

Trade and Growth: Some Lessons and Questions

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Lesson 1: Export Success Associated with Growth

- ▶ Commission on Growth and Development (2008), summarizing study of growth experiences:
“A flourishing export sector is a critical ingredient of high growth, especially in the early stages.”

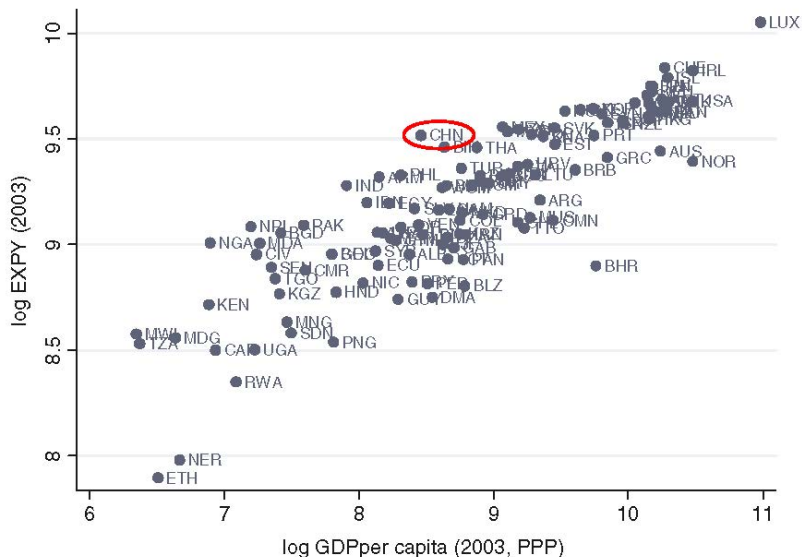
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- ▶ Commission on Growth and Development (2008), summarizing study of growth experiences:
 - “A flourishing export sector is a critical ingredient of high growth, especially in the early stages.”
- ▶ Micro-economic studies:
 - ▶ Productivity literature somewhat mixed (Clerides et al., 1998; Bernard and Jensen, 1999; Van Biesebroeck, 2005; De Loecker, 2007).
 - ▶ But more robust results for more directly observable measures:
 - ▶ Product quality, wages (Verhoogen, 2008)
 - ▶ Adoption of more advanced technology (Bustos, 2011; Lileeva and Trefler, 2010)

Lesson 2: Exports of Sophisticated Products Associated with Growth

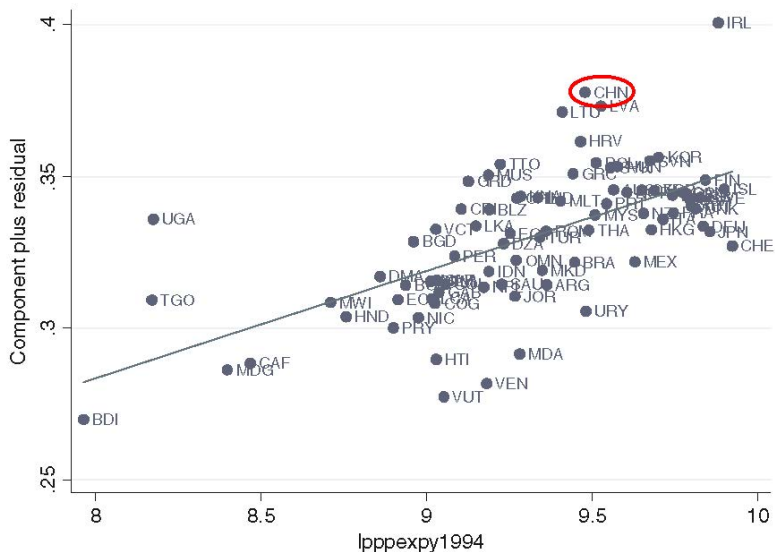
- ▶ Hausmann, Hwang and Rodrik (2007) generate a measure of product sophistication, EXPY, using trade-flow data (HS 6-digits):
 - ▶ PRODY: weighted average income per capital of countries that produce a product.
 - ▶ EXPY: weighted average of PRODYs of products produced by a country.
- ▶ EXPY predicts future growth, conditional on current income.

EXPY vs Income per Capita



Source: Hausmann, Hwang and Rodrik (2007).

Growth vs. Initial Level of EXPY



Source: Hausmann, Hwang and Rodrik (2007). On y-axis is $X_i\hat{\beta} + \varepsilon_i$ estimated from an instrumental variables regression $\Delta y_i = X_i\beta + Z_i\gamma + \varepsilon_i$ where Δy is change in log GDP/capita from 1992-2003, X_i is EXPY in 1994, Z_i includes log initial GDP/capita and a measure of human capital in logs, and log population and log land area are used as instruments for EXPY.

Lesson 2: Exports of Sophisticated Products Associated with Growth (cont.)

- ▶ This finding has been criticized:
 - ▶ Not clear it can be interpreted causally.
 - ▶ In countries with big assembly-for-export sectors, EXPY is likely to be overstated.
- ▶ But it has played an important role in stimulating debate on the role between exports and growth.

Lesson 3: Heterogeneity in Sophistication Within Industries As Well As Between

- ▶ A growing body of work of product quality in international trade has provided evidence that:
 - ▶ Larger, more productive firms in each industry tend to produce higher-quality (Kugler and Verhoogen, 2012; Hallak and Sivadasan, 2009).
 - ▶ Firms sell higher-quality varieties to richer countries (Verhoogen, 2008; Bastos and Silva, 2010; Manova and Zhang, 2012).
 - ▶ Producing high-quality output requires high-quality inputs (Kugler and Verhoogen, 2012; Brambilla et al., 2012)
- ▶ Key point: Growth appears to be associated with moving up quality ladder within industries, as well as exporting more sophisticated products.

Question 1: In Theory, Should Governments Intervene to Promote Exports?

- ▶ Classical theory of comparative advantage:
 - ▶ In absence of market failures, markets alone will allocate resources (labor, capital etc.) to their most productive uses.
 - ▶ Interventions will lead to misallocation, lower welfare overall.

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 - ▶ Suppose production in a sector generates *dynamic learning externalities*.
 - ▶ That is, firms learn as they produce and this knowledge spills over to other firms in the sector.
 - ▶ Market processes alone would lead to under-investment in that sector.
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 - ▶ References: Graham (1923); Bardhan (1970); Matsuyama (1992); Redding (1999); Rodriguez and Rodrik (2001); Melitz (2005).

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 - ▶ We can't all produce semiconductors.
- ▶ We need more research.

Question 3: What is the Way Forward?

- ▶ In face of uncertainty over which sectors/products/activities have the most dynamic potential, two policy approaches have received the most attention:
 1. Broad-based support for innovative sectors/products/activities (Lederman and Maloney, 2012):
 - ▶ Infrastructure: roads, electricity, ports.
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 2. Cadre of officials “embedded” in industries they seek to promote (Evans, 1995).
 - ▶ Advantage: officials knowledgeable about industries they regulate/promote.
 - ▶ Disadvantage: vulnerable to capture, cronyism.

Parting Thought

- ▶ State effectiveness crucial for industrial policy.
 - ▶ If government will not be able to “pull the plug” on an under-performing industry, should avoid plugging in subsidies in the first place.
 - ▶ But if government avoid capture, there is a strong case for considering industrial-policy interventions.

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