Inequality and Growth through Creative Destruction

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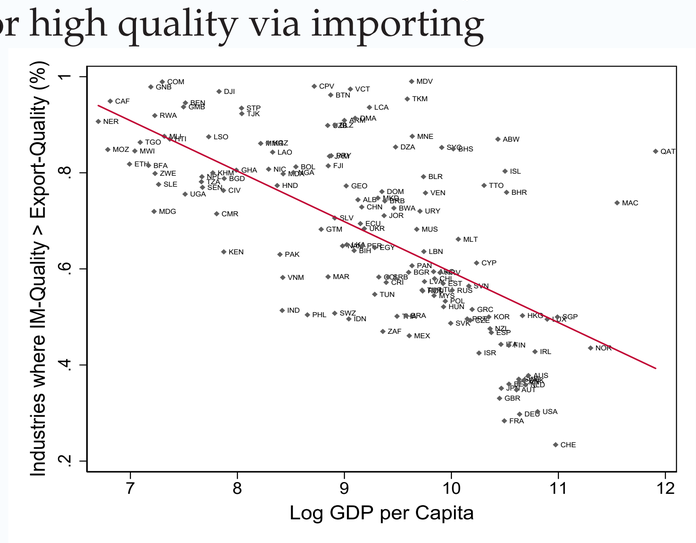
I. Research Question

- 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

$$u^h = \int_0^1 \left(q_i^h(t)\right)^{1-\beta} di \ \left(z^h(t)\right)^{\beta}$$

- Linear production technology

$$q_i = a_q A L_i$$

- Convex cost of quality upgrading

$$h\left(\frac{\bar{q}_i(t)}{\bar{q}_i(t-1)};\tau\right)$$

- Law of motion of aggregate technology

$$A(t+1) = \frac{\bar{q}(t)}{\bar{q}(t-1)} A(t)$$

VI. Equilibrium

- Firm's decision problem in the closed economy with two types of consumers

$$\max_{q_i^H, p_i^H, q_i^L, p_i^L, \bar{q}_i(t)} \ \lambda\left(p_i^H - \frac{1}{a_q A} q_i^H\right) + (1-\lambda)\left(p_i^L - \frac{1}{a_q A} q_i^L\right) - h\left(\frac{\bar{q}_i(t)}{\bar{q}_i(t-1)}\right),$$

  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

$$\ln\left(\frac{q^s_{x,c,t}}{q^s_{x,c,t-j}}\right) = \beta_1 \ln(q^s_{x,c,t-j}) + \beta_2 Open^s_{c,t-j} + \beta_3 Gini_{c,t-j} + \beta_4 Poor_c + \beta_5 Barro_{c,t-j}$$

  where $q^s_{x,c,t}$ is export quality in sector s in country c in year t, $Open$ measures openness, $Gini$ is the Gini coefficient, $Poor$ a dummy variable for developing countries, and $Barro$ a set of control variables
- Robustness using GDP growth
- Main result for poor countries:

	Growth Rate in Export Quality				Log Diff. GDP	
	(1)	(2)	(3)	(4)	(5)	(6)
Gini × Open	-0.21***	-0.43***	-0.02	-0.10	-0.18**	-0.10*
Baseline Controls	Yes	Yes	Yes	Yes	Yes	Yes
Barro Controls	No	Yes	No	Yes	No	Yes
Country FE	No	No	Yes	Yes	No	No
Sector FE	Yes	Yes	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

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

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