Associations between Social Trust and Human Values across Europe

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Outline

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   - Measurement
   - Conceptual Confusion
2. **Schwartz‘ Human Values and their expected the relations with social trust**
3. **Establishing Measurement invariance**
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   - Latent Social Trust Levels (MGCFA)
4. **Associations of Trust with Schwartz‘ Human Values**
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5. **Controlling for Covariates and Explaining Variation between Countries (Multilevel Models)**
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Challenges of Comparative Research on Social Trust (1): Empirical Findings

Predictors of trust are cross-nationally different (e.g. Gabriel et al. 2002; Delhey & Newton 2003; Freitag & Bühlmann 2005; Kaasa & Parts 2008; Neller 2008)

- Explanatory power of individual level approaches varies considerably across countries (Education, Income, Well-Being, Religious Affiliation, Social Networks)

The Radius Problem as one explanation for variation:

- radius of trust, i.e. the range of people respondents have in mind when they think of relevant others to trust, varies markedly over countries (Delhey et al. 2011).

Challenges of Comparative Research on Social Trust (2): Measurement

High stochastic errors in studies applying a single indicator measurement of Social Trust

- Low R^2 at individual level

Establish measurement invariance on a latent Social Trust indicator

- Reskeens & Hooghe (2008) provide evidence that it is error-prone to measure trust by single variables and composite scores of the common generalized trust questions

Lack of Measurement equivalence as second explanation for variation of predictors across countries

Challenges of Comparative Research on Social Trust (3): Conceptual Ambiguity

Social trust is still lacking an established theory or generally accepted model for the foundation of Social Trust so far (Nannestad 2008)

Rational Concepts

- Logic of Consequentiality
- Trust rests on the costs-benefit-calculation under consideration of the trustworthiness of the Others
- Based-on experiences, permanently adjusted

Norm-Driven Concepts

- Logic of Appropriateness
- "general outlook on human nature" (Uslaner 2002)
- Inherited through socialization
- One should judge strangers as trustworthy and be trustful

Trust depends on Norms and Values

Trust is influenced by moral norms, values and attitudes which depend on culture (Fukuyama 1995; Seligman 1997; Sztompka 1999; Uslaner 2002)

> *"This concept describes a condition when, apart from rational calculations of trustworthiness, […] people not only routinely tend to, but are culturally encouraged to express a trustful orientation toward their […] fellow citizens." (Sztompka 1998: 21)*

Not only a normative commandment to behave trustworthy, but also trustful: be open-minded to people in general and assume their honesty and goodwill

> *"[M]oralistic trust is a commandment to treat people as if they were trustworthy."*
> *(Uslaner 2002: 17f)*

This optimistic view on human nature is internalized in early adolescence through moral role models

Investigating Norm-driven Social Trust

If we want to know, whether trust is normatively grounded, we should not only inquire the trustworthiness of the people around, but rather which norms or values go along with trust on the individual level!

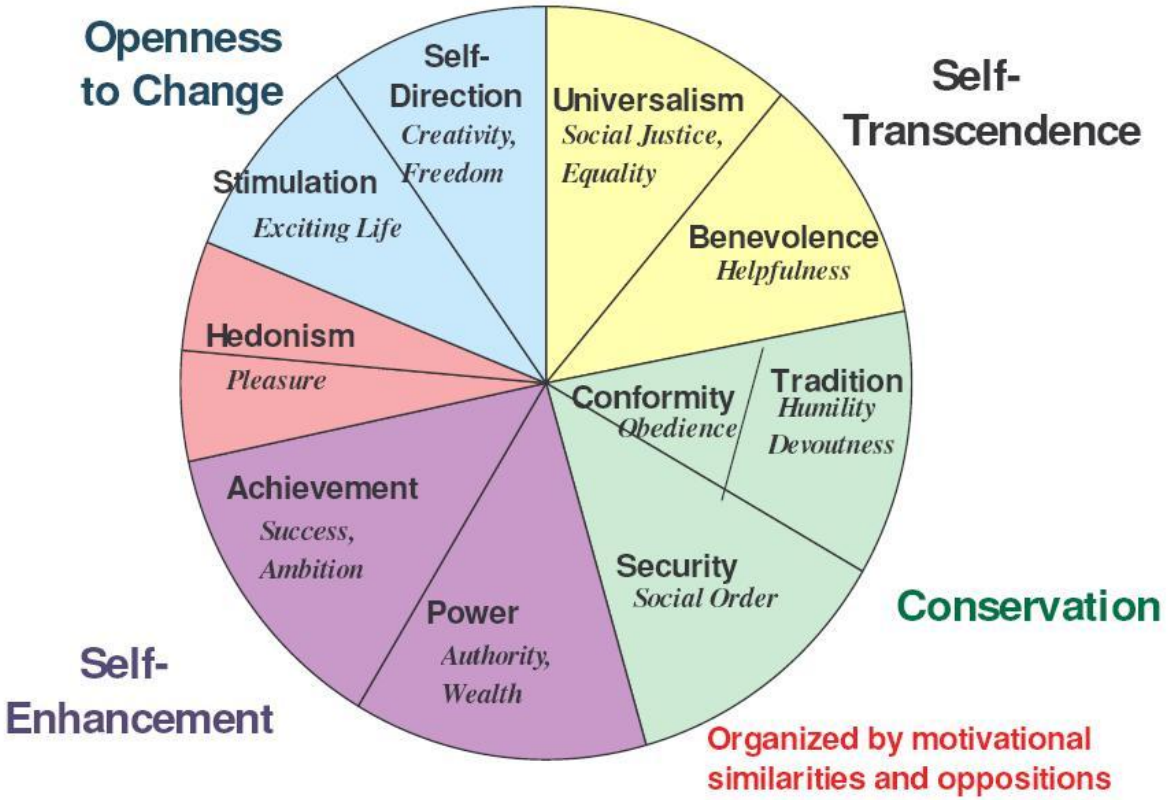
Associations of Social Trust and Norms:

- Strong Evidence at the aggregate level, but little on the individual level

Associations of Trust and Values:

- Individualism (Yamagishi & Yamagishi 1994; Gheorghiu et al. 2009)

Schwartz' Human Values and their expected the relations with social trust



Value Dimensions (Abbrev.)	Direction of expected Relation with Trust	Sort of Trust
POWER (PO): Social status and prestige, control or dominance over people and resources	(+/-)	
ACHIEVEMENT (AC): Personal success through demonstrating competence according to social standards	(+/-)	
HEDONISM (HE): Pleasure and sensuous gratification for oneself	(+/-)	
STIMULATION (ST): Excitement, novelty, and challenge in life	(+/-)	
SELF−DIRECTION (SD): Independent thought and action-choosing, creating, exploring	(+/-)	
UNIVERSALISM (UN): Understanding, appreciation, tolerance and protection for the welfare of all people and for nature	**(+)**	**Norm-driven**
BENEVOLENCE (BE): Preservation and enhancement of the welfare of people with whom one is in frequent personal contact	**(+)**	**Norm-driven**
TRADITION (TR): Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide the self	(+/-)	
CONFORMITY (CO): Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms	(+/-)	
SECURITY (SE): Safety, harmony and stability of society, of relationships, and of self	**(-)**	**Rational**

Establishing measurement invariance with MGCFA: Levels of Measurement Invariance

Configural Invariance

- Equal factor structure

Metric Invariance

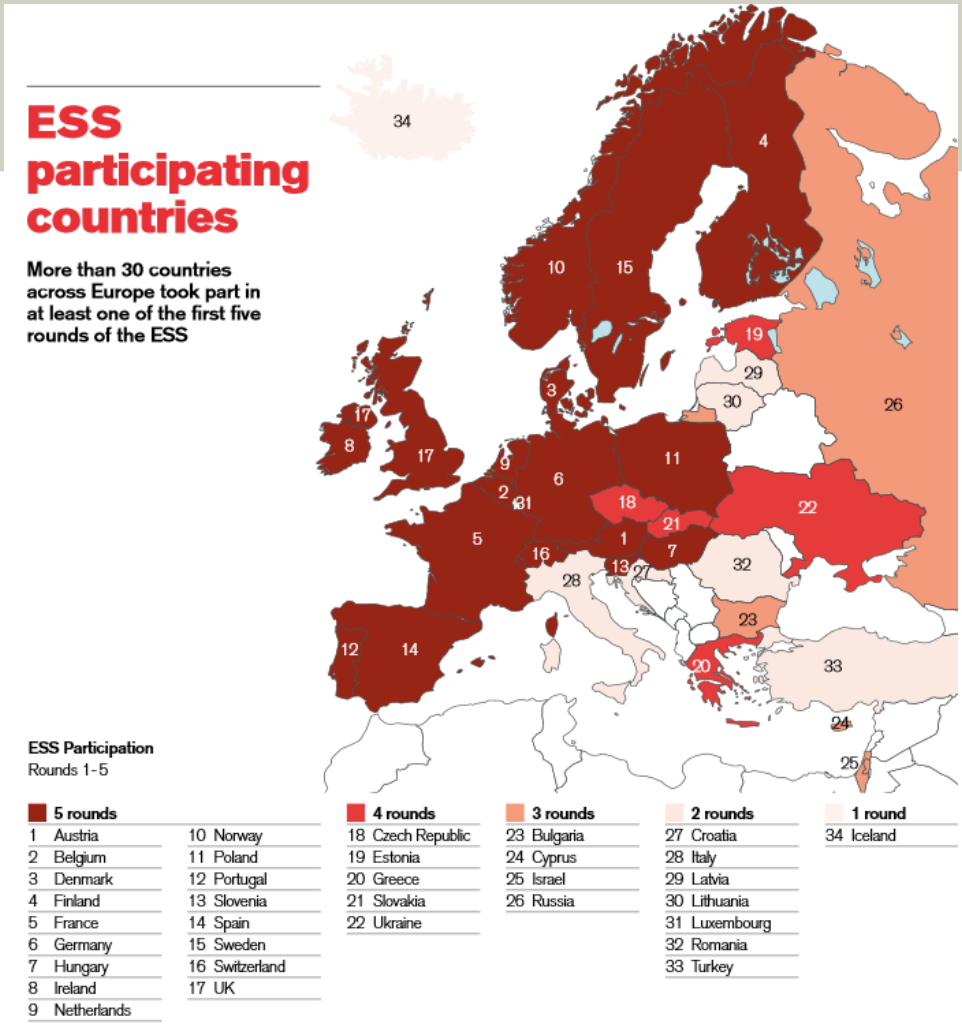
- Equal factor loadings: allows interpretation of covariation

Scalar Invariance

- Equal item intercepts: allows interpretation of latent means

Data

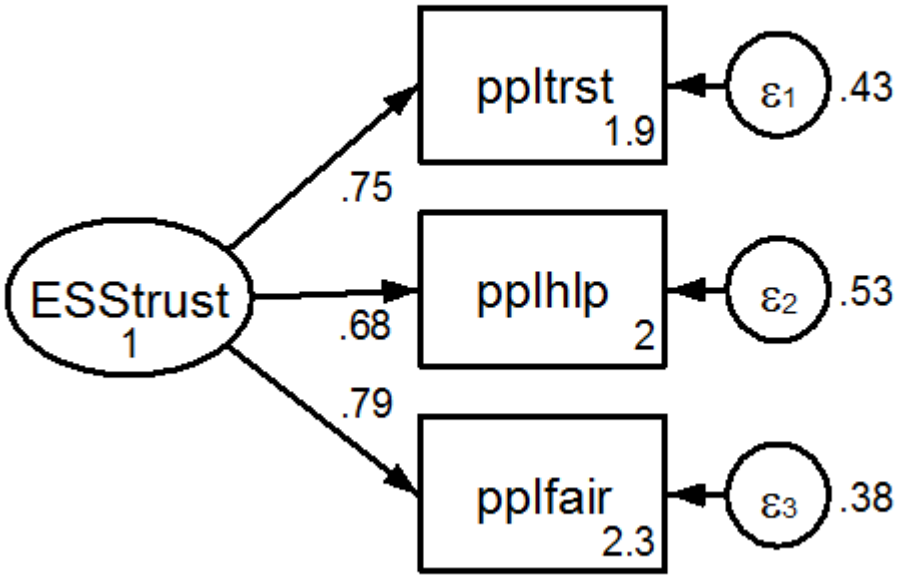
- European Social Survey
- Five Waves (2002-2010)
- Potentially 34 countries



Dependent Variable – Social Trust

Varname	*Survey Question (0 – 10)*
ppltrst	*"Generally speaking, most people can be trusted or that one cannot be too careful in dealing with people"*
pplfair	*"Do you think that most people would try to take advantage of you if they got the chance, or would they try to be fair?"*
pplhlp	*"Would you say that most of the time people try to be helpful or that they are mostly looking out for themselves?"*

Measurement Model Generalized (Social) Trust



Model fit

Modell	Chi²	df	CFI	TLI	RMSEA	SRMR
Configural Invariance (ppltrst & pplfair fixed to 1)	323.231	33	0.998	0.994	0.035	0.011
Metric Invariance	993.826	64	0.994	0.991	0.045	0.022
Scalar Invariance	12309.219	128	0.922	0.940	0.116	0.058
Partial Scalar Invariance	6726.058	124	0.958	0.966	0.086	0.045

ESS (Pooled Countrywaves (N=33); N(individual)= 235283. For Partial Scalar Invariance a different intercept for pplhlp was calculated for GB and IE, for pplfair for FR; for ppltrst for GR. .

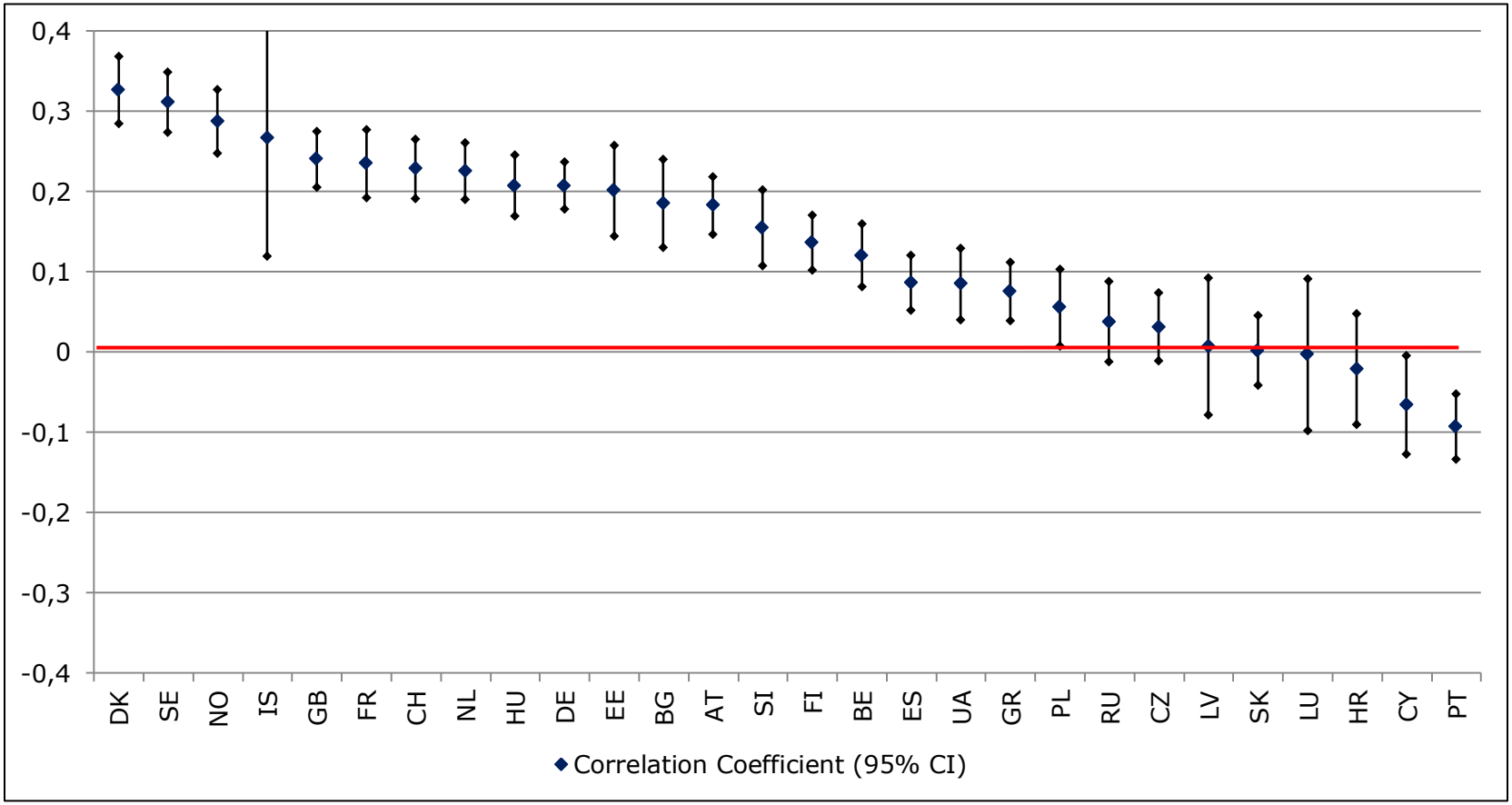
Levels of Social Trust (Latent variable)

Country	Pooled Waves	2002	2004	2006	2008	2010
DK	1.10	1.23	1.07	1.23	1.17	1.20
NO	1.01	1.07	1.08	1.17	1.05	1.11
IS	0.88		0.96			
FI	0.84	0.89	0.97	0.99	0.86	0.91
SE	0.70	0.73	0.62	0.81	0.87	0.88
CH	0.41	0.38	0.53	0.59	0.46	0.48
NL	0.39	0.36	0.44	0.43	0.48	0.67
IE	*0.11*	*0.19*	*0.39*	*0.12*	*0.24*	*0.01*
EE	0.04		-0.05	0.02	0.14	0.31
AT	0.00	0.00	0.10	0.08		
GB	*-0.03*	*-0.08*	*-0.01*	*0.12*	*0.04*	*0.09*
LU	-0.09		-0.03			
DE	-0.10	-0.07	-0.08	-0.04	0.05	-0.01
BE	-0.13	-0.15	-0.18	-0.04	0.06	0.03
IL	-0.17	-0.22			-0.01	-0.08
ES	-0.27	-0.23	-0.26	-0.16	-0.22	-0.13
LT	-0.27					-0.22
LV	-0.30				-0.24	
CZ	-0.40	-0.42	-0.43		-0.25	-0.30
FR	*-0.49*	*-0.45*	*-0.40*	*-0.41*	*-0.40*	*-0.46*
SI	-0.53	-0.53	-0.49	-0.44	-0.33	-0.55
HU	-0.55	-0.54	-0.65	-0.41	-0.53	-0.34
HR	-0.55				-0.59	-0.41
RU	-0.55			-0.58	-0.47	-0.44
CY	-0.56			-0.50	-0.35	-0.70
UA	-0.60		-0.50	-0.60	-0.58	-0.54
SK	-0.62		-0.72	-0.48	-0.55	-0.56
PT	-0.72	-0.59	-0.77	-0.54	-0.71	-0.70
PL	-0.80	-0.92	-0.95	-0.70	-0.63	-0.48
RO	-0.85				-0.81	
BG	-0.86			-0.77	-0.83	-0.81
GR	*-1.09*	*-1.14*	*-1.03*		*-1.02*	*-0.97*
TR	-1.13		-0.98		-1.16	

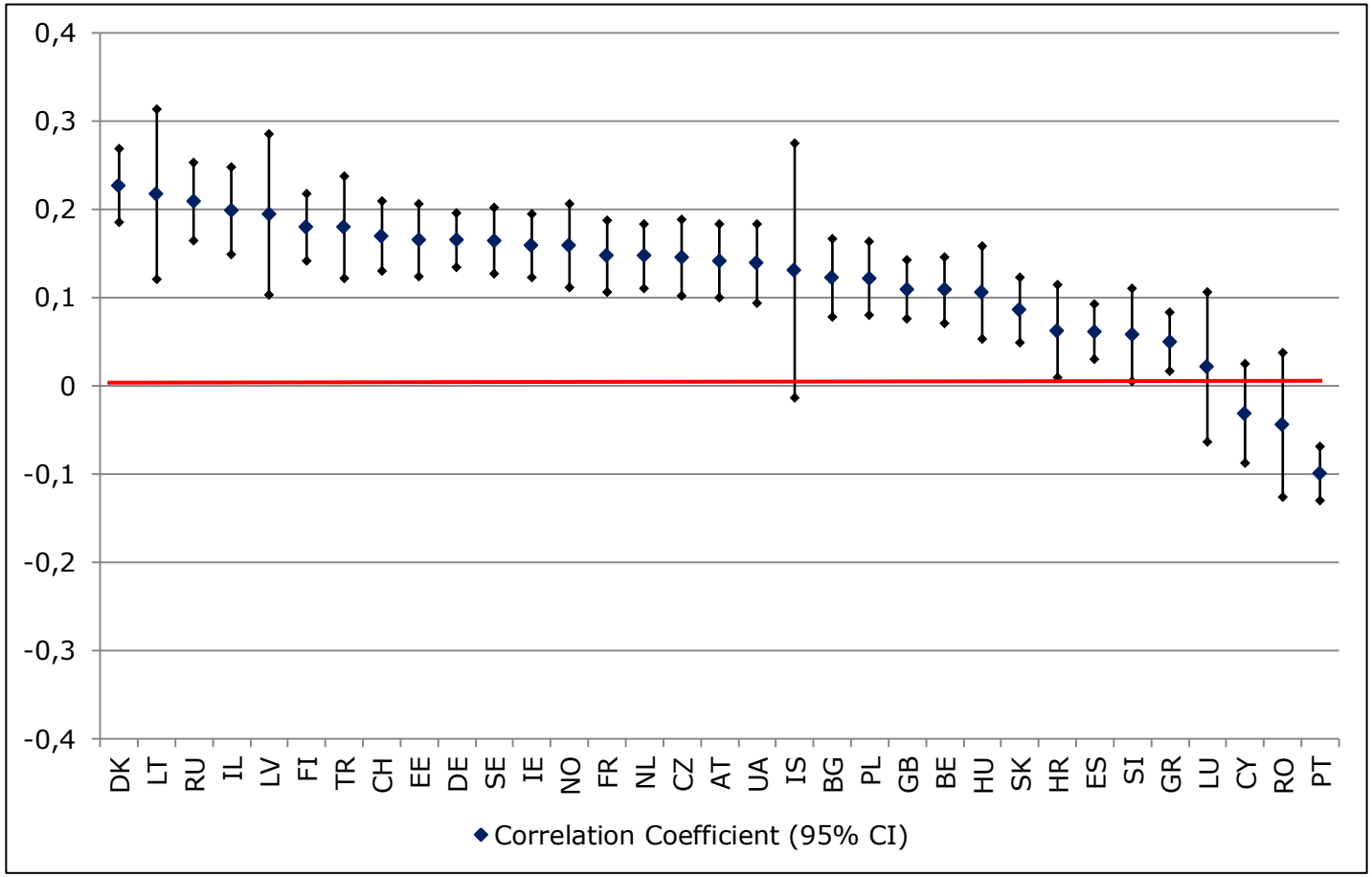
Associations of Trust with Schwartz‘ Human Values
Model Fit – Metric Invariance

Modell	Chi²	df	CFI	NFI	RMSEA	SRMR
Universalism and Social Trust (Metric Invariance)	2262.305	332	0.988	0.985	0.028	0.022
Benevolence and Social Trust (Metric Invariance)	1720.413	228	0.991	0.987	0.030	0.019
Openness and Social Trust (Metric Invariance)	4369.020	412	0.980	0.975	0.037	0.027
Self-Enhancement and Social Trust (Metric Invariance)	4712.177	412	0.979	0.974	0.039	0.028
Security and Social Trust (Metric Invariance)	2733.456	221	0.986	0.979	0.040	0.023

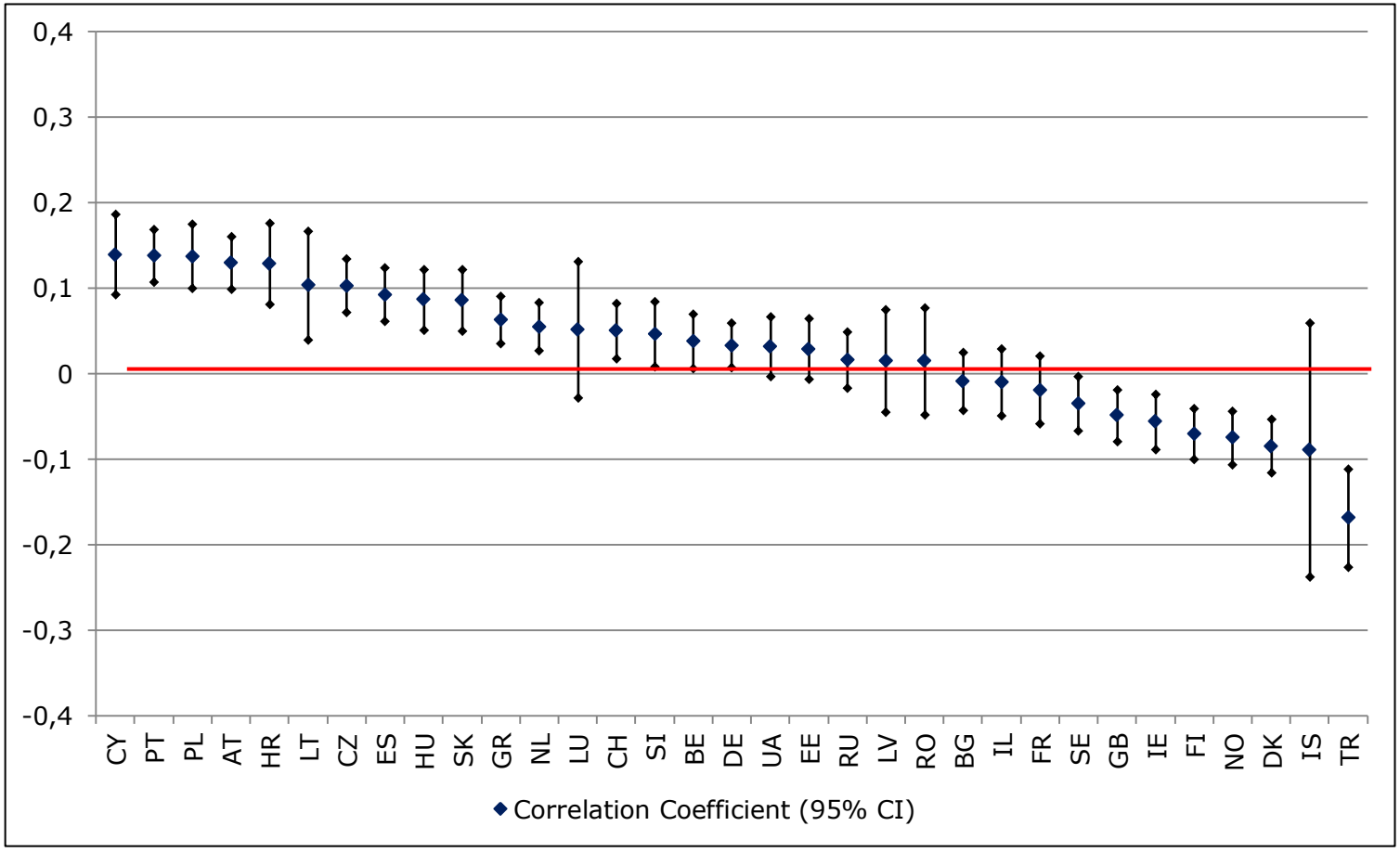
Correlation Social Trust vs. Universalism



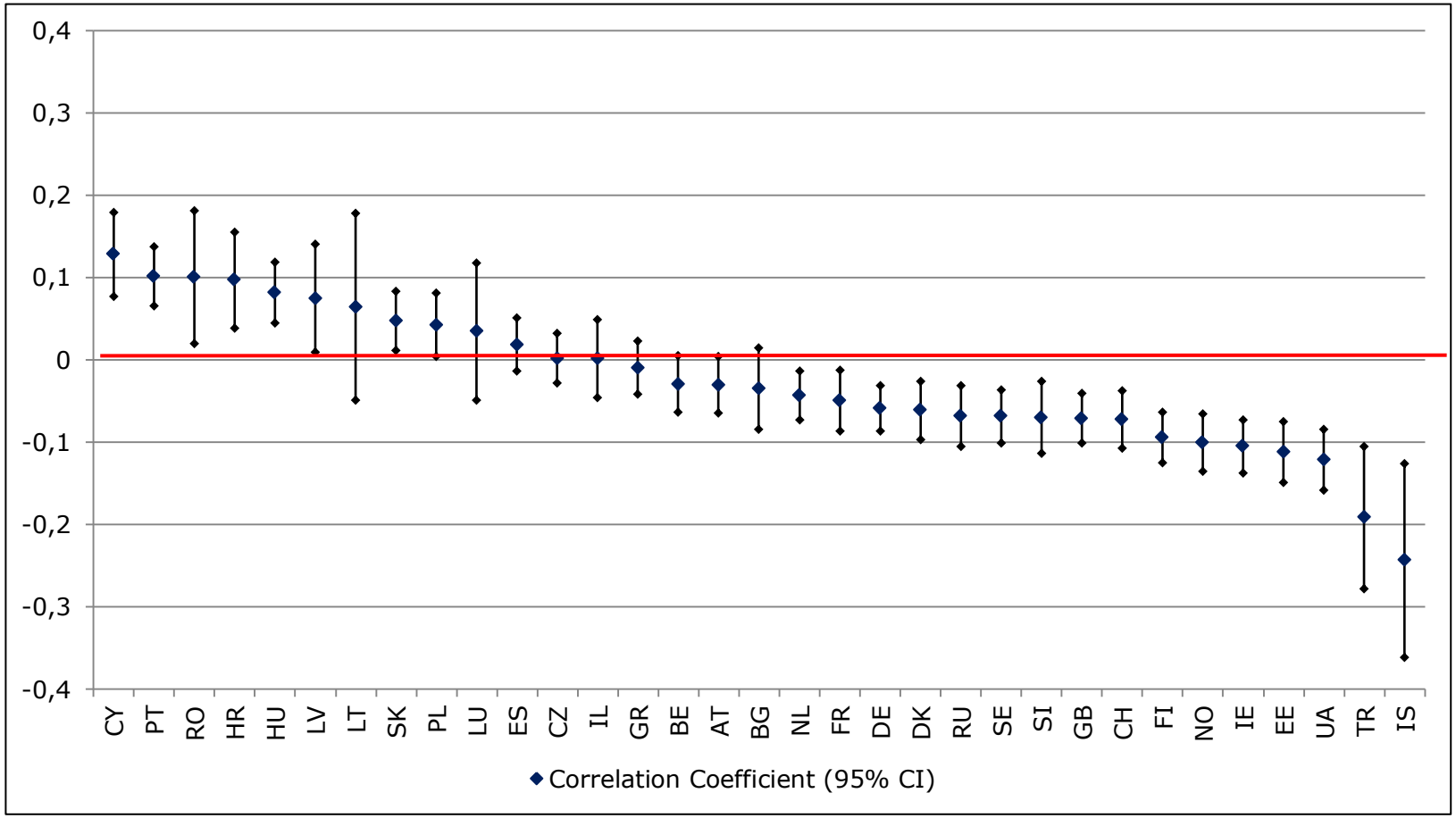
Correlation Social Trust vs. Benevolence



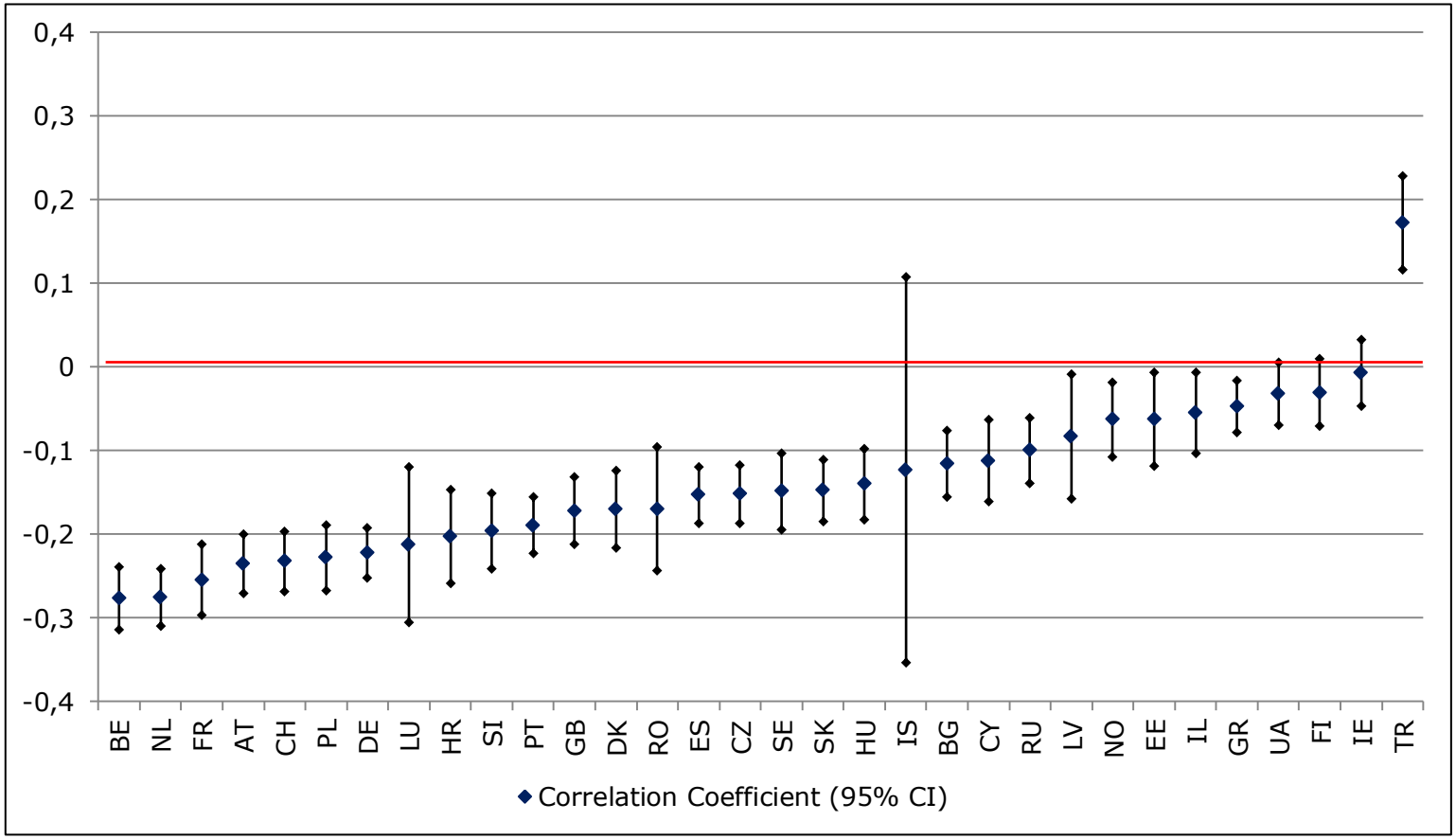
Correlation Social Trust vs. Openness



Correlation Social Trust vs. Self-Enhancement



Correlation Social Trust vs. Security



Universalism

	(1)	(2)	(3)	(4)
Individual level				
Controls	yes	yes	yes	yes
Universalism	0.166***	0.164***	0.163***	0.162***
Country level				
GDP	0.001	0.001	0.001	0.001
GINI	-0.011***	-0.011***	-0.011***	-0.011***
Socialist Legacy	-0.276	-0.276	-0.275	-0.320*
Share of Protestants in %	0.019***	0.019***	0.019***	0.018***
Cross-Level Interaction				
GINI*Universalism		-0.001*		
GDP*Universalism			0.001***	
Constant	0.161*	0.160*	0.160*	0.179*
N(individual)	174,671	174,671	174,671	174,671
N(country)	25	25	25	25
Variance (Intercept)	0.0889	0.0889	0.0889	0.0893
Std. Dev. (Slope)				0.115***
Corr(Intercept, Slope)				0.232
Variance (Residuals)	0.609	0.609	0.609	0.602
ICC	0.127	0.128	0.127	0.129
df	-204558	-204556	-204552	-203607
-2LL	32	33	33	32

*** p<0.001, ** p<0.01, * p<0.05; unstandardized regression coefficients;controlled for ESS-Round in all models. Main effects included, remain stable.

Benevolence

	(1)	(2)	(3)	(4)
Individual level				
Controls	yes	yes	yes	yes
Benevolence	0.127***	0.127***	0.128***	0.147***
Country level				
GDP	0.003**	0.003**	0.003**	0.002*
GINI	-0.012***	-0.012***	-0.012***	-0.013***
Socialist Legacy	-0.204	-0.206	-0.204	-0.184
Share of Protestants in %	0.020***	0.020***	0.020***	0.021***
Cross-Level Interaction				
GINI*Benevolence		-0.005***		
GDP*Benevolence			-0.001***	
Constant	0.109	0.108	0.11	0.097
N(individual)	194,925	194,925	194,925	194,925
N(country)	28	28	28	28
Variance (Intercept)	0.0935	0.0938	0.0933	0.0954
Std. Dev. (Slope)				0.091***
Corr(Intercept, Slope)				-0.363
Variance (Residuals)	0.635	0.635	0.635	0.628
ICC	0.128	0.129	0.128	0.132
df	32	33	33	32
-2LL	-232448	-232380	-232439	-231337

*** p<0.001, ** p<0.01, * p<0.05; unstandardized regression coefficients;controlled for ESS-Round in all models. Main effects included, remain stable.

Openness

	(1)	(2)	(3)	(4)
Individual level				
Controls	yes	yes	yes	yes
Openness	0.027***	0.027***	0.030***	0.019
Country level				
GDP	0.004***	0.004***	0.004***	0.004***
GINI	-0.013***	-0.013***	-0.013***	-0.013***
Socialist Legacy	-0.19	-0.19	-0.189	-0.231
Share of Protestants in %	0.020***	0.020***	0.020***	0.020***
Cross-Level Interaction				
GINI*Openness		0.000		
GDP*Openness			-0.001***	
Constant	0.133	0.133	0.132	0.143*
N(individual)	194,925	194,925	194,925	194,925
N(country)	28	28	28	28
Variance (Intercept)	0.091	0.091	0.091	0.091
Std. Dev. (Slope)				0.113***
Corr(Intercept, Slope)				0.218
Variance (Residuals)	0.65	0.65	0.65	0.645
ICC	0.123	0.123	0.123	0.124
df	32	33	33	32
-2LL	-234663	-234662	-234628	-233996

*** p<0.001, ** p<0.01, * p<0.05; unstandardized regression coefficients;controlled for ESS-Round in all models. Main effects included, remain stable.

Self-Enhancement

	(1)	(2)	(3)	(4)
Individual level				
Controls	yes	yes	yes	yes
Self-Enhancement	-0.037***	-0.037***	-0.036***	-0.035*
Country level				
GDP	0.002	0.002	0.002*	0.002
GINI	-0.013***	-0.013***	-0.013***	-0.013***
Socialist Legacy	-0.285*	-0.285*	-0.284*	-0.338**
Share of Protestants in %	0.019***	0.019***	0.019***	0.018***
Cross-Level Interaction				
GINI*Security		0.001		
GDP*Security			-0.001*	
Constant	0.171*	0.171*	0.171*	0.192**
N(individual)	191,235	191,235	191,235	191,235
N(country)	27	27	27	27
Variance (Intercept)	0.0822	0.0822	0.0822	0.0826
Std. Dev. (Slope)				0.081***
Corr(Intercept, Slope)				-0.292
Variance (Residuals)	0.639	0.639	0.639	0.635
ICC	0.114	0.114	0.114	0.115
df	32	33	33	32
-2LL	-228566	-228566	-228564	-228014

*** p<0.001, ** p<0.01, * p<0.05; unstandardized regression coefficients;controlled for ESS-Round in all models. Main effects included, remain stable.

Security

	(1)	(2)	(3)	(4)
Individual level				
Controls	yes	yes	yes	yes
Security	-0.152***	-0.149***	-0.151***	-0.144***
Country level				
GDP	0.004***	0.004***	0.004***	0.004***
GINI	-0.014***	-0.014***	-0.014***	-0.014***
Socialist Legacy	-0.185	-0.188	-0.187	-0.237
Share of Protestants in %	0.020***	0.020***	0.020***	0.019***
Cross-Level Interaction				
GINI*Security		0.006***		
GDP*Security			-0.001***	
Constant	0.141*	0.140	0.140*	0.153*
N(individual)	194,925	194,925	194,925	194,925
N(country)	28	28	28	28
Variance (Intercept)	0.0922	0.0924	0.0926	0.0927
Std. Dev.(Slope)				0.121***
Corr(Intercept, Slope)				-0.363
Variance (Residuals)	0.629	0.628	0.629	0.622
ICC	0.128	0.128	0.128	0.130
df	32	33	33	32
-2LL	-231501	-231385	-231462	-230442

*** p<0.001, ** p<0.01, * p<0.05; unstandardized regression coefficients;controlled for ESS-Round in all models. Main effects included, remain stable.

Summary and Conclusion

- Latent Variables do much better, it is cumbersome but useful to take measurement error and measurement invariance into account
- A preference for Universalism Values correlates with social trust at the individual level, in these cases trust is moralistic
  - Moralistic trust is strongest in the Nordic Countries
  - Moralistic trust is weak in Eastern and Southern European countries (esp. PT, CY, CZ)
- A preference for Benevolence Values correlates with social trust at the individual level, suggesting a tendency for a small trust radius
  - This association is moderate in most countries, and missing in some, where it can be seen as an indicator for high in-group orientation at cost of generalized trust
  - It can partly be explained by social inequality

Summary and Conclusion (2)

- A preference for Openness Values or for Self-Enhancement Values is not attached to Social Trust
- Preferences for Security Values are negatively related to Social trust, trust is understood rational in these cases
  - This rational sort of trust is strongest in Central Europe, but less strong in the Nordic Countries, FI in particular

Thank you for your Attention!

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```
. xtmixed trustfac || country:

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0:   log likelihood = -268459.38
Iteration 1:   log likelihood = -268459.38  (backed up)

Computing standard errors:

Mixed-effects ML regression                     Number of obs      =    235283
Group variable: country                         Number of groups   =        33

                                                Obs per group: min =       563
                                                               avg =    7129.8
                                                               max =     14399


                                                Wald chi2(0)       =         .
Log likelihood = -268459.38                     Prob > chi2        =         .

------------------------------------------------------------------------------
    trustfac |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |  -.0378449   .0670608    -0.56   0.573    -.1692817    .0935918
------------------------------------------------------------------------------

------------------------------------------------------------------------------
  Random-effects Parameters  |   Estimate   Std. Err.     [95% Conf. Interval]
-----------------------------+------------------------------------------------
country: Identity            |
                  sd(_cons) |   .3850574   .0474498      .3024362    .4902496
-----------------------------+------------------------------------------------
               sd(Residual) |   .7569581   .0011036      .7547982    .7591241
------------------------------------------------------------------------------
LR test vs. linear regression: chibar2(01) = 50648.79 Prob >= chibar2 = 0.0000

. xtmrho

Levels: country

level 1

Intraclass correlation  (ICC):
```

rho1 = 0.20557

```
. xtmixed trustfac_l || country:

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0:   log likelihood = -290806.51
Iteration 1:   log likelihood = -290806.51  (backed up)

Computing standard errors:

Mixed-effects ML regression                     Number of obs      =    235283
Group variable: country                         Number of groups   =        33

                                                Obs per group: min =       563
                                                               avg =    7129.8
                                                               max =     14399


                                                Wald chi2(0)       =         .
Log likelihood = -290806.51                     Prob > chi2        =         .

------------------------------------------------------------------------------
  trustfac_l |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |  -.0509939   .0994857    -0.51   0.608    -.2459823    .1439945
------------------------------------------------------------------------------

------------------------------------------------------------------------------
  Random-effects Parameters  |   Estimate   Std. Err.     [95% Conf. Interval]
-----------------------------+------------------------------------------------
country: Identity            |
                  sd(_cons) |   .5713572   .0703733       .448814    .7273593
-----------------------------+------------------------------------------------
               sd(Residual) |   .8323439   .0012135      .8299689    .8347256
------------------------------------------------------------------------------
LR test vs. linear regression: chibar2(01) = 86090.22 Prob >= chibar2 = 0.0000

. xtmrho

Levels: country

level 1

Intraclass correlation  (ICC):
```

rho1 = 0.32029

Correlations with manifest indicators (Social Trust vs. Universalism)

DK	0.1705	BE	0.0644
SE	0.169	ES	0.0526
IS	0.1683	UA	0.0428
NO	0.153	GR	0.042
GB	0.1323	PL	0.0382
AT	0.1282	RU	0.02
NL	0.1263	HU	0.0176
CH	0.1251	CZ	0.0151
IE	0.1165	SK	0.0104
DE	0.1162	LU	0.0064
FR	0.1113	HR	-0.0048
IL	0.0964	LV	-0.0058
EE	0.0893	RO	-0.0204
BG	0.089	LT	-0.0382
FI	0.0812	CY	-0.0417
SI	0.0782	PT	-0.042
TR	0.0647		

Model fit

Modell	Chi²	df	CFI	NFI	RMSEA	SRMR
Configural Invariance (ppltrst & pplfair fixed to 1)	502.308	124	0.998	0.993	0.040	0.013
Metric Invariance	1443.677	246	0.992	0.989	0.051	0.025
Scalar Invariance	13868.017	492	0.915	0.936	0.120	0.065
Partial Scalar Invariance	8207.926	488	0.951	0.963	0.081	0.047

ESS (Pooled Countrywaves (N=124); N(individual)= 235283. For Partial Scalar Invariance a different intercept for pplhlp was calculated for GB and IE, for pplfair for FR; for ppltrst for GR. .

Una_micr	.9867898	.1284565	7.68	0.000	.7350198	1.23856
_Iessround_2	.0178578	.0548886	0.33	0.745	-.0897218	.1254374
_Iessround_3	.0338302	.0678573	0.50	0.618	-.0991677	.1668281
_Iessround_4	.0331304	.0872951	0.38	0.704	-.1379647	.2042256
_Iessround_5	.0010031	.0839961	0.01	0.990	-.1636262	.1656324
c_gdp	.0104226	.0070248	1.48	0.138	-.0033458	.024191
c_ginitot	-.0248165	.0132159	-1.88	0.060	-.0507192	.0010863
c_protestantism	.0287884	.0056122	5.13	0.000	.0177887	.0397881
trafola	-.4586955	.2651144	-1.73	0.084	-.9783102	.0609193
_cons	.0619559	.1373328	0.45	0.652	-.2072115	.3311233

Random-effects Parameters	Estimate	Std. Err.	[95% Conf.	Interval]
country: Unstructured				
var(Una_micr)	.3732061	.1232693	.1953432	.7130158
var(_cons)	.2816103	.0895694	.1509781	.5252705
cov(Una_micr,_cons)	.1572955	.0813098	-.0020689	.3166598
cround: Unstructured				
var(Una_micr)	.1057583	.0212455	.0713377	.1567871
var(_cons)	.0192553	.0036246	.0133143	.0278472
cov(Una_micr,_cons)	.0032136	.006382	-.0092948	.015722
var(Residual)	1.834069	.0062472	1.821865	1.846354