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MEASURING THE TRUST IN THE EUROPEAN VALUES STUDY AND THE EUROPEAN SOCIAL SURVEY

Merenje poverenja u Evropskom istraživanju vrednosti i Evropskom društvenom istraživanju

ABSTRACT: *In this paper, we compare the latent construct measurement of political and interpersonal trust in two researches: the European Values Study and the European Social Survey. The main goal was to estimate the validity of measuring the respective concepts. In order to achieve this goal, we conducted a number of Principal Component Analyses and Confirmatory Factor Analyses. Additionally, we used multilevel regression modelling to test and compare the effect of socio-demographic variables on political and interpersonal trust in both researches. We identified that socio-demographic predictors had a similar effect on both types of trust. The paper is complemented with descriptive data that portray the differences among countries when it comes to interpersonal and political trust.*

KEY WORDS: *political trust, interpersonal trust, validity of testing, multilevel analysis, Principal Component analysis, Confirmatory Factor Analysis*

APSTRAKT: *U ovom radu poredićemo merenje političkog i interpersonalnog poverenja kao latentnih konstrukata u dva istraživanja: Evropsko istraživanje vrednosti i Evropsko društveno istraživanje. Ključni cilj bio je da se testira validnost kada merimo ova dva koncepta. Kako bi ostvarili ovaj cilj realizovali smo veći broj faktorskih analiza bazičnih komponenti kao i konfirmatornih faktorskih analiza. Koristili smo, takođe, i hijerarhijsko linearno modeliranje sa ciljem da testiramo i uporedimo efekat socio-demografskih varijabli na političko i interpersonalno poverenje u oba istraživanja. Utvrdili smo manje-više konzistente nalaze kada je reč o efektu socio-demografskih varijabli na interpersonalno i političko poverenje. Rad je obogaćen deskriptivnim podacima koji prikazuju razlike između zemlja kada je reč o merenju oba tipa poverenja.*

KLJUČNE REČI: *političko poverenje, inrpersonalno poverenje, validnost merenja, hijerarhijsko linearno modeliranje, faktorska analiza bazičnih komponenti, konfirmatorna faktorska analiza*

Introduction

Using integrated cross-country data sets in order to measure complex phenomena is always a challenging task. Testing the validity and improving the instrumentalization is one of the more important methodological goals to achieve. In the last two decades, a number of new cross-country researches have been conducted, which raises the importance of the issue of methodological consideration, in particular the issue of measurement validity. This paper is focused on this methodological issue, and specifically the issue of validity of measuring social capital in European Values Study (the EVS) and European Social Survey (the ESS). Our task was to identify the items and scales that measure the same concept in two researches, and to compare them from the validity point of view. For this purpose, we will compare the measurement of social trust as a concept, since in both researches this concept has been included through numerous questions and items. More specifically, in the ESS and the EVS different items and variable scales have been used in order to measure interpersonal trust and trust in political institutions, as theoretical concepts. Therefore, we will provide the evidence regarding the validity and reliability of measurement of these concepts, then we will construct referent scales, and finally, we will test them.

Validity as an epistemological concept covers more than a few aspects. There is no agreement in the literature about the common and unified understanding of different types of validity. Some twenty years ago, Adcock and Collier (2001), claimed: “we have found 37 different adjectives that have been attached to the noun ‘validity’ by scholars wrestling with issues of conceptualization and measurement” (page, 530). Meanwhile, strong doubts regarding clear and unified distinction among the different types of validity remain. So in order to avoid any misunderstanding, we will test the validity in the following manner. First, we will test the measurement validity and internal reliability of the scales of different types of trust that can be identified in the EVS and the ESS. For this purpose, we used Principal Component Analysis (PCA) and Confirmatory Factor Analysis (CFA). Then, we tested the results of the resulting measures of trust by comparing the countries². Finally, we tested the effect of socio-demographics on trust, by comparing the respective effect in two researches³. Therefore, in general, we deal with different aspects of measurement validity⁴. Beside this main methodological goal, the paper provides descriptive data regarding the level of social trust in each country.

The paper is organized in four parts. First, we provide theoretical insight about main concepts to be examined. Then we provide methodological framework since the purpose of this paper is methodological. Third, we test the validity of measuring trust in the EVS and the ESS. Fourth, we test some hypotheses regarding the effect of sociodemographic on interpersonal and political trust, Finally, we draw the main conclusion that came up regarding validity testing.

2 Sometimes called ‘criterion validity’ and sometimes ‘concurrent validity’

3 Sometimes called ‘predictive validity’

4 Some authors claim that measurement validity and construct validity are the synonyms, and according to other authors, measurement validity is type of construct validity.

Main Concepts and Conceptual Framework

Social capital is one of the most prominent concepts to be measured in the last two decades in sociology and political sciences. Although it is not a new concept (Bourdieu 1973; Loury 1977), at the end of XX and the beginning of the new century, social capital became particularly the object of theoretical and research interest in different fields (Flap 1999; Paxton 1999; Portes 1998; Putnam 1993, 1995; Swain 2003; Szreter 2000; Woolcock 1998). It should be noted that there are more than few different meanings of social capital, and that there are more than few different approaches to it, that can be found in different fields. According to Woolcock & Narayan (2006) there are four main perspectives of social capital. The first is called the communitarian view, which focuses on membership in organizations. The second is the network view, which is about exploring the vertical and horizontal bonds among organizations. Third one is the institutional view, which covers the perspective of trust in institutions and effectiveness of the institutions. The fourth perspective they called synergy view, which practically integrates the network and institutional views.

In this paper we deal with one of the most important components of social capital, which is trust. More specifically, we will deal with interpersonal and political trust (trust in political institutions). Speaking about interpersonal trust, it is considered that this aspect of trust is one of the most important 'social glues' which provides overall social efficiency (Newton, 1997). Conceptually, there are many different interpretations about what is the basis of interpersonal trust. Generally, it is considered that trust is expected behaviour of others related to 'myself' (Lewicki & Bunker, 1996; Kramer, 1999). It means that we are dependent on others (Misztal, 1996). Consequently, it raises the issue of 'uncertainty' regarding the expected behaviour of others (Coulson, 1998). There is an opinion that trust is an ethical category, i.e., it is the aspect of moral standards in a certain community (Mansbridge, 1999; Uslaner, 2002), but there are also views claiming that trust, in practice, is self-reflection, i.e. we expect that others would treat us the same way we treat them (Newman, 1998; Misztal, 1996; Warren, 1999). Rational choice perspective presents trust as 'risk calculus' (Hindmoor, 1998; Warren, 1999) and from that perspective, trust can be treated as kind of 'risk analysis' (Williamson, 1993). Additionally, while speaking about interpersonal trust, there is one important distinction, namely, we differentiate between trusting people that we know personally, and people we do not know, or people in general. This difference is sometimes conceptually referred to as the difference between 'bonding' (de Souza 1998; Holzmann & Jorgensen, 1999) and 'bridging' (Bar, 1998; Kozel & Parker 2000; Narayan, 1999).

However, in literature there is a clear distinction between interpersonal trust and trust in institutions. (Seligman, 1997). Sometimes this distinction is interpreted as the difference between 'particularized' and 'generalized' trust (Putnam, 1995; Newton, 1999, Uslaner, 2002). It is argued that institutional trust presumes less risk than interpersonal trust, since the institutions must fulfil their social role (Offe, 1999; Patterson, 1999). One of the main arguments is that overall social order and social efficiency depend on institutional trust (Patterson, 1999; Thomas, 1998). Therefore, in this paper we will deal with the trust in political institutions, or more simply, political trust as one of the important components of social capital (Bešić, 2016).

Methodological Framework

In this paper, we analyse two kinds of trust and these are interpersonal trust and trust in political institutions or political trust. We use the EVS and the ESS data collected from 2017 to 2020⁵. Design of this validity testing includes many steps, but before we introduce them, it is important to note some significant methodological remarks. First, we adjust both databases in terms of including the same countries. Namely, the list of countries in the EVS is more extensive, and there are some countries in the ESS, which are not included in the EVS. In other words, in order to provide comparable results, we designed databases of 25 countries, which are included in both data files (Table 1)⁶. Second, sampling population in two researches was different. the ESS sampling includes residents starting from the age of 15, while the EVS sampling includes only the population older than 18. Therefore, we exclude from the ESS dataset those who are younger than 18.

Table 1 Number of respondents per country

Countries	EVS	ESS
Austria	1651	2499
Bulgaria	1566	2198
Croatia	1493	1810
Czech	1829	2398
Denmark	3369	1572
Estonia	1304	1904
Finland	1220	1755
France	1880	2010
Germany	2170	2358
Hungary	1519	1661
Iceland	1633	861
Italy	2282	2745
Lithuania	1453	1835
Montenegro	1004	1200
Netherlands	2409	1673
Norway	1123	1406
Poland	1358	1500
Portugal	1217	1055
Serbia	1520	2043
Slovakia	1436	1083
Slovenia	1080	1318
Spain	1210	1668
Sweden	1198	1539
Switzerland	3174	1542
United Kingdom	1794	2204
Total	41891	43837

5 In Serbia both researches have been done in the same period in 2019.

6 Table 1 shows the authentic number of cases per country after demographic weights were applied. However, it is to be noted that different weights are applied for specific statistical analysis in this paper in accordance to methodological instructions to be found at: https://www.europeansocialsurvey.org/docs/methodology/the_ess_weighting_data_1_1.pdf (last access, 15th April 2021)

Since we set the goal to compare measurement validity, it is important to identify the questions and items that have been used in both surveys. First, speaking about political trust, in both surveys the items on this question were about trust/confidence in parliament, legal system, police and political parties. We note two methodological remarks in this regard. First, it is the issue of scaling, i.e., in the EVS for the estimation of the confidence in institutions, four-point Likert scale is used, ranging from 'great deal' of confidence to 'none at all'. In the ESS, however, eleven-point scale is used ranging from 0 (no trust at all) to 10 (complete trust). Secondly, there is slight difference in wording. In the ESS we used the word 'trust', while in the EVS we used the word 'confidence'⁷. Additionally, one of the items/institutions is named differently. In the ESS the item was about the trust in the 'legal system', while in the EVS the item was about confidence in the 'justice system'.

When it comes to interpersonal trust, the problem is even bigger. This means that we have completely different questions that have been used. In the ESS there are three items measuring this concept and these are:

- Most people can be trusted or you can't be too careful
- Most people try to take advantage of you, or try to be fair
- Most of the time people are helpful or mostly looking out for themselves

For each of them an eleven-point ordinal scale ranging from 0 to 10 is used. Conceptually, from the face validity point of view, it is clear that these three items measure general interpersonal trust, or trust in people we do not know; since the question was phrased by using 'most of the people' or simply 'people'. In the EVS, however, interpersonal trust was measured in a question containing six items, and each of them specified what type of 'people' the trust is about. More specifically, the question was about trusting the following categories of 'people'

- your family
- people in your neighbourhood
- people you know personally
- people you meet for the first time
- people of another religion
- people of another nationality

It seems to be that these items are referring to different kinds of trust, and these are: trust in people we personally know, and trust in people we personally don't know. But even in the latter case, the people we do not know, we are not talking about 'people in general', which is the case in the ESS, but it is specified what kind of people we are talking about. This must be taken into consideration while speaking about comparison between the two researches. And again, there is a difference between the two researches in terms of scaling, i.e., interpersonal trust in

7 It is to be noted that in many countries there is no difference between these two words. In Serbia, for example, in both cases word 'poverenje' is used, and the same is in Croatia, Montenegro and BiH.

the EVS is measured with four-point ordinal scale ranging from 'trust completely' to 'do not trust at all', as oppose to eleven-point ordinal scale in the ESS.

Overall, we identified main methodological differences regarding the instrumentalization and concepts indicators. In next part of the paper, we will test the measurement validity in two researches (Jenkinson, Wright & Coulter 1994; Amirkhan 1994, O'Leary-Kelly & Vokurka 1998; Smith 2005; Bešić 2020). This means that we will identify the level of internal reliability in both researches regarding the concepts of trust, and then we will test if we get different results by comparing the countries. Finally, we will measure the effect of socio-demographics on both concepts of trust in two researches, in order to test predictive validity (Onwuegbuzie 2000; McDermott, 2011)

Testing the Validity of the Trust in Political Institutions

First, we will deal with political trust. As claimed above, we identified four institutions which are included in the EVS and the ESS and which are from the face validity point of view indicators for measuring the political trust (or trust in political institutions). In order to test reliability, we first conducted a Principal Component Analysis (PCA) with four variables in both researches in order to identify the latent construct (Table 2)

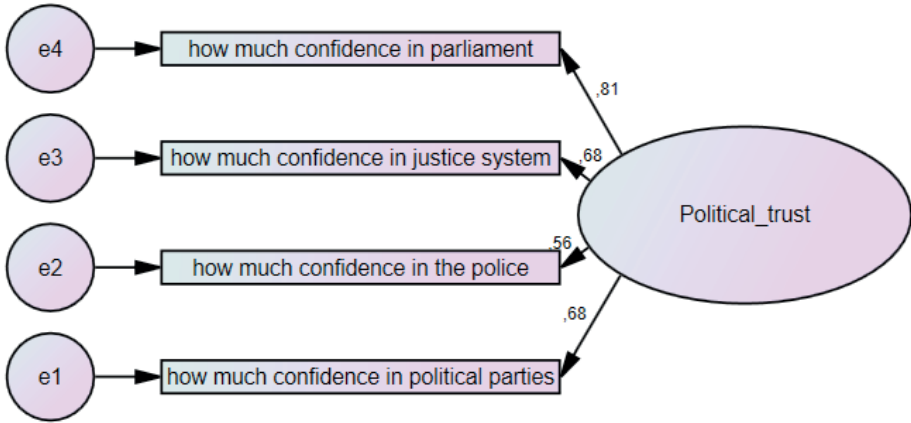
Table 2 Institutional trust:
Principal component analysis – Component Matrix

Items	EVS	ESS
Trust in country's parliament	0.834	0.877
Trust in the legal system	0.794	0.883
Trust in the police	0.704	0.785
Trust in political parties	0.752	0.827
Variance explained	59.69%	71.23%
KMO	0.737	0.768

Then we conducted a Confirmatory Factor Analysis (CFA) in order to test the latent construct of political trust. In Scheme 1 we present the results of CFA in the EVS, and in Schema 2 we present the results of CFA in the ESS, respectively. We identify that police is 'problematic' variable in both samples. Based on modification index criteria, it is probably due to covariation of residual error of this item and trust in justice system.

In Table 3 we present Goodness-of-fit criteria for both researches based on CFA. It appeared to be that both constructs are problematic from the rule-of-thumb goodness of fit criteria. Again, according to modification indexes, the covariation of residual error between 'police' and 'justice' in the EVS is 1718.828, while the respective value for the ESS is 4668.703. Therefore, this is to suggest in future researches that confidence in police OR in legal system should be removed from the scale construction. Additionally, we note that average residual covariation in the EVS is 583.75, while the respective value for the ESS is 1872.82. This is to conclude that four-point scale used in the EVS provides lower level of covariation among residual errors of the items compared to eleven-point scale in the ESS.

Scheme 1 CFA – Political trust in the EVS



Scheme 2 CFA – Political trust in the ESS

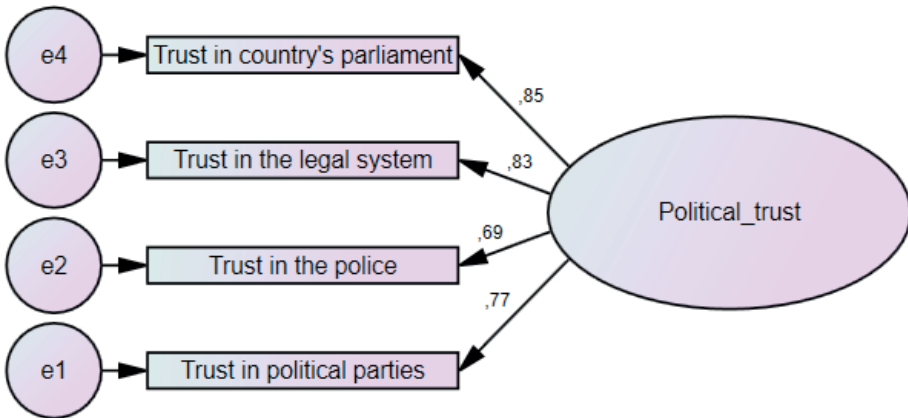


Table 3 Goodness-of-fit: CFA– political trust in the EVS and the ESS

Criteria	EVS	ESS
Cmin/df	1221.022 (p<0.01)	3410.928 (p<0.01)
GFI	.968	.919
AGFI	.841	.594
NFI	.943	.922
CFI	.943	.922
RMSEA	.178	.285
SRMR	.047	.051

Table 4 Level of political trust in the EVS and the ESS – latent construct:
factor regression scores comparison

Countries	EVS			ESS			Absolute mean difference
	Mean	95% CI minimum	95% CI maximum	Mean	95% CI minimum	95% CI maximum	
Austria	.427	.384	.471	.410	.393	.443	0.017
Bulgaria	-.782	-.782	-.782	-.965	-.986	-.923	0.182
Croatia	-1.052	-1.052	-1.052	-.896	-.916	-.858	0.155
Czech	-.489	-.489	-.489	-.116	-.136	-.077	0.373
Denmark	.519	.519	.519	.770	.750	.807	0.251
Estonia	.071	.071	.071	.195	.175	.234	0.124
Finland	.496	.496	.496	.690	.672	.726	0.194
France	-.121	-.121	-.121	-.131	-.150	-.095	0.010
Germany	.179	.179	.179	.236	.218	.271	0.057
Hungary	-.144	-.144	-.144	.059	.036	.106	0.203
Iceland	.254	.254	.254	.352	.325	.405	0.098
Italy	-.178	-.178	-.178	-.096	-.113	-.063	0.082
Lithuania	-.090	-.090	-.090	-.339	-.361	-.297	0.250
Montenegro	-.206	-.206	-.206	-.350	-.383	-.284	0.144
Netherlands	.127	.127	.127	.555	.538	.589	0.428
Norway	.756	.756	.756	.790	.769	.831	0.034
Poland	-.471	-.471	-.471	-.333	-.356	-.287	0.139
Portugal	-.044	-.044	-.044	-.294	-.322	-.239	0.250
Serbia	-.560	-.560	-.560	-.580	-.605	-.532	0.020
Slovakia	-.277	-.277	-.277	-.369	-.403	-.304	0.092
Slovenia	-.544	-.544	-.544	-.417	-.442	-.369	0.127
Spain	-.134	-.134	-.134	-.222	-.244	-.179	0.089
Sweden	.591	.591	.591	.545	.524	.584	0.047
Switzerland	.398	.398	.398	.662	.643	.699	0.264
United Kingdom	.131	.131	.131	.059	.040	.096	0.072

One of the simplest ways to test criterion validity is to compare the level of political trust based on these four items in both researches. Therefore, we used factor regression scores based on PCA in both researches, and then, we compared the level of political trust among the countries (Table 4). We can see that difference of mean value of political trust provides consistent results while comparing the countries. In average, at the aggregate level the difference among the countries is 0.148, meaning that in average error is 0.148 standard deviations. Minimum difference between two researches we measure in case of France (0.01), and the highest difference in case of the Netherlands (0.428), so in the 'worst' case, the difference between the two measurements is less than 0.5 standard deviations.

In order to provide clearer picture of the comparative measurement of political trust in two researches we formed new data file on aggregate (country) level, and produced Z-scores of political trust for each country based on the measured mean level of political trust at the individual level. First, and most

importantly, we note that Pearson correlation between Z-scores of political trust at the aggregate level between two researches is $r = 0.937$, which is to be considered as very high. Then we compare the values (table 5) of the main statistics and found strong similarity between two measurements of political trust at the aggregate level. Trimmed mean (5%) has almost the same value, while range is somewhat greater in the EVS; the distribution in the EVS is somewhat more skewed towards the higher values and according to kurtosis, the distribution in the ESS is more platykurtic compared to the EVS. Finally, we found smaller difference between mean and median value in the EVS than in the ESS. Therefore, to conclude, both measurements of political trust are more than reliable providing similar results while comparing the scores of the PCA among the countries, or to put it simply, regardless of whether we used the EVS or the ESS measurement, we would come up with similar results while comparing the level of political trust at the country level.

Table 5 Political trust – Z score distribution at aggregate (country) level in the EVS and the ESS

Statistic		EVS	ESS
Mean		0.000	0.000
Standard error of mean		0.200	0.200
95% Confidence Interval for Mean	From	-.413	-.413
	To	.413	.413
5% Trimmed Mean		.023	.021
Median		-.098	-.230
Minimum		-2.236	-1.957
Maximum		1.781	1.566
Range		4.017	3.523
Interquartile Range		1.555	1.618
Skewnthe ESS		-.252	-.090
Kurtosis		-.295	-.726

The Effect of Socio-demographics on Political Trust

It is to presume that the socio-demographics should have same direction, statistical significance, and approximately similar effect on political trust in both researches. Therefore, we conducted a multilevel regression analysis with political trust as dependent and main demographic variables as independents. Additionally, we add GDP per capita at the second level in order to control the effect of socio-demographics with the level of the country's economic development. The variables in the models are organized in the following manner:

1. Dependent in regression analysis is factor score of four variables which measure political trust
2. Gender is dummy variable, coded as 1 for male, and 0 for female
3. Age is taken as authentic numerical variable

4. Education is divided in three categories (less than secondary, secondary, and higher than secondary), and then three dummy variables for each category are formed. In the regression analysis we used the lowest level of education as the referent group
5. Income is used as numerical variable in the same manner that it is provided in the database in both researches, i.e. where at the country level family income is divided in deciles
6. We impute the GDP for each country in files, and then used Z-score of GDP as predictor in the analysis.

The result of testing is presented in Table 6. It was presumed from the validity point of view that we could find consistent and similar effect of the demographic predictors on political trust. First, if we compare unconditional intra-class coefficient of correlation, we found, in so call 'empty model'⁸, that ICC in the EVS=0.207, while in the ESS the ICC=0.243, respectively. Therefore, it is to say that in the ESS 24.3% of variation of the dependent is about the difference among the states, while the respective difference in the EVS is 20.7%. We conclude that in the EVS there is more variation to be explained based on difference among observations compared to the ESS. But, the main finding is about the effect of predictors on political trust. We found some inconsistent findings in this regard. First, we found that being male predicts 0.035 lower level of political trust in the EVS, while gender dummy variable in the ESS is not significant. Somewhat more disturbing finding is that according to the EVS, the older someone is, the higher the level of political trust is expected, while in the ESS the older someone is, the lower level of political trust is expected. When it comes to other predictors, we found quite consistent results. Medium education is not statistically different compared to low education in both researches, while higher education, as opposed to lowest education, predicts higher level of political trust. There is slight difference comparing the fixed effect estimate, i.e., according to the EVS those who are highly educated are supposed to have 0.17 higher level of political trust compared to the lowest level of education in the EVS, while the referent value of the regression coefficient in the ESS is 0.19. Therefore, we estimate somehow stronger positive effect of higher level of education on political trust in the ESS compared to the EVS. Comparison of the effect of family income provides the evidence that in the EVS for each decile of income it is to expect 0.017 higher level of political trust, while in the ESS referent effect of income is 0.027. Additionally, we note that the effect of GDP on political trust is somehow stronger in the ESS compared to the EVS ($ZGDP_{EVS} = 0.234$ vs $ZGDP_{ESS} = 0.260$). Overall, it is to conclude that from this comparative point of view we find some differences in estimating the effect of gender and age on political trust in two researches, while the estimation of education, income and GDP are pretty much consistent.

8 Colloquial statistical term which means that we calculate variance components in the model where only the dependent is included

Table 6 Fixed effect estimates – Socio-demographics as predictor of political trust in the EVS and the ESS

	EVS	ESS
Intercept	-.265*** (.057)	-.094*** (.053)
Individual level predictors		
Male	-.035*** (.010)	.011 (.009)
Age	.003*** (.000)	-.001*** (.000)
Medium education	.007 (.012)	-.012 (.012)
High education	.168*** (.015)	.193*** (.014)
Income	.017*** (.002)	.027*** (.002)
Country level predictor		
ZGDP	.234*** (.035)	.260*** (.032)
Variance components and Goodness-of-fit		
AIC	87489.413	84895.559
BIC	87506.260	84912.404
Difference among observation	0.785*** (0.006)	0.728*** (0.006)
Difference among states	0.068*** (0.021)	0.061*** (0.018)
ICC	0.079	0.077

Testing the Validity of Interpersonal Trust

As specified earlier, measuring the political trust operates with same questions/items with different scaling, while interpersonal trust operates in two researches not only with different scales on variables, but with different questions in the instrument, as well. Therefore, the challenge of comparison is even greater. As in a case of testing political trust, we first conduct a Principal Component Analysis with the items and questions to be used in order to measure interpersonal trust. In the ESS a single factor has been identified (Table 7)

Table 7 Interpersonal trust in the ESS: Principal Component Analysis

Items	Factor loadings
Most people can be trusted or you can't be too careful	.720
Most people try to take advantage of you, or try to be fair	.744
Most of the time people are helpful or mostly looking out for themselves	.682
Variance explained	71.52%
KMO	.707

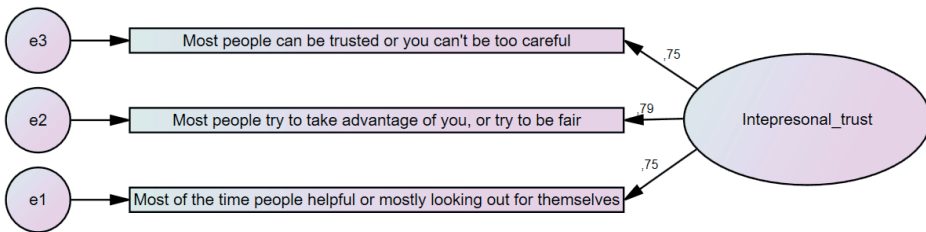
Table 8 Interpersonal trust in EVS:
Principal component analysis with Promax rotation

Items	Components
how much you trust: your family	.923
how much you trust: people in your neighborhood	.574
how much you trust: people you know personally	.488
how much you trust: people you meet for the first time	.754
how much you trust: people of another religion	.932
how much you trust: people of another nationality	.931
Variance explained	68.6%
KMO	0.770

In the EVS, however, there were six items, which from the face validity point of view measure interpersonal trust. In Table 8, we present two components that has been identified based on PCA. In this analysis, we introduce Promax rotation with Kappa 4. Clearly, we identify the difference between trusting the people we do not know (first component) and trusting people we do personally know (second component). Therefore, there are two latent constructs of interpersonal trust in the EVS based on six items from discriminative validity point of view.

Accordingly, we conduct CFA in order to confirm the latent factor structure of the items in question in both researches. In Schema 3, we present CFA in the ESS and in Schema 4, CFA in the EVS. In Table 9, we present comparison of Goodness-of-fit criteria, and we note mostly satisfying fit in both researches. We observe in the EVS sample that RMSEA value is higher than proposed by rule-of thumb criteria. Based on modification index criteria, we report that a 'problematic' variable: 'trust in family'.

Schema 3 CFA: Interpersonal trust in the ESS



Schema 4 CFA: Interpersonal trust in the EVS

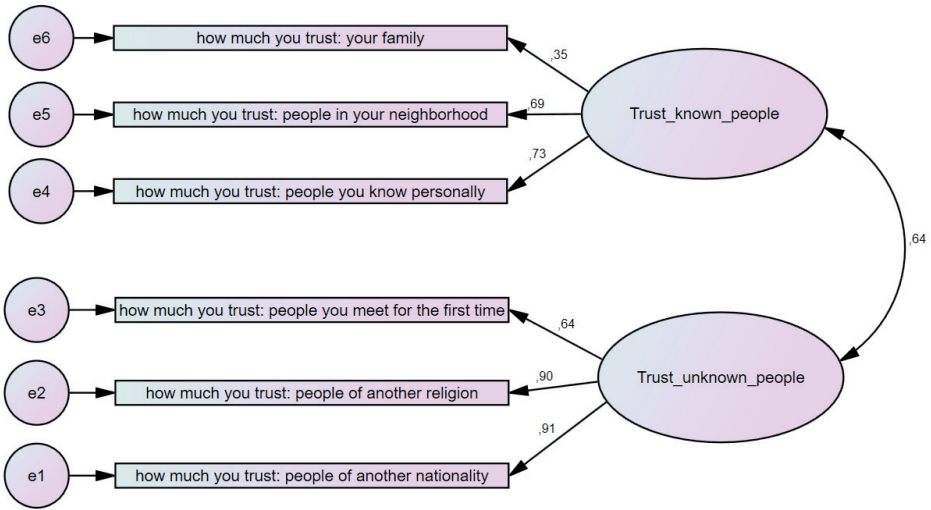


Table 9 Goodness-of-fit: CFA– interpersonal trust in the EVS and the ESS

Criteria	the EVS	the ESS
Cmin/df	498,941 (p<0.001)	193.867 (p<0.001)
GFI	.967	.994
AGFI	.913	.982
NFI	.954	.991
CFI	.954	.991
RMSEA	.116	.067
SRMR	.055	.017

In Table 10, we compare average factor scores based on factor analysis at the country level and we observe the difference between the EVS and the ESS. By comparing the scores the average difference between the ESS interpersonal trust and the EVS 'trust in people they don't know' is 0.21 standard deviations. The country with highest difference is Slovenia (0.445), and the smallest difference is in a case of Poland (0.01). On the other hand, between the ESS interpersonal trust and 'trust in people they know' in the EVS we find 0.27 standard deviations difference among countries in average, but with much higher range. The highest difference is in case of Bulgaria (0.614 SD) and the smallest is in case of Italy (0.005 SD). Therefore, based on this simple criterion it is to be said that the EVS 'trust in people we don't know' and the ESS interpersonal trust measuring provides much smaller discrepancy if we compare the scores among countries.

Table 10 Level of interpersonal trust in the EVS and the ESS
 – latent construct: factor regression scores comparison

Country	the EVS TRUST people they know	the EVS TRUST people they do not know	the ESS interpersonal TRUST	Absolute diff. the EVS people they know and the ESS trust	Absolute diff. the EVS people they do not know and the ESS trust
Austria	.108	-.091	.338	0.231	0.429
Bulgaria	-.078	-.556	-.692	0.614	0.136
Croatia	-.320	-.122	-.469	0.149	0.347
Czech	-.039	-.370	-.055	0.015	0.316
Denmark	.521	.620	.782	0.261	0.163
Estonia	.049	-.143	.166	0.117	0.309
Finland	.328	.386	.735	0.407	0.349
France	-.406	-.013	-.044	0.362	0.031
Germany	-.020	-.108	.194	0.214	0.302
Hungary	.144	-.166	-.180	0.324	0.014
Iceland	.137	.463	.746	0.609	0.284
Italy	-.297	-.429	-.293	0.005	0.137
Lithuania	-.342	-.557	-.215	0.127	0.342
Montenegro	-.120	-.377	-.720	0.600	0.342
Netherlands	.375	.547	.463	0.089	0.083
Norway	.410	.493	.665	0.255	0.172
Poland	-.510	-.448	-.438	0.072	0.010
Portugal	-.605	-.230	-.337	0.268	0.107
Serbia	-.229	-.714	-.767	0.537	0.052
Slovakia	-.127	-.417	-.548	0.421	0.131
Slovenia	-.116	-.616	-.171	0.055	0.445
Spain	.057	.047	-.083	0.139	0.130
Sweden	.287	.684	.546	0.259	0.138
Switzerland	-.118	.189	.442	0.560	0.253
United Kingdom	.094	.297	.169	0.075	0.128

Additionally, we compare Z-scores of three variables at the aggregate/country level. In Table 11, we provide statistics of three variable after saving Z-scores in a data file containing the average factor scores in each country based on individual level factor analysis. But first, we report high correlation between the EVS interpersonal trust in 'people they know', and 'people they do not know' ($r=0.733$). Correlation between the ESS interpersonal trust and the EVS 'trust in known people' is $r=0.736$, while respective correlation coefficient between the ESS interpersonal trust and the EVS 'unknown' people is $r=0.875$. Again, we confirm that the ESS items, based on this finding, strongly correlate with the EVS trust in 'unknown' people. When it comes to country level distribution of

the interpersonal trust(s) in question, we can see than in each of three cases 5% trimmed mean is close to zero (mean value). Although the median value is also in all three cases close to zero, we report somewhat smaller difference between the mean and median in a case of the EVS 'trust in known people', compared to the EVS 'unknown people' and the ESS interpersonal trust. On the other hand, the smaller difference is among the states, based on range estimation we note in the ESS, and the highest in a case of the EVS 'trust people they know'. Skewness is relatively low in case of the EVS trust in 'known' people, as well as in a case of the ESS interpersonal trust, while speaking about the EVS 'trust in unknown people', it is somewhat positively skewed. On all three variables we observe platykurtic distribution, noting that it is relatively higher in a case of the ESS interpersonal trust, and the EVS 'unknown people' trust compared to the EVS 'trust in known people'.

Table 11 Interpersonal trust
 – Z scores at aggregate level in the EVS and the ESS

Statistic		the EVS 'known people'	the EVS 'unknown people'	the ESS
Mean		0.00	0.00	0.00
Standard error of mean		0.20	0.20	0.20
95% Confidence Interval for Mean	From	-.413	-.413	-.413
	To	.413	.413	.413
5% Trimmed Mean		.004	-.014	.000
Median		-.022	-.135	-.132
Minimum		-1.970	-1.540	-1.596
Maximum		1.906	1.778	1.588
Range		3.876	3.318	3.184
Interquartile Range		1.389	1.815	1.727
Skewness		-.019	.340	.093
Kurtosis		-.477	-1.082	-1.130

The Effect of Socio-demographics on Political Trust

As in a case of testing the validity of political trust, we conduct multilevel analysis where interpersonal trust is used as dependent variable and socio-demographics as predictors. It is to be assumed that regardless different questions and items that are used to measure interpersonal trust, we should expect similar predictability of independents on interpersonal trust. We provide the analysis in Table 12. First we report that unconditional intraclass correlation coefficient in the EVS 'people they know' is ICC=0.078, for the EVS 'people they do not know' ICC=0.190, and for the ESS interpersonal trust ICC=0.238, respectively. So this to say that speaking about the 'trust in people they know' in the EVS 7.8% of the variation of the dependent can be attributed due to the difference among the countries, while the respective value for the 'trusting unknown people' in the EVS is 19%. On the other hand, in the ESS, huge 24% of variation of the

dependent (interpersonal trust) can be attributed to the differences among the countries, while remaining 76% is about the differences among observations. It is to conclude that in the ESS the effect of countries on interpersonal trust is much higher, compared to both variables that measure the EVS interpersonal trust.

Comparison of the effects of socio-demographic predictors on interpersonal trust in all three dependents provide solid and consistent findings. All the predictors in three models (three dependents in two samples) have the same direction and significant effect on dependent. We found that being a male as opposed to being a female is negative predictor in all three models, noting that the effect in Model 1 is significantly weaker compared to Model 2 and Model 3. For each year, someone is getting older, interpersonal trust in people 'they know' in the EVS increases by 0.005, and the effect of 0.006 we observe, while speaking about the trust in people 'they do not know'; while respective value in the ESS for age variable claims that for each year someone gets older, interpersonal trust would increase for 0.002. Medium education as opposed to low education has strong positive effect on dependent in all three models, noting that the respective effect in the EVS 'trusting unknown people' is comparatively the highest. Highly educated in all three cases would trust more than lower educated, and the effect is the smallest in a case of the EVS 'known people trust', higher in the ESS, and the highest in the EVS 'unknown people trust'. Speaking about the effect of income on trust, it is to be said that for the each level of increase of family income, interpersonal trust in the ESS would increase 0.031, while the respective value for the EVS 'unknown people trust' is 0.26. This effect is somewhat even higher in a case of the EVS trusting 'known people trust', where it is to be sad that for each level of higher income, interpersonal trust would increase for 0.040. Finally, the effect of GDP (Z-score) is very similar while using the EVS 'unknown people trust' as dependent (0.215) and the ESS interpersonal trust (0.271). Approximately, we conclude that for one standard deviation of increase of GDP, interpersonal trust would increase for 0.22 to 0.27 standard deviations at the individual level. The effect of GDP is somewhat lower while speaking about the EVS 'trusting known people', i.e., if GDP increases by one standard deviation, political trust would increase for 0.095. Finally, we simply calculate the average difference of the effect of all predictors between the EVS 'trust known people' and the EVS 'trust unknown people', as opposed to the ESS interpersonal trust. We find that the average difference in effect of predictors comparing the ESS and the EVS 'trust in known people' is 0.069, while the respective value of the difference between the ESS and the EVS 'trusting unknown people' is 0.030. This is to conclude that the EVS variable that measure trust in unknown people is better proxy for general interpersonal trust that is measured in the ESS, as far as we speak of predictive validity based on socio-demographics.

Table 12 Socio-demographics as predictor of political trust in the EVS and the ESS: fixed effect estimate

	Model 1 the EVS people they now Effect	Model 2 the EVS people they do not know Effect	Model 3 the ESS Effect
Intercept	-.562*** (.051)	-.595*** (.057)	-.322*** (.046)
Individual level predictors			
Male	-.031*** (.010)	-.062*** (.010)	-.050*** (.009)
Age	.005*** (.000)	.006*** (.000)	.002*** (.000)
Medium education	.124*** (.013)	.143*** (.013)	.105*** (.012)
High education	.177*** (.016)	.383*** (.015)	.292*** (.014)
Income	.040*** (.002)	.026*** (.002)	.031*** (.002)
Country level predictor			
ZGDP	.095*** (.030)	.215*** (.034)	.271*** (.027)
Variance components and Goodness-of-fit			
AIC	86923,989	83535.100	87508,782
AIC	86923,989	83535.100	87508,782
BIC	86940.752	83551.863	87525.677
Difference among observation	0.861*** (0.007)	0.775*** (0.006)	0.737*** (0.006)
Difference among states	0.049*** (0.015)	0.066*** (0.020)	0.042*** (0.013)
ICC	0.054	0.079	0.054

Discussion and Conclusions

Testing the measurement validity by comparing the EVS and the ESS regarding the concept of trust provide some significant conclusions. Using more than one indicator for measuring the same concepts always brings many considerations from the conceptual and operational point of view. This is why the issue of validity of measuring specific concept is an issue that must be considered when we use different researches, which include number of samples (countries). Therefore, our first task was to estimate the construct validity of the concepts of interpersonal and political trust in the EVS and the ESS. Usual procedure to perform this kind of testing is to use PCA and CFA, so we used both of them for two concepts. First, speaking about political trust, we found that according to PCA solid convergence among the items in both researches. Comparatively, in the ESS compared to the EVS, the internal reliability is somewhat stronger.

Testing the reliability of political trust by using CFA, we found that both measurements are not meeting the requested Goodness-of-fit criteria. So, in the future research it is to be considered to remove suggested items from the scale, or to control the covariation between two errors while calculating the overall score of the scale. However, comparing the political trust among countries based on PCA factor regression scores provide solid consistency between the EVS and the ESS. In other words, regardless we used the EVS or the ESS to measure political trust, more or less we will come up with similar rating of the respective countries. The best evidence for such conclusion is extremely high correlation of the country means of the political trust at the aggregate level between researches.

Measuring interpersonal trust in both researches according to PCA is reliable. In the ESS estimating the reliability based on CFA has almost perfect fit, while in the EVS we identify some problems, again, regarding RMSEA. Based on analysis it is to recommend to exclude 'family' item from future scale construction of interpersonal trust, or to control it for the residual error while forming the factor score of the interpersonal trust in this research. However, the general conclusion from reliability point of view is that measuring the interpersonal trust, particularly in the ESS, is much more reliable compared to Political trust. Possible reason to be explored is the issue of idiosyncrasy regarding country context specificities while speaking about political trust. In other words, while interpersonal trust has more or less the same generative meaning in different countries, trust in political institutions might be sensitive to country context(s). Correlation of the factor regression scores of interpersonal trust at the aggregate (country) level in both researches provide the evidence that trusting unknown people in the EVS is better proxy for interpersonal trust in the ESS. So, to conclude, at the country level stronger similarity between the EVS and the ESS we found while measuring political trust compared to interpersonal trust. Again, it is to be noted that different items for the interpersonal trust measuring are used in two researches. If we take this into consideration, it is to be said that there is high level of consistency of the measuring the interpersonal trust between two researches when it comes to comparing the countries.

Additionally, based on extensive data files, which integrates number of respondents from different countries, multilevel regression analysis (MLM) is usual tool to estimate generative association among the variables of interest. In other words, MLM is usual statistical procedure to try to identify some deterministic relationship and provide nomothetic conclusions. This is why we introduce MLM in order to compare the results of MLM conducted in the same manner and treating the same concepts/variables in the EVS and the ESS. More specifically, we compare the effect of socio-demographics on interpersonal and political trust. This kind of measuring provide the evidence of validity from the inferential point of view. We found somewhat bigger proportion of the variation of the dependent (political trust) is about the differences among the countries in the ESS compared to the EVS. Second, although most of the socio-demographic predictors have the same direction and more or less similar effect on political trust, we found two significant differences while comparing two researches. First, it is the fact that in the EVS gender is statistically significant, while in the ESS

this is not the case. Second, and more disturbing, according to the EVS getting older predicts higher level of political trust, while in the ESS the older someone is, the less trustful toward political institutions s-he will be. Therefore, we have the opposite effect of age in two researches.

On the other hand, estimating the effect of socio-demographics on interpersonal trust in both researches provide some interesting evidence. First, as in a case of political trust, more variation of dependent (interpersonal trust) is to be attributed to differences among the states in the ESS compared to the EVS (both types of interpersonal trust). Second, there is no inconsistency regarding the direction and statistical significance of the sociodemographic predictors of interpersonal trust in both researches. This is to say that regardless of whether we use the ESS or the EVS (both types of interpersonal trust), we would assume more or less similar estimate of the effect of the demographic predictors.

Overall, we provide solid evidence to claim that measuring interpersonal and political trust in the ESS and the EVS provide solid consonance from the measurement, construct, criterion and predictive validity point of view. There are some differences, indeed, but in general, several conclusions can be made. First, the comparison among the countries while measuring both types of trust would result with similar findings. Second, if we use the EVS and the ESS to calculate country level of political and interpersonal trust, and to estimate correlation between two types of trust we would draw similar conclusions. Third, testing the effect of socio-demographic predictors, except the effect of gender and age, similar theoretical conclusions would come up.

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