

### **Study design – 3. Poverty measures.**

Most of our analyses use a relative poverty measure. A household is relatively poor if its size-adjusted income (pre- or post-, depending on the analysis) is less than 50% the national median.

In our initial analysis, we also report absolute poverty rates, meaning that we select a single poverty line and convert it across countries using purchasing power parities (PPPs). In this paper, we calculated such a line by taking the 2005 U.S. poverty line for a family of four, converting it to a single-person poverty line using our equivalence scale – the square root of family size – and applying that line to all cases.

### **Women's Poverty Rates**

(4 figures)

- relative versus absolute
- pre-transfer versus post-transfer
  - by family type
  - by labour market status

Figure 1.

Percentage of women living in poor households,  
absolute poverty vs relative poverty  
(post-tax, post-transfer)

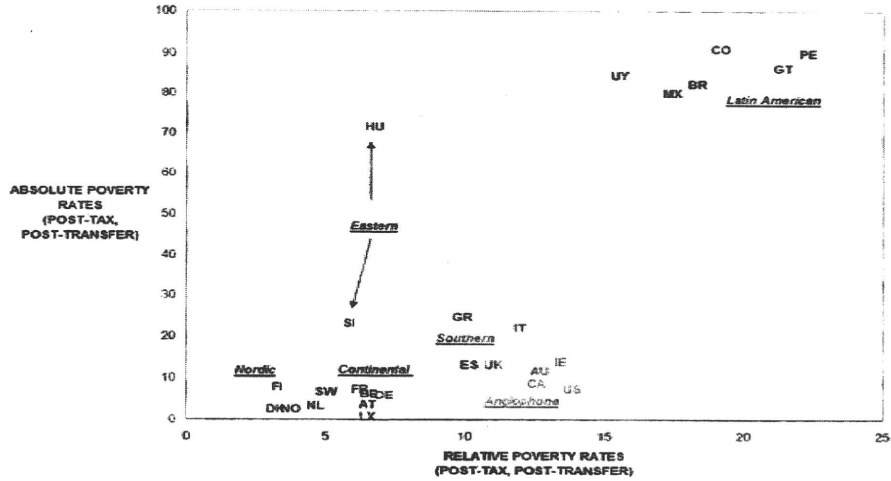
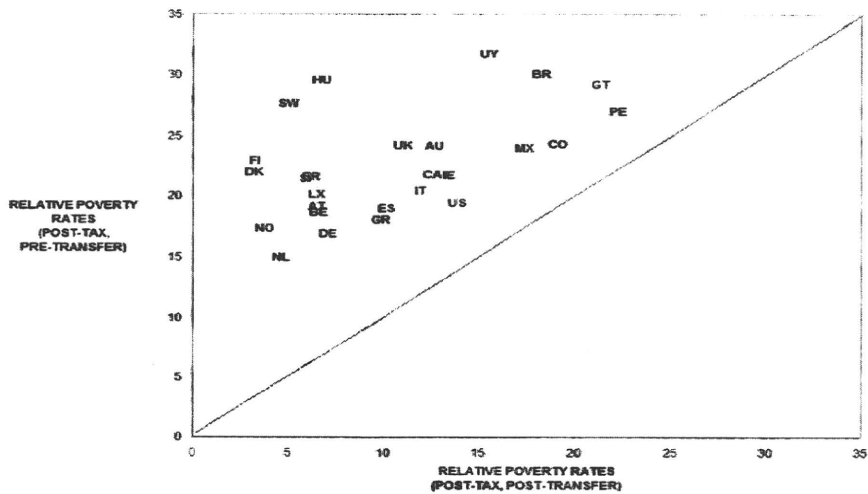


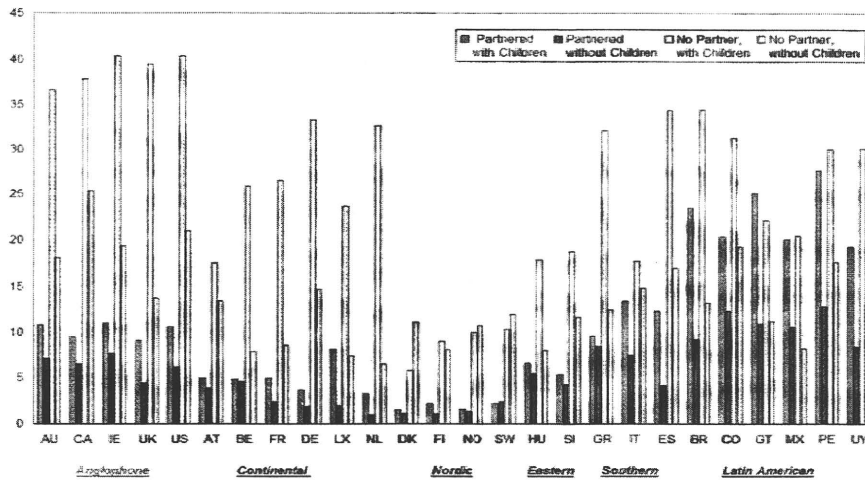
Figure 2.

Percentage of women living in poor households,  
pre-transfer poverty vs post-transfer-poverty  
(relative poverty)



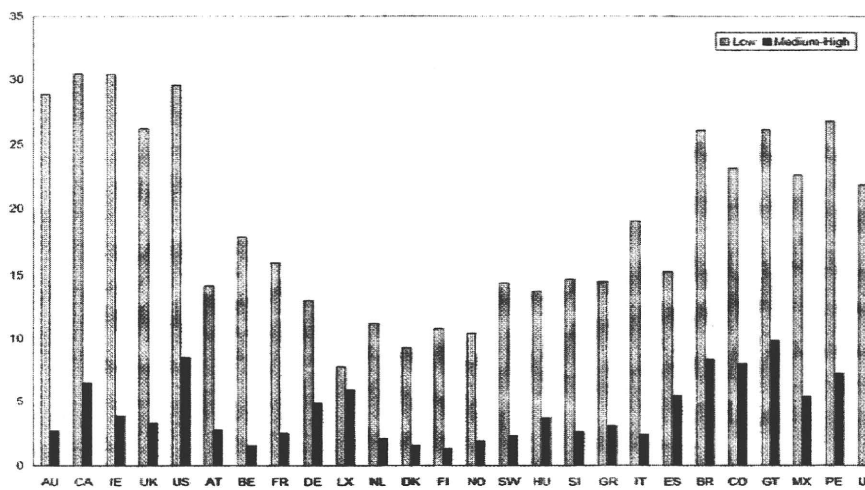
**Figure 3.**

Percentage of women living in poor households,  
by family type  
(relative post-transfer-poverty)



**Figure 4.**

Percentage of women living in poor households,  
by labour market status  
(relative post-transfer-poverty)



## Poverty Rates: Gender Differentials\*

(4 tables)

- by family type
- by labour market status
- HH-level versus person-level income

\*Latin American results not shown

**Table 1.**  
**Poverty Rates by Family Type and Gender:**  
**Relative Poverty, Post-Tax, Post-Transfer Income**  
**(early-mid-2000s)**

	A. Partnered with Children			B. Partnered without Children			C. No Partner, with Children			D. No Partner, without Children		
	M	F	F-M	M	F	F-M	M	F	F-M	M	F	F-M
<b>Anglophone</b>												
Australia	10.6	10.8	0.2	5.5	7.1	1.6	35.4	36.6	1.2	24.0	18.2	-5.8
Canada	9.6	9.4	-0.1	5.8	6.5	0.7	16.5	37.9	21.4	18.1	25.3	7.2
Ireland	11.1	11.0	-0.1	3.4	7.6	4.2	n.a.	40.3	n.a.	23.4	19.4	-4.0
United Kingdom	9.3	9.1	-0.2	4.1	4.4	0.3	29.7	39.5	9.8	15.5	13.8	-1.7
United States	11.0	10.6	-0.4	5.7	6.1	0.4	19.8	40.4	20.5	17.0	21.0	4.0
average	10.3	10.2	-0.1	4.9	6.3	1.4	n.a.	38.9	n.a.	19.6	19.5	-0.1
<b>Continental European</b>												
Austria	4.9	4.9	0.0	4.6	3.8	-0.8	n.a.	17.5	n.a.	11.3	13.4	2.2
Belgium	5.2	4.8	-0.4	3.7	4.6	0.9	n.a.	25.8	n.a.	5.0	7.8	2.8
France	4.7	4.9	0.2	3.0	2.4	-0.6	18.7	26.5	7.8	10.0	8.5	-1.4
Germany	3.4	3.7	0.2	1.9	1.9	0.0	19.8	33.2	13.4	13.3	14.7	1.3
Luxembourg	7.6	8.1	0.5	2.3	2.0	-0.3	n.a.	23.6	n.a.	3.6	7.4	3.8
Netherlands	2.3	3.3	1.0	1.9	1.0	-0.8	n.a.	32.7	n.a.	5.6	6.5	0.9
average	4.7	4.9	0.3	2.9	2.6	-0.3	n.a.	26.6	n.a.	8.1	9.7	1.6
<b>Nordic European</b>												
Denmark	1.6	1.5	0.0	1.5	1.2	-0.4	7.2	5.8	-1.5	16.5	11.0	0.6
Finland	2.1	2.2	0.0	1.1	1.1	0.0	3.5	8.9	5.4	13.6	8.0	-5.6
Norway	1.7	1.6	-0.2	1.6	1.4	-0.3	2.3	10.0	7.7	12.8	10.7	-2.1
Sweden	2.1	2.2	0.0	2.8	2.4	-0.4	5.2	10.3	5.1	11.3	11.9	0.7
average	1.9	1.9	0.0	1.8	1.5	-0.2	4.5	8.7	4.2	12.0	10.4	-1.6
<b>Eastern European</b>												
Hungary	6.2	6.5	0.3	6.5	5.5	-1.0	n.a.	17.9	n.a.	14.6	8.0	-6.6
Slovenia	5.4	5.3	0.0	4.5	4.3	-0.2	n.a.	18.8	n.a.	19.0	11.7	-7.3
average	5.8	5.9	0.1	5.5	4.9	-0.6	n.a.	18.3	n.a.	16.8	9.8	-7.0
<b>Southern European</b>												
Greece	9.8	9.5	-0.3	7.0	8.5	1.5	n.a.	32.1	n.a.	7.4	12.4	5.0
Italy	13.9	13.4	-0.5	5.9	7.5	1.5	n.a.	17.7	n.a.	8.9	14.9	6.0
Spain	12.2	12.3	0.1	4.6	4.2	-0.4	n.a.	34.4	n.a.	10.3	17.1	6.8
average	12.0	11.8	-0.2	5.8	6.7	0.9	n.a.	28.1	n.a.	8.9	14.8	5.9



**Table 2.**  
**Poverty Rates by Labor Market Status and Gender:**  
**Relative Poverty, Post-Tax, Post-Transfer Income**  
**(early-middle 2000s)**

	Low			Medium-High		
	M	F	F-M	M	F	F-M
<b>Anglophone</b>						
Australia	34.9	28.8	-6.0	1.5	2.7	1.2
Canada	35.6	30.5	-5.2	4.9	6.5	1.6
Ireland	28.9	30.4	1.5	3.5	3.8	0.3
United Kingdom	25.6	26.2	0.6	2.1	3.2	1.2
United States	35.1	29.6	-5.5	7.0	8.5	1.6
<i>average</i>	32.0	29.1	-2.9	3.8	5.0	1.2
<b>Continental European</b>						
Austria	22.7	14.2	-8.5	2.7	2.8	0.1
Belgium	26.8	17.9	-9.0	0.8	1.6	0.8
France	18.9	15.9	-3.0	2.8	2.5	-0.3
Germany	14.7	13.0	-1.7	3.5	4.9	1.3
Luxembourg	18.5	7.7	-10.7	3.6	5.9	2.3
Netherlands	11.9	11.2	-0.7	1.6	2.1	0.4
<i>average</i>	18.9	13.3	-5.6	2.5	3.3	0.8
<b>Nordic European</b>						
Denmark	14.3	9.2	-5.0	1.3	1.6	0.3
Finland	16.6	10.8	-5.8	1.9	1.3	-0.5
Norway	18.4	10.4	-8.0	1.7	1.9	0.2
Sweden	21.3	14.4	-7.0	2.0	2.3	0.3
<i>average</i>	17.6	11.2	-6.4	1.7	1.8	0.1
<b>Eastern European</b>						
Hungary	23.0	13.8	-9.2	4.5	3.7	-0.9
Slovenia	20.0	14.7	-5.3	2.9	2.6	-0.3
<i>average</i>	21.5	14.2	-7.2	3.7	3.1	-0.6
<b>Southern European</b>						
Greece	17.0	14.5	-2.5	3.4	3.0	-0.4
Italy	18.6	19.0	0.4	6.6	2.4	-4.2
Spain	15.4	15.3	-0.1	5.8	5.4	-0.4
<i>average</i>	17.0	16.3	-0.8	5.3	3.6	-1.7

**Table 3**  
**Female/Male Ratios, Comparison of Household- and Person-Level Income:**  
**Post-Transfer Income**  
**(early-middle 2000s)**

	Poor		Near-Poor		Non-Poor	
	Household	Person	Household	Person	Household	Person
<b>Anglophone</b>						
Australia	131.9	135.3	111.3	59.2	98.4	57.0
Canada	118.4	98.8	106.5	63.7	99.3	55.2
Ireland	117.9	62.8	112.9	51.7	104.6	52.6
United Kingdom	158.2	47.4	116.6	56.0	96.4	49.5
United States	117.9	61.8	109.3	58.4	101.2	54.7
<i>average</i>	128.9	81.2	111.3	57.8	100.0	53.8
<b>Continental European</b>						
Austria	135.6	73.9	107.0	47.7	100.3	57.3
Belgium	122.9	74.5	107.0	76.5	98.2	53.2
France	124.2	36.6	107.4	45.9	100.9	60.5
Germany	116.7	73.9	109.2	52.7	96.6	50.7
Luxembourg	112.1	45.7	101.1	40.4	98.3	46.2
Netherlands	136.2	57.8	107.7	28.7	98.2	45.4
<i>average</i>	124.6	60.4	106.6	48.6	98.7	52.2
<b>Nordic European</b>						
Denmark	123.3	199.7	120.9	112.8	100.3	70.0
Finland	110.7	82.3	116.1	106.5	101.2	71.3
Norway	135.2	100.9	117.6	87.9	98.2	63.7
Sweden	115.9	138.3	120.1	96.9	99.2	65.9
<i>average</i>	121.3	130.3	118.7	101.0	99.7	67.7
<b>Eastern European</b>						
Hungary	106.4	139.3	109.6	105.6	103.2	70.5
Slovenia	113.5	89.0	102.7	73.8	101.0	86.5
<i>average</i>	110.0	114.1	106.1	89.7	102.1	78.5
<b>Southern European</b>						
Greece	106.9	22.3	100.4	18.9	98.6	45.6
Italy	98.8	21.8	100.7	17.9	99.9	54.8
Spain	101.9	29.1	102.1	20.2	98.7	46.8
<i>average</i>	102.5	24.4	101.1	19.0	99.0	49.1

**Table 4**  
**Female/Male Ratios, Comparison of Household- and Person-Level Income:**  
*Pre-Transfer Income*  
 (early-middle 2000s)

	Poor		Near-Poor		Non-Poor	
	Household	Person	Household	Person	Household	Person
<b>Anglophone</b>						
Australia	72.6	58.2	98.7	37.0	97.4	55.4
Canada	101.6	58.8	103.9	53.3	99.0	53.8
Ireland	98.0	33.7	105.1	33.5	105.4	47.6
United Kingdom	158.6	27.9	99.4	37.4	94.6	47.0
United States	106.3	58.2	105.4	56.5	100.2	53.8
<i>average</i>	107.4	47.4	102.5	43.6	99.3	51.5
<b>Continental European</b>						
Austria	96.0	36.2	95.7	28.8	100.4	50.9
Belgium	66.7	44.5	101.5	56.3	95.6	45.1
France	77.3	33.0	99.4	41.4	99.3	59.2
Germany	94.5	71.7	101.4	46.0	94.9	49.4
Luxembourg	102.8	42.3	97.6	36.7	96.5	43.6
Netherlands	55.9	54.5	97.8	26.4	96.2	44.5
<i>average</i>	82.2	47.0	98.9	39.3	97.1	48.8
<b>Nordic European</b>						
Denmark	-741.7	242.3	146.2	106.0	100.0	67.0
Finland	139.5	78.1	117.8	81.7	98.9	66.5
Norway	156.8	73.7	105.2	66.3	96.6	59.2
Sweden	51.5	126.9	130.1	95.8	96.3	62.2
<i>average</i>	-98.5	130.3	124.8	87.5	98.0	63.7
<b>Eastern European</b>						
Hungary	76.7	66.9	110.9	71.0	103.1	63.4
Slovenia	131.2	89.6	99.5	66.1	100.2	82.5
<i>average</i>	104.0	78.3	105.2	68.5	101.7	72.9
<b>Southern European</b>						
Greece	103.2	16.4	97.7	16.3	96.3	42.7
Italy	93.4	17.5	98.0	17.1	100.1	53.9
Spain	91.6	22.7	100.9	16.8	99.3	45.7
<i>average</i>	96.1	18.9	98.9	16.7	98.6	47.4

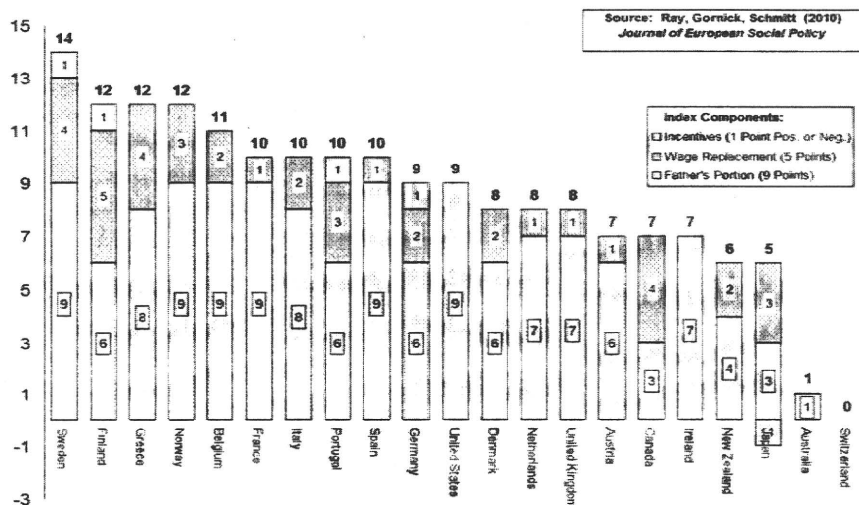
### III. COMMENTARY

A voluminous body of research has established that women's employment can be strengthened by generous and gender-egalitarian work-family reconciliation policies.

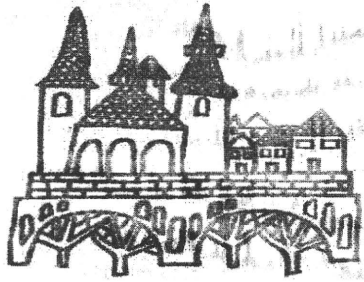
**key policy components:**

- paid family leave
- regulation of working time
- early childhood education and care

**Figure 5.**  
The case of Paid Family Leave  
in comparative perspective



Thank you for hosting our visit.



# CRITA: A Meta-Analysis of Child Outcomes Across Parental SES (Education)

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January 11, 2011

## The purpose of the cross-national tables

- basis for standardized look at the socio-economic gradient at different stages of childhood across a variety of outcomes and countries
- data for examining in a “meta-analysis” kind-of-way if the change in the gradient across the stages is similar across outcome domains and countries
- input data for chapter that offers a broad overview of the dependence of child outcome of parental SES for the CRITA volume

## The input data

- cross-tabulations of parental SES against child outcomes
- parental SES: the education (ISCED-classified) of the more highly educated parent measured around the time of the child's outcome
- child outcomes:
  - ▶ continuous outcomes: discretized into quartile groups
  - ▶ discrete outcomes: ordered from worse to better
- classified into stages of child development, domain
- we have 297 such tables

## Stages and ages

Stage	Ages
C0	0-1
C1	2-6
C2	7-11
C3	12-17
C4	18-29
OA	30–

## Variable domains

Short hand	Description
P	Physical (includes health; height, birth weight, BMI etc)
C	Cognitive (IQ & other test scores etc.)
SE	Socio-emotional behavior (aka non-cognitive)
ED	Educational achievements (graduation, grades, final attainment etc.)
EC	Economic outcomes (various incomes, labor market position etc)

## Empirical strategy

- take a look at the data:
  - ▶ what stages ( $C_t$ :s) are covered
  - ▶ what variables are available for which countries, stages within study
- estimate correlations from the provided frequency tables
  - ▶ assume underlying bivariate normality and ordinal information of the cross-classifying variables (both of which are most likely false)
  - ▶ plot and stare at the correlations and their confidence intervals
  - ▶ use estimated correlations to examine similarities and differences across countries in the stage
  - ▶ (the technical term is “polychoric” correlation)
- graphically examine the materials
- examine variations in strength of the association across domains, stages and countries

## Projects and stages

	C0	C1	C2	C3	C4	OA
anger2010crita	0	0	0	12	13	13
bingleyandwestergaardnielsen2010crita	2	0	0	1	0	3
bjorklundjanttiandnybom2010crita	0	0	0	2	0	8
blandenkatzandredmond2010crita	0	6	17	8	1	10
bradburycroakwaldfogelandwashbrook2010crita	4	15	0	0	0	0
brattiandcapellari2010crita	0	0	0	0	8	0
bratticappellarigrohsambergandlohmann2010crita	0	0	0	0	0	54
dumasandlefranc2010crita	0	3	3	5	3	3
duncanetal2010crita	0	0	21	0	0	16
ermischandelbono2010	0	0	1	3	0	0
ermischspiessandpeter2010crita	0	1	0	0	0	0
havemanpirainosmeedingandwilson2010crita	9	0	3	22	13	0
jerrimandmicklewright2010crita	0	0	8	9	0	0
magnusonwaldfogelandwashbrook2010crita	0	9	19	4	0	0
moodjonssonandbihagen2010crita	0	0	0	7	0	2

## Countries and stages

	C0	C1	C2	C3	C4	OA
Australia	1	6	6	2	0	0
Canada	5	3	4	12	3	0
Denmark	2	0	1	2	0	3
Finland	0	0	3	0	0	3
France	0	3	4	6	3	3
Germany	0	1	1	13	13	27
Italy	0	0	1	1	8	40
Sweden	0	0	5	9	0	8
UK	1	11	28	14	1	21
US	6	10	19	14	10	4



## Countries and domains

	Cognitive	Economic	Education	Physical	Socio-emotional
Australia	6	0	0	2	7
Canada	7	0	4	10	6
Denmark	2	2	2	2	0
Finland	0	2	2	0	2
France	3	4	12	0	0
Germany	12	6	8	0	29
Italy	2	10	38	0	0
Sweden	5	4	4	5	4
UK	29	16	6	6	19
US	20	2	4	10	27

## Domains and stages

	C0	C1	C2	C3	C4	OA
Cognitive	0	14	38	28	3	3
Economic	0	0	0	0	4	42
Education	0	3	3	9	11	54
Physical	15	4	4	10	2	0
Socio-emotional	0	13	27	26	18	10

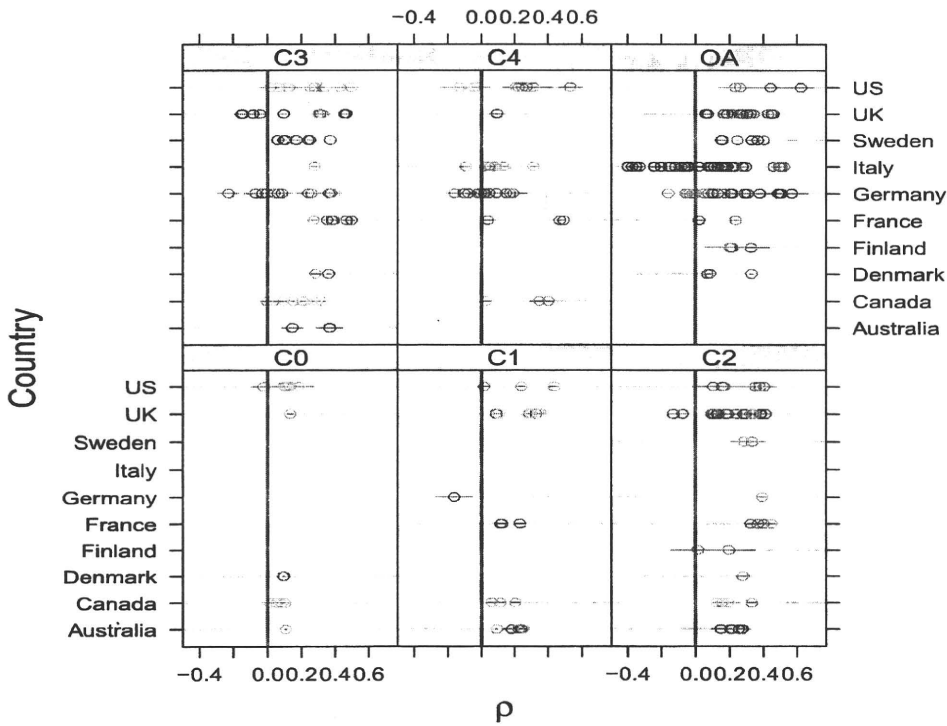
## Example table

C ISCED of Highest Educated Parent	WEIGHTED Observations				Row
	IQ Test: Total Score, Child Aged 30+ (2006)	Quartile 1	Quartile 2	Quartile 3	Quartile 4
0–2 (Low)	300	188	181	122	791
3–4 (Med)	697	716	723	689	2,825
5b	16	16	11	15	58
5a/6 (High)	60	77	100	113	350
<b>Column Total</b>	<b>1,073</b>	<b>997</b>	<b>1,015</b>	<b>939</b>	<b>4,024</b>

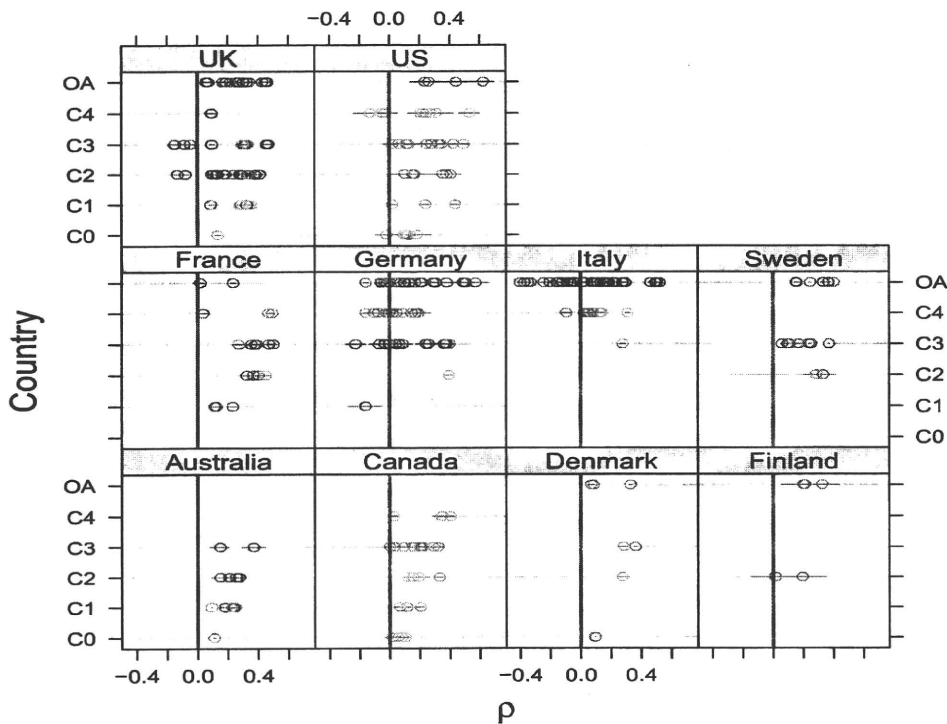
## Estimating the correlations

- run standard software to estimate latent (“polychoric”) correlations from the cross-classified tables (package `polycor` in R)
- use the correlations to compare strength of association

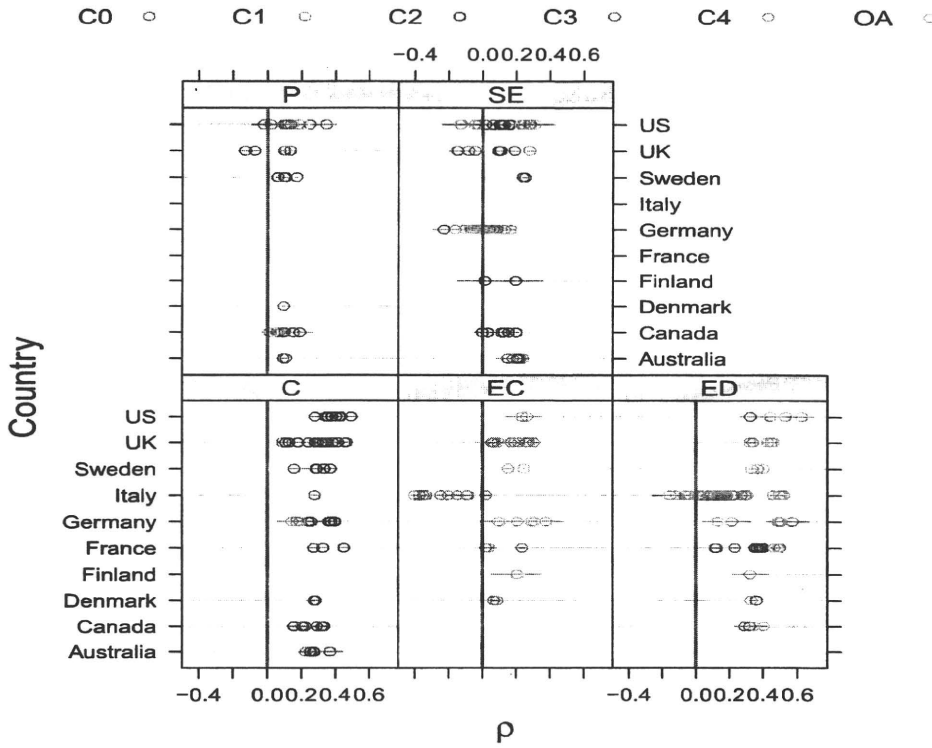
# Correlations: Country within Stage



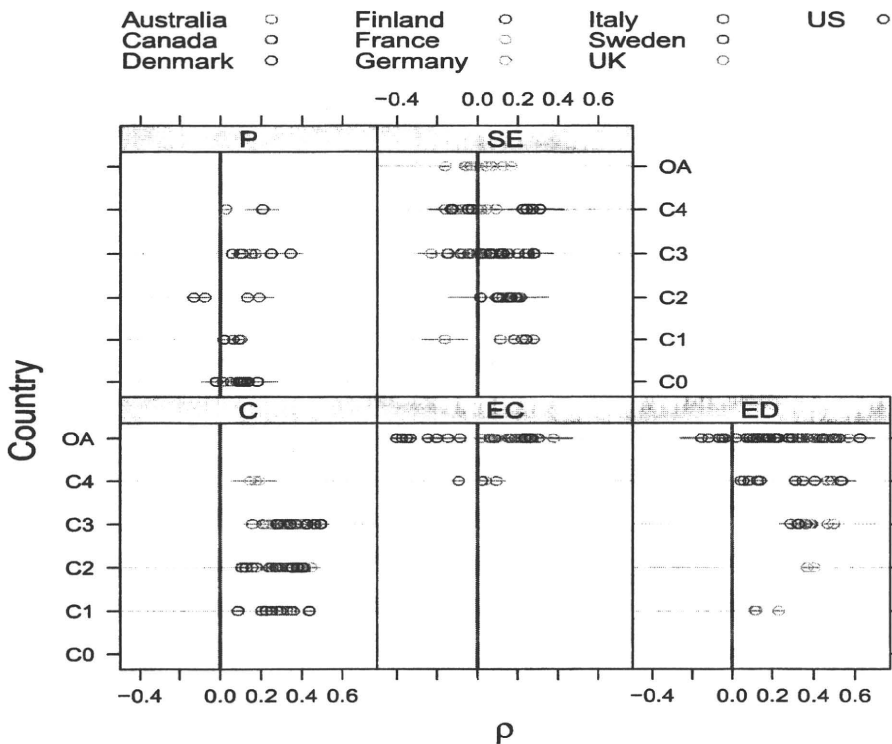
# Correlations: Stage within Country



# Correlations: Country within Domain

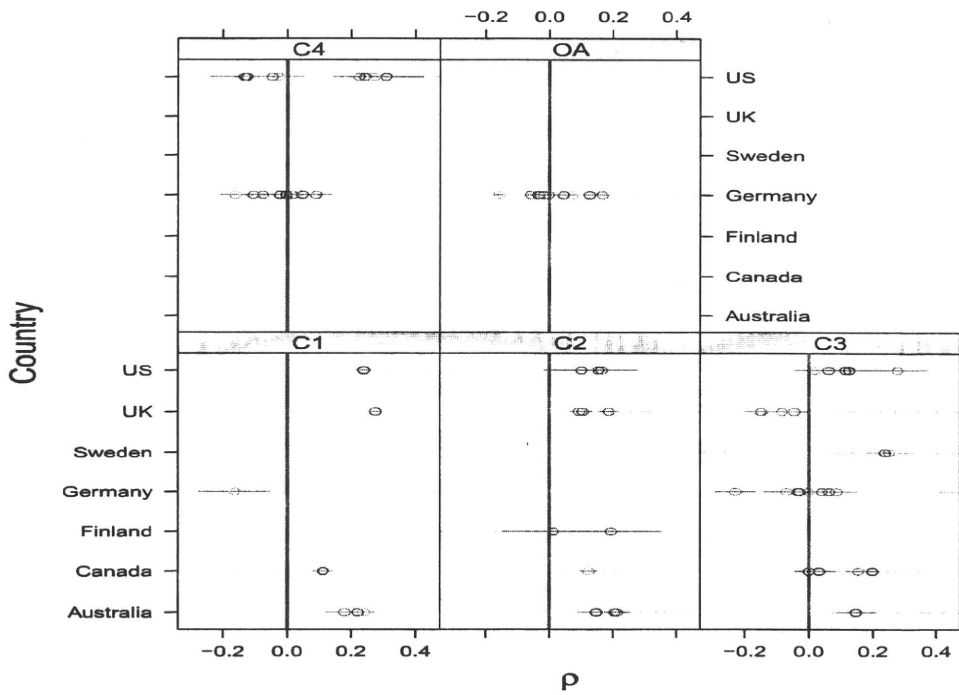


# Correlations: Stage within domain

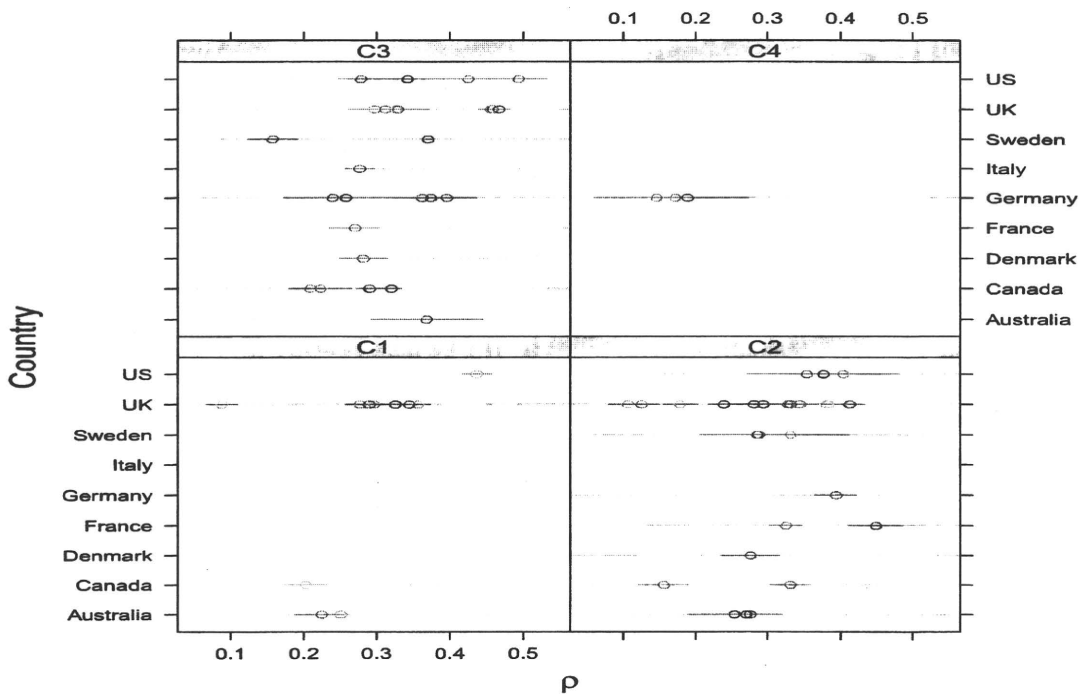




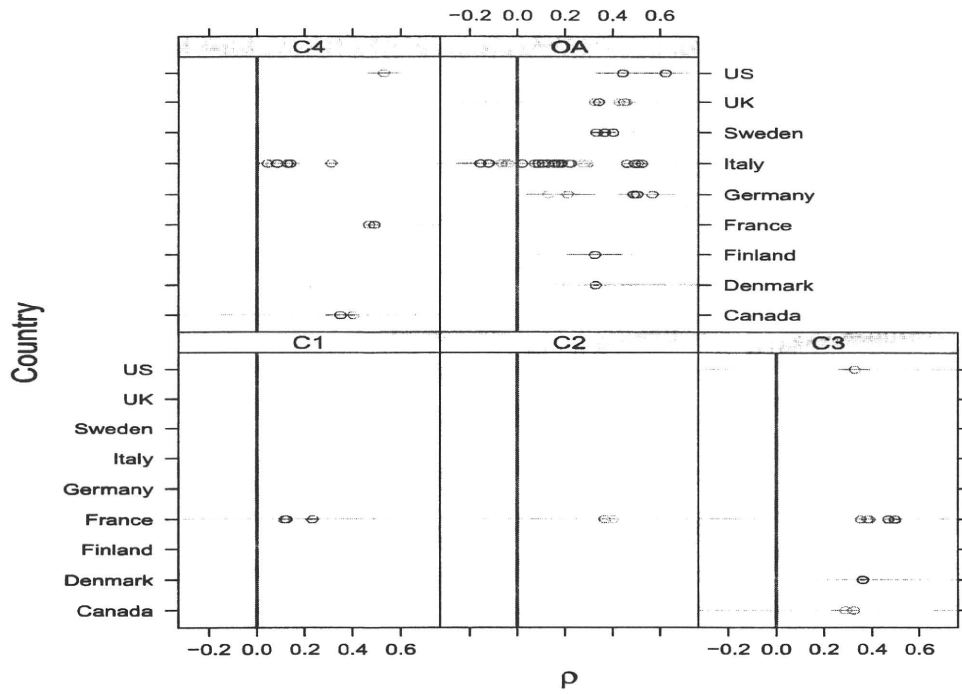
# Correlations by country in domain – SE



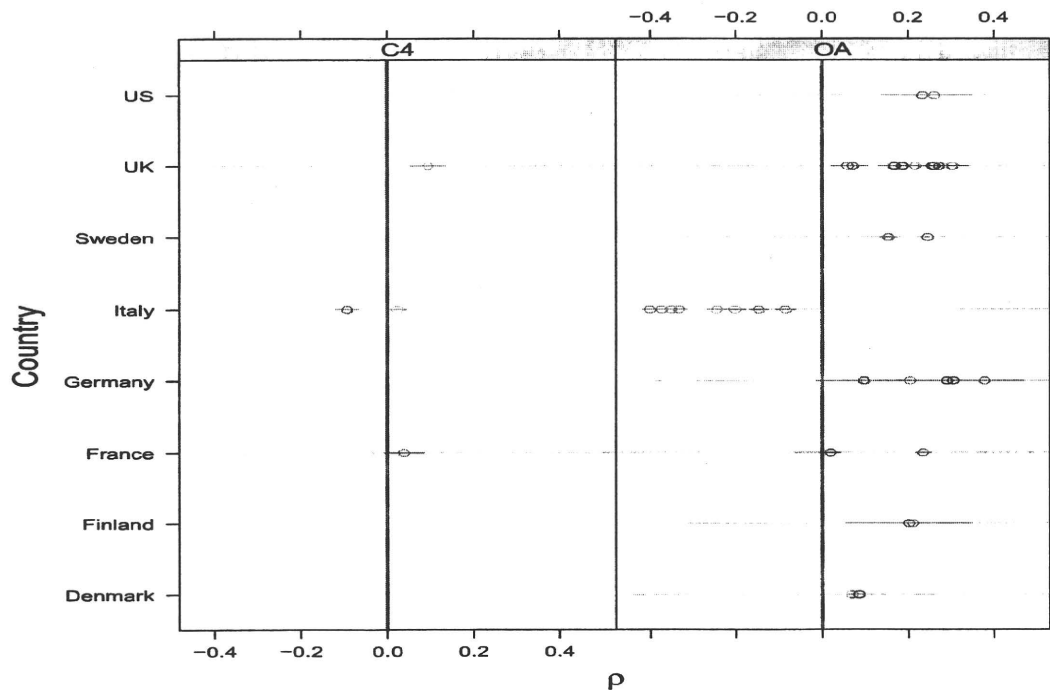
# Correlations by country in domain – C



# Correlations by country in domain – ED



# Correlations by country in domain – EC



## Modelling the correlations

- basic specification (D=domain, G=country, C=stage):

$$\rho_{C_t, D_d, G_g} = \beta_0 + \sum \beta_{C_t} C_t + \sum \beta_{D_d} D_d + \sum \beta_{G_g} G_g + \epsilon_{C_t, D_d, G_g} \quad (1)$$

- estimated specifications:

- ① only domain and stage (i.e., omit country intercept)
- ② add country
- ③ add stage, domain interactions
- ④ add country, domain interactions

- take into account the variability of  $\hat{\rho}$  (weight regressions using inverse of estimated standard error)
- also estimate specifications within each domain, including country and stage

## Model Comparison

do.call	Res.Df	RSS	Df	Sum of Sq	F	Pr(> F)
1	282.00	419.70				
2	273.00	274.92	9.00	144.79	20.84	0.00
3	262.00	241.03	11.00	33.88	3.99	0.00
4	237.00	182.97	25.00	58.06	3.01	0.00