1 Fundamental Causes of Growth: "Culture"

- **Michalopoulos & Papaioannou (2014):** result suggests that **culture is important in explaining growth**
- **Two main channels**
  - Individual utility function (via social norms)
  - *Cooperation and trust*
    - *Trust and cooperation* are essential elements of the market: Without trust, "no market could function" (Arrow, 1973)
    - Overlap between culture, informal institutions, and social capital

2 Social Capital

2.1 history

Bourdieu (1985): attribute of individuals

> "The aggregate of the actual or potential **resources linked to** a durable network **relationships** of mutual acquaintance or recognition"

Granovetter: attribute of individuals Literature on social networks (e.g. Granovetter): context related anlays of weak and strong ties. Analysis of the imieidate circle of relationships surronding indibiduals.

Putnam (2001): telescoped the concept into mych larger social units, the empirical focus changed from the immediate circle of relationships surrounding individuals and families to aggregate characteristics of the population. We went from individuals to areas as a public good

- "The central idea of social capital, in my view, is that **networks and the associated norms of reciprocity** have **value**."
  → Available at the level of *cities, states, ...* (area level)
  → Idea of "public good"
- Like physical capital, social capital is far from homogeneous

2.2 Definition

- **Positive connotation**:

  > "The collection of **good behavior** that tends to be simultaneously present in certain communities/countries whose inhabitants vote, obey the law, and cooperate with each other and whose leaders are honest and committed to the public good." (Putnam, 1995)

- **Methodological concerns**: Social capital should be defined and measured independently from its consequences
  - Risk of tautology: effect of social captial is positive by definition! Example in social capital: If we define social capital as something that improves economic outcomes (trust), you go to brera you see they are rich and they have higher trust than Giabellino, then you say economic success proves social capital exists, we are being circular.
  - (Im)possibility of falsification: Imagine you find perfect RCT of social capital on GDP. you find negaitve relaitonship. this contraddicts the concept itself of social capital. imagine you then define social capital as somehign positive (ex. trust).

2.3 Measures

- **Examples**
  - **World Value Surveys:**
    - **Trust:**
      "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?"
      - "Most people can be trusted", "Can't be too careful", "Don't know"
    - **Respect for others**
    - **Obedience**
- **Issues**
  - Measuring values and beliefs is problematic
  - Limits in terms of comparability, but can use:
    - Individual and country "fixed effects"
  - Portes&Vickstrom (2011): Putnam brought the concept away from its initial meaning, are we sure it makes sense for how is consideren now?

3 Growth: Culture or Institutions?

- **Acemoglu:** Supremacy of formal institutions
  - Historical example: Korea (natural experiment)
  - Previous lectures: institutional development and causal links
- **However, several counter-examples:**
  - **Italy:** Before unificaiton, very similar economic outcome, then. same formal institutions since unification (1861) → Persistent **cultural differences** and **economic differences**

4 Does Culture Have Relevant Economic Consequences?

Empirical challenge: *Culture is difficult to measure*

- **Traditional cross-country regressions with controls**
  - Omitted variable bias (formal vs. informal institutions)
  - Reverse causality
- **Within-country variation (regional)**
  - Possible endogeneity (better for OVB, but still problematic)
  - Instrumental variables, Differences-in-Differences, RD designs
- **Experimental evidence**
  - Games in different cultural contexts
  - Relatively small and non-representative samples
  - External validity concerns
- **Other approaches**
  - Case studies
  - "**Epidemiological**" approach (reversed)

5 Epidemiological Approach

5.1 Origin

- **Used in medicine** to distinguish between genetic predisposition and environmental determinants
- Focuses on disease incidence in immigrants vs. natives:
  - If outcomes **converge** ⇒ genetic explanation less plausible
  - If outcomes **do not converge** ⇒ genetics more plausible

5.2 Application in Economics

- Distinguish between:
  - Environmental factors = institutions
  - Cultural factors = beliefs, values, norms, social capital (SC)
- Study people with same institutions (host country), different culture (origin country)
- Compare economic outcomes to assess cultural impact.
  - If outcomes **converge** ⇒ culture explanation less plausible
  - If outcomes **do not converge** ⇒ culture more plausible

5.3 Key Assumptions

1. Culture is transmitted from parents to children
2. Immigrants bring cultural traits from origin country
3. Host country institutions are homogeneous

5.4 Regression Analysis in the Epidemiological Approach

Specification: Individual level!

$$y_{ic} = \beta_0 + \beta_1 X_i + \beta_2 \text{Culture}_c + e$$

- y_{ic} = behavior/outcome of individual i from origin country c
  - E.g., labor supply by gender, welfare/political participation
- X_i = individual controls
- Culture_c = measure of culture in origin country c
- β_2 = **coefficient of interest**
  - If $\beta_2 \neq 0 \Rightarrow$ culture affects y

5.5 Issues

- Measurement Issues
  - **Underestimation** of the effect of culture due to:
    - Other transmission channels (exposure to other cultures): school, local institutions
    - Attenuation for second+ generation immigrants
- Identification Assumptions
  - All individuals in host country, both natives and immigrants, face same:

    - Environmental factors
    - Institutional setting (economic, legal, etc.)
- Likely Violations
    - Spatial segregation
    - Labor market and welfare exclusion
    - Discrimination
    - Ethnic networks
    - ...

5. Applications of the Epidemiological Approach

Culturally persistent across generations:

- Female LFP
- Fertility & Gender Norms
- Family Ties & Politics
- Trust & Redistribution
- Violence & Norms
- Within-Country Evidence: Ichino & Maggi (2000): Southern Italians in North shirk more → cultural persistence.

Digression: Ethnic Networks

Epidemiological View

$$\text{Culture}_c \rightarrow \text{Culture}_{i,c,d} \rightarrow y_{i,c,d}$$

- d = destination, c = origin, i = individual
- Focus on $\text{Culture}_c \rightarrow y_{i,c,d}$

Ethnic Networks View

$$\text{Culture}_c \rightarrow \text{Culture}_{c,d} \rightarrow y_{i,c,d}$$

- $\text{Culture}_{c,d}$ = average culture of group c in d
- Focus on $\text{Culture}_{c,d} \rightarrow y_{i,c,d}$
- It may be of interest per se + Highlights epidemiological weaknesses: Ethnic networks expose immigrants to different (informal) institutions.

Literature

- Sociological and economic research:
    - Social networks among immigtants have causal effects on integration in labor market, welfare
    - Mechanisms: social norms (culture), information (job search, admin navigation)
- evidence: $\text{Culture}_{c,d} \rightarrow y_{i,c,d}$ mediated by social networks

6 Back to Culture and GDP (continued)

Reversed Epidemiological Approach (Algan & Cahuc, 2010)

- **Key Idea:** Use $\text{Culture}_{i,c,d,t}$ to measure $\text{Culture}_{c,t}$

$$\text{Culture}_{i,c,d,t} \rightarrow \text{Culture}_{c,t}$$

- **Goal:** Estimate the causal effect of culture (trust) on GDP

$$Y_{c,t} = \alpha_0 + \alpha_1 \text{Culture}_{c,t} + \alpha_2 X_{c,t} + F_c + F_t + e_{c,t}$$

  - $Y_{c,t}$ = per capita output in country c
  - $\text{Culture}_{c,t}$ = trust
  - $X_{c,t}$ = time-varying controls
  - F_c, F_t = country and time fixed effects

- **Issue:** Endogeneity of $\text{Culture}_{c,t}$, especially **reverse causality**. Idea: maybe GDP influences trust, not the other way around. use lagged term!

Idea 1: Use Lagged Trust

consider there are two periods.

$$Y_{c,t} = \alpha_0 + \alpha_1 \text{Culture}_{c,t-1} + \alpha_2 X_{c,t} + F_c + F_t + e_{c,t}$$

- Valid if $\text{Culture}_{c,t-1}$ uncorrelated with $e_{c,t}$ (assumption, not obv. there may be somethign affecting past trust and current gdp. still an improvement. Accountinf dor rhe fact past culture may be relaed to past gdp they control for past gdp)
- Problem: historical trust measures are limited (e.g., WVS starts recently)
- **Solution:** Use the reversed logic of the epidemiological approach: use immigrants' trust to construct historical trust in most countries (idea 2)

Idea 2: Reconstruct Past Culture from Immigrants' Trust

Model: Use trust of immigrants from different countries (c) to the US (d) $Culture_{i,c,d,t}$ as measure of $Culture_{c,d,t}$ at the moment of migration (available in the U.S.)

$$\text{Culture}_{i,c,d,t} = \lambda_1 + \lambda_2 \text{Country}(c) + \lambda_3 X_{i,t} + v_{i,t}$$

- $X_{i,t}$ includes: age, sex, education, income, occupation, religion
- d = USA; c = origin country
- $\hat{\lambda}_2$ isolates **culture of origin**
  - Possible to estiate λ_2 by cohort/generation (e.g., 2nd/3rd gen immigrants)
    - Provides proxy of trust in the past in country c
    - Enables dynamic analysis (variation in trust $\rightarrow$ variation in growth)

Advantages

- Fills trust data gaps for countries without historical surveys
- Infers historical culture from immigrants' descendants
- Uses time variation of trust with fixed effects:

$$\text{Culture}_{i,c,d,t-1} \rightarrow \text{Culture}_{c,t-1}$$

- CExploit the variability over time of culture to control for country time-invariant characteristics (country fixed effects)

Measures of Trust

Data: General Social Survey (GSS)

- USA, 1972–2004
- Ancestry info: 24 origins (self, parents, grandparents)
- Question:

> "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?"

Check: World Values Survey The check is required because immigrants self select into migration

- Measures trust in origin countries directly
- Same question and categorization

They compare only the subset of countries for which: They have estimated trust levels from the GSS (i.e., sufficient immigrant sample in the U.S.) + WVS data is available (trust question asked).

Empirical Illustration:

Figure 1:

- Estimate lambdas, Sweden, Denmark, Belgium

Figure 2:

- Correlation between inherited trust (from US immigrants) and trust in home country (2000)
- Good correlation

Figure 3:

- Correlation: inherited trust in 2000 vs. income per capita (2000, relative to Sweden)
- Good correlation $R^2 = 0.54$

Conclusions

- Trust causes growth and The effect is economically relevant
- What determines culture (trust)?

Past Exam Question: Identification Caveat

Spatial Segregation and Trust

Question: Suppose that the spatial segregation of immigrants in the destination country is linked to the level of development of their country of origin c and, in turn, the spatial segregation affects the (formal and informal) institutional setting immigrants are exposed to.

Would this fact threaten the identification strategy? (Justify your answer)

Answer: Yes, this would threaten the identification strategy.

- The epidemiological approach assumes that all immigrants are exposed to the same host-country environment (institutions, norms).
- If spatial segregation is **systematically related to** the GDP of the origin country $Y_{c,t}$, it introduces a form of **omitted variable bias**.

- Channel: Segregation $\rightarrow$ differential exposure to host-country institutions.
- Then, the estimated effect of Culture_c on $y_{i,c,d,t}$ may be confounded with **institutional exposure**, not just inherited culture.

Conclusion: This violates the core identification assumption of homogeneous exposure and introduces a bias in the estimation of inherited cultural effects.