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Master Thesis

**The Influence of Social Capital and
Tolerance on Democratic Performance**

Advisor: Prof. Dr. Steffen Kühnel

Johannes Schult

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and Tolerance on Democratic Performance

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Address: Geissberg 13; D-71334 Waiblingen

Email: johannes.schult@student.kubrusssel.be

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Abstract

The present paper deals with the questions to what extent does social capital influence democratic values directly and whether there is an indirect influence through interpersonal and political tolerance. Data from the German and the Swiss part of the European Values Survey (EVS) mid-90s wave are used for the empirical analysis. Conceptual and methodological effects influence the structural equation model. Individual social capital appears to have a moderate influence on democratic attitude, whereas the role of tolerance is of minor importance in Germany and neglectable in Switzerland. The results support the notion that social trust and civic associations foster democratic values. Both personal and political tolerance can be regarded as separate concepts with rather weak relationships in the given framework. The lack of influence of political tolerance on democratic attitude is remarkable, but can partly be attributed to the respective tolerance items, which are binary and do not differentiate between degrees of tolerance.

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1 Introduction

Social capital research experienced an unprecedented boom during the past two decades (Ostrom & Ahn 2003). The concept of an underlying factor that combines civic associations and interpersonal trust proved to be helpful in explaining the development of human capital (Coleman 1988) and democracy (Putnam 1993).

The present study revisits the work of Müller-Berner (2007), elaborating the analysis of the effects of social capital and tolerance on democratic performance. Particularly, it seeks to answer the question: how far can social capital and interpersonal tolerance account for the level of political tolerance and democratic values?

1.1 Social Capital

Putnam (2000, pp. 18–19) describes social capital as a feature of social organizations that manifests itself in terms of trust, norms, and networks. Norris (2002, Chapter 8) suggests two basic dimensions of social capital: a structural one (associational activism) and a cultural one (social trust). This conception appears to be at the core of most social capital studies regardless of their sometimes vast differences (Van Deth 2003). Available survey data fail to tackle the complete spectrum of social capital as defined in theoretical papers (Yang 2007); the social capital concept used in this study (and other studies) is therefore constrained by pragmatic considerations (Van Deth 2003).

1.2 Tolerance

Putnam (2000, p. 362) implicitly includes tolerance in his conception of social capital when he differs between bonding and bridging social capital. The latter type requires tolerance toward other social groups. The definition of social capital in the previous section follows a different approach and does not contain tolerance, because tolerance is usually not contained in the concept of social capital (Ostrom & Ahn 2003, Van Deth 2003).

In the present study, the distinction between interpersonal tolerance and political tolerance is made in order to differentiate between the rather social aspects and the rather political aspects of the broad concept of tolerance. The former ones refer to the acceptance of, for example, homosexuality, abortion, divorce, and suicide; the latter ones refer to attitudes towards the involvement of the least liked group in public life (Sullivan & Transue 1999).

1.2.1 Interpersonal Tolerance

Tolerance is a very broad concept that is closely tied to general norms (Putnam 2000, Chapter 22). The concept of interpersonal tolerance used in the present study deals with the acceptance of behaviour that deviates from the prevailing social norm. It corresponds to the second part of the tolerance index of Müller-Berner (2007, p. 57). The first part, the social and political acceptance of equal rights to women is excluded because of the potential overlap with political tolerance and democratic attitude.

1.2.2 Political Tolerance

Political tolerance “evolved from efforts to moderate the harmful and often violent effects of religious conflict” (Sullivan & Transue 1999, p. 630) and closely linked to opinions on civil liberties, i. e., the norms regarding the handling of different political views in a non-violent and possibly constructive way.

The “least liked group” measure is routinely in studies of political tolerance (Finkel, Sigelman & Humphries 1999). Unlike items about political tolerance in general, the willingness to extend civil liberties to unpopular groups is closely linked to corresponding behaviour (Sullivan & Transue 1999, Finkel et al. 1999).

1.3 Democratic Attitudes

Finkel et al. (1999, p. 215) warn that “orientations toward political tolerance should not be equated with orientations toward “democracy”” The latter ones are only an imperfect indicator for the actual democratic performance of a society. Still, they are the best measure available on the individual level.

Attitudes toward democracy include the direct estimation of democracy as a system of government, but also opinion on the performance of a democracy in practice. Social capital research often employs aggregated numbers of these measures to model effects of mass-values. Democratic attitudes are supposed to be a prerequisite for democracy, delegitimizing autocracy and supporting democratic developments (Inglehart & Welzel 2005, p. 247). The present study uses democracy-friendly attitudes on the individual level, despite their imperfect representation of societal conditions.

1.4 Theoretical Path Model

Figure 1 shows the theoretical path diagram of the presumed model. A structural equation modelling approach is chosen in order to run a joint analysis of the presumed underlying factors and their structural relationship with each other. This method has been used previously in the study of social capital

and its effects, for example by Brehm & Rahn (1997), who used data from the General Social Surveys 1972–94.

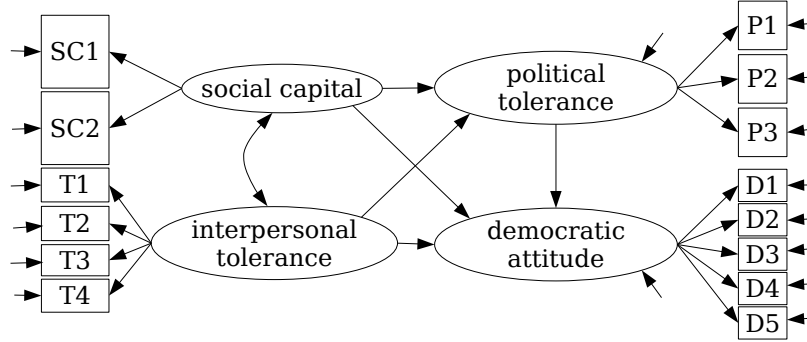


Figure 1: Path diagram of the proposed structural equation model. S1 and S2 refer to the social capital indicators; T1 to T5 denote the indicators for interpersonal tolerance; P1 to P3 denote the indicators for political tolerance; D1 to D5 refer to the indicators for democratic attitude. See Skrondal & Rabe-Hesketh (2004, p. 77) for formal aspects of the statistical model.

There is evidence that social capital can facilitate the democratic performance of countries (Putnam 2000, Paxton 2002). Trust, one of the major components of social capital, is supposed to have an impact on democratic attitude, because it requires the willingness to give political power to the whole population of a nation (Paxton 2002). Civic associations, the other important component of social capital, are a crucial element of a prodemocratic civic culture (Inglehart & Welzel 2005, pp. 247–249).

But the effect of social capital on democracy is not always clear and stable (Levi 1996). This may partly be due to heterogeneous definitions and operationalizations (Van Deth 2003). Putnam (2000) suggests that a low level of tolerance might counteract the influence of social capital on democratic performance. The findings of Müller-Berner (2007) indicate that tolerance plays an important role in the transition from the cultural aspects of social capital to the structural aspects of democracy. Table 1 shows the possible combinations of different levels of social capital and tolerance in a society. The division into different types is not clear-cut. The present path model contains direct effects from social capital and tolerance on democratic values, as well as an indirect path from social capital to democratic attitude via political tolerance.

A correlation between social capital and interpersonal tolerance is introduced to reflect a possible conceptual overlap.

The path from interpersonal tolerance to political tolerance is introduced, because the general form of interpersonal tolerance is supposed to be a facilitator

	Low social capital	High social capital
High tolerance	Individualistic	Civic community
Low tolerance	Anarchic	Sectarian community

Table 1: Social capital, tolerance and the respective types of society. Adapted from Putnam (2000, p. 355).

for the societal notion of political tolerance; people who are likely to tolerate the norms are presumably also more inclined to respect the civic rights of disliked groups.

The present study tests, whether this structure of factors reflects the democracy enhancing effect of social capital, in particular the role of tolerance.

2 Method & Data

Structural equation modelling provides an appropriate frame for the model outlined above (see Figure 1). The major advantage of this method is the joint estimation of the latent factors and their linear relationships. The initial measurement models contains no specific structural parts (i.e., no paths between the latent factors). Only when the conceptual connections between the indicators and the proposed underlying constructs appear tenable, the actual relationships between social capital, tolerance, and democratic values are entered into the model and tested.

2.1 Level of Measurement

There is an ongoing debate about the appropriate level of measurement of social capital. Survey data, social networks¹, and macro-level variables have been used in social capital research. Some authors like Norris (2002, p. 139) argue that social capital, being a relational phenomenon, cannot be the property of individuals, whereas others view it as an attribute of individuals and their relationships (Ostrom & Ahn 2003). Social capital requires interpersonal relationships by definition; it “exists only when it is shared” (Narayan & Cassidy 2001, p. 60). Still, information about these relationships can very well be acquired on an individual level. Even proponents of meso- and macro-level approaches (Inglehart & Welzel 2005, Norris 2002) often rely on aggregated individual data. Yang (2007, p. 20) concludes that social capital can be both a collective property and an asset of individuals. The two types of social capital have a different meaning (Portes 2000), although in practice the social capital of a community is usually measured by adding up the social capital of its members (e.g., Norris 2002). For the present study, the concept of individual social capital is adopted in order to study the effects described in Section 1.4.

Democracy and democratic performance are clearly societal attributes that cannot be observed at the level of individual persons (Inglehart & Welzel 2005). The opinions on democracy included in the present study are not so much a proxy for democracy, but rather an indicator for inclination toward democracy.

¹Social network analysis provides a proper framework for studying social capital in the context of individuals that interact (or do not interact) in a group (Burt 2000). The major shortcoming of this approach is the lack of (theoretical and practical) means to obtain general population samples. It is also unclear how this type of data could be aggregated to the national level.

2.2 Data

All data are taken from the European Values Survey (EVS)². The quality of the data is deemed sufficient for the purpose of the present study. The size of the World Values Surveys is a prominent feature along with the extensive questionnaire that covers a broad range of topics; the downside is a lack of extensive, unified non-response research. The absence of selected items in some waves is another limitation. As a result, the only wave containing all necessary items was the European Values Survey 1995. Only the data from Germany 1997 and Switzerland 1996 were thus used in the analysis. Both countries displayed moderately high average level of social trust and associational activism, respectively, and subsequently lie close to each other on the Social Capital Index reported by Norris (2002, pp. 149–154).

The data are likely to share some method variance, because they stem from the same survey. The individual cases were not weighted. Cases with missings on any of the variables of interest were excluded from the analyses.

2.3 Variables

Table 2 lists the variables used as indicators, ordered by the respective latent factor they are supposed to belong to. Generally, a high value on any one indicator is related to a high level of the corresponding factor. See Appendix A for the exact wording of each question.

2.3.1 Indicators for Social Capital

The indicators for social capital reflect the cultural dimension (trust in other people; binary item) and the structural dimension (membership in associations). The responses to the latter one can indicate both active and Inactive memberships. Active membership has the value 2; inactive membership has the value 1; no membership has the value 0.

²European Values Study Group and World Values Survey Association. EUROPEAN AND WORLD VALUES SURVEYS FOUR-WAVE INTEGRATED DATA FILE, 1981-2004, v.20060423, 2006. Aggregate File Producers: Analisis Sociologicos Economicos y Politicos (ASEP) and JD Systems (JDS), Madrid, Spain / Tilburg University, Tilburg, The Netherlands. Data Files Suppliers: Analisis Sociologicos Economicos y Politicos (ASEP) and JD Systems (JDS), Madrid, Spain / Tilburg University, Tilburg, The Netherlands / Zentralarchiv fur Empirische Sozialforschung (ZA), Cologne, Germany. Aggregate File Distributors: Analisis Sociologicos Economicos y Politicos (ASEP) and JD Systems (JDS), Madrid, Spain / Tilburg University, Tilburg, The Netherlands / Zentralarchiv fur Empirische Sozialforschung (ZA) Cologne, Germany.

variable	
a098	Active/Inactive membership of church or religious organization
a099	Active/Inactive membership of sport or recreation
a100	Active/Inactive membership of art, music, educational
a101	Active/Inactive membership of labour unions
a103	Active/Inactive membership of environmental organization
a104	Active/Inactive membership of professional organization
a105	Active/Inactive membership of charitable/humanitarian organization
a106	Active/Inactive membership of any other organization
a165	Most people can be trusted
f118	Justifiable: homosexuality
f120	Justifiable: abortion
f121	Justifiable: divorce
f123	Justifiable: suicide
e193	Least liked allow: hold office
e194	Least liked allow: teach
e195	Least liked allow: demonstrate
e117	Political system: Having a democratic political system (recoded)
e120	In democracy, the economic system runs badly
e121	Democracies are indecisive and have too much squabbling
e122	Democracies aren't good at maintaining order
e123	Democracy may have problems but is better (recoded)

Table 2: List of variables. The first group of items belongs to the latent factor social capital, the second group to interpersonal tolerance, the third group to political tolerance, and the fourth group to democratic attitude.

2.3.2 Indicators for Interpersonal Tolerance

The items for interpersonal tolerance reflect the selection of Müller-Berner (2007, p. 112). Respondents were asked, whether they think that the element in question can be justified. The four items used are: homosexuality, abortion, divorce, suicide. The item concerning euthanasia (f122) was not included in the German 1997 EVS wave.

2.3.3 Indicators for Political Tolerance

The items about political tolerance were preceded by the request to pick from a list one group or organization that the respondent likes least. Eventually, respondents were asked, whether they think that the group they have chosen

should be allowed to hold public office, to teach in schools, and to hold public demonstrations. A binary response was given to each part (“no” = 0, “yes” = 1).

2.3.4 Indicators for Democratic Attitude

Respondents had to value democracy as a way of governing their country on a four point scale which was inverted for the present analysis so that 1 means “very bad” and 4 means “very good”. They were also asked to give an opinion on the following statements about democracy: “In democracy, the economic system runs badly.”, “Democracies are indecisive and have too much squabbling”, “Democracies aren’t good at maintaining order”, and “Democracy may have problems but it’s better than any other form of government.” Responses were again given on a four point scale from 1 (“agree strongly”) to 4 (“disagree strongly”). Answers to the last item were inversed.

3 Analysis

The main analyses in the following two subsections are based on the data from Germany. The data from Switzerland is used in the third subsection to check the validity of the results. Finally, the standardized solutions from all three parts are listed in the last subsection. A significance level of $\alpha = 0.05$ is adopted for all tests. The LISREL syntax is listed in Appendix D³.

3.1 Initial LISREL Models

The initial measurement model with four latent variables is listed in `master001.LS8`. The order of the indicators corresponds to Table 2. The root mean square error of approximation (RMSEA) is already sufficiently small ($0.0467 > 0.05$) and the p -value for test of close fit (RMSEA < 0.05) is high (0.958). But the minimum fit function χ^2 has a very small probability ($p < 0.0001$). The modification indices suggest that model can be improved by freeing some error covariances.

First, the error variances between church membership and tolerance towards abortion (`master002.LS8`) and divorce (`master003.LS8`) are implemented. Next, the error variance between the first and the last democratic attitude indicator is freed (`master004.LS8`). Finally, the error variance between the two more participation-oriented indicators for political tolerance is freed in model `master005.LS8`. Table 3 shows the goodness of fit statistics of all models and the likelihood ratio (LR)-test for each modification step. All tests were highly significant, indicating an improvement of the measurement model.

model	χ^2	df	p	AIC	$\Delta\chi^2$	Δ df	p
<code>master001</code>	857.466	203	0.000	995.951			
<code>master002</code>	758.053	202	0.000	889.697	99.413	1	0.000
<code>master003</code>	729.780	201	0.000	857.121	28.273	1	0.000
<code>master004</code>	578.084	200	0.000	703.043	151.696	1	0.000
<code>master005</code>	526.405	199	0.000	637.257	51.679	1	0.000

Table 3: Goodness of fit statistics and LR-tests of the initial measurement model and subsequently modified models. Each LR-test compares the current model to the previous one.

The loadings of the social capital are rather small. The variable indicating membership in a labour union is dropped, because it has the lowest loading. The resulting new model is listed in `master006.LS8`. The error variances between church membership and tolerance towards homosexuality is implemented

³Appendix B lists the STATA syntax used to prepare the covariance matrices; Appendix C contains said covariance matrices.

in model (`master007.LS8`) to improve the fit of the measurement model. The loadings of the third and the fourth indicator for democratic attitude are set equal in model `master008.LS8`. The loadings of the first and the third indicator for interpersonal tolerance are set equal in model `master009.LS8`.

Table 4 shows the goodness of fit statistics of the models and the LR-tests for each modification. Each step indicates a significant improvement, making `master009.LS8` the new measurement model.

model	χ^2	df	p	AIC	$\Delta\chi^2$	Δ df	p
<code>master006</code>	467.323	179	0.000	573.079			
<code>master007</code>	458.712	178	0.000	570.988	8.611	1	0.003
<code>master008</code>	458.714	179	0.000	568.986	0.002	1	0.964
<code>master009</code>	458.733	179	0.000	566.953	0.019	1	0.890

Table 4: Goodness of fit statistics and LR-tests of the reduced measurement model and the subsequently modified models.

The proposed structure of latent factors (see Figure 1) is modelled in `master010.LS8`. The completely standardized solution contains a rather small correlation between social capital and interpersonal tolerance ($r = 0.075$). The covariance between the first two factors is fixed to zero in model `master011.LS8`. Table 5 shows the goodness of fit statistics of the models and the LR-test for the modification. Excluding the covariance between the first two latent factors does not make the model significantly worse; `master011.LS8` also has a smaller AIC and thus becomes final model. Figure 2 shows the path diagram of the standardized solution. The completely standardized solution is listed in Section along with forthcoming alternative solutions.

model	χ^2	df	p	AIC	$\Delta\chi^2$	Δ df	p
<code>master010</code>	458.733	180	0.000	566.953			
<code>master011</code>	462.483	181	0.000	566.750	3.750	1	0.053

Table 5: Goodness of fit statistics and LR-test of the structural equation model and the subsequently modified model.

3.2 LISREL Models with Aggregated Civic Associations Indicator

Several loadings of the social capital factor are rather low in model `master011`. This is possibly due to socially active respondents being part of selected, but

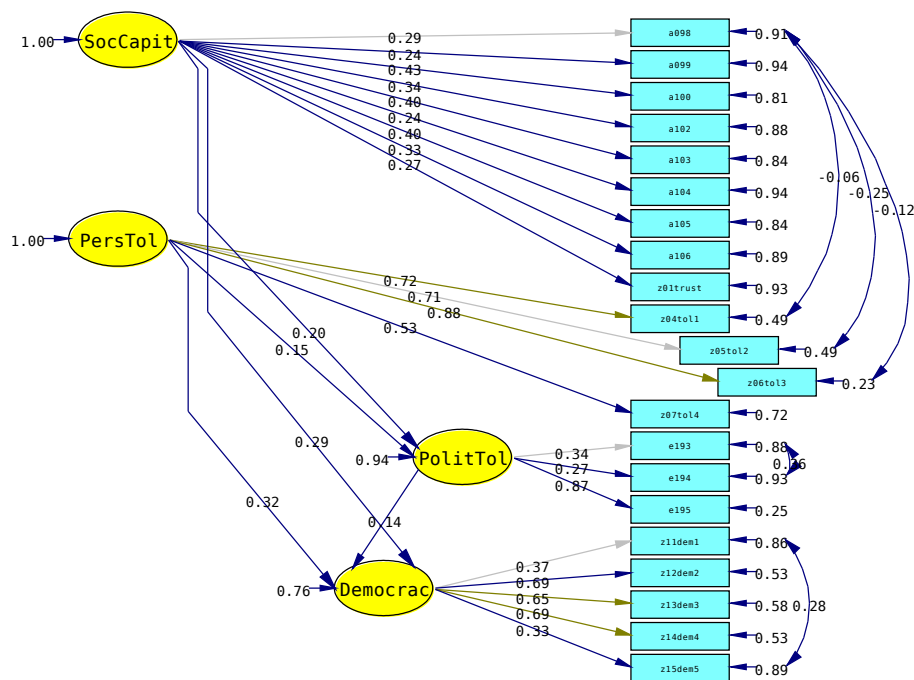


Figure 2: Path diagram of the best fitting structural equation model (`master011.LS8`) with the standardized solution. $\chi^2 = 462.483$, $df = 181$, $p = 0.000$, RMSEA = 0.0318.

not all civic associations. An additive indicator replaces the membership items. This civic associations indicator is simply the sum of the membership variables. Church membership and labour union membership were excluded because of their performance in the previous analyses. Church membership is negatively related to most of the interpersonal tolerance items; labour union membership shows a very weak connection to the social capital factor, possibly because the sometimes socially mandatory nature of labour union membership.

The initial measurement for the configuration with only two social capital indicators is listed in `master012.LS8`. This model is modified in a similar fashion like the original measurement model to obtain good fit. See Table 6 for the corresponding goodness of fit statistics and LR-tests. The error variance between the two inversed items democratic attitude items is freed (`master013.LS8`). The RMSEA (0.0384) and the p -value for RMSEA < 0.05 (1.00) suggest that this model fits the data well. But the modification indices of several parameters indicate that the model can still be improved. The error variance between the first two political tolerance indicators is freed (`master014.LS8`) next. The loadings of the second and the third democratic attitude indicator are set equal in model `master015.LS8`. The loadings of the first and the third interpersonal tolerance

indicator is set equal in model `master016.LS8`. The error variance between the first two interpersonal tolerance indicators is freed in model `master017.LS8`.

model	χ^2	df	p	AIC	$\Delta\chi^2$	Δ df	p
<code>master012</code>	372.207	71	0.000	453.692			
<code>master013</code>	222.180	70	0.000	301.639	150.027	1	0.000
<code>master014</code>	160.528	69	0.000	233.839	61.652	1	0.000
<code>master015</code>	163.121	70	0.000	235.664	2.593	1	0.107
<code>master016</code>	163.132	71	0.000	233.727	0.011	1	0.916
<code>master017</code>	150.649	70	0.000	222.220	12.483	1	0.000

Table 6: Goodness of fit statistics and LR-tests of the revised measurement model and the subsequently modified models.

The LR-tests in Table 6 suggest that each step is an improvement. The decrease of the AIC for all but one modification supports the decision to adopt `master017.LS8` as measurement model, although it is slightly different from structure of the previous subsection’s final model.

The postulated factor relationships are implement in model `master018.LS8`. The path from interpersonal to political tolerance is fixed to zero, because its completely standardized value is rather small and the theoretical link possibly the weakest one in the model. Table 7 shows the goodness of fit statistics and the LR-test. The revised model `master019.LS8` fails to achieve a proper fit in terms of χ^2 , but its RMSEA is sufficiently low (0.0273) and the p -value for RMSEA < 0.05 approaches 1.

model	χ^2	df	p	AIC	$\Delta\chi^2$	Δ df	p
<code>master018</code>	150.649	70	0.000	222.220			
<code>master019</code>	151.929	71	0.000	221.658	1.280	1	0.258

Table 7: Goodness of fit statistics and LR-test of the alternative structural equation model and the subsequently modified model.

The standardized solution of model `master019.LS8` is shown in Figure 3. The completely standardized solution is listed in Section .

3.3 Comparison with Swiss Data

The models from the previous subsections are based on data from Germany. The final model `master019.LS8` is now reassessed with data from Switzerland to investigate the robustness of the results.

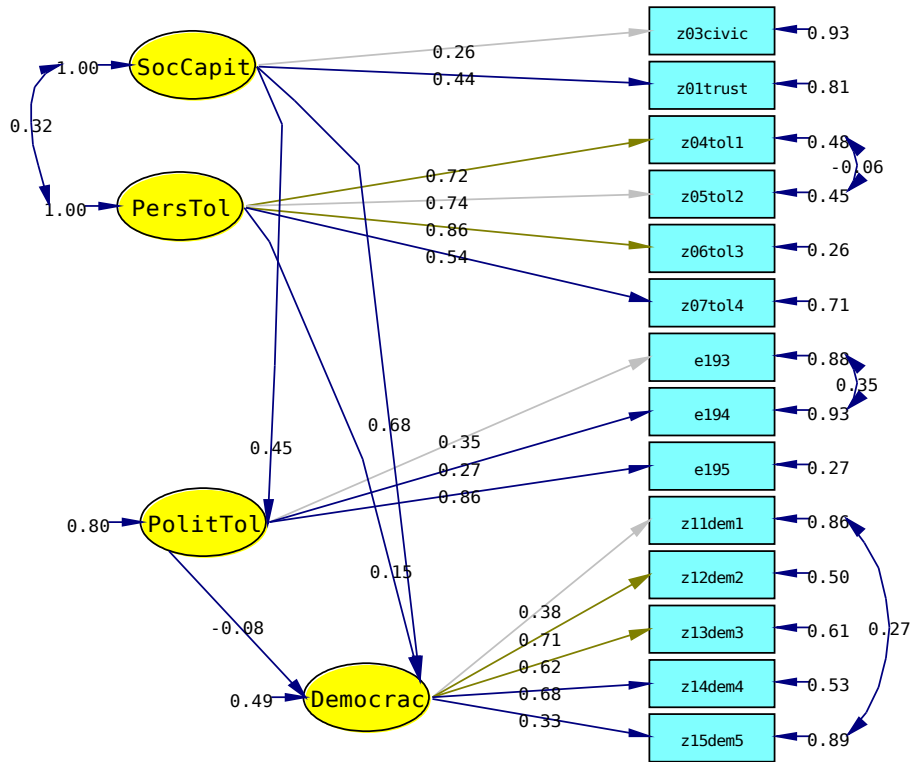


Figure 3: Path diagram of the revised structural equation model (master019.LS8) with the standardized solution. $\chi^2 = 151.929$, $df = 71$, $p = 0.000$, RMSEA = 0.0273.

The model with the Swiss data is specified in master020.LS8. The error covariance between the first two political tolerance indicators is removed from the model to get proper output. The modification index of the second and the third democratic attitude indicator high (28.820 > 3,84); the equality command is excluded in model master021.LS8. Table 8 shows the goodness of fit statistics and the LR-test. Both models show a poor fit in terms of χ^2 . But master021.LS8, which according to the LR-test is the superior model, has a low RMSEA (0.0296) and the p -value for RMSEA < 0.05 (0.999) is close to 1.

model	χ^2	df	p	AIC	$\Delta\chi^2$	Δdf	p
master020	141.158	72	0.000	204.398			
master021	107.154	71	0.004	173.399	34.004	1	0.000

Table 8: Goodness of fit statistics and LR-test of the validation structural equation model and the subsequently modified model.

The fit of model `master021.LS8` can be further improved, for example, by setting $\beta_{4,3}$ zero. But the purpose of the present sample is the validation of the previously established results. The direct comparison of the parameter estimates is presented in Section 3.4. The path diagram with standardized parameters is shown in Figure 4.

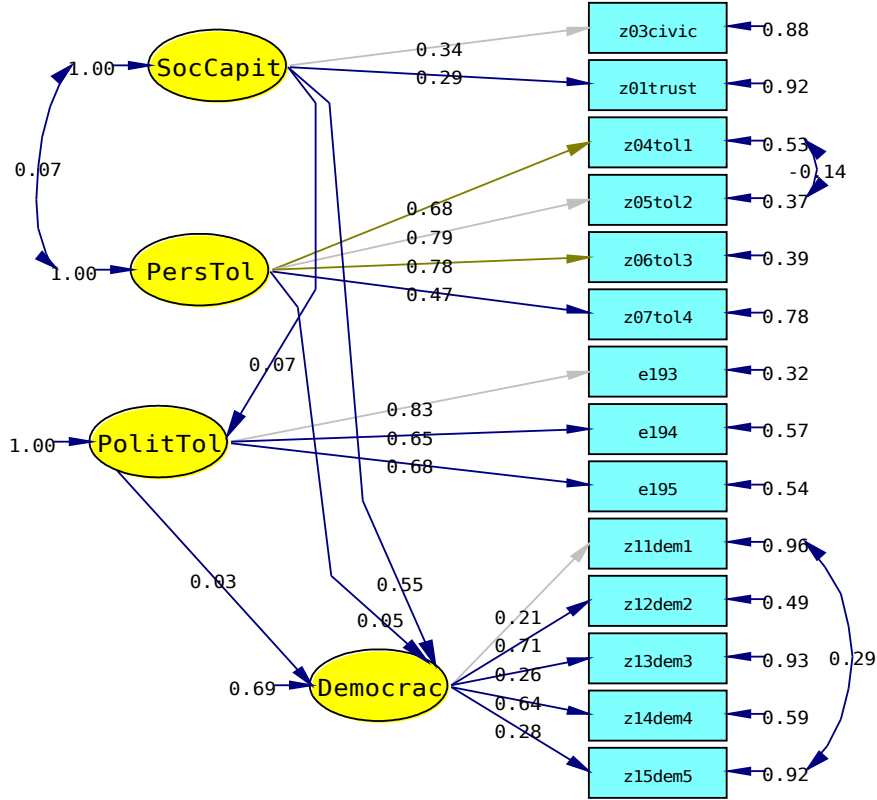


Figure 4: Path diagram of the structural equation model `master021.LS8` with the standardized solution. $\chi^2 = 107.154$, $df = 71$, $p = 0.004$, $RMSEA = 0.0296$.

model	χ^2	df	p	AIC	$\Delta\chi^2$	Δdf	p
<code>master022</code>	339.180	144	0.000	476.347			
<code>master023</code>	339.969	149	0.000	467.429	0.789	1	0.374

Table 9: Two-group analysis: goodness of fit statistics and LR-test of the initial global model (`master022.LS8`) and the modified model (`master023.LS8`).

Furthermore, a two-group analysis is implemented in model `master022.LS8` with each country as a separate group. The matrices of the structural equation models are specified to have the same pattern. The joint analysis is helpful in

determining similarities and differences across groups. Model `master023.LS8` restricts several parameters to be equal for both groups, without making the fit of the global model significantly worse. Some test statistics are shown in Table 9.

Table 10 illustrates the procedure, listing the completely standardized β -parameters for both groups (nations). The effects appear to be smaller in Switzerland.

parameter	group	
	Germany	Switzerland
$\beta_{3,1}$	0.268	0.084
$\beta_{4,1}$	0.580	0.343
$\beta_{4,2}$	0.255	0.039
$\beta_{4,3}$	0.008	0.008

Table 10: Two-group analysis: common metric completely standardized β -parameters for Germany (group A) and Switzerland (group B) of model `master023.LS8`.

3.4 Comparison of Completely Standardized Solutions

Tables 11 and 12 shows the completely standardized parameters of the final models. `master011.LS8` and `master019.LS8` are based on the data from Germany; `master021.LS8` is based on the data from Switzerland.

parameter	model		
	<code>master011</code>	<code>master019</code>	<code>master021</code>
$\beta_{3,1}$	0.196	0.450	0.068
$\beta_{3,2}$	0.146	–	–
$\beta_{4,1}$	0.290	0.683	0.549
$\beta_{4,2}$	0.325	0.155	0.055
$\beta_{4,3}$	0.143	–0.079	0.027
$\psi_{1,1}$	1.000	1.000	1.000
$\psi_{2,1}$	–	0.315	0.071
$\psi_{2,2}$	1.000	1.000	1.000
$\psi_{3,3}$	0.941	0.797	0.995
$\psi_{4,4}$	0.760	0.488	0.689

Table 11: Comparison of the completely standardized parameters of models `master011.LS8`, `master019.LS8`, and `master021.LS8`.

λ	model			θ	model		
	master011	master019	master021		master011	master019	master021
a098	0.293	–	–	θ	0.914	–	–
a099	0.238	–	–	θ	0.943	–	–
a100	0.434	–	–	θ	0.811	–	–
a102	0.340	–	–	θ	0.884	–	–
a103	0.402	–	–	θ	0.838	–	–
a104	0.243	–	–	θ	0.941	–	–
a105	0.395	–	–	θ	0.844	–	–
a106	0.334	–	–	θ	0.889	–	–
z03civic	–	0.261	0.341	θ	–	0.932	0.884
z01trust	0.267	0.440	0.288	θ	0.929	0.806	0.917
z04tol1	0.716	0.724	0.683	θ	0.487	0.476	0.533
z05tol2	0.711	0.740	0.791	θ	0.494	0.452	0.375
z06tol3	0.878	0.863	0.783	θ	0.229	0.255	0.387
z07tol4	0.532	0.538	0.474	θ	0.717	0.710	0.775
e193	0.341	0.347	0.826	θ	0.884	0.879	0.318
e194	0.266	0.268	0.653	θ	0.929	0.928	0.574
e195	0.869	0.856	0.675	θ	0.245	0.267	0.544
z15dem1	0.373	0.376	0.206	θ	0.861	0.858	0.958
z15dem2	0.687	0.711	0.712	θ	0.528	0.495	0.493
z15dem3	0.645	0.622	0.259	θ	0.584	0.613	0.933
z15dem4	0.688	0.683	0.641	θ	0.527	0.534	0.589
z15dem5	0.326	0.331	0.276	θ	0.894	0.891	0.924
			$\theta_{e194,e193}$		0.357	0.354	–
			$\theta_{z04tol1,a098}$		–0.061	–	–
			$\theta_{z05tol2,a098}$		–0.246	–	–
			$\theta_{z07tol4,a098}$		–0.118	–	–
			$\theta_{z05tol2,z04tol1}$		–	–0.062	–0.138
			$\theta_{z15dem5,z15dem1}$		0.277	0.274	0.290

Table 12: Comparison of the completely standardized loadings, error variances and error covariances of models `master011`, `master019`, and `master021`.

4 Discussion

The traditional approach of viewing social capital as an important factor for facilitating democratic progress was tested on an individual level, taking into account the contribution of tolerance. The estimated parameters listed in Section 3.4 are now discussed along with the general performance of the specified structural equation models.

4.1 Main Effects

4.1.1 Social Capital

Social capital has a positive effect on democratic attitude in all models. This effect is most pronounced for the German data, using two indicators for social capital (`master019.LS8`). It is the only effect that remains rather stable in the Swiss model (`master021.LS8`). This result is in line with the expectations and the reasoning of Putnam (2000).

The correlation of social capital and interpersonal tolerance appears to depend on the measurement model and the data. There is a correlation higher than 0.3 in model `master019.LS8`, whereas the Swiss data yields a correlation smaller than 0.1 and the initial measurement model lacks the correlation altogether. The relationship between the two concepts seems to be vulnerable to operational and societal diversity. This result highlights the need for social capital survey items that are both appropriate and pragmatic (Yang 2007). On the other hand, it can be argued that the absence of a strong correlation supports the decision to view social capital and personal tolerance as separate constructs.

4.1.2 Interpersonal Tolerance

The influence of interpersonal tolerance on other factors waned stepwise. It was rather prominent in model `master011.LS8`, but shrunk as the social capital indicators were revised. It is almost completely absent in the Switzerland model. The latter models are probably closer to the truth, because the modification indices for the interpersonal tolerance indicators were quite high in the initial model, but not in the following ones.

The positive effect of tolerance on democratic found by Müller-Berner (2007) is thus either a macro-level phenomenon, or the consequence of the different variables (non-WVS data) and factors (democratic performance instead of attitudes) employed.

4.1.3 Political Tolerance

Political tolerance could not be established as an agent in mediating positive effects of social capital on democratic attitude. There is a large effect of social capital on political tolerance for the German data (model `master019.LS8`), but not for the Swiss data. The effects of political tolerance on democratic attitude are close to zero.

This is presumably to a large part due to the small proportions of people who gave positive responses on the political tolerance items (see Table 13). These findings support the notion that “political tolerance in the United States and other nations is more an unfulfilled aspiration than an accomplished fact.” (Finkel et al. 1999, p. 206)

item	proportion of positive answers (in %)	
	Germany	Switzerland
least liked allow: hold office	4.92	3.44
least liked allow: teach	3.38	2.53
least liked allow: demonstrate	14.75	4.88

Table 13: Proportions of people who answered the respective political tolerance item with “yes”. To get the proportion of “no”-answers subtract the percentages from 100. (Germany: $n = 1566$; Switzerland: $n = 553$.)

4.2 Model Fit

All models failed to achieve an acceptable χ^2 -value. Still, the goodness of fit in terms of the RMSEA is sufficient for the established models. They are not able to reproduce the data perfectly, but they provide insight into the underpinnings of a part of social life. The models are certainly incomplete, because cultural values included in the analysis are only one of many social prerequisites of democracy (Lipset, Seong & Torres 1993).

The model fit is closely related to measurement issues, which in turn indicate conceptual shortcomings. The modification indices of selected factor loading are very high in all models. The lack of theoretical justifications prevented better fitting models.

Imposing the structural equation model on data from another country did not pose much problems. Large parts of the measurement part of the model appear to be different for the two countries in the present study, but there were no outliers.

4.3 Modifications and Measurement Issues

The negative error covariances between membership in a church and the tolerance items about abortion, divorce and homosexuality indicate a major shortcoming of analyses of aggregated data. The dominant Christian religions in Germany reject both behaviours, so these findings come as no surprise. The social capital based on religious communities is rather bonding than bridging (Putnam 2000, Chapter 22; see also Section 1.2).

The error covariance between the first and the last indicator for democratic attitude appears to be an artifact of acquiescence tendencies (Krosnick 1991), because the order of the response categories was reversed for both items, but not for the other ones.

The first approach to the measurement model suffers from a surplus of indicators. Even the most involved respondents are members of only a limited number of associations. This constraint is a major flaw that renders model `master010g.LS8` more or less useless. Unsurprisingly, the modification indices for the loadings of social trust on the other three factors are high, underlining the problematic interpretation of the social capital factor. Establishing latent factors given the available survey data is a difficult endeavour, despite the more successful second approach `master019.LS8`. There is no instant remedy to solve the problem of having only three binary indicators for political tolerance, all of them plagued with hardly any variance.

4.4 Limitations

The final model does not contain interaction effects between tolerance and social capital as proposed by Putnam (2000, Chapter 22) and detected on the macro-level by Müller-Berner (2007).

The data for this study stems from one point in time (or rather one wave of the EVS). None of the concepts used in the study is too stable across time (Inglehart & Welzel 2005). Longitudinal data is needed in order to verify the causality of the relationships and to detect possible changes across time.

All variables are treated as continuous in the analyses, although some of them are only binary by default, and other possibly just ordinal.

4.5 Future Research

Multilevel analyses are probably a valuable tool to study social capital and to contribute to the understanding of individual and societal social capital. The remarkable absence of such studies is lamentable. Another appropriate way to tackle the cross-level-linkage implied by Inglehart & Welzel (2005) is social

network analysis. The field still needs the conceptual frame for macro-level concepts like democracy.

Once more suitable survey data (i. e., items intended to measure social capital as a continuous variable) become available, structural equation modelling provides a proper mean to analyse the underlying factors of interpersonal trust, civic actions and democratic values.

4.6 Conclusions

The models revealed a stable influence of social capital on democratic attitude on the individual level. They also allow to investigate the interplay of social capital and tolerance to some degree. Tolerance, however, has less clear effects on the individual level. A relationship between interpersonal tolerance and democratic attitudes appears to exist in Germany, but not in Switzerland.

A Question Wording

A.1 Membership Indicators

Now I am going to read out a list of voluntary organizations; for each one, could you tell me whether you are a member, an active member, an inactive member or not a member of that type of organization?

All response scales: 2 'Active member' 1 'Inactive member' 0 'Not a member'.

A098.- Active/Inactive membership of church or religious organization

Church or religious organization

A099.- Active/Inactive membership of sport or recreation

Sport or recreation organization

A100.- Active/Inactive membership of art, music, educational

Art, music or educational organization

A101.- Active/Inactive membership of labour unions

Labour union

A103.- Active/Inactive membership of environmental organization

Environmental organization

A104.- Active/Inactive membership of professional organization

Professional association

A105.- Active/Inactive membership of charitable/humanitarian organization

Charitable organization

A106.- Active/Inactive membership of any other organization

Any other voluntary organization

A.2 Trust Indicator

A165.- Most people can be trusted

Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?

Response scale: 1 'Most people can be trusted' 2 'Can't be too careful'.

A.3 Personal Tolerance Indicators

Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card. (Read out statements. Code one answer for each statement).

All response scales: 1 'Never justifiable' 2 3 4 5 6 7 8 9 10 'Always justifiable'.

F118.- Justifiable: homosexuality

Homosexuality

F120.- Justifiable: abortion

Abortion

F121.- Justifiable: divorce

Divorce

F123.- Justifiable: suicide

Suicide

A.4 Political Tolerance Indicators

Do you think that [least liked group] should be allowed to...

All response scales: 0 'No' 1 'Yes'.

E193.- Least liked allow: hold office

Hold public office?

E194.- Least liked allow: teach

Teach in our schools?

E195.- Least liked allow: demonstrate

Hold public demonstrations?

A.5 Democratic Attitude Indicators

E117.- Political system: Having a democratic political system

I'm going to describe various types of political systems and ask what you think about each as a way of governing this country. For each one, would you say it is a very good, fairly good, fairly bad or very bad way of governing this country?
Having a democratic political system

Response scale: 1 'Very good' 2 'Fairly good' 3 'Fairly bad' 4 'Very bad'.

E120.- In democracy, the economic system runs badly

I'm going to read off some things that people sometimes say about a democratic political system. Could you please tell me if you agree strongly, agree, disagree or disagree strongly, after I read each one of them? In democracy, the economic system runs badly

Response scale: 1 'Agree strongly' 2 'Agree' 3 'Disagree' 4 'Strongly disagree'

E121.- Democracies are indecisive and have too much squabbling

I'm going to read off some things that people sometimes say about a democratic political system. Could you please tell me if you agree strongly, agree, disagree or disagree strongly, after I read each one of them? Democracies are indecisive and have too much quibbling

Response scale: 1 'Agree strongly' 2 'Agree' 3 'Disagree' 4 'Strongly disagree'

E122.- Democracies aren't good at maintaining order

I'm going to read off some things that people sometimes say about a democratic political system. Could you please tell me if you agree strongly, agree, disagree or disagree strongly, after I read each one of them? Democracies aren't good at maintaining order

Response scale: 1 'Agree strongly' 2 'Agree' 3 'Disagree' 4 'Strongly disagree'

E123.- Democracy may have problems but is better

I'm going to read off some things that people sometimes say about a democratic political system. Could you please tell me if you agree strongly, agree, disagree or disagree strongly, after I read each one of them? Democracy may have problems but it's better than any other form of government

Response scale: 1 'Agree strongly' 2 'Agree' 3 'Disagree' 4 'Strongly disagree'

B STATA Syntax

The following do-file calculates the covariance matrix that is used as input in the LISREL analyses. The actual covariance file `brd973.cm` was manually edited out of the log-file. The covariance matrix `ch963.cm` for the Swiss data was acquired in the same fashion; see comments in the syntax for details.

```
----- brd.do -----
version 10
set more off
capture log close
clear
log using brd97cm3.log, replace
set memory 310m
cd /home/jutze/qass/master
use xwvsevs_1981_2000_v20060423
* Select the data collected in 1997 in Germany:
keep if s025 == 2761997
* To select the data collected in 1996 in Switzerland substitute
* "keep if s025 == 2761997" by "keep if s025 == 7561996"
save brd973, replace
clear
set memory 40m
use brd973
#delimit ;
keep s017 a165 a098 a099 a100 a101 a102 a103 a104 a105 a106
c001 f118 f120 f121 f123 e193 e194 e195 e076 e117 e120 e121
e122 e123 f024;
drop if a165 == . | a099 == . | a100 == . | e076 == . | c001 == .
| a103 == . | a104 == . | a105 == . | a106 == . | f118 == .
| f120 == . | f121 == . | f123 == . | e193 == . | e194 == .
| e195 == . | e117 == . | e120 == . | e121 == . | e122 == .
| e123 == . ;
#delimit cr
drop if a098 == . | a101 == . | a102 == .
recode a165 (1 = 2) (2 = 1), gen(z01trust)
recode e076 (1 = 4) (3 = 2) (2 = 3) (4 = 1), gen(z02trust)
gen z03civic = a099 + a100 + a101 + a102 + a103 + a104 + a105 + a106
gen z04tol1 = f118
gen z05tol2 = f120
gen z06tol3 = f121
gen z07tol4 = f123
recode c001 (1 = 3) (3 = 2) (2 = 1), gen(z09polt)
gen z10polt = e193 + e194 + e195
recode e117 (1 = 4) (3 = 2) (2 = 3) (4 = 1), gen(z11dem1)
gen z12dem2 = e120
gen z13dem3 = e121
gen z14dem4 = e122
recode e123 (1 = 4) (3 = 2) (2 = 3) (4 = 1), gen(z15dem5)
drop f024 a165 c001 f118 f120 f121 f123 e076 e117 e120 e121 e122 e123
tab z01trust
tab e193
tab e194
tab e195
save brd97cm3, replace
set linesize 255
d
sum
correlate a* e* z* , wrap covariance
```

```

set matrix 80
clear
log close
exit

```

C Covariance Matrices

brd973.cm

```

.486784
.054739 .788831
.078133 .065815 .415442
.025762 .026198 .019382 .320355
.017541 .0144 .024672 .027051 .151325
.025957 .031949 .036102 .014785 .036888 .14334
-.0043 .028754 .037913 .021711 .019003 .017164 .232177
.069883 .036209 .074938 .013149 .028932 .035125 .035667 .352884
.020501 .047923 .063965 .062515 .034156 .028412 .016163 .060693 .389751
-.002561 .002982 .006141 .004696 .001708 .004212 .007942 .003784 .000956 .046782
.001175 .001491 .001739 .00178 .003168 .00397 .001696 .001153 .001206 .017504 .03272
.011486 .016413 .015229 .000029 .002569 .015182 .000573 .001769 .012453 .022774 .014813 .125831
.041844 .036422 .036079 .002196 .006422 .013661 .00177 .018819 .018281 .007766 .00275 .02777 .227241
.051009 .038334 .009585 .027388 .000147 .002446 .003922 .031009 .000617 .003893 .004056 .00813 .01062 .454203
-.23043 .034086 .173029 .446295 .336876 .013661 .042051 .037818 .004838 .032422 .009744 .010428 .132369 .033308 .462205
-.099146 .193114 .178346 .006475 .050456 .095972 .060647 .050518 .107103 .010261 .014739 .19564 .282636 .044214 .529932 .124195
-.559403 .040256 .005789 .001776 .003379 .016223 .001628 .011398 .004238 .02654 .002490 .07898 .126209 .023269 .163637 .5.25013 .9.56725
-.271398 .161022 .073956 .002365 .029214 .03277 .059829 .102924 .011869 .014214 .02443 .101719 .140582 .187289 .208723 .6.4467 .5.87209 .8.33688
.000118 .03537 .008367 .143209 .014484 .008467 .037018 .087109 .044003 .018515 .01144 .100001 .105447 .180166 .018302 .8.26085 .040787 .4.22537 .10.1203
.045546 .048136 .021335 .009406 .001848 .003081 .009905 .011834 .019178 .004792 .002958 .028432 .061046 .026404 .059003 .8.49972 .6.11579 .6.28024 .4.74305 .6.88815
.01099 .012154 .018631 .006505 .001945 .002374 .016214 .006706 .014014 .08706 .005037 .018418 .037785 .008994 .112594 .27054 .129812 .145824 .127346 .036181 .315515
.05048 .028115 .02886 .012728 .014607 .005123 .018369 .01461 .013591 .007882 .003923 .023007 .048048 .004781 .13403 .316629 .117935 .129529 .120224 .054584 .034812 .355026
.00973 .202314 .030299 .006976 .018399 .014733 .023601 .004491 .017544 .009825 .001717 .028476 .060511 .011162 .133607 .436001 .308643 .379438 .317379 .082312 .045019 .093478 .372843
.041258 .054952 .043131 .000066 .027394 .013496 .026771 .018277 .024424 .002728 .004175 .031123 .063927 .01701 .203911 .37757 .348113 .399116 .061848 .103988 .037378 .099449 .197312 .008924
.030118 .035783 .046336 .008152 .027273 .011119 .010319 .006515 .031828 .008097 .008443 .036433 .061077 .007361 .180864 .576112 .339748 .387039 .318288 .097161 .050975 .100859 .191363 .216538 .447626
.044389 .012141 .034398 .003379 .014541 .014201 .007058 .019601 .023796 .006477 .00528 .034766 .046565 .013881 .139075 .289202 .053928 .133289 .217942 .042636 .046522 .146748 .095408 .071753 .088807 .381422

```

ch963.cm

```

.582226
.092255 .84896
.135865 .046607 .605164
.099245 .063828 .046597 .272185
.078627 .056412 .058486 .061222 .354935
.08221 .063818 .117134 .031485 .049772 .287241
.07652 .059183 .070228 .081361 .091245 .063176 .465773
.148724 .055694 .100553 .030194 .098927 .091887 .074649 .381463
.02367 .018463 .050003 .007135 .063432 .028096 .054299 .003368 .310716
.00514 .000858 .003875 .003387 .007115 .005779 .01485 .00591 .002274 .033238
.000069 .003844 .000482 .000069 .003118 .008072 .001789 .000522 .003187 .018418 .02472
-.005949 .000878 .0036 .007767 .003944 .014791 .009661 .000778 .006663 .02187 .015086 .046525
.017336 .031416 .028963 .002884 .001951 .003961 .011904 .000146 .002201 .002385 .005893 .235966
-.00992 .016212 .048839 .016219 .026483 .00493 .027318 .033896 .002739 .002804 .006834 .00002 .035475 .501029
.488135 .17007 .116149 .398988 .11665 .70381 .965834 .890916 .604532 .036537 .003181 .010181 .126651 .045116 .7.02158
-.140229 .285475 .032838 .106334 .311181 .146097 .074092 .052838 .003781 .021464 .014195 .028125 .174762 .075766 .061388 .10.1147
-.450134 .302991 .051092 .001763 .04021 .003064 .003878 .00154 .008715 .003738 .078181 .001901 .028665 .079291 .3.80007 .9.33428
-.189891 .305419 .08315 .002873 .115162 .073702 .059101 .11564 .012416 .007492 .011833 .02247 .018862 .188062 .238881 .4.7749 .5.33795 .7.91238
-.38031 .104514 .106485 .041729 .1189 .007011 .103213 .101514 .037163 .001181 .021197 .002741 .012114 .002712 .019466 .7.88667 .5.5409 .3.29838 .9.07033
-.048661 .054821 .036278 .022713 .004265 .060379 .044166 .044992 .025752 .004403 .002477 .013598 .022668 .022037 .239451 .8.00839 .430976 .432879 .221702 .795313
-.00074 .003964 .006984 .011422 .000992 .002842 .023295 .010533 .005749 .002451 .01048 .006119 .0719 .009313 .074054 .018129 .010358 .015125 .208231
.02529 .020293 .026669 .003292 .005976 .016992 .0209 .056439 .035862 .002811 .003554 .004662 .019148 .041064 .188239 .030247 .115631 .013949 .050145 .054742 .003918 .398996
.7.8866 .095487 .0374 .002887 .009468 .002248 .008135 .045129 .003544 .010732 .000713 .003142 .04398 .07955 .280697 .149317 .112777 .000229 .108787 .096875 .01463 .264941 .520569
.022434 .01269 .006008 .011469 .011649 .014288 .009376 .009549 .006644 .005346 .008897 .015407 .00663 .03957 .023678 .1056 .07457 .207704 .007136 .016924 .02985 .014152 .091749 .47298
.09863 .030862 .064484 .004812 .021205 .01728 .024448 .038672 .020678 .008229 .001853 .002922 .038227 .057874 .181033 .264215 .13258 .087907 .145388 .088401 .007799 .099419 .418071 .114883 .558148
.043206 .005582 .061216 .005422 .062878 .020547 .026116 .011153 .010866 .003158 .000482 .008776 .016327 .009913 .206138 .025592 .024435 .088693 .073158 .081476 .011653 .138703 .101564 .020389 .075786 .007148

```

D LISREL Syntax

master001.LS8

```

Measurement model version 1
! The congeneric measurement model for four latent variables
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
a098 a099 a100 a101 a102 a103 a104 a105 a106 z01trust z04tol1 z05tol2 z06tol3 z07tol4
e193 e194 e195 z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
! 10 Social capital (9 membership, 1 trust (a165))
! 4 tolerance items f118,f120,f121,f123
! 3 political tolerance indicators (least liked group rights)
! 5 democracy indicators e117,e120-e123
MO NY=22 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1) LY(8,1) LY(9,1) LY(10,1) LY(12,2)
FR LY(13,2) LY(14,2) LY(16,3) LY(17,3) LY(19,4) LY(20,4) LY(21,4) LY(22,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(15,15) TE(16,16) TE(17,17) TE(18,18)
FR TE(19,19) TE(20,20) TE(21,21) TE(22,22)
! FR PS(1,1) PS(2,2) PS(3,3) PS(4,4) PS(2,1)
VA 1 LY(1,1) LY(11,2) LY(15,3) LY(18,4)
! FR BE(3,1) BE(3,2) BE(4,1) BE(4,2) BE(4,3)
PD
OU RS MI SS SC ND=3

```

master002.LS8

```

Measurement model version 2
! Difference to model 14: FR TE(12,1)
DA NI=26 NO=1566
CM=brd973.cm

```

```

LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
a098 a099 a100 a101 a102 a103 a104 a105 a106 z01trust z04tol1 z05tol2 z06tol3 z07tol4
e193 e194 e195 z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
MO NY=22 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1) LY(8,1) LY(9,1) LY(10,1) LY(12,2)
FR LY(13,2) LY(14,2) LY(16,3) LY(17,3) LY(19,4) LY(20,4) LY(21,4) LY(22,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(15,15) TE(16,16) TE(17,17) TE(18,18)
FR TE(19,19) TE(20,20) TE(21,21) TE(22,22) TE(12,1)
VA 1 LY(1,1) LY(11,2) LY(15,3) LY(18,4)
PD
OU RS MI SS SC ND=3

```

master003.LS8

```

Measurement model version 3
! Difference to model 15: FR TE(13,1)
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
a098 a099 a100 a101 a102 a103 a104 a105 a106 z01trust z04tol1 z05tol2 z06tol3 z07tol4
e193 e194 e195 z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
MO NY=22 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1) LY(8,1) LY(9,1) LY(10,1) LY(12,2)
FR LY(13,2) LY(14,2) LY(16,3) LY(17,3) LY(19,4) LY(20,4) LY(21,4) LY(22,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(15,15) TE(16,16) TE(17,17) TE(18,18)
FR TE(19,19) TE(20,20) TE(21,21) TE(22,22) TE(12,1) TE(13,1)
VA 1 LY(1,1) LY(11,2) LY(15,3) LY(18,4)
PD
OU RS MI SS SC ND=3

```

master004.LS8

```

Measurement model version 4
! Difference to model 16: FR TE(22,18)
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
a098 a099 a100 a101 a102 a103 a104 a105 a106 z01trust z04tol1 z05tol2 z06tol3 z07tol4
e193 e194 e195 z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
MO NY=22 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1) LY(8,1) LY(9,1) LY(10,1) LY(12,2)
FR LY(13,2) LY(14,2) LY(16,3) LY(17,3) LY(19,4) LY(20,4) LY(21,4) LY(22,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(15,15) TE(16,16) TE(17,17) TE(18,18)
FR TE(19,19) TE(20,20) TE(21,21) TE(22,22)
FR TE(12,1) TE(13,1) TE(22,18)
VA 1 LY(1,1) LY(11,2) LY(15,3) LY(18,4)
PD
OU RS MI SS SC ND=3

```

master005.LS8

```

Measurement model version 5
! Difference to model 17: FR TE(16,15)
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE

```

```

a098 a099 a100 a101 a102 a103 a104 a105 a106 z01trust z04tol1 z05tol2 z06tol3 z07tol4
e193 e194 e195 z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
MO NY=22 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1) LY(8,1) LY(9,1) LY(10,1) LY(12,2)
FR LY(13,2) LY(14,2) LY(16,3) LY(17,3) LY(19,4) LY(20,4) LY(21,4) LY(22,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(15,15) TE(16,16) TE(17,17) TE(18,18)
FR TE(19,19) TE(20,20) TE(21,21) TE(22,22)
FR TE(12,1) TE(13,1) TE(22,18) TE(16,15)
VA 1 LY(1,1) LY(11,2) LY(15,3) LY(18,4)
PD
OU RS MI SS SC ND=3

```

master006.LS8

```

Measurement model version 6
! Difference to model 18: drop a101
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
a098 a099 a100 a102 a103 a104 a105 a106 z01trust z04tol1 z05tol2 z06tol3 z07tol4
e193 e194 e195 z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
MO NY=21 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1) LY(8,1) LY(9,1) LY(11,2)
FR LY(12,2) LY(13,2) LY(15,3) LY(16,3) LY(18,4) LY(19,4) LY(20,4) LY(21,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(15,15) TE(16,16) TE(17,17) TE(18,18)
FR TE(19,19) TE(20,20) TE(21,21)
FR TE(11,1) TE(12,1) TE(21,17) TE(15,14)
VA 1 LY(1,1) LY(10,2) LY(14,3) LY(17,4)
PD
OU RS MI SS SC ND=3

```

master007.LS8

```

Measurement model version 7
! Difference to model 19: FR TE(10,1)
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
a098 a099 a100 a102 a103 a104 a105 a106 z01trust z04tol1 z05tol2 z06tol3 z07tol4
e193 e194 e195 z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
MO NY=21 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1) LY(8,1) LY(9,1) LY(11,2)
FR LY(12,2) LY(13,2) LY(15,3) LY(16,3) LY(18,4) LY(19,4) LY(20,4) LY(21,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(15,15) TE(16,16) TE(17,17) TE(18,18)
FR TE(19,19) TE(20,20) TE(21,21)
FR TE(10,1) TE(11,1) TE(12,1) TE(21,17) TE(15,14)
VA 1 LY(1,1) LY(10,2) LY(14,3) LY(17,4)
PD
OU RS MI SS SC ND=3

```

master008.LS8

```

Measurement model version 8
! Difference to model 20: EQ LY(20,4) LY(19,4)
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
a098 a099 a100 a102 a103 a104 a105 a106 z01trust z04tol1 z05tol2 z06tol3 z07tol4
e193 e194 e195 z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /

```



```

MO NY=21 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1) LY(8,1) LY(9,1) LY(11,2)
FR LY(12,2) LY(13,2) LY(15,3) LY(16,3) LY(18,4) LY(19,4) LY(20,4) LY(21,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(15,15) TE(16,16) TE(17,17) TE(18,18)
FR TE(19,19) TE(20,20) TE(21,21)
FR TE(10,1) TE(11,1) TE(12,1) TE(21,17) TE(15,14)
EQ LY(20,4) LY(19,4)
VA 1 LY(1,1) LY(10,2) LY(14,3) LY(17,4)
PD
OU RS MI SS SC ND=3

```

master009.LS8

```

Measurement model version 9
! Difference to model 21: EQ LY(12,2) LY(10,2)
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
a098 a099 a100 a102 a103 a104 a105 a106 z01trust z04tol1 z05tol2 z06tol3 z07tol4
e193 e194 e195 z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
MO NY=21 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1) LY(8,1) LY(9,1) LY(11,2)
FR LY(12,2) LY(13,2) LY(15,3) LY(16,3) LY(18,4) LY(19,4) LY(20,4) LY(21,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(15,15) TE(16,16) TE(17,17) TE(18,18)
FR TE(19,19) TE(20,20) TE(21,21)
FR TE(10,1) TE(11,1) TE(12,1) TE(21,17) TE(15,14)
EQ LY(20,4) LY(19,4)
VA 1 LY(1,1) LY(10,2) LY(14,3) LY(17,4)
EQ LY(12,2) LY(10,2)
PD
OU RS MI SS SC ND=3

```

master010.LS8

```

Model version 10
! THE LISREL MODEL
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
a098 a099 a100 a102 a103 a104 a105 a106 z01trust z04tol1 z05tol2 z06tol3 z07tol4
e193 e194 e195 z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
MO NY=21 NE=4 TE=SY,FI LY=FU,FI PS=SY,FI BE=FU,FI
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1) LY(8,1) LY(9,1) LY(11,2)
FR LY(12,2) LY(13,2) LY(15,3) LY(16,3) LY(18,4) LY(19,4) LY(20,4) LY(21,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(15,15) TE(16,16) TE(17,17) TE(18,18)
FR TE(19,19) TE(20,20) TE(21,21)
FR TE(10,1) TE(11,1) TE(12,1) TE(21,17) TE(15,14)
EQ LY(20,4) LY(19,4)
FR PS(1,1) PS(2,2) PS(3,3) PS(4,4) PS(2,1)
VA 1 LY(1,1) LY(10,2) LY(14,3) LY(17,4)
FR BE(3,1) BE(3,2) BE(4,1) BE(4,2) BE(4,3)
EQ LY(12,2) LY(10,2)
PD
OU RS MI SS SC ND=3

```

master011.LS8

```

Model version 11
! Difference to model 23: FI PS(2,1)
DA NI=26 NO=1566
CM=brd973.cm
LA

```

```

a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
a098 a099 a100 a102 a103 a104 a105 a106 z01trust z04tol1 z05tol2 z06tol3 z07tol4
e193 e194 e195 z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
MO NY=21 NE=4 TE=SY,FI LY=FU,FI PS=SY,FI BE=FU,FI
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1) LY(8,1) LY(9,1) LY(11,2)
FR LY(12,2) LY(13,2) LY(15,3) LY(16,3) LY(18,4) LY(19,4) LY(20,4) LY(21,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(15,15) TE(16,16) TE(17,17) TE(18,18)
FR TE(19,19) TE(20,20) TE(21,21)
FR TE(10,1) TE(11,1) TE(12,1) TE(21,17) TE(15,14)
EQ LY(20,4) LY(19,4)
FR PS(1,1) PS(2,2) PS(3,3) PS(4,4)
VA 1 LY(1,1) LY(10,2) LY(14,3) LY(17,4)
FR BE(3,1) BE(3,2) BE(4,1) BE(4,2) BE(4,3)
EQ LY(12,2) LY(10,2)
PD
OU RS MI SS SC ND=3

```

master012.LS8

```

Measurement model version 13
! The measurement model for four latent variables
! Difference to model 14: one single, additive civic association indicator
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
! 2 Social capital (1 membership, 1 trust (a165))
! 4 tolerance items f118,f120,f121,f123
! 3 political tolerance indicators (least liked group rights)
! 5 democracy indicators e117,e120-e123
MO NY=14 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(4,2)
FR LY(5,2) LY(6,2) LY(8,3) LY(9,3) LY(11,4) LY(12,4) LY(13,4) LY(14,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14)
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4)
PD
OU RS MI SS SC ND=3

```

master013.LS8

```

Measurement model version 13
! Difference to model 13: FR TE(14,9)
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
MO NY=14 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(4,2)
FR LY(5,2) LY(6,2) LY(8,3) LY(9,3) LY(11,4) LY(12,4) LY(13,4) LY(14,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(14,10)
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4)
PD
OU RS MI SS SC ND=3

```

master014.LS8

```

Measurement model version 14
! Difference to model 13b: FR TE(8,7)

```

```

DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
MO NY=14 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(4,2)
FR LY(5,2) LY(6,2) LY(8,3) LY(9,3) LY(11,4) LY(12,4) LY(13,4) LY(14,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(14,10) TE(8,7)
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4)
PD
OU RS MI SS SC ND=3

```

master015.LS8

```

Measurement model version 15
! Difference to model 13c: EQ LY(12,4) LY(11,4)
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
MO NY=14 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(4,2)
FR LY(5,2) LY(6,2) LY(8,3) LY(9,3) LY(11,4) LY(12,4) LY(13,4) LY(14,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(14,10) TE(8,7)
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4)
EQ LY(12,4) LY(11,4)
PD
OU RS MI SS SC ND=3

```

master016.LS8

```

Measurement model version 16
! Difference to model 13e: EQ LY(5,2) LY(3,2)
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
MO NY=14 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(4,2)
FR LY(5,2) LY(6,2) LY(8,3) LY(9,3) LY(11,4) LY(12,4) LY(13,4) LY(14,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(14,10) TE(8,7)
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4)
EQ LY(5,2) LY(3,2)
EQ LY(12,4) LY(11,4)
PD
OU RS MI SS SC ND=3

```

master017.LS8

```

Measurement model version 17
! Difference to model 13e: FR TE(4,3)
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /

```

```

SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
MO NY=14 NE=4 TE=SY,FI LY=FU,FI PS=SY,FR
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(4,2)
FR LY(5,2) LY(6,2) LY(8,3) LY(9,3) LY(11,4) LY(12,4) LY(13,4) LY(14,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(14,10) TE(8,7) TE(4,3)
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4)
EQ LY(5,2) LY(3,2)
EQ LY(12,4) LY(11,4)
PD
OU RS MI SS SC ND=3

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master018.LS8

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Model version 18
! THE LISREL MODEL
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
! 2 Social capital (1 membership, 1 trust (a165))
! 4 tolerance items f118,f120,f121,f123
! 3 political tolerance indicators (least liked group rights)
! 5 democracy indicators e117,e120-e123
MO NY=14 NE=4 TE=SY,FI LY=FU,FI PS=SY,FI BE=FU,FI
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(4,2)
FR LY(5,2) LY(6,2) LY(8,3) LY(9,3) LY(11,4) LY(12,4) LY(13,4) LY(14,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(14,10) TE(8,7) TE(4,3)
FR PS(1,1) PS(2,2) PS(3,3) PS(4,4) PS(2,1)
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4)
EQ LY(5,2) LY(3,2)
EQ LY(12,4) LY(11,4)
FR BE(3,1) BE(3,2) BE(4,1) BE(4,2) BE(4,3)
PD
OU RS MI SS SC ND=3

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master019.LS8

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Measurement model version 19
! Difference to model 13g: FI BE(3,2)
DA NI=26 NO=1566
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
MO NY=14 NE=4 TE=SY,FI LY=FU,FI PS=SY,FI BE=FU,FI
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(4,2)
FR LY(5,2) LY(6,2) LY(8,3) LY(9,3) LY(11,4) LY(12,4) LY(13,4) LY(14,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(14,10) TE(8,7) TE(4,3)
FR PS(1,1) PS(2,2) PS(3,3) PS(4,4) PS(2,1)
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4)
EQ LY(5,2) LY(3,2)
EQ LY(12,4) LY(11,4)
FR BE(3,1) BE(4,1) BE(4,2) BE(4,3)
PD
OU RS MI SS SC ND=3

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master020.LS8

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Model version 20
! THE LISREL MODEL

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! Swiss data EVS 1996
DA NI=26 NO=553
CM=ch963.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
! 2 Social capital (1 membership, 1 trust (a165))
! 4 tolerance items f118,f120,f121,f123
! 3 political tolerance indicators (least liked group rights)
! 5 democracy indicators e117,e120-e123
MO NY=14 NE=4 TE=SY,FI LY=FU,FI PS=SY,FI BE=FU,FI
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(4,2)
FR LY(5,2) LY(6,2) LY(8,3) LY(9,3) LY(11,4) LY(12,4) LY(13,4) LY(14,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(14,10) TE(4,3)
FR PS(1,1) PS(2,2) PS(3,3) PS(4,4) PS(2,1)
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4)
EQ LY(5,2) LY(3,2)
EQ LY(12,4) LY(11,4)
FR BE(3,1) BE(4,1) BE(4,2) BE(4,3)
PD
OU RS MI SS SC ND=3

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master021.LS8

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Model version 21
! Difference to model 13x: no EQ LY(12,4) LY(11,4)
DA NI=26 NO=553
CM=ch963.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
MO NY=14 NE=4 TE=SY,FI LY=FU,FI PS=SY,FI BE=FU,FI
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(4,2)
FR LY(5,2) LY(6,2) LY(8,3) LY(9,3) LY(11,4) LY(12,4) LY(13,4) LY(14,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(14,10) TE(4,3)
! TE(8,7)
FR PS(1,1) PS(2,2) PS(3,3) PS(4,4) PS(2,1)
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4)
EQ LY(5,2) LY(3,2)
FR BE(3,1) BE(4,1) BE(4,2) BE(4,3)
PD
OU RS MI SS SC ND=3

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master022.LS8

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Model version 22, Group A (Germany)
! THE LISREL MODEL
! Simultaneous analysis of two groups: Germany (master019) and Switzerland (new)
! no EQ LY(12,4) LY(11,4); no FI TE(8,7)
DA NI=26 NO=1566 NG=2
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
MO NY=14 NE=4 TE=SY,FI LY=FU,FI PS=SY,FI BE=FU,FI
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(4,2)
FR LY(5,2) LY(6,2) LY(8,3) LY(9,3) LY(11,4) LY(12,4) LY(13,4) LY(14,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(14,10) TE(4,3)

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FR PS(3,3) PS(4,4) PS(2,1)
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4) PS(1,1) PS(2,2)
EQ LY(5,2) LY(3,2)
! EQ LY(12,4) LY(11,4)
FR BE(3,1) BE(4,1) BE(4,2) BE(4,3)
PD
OU AD=off RS MI SS SC ND=3
Model version 22, Group B (Switzerland)
DA NO=553
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
CM=ch963.cm
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
MO TE=SP LY=SP PS=SP BE=SP
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4) PS(1,1) PS(2,2)
LE
SocCapit PersTol PolitTol Democrac /
OU

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master023.LS8

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Model version 23, Group A (Germany)
! additional eq statements
DA NI=26 NO=1566 NG=2
CM=brd973.cm
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
MO NY=14 NE=4 TE=SY,FI LY=FU,FI PS=SY,FI BE=FU,FI
LE
SocCapit PersTol PolitTol Democrac /
FR LY(2,1) LY(4,2)
FR LY(5,2) LY(6,2) LY(8,3) LY(9,3) LY(11,4) LY(12,4) LY(13,4) LY(14,4)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10)
FR TE(11,11) TE(12,12) TE(13,13) TE(14,14) TE(14,10) TE(4,3)
FR PS(3,3) PS(4,4) PS(2,1)
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4) PS(1,1) PS(2,2)
EQ LY(5,2) LY(3,2)
! EQ LY(12,4) LY(11,4)
FR BE(3,1) BE(4,1) BE(4,2) BE(4,3)
PD
OU AD=off RS MI SS SC ND=3
Model version 23, Group B (Switzerland)
DA NO=553
LA
a098 a099 a100 a101 a102 a103 a104 a105 a106 e193 e194 e195 z01trust z02trust z03civic
z04tol1 z05tol2 z06tol3 z07tol4 z09polt z10polt z11dem1 z12dem2 z13dem3 z14dem4 z15dem5 /
CM=ch963.cm
SE
z03civic z01trust z04tol1 z05tol2 z06tol3 z07tol4 e193 e194 e195 z11dem1 z12dem2 z13dem3
z14dem4 z15dem5 /
MO TE=SP LY=SP PS=SP BE=SP
VA 1 LY(1,1) LY(3,2) LY(7,3) LY(10,4) PS(1,1) PS(2,2)
EQ BE(1,4,3) BE(4,3)
EQ LY(1,8,3) LY(8,3)
EQ LY(1,9,3) LY(9,3)
EQ TE(1,14,10) TE(14,10)
EQ PS(1,3,3) PS(3,3)
LE
SocCapit PersTol PolitTol Democrac /
OU

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