

# **How can we explain differences in institutional trust between regions: Looking at ways to characterize countries using longitudinal data**

By

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# Outline

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

- The context
- The goal
- The data
- Methods of analysis
- The results:
  - Clustering according to trust
  - Clustering according to characteristics of the different countries.
  - Relationship between different clusterings?
- Discussion and 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, currently,
  - ▶ 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 homogeneity within region but also much heterogeneity between countries 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, using “factual” data, not perceptions.
- In order to do this, cluster countries longitudinally,
  - According to change in trust in various institutions (State or Government for this presentation)
  - According to change in the countries’ characteristics
- And examine if there is a relationship between clusterings.

# 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 110 institutions grouped into 14 categories,
    - 4 political (**State/Gvt\***, Pol. Parties, Elections, Intl Org.)
    - 4 administrative (Army, Police, judiciary, Public Adm.)
    - 4 social (Media, Religion, Trade Unions, NGO)
    - 2 economic (Banks, Private enterprises).

# DATA

## On the countries' characteristics

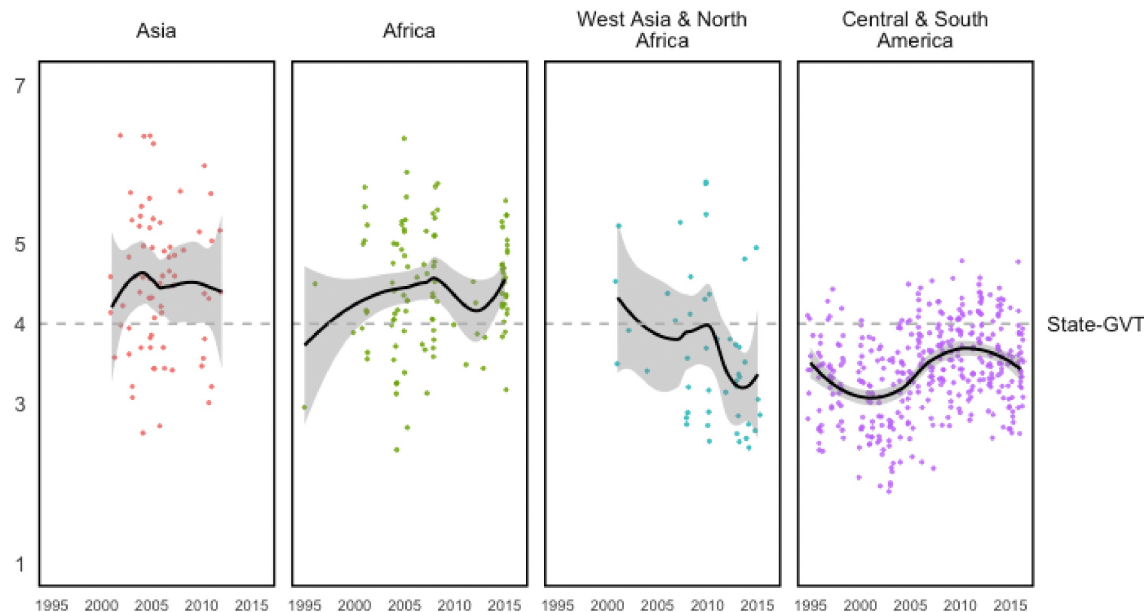
- Same countries as for trust, 1995-2015 for the cluster analysis.
- Economic situation:
  - ▶ LN (GDP) per capita (QOG - UN)
  - ▶ Gini:
    - Disposition and Market (SWIID)
- Social situation:
  - ▶ Proportion of urban population (QOG - UN)
  - ▶ Diversity:
    - Ethnic fractionalization (QOG -Alesina et al.);
    - Religious fractionalization (QOG -Alesina et al.)
- Political:
  - ▶ Polity2 index of democratic regime

# The process

- Choose the best algorithm:
  - ▶ K-Means longitudinal
  - ▶ Traj
- Decide on the appropriate number of clusters
  - ▶ Calinski-Harabatz index
  - ▶ Comparison of multiple indexes.
- Perform the analysis
- Use Correspondence analysis to see whether there is a relationship between clusters.

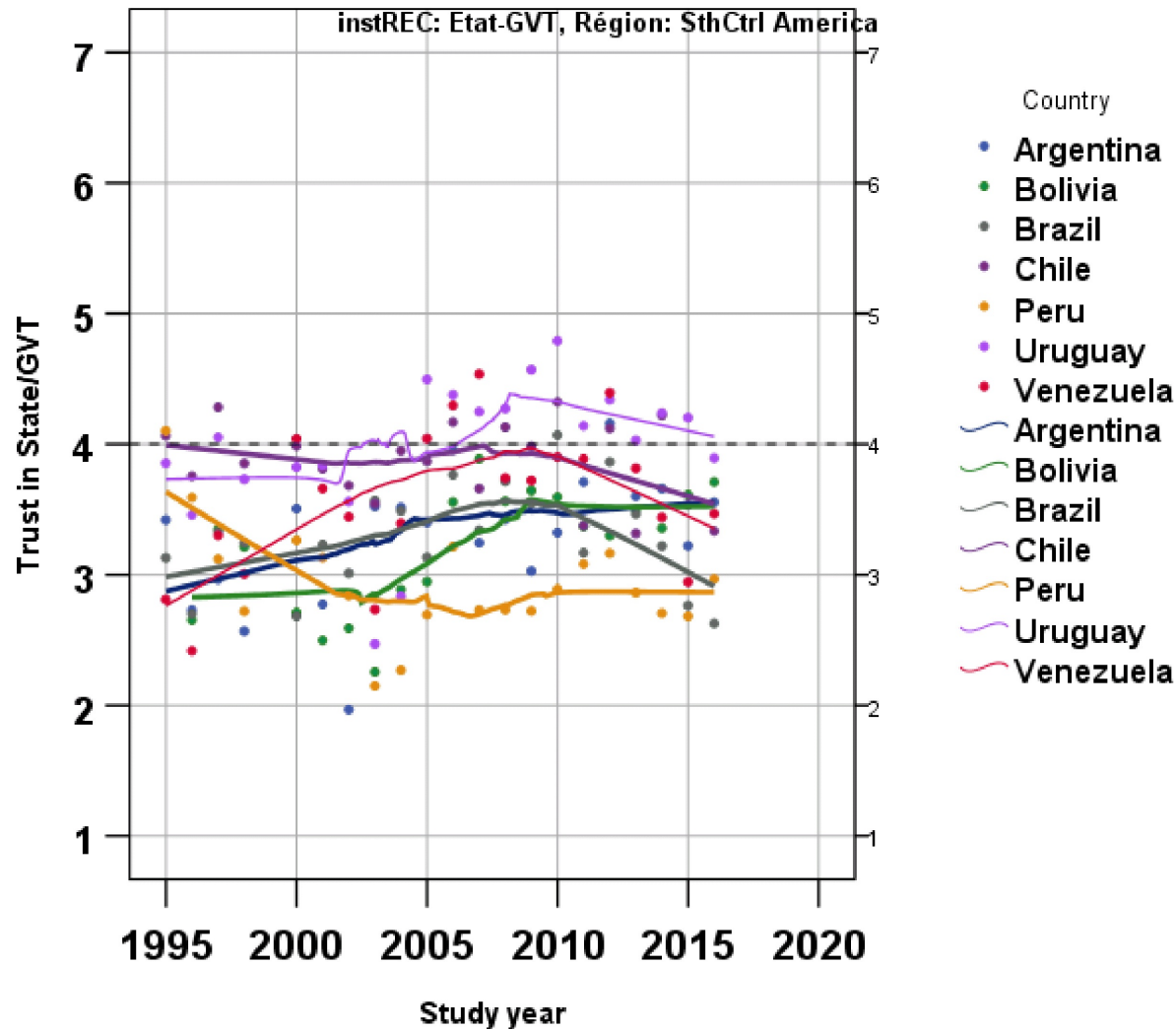


# Trust in the State or Government



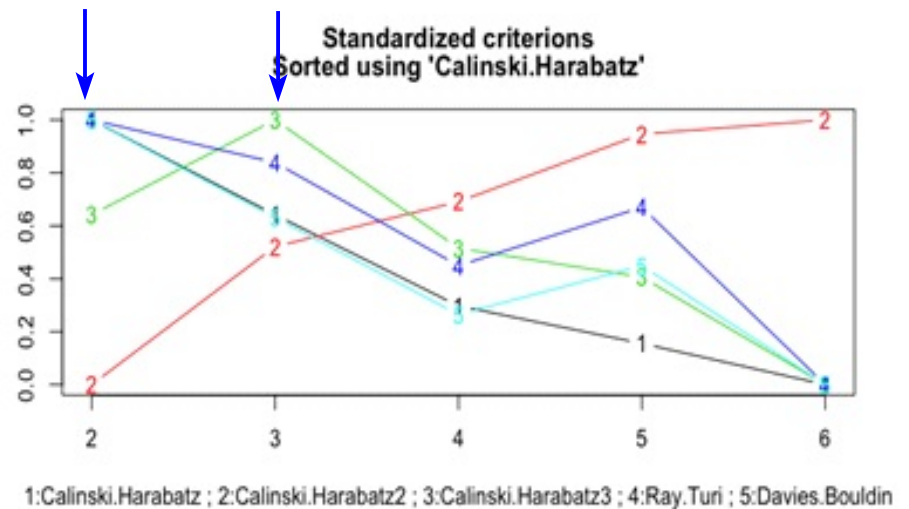
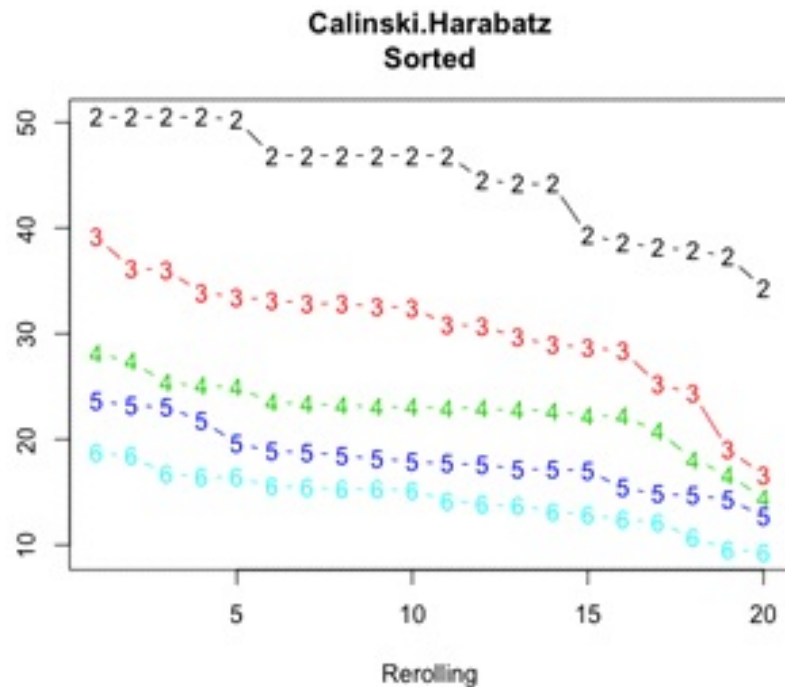
- Trust in the State or Government is stable in Asia, fluctuating in Africa and South & Central America and decreasing in the WANA region. It is lower overall in South & Central America.
- There is much variability between countries.

# Trust in State/Government, South & Central America, selected countries



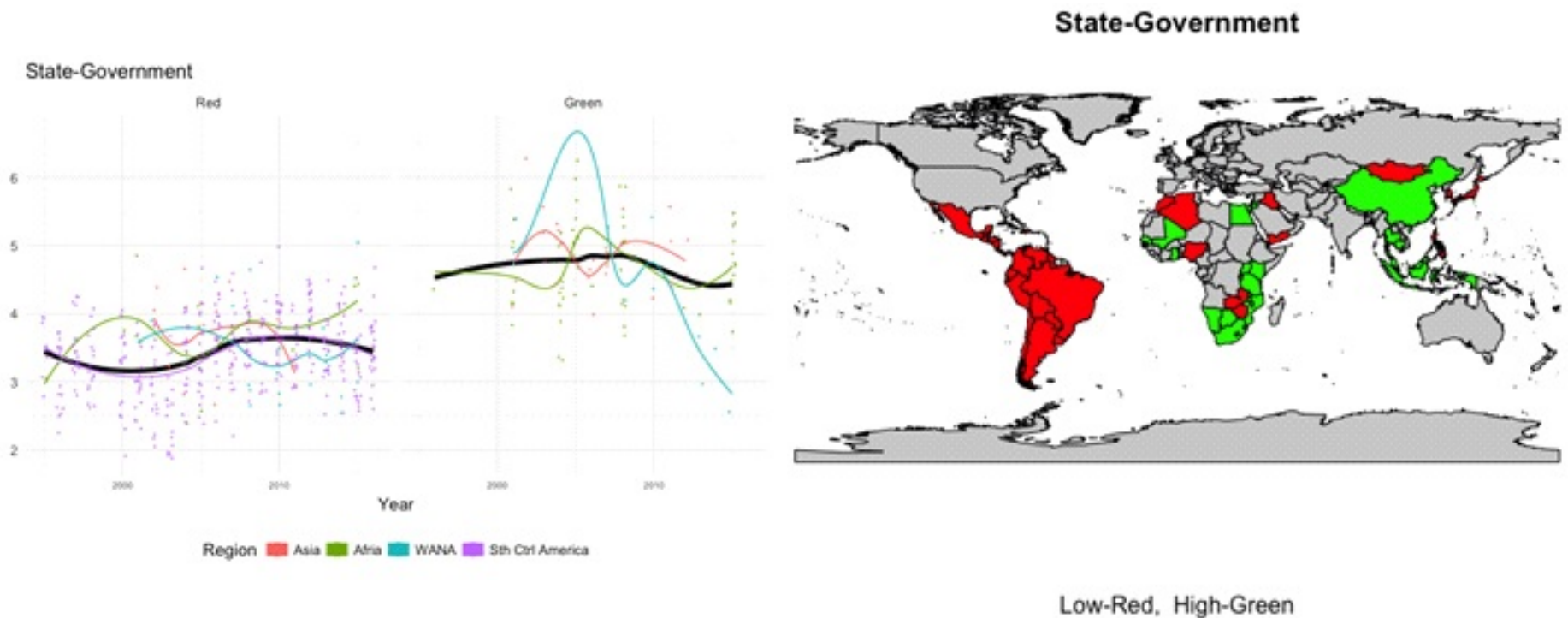
- Increases in Bolivia, Argentina
- Decreases in Peru, Chile
- Quadratic trend in Brazil & Venezuela.

# First step : How many clusters?



- All the indices, except Calinski Harabatz2, point in the same direction, i.e., 2 clusters.
- A three-cluster solution would also be acceptable, with all the indices high.

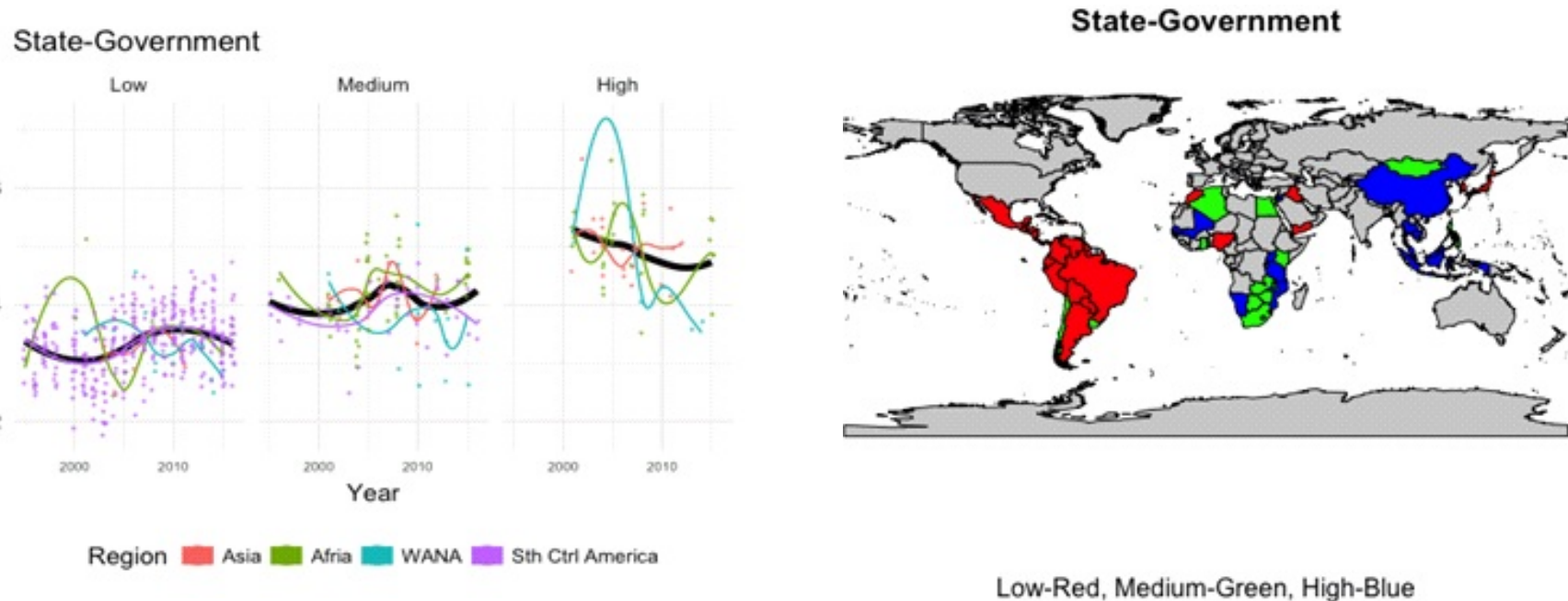
# Trust in the State & Government



- All of South & Central America is in the low trust cluster (red).
- Most of Asia is in the high trust cluster (green).
- Africa & Wana are mixed.

# Trust in the State & Government

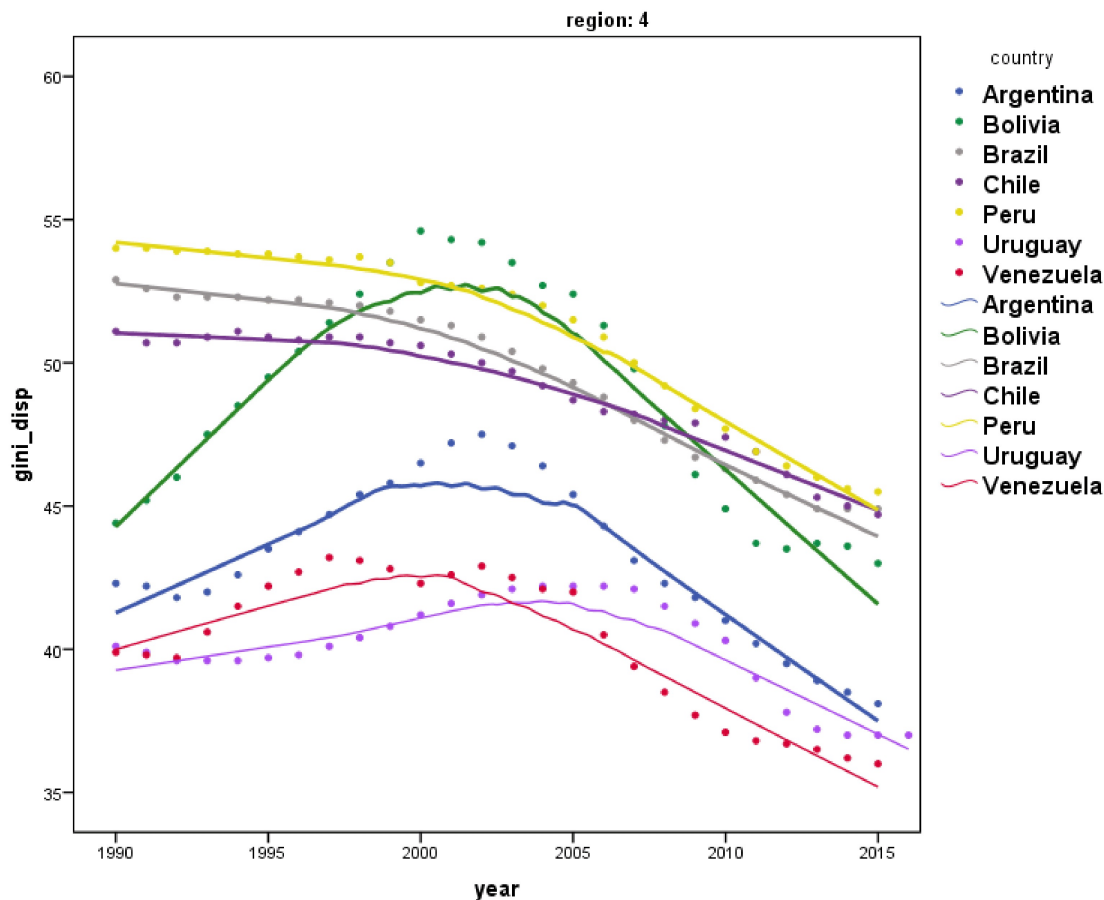
What about a 3-cluster solution?



- Most of South & Central America (except Chile and Uruguay) is in the low trust cluster (red).
- Most of Asia is in the high trust cluster (blue).
- Africa & Wana are mixed.
- Regional homogeneity in LA and Asia.

# What about economic characteristics? In Latin America

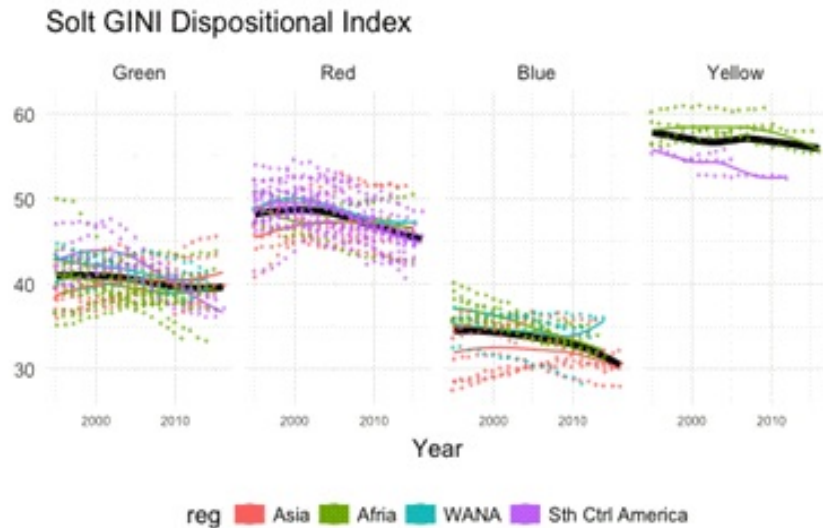
Solt GINI dispositional



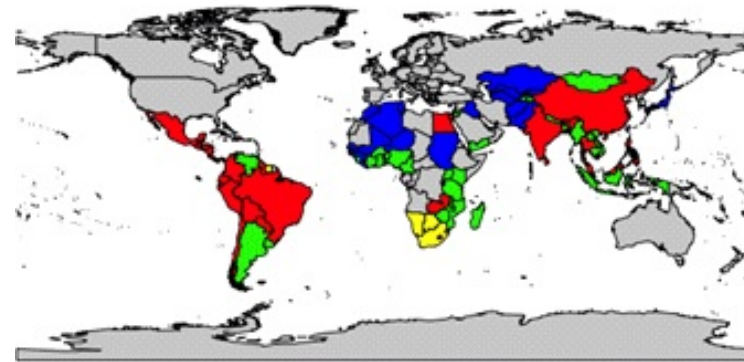
- A rise in inequalities may precedes a change of gvt: Bolivia, Venezuela, Argentina, Uruguay.
- 3 groups of trajectories:
  - Argentina, Uruguay, Venezuela
  - Peru, Brazil, Chile
  - Bolivia

# GINI\_disp index; level & shape

Estimate of inequality in equivalized household disposable (post-tax, post-transfer) income.



Solt GINI Dispositional Index

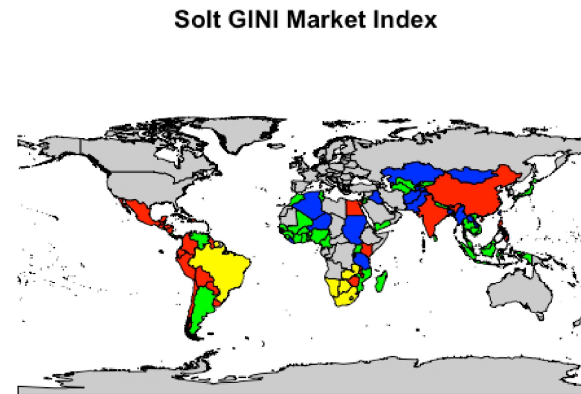
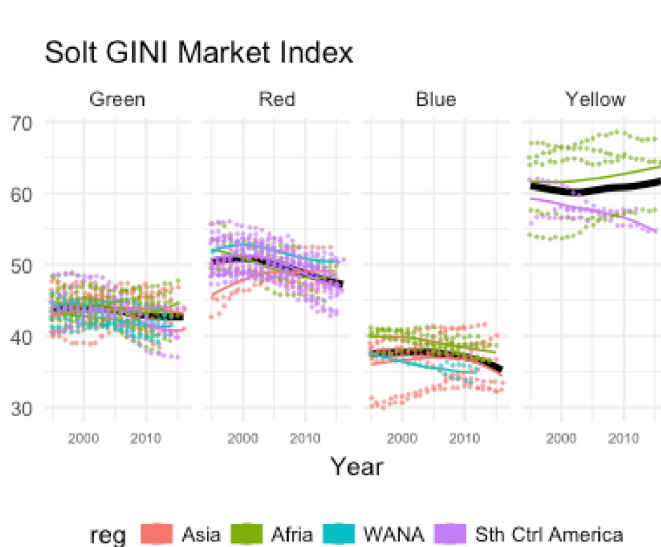


Low-Blue, Low Middle-Green, High Middle-Red, High-Yellow

- Latin America: mostly medium-high (red) or medium low (green)
- Asia: mostly medium also. Some low (blue).
- Wana & Africa: mostly low & medium low but high inequalities in Southern Africa.

# GINI\_mkt index; level & shape

Estimate of inequality in equivalized household disposable (pre-tax, pre-transfer) income.



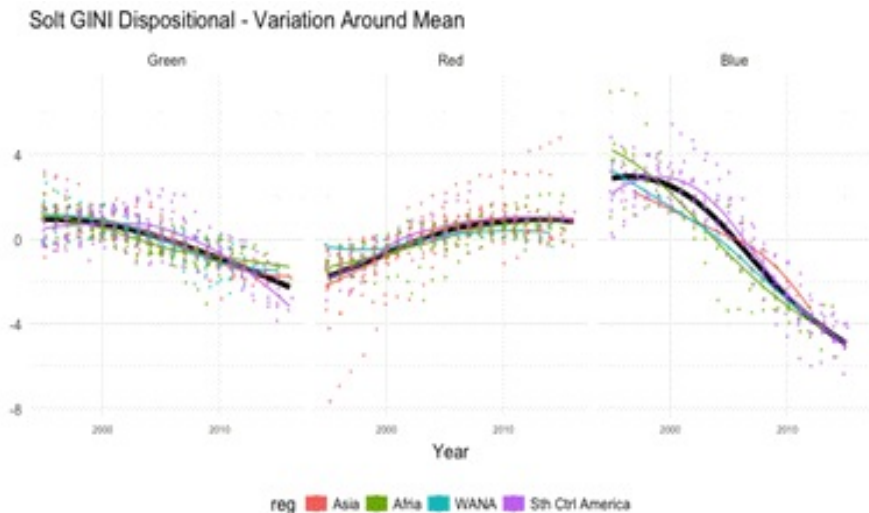
Low-Blue, Low Middle-Green, High Middle-Red, High-Yellow

- Latin America: medium-high (red), medium low (green) and high (yellow)
- Asia: mixed also, but no high inequalities.
- Wana & Africa: mostly mixed, with high inequalities in Southern Africa.

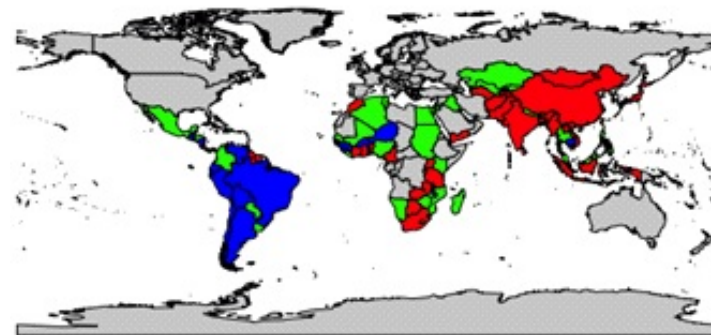


# GINI\_disp index - shape

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

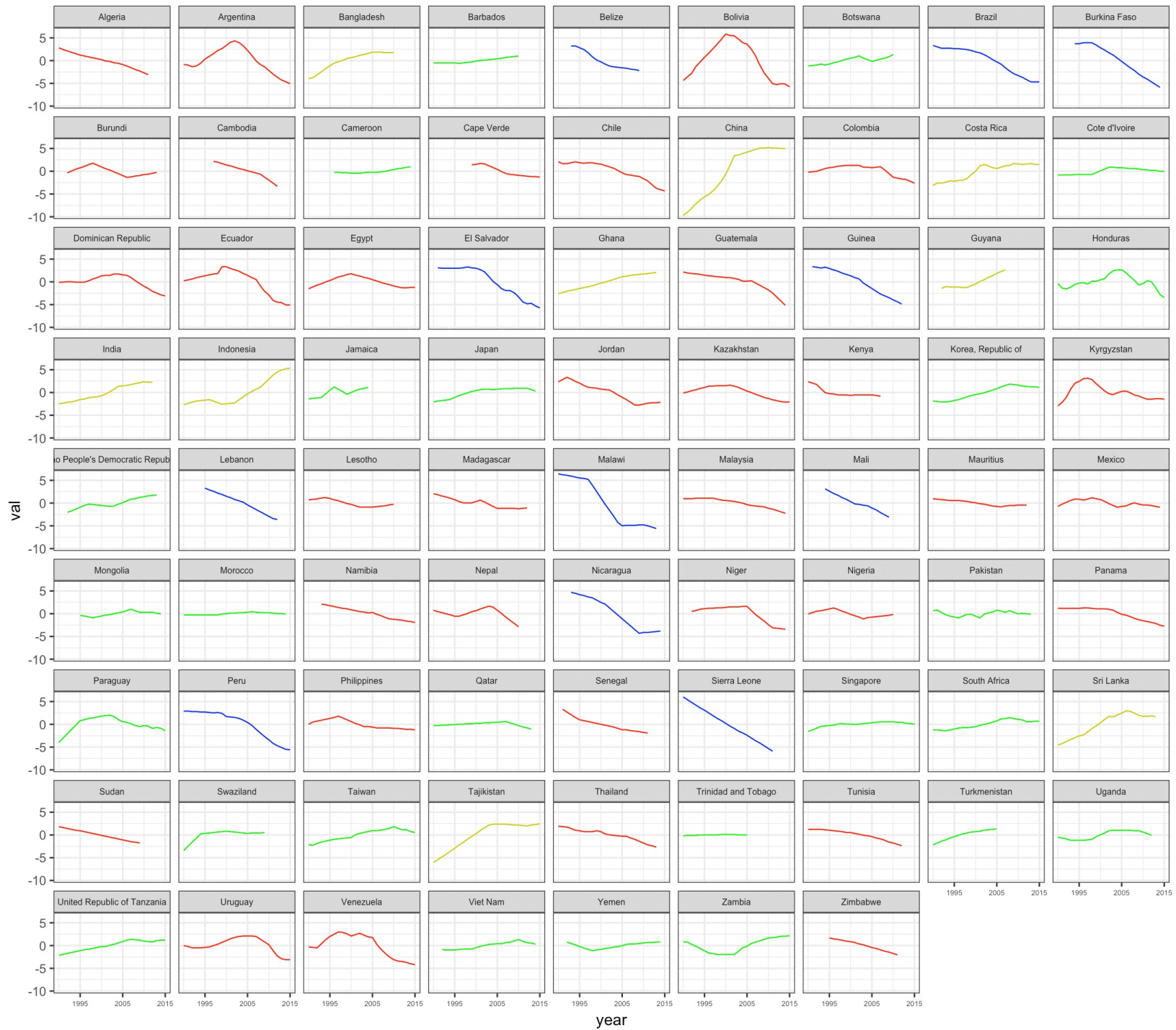


Solt GINI Dispositional - Variation Around Mean



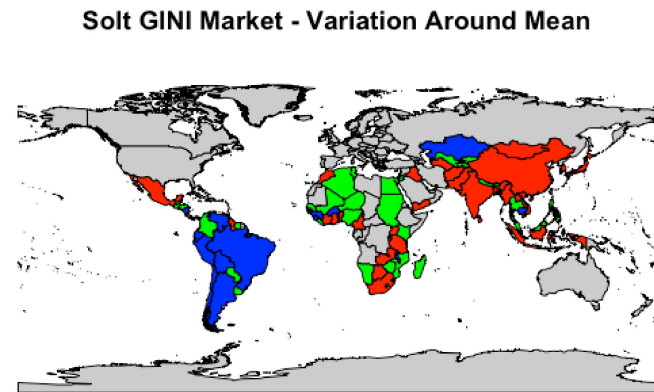
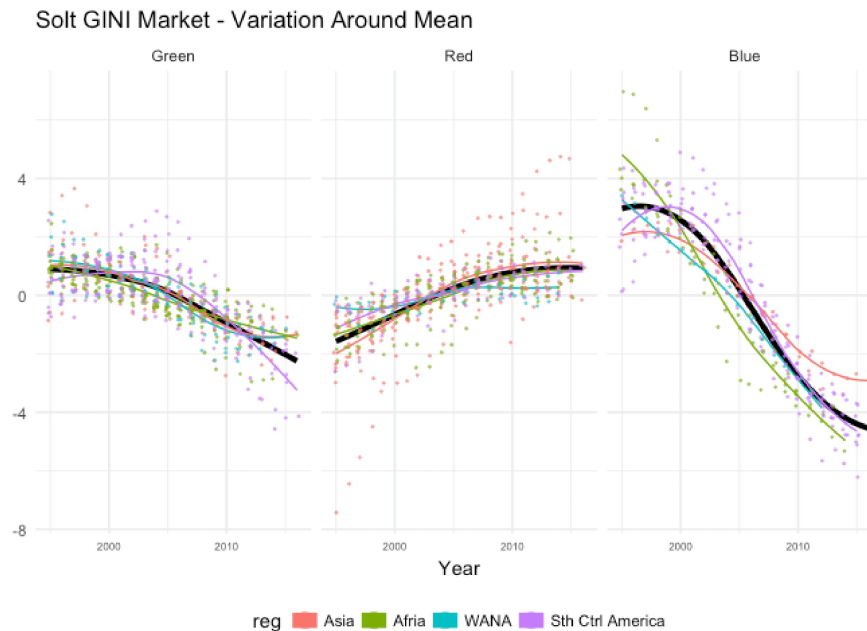
Large Decrease-Blue, Decrease-Green, Increase-Red

- Latin America: Mostly large decrease.
- Africa & Wana: mixed
- Asia: mostly increasing (Red)
- In regions of increasing ineq.: higher trust.



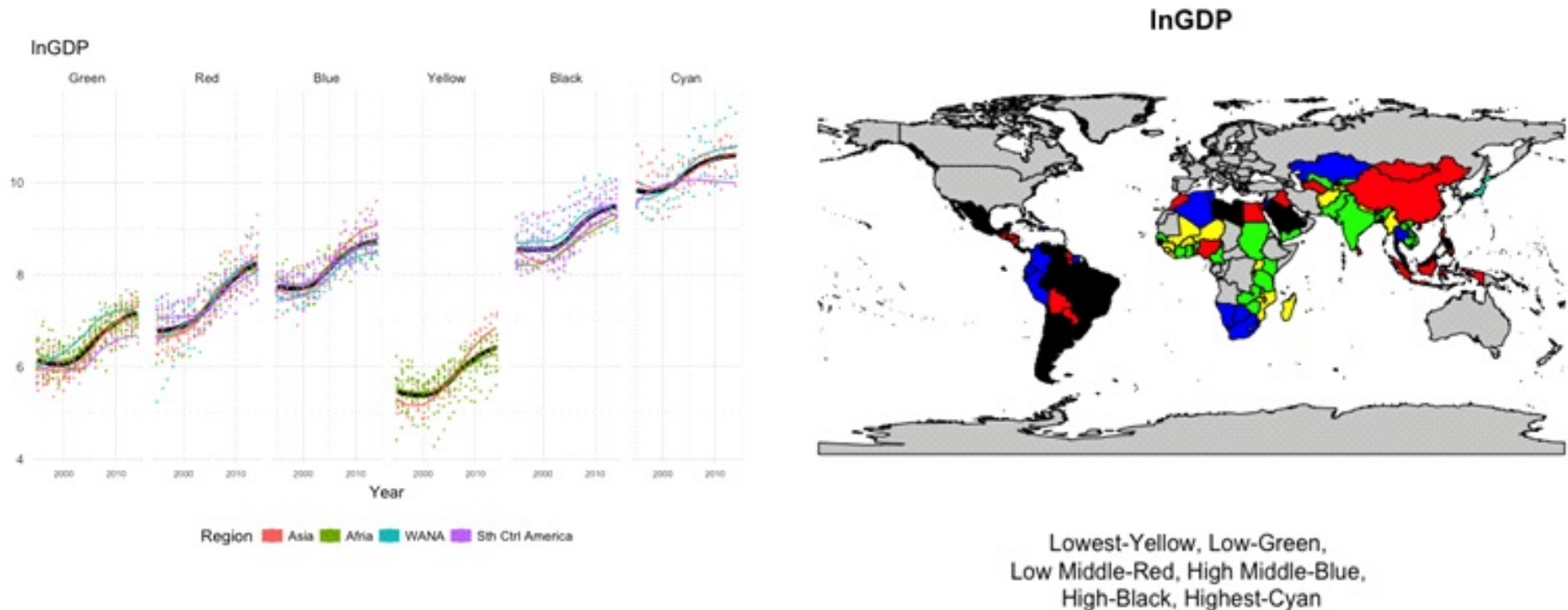
# Gini\_market index - shape

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.**



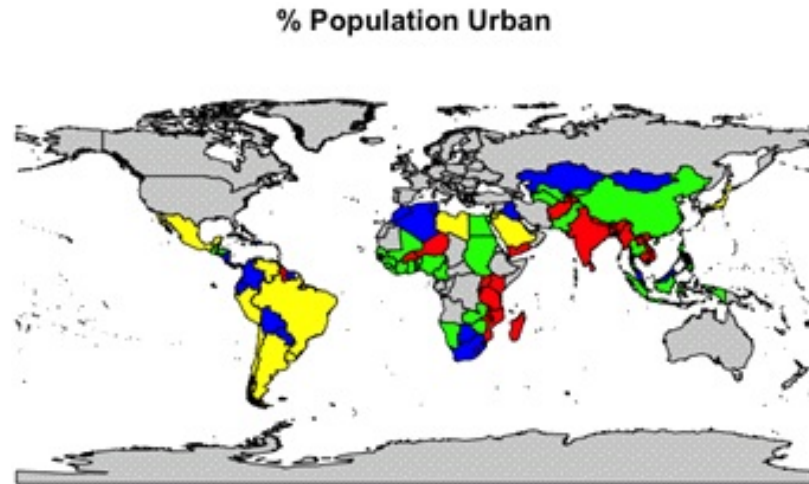
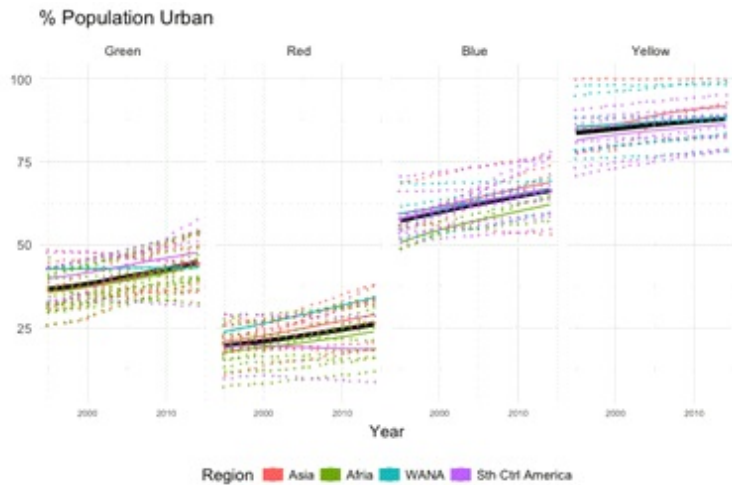
- Latin America: mostly large decrease (blue)
- Africa & WANA: mostly small decrease (green)
- Asia, South Africa: Mostly increasing (Red)

# GDP (Ln)



- Increasing everywhere, mostly after the 2008 crisis.
- Latin America: Medium-High mostly
- Other regions: mixed, no homogeneity.

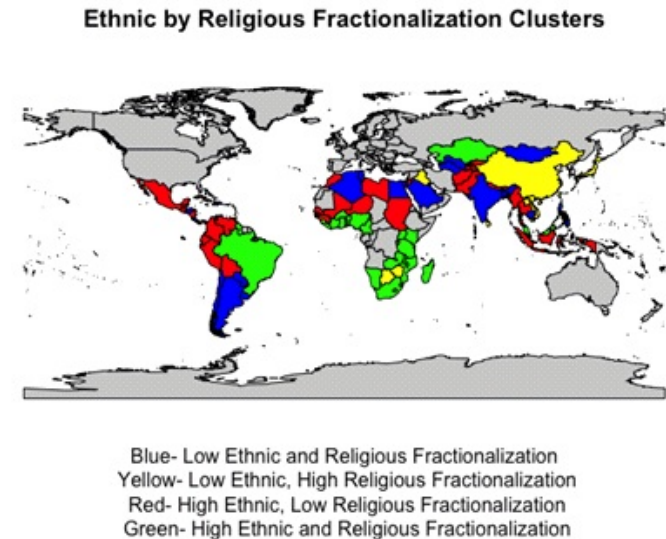
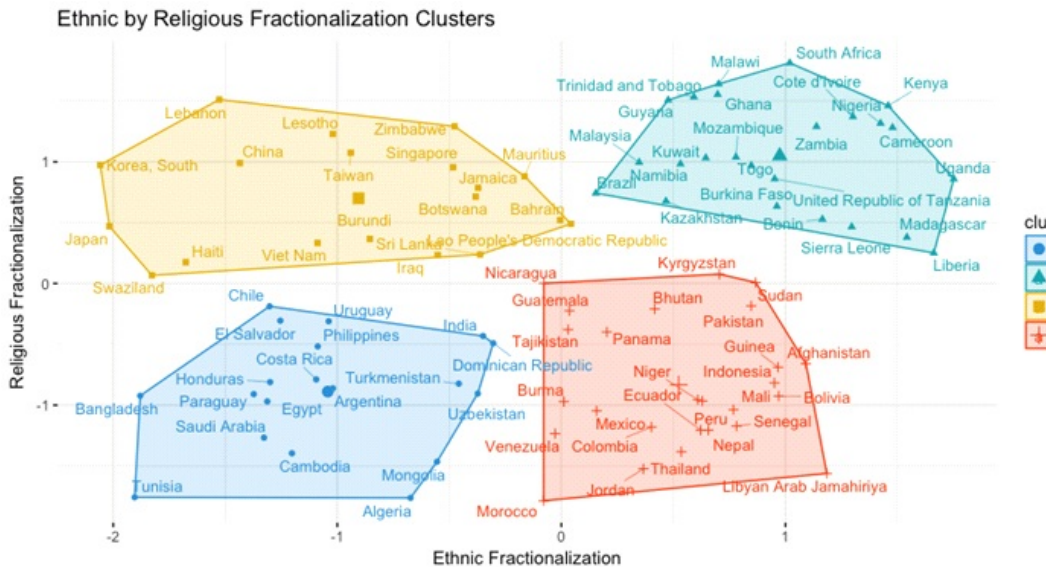
# Urban Population



Low-Red, Low Middle-Green, High Middle-Blue, High-Yellow

- Latin America (where trust is mostly low): mostly high proportion of urban population.
- The rest: mixed.

# Diversity - ethnic & religious



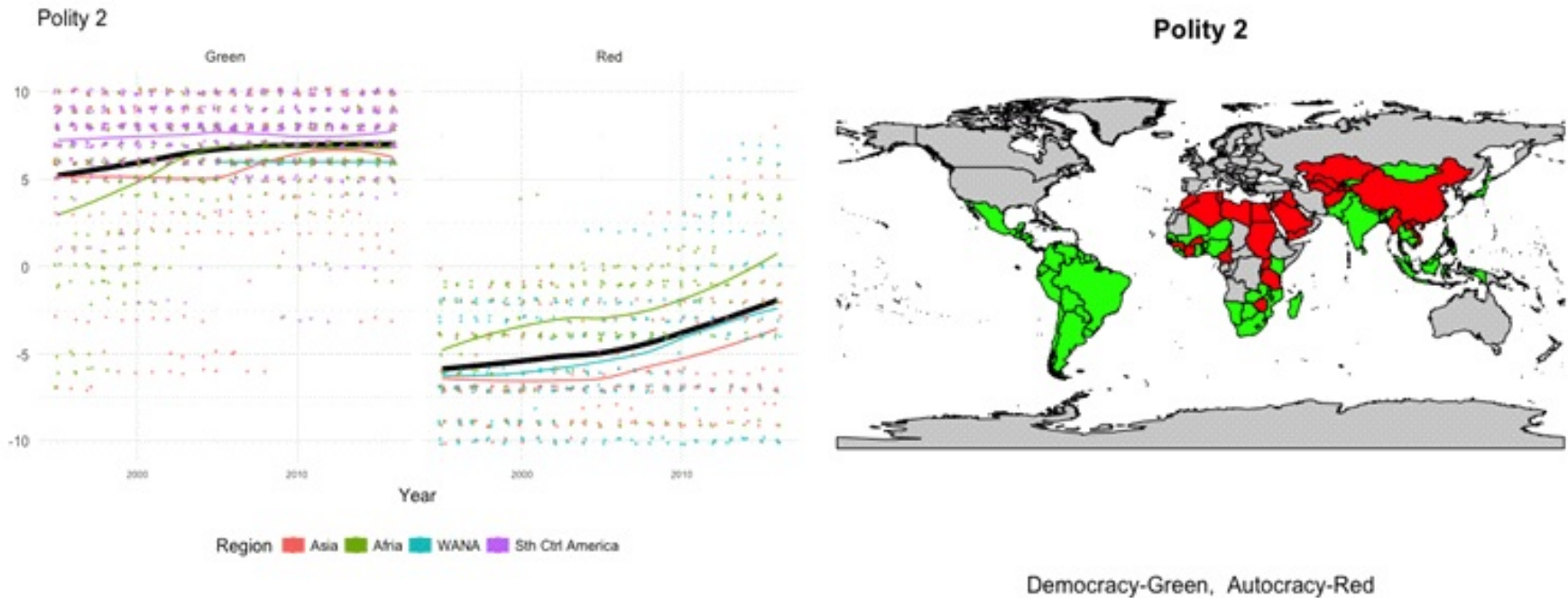
Variation within regions:

Blue: Low diversity; Green: High diversity

Yellow: Low ethnic, high religious

Red: High ethnic, low religious

# Polity2 (Political Regimes)



- Green: More democratic regimes characterize Latin America
- Red: More autocratic regimes characterize WANA.
- Asia & Africa are mixed.

# Preliminary Observations

- There is homogeneity in Trust in State or Government
  - ▶ In South & Central America (Low)
  - ▶ In Asia (high)
- But there is not much homogeneity within regions for all the indicators that we used, except for political regimes. However South and Central America tends to be more homogenous.



# Relationship between economic indicators & Trust in State/Gvt



Medium Trust, MHigh GDP, High decreasing inequalities

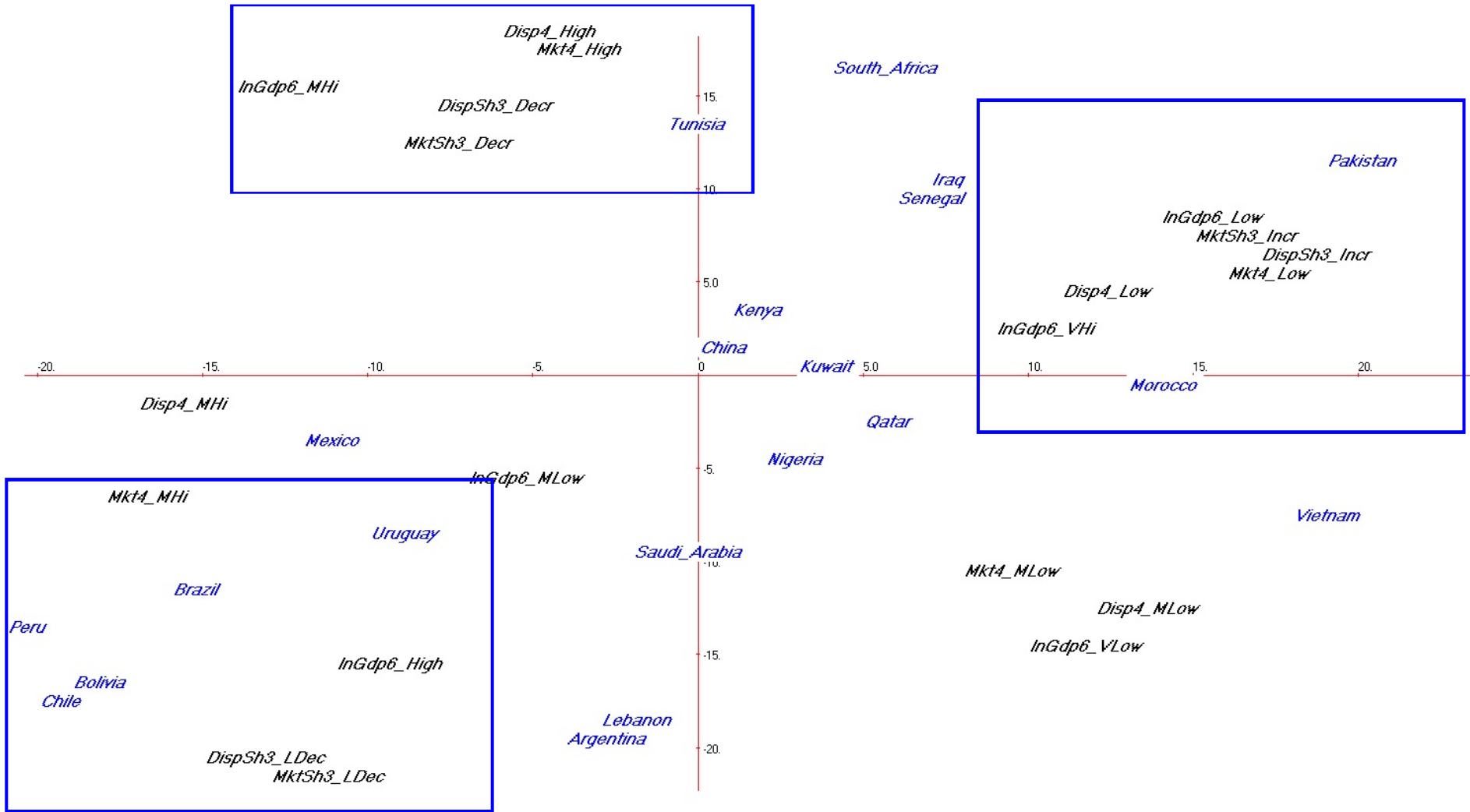
Low GDP, increasing inequalities

Low trust, MHi inequalities, decreasing, Latin America

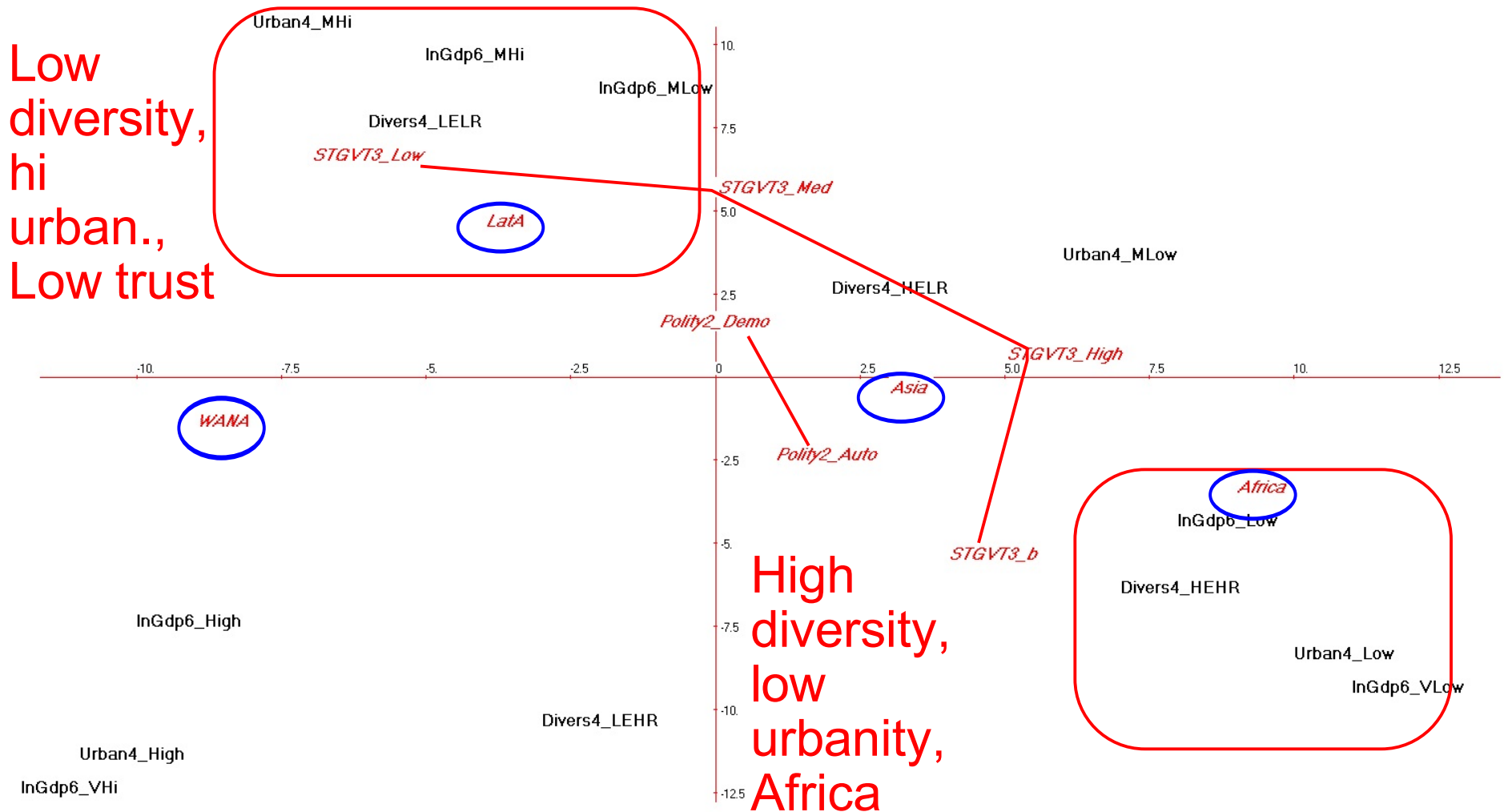
No info on trust, Mlow inequalities, Autocracy, Asia

# Economic indicators, selected countries

Countries not grouped by region

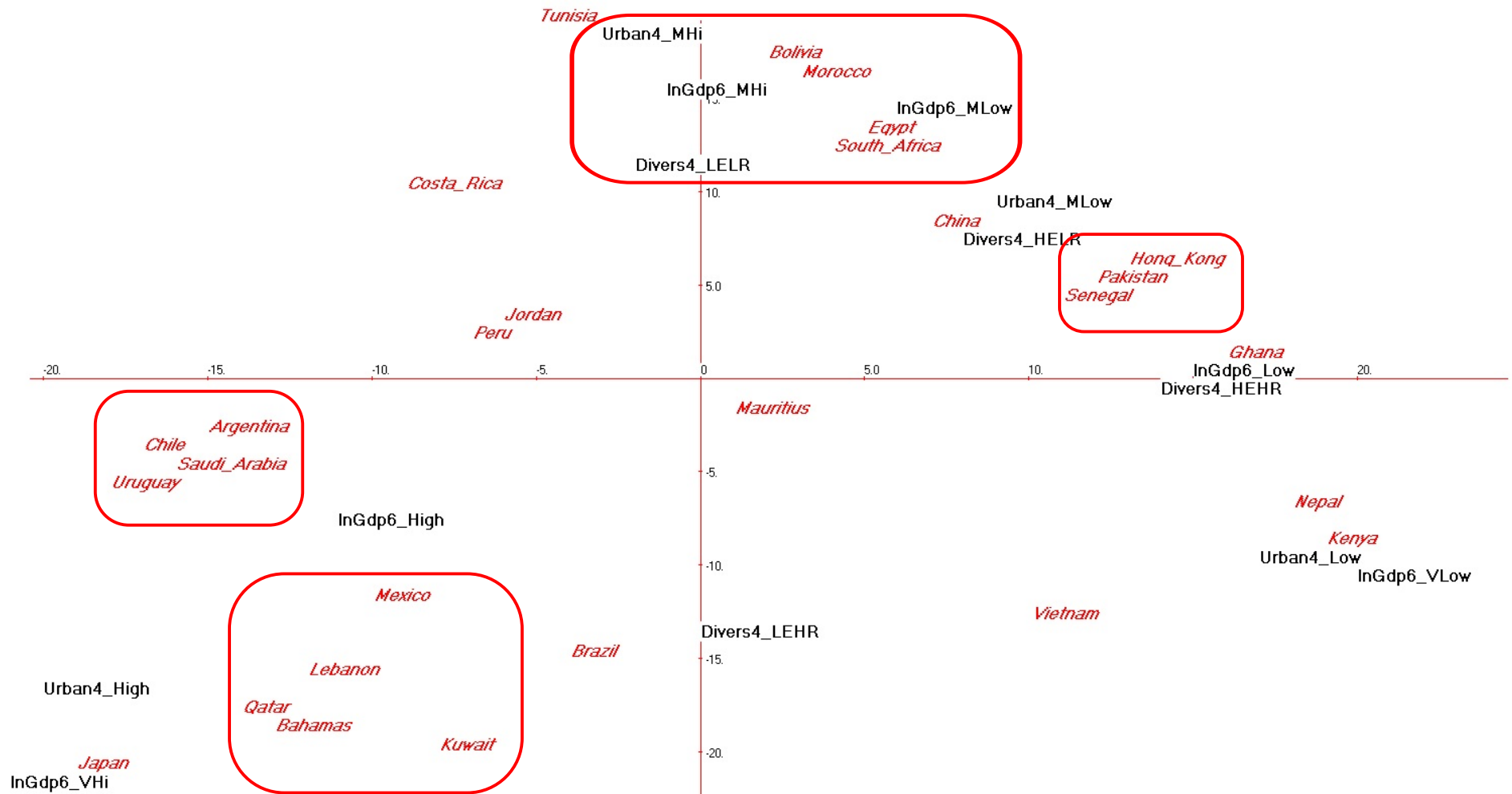


# Relationship between social indicators +Ln(GDP) and trust in State/Gvt



# Social indicators and selected countries

The clusters of countries are mostly from different regions.



# Discussion

- Weak relationship between economic and social indicators and trust:
  - ▶ Stable indicators (diversity) cannot explain change.
  - ▶ Indicators that change in the same way (urban population, gdp) cannot explain differential change.
  - ▶ Hi decreasing GINI indices are associated with High GDP and low trust (South&Central America).
  - ▶ Democratic regimes are associated with low trust.
- What does Gini measure?
  - ▶ Hi GDP is associated with high inequalities & low GDP with low inequalities. Does GINI measure the spread of income?

# Validating using 4-level regression analysis

- Shows that:
  - ▶ Polity2 index (democratic vs autocratic regime) is related:
    - Negatively to trust in the State/Gvt & in 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 gini\_disp index.
  - ▶ These variables explain around 15% of the variance in average trust.

# Conclusion

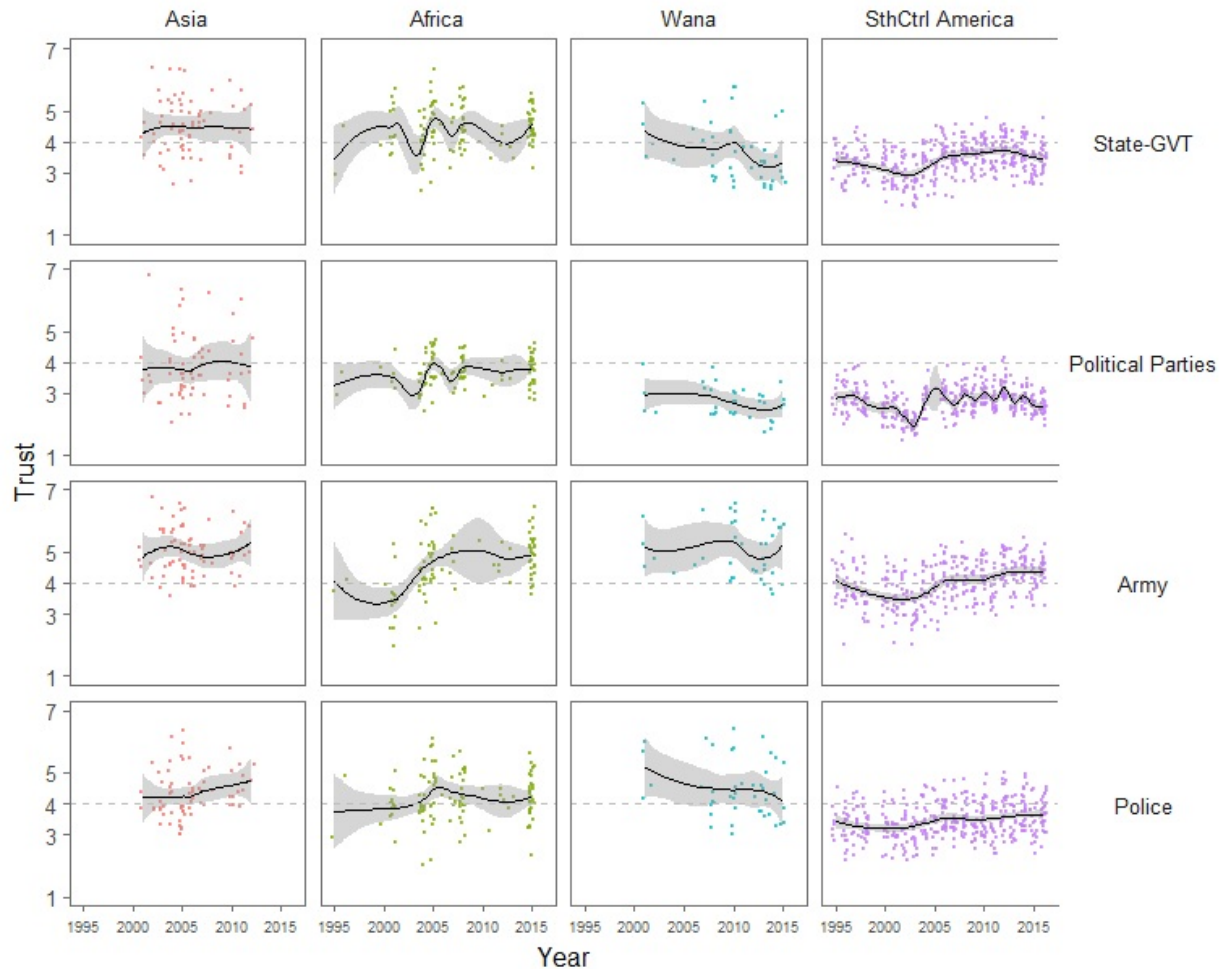
- Latin America is characterized by low trust, democratic regimes & a highly urbanized population and Asia has higher trust and more autocratic regimes.
  - ▶ Can we conclude that democracy & the proportion of urban population are associated by low trust? What influences what?
- In other regions, there is much heterogeneity within region in all aspects.
- Some trends are quadratic but cluster analysis failed to capture those appropriately. It tends to group them with declining trends. This may hamper our 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.

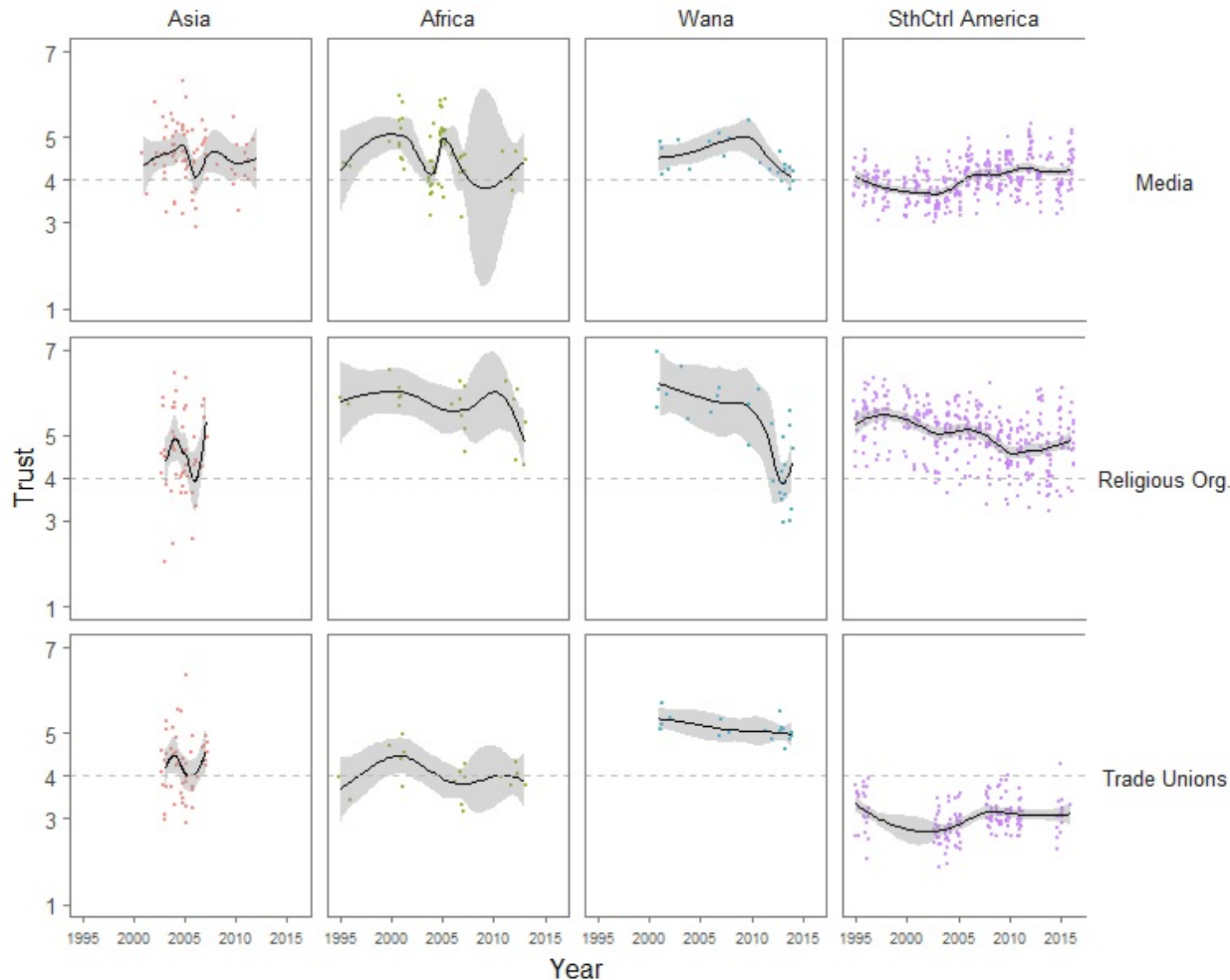


# Trust in the State/government, compared with political parties, army & police



- Trust in the state-gvt differs from mean institutional trust:
- Asia, stable;
- Africa: variable;
- Wana: declining;
- South-Central America: variable.

# Trust in the Media, Religious Organizations & Trade Unions



- Trust in the religious organisations and leaders is high but declining, particularly in WANA & LA
- Trust in the Trade Unions is low in LA, high in the WANA.