

A transnational analysis of change in trust over time

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Outline

- The question
- The data
- The problems to solve:
 - ◆ Measures
 - ◆ Missing values
- A first analysis using the Latino Barometro, East Asia and Asian Barometers.
- Discussion
- Conclusion

The questions

- Is trust really declining?
 - ◆ Institutional trust as an essential ingredient of society.
 - ◆ Therefore, institutional trust as a collective property of societies, should not decline over time.
- However, is trust in institutions similar over time for all groups in societies?
 - ◆ Is trust related to economic development, inequalities, electoral system, etc.?
 - ◆ Do events impact trust in some institutions more than others? How does society recuperate from such events?
- Is trust similar for all groups in society?

The Data

- The Barometers:
 - ◆ Latino (1995-2013)
 - ◆ East Asia, Eurasia, Asian (2001-2012)
 - ◆ Arab (2006-2014)
 - ◆ Africa (2001-2015)
 - ◆ Europe (1985, 1997-2015)
- LAPOP (2004-2014)
- International Social Survey Programs
 - ◆ Various surveys.
- World Values survey
 - ◆ Various surveys.

The problems

The measure of trust

- Not all questions on the same scale:
 - ◆ Most Barometers: 4-points scale.
 - ◆ Lapop: 7-points scale.
 - ◆ Eurobarometer: 2 points scale
- Solution: Put all scales on a seven-points scale (1,2,3,4=1,3,5,7) (1,2=3,5). Control for number of points in the scale.
- If EuroBarometer is included, it is not possible to analyse the extreme answers, i.e., great deal of trust, no trust.

The problems

The measure of trust

- Not the same institutions measured at different periods in different countries.
- Solution: Multilevel longitudinal repeated measures.
 - ◆ Each answer to a trust-related question is coded on the institution on which the question focusses.
 - ◆ The institutions are grouped in order to have an acceptable number of categories:
 - Governments (federal, provincial, local); public administration (public service, civil service, etc.); International organizations (UN, IMF, World Bank, etc.).

The problems

The measures of independent variables at the individual level

- Age and sex: ok
- Level of education and occupation: possible to put on the same scale but do they “mean” the same thing in different parts of the world?
- Present in most surveys but not in all: Impute missing values?
 - ◆ Income: subjective income, subjective social class, ownership (bicycle, car, house, etc.).
 - ◆ Support for democracy, satisfaction with democracy.

The problems

The measures of independent variables at the country-year level

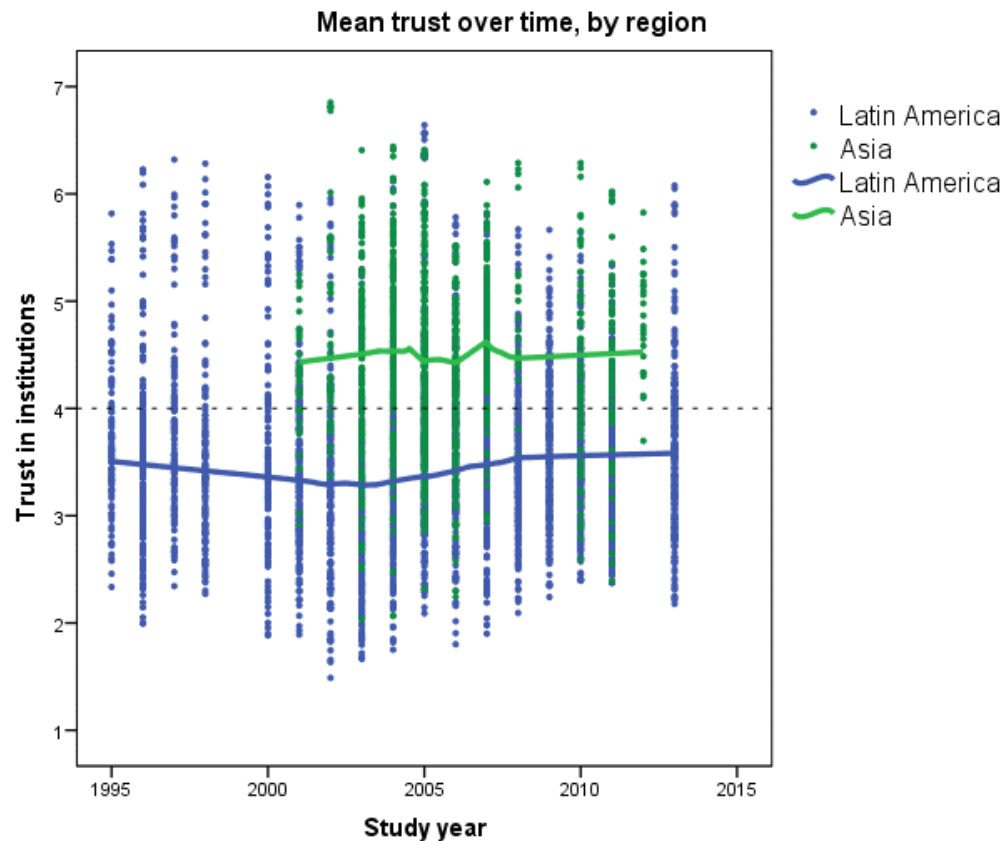
- **Development indexes:**
 - ◆ Need to make choices: Gini, HDI,...
 - ◆ Need to have them for all countries and years.
- **Indices of democratic development?**
 - ◆ Before democracy, no surveys, less reliable data?
 - ◆ Electoral systems, elections, etc.
- **Information on international and national events in various countries:**
 - ◆ Need for research in various data bases.

A first analysis

A combination of Latino Barometro and Asian Barometers

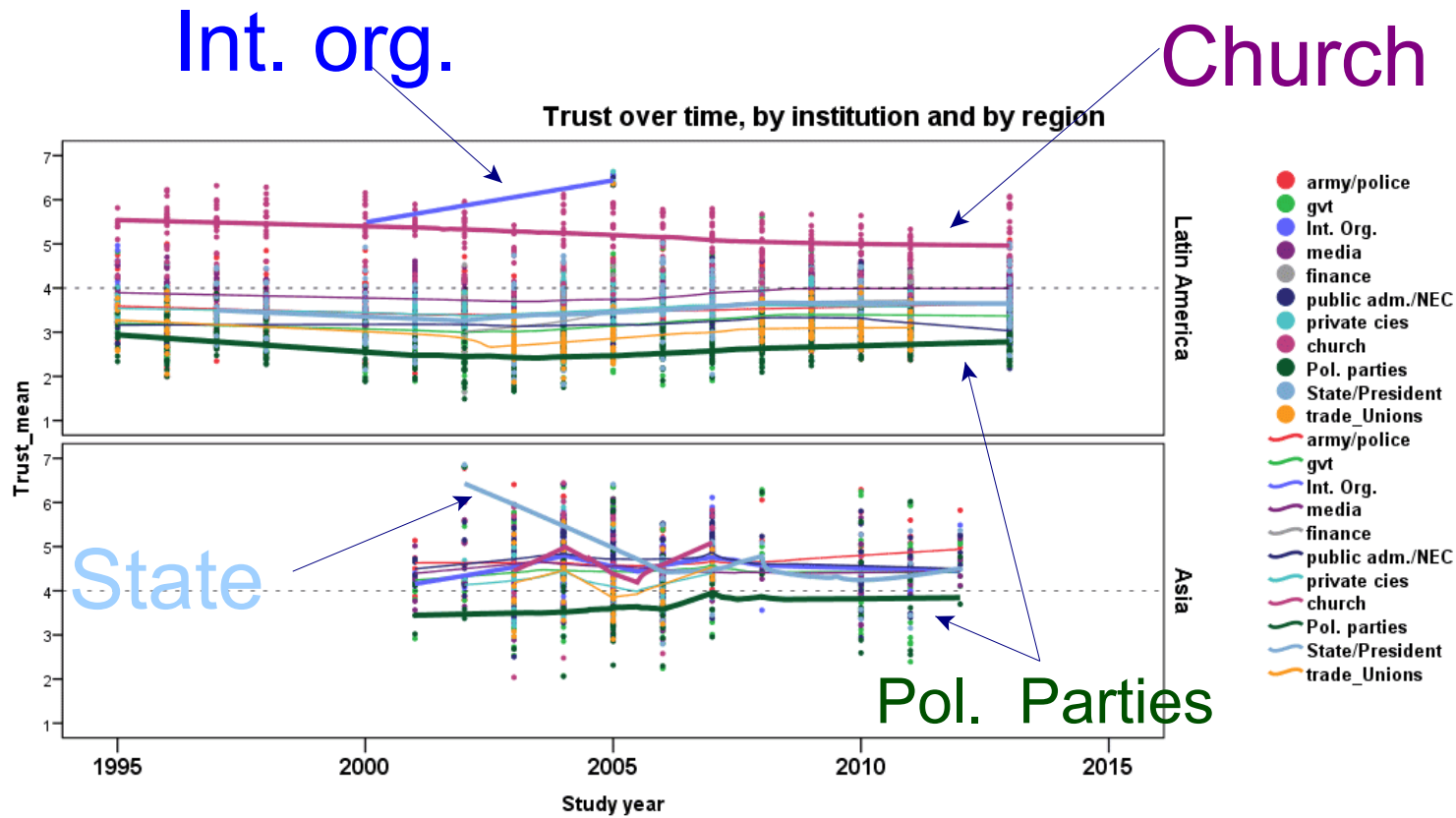
- 47 countries.
- 367 country - years.
- 415 559 respondents.
- 5 197 379 measures pertaining to:
 - ◆ 35 different institutions.

A synthetic view of global trust in institutions according to region



On average, trust is higher in Asia than in Latin America.

A synthetic view, according to type of institution

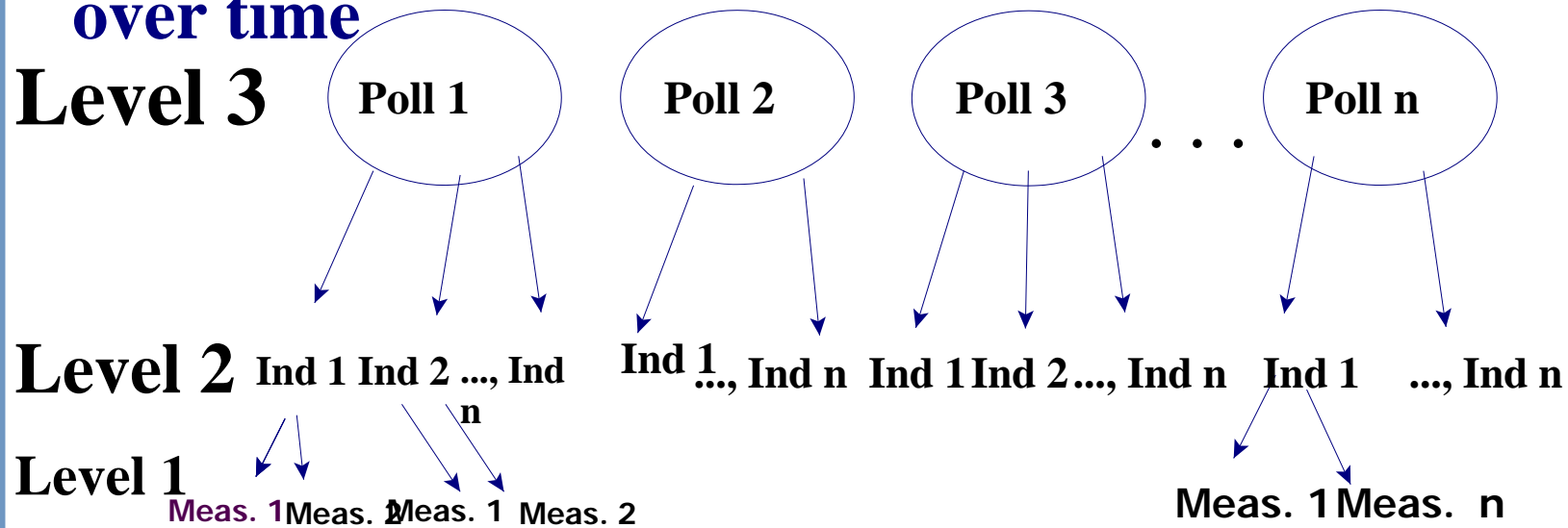


First conclusion

- Overall stability of trust.
- Similar distrust in Latin America and Asia for political parties & trade unions.
- Church as the most trusted institution in Latin America – but declining –, not in Asia.

A three-level longitudinal model with repeated measures

- ◆ At Level 3: country-year characteristics and change over time



- ◆ At level 2: Individuals and their characteristics (age, sex, education, attitudes)
- ◆ At level 1: Trust and its objects (police, religion, unions,...).

Equations: Basic 3-level model

- Trust at the measurement level (ref: media)
 - ◆ MeanTrust = $\psi_0 + \psi_1(\text{Army}) + \psi_2(\text{Finance}) + \dots + \psi_n(\text{ObjectN}) + \varepsilon$

- Trust at the respondent level

- ◆ $\psi_0 = \pi_{00} + \pi_{01}(\text{woman}) + \pi_{02}(\text{age}) + \pi_{03}(\text{educ}) + e_0$
- ◆ $\psi_1 = \pi_{10}$
- ◆ $\psi_2 = \pi_{20}, \dots$
- ◆ $\psi_n = \pi_{n0}$

- Trust at the country-year level

- ◆ $\pi_{00} = \beta_{000} + \beta_{001}(\text{Time}) + \beta_{002}(\text{HDI}) + \beta_{000}(\text{region}) + r_{00}$
- ◆ $\pi_{01} = \beta_{010}$
- ◆ $\pi_{02} = \beta_{020}$
- ◆ $\pi_{03} = \beta_{030}$
- ◆ $\pi_{10} = \beta_{100}$
- ◆ $\pi_{20} = \beta_{200}, \dots$

_____ **Trust may change differently over time according to the object of trust and may differ according to region.*

Results

Trust in institutions - Latin America & Asia														
	Model 0		Model 1		Model 2		Model 3		Model parcim.		w. time on age		w. time & Asia on inst.	
Intercept	3.74	***	4.03	***	4.04	***	3.86	***	3.82	***	3.76	***	3.75	***
Measurement level														
Church			1.17	***	1.17	***	1.16	***	1.17	***	1.16	***	1.70	***
<i>Time on church</i>													-0.04	***
<i>Asia on church</i>													-1.56	***
Army-police			-0.25	***	-0.25	***	-0.26	***	-0.25	***	-0.26	***	-0.26	***
Governments			-0.51	***	-0.51	***	-0.52	***	-0.51	***	-0.52	***	-0.52	***
Internation. Org.			-0.28	***	-0.28	***	-0.29	***	-0.28	***	-0.29	***	0.27	
<i>Time on I.O.</i>													-0.06	**
Media														
Financial inst.			-0.26	***	-0.26	***	-0.27	***	-0.26	***	-0.27	***	-0.26	***
Public adm.			-0.44	***	-0.44	***	-0.46	***	-0.44	***	-0.46	***	-0.48	***
Private entrep.			-0.35	***	-0.35	***	-0.36	***	-0.35	***	-0.36	***	-0.38	***
Legal system			-0.58	***	-0.58	***	-0.59	***	-0.58	***	-0.59	***	-0.58	***
Political parties			-1.11	***	-1.11	***	-1.12	***	-1.11	***	-1.12	***	-1.11	***
State/President			-0.29	***	-0.29	***	-0.30	***	-0.29	***	-0.30	***	-0.28	***
Trade Unions			-0.73	***	-0.73	***	-0.74	***	-0.73	***	-0.74	***	-0.75	***
Respondent level														
Woman					-0.01	**	-0.01	**	-0.01	**	-0.01	**	-0.01	*
Age					0.00	ns	0.00	ns			0.00			
<i>time on age</i>											0.00			
Educ					-0.01	ns	-0.01	ns						
Country-year level														
Asia (vs AL)							1.08	***	1.05	***	1.08	***	1.16	***
Time							0.00	ns			0.01	ns	0.01	ns
HDI2010							-0.04	ns						
HDI210-2014							-0.01	ns						
Variance														
Measurement	2.5116	65.7%	2.2531	62.6%	2.2531	62.6%	2.2598	65.9%	2.2531	65.8%	2.2598	65.9%	2.2419	65.6%
Respondent.	0.9658	25.3%	0.9799	27.2%	0.9799	27.2%	0.9847	28.7%	0.9799	28.6%	0.9846	28.7%	0.9860	28.9%
Country-year	0.3455	9.0%	0.3652	10.1%	0.3653	10.2%	0.1871	5.5%	0.1906	5.6%	0.1872	5.5%	0.1885	5.5%

Focus on level 1

	Model 0		Model 1	
Intercept	3.74	***	4.03	***
Measurement level				
Church			1.17	***
<i>Time on church</i>				
<i>Asia on church</i>				
Army-police			-0.25	***
Governments			-0.51	***
Internation. Org.			-0.28	***
<i>Time on I.O.</i>				
Media				
Financial inst.			-0.26	***
Public adm.			-0.44	***
Private entrep.			-0.35	***
Legal system			-0.58	***
Political parties			-1.11	***
State/President			-0.29	***
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Measurement	2.5116	65.7%	2.2531	62.6%
Respondent.	0.9658	25.3%	0.9799	27.2%
Country-year	0.3455	9.0%	0.3652	10.1%

- Compared to media
 - ◆ Church 1.17 points higher
 - ◆ Political Parties, 1.11 points lower.
- 66% variance at institution level
- 11.6% variance explained by instit. (2.51-2.25/2.25)

Focus on level 2 & 3

Respondent level								
Woman					-0.01 **			-0.01 **
Age					0.00 ns			0.00 ns
time on age								
Educ					-0.01 ns			-0.01 ns
Country-year level								
Asia (vs AL)								1.08 ***
Time								0.00 ns
HDI2010								-0.04 ns
HDI210-2014								-0.01 ns
Variance								
Measurement	2.5116	65.7%	2.2531	62.6%	2.2531	62.6%	2.2598	65.9%
Respondent.	0.9658	25.3%	0.9799	27.2%	0.9799	27.2%	0.9847	28.7%
Country-year	0.3455	9.0%	0.3652	10.1%	0.3653	10.2%	0.1871	5.5%

- Individual level: Sex is signif.
- Country-year Level: ASIA (+1.08)
 - ◆ 48.6% of the variance explained.

Focus on cross-level interactions

Church	1.70	***
<i>Time on chu</i>	-0.04	***
<i>Asia on chur</i>	-1.56	***
Army-police	-0.26	***
Governments	-0.52	***
Internation. C	0.27	
<i>Time on I.O.</i>	-0.06	**
Media		
Financial inst.	-0.26	***
Public adm.	-0.48	***
Private entrep	-0.38	***
Legal system	-0.58	***
Political partie	-1.11	***
State/Preside	-0.28	***
Trade Unions	-0.75	***

- Trust of Church decreases .04 points per year.
- And it is 1.56 points lower in Asia.
- International Organisations lost .06 points per year during the period.

What does it mean?

- Compared to Van der Meer and Dekker (2011),
 - ◆ 9% of variance at the country-year level (vs 9%).
 - ◆ 25% at the individual level and 66% at the measurement level (compared to 91% at the individual level)
 - ◆ This confirms the importance of including the measurement level instead of using only one measure of trust or an average of measures.
- The model explains
 - ◆ 11% of the variance at the measurement level
 - ◆ 45% of the variance at the country-year level.
 - ◆ No variance at the individual level.

What does it mean?

- Compared with trust in media,
 - ◆ Trust in political parties is more than one point (1.1) lower
 - ◆ Trust in Trade Unions is 3/4 of point lower (0.75)
 - ◆ Trust in the Church is 1.7 points higher but declining by .04 per year AND 1.56 points lower in Asia than in Latin America.
- The analysis allows for modelling
 - ◆ The impact of time or region on trust for specific institutions.

Next steps

- Complete the data base with other surveys (Arab, Africa, Europe, Lapop, etc.).
- Integrate relevant information that characterizes each country-year, including at the political level.
 - ◆ Explore the possibility to cluster countries according to these variables.
- Integrate information about events, elections, etc.
- See how to impute missing values, if possible, at the respondent level.

Conclusion

- Technically, the method asks for
 - ◆ Methodical work to combine the data.
 - ◆ Building the 3-level – eventually 4-level – files.
- It allows to validate
 - ◆ Trust in institutions taking into account
 - Mean levels of trust at the individual level
 - The variation in objects of trust in different surveys.
 - The variation in scales used in different surveys.
- It allows for testing cross-level interactions between country-level, individual-level and institution-level effects.