INEQUALITY AND GROWTH THROUGH CREATIVE DESTRUCTION

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I. RESEARCH QUESTION

- Inequality impacts growth through various channels
- The net effect remains unclear and empirical evidence is mixed
- We seek to contribute to this literature by focusing on one specific channel: The effect of inequality on the demand for high quality goods
- We ask how this channel is affected by a country’s openness to international trade and its distance from the frontier

II. MOTIVATING FACT

Low income countries satisfy their demand for high quality via importing

III. KEY RESULTS AND IMPLICATIONS

- The effect of inequality on growth is ambiguous and depends on parameter values
- This is in line with the literature, which finds mixed results empirically as well as theoretically (for example, Barro, 2000; Halter et al., 2013; Foellmi and Zweimueller, 2006; Foellmi et al, 2014)
- However, for poor and open economies, inequality reduces incentives for domestic firms to invest in quality upgrading themselves
- This is because in an open economy rich households satisfy their demand for high quality via importing
- We see this effect in the data

IV. ECONOMIC ENVIRONMENT AND MAIN MECHANISM

- We consider a small open economy with growth through quality upgrading by private firms
- Households have non-homothetic preferences for quality
- International trade is subject to an iceberg trade cost
- Two types of technological spillovers: from the world technological frontier and from domestic innovation to production
- Effects on Growth
  - Openness: Ambiguous. Openness intensifies import competition from foreign high quality providers (-), but also increases technological spillovers (+)
  - Inequality: Ambiguous. Market Size versus Price Effect
  - Distance to frontier: Initially positive, then zero
  - However, for a poor country, the interaction between inequality and openness has a negative effect on growth

V. DETAILS

- Instantaneous utility
  \[u^h = \int_0^1 (q_i^h(t))^{-1-\beta} \left(x^h(t)\right)^\beta \, dt\]
- Linear production technology
  \[q_i = a_i AL\]
- Convex cost of quality upgrading
  \[h\left(\frac{\bar{q}_i(t)}{\bar{q}_i(t-1)}\right)^{\tau}\]
- Law of motion of aggregate technology
  \[A(t+1) = q_i(t) A(t)\]

VI. EQUILIBRIUM

- Firm’s decision problem in the closed economy with two types of consumers
  \[\max_{q^h, q^l, q^h, q^l} \lambda \left(p^h_i - \frac{1}{a_i A_i q_i^{h}}\right) + (1-\lambda) \left(p^l_i - \frac{1}{a_i A_i q_i^{l}}\right) - h\left(\frac{\bar{q}_i(t)}{\bar{q}_i(t-1)}\right)^{\tau}\]
  subject to IC and IR constraints
- Separating or pooling equilibrium (depending on parameter values)
- Same maximization problem in the open economy, but additional constraint as high quality can be imported
- Continuum of types: the richest households satisfy their demand for higher quality via importing

VII. EMPIRICS: EXPORT QUALITY GROWTH / GDP GROWTH

- We examine the effect of inequality, openness, and distance to frontier on growth
- Main specification with growth in export quality
  \[\ln\left(\frac{q_{i,t}^e}{q_{i,t-1}}\right) = \beta_1 \ln(q_{i,t-1}^e) + \beta_2 \text{Open}_i + \beta_3 \text{Gini}_i + \beta_4 \text{Poor}_i + \beta_5 \text{Barro}_i\]
  where \(q_{i,t}^e\) is export quality in sector \(s\) in country \(c\) in year \(t\), \(\text{Open}\) measures openness, \(\text{Gini}\) is the Gini coefficient, \(\text{Poor}\) a dummy variable for developing countries, and \(\text{Barro}\) a set of control variables
- Robustness using GDP growth
- Main result for poor countries:

<table>
<thead>
<tr>
<th>Growth Rate in Export Quality</th>
<th>Log Diff. GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Gini × Open</td>
<td>-0.21***</td>
</tr>
<tr>
<td>Baseline Controls</td>
<td>Yes</td>
</tr>
<tr>
<td>Barro Controls</td>
<td>No</td>
</tr>
<tr>
<td>Country FE</td>
<td>No</td>
</tr>
<tr>
<td>Sector FE</td>
<td>Yes</td>
</tr>
<tr>
<td>Year FE</td>
<td>Yes</td>
</tr>
</tbody>
</table>

- Barro Controls are a set of control variables taken from Barro (2015)

REFERENCES