Looking for a Universal Measure of Religiosity:

A Latent Variable Approach

Kirill Zhirkov

Idea of the Project

- Cross-cultural study of religiosity and religious identity is my long-standing interest

- Multilevel SEM is a perfect method to address the problem

- Possibility of an important empirical contribution to the field

Theoretical Basis

- Revised modernization theory
  - "Sacred and Secular" by Norris & Inglehart

- Negative relationship between existential security and religiosity

- Persistence of cultural zones based on religious heritage

- Negative influence of religiosity on gender equality and liberal democracy

Individual level

Age / cohort

Education

Denomination

Religiosity

Support for
gender equality

1

Country level

Religiosity

1

HDI

Culture

Democracy
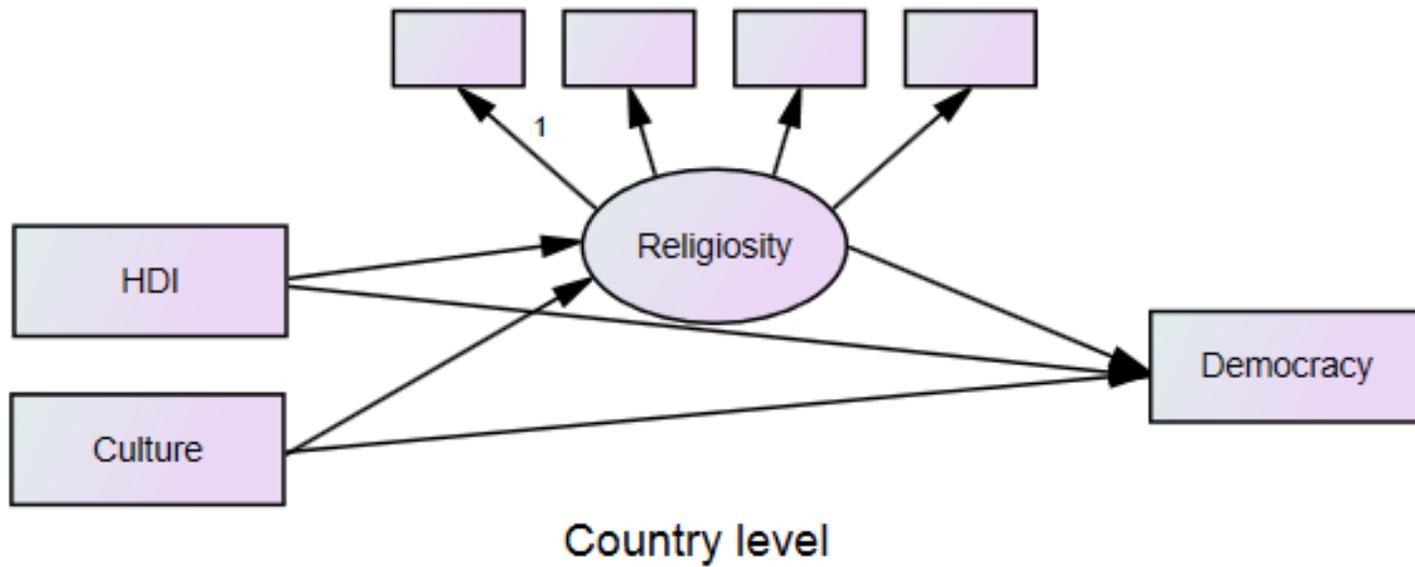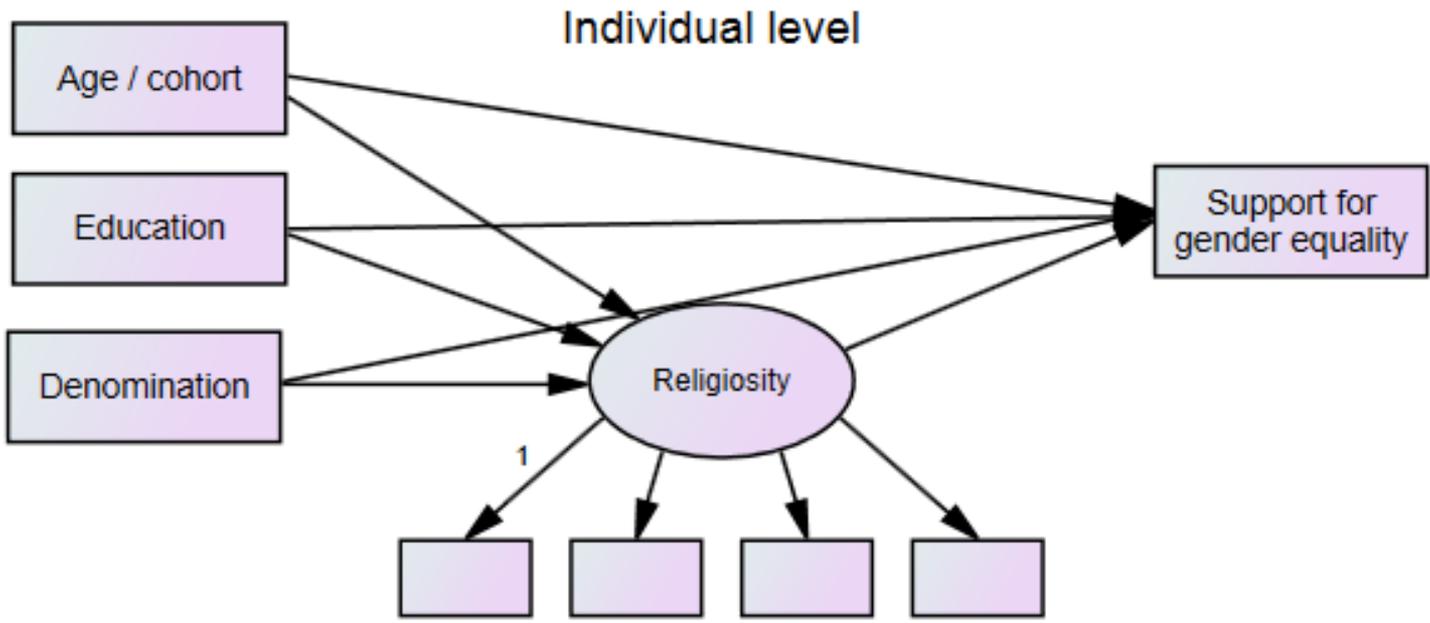
Data

- World Values Survey; waves 3 to 5; 85 countries; about 200,000 respondents

- Survey questions:
  - Religiosity indicators
  - Self-reported denomination
  - Support for gender equality
  - Socio-demographics

- HDI figures from the UN

- Freedom House democracy index

Cultural Zones

- Important notion from modernization theory

- "Sacred and Secular" – 5 zones: Catholic, Protestant, Orthodox, Muslim, and Eastern

- Must be a country-level characteristic

- Now: 5 dummy variables based on classification from "Sacred and Secular"

- All other variants are worse

Religiosity Indicators

- Importance of God
  - 10 categories; highly skewed

- Importance of religion
  - 4 categories

- Religious attendance
  - 7 categories; skewed

- Self-assessed religiosity
  - 3 categories

Normality Assumption

Indicator	Continuous	Categorical
Importance of God	0.805	0.860
Importance of religion	0.615	0.664
Religious attendance	0.683	0.774
Self-reported religiosity	0.834	0.866

Measurement Invariance

- Testing for countries is senseless
  - Unlikely with 80 groups
  - No substantive ground

- Therefore, test for zones

- Additional checks:
  - For personal denominations
  - For Muslim men and women
  - For major "Eastern" countries

Cultural Zones

Indicator	Catholic	Protestant	Orthodox	Muslim	Eastern
Importance of God	1.000	1.000	1.000	1.000	1.000
Importance of religion	0.989	0.984	0.828	1.174	0.875
Religious attendance	0.884	0.837	0.692	0.689	0.710
Self-reported religiosity	0.645	0.636	0.617	0.518	0.889
Mean	0.000	-0.065	-0.038	0.177	-0.198
Variance	0.081	0.117	0.080	0.025	0.072

Personal Denominations

Indicator	Catholic	Protest.	Orthodox	Muslim	Eastern	Non-rel.	Other
Importance of God	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Importance of religion	1.117	0.982	0.837	1.248	0.718	0.957	0.975
Religious attendance	0.942	0.929	0.674	0.592	0.470	0.864	0.982
Self-reported religiosity	0.482	0.525	0.419	0.414	0.619	0.826	0.787
Mean	0.000	-0.024	-0.085	0.115	-0.081	-0.449	-0.091
Variance	0.044	0.083	0.055	0.018	0.050	0.053	0.065

Muslim Men and Women

Indicator	Men	Women
Importance of God	1.000	1.000
Importance of religion	1.124	1.082
Religious attendance	1.104	0.554
Self-reported religiosity	0.779	0.671
Mean	0.000	0.023
Variance	0.026	0.022

"Eastern" Countries

Indicator	China	India	Japan	Thailand
Importance of God	1.000	1.000	1.000	1.000
Importance of religion	0.920	1.078	0.780	1.305
Religious attendance	0.533	0.619	0.473	0.841
Self-reported religiosity	0.828	0.857	0.960	0.467
Mean	0.000	0.476	0.102	0.456
Variance	0.056	0.023	0.048	0.009

Invariant ML Model

Indicator	Invariance
RMSEA	0.015
CFI	0.996
TLI	0.996
SRMR	
Within	0.032
Between	0.062

Some Questions

- Is it possible to claim measurement invariance?
  - Without it further development of project is not possible

- Better approaches to definition of cultural zones?
  - "Eastern" group seems especially problematic