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Wybór małżonka a stratyfikacja społeczna

2002-2014

EUROPEJSKI SONDAŻ SPOŁECZNY, EDYCJA 7
„Polska na tle Europy: Kontynuacje i zmiany”
Warszawa, 9 marca 2016 r.

Theoretical background

- In research on social stratification studies on marital choices were developed to describe how open stratification systems are (Smits et al. 1998; 2000; Raymo & Xie 2000; Blossfeld & Tim 2003.
- All previous findings revealed the tendency for persons to choose partners of similar social standing (referred to **marital homogamy**) as defined in terms of:
  - **educational attainment,**
  - **occupational positions.**

In case of **cross-national studies**, a primary concern on marriage homogamy lies in examination of commonality and differences between countries as regards **two aspects of openness**:

- degree of association between education/occupation of spouses
- degree of homogamy in educational levels and occupational categories.

Earlier analyses disclosed that opennes of martital choices was slightly lower in post-communist societies (Domański & Przybysz 2007). Using data from ESS 2002-2014 we attempt to determine:

1.concerning international patterns

- whether this division remains.

- did some other factors, like economic development, contrasts between welfare state regimes, or cultural differences emerged

2. concerning changes

- whether degree of association between social standing of spouses, barriers to intermarriage,

and variation in homogamy are stable or changed.

Following analysis (e.g. by Smits et al. (1998)) one may expect that:

1. As European societies became more democratic and geographically mobile, educational homogamy might decline
2. In contradiction to this, increasing importance of education in post-communist economies might lead to increase barriers to intermarriage
3. Economic crisis since 2008 might also produced a shift to tendency for marriage to become less common the farther away the two status positions are.

Educational homogamy

We distinguish 3 categories which describe wife's and husband's levels of education (based on ISCED):

1) Basic and lower secondary

2) Upper secondary

3) Tertiary and post-secondary

Joint distribution of Wifes' (W) and Husbands' (H) Educational Categories – percentages Austria ESS1

H\W	1. Basic and lower secondary	2. Upper secondary	3. Tertiary and post-secondary	Total
1. Basic and lower secondary	16,6%	8,9%	0,6%	26,1%
2. Upper secondary	14,8%	36,9%	5,9%	57,6%
3. Tertiary and post-secondary	1,3%	8,3%	6,6%	16,2%
Total	32,7%	54,1%	13,1%	100%

Educational homogamy

- The limitation of percentage distribution is that it confounds the effects of marginals with the underlying relative association between educational levels of partners. For example, the percentages of homogamous marriages are dependent on the marginal distributions of the tables, and perfect homogamy requires that they are identical.
- We employed log-linear and log-multiplicative models to analyse educational homogamy, statistical methods which allow to control for differences in the educational distributions of husbands and wives and to measure what is called *relative* homogamy.

Educational homogamy

We used „uniform difference” model (Xie 1992), which assumes that

- the form of the relationship between wifes’ and husbands’ educational levels remains constant across time and is the same in all countries, but
- the strength of this association could be different.

Goodnes of fit: χ^2=1342,3 (p<0,0001); G^2=1381,1 (p<0,0001); df=492 Δ=2,4%; BIC=-4604,9

Interaction parameters of uniform difference model
Austria ESS1 – reference category

H\W	1. Basic and lower secondary	2. Upper secondary	3. Tertiary and post-secondary
1. Basic and lower secondary	3,12	0,82	0,39
2. Upper secondary	0,85	1,34	0,88
3. Tertiary and post-secondary	0,38	0,91	2,92

Interaction parameters for Poland ESS1

H\W	1. Basic and lower secondary	2. Upper secondary	3. Tertiary and post-secondary
1. Basic and lower secondary	$3{,}12^{1,4}=4{,}91$	$0{,}82^{1,4}=0{,}75$	$0{,}39^{1,4}=0{,}27$
2. Upper secondary	$0{,}85^{1,4}=0{,}79$	$1{,}34^{1,4}=1{,}51$	$0{,}88^{1,4}=0{,}84$
3. Tertiary and post-secondary	$0{,}38^{1,4}=0{,}26$	$0{,}91^{1,4}=0{,}88$	$2{,}92^{1,4}=4{,}48$

According to this model the general pattern of association in Poland ESS1 is the same as in Austria ESS1, but the association is stonger in Poland. Parameter which describe strength of association for Poland=1,4.

Strength of association (education)

	2002	2004	2006	2008	2010	2012	2014
Bulgaria			1,84	1,84	1,77	1,78	
Slovakia		1,74	1,05	1,57	1,56	1,52	
Turkey		1,43		1,47			
Portugal	1,16	1,3	1,49	1,27	1,47	1,44	
Italy	1,29	1,28				1,44	
Poland	1,4	1,39	1,63	1,51	1,09	1,08	1,21
Croatia				1,16	1,43		
Greece	1,31	1,27		1,29	1,24		
Cyprus			1,05	1,25	1,51	1,26	
Hungary	1,32	1,04	1,16	1,25	1,27	1,5	
Slovenia	1,2	1,35	1,03	1,22	1,46	1,24	
Czech Republic	1,37	1,32		1,56	0,92	1,25	1,06
Austria	1	1,2	1,2				1,3
Lithuania					1,14	1,16	
Israel	0,79			1,25	1,2	1,28	
France	1,1	1,08	0,92	1,01	1,11	1,15	1,07

Strength of association (education)

	2002	2004	2006	2008	2010	2012	2014
Ukraine		0,97	1,03	0,97	1,09	0,85	
Switzerland	0,88	0,93	0,97	1,08	0,98	1,19	0,8
Germany	0,93	1,15	1,01	0,92	0,92	0,94	0,87
Finland	0,98	0,97	0,91	0,96	1	0,83	0,9
Luxembourg	0,95	0,89					
Belgium	1,05	0,87	1	0,99	0,81	0,79	0,79
Spain	1	0,88	0,92	0,98	0,79	0,76	
Sweden			0,87	0,96	0,88	0,78	0,9
Ireland	0,88	0,81	0,71	0,88	0,96	0,92	0,94
Estonia		0,82	0,73	0,84	0,98	0,89	0,96
Denmark	0,81	0,94	0,87	1,09	0,72	0,82	0,85
Norway	0,82	0,77	0,84	0,92	0,8	0,83	0,92
Russia			0,83	0,83	0,85	0,81	
Netherlands	0,81	0,79	0,77	0,78	0,78	0,89	0,87
United Kingdom	0,55	0,59	0,57	0,55	0,52	0,68	
Iceland		0,44				0,64	

Occupational homogamy

Social position of husband and wife is defined in terms of EGP class scheme. We distinguished 6 categories:

1) Professionals and managers
2) Routine non−manuals
3) Petty bourgeoisie
4) Skilled manuals
5) Non-skilled manuals
6) Farmers

(We had to limit our analysis to 1-5 ESS rounds. In ESS6 and ESS7 datasets information about partner's occupation was incomplete)

Interaction parameters of uniform difference model
Austria ESS1 – reference category

H\W	1	2	3	4	5	6
1. Professionals and managers	6,68	1,78	1,53	0,53	0,36	0,28
2. Routine non−manual	2,15	1,71	1,08	1,01	0,77	0,32
3. Petty bourgeoisie	1,12	0,89	3,16	0,84	0,66	0,58
4. Skilled manuals	0,54	0,98	0,56	2,11	1,97	0,79
5. Non-skilled manuals	0,38	0,86	0,58	1,61	2,78	1,17
6. Farmers	0,30	0,44	0,59	0,65	0,99	20,04

Goodness of fit measure χ^2=3478,0 (p<0,0001);
G^2= 3693,1 (p<0,0001); df= 2328 Δ=6,5%;
BIC= -22179,4

Strength of association (socio-occupational position)

	2002	2004	2006	2008	2010
Luxembourg	1,3	0,97			
Portugal	0,92	0,99	1,02	1,03	0,81
Lithuania					0,94
Poland	0,89	0,91	1,01	0,9	0,9
Greece	0,95	0,79		0,75	0,87
Austria	1	0,83	0,68		
Italy	0,72	0,86			
Switzerland	0,69	0,86	0,76	0,77	0,86
Germany	0,72	0,77	0,77	0,77	0,9
Finland	0,94	0,77	0,78	0,77	0,67
Belgium	0,8	0,83	0,67	0,76	0,85
Bulgaria			0,77	0,68	0,88
Spain	0,8	0,76	0,77	0,8	0,71

Strength of association (socio-occupational position)

	2002	2004	2006	2008	2010
Hungary	0,62		0,78	0,84	0,74
France			0,76	0,75	0,71
Sweden	0,76	0,81	0,55	0,88	0,6
Czech Republic	0,77	0,72		0,77	0,55
Denmark	0,88	0,64	0,5	0,72	0,74
Norway	0,48	0,75	0,77	0,69	0,75
Cyprus			0,67		
Slovakia		0,62	0,76	0,61	0,67
Netherlands	0,52	0,59	0,83	0,72	0,65
Estonia		0,77	0,81	0,57	0,51
Russia			0,67	0,56	0,55
Croatia					0,55
Ukraine		0,46	0,65	0,6	0,51

Parameters of homogamy

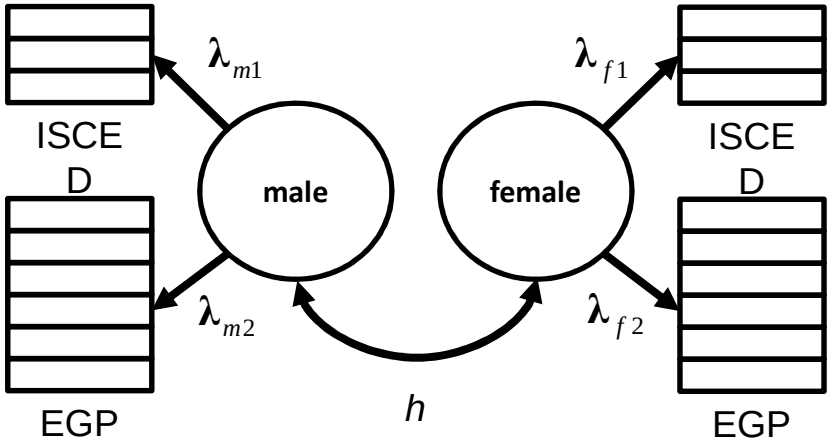
Educatonal category	1. Basic and lower secondary	2. Upper secondary	3. Tertiary and post-secondary	1. Basic and lower secondary	2. Upper secondary	3. Tertiary and post-secondary
	ESS 1			ESS 7		
Austria	3,59	1,15	3,67	4,68	1,33	4,5
Belgium	3,05	1,35	3,44	2,37	1,36	2,37
Switzerland	2,8	1,3	2,52	2,25	1,28	2,46
Czech Republic	6,53	1,26	5,77	3,84	1,45	3,02
Germany	2,54	1,24	2,81	2,93	1,31	2,54
Denmark	2,27	1,21	2,64	2,19	1,39	2,59
Estonia				2,97	1,36	2,72
Spain	3,33	1,66	2,5			
Finland	2,89	1,5	2,78	2,57	1,4	2,64
France	3,6	1,19	3,98	3,2	1,35	3,3
United Kingdom	2,11	1,35	1,68			

Parameters of homogamy

Educatonal category	1. Basic and lower secondary	2. Upper secondary	3. Tertiary and post-secondary	1. Basic and lower secondary	2. Upper secondary	3. Tertiary and post-secondary
	ESS 1			ESS 7		
Greece	4,89	1,32	3,48			
Hungary	5,22	1,26	6,05			
Ireland	2,73	1,31	2,58	2,67	1,9	2,75
Israel	2,26	1,02	2,58			
Italy	4,9	1,27	4,4			
Luxembourg	2,77	1,31	3,24			
Netherlands	2,32	1,36	2,65	2,66	1,39	2,5
Norway	2,17	1,11	2,82	2,59	1,4	2,66
Poland	7,17	1,14	6,85	4,35	1,11	4,25
Portugal	3,96	1,37	2,93			
Sweden				2,73	1,32	2,6
Slovenia	7,22	0,93	7,39	3,46	1,08	3,93

Latent CFAM for homogamy analysis

2D Nominal Response Model (NRM)
(Bock, 1972; Thissen, Cai, & Bock, 2010)



$$P(X_{ic} \mid \theta) = \frac{\exp(\lambda_{ic}\theta + \tau_{ic})}{\sum_{h=0}^{m} \exp(\lambda_{ih}\theta + \tau_{ih})} \qquad \lambda_{i0} = \tau_{i0} = 0$$

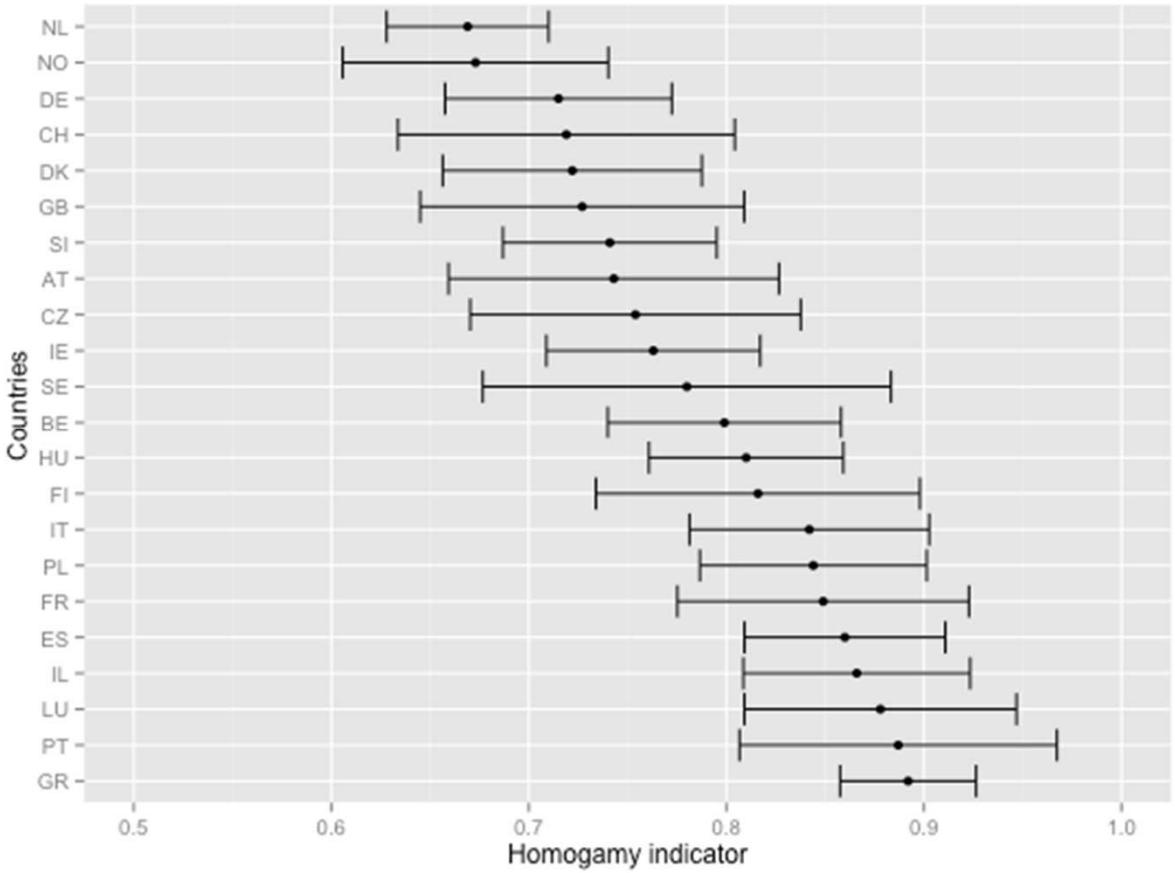
λ_{ic} slope associated to category *c* of indicator *i*.
τ_{ic} intercept associated to category *c* of indicator *i*.
m number of categories for indicator *i*.

Model features

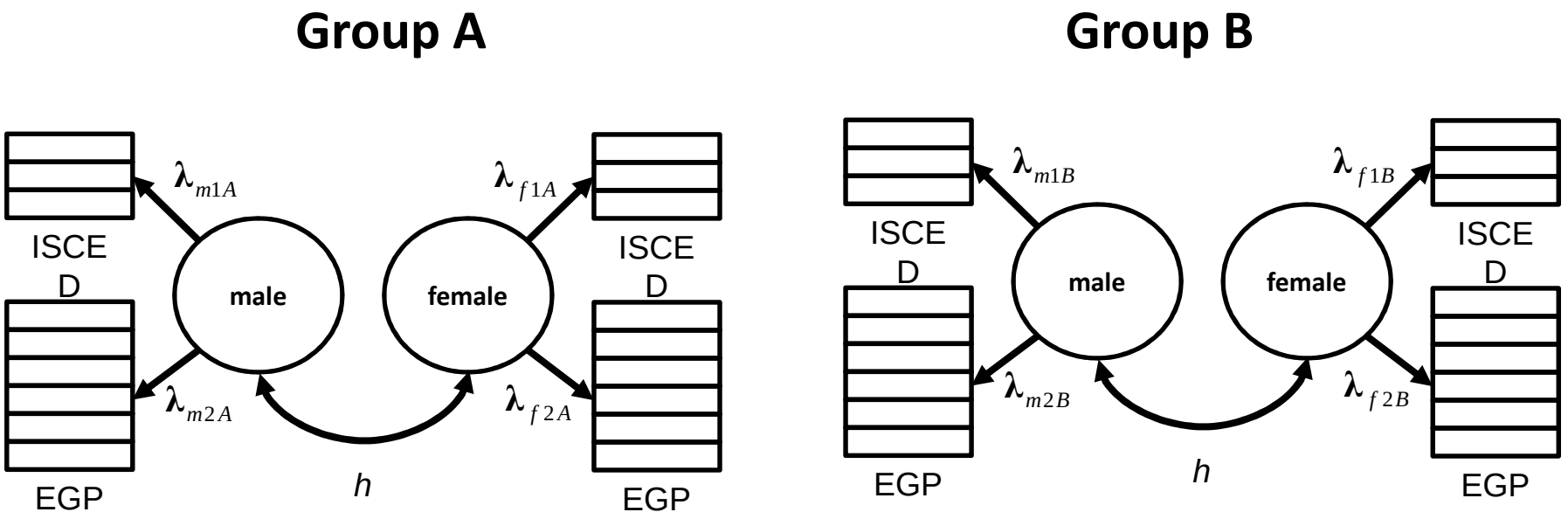
- Translates nominal indicators of social position into one dimensional continuous latent scale that describes social position
- Measure of homogamy is based on simple idea of correlation. High correlation between male and female factors indicates high homogamy
- Technical advantages: FML estimation = no problem of empty cells; smaller sample size
- Assumptions: conditional independence, unidimensionality

Homogamy indicators for ESS round 5

(with 10% CI)

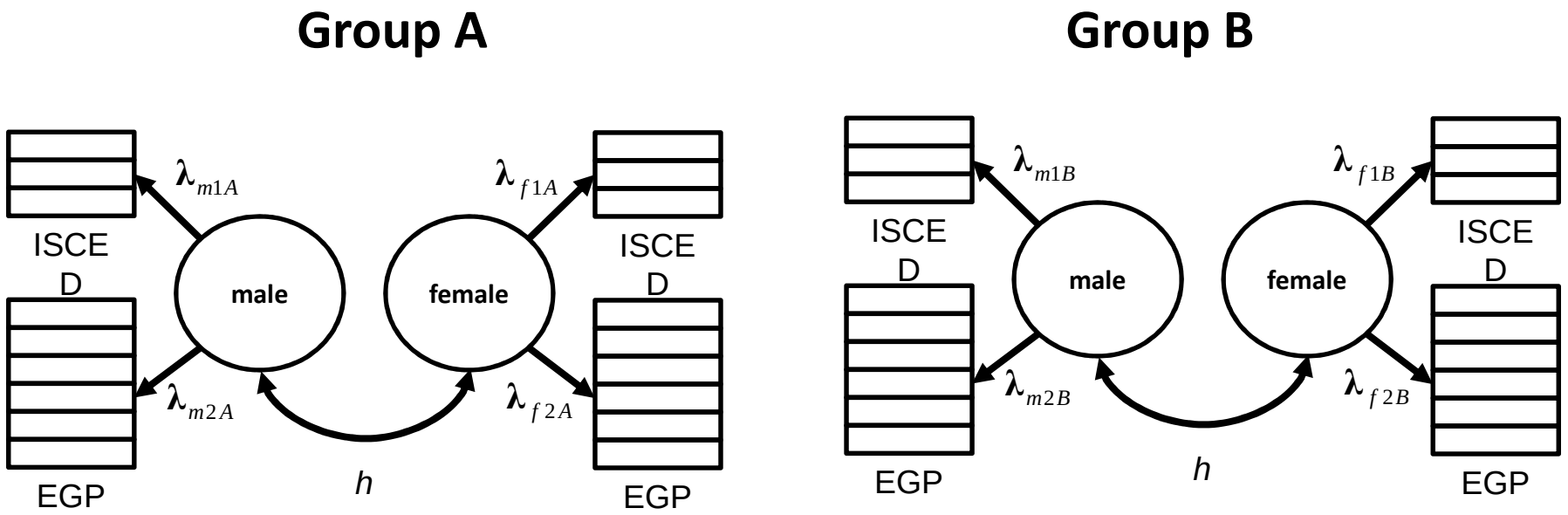


Multigroup 2D NRM



- Multigroup model allows for testing different hypothesis about comparability of social position scale and its indicators.
- Measurement invariance is not only methodological but also substantial issue.

Multigroup 2D NRM



$\lambda_{m1A} = \lambda_{m1B}$ $\lambda_{m2A} = \lambda_{m2B}$ $\lambda_{f1A} = \lambda_{f1B}$ $\lambda_{f2A} = \lambda_{f2B}$	**H1:** structure of social position (relation between ISCED and EGP) is the same among countries (time points)
$\lambda_{m1} = \lambda_{m2}$ $\lambda_{f1} = \lambda_{f2}$	**H2:** structure of social position is equally defined by ISCED and EGP
$\lambda_{m1} = \lambda_{f1}$ $\lambda_{m2} = \lambda_{f2}$	**H3**: structure of social position is the same for males and females

Comparability of structure of social position (H1)

- Structure of social position is defined here as the relation between EGP and ISCED in a group
- **H1:** structure of social position is the same among groups

H1a

- *Differences between countries homogamy arise <u>only</u> from processes operating in same structures of social positions*
- *There are differences in social structures that influences differences in homogamy*

H1b

- *Changes (or stability) in homogamy across time arise <u>only</u> from processes operating in same structures of social positions*
- *Some changes (or stability) in homogamy across time arise from changes in structures of social positions*

Comparability of structure of social position (H1)

H1a

- *Differences between countries homogamy arise only from processes operating in same structures of social positions*
- *There are differences in social structures that influences differences in homogamy*

Metric model

$$\lambda_{m1A} = \lambda_{m1B}$$
$$\lambda_{m2A} = \lambda_{m2B}$$
$$\lambda_{f1A} = \lambda_{f1B}$$
$$\lambda_{f2A} = \lambda_{f2B}$$

Configural model

$$\lambda_{m1A} \neq \lambda_{m1B}$$
$$\lambda_{m2A} \neq \lambda_{m2B}$$
$$\lambda_{f1A} \neq \lambda_{f1B}$$
$$\lambda_{f2A} \neq \lambda_{f2B}$$

Better fit

H1b

- *Changes (or stability) in homogamy across time arise only from processes operating in same structures of social positions*
- *Changes (or stability) in homogamy across time arise from differences changes in structures of social positions*

Metric model

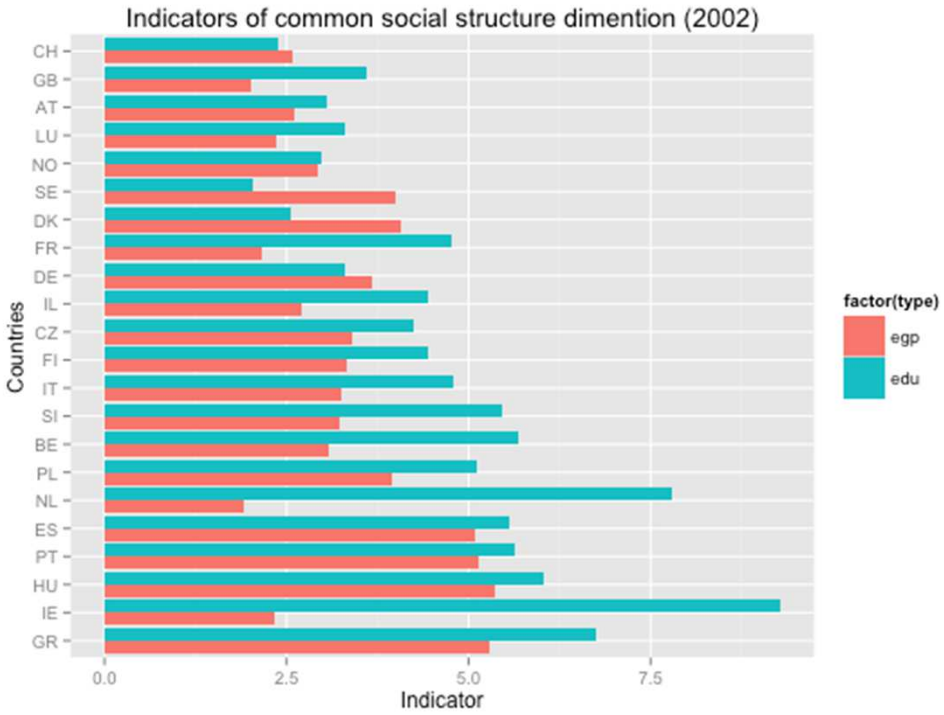
$$\lambda_{m1A} = \lambda_{m1B}$$
$$\lambda_{m2A} = \lambda_{m2B}$$
$$\lambda_{f1A} = \lambda_{f1B}$$
$$\lambda_{f2A} = \lambda_{f2B}$$

Better fit

Configural model

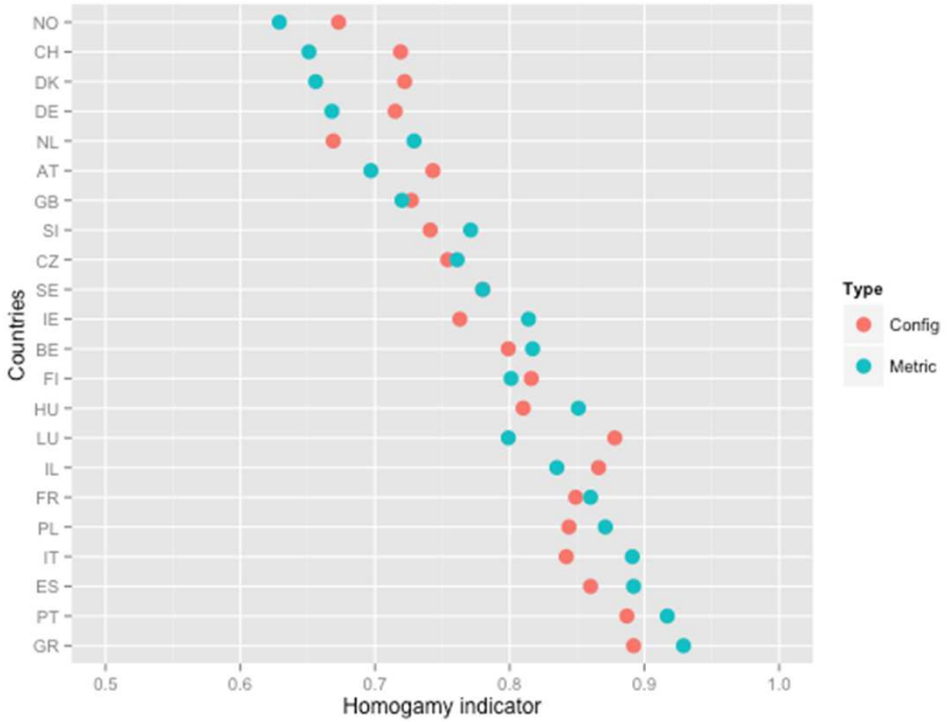
$$\lambda_{m1A} \neq \lambda_{m1B}$$
$$\lambda_{m2A} \neq \lambda_{m2B}$$
$$\lambda_{f1A} \neq \lambda_{f1B}$$
$$\lambda_{f2A} \neq \lambda_{f2B}$$

There are differences in social structures that influences differences in homogamy (1)



1. Common social structure position is defined differently in different countries.
2. In most countries (excluding Switzerland, Sweden, Denmark and Germany) impact of ISCED is greater than impact of EGP (see Netherlands and Israel as extremes)

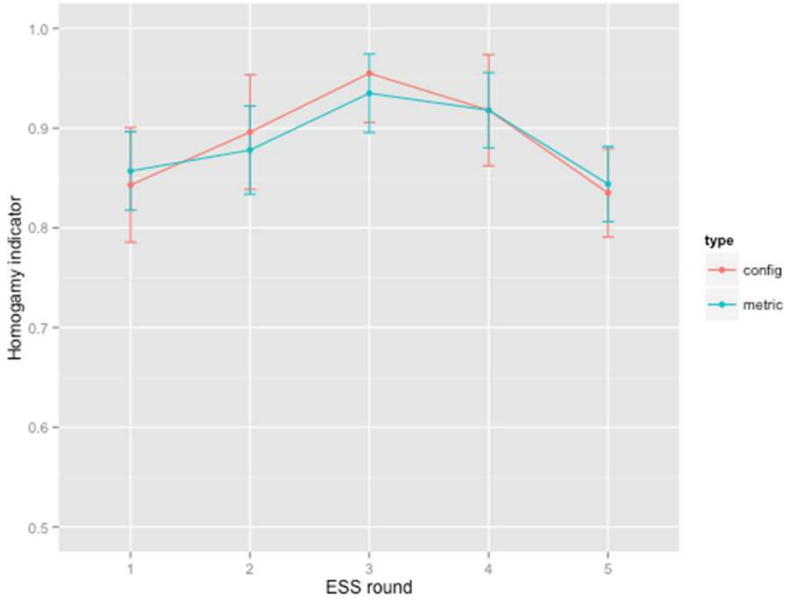
There are differences in social structures that influences differences in homogamy (2)



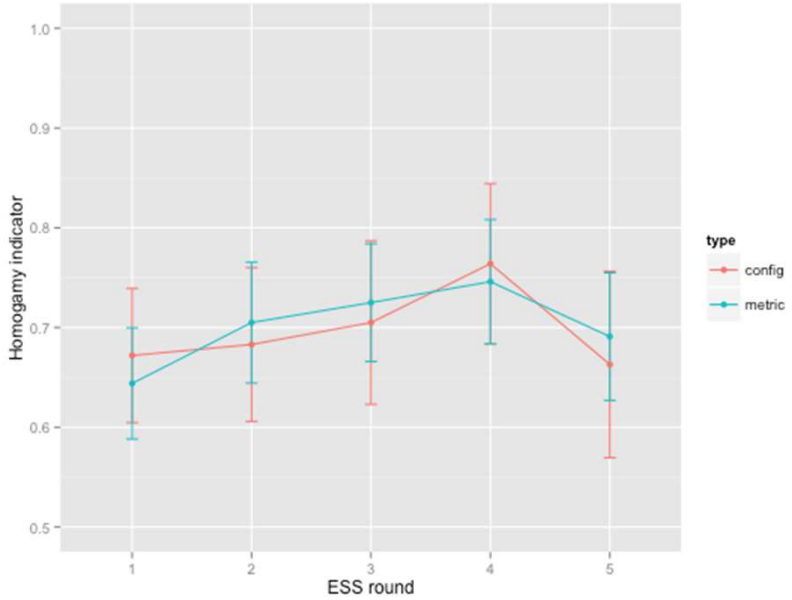
3. Cross-country variation of homogamy indicators would be slightly greater if common structure of social position would be imposed (fixed) .
4. Differences in structure of social position makes countries more similar to each others according to homogamy

Changes (or stability) in homogamy across time arise only from processes operating in same structures of social positions (1)

Poland



Norway



5. Structure of social position in countries is very similar across time. Metric and scalar models gives similar results of homogamy

CONCLUSIONS

1.As regards degree of social openness, it confirms that post-communist (but also Mediterranean) societies are slightly more closed than Western societies.

2. As regards patterns of homogamy, it confirms that the categories at the top and the bottom of stratification ladder are more closed than categories in the middle.

CONCLUSIONS

3. As regards patterns of marriage, cohabitation does not significantly affect marital homogamy according to educational and occupational level of spouses.

4. As regards structural underpinnings of marital selection, it shows educational levels more strongly affects marital choices than occupational position. This may be attributed to higher impact of educational capital resulting from socialization, schooling, and social networks in comparison with effect of occupational career.