Polarization of Opportunity

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Paolo Brunori - UNIFI & London School of Economics

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Introduction

- Joint work with Pedro Salas-Rojo (LSE) and Vanesa Jorda (University of Cantabria).

- This paper merges two perspectives on inequality:
    - Inequality of Opportunity (IOp)
    - Polarization (Pol)

Two Perspectives on Inequality

Inequality of Opportunity:
- Focus on exogenous circumstances (race, sex, background).

- Fairness concerns and implications for growth.

Polarization:
- Not just inequality, but alienation between cohesive groups.

- A polarized society has strong within-group identity, weak across-group cohesion.

Our Research Question

- Can the concept of polarization be applied to opportunity distributions?

- Can we learn something from studying polarization of opportunity (POp)?

- We use 40 waves of the PSID (1970-2014) to explore this.

Measuring Opportunity Distributions

Two main approaches:

- *Between-group inequality*: Use group averages based on socioeconomic partitions.

- *Predictive modeling*: Use a prediction model to estimate share of income explained by observable circumstances.

Polarization: Esteban-Ray Index (1994)

$$P_\alpha = C \sum_{i=1}^{k} \sum_{j=1}^{k} f_i^{1+\alpha} f_j |y_i - y_j|$$

- f_i: group share, y_i: group income

- $\alpha \in (0, 1.6]$: sensitivity parameter

- Groups must be pre-specified
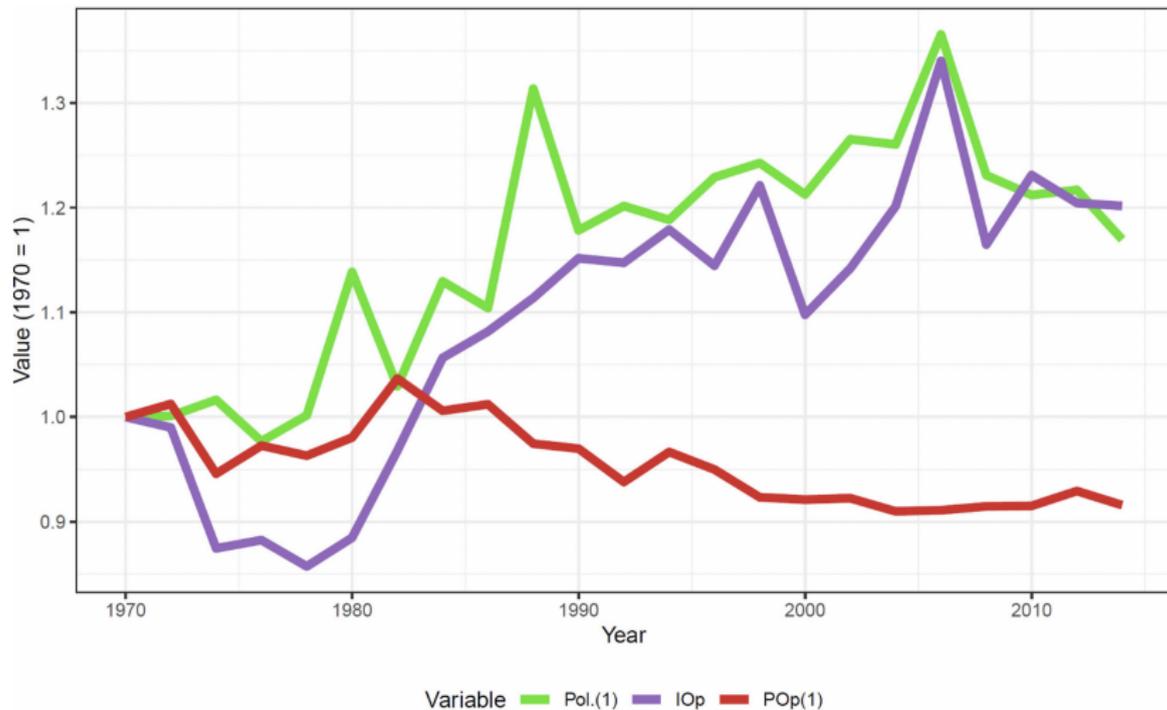
Duclos-Esteban-Ray Index (2004)

$$P_\alpha = \int \int f(y)^{1+\alpha} f(y')|y - y'| dy \, dy'$$

- A continuous version of ER

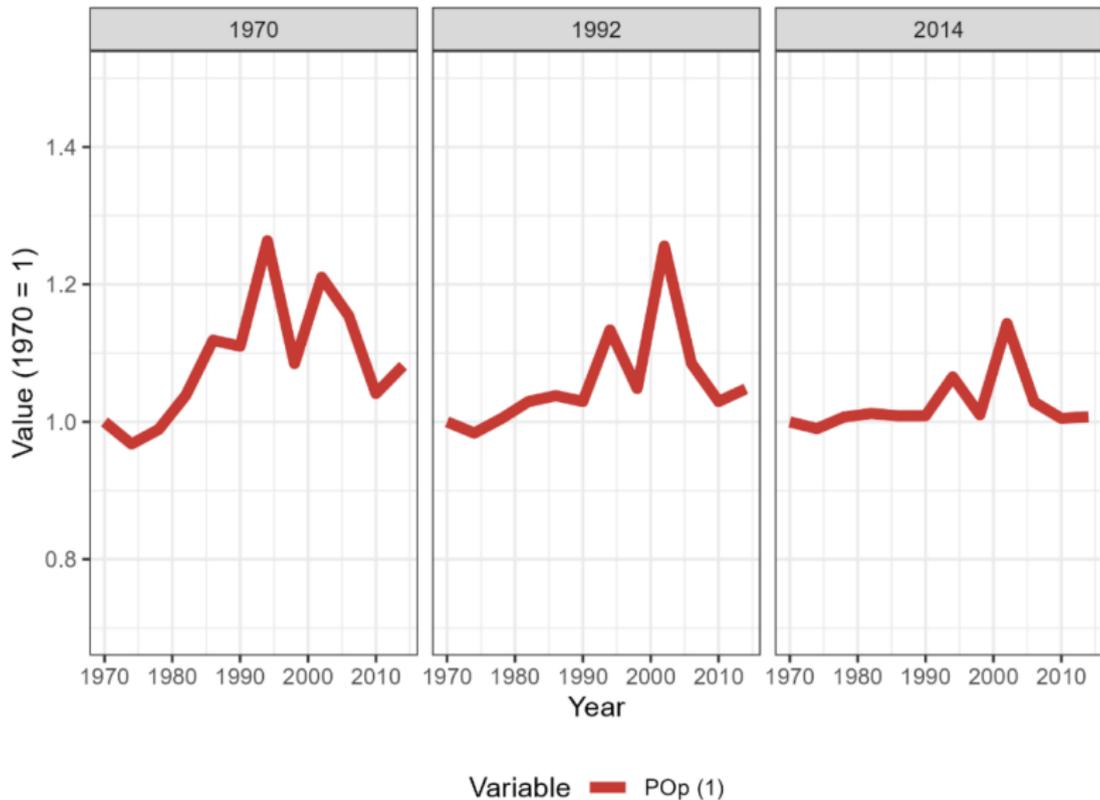- No need for arbitrary group definitions

Empirical Strategy

- Use PSID data (1970014)

- Outcome: equivalized household disposable income

- Circumstances: race, sex, parental education, occupation, birth region

- Predict incomes via OLS for each wave

- Compute IOp, Pol(1), and POp
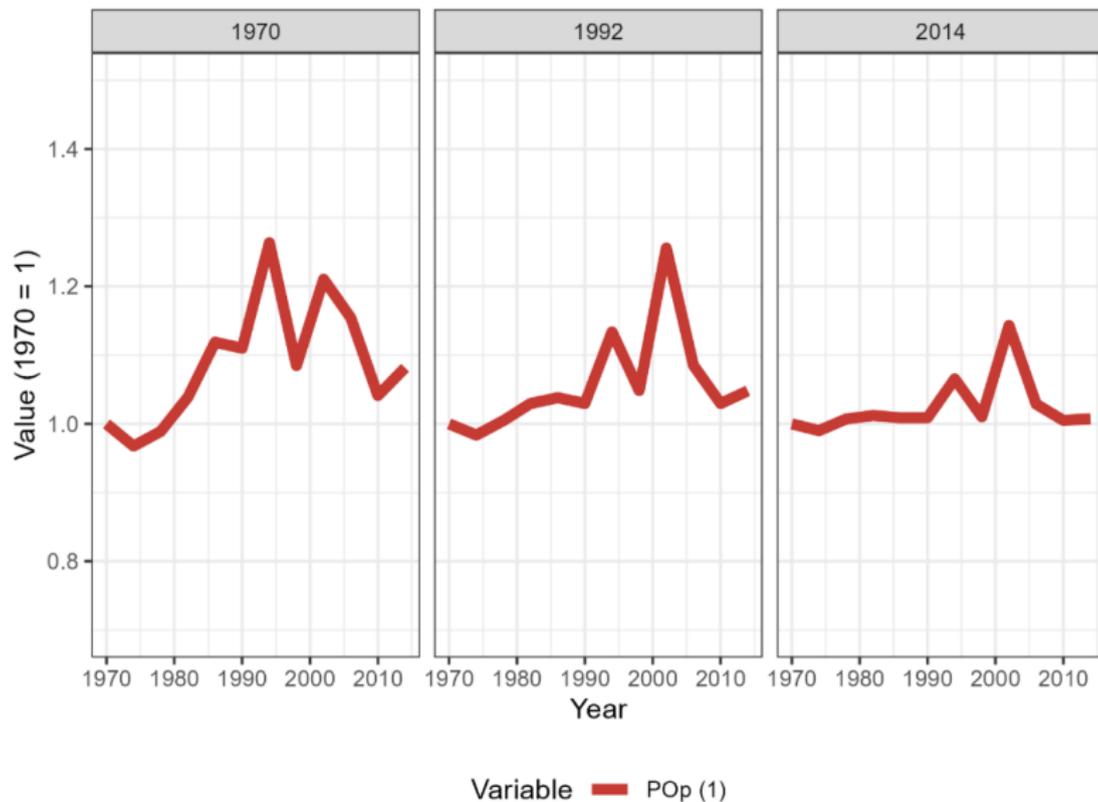
Divergence Over Time

Divergence Over Time

Two Sources of Change in POp

- Changes in the *premia/penalties* of circumstances

- Changes in the *distribution* of circumstances

Fixed Population, varying coefficients

- Estimate income prediction model each year

- Fix population structure in 1970, 1992, 2014

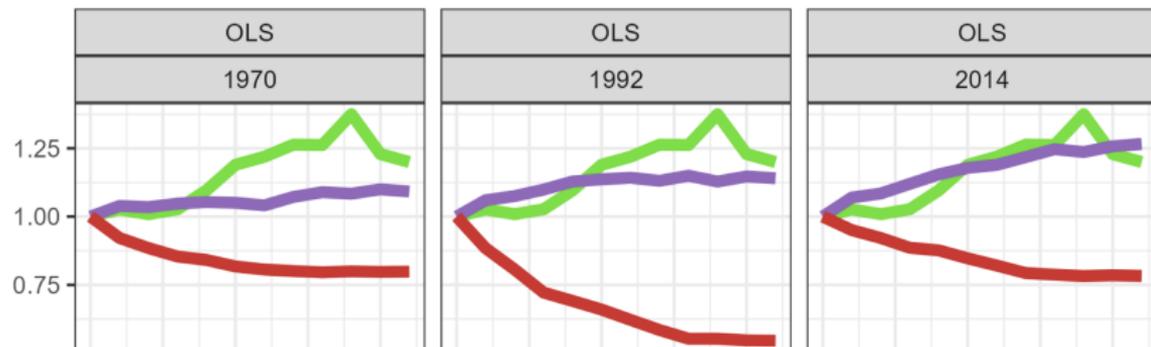- Predict POp in each case using year's coefficients

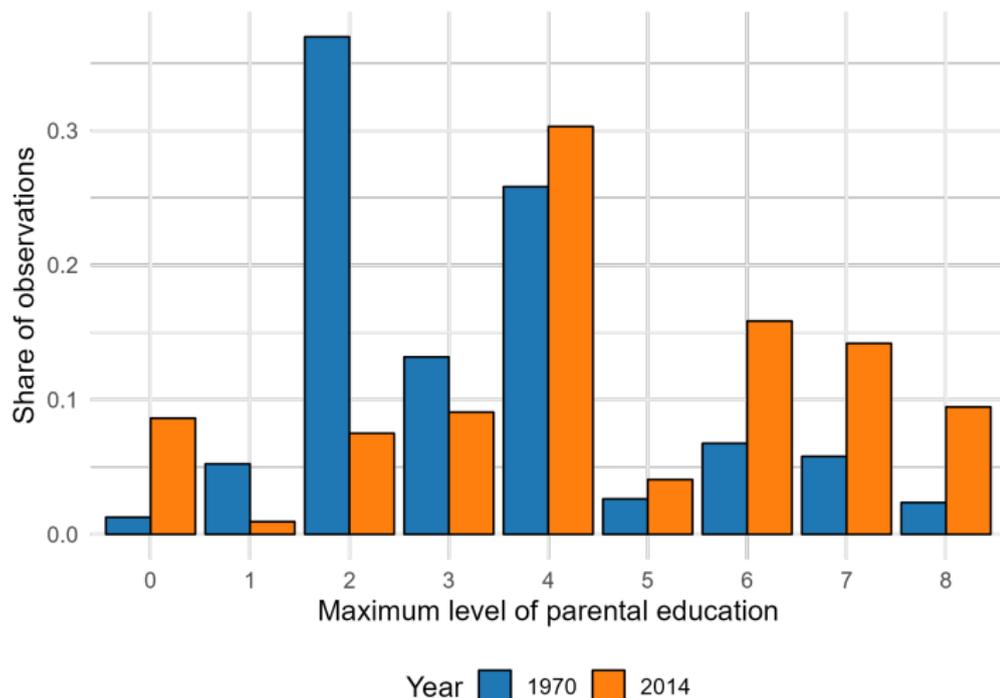# Coefficients Effect (fixed population)

Fixed Coefficients, Varying Populations

- Coefficients estimated in 1970, 1992, 2014

- Predictions estimated for the evolving population

Population Effect (fixed coefficients)

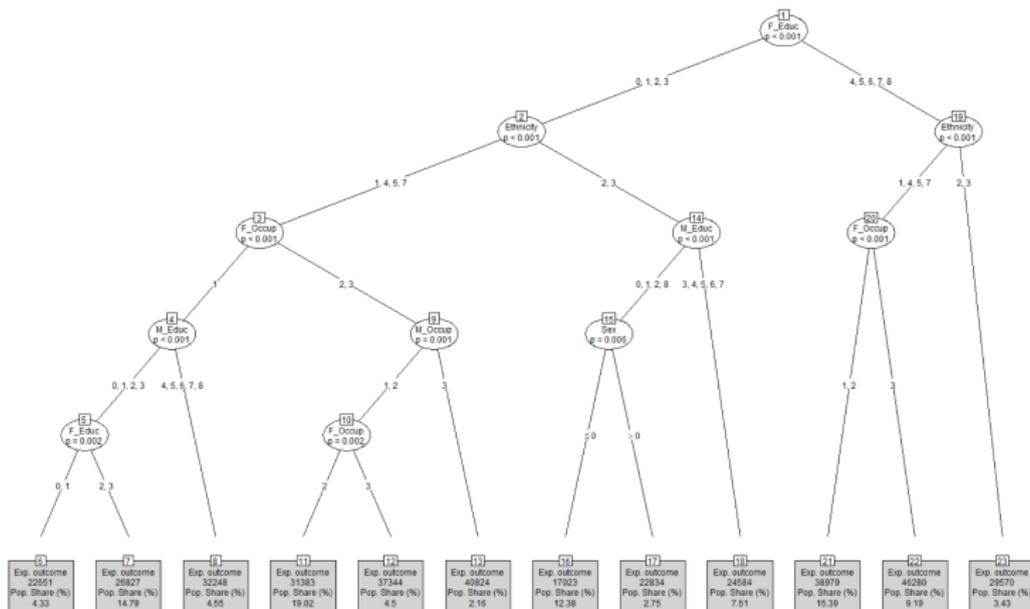# Depolarization of Circumstances: Parental Education

Note: Education: 2=Lower secondary education (6-8), 4= High school,
6=College (no degree), 7=College.

Conclusion

- Polarization of opportunity differ from IOp and Pol

- POp influenced by both difference in opportunities and population stratification

- In the US equalization of the past reduce polarization today

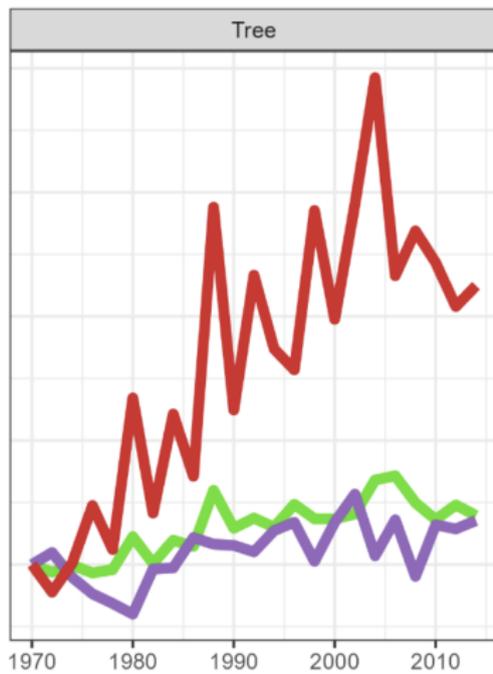- But present rising inequality may reverse these gains

Appendix

Data-driven partition (ctree)

Source: PSID, 1970.

Data-driven partition trend

Data-driven partition (population shares)

Figure B4: population share of types identified in 1970 over time