Inequality of Opportunity and Aggregate Economic Performance

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The Consequences of Economic Inequality for Economic Performance
Columbia University
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Consequences of Inequality of Opportunity for Economic Performance


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- In contrast, there is a clear theoretical prediction that a reduction in inequality of opportunity will increase growth.
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- In contrast, there is a clear theoretical prediction that a reduction in inequality of opportunity will increase growth.

- Empirical work is generally consistent with this prediction.
Inequality of opportunity in growth regressions

Two recent papers include measures of both inequality of opportunity and inequality of outcomes in growth regressions:


Both papers use generalized entropy income inequality indices that can be decomposed into two components:

- Income inequality measured over groups defined by individuals’ circumstances (inequality of opportunity).
- Residual income inequality - inequality within groups defined by circumstances.
  - Often labeled inequality of effort, but incorporates all inequality not associated with measured circumstances.
Regression results in previous research

Marrero and Rodriguez, 2013:

- Estimates growth regression using panel of U.S. state-level data.
- Uses race and father’s education to define circumstance groups within U.S. states.
- Finds a negative relationship between inequality of opportunity and growth and a positive relationship between inequality of effort and growth.
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Ferreira et al., 2014:
- Estimates growth regression using panel of cross-country data.
- 2-5 circumstance indicators per country
  - Circumstances include gender, race or ethnicity, language, immigration status, and region of birth or residence.
- Results are not sufficiently robust to draw conclusions on the effect of inequality of opportunity on growth.
Commuting zone intergenerational mobility data

Data are from Chetty, Hendren, Kline, and Saez, “Where is the land of opportunity? The geography of intergenerational mobility in the United States.” NBER, 2014.

- United States divided into 741 “Commuting Zones” (CZ) - counties grouped by commuting patterns
- We use two measures of intergenerational mobility calculated for each CZ for the cohort born in the early 1980s:
  - Absolute mobility: Income rank in national distribution of children (at about age 30) whose parents were at 25th percentile of national income distribution (when children were teens).
  - Relative mobility: Expected difference in rank in national income distribution between children (at about age 30) whose parents were at the top of the income distribution within a CZ and those whose parents were at the bottom.
Intergenerational mobility and inequality of opportunity

Inequality of opportunity is closely related to intergenerational mobility

- Parents’ income can be viewed as the circumstance that would be used in computing inequality of opportunity.
- A key difference is that the extent of inequality of opportunity depends on both intergenerational income mobility and inequality of parents’ income.
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Absolute or relative intergenerational mobility?

- Relative mobility may be driven by downward mobility among the rich as well as by upward mobility among the poor.
- Absolute mobility captures both income growth within a CZ relative to the nation and the degree of re-ranking of children’s income relative to their parents’ income.
Absolute Mobility Across Commuting Zones

Growth and Absolute Mobility, 2000-2010

\[ \text{Slope} = 1.2 \ (p-value < 0.001) \quad R^2 = 0.20 \]
Growth regressions  New empirical findings  Channels

Growth and Relative Mobility, 2000–2010

\[ \text{Slope} = -0.46 (p - value < 0.001) \quad R^2 = 0.039 \]
## Regression of Growth on Mobility

**Drawn from Table 2 in Paper**

<table>
<thead>
<tr>
<th></th>
<th>Per Capita Income Growth</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000-2010</td>
<td>2007-2012</td>
</tr>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>Absolute Mobility</td>
<td>1.1***</td>
<td>1.2***</td>
</tr>
<tr>
<td></td>
<td>(0.1)</td>
<td>(0.1)</td>
</tr>
<tr>
<td>Relative Mobility</td>
<td>-0.071</td>
<td>-0.21*</td>
</tr>
<tr>
<td></td>
<td>(0.085)</td>
<td>(0.08)</td>
</tr>
<tr>
<td>Gini</td>
<td>2.4</td>
<td>-19*</td>
</tr>
<tr>
<td></td>
<td>(7.9)</td>
<td>(8.1)</td>
</tr>
<tr>
<td>Observations</td>
<td>709</td>
<td>709</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.59</td>
<td>0.54</td>
</tr>
</tbody>
</table>

**Note:** Significance as follows: + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001.
How does mobility affect growth?

Estimation results:

- Mobility is a plus for economic growth
  - Absolute mobility, growth in both periods
  - Relative mobility significant only 2007-2012
- Overall inequality appears unrelated to growth across CZs
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Variations on simplest growth model – no change in results for mobility

Regression interpretation caution: descriptive facts *suggestive* of causal relationships
Some channels through which inequality of opportunity affects economic performance

- Credit market imperfections.
  - Unequal access to collateral and insider networks.
  - Unequal opportunities for risk diversification.
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- Credit market imperfections.
  - Unequal access to collateral and insider networks.
  - Unequal opportunities for risk diversification.
- Lack of information about profitable investment opportunities.
- Missing markets for inputs into job matching and human capital accumulation.
  - Jobs often found through personal contacts.
  - Non-marketed parental inputs.
Unequal access to advantageous professions and educational institutions.

- Explicit barriers to entry.
- unequal access to:
  - network of contacts.
  - high quality K-12 schools.
  - early life investments in health and other human capital inputs.
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Unequal opportunities for human capital investment may be detrimental to functioning of a market economy.

- dilution of social capital and sense of trust.
- potentially higher rates of criminal activity and lower rates of labor market participation.
Effects of barriers to opportunity on output


- Investigates macroeconomic consequences of the lessening of barriers to advantageous occupations faced by women and blacks.
- Occupational frictions resulted in inefficient allocation of people to occupations.
- Relaxation of barriers:
  - explains 15-20% of growth in output per worker from 1960 to 2008
  - caused substantial real wage growth for women and blacks, but a small reduction in real wages for white men
  - accounts for about 75% of the increase in female labor force participation during this period