Trust in political institutions of young people in five Arab-Mediterranean countries

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Abstract

According to the literature the concept of *trust in political institutions* cannot be observed directly but has to be measured by different indicators. Taking into account that most of the studies on trust in political institutions are carried in Europe and America, in this paper we try to overcome this lack by analyzing data from the SAHWA Youth Survey, a cross-national survey targeting young people, between 15 and 29 years, in five Arab-Mediterranean countries, namely Algeria, Egypt, Lebanon, Morocco, and Tunisia, between 2015 and 2016. This new data set allows exploring if the complex concept *trust in political institutions* can be compared in the countries under study and if young people in the region have similar levels of trust in political institutions..Since the literature offers several different measurement models, we conduct measurement invariance tests to explore if the same measurement model can be found in the different countries and if it is equally understood by all the surveyed respondents regardless the country they live. We found that the model that measures political trust by trust in the national parliament, the political parties, and politicians is fully configural, metric, and scalar invariant in the cases of Algeria, Egypt, and Tunisia but not in Morocco and Lebanon.

1. Introduction: Trust in political institutions

Although *political trust* is one of the most prominent topics in political science, there is still discussion about its definition, origins, and its relationship with the rise, maintenance, and good functioning of political systems. Newton (2008) defines it as a belief that those in power will not harm the citizens but look after their interests. Due to its closeness with other social and political attitudes and behaviors, *political trust* is difficult to conceptualize and operationalize empirically. It relates to different objects of the political system (Easton, 1965; Dalton, 2004; Marien, 2011) and is most frequently operationalized by studying the levels of *trust in political institutions*. However, these operationalizations vary as different indicator are used to measure the concept. Most frequently we find four different measurement models as we summarize in Section 2.

Besides, to our knowledge, most of the studies on trust in *political institutions* focus on Western and democratic regimes, mainly in Europe and America. Only during the last years authors tried to overcome this lack by studying different levels of *trust in political institutions* in a cross-cultural context including both, democratic and non-democratic regimes and in cases which are neither European nor American, e.g. in Asian countries (Yudong, 2013, Li,2004; Wang, Dalton, and Shin,2006; Ahn and Kang, 2002). However, research focusing on *trust in political institutions* in Arab societies remains very limited. In this paper we aim to contribute to filling this gap in the literature by making use of the unpublished and recent survey data from the SAHWA project[1].

The SAHWA project joins partners from European and Arab countries to research on prospects and perspectives of young people between 15 and 29 years-old in Algeria, Egypt, Lebanon, Morocco, and Tunisia. The main topics under study in the SAHWA project are education, employment and social inclusion, political mobilization and participation, culture and values, international migration and mobility, gender, comparative experiences in other transitional contexts and public policies, and international cooperation.

Preliminary analysis of this data suggests that the average of *trust in political institutions, ranging from 0 not at all to10 absolutely confident,* operationalized as the sum of trust in the *parliament*, in the *legal system*, in the *political parties*, in the *politicians*, and in the *police*, is lower in Lebanon (2.02) and Tunisia(2.78) than in Algeria (3.50) and Morocco (3.87). However, before affirming that these empirical differences are, indeed, real, we need to confirm that they are not caused by the measurement model. Measurement equivalence is indispensable to ensure that that the survey questions measure the same concept across countries.

The remainder of the paper is divided in seven sections: in section 2, we resort to the literature in order to define/extract the measurement models of *trust in political institutions*, in section 3 we describe the data, in section 4 we present the statistical techniques that we apply, in section 5 we summarize the models that we test, and the results of our analysis are presented in section 6. The conclusions are presented in section 7.

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2. The measurement of trust in political institutions

According to the literature, the theoretical concept of *trust in political institutions* is a complex concept that cannot be measured directly by a single observed indicator but there is no consensus on how to measure it. The most common way is measuring it as a one-dimensional concept with several indicators. This means that if respondents have a positive attitude towards political parties, for instance, they most likely have a positive attitude towards other institutions as well (Zmerli and Hooghe,2011). Hereafter we will summarize some of the measurement models of trust in political institutions we found in the literature.

Most frequently we find the concept measured by the following five indicators: *trust in the parliament*, in *politicians*, in *political parties*, in the *legal system*, and in the *police*. For instance, Daniele and Geys (2015)construct a sum score for this concept with these five indicators in order to explain individual support towards welfare state. They find a strong and positive relation between supporting redistribution measures and different levels of the political trust index in 29 European countries. Oorschot, Roosma, & Gelissen(2014)explore the effect of political trust on individual perception of overuse and underuse of public goods. Using the same five indicators, Carlson(2016)shows that different levels of self-rated health condition lead to significantly different levels of *trust in political institutions* in Poland, Russia, and Estonia. However, in these studies measurement equivalence of the concept was assumed across countries but not tested. Marien (2011),on the other hand, focused specifically on the equivalence of the measurement of *trust in political institutions* across 30 countries and over the period from 2004 to 2008. She finds that the model with five indicators is equivalent across countries but only after introducing correlated errors between *trust in legal systems* and in the *police* and *trust in politicians* and *political parties*. These findings suggest that the concept of *trust in political institutions* is measured by the combination of the five single indicators trust in national parliament, trust in politicians, trust in political parties, trust in the legal system, and 'trust in the police' (Model 1).

Schneider(2016), also in search of a measurement model of political trust in different political regimes, found that *trust in the police* and *trust in courts* are associated with *trust in political institutions* depending on the regime's history. We therefore could also expect that *trust in political institutions* is measured by the combination of only four of the five single indicators mentioned above, leaving *trust in the police* out (Model 2).Moreover, Rothstein and Stolle (2008) and André (2014) also argue that *trust in political institutions* has a multi-dimensional structure and we need to distinguish between *partisan* and *order/neutral political trust*. Then *trust in political institutions* can be measured with a two-dimensional measurement model, making a distinction between *partisan* and *order/neutral trust in political institutions* (Model 3). Turper and Aarts (2015), on the other hand, leave out this second factor *order/neutral political trust* and find that the *partisan political trust* model is measurement invariant in the Netherlands between 2004 and 2012.Therefore, the final model (Model 4) contains three indicators *trust in national parliament*, in *politicians*, and in *political parties*.

3. Data

We use data from the SAHWA Youth Survey. The SAHWA Youth Survey is a cross-national and representative survey conducted in the five Arab-Mediterranean countries between 2015 and 2016. The target group is young people between 15 and 29 years-old and the number of completed interviews is 10,036. The survey contains items which measure respondents' trust in the national parliament, politicians, political parties, the legal system, and police. Although the survey was supposed to be implemented in the most similar way in all countries, exceptions accounting for the national reality were allowed. Therefore, in Egypt "trust in the police" was not measured, and in Morocco the answer scale ranged from 1 'no confidence at all' to 10 'absolute confidence', whereas in all other countries it ranges from 0 to 10 labeled in the same way. We therefore have to exclude Egypt when 'trust in the police' is included in the analyses but we can keep the data from Morocco because one missing response option may not cause non-equivalence *per se*.
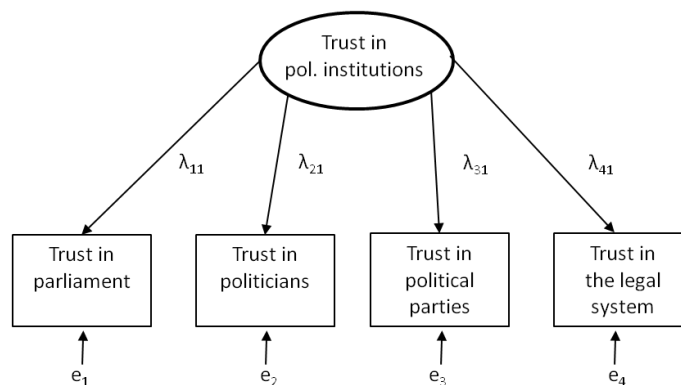
4. Measurement models

In order to test which of the models elaborated based on the literature fits the SAHWA data we test each of them. The four different models are presented in Figures 1 to 4:
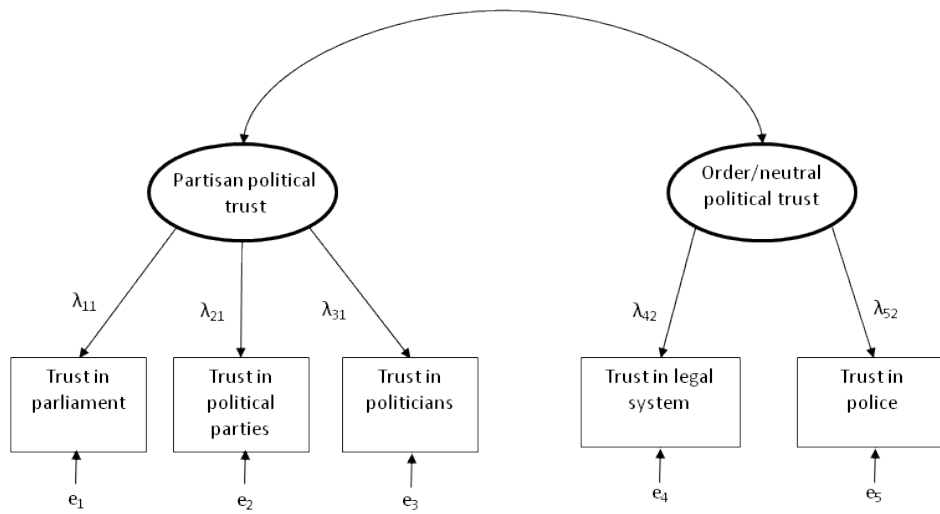
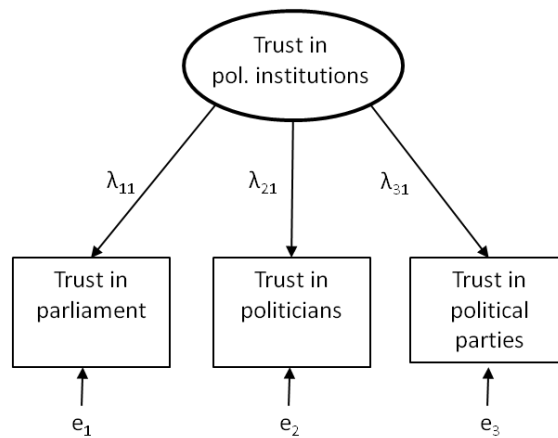**Figure 1: 1-factor model with 5 reflective indicators (Model 1)**
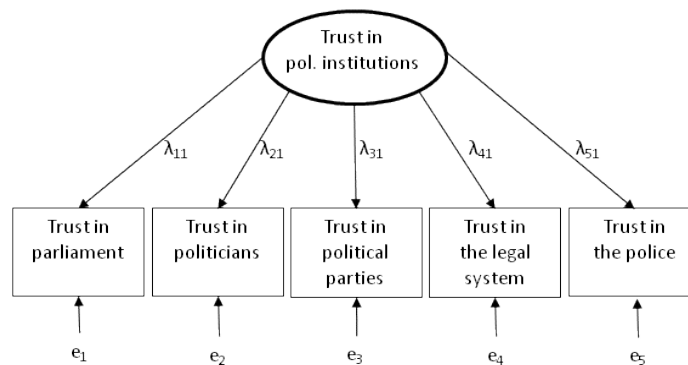
Figure 2: 1-factor model with 4 reflective indicators (Model 2)

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Figure 3: 2-factor model with 5 reflective indicators (Model 3)

Figure 4:   1-factor model with 3 reflective indicators (Model 4)

5. Method

In order to evaluate which indicators are valid measures for *trust in political institutions* and if the same measurement model holds across countries, we test for three successively stricter levels of measurement invariance:

1. Configural invariance to assess that the same measurement model fits across countries.
2. Metric invariance to test whether the loadings (λ_{ij})are equal across countries. If established, covariances and unstandardized regression coefficients can be compared across countries. A unit change in the latent variable will affect the scores of the indicators in the same magnitude across countries.

3. Scalar invariance to test if the intercepts of the indicators are equal across countries. If scalar invariance holds, the means of the latent variables can be compared across countries.

We conduct a multigroup-confirmatory factor analysis using the packages *lavaan* for structural equation modeling analysis (Rosseel2012) of the statistical software *R*(2016).All the estimators will be obtained using the Maximum Likelihood estimation procedure.

6. Results

In order to test the goodness-of-fit of all the models the parameter we use both global fit indices and parameter level approach. Saris, Satorra, & van der Veld (2009) show that global fit measures have important limitations, such its big dependence on the sample size, the parameters size, the power of the test, and it is very sensitive to non-normal distributions. They recommend using the modification indices, the power, and, when necessary, the expected parameter change to asses if there is any local misspecification in the model. They therefore developed the program *JRule*(Van der Veld, Saris, and Satorra, 2008). We use the *JRule* adaptation for *R*, the function *MyPowerFit*included in the package *semTools* (semTools Contributor, 2016). Nonetheless, in addition we also report the traditional global fit indices *chi2* and degrees of freedom, the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR) and the Comparative Fit Index (CFI). In order to fit an acceptable model, RMSEA values should be lower than 0.06 , SRMR 0.09 or lower, and the CFI needs to take values greater than 0.90 (Chen, 2007).Table 1 presents the results for the four different models tested.

Table 1: Local and global fit measures invariance for trust in political institutions

	Local misspecifications	Chi^2	df.	P	RMSEA	CFI	SRMR
Model 1 Configural	11 correlated errors	2244	20	0.000	0.235 (CFI 95% 0.224 – 0.227)	0.911	0.071
Metric	-	-	-	-	-	-	-
Scalar	-	-	-	-	-	-	-
Model 2 Configural	5 correlated errors	292	8	0.000	0.133 (CFI 95% 0.120 – 0.146)	0.986	0.023
Metric	-	-	-	-	-	-	-
Scalar	-	-	-	-	-	-	-
Model 3 Configural	3 correlated errors and 5 cross-loadings	169	8	0.000	0.100 (CFI 95% 0.087 – 0.114)	0.992	0.015
Metric	-	-	-	-	-	-	-
Scalar	-	-	-	-	-	-	-
Model 4 Configural	-	-	-	-	-	-	-

Metric (1)	Correlated error between Parliament and Politicians in Morocco	79	8	0.000	0.060 (CFI 95% 0.054 – 0.081)	0.997	0.026
Metric (2)	None – after excluding Morocco	27	6	0.000	0.043 (CFI 95% 0.027 – 0.059)	0.999	0.019
Scalar	None	229	8	0.000	0.117 (CFI 95% 0.105 – 0.131)	0.986	0.034

For Model 1, configural invariance could not be established as we findel even correlated errors out of total of 40 possible in the four groups, mostly between the variables *police* and *legal* and *politicians* and *political parties*. Moreover, global fit indices also confirm that this measurement structure does not fit properly the data(RMSEA>0.06). Taking into account that the model does not hold configural invariance which is a pre-condition for metric or scalar invariance, we do not precede testing and have to reject this model.

For Model 2, which did not contain the variable *police*, configural invariance could not be established either. As the indicator *trust in the police* is left out, we included Egypt in the analysis. Although the number of correlated errors reduced considerably compared to Model 1 when dropping *police*, correlated errors between the variables *political parties* and *politicians* remain in the case of Algeria and Tunisia. Besides, like in Model 1, the RMSEA index shows a poor global fit of the model. We conclude then that Model 2 is not configural invariant across groups either and have to reject the model.

Fitting a 2-factor model as defined in Model 3 we find local as well as global fitting problems. Besides the correlated errors between *political parties* and *politicians* as well as *legal system* and *police* already found in Model 1, we find two cross-loadings between the second factor and two observed variables from the first factor, *parliament* and *political parties*. Besides the local misspecificants, the global fit indices are also poor. Model 3 is therefore rejected as well.

The final model, Model 4, only includes three indicators. As the indicator *trust in the police* is left out, we include Egypt in the analysis. A factor model with three indicators does not have sufficient degrees of freedom to test for configural invariance and we therefore test directly for metric invariance. For this model we find that only the loading of the observed variable *trust in the parliament* in Morocco is not invariant across countries. Taking into account that Morocco is the only country that used a response scale ranging from 1 to 10 instead of 0 to 10 like in the other countries, we remove it from the analysis. After this, find that Algeria, Egypt, Lebanon, and Tunisia are fully metric invariant. As measurement invariance testing is successively stricter, we deduce that fully configural invariance also holds for the last four countries. Finally, we test for scalar invariance for the four countries for which metric invariance holds. At that last level we find no misspecification so fully scalar invariance is established for the four countries. Overall, the model with three indicators is the one that fits our data best.

7. Conclusions

In this paper study we aimed to study trust in political institutions in Arab societies by fitting a measurement model and testing its configural, metric, and scalar invariance in the five countries under study. According to our analysis, after testing several measurement models found in the literature, we conclude that the best measurement model to study the complex concept *trust political institutions* is using three observed indicators: *trust in political parties*, *trust in politicians*, and *trust in the parliament*. Other models including order/neutral political institutions do not fit the data properly.

After our analysis, we can conclude that fully configural and metric invariance hold for all the countries under study with the exception of Morocco. For Morocco, we find fitting problems that forced us to remove this country from the analysis. .This means that, in terms of the latent concept or additive index, we can compare unstandardized relationships across all countries excluding Morocco.

In the last and strictest levels of invariance we test, we find that scalar invariance does not hold for the case of Lebanon. The intercept of the indicator *trust in political parties* is not the same was in the other countries. This implies that the latent means of Algeria, Egypt, and Tunisia can be compared and that the three indicators can be also used to construct an additive index which is comparable across these countries as well.

To conclude, initially we stressed the importance of measurement invariance testing in cross-cultural studies before drawing substantive conclusions. Our preliminary analysis suggested that the average of trust in political institutions, operationalized as the sum of trust in the parliament, in the legal system, in the political parties, in the politicians, and in the police, is lower in Lebanon (2.02) and Tunisia (2.78) than in Algeria (3.50) and Morocco (3.87). However, after our analysis, we know an additive index, ranged from 0 to 10, summing these five observed variables would not be invariant across countries and therefore its values, means, or relationships with other variables cannot be compared. After fitting the data with the measurement model which yields most comparability (Model 4), where *trust in political parties*, in *politicians*, and in *the parliament* are the indicators, we conclude that on average Algeria has the highest level of *trust in political institutions* (2.74), followed by Egypt (2.48), Tunisia (1.73), and Lebanon (1.61). The mean of Morocco is not comparable to the former.

8. References

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