Looking for ways to characterize countries socio-politically and economically using longitudinal data

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... It is a work in progress...

- The context
- The goal
- The data
- Methods of analysis
- The results
  - Clustering according to characteristics
  - Clustering according to Trust
  - Relationship between clusters
- Conclusion
The context

- We are interested in understanding change over time in institutional trust.
- Previous research (Durand et al., 2017) has shown that more than 40% of the variance between countries is explained by the region where these countries are, in our case, for now,
  - Latin America
  - West Asia and North Africa (WANA)
  - Sub-Saharan Africa
  - Asia
- Why would region be related to trust? Are there characteristics that differentiate regions and are related to trust?
The problem

“With your feet in a ice bucket and your head in the oven, on average you are comfortable”

- There is much heterogeneity between countries within region in change over time in different measures of trust.
- We want to characterize countries in order to understand heterogeneity & homogeneity within and between regions.
- Not many authors could validate a relationship between socio-politico-economic indicators and trust, and certainly not a substantial one.
The goal

- Understand differences between regions in institutional trust, taking into account change over time.
- We do not want to predict perceptions (Trust) with perceptions, but with “factual” data.
- Can we cluster countries longitudinally,
  - According to change in the countries’ characteristics?
  - According to change in trust in various institutions?
DATA
On trust

- A combined data base of Barometers, LAPOP and World Values Surveys.
- 756 surveys, conducted in 98 countries from 1995 to 2016,
  - In four regions: South & Central America, West Asia and North Africa (WANA), Sub-Saharan Africa, Asia.
- 1M respondents, 13M measures of trust.
  - Pertaining to 11 institutions grouped into 14 categories,
    - 4 political (State/Gvt*, Pol. Parties, Elections, Intnl Org.)
    - 4 administrative (Army, Police, judiciary, Public Adm.)
    - 4 social (Media, Religion, Trade Unions, NGO)
    - 2 economic (Banks, Private enterprises).
Data
On countries’ characteristics

- Same countries as for trust, 1990-2016
- Economic situation:
  - LN (GDP) per capita (QOG - UN)
  - Gini:
    - Disposition and Market (SWIID)
- Social situation:
  - Proportion of urban population (QOG - UN)
  - Diversity:
    - Ethnic fractionalization (QOG - Alvesina et al.); E-GSMA
    - Religious fractionalization (QOG - Alvesina et al.)
- Political:
  - Polity2 index of democratic regime
Methods of analysis

- We use K-means longitudinal analysis in order to cluster countries into homogenous groups.
  - Based on Trust -- total institutional trust and trust in the State&Government
  - And on social, economic and political characteristics.
- Since we cannot predict the past by the future,...
  - We use Correspondence analysis to examine whether there is a relationship between clusters of characteristics, region, and clusters of Trust.
First, Trust
Mean trust over time

- Mean trust is stable except in the WANA region, where it is decreasing.
- On average,...
Comparison of average trust & trust in State/Government, by region
Trust in State-Government, Latin America, some countries

- Increases in Bolivia, Argentina
- Decreases in Peru, Chile
- Quadratic trend in Brazil & Venezuela.
What about economic characteristics? In Latin America:

- A rise in inequalities often precedes a change of gvt: Bolivia, Venezuela, Argentina, Uruguay.

- 3 groups of trajectories:
  - Argentina, Uruguay, Venezuela
  - Peru, Brazil, Chile
  - Bolivia
- Latin America is in the two low-trust clusters.
- Most of Asia is in the high trust cluster
- Africa & Wana: mixed.
Trust in the State & Government

- Most of Latin America is in the low trust cluster (red)
- Most of Asia is in the high trust cluster (Blue).
- Africa & Wana are mixed.
GINI\_disp index; level & shape

Estimate of inequality in equivalized household disposable (post-tax, post-transfer) income; the clustering takes into account the level of the index.

- **Latin America**: medium level, mostly quadratic
- **South Africa**: high inequalities
- **Wana & Asia**: mixed but low inequalities
  countries (blue) are present in both regions.
**Gini_disp index - shape**

Estimate of inequality in equivalized household disposable (post-tax, post-transfer) income; the clustering maximises the shape of change over time, independently from the level.

Latin America: Quadratic trend or decreasing (blue & red).
Africa & Wana: mixed, but not increasing.
Asia: mostly increasing (Yellow)
Gini_market index - shape

Estimate of inequality in equivalized household market (pre-tax, pre-transfer) income; the clustering maximises the shape of change over time, independently from the level.

- **Latin America**: quadratic or decreasing
- **Africa & WANA**: mixed.
- **Asia, South Africa**: Increasing.
GDP (Ln)

- **Latin America**: Medium-High mostly
- **Other regions**: mixed;
Urban Population

Medium-High (blue) & High (yellow) proportion of urban population characterizes Latin America
Diversity - ethnic & religious

Variation within regions:
Red: Low diversity; Green: High diversity
Blue: Low ethnic, high religious
Yellow: High ethnic, low religious
- Red: More democratic regimes characterize Latin America
- Green: More autocratic regimes characterize WANA.
- Asia & Africa are mixed.
First conclusion

- We see that some clusters are more present in some regions:
  - For example, Latin America:
    - all in the democratic cluster,
    - most countries high urbanized and with a high $\ln(GDP)$.
- But other analysis show clusters almost evenly distributed in different regions.
  - Diversity & Gini - shape indices, for example.
Relationship between clusters of economic situation & clusters of trust?

The graph shows no relationship bw trust & economic situation
Clusters of economic situation & clusters of trust

Some countries
Relationship between clusters of social situation & clusters of trust?

The graph shows low trust in Government to be associated with high urban population & low diversity.
Relationship between clusters of social situation & clusters of trust?

Some countries
Validating using 4-level regression analysis

Shows that:

- Polity2 index (democratic vs autocratic regime) is related:
  - Negatively to trust in the Government & the political parties.
  - But positively to trust in the electoral process.
- Proportion of urban population related negatively with average trust.
- Other variables not related, including an index of change over 5 years in the giniDisp index.
- These variables (+ WGI_mean) explain a similar proportion of variance that region.
Conclusion

- We could find variables that inform about regional differences. The interpretation of these findings is not yet obvious, however.
- Latin America is characterized by low trust, democratic regimes & a highly urbanized population.
  - Can we conclude that democracy & the proportion of urban population are associated by low trust? What influences what?
- In other regions, there is much heterogeneity within region in all aspects.
- Some clusters are defined by quadratic trends. This may hamper the capacity to validate relationships between some characteristics & trust.
Next steps

- More thorough review of the literature and selection of other indicators (V-Dem data base & World Governance indicators).

- Clustering of trust according to other institutions:
  - Elections
  - Political parties
  - Army, police
  - Trade Unions
  - Religious leaders/ the Church.
Trust in the State/government, compared with political parties, army & police

- Trust in the state-gvt differ from mean institutional trust:
  - Asia, stable;
  - Africa: variable;
  - Wana: declining;
  - South-Central America: variable.
An example: Trust in the Media, Religious Organizations & Trade Unions

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