

# Evaluation of Political Trust in the ESS

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# Outline

- Evaluation of concepts in the ESS
- Analyses of Political trust
  - Invariance test
- How SQP can help for exploring causes of invariance

# Evaluation of concepts in the ESS

- Cross cultural survey research requires that the **measures used to compare** groups of countries or populations **are comparable**
- In the ESS the methodological rigour at all stages of the survey design focuses on cross-country comparability.

# Evaluation of concepts in the ESS

- Permanent program on evaluation of concepts in the ESS
- Political trust is a concept widely used both as independent and dependent variable in substantive models.
- Worth to evaluate if the questions used to measure the concepts for political trust are equivalent or invariant =
- They are interpreted in the same way by all respondents regardless of their cultural context or national origin.

# Analysis of Political trust

Using this card, please tell me on a score of 0-10 how much you personally trust each of the institutions I read out. 0 means you do not trust an institution at all, and 10 means you have complete trust. Firstly...

	<i>No trust</i>										<i>Complete</i>
	<i>at all</i>										<i>trust</i>
<b>B4</b> ...[country]'s parliament?	00	01	02	03	04	05	06	07	08	09	10
<b>B5</b> ...the legal system?	00	01	02	03	04	05	06	07	08	09	10
<b>B6</b> ...the police?	00	01	02	03	04	05	06	07	08	09	10
<b>B7</b> ... politicians?	00	01	02	03	04	05	06	07	08	09	10
<b>B8</b> ... political parties?	00	01	02	03	04	05	06	07	08	09	10

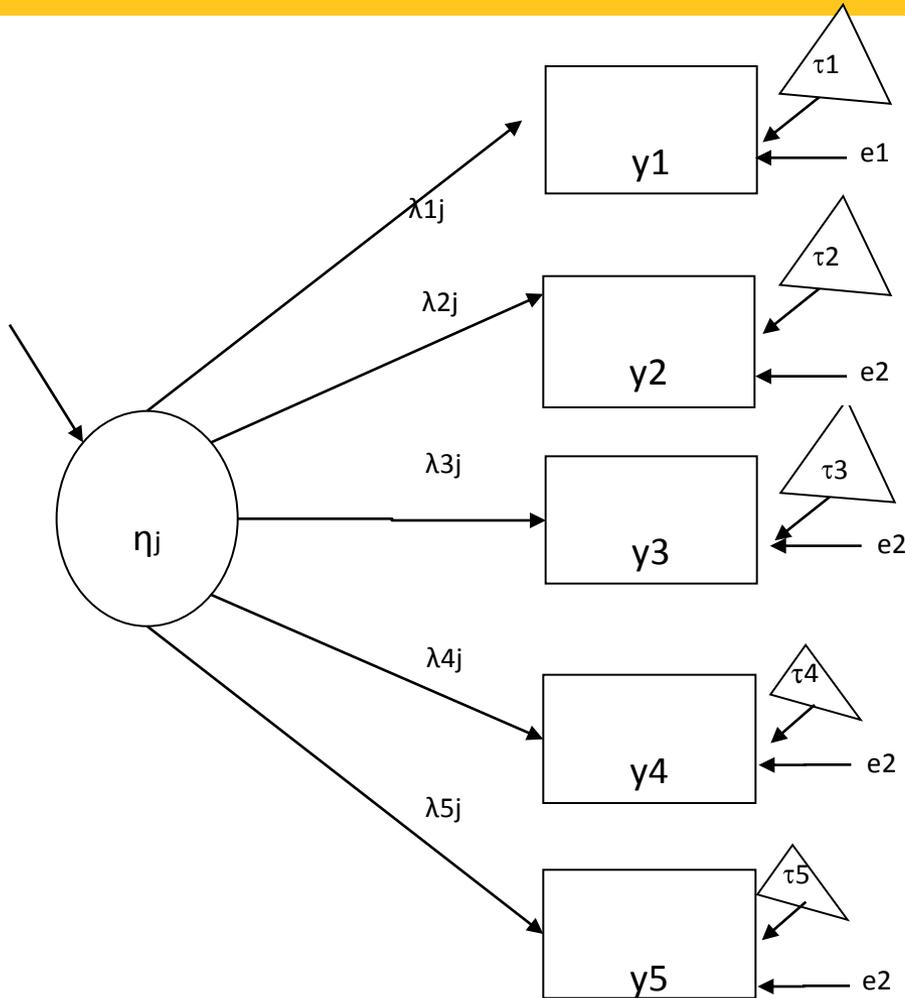
# Analysis of Political trust

- In each round about 25 countries and 30 different language versions are used in the ESS
- A previous study of the MTMM experiments in R2 of political trust shows that the quality of the measures is different for different linguistic groups.
- Cross-cultural analysis where the minority languages included more than 80 cases (Round 2 to Round 5).

# Testing invariance: CFA

- **Configural invariance.** Tests if the factor structure is the same across groups or in other words if the same model holds for all countries/cultures under comparison.
- **Metric invariance.** Factor loadings ( $\lambda$ ) are assumed invariant in all countries. If holds, comparisons of relationships can be made.
- **Scalar invariance.** Requires equality of intercepts ( $\tau$ ) across countries. If holds also the means can be compared.

# The first model proposed



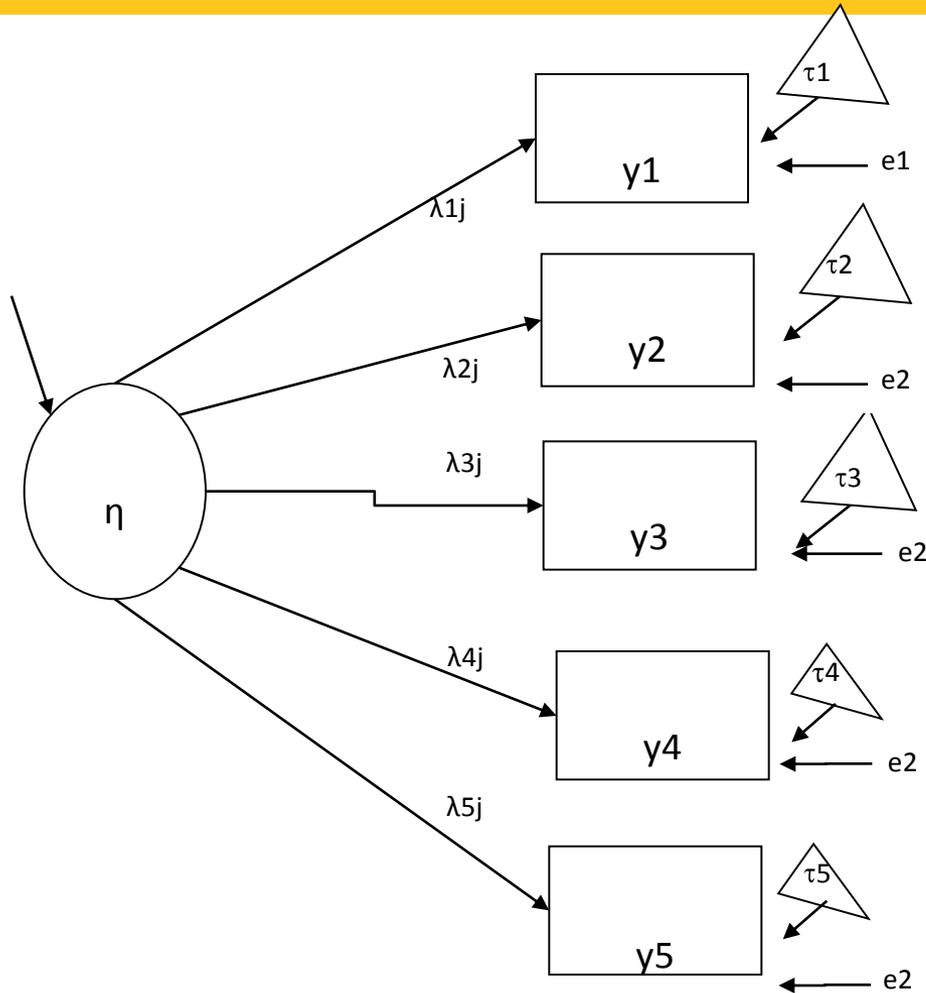
$$\begin{aligned}y_{1j} &= \tau_{1j} + \lambda_{1j}\eta_j + e_{1j} \\y_{2j} &= \tau_{2j} + \lambda_{2j}\eta_j + e_{2j} \\y_{3j} &= \tau_{3j} + \lambda_{3j}\eta_j + e_{3j} \\y_{4j} &= \tau_{4j} + \lambda_{4j}\eta_j + e_{4j} \\y_{5j} &= \tau_{5j} + \lambda_{5j}\eta_j + e_{5j}\end{aligned}$$

$$E(e_i) = E(e_i \eta_j) = E(e_i e_j) = 0 \text{ for } i \neq j$$

$\eta$  = Political trust

$y_1$  = Trust in the Parliament  
 $y_2$  = Trust in the legal system  
 $y_3$  = Trust in the police  
 $y_4$  = Trust in the politicians  
 $y_5$  = Trust in the Political parties

# The second model proposed



$$y_{1j} = \tau_{1j} + \lambda_{1j}\eta_j + e_{1j}$$
$$y_{2j} = \tau_{2j} + \lambda_{2j}\eta_j + e_{2j}$$

$$y_{4j} = \tau_{4j} + \lambda_{4j}\eta_j + e_{4j}$$
$$y_{5j} = \tau_{5j} + \lambda_{5j}\eta_j + e_{5j}$$

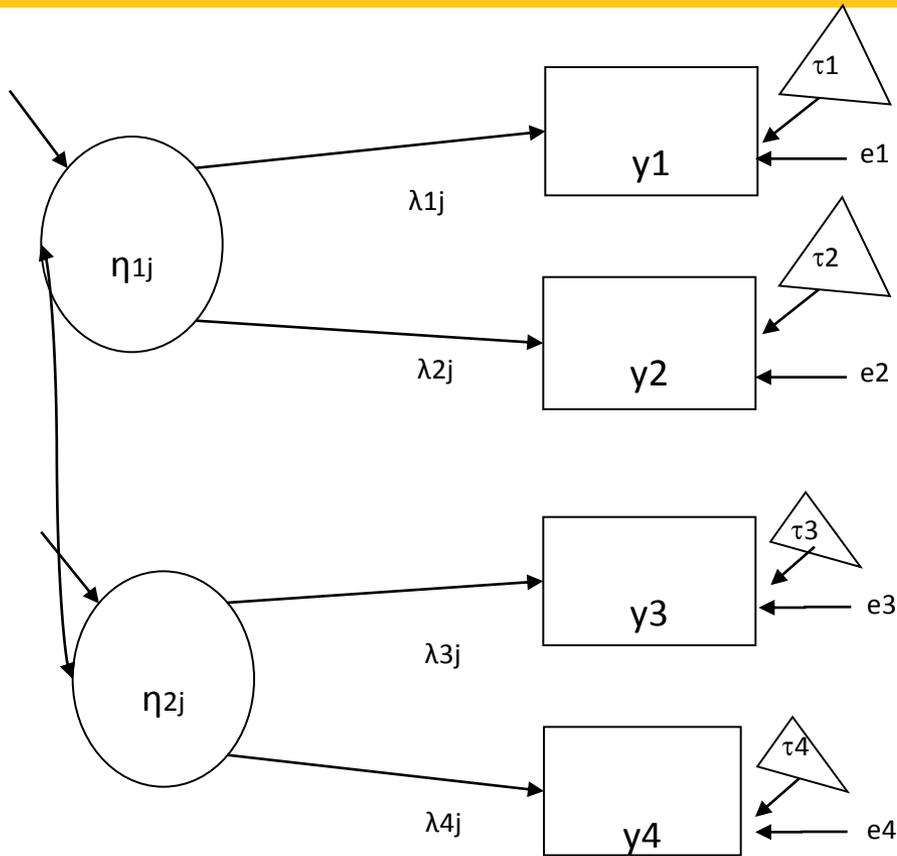
$$E(e_i) = E(e_i | \eta_j) = E(e_i e_j) = 0 \text{ for } i \neq j$$

$\eta$  = Political trust

$y_1$  = Trust in the Parliament  
 $y_2$  = Trust in the legal system

$y_4$  = Trust in the politicians  
 $y_5$  = Trust in the Political parties

# The third model proposed



$$y_{1j} = \tau_{1j} + \lambda_{1j}\eta_{1j} + e_{1j}$$
$$y_{2j} = \tau_{2j} + \lambda_{2j}\eta_{1j} + e_{2j}$$

$$y_{3j} = \tau_{3j} + \lambda_{3j}\eta_{2j} + e_{3j}$$
$$y_{4j} = \tau_{4j} + \lambda_{4j}\eta_{2j} + e_{4j}$$

$$E(e_i) = E(e_i \eta_j) = E(e_i e_j) = 0 \text{ for } i \neq j$$

$\eta_{1j}$  = Trust in institutions

$\eta_{2j}$  = Trust in authorities

$y_1$  = Trust in the Parliament

$y_2$  = Trust in the legal system

$y_3$  = Trust in the politicians

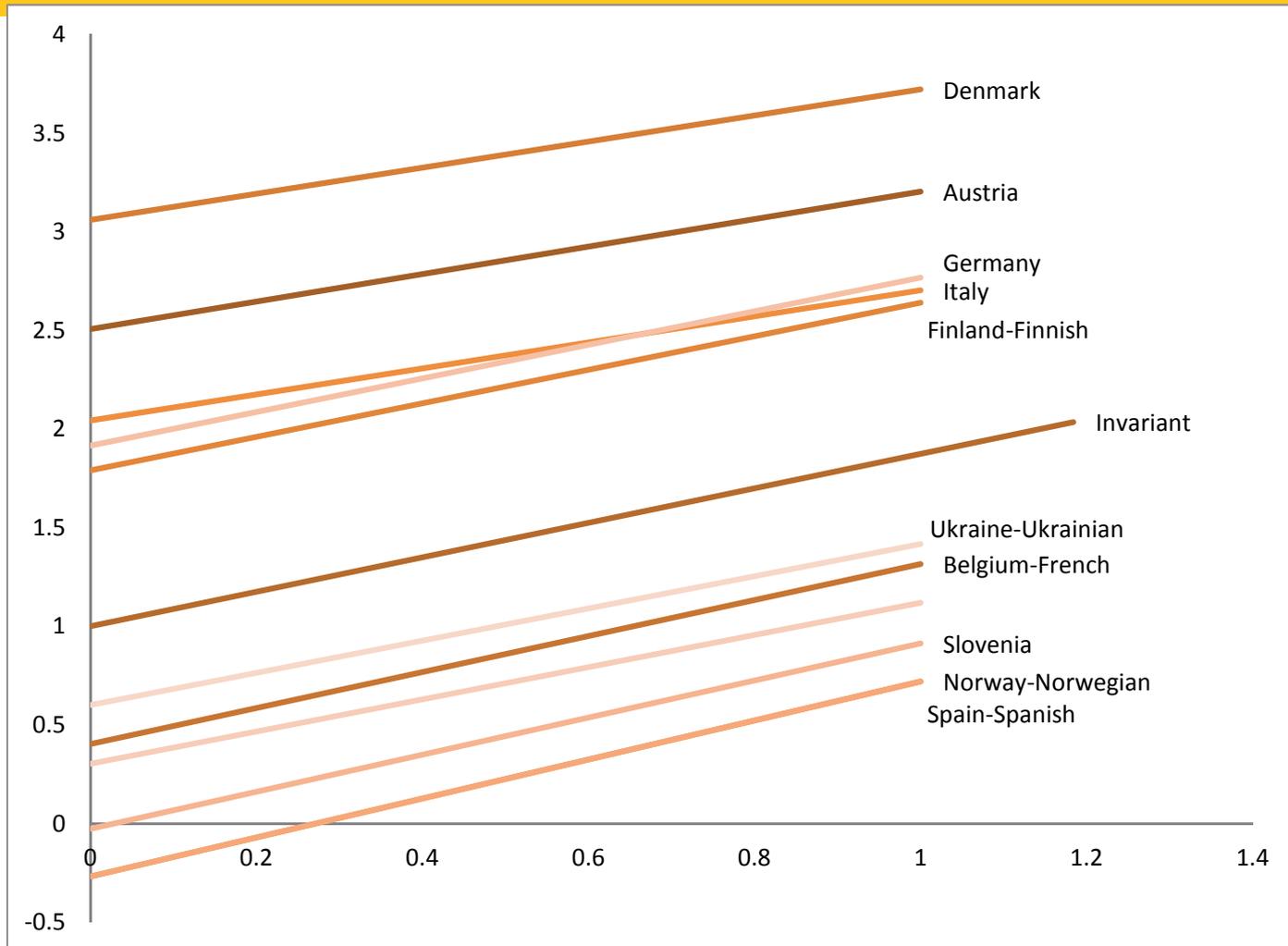
$y_4$  = Trust in the Political parties

# Metric Invariance

	R2 $\lambda_{\text{trust}}$ institutions	R3 $\lambda_{\text{trust}}$ institutions	R4 $\lambda_{\text{trust}}$ institutions	R5 $\lambda_{\text{trust}}$ institutions
Invariant groups	.851 (.006)	.816 (.006)	.836 (.005)	.807(.005)
Austria	.697 (.025)	.626 (.026)	*	*
Belgium – French	.912 (.051)	-	.994(.054)	-
Denmark	.661 (.032)	.483 (.03)	.668(.031)	.531(.027)
Finland- Finnish	-	.627 (.025)	.659(.024)	.591(.023)
Finland- Swedish	-	-	.409(.11)	.283(.13)
Italy	.66 (.036)	*	*	*
Israel - Arabic	*	*	.409(.107)	.458(.075)
Norway	.688 (.029)	.608 (.027)	.629(.028)	.675(.029)
Spain – Spanish	.987 (.041)	-	.999(.039)	-
Slovenia	.94 (.036)	-	-	.995(.028)

Invariant countries	1.184 (.028)	1.263 (.031)	1.34 (.025)	1.48(.022)
Austria	2.506 (.128)	2.936 (.132)	*	*
Belgium – French	.403 (.245)	-	.406(.259)	-
Denmark	3.06 (.204)	4.361 (.199)	2.94(.241)	4.249(.164)
Finland- Finnish	1.789(.056)	3.283 (.154)	3.153(.15)	3.739(.127)
Finland- Swedish	-	2.26(.13)	4.674(.13)	5.671(.832)
Italy	2.042 (.161)	*	*	*
Israel - Arabic	-	-	4.835(.454)	4.231(.312)
Norway-Norwegian	2.621 (.166)	3.114(.158)	3.125 (.167)	2.784(.18)
Spain – Spanish	-.268 (.212)	-	-.642(.2)	-
Slovenia	-.028 (.161)	-	.582(.059)	.121(.094)
Germany	1.915(.047)	2.115(.048)	1.822(.047)	2.167(.044)
Ukraine-Russian	.017 (.068)	.303(.066)	.482(.06)	.505(.051)
Ukraine-Ukrainian	-.527(.297)	.601(.071)	.416(.069)	.48(.107)
Bulgaria	*	.671(.057)	.654(.04)	.575(.043)
Israel- Hebrew	*	*	2.099(.059)	2.3(.061)
Latvia-Latvian	*	*	2.384(.063)	*
Latvia-Russian	*	*	2.218(.102)	*
Romania	*	*	.585(.045)	*
Croatia	*	*	.598(.047)	-

# Invariance in R2: an illustration

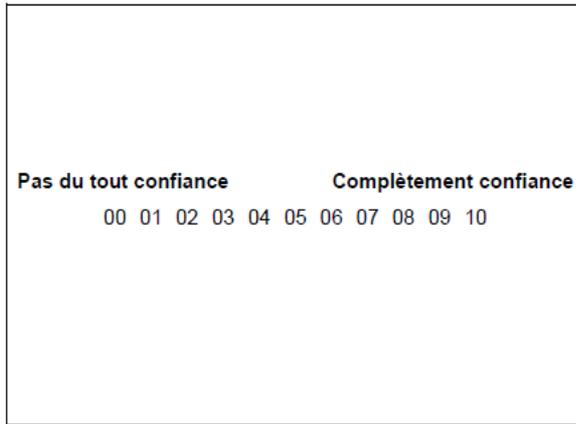


# Exploring reasons of non-invariance using SQP codings

- Belgium French: reference to the Federal Belgian Parliament not present in Dutch.
- More complex item in linguistic characteristics (nouns, words, abstract nouns)
- Different layout of showcards
- In other cases there is an inconsistent use of Country's parliament (legal system) and the name of the specific institution

# Exploring invariance

CARTE 8



KAART 8

*Helemaal  
geen  
vertrouw  
en*

*Volledig  
vertrouwen*

0 1 2 3 4 5 6 7 8 9 10



 Deuxième vague 2004 – Belgique francophone



# Conclusions

Testing invariance is important before starting comparisons in cross-cultural research

One should also keep in mind the size of the bias.

The ESS makes a systematic exercise of testing invariance on its core concepts (WP12-DACE)

SQP can be used to explore possible differences in the instruments that may cause invariance because provides systematic information on the characteristics

# RECSM

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