Regime Changes and Economic Preferences: Global Evidence

Milestone 3: Econometric Approach

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1 Economic model

Economic model of reference taken from the literature (e.g. if you measure impact of train delay on school grades, then it could be a theory model showing how school performance is a function of many things, and one of them is school behavior – which itself is a function of punctuality)

As Detlefsen et al. (2024) points out, the formation of economic preferences in **childhood** and **adolescence** has a long-term consequences for life outcomes. To provide an example, patience can impact one's school performance, which can later translate to education attainment and labor market outcomes. The same way can risk preference impact one's financial decisions (Detlefsen et al. 2024).

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According to the National Library of Medicine, childhood is defined as a stage from **3-11 years** and adolescence as a stage from **12-18 years**(**balasundaram2025?**). But what factors can have an impact on economic preferences?

2 Setting

How many treated and non-treated units you observe in which part of the sample period and how treatment is defined. Which is your endogenous variable and which the main outcomes?

Treatment definition was one of our main tasks until now. Our goal was to capture both **sudden** and **gradual regime changes** and direction of change (democratization/autocratization) according to changes in **LDI** (Liberal Democracy Index).

We followed similar methodology as described in (Lührmann et al. 2020), which is based on the evaluating differences of the LDI at time *t* and time *t-10.* Afterwards, following steps are executed:

- Computation of standard errors and **confidence intervals** of the respective changes.If the **confidence intervals don't overlap** andthe **absolute value of the change in LDI is higher than 0.05**, the change in LDI is recognized as significant and identified as regime change.

- If regime change in a country at time t is identified, we take a look into the gps dataset and **assign the treatment to individuals, who are between 3-18 years at the time of regime change in their country**.

2.1 Mechanism

Our core hypothesis is that political regime changes during formative years (ages 3–18) have lasting impacts on non-cognitive preferences. This aligns with psychosocial development theory (Balasundaram and Avulakunta 2025; Detlefsen et al. 2024).

We cannot test the mechanism directly, but we test its implications through a Difference-in-Differences (DiD) approach:

- Individuals are assigned to treatment if they experienced a regime change during their formative years.
- All individuals are surveyed in the same period (2012–2013), minimizing confounding from external shocks.

This setup controls for country-specific time-invariant factors and period shocks. Our methodology is similar to cohort-based DiD approaches used by (Friehe and Pannenberg 2020) and (Fuchs-Schündeln and Schündeln 2015).

We additionally test the intensity of treatment by examining whether the number of years spent under the new regime correlates with preference scores.

2.2 Source of Bias and Identification

Our identification strategy leverages a DiD design comparing cohorts within countries based on exposure to regime change during formative years. We estimate the **Average Treatment Effect on the Treated (ATT)**, assuming parallel trends.

2.2.1 Potential Biases and Mitigation

- **Endogeneity of regime change exposure:**
  Exposure is not random, but we exploit birth year variation within countries. Similar to the quasi-experimental setup in (Fuchs-Schündeln and Schündeln 2015).

- **Time-invariant country-level confounding:**
  Fixed effects absorb differences in culture, geography, or historical institutions.

- **Measurement of regime change:**
  Defined as statistically significant changes in LDI over a 10-year span, (Lührmann et al. 2020).

- **Residual selection bias:**
  Countries with frequent regime changes may differ systematically (e.g., lower GDP), leading to downward bias in preference measures.

2.3 Formulas

Following (Fuchs-Schündeln and Schündeln 2015) and (Friehe and Pannenberg 2020), we estimate the following model:

$$Y_{ict} = \alpha + \beta \cdot \text{FormativeRegimeChange}_{ic} + \gamma_c + \delta_t + X'_{ict}\theta + \varepsilon_{ict}$$

Where:

- (Y_{ict}): Preference outcome (trust, patience, etc.) for individual (i), country (c), birth cohort (t)

- (FormativeRegimeChange_{ic}): Treatment indicator (1 if experienced regime change between ages 3–18)
- (_c): Country fixed effects
- (_t): Birth cohort fixed effects
- (X_{ict}): Controls (e.g., age, GDP per capita, subjective math skills)
- ( ): Causal effect of interest

See also: (**callaway_difference?**–differences_2024), ([Borusyak, Jaravel, and Spiess 2024]), ([Chaisemartin and D'Haultfœuille 2020]) for recent methodological advancements.

2.4 Identified Types of Effects

We use DiD to estimate the **ATT**: the effect of regime change exposure on those who actually experienced it.

2.4.1 Identification Assumptions

- **Parallel Trends**:
  Absent treatment, treated and control groups would evolve similarly over time.

- **No Spillovers**:
  Regime changes in one country do not affect individuals in another.

- **Common Shocks**:
  Global events impact both groups equally. Year-fixed effects help address this.

3 Questions for meeting on 12.3.

- After running the basic regression -> effect of formative_regime_change significant but low R2

- Regarding the methodology as described in "Setting": We are capturing democratization/autocratization as a regime change. But maybe not all democratization/autocratization process must necessarily mean the regime has changed? Should we consider another criterion which at the end evaluates if the value of LDI is: above 0.5 -> liberal democracy, below 0.5 -> autocracy?

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