Competition, Innovation and Growth: Theory, Evidence and Policy Challenges

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Introduction

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The "Schumpeterian" alternative

- the only effective form of competition **is** innovation
- anti-trust measures reduce the reward to innovation

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   product-market competition is essential to the growth process

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Two important themes

1. The most effective form of competition is global competition
2. Interaction with trade, labor, education, IPR policies

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Long-run growth driven by technological change

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Different technology strategies, depending on distance to frontier

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Context-dependent theory of "appropriate growth policy"

In the earliest version of the theory competition reduces growth by reducing monopoly profits that reward innovation

Problems with the "Schumpeterian" alternative

Appropriability effect contradicted by much empirical evidence

1. UK industries
2. Japanese prefectures
3. Countries that relaxed domestic barriers (eg China and India)
4. Lessons of import substitution (eg Argentina versus Canada)

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$\longrightarrow$ Second-generation models with growth-enhancing effects of competition that counteract appropriability

Rethinking Schumpeterian theory

1. Ex ante barriers to entry

Competition that reduces barriers will let in more innovators

Removing barriers vs anti-trust - focus of the Sapir report

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Djankov *et al* (2002) measures of cost of starting a business

	procedures	time	cost
Brazil	15	63	20%
Russia	20	57	20%
India	10	77	58%
China	12	92	14%
Richest 1/4	7	24	10%

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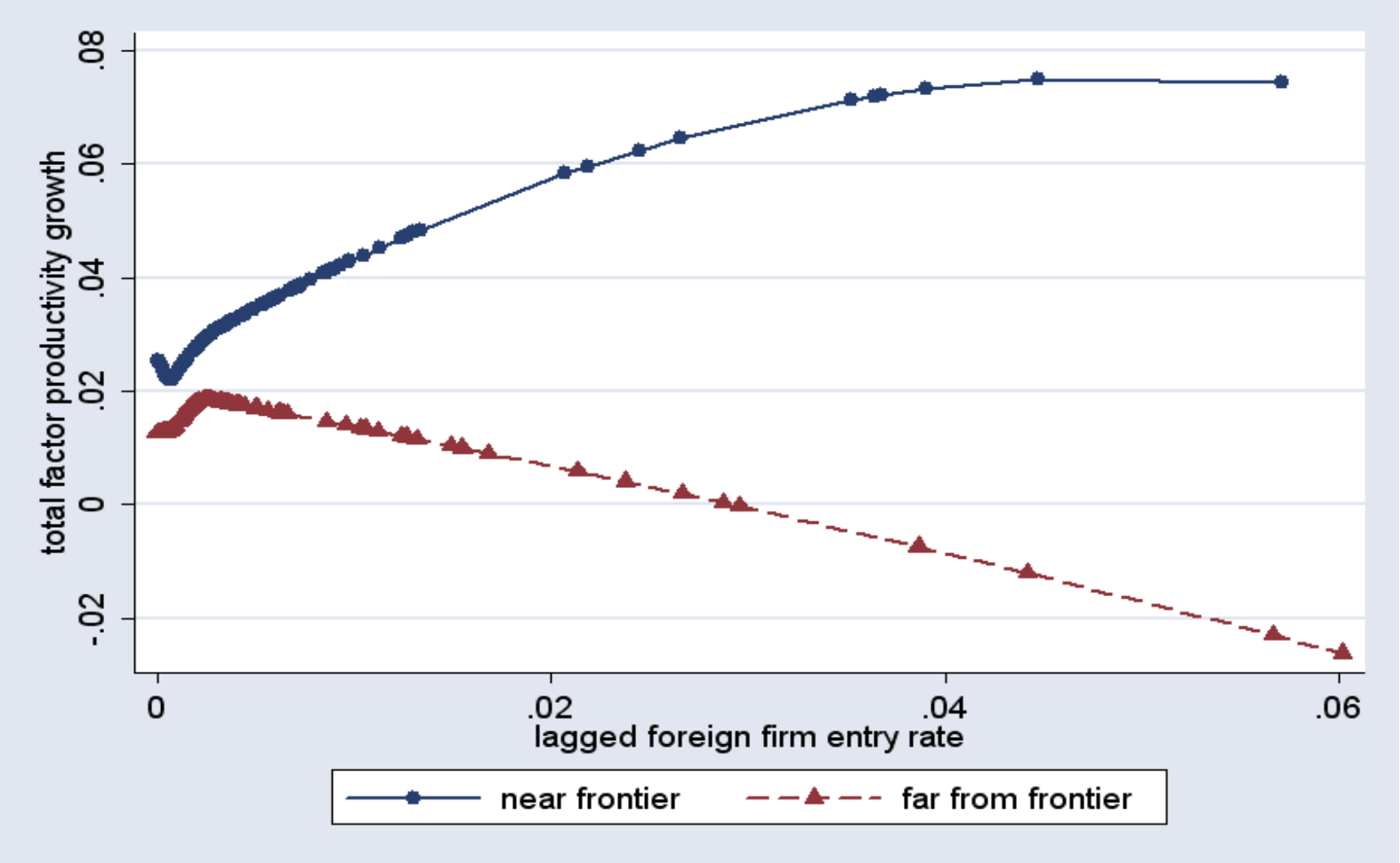
Incumbent firms innovate to escape entry (esp. close to frontier)

Entry, incumbent TFP growth and distance to frontier

Aghion, Blundell, Griffith, Howitt and Prantl (forthcoming)



Barriers to entry when far from frontier

Works in India when combined with appropriate labor market regulation (Aghion, Burgess, Redding & Zilibotti, 2005)

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Removing barriers raises **industry-wide** productivity growth more in less productive industries (Nicoletti-Scarpetta, 2003)

This is how trade should work, especially for countries like BRICs with many firms near the frontier

Further reasons for promoting global competition

Trade liberalization stimulates productivity growth more generally

1. Efficiency effect of international trade
2. Importation of high tech intermediates (Coe, Helpman)
3. Direct knowledge spillovers enhance implementation (Keller)

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Works best with openness to foreign technology

- Canada's Industrial Research Assistance Program

Rethinking Schumpeterian theory

2. Corporate governance problems

Monopoly profit allows managers to avoid costly innovation

More vigorous competition means "innovate or die" (Porter)

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Qualifications:

- Polish counterevidence of Grosfeld-Tressel (2001)
- Empire-building versus the quiet life. e.g. Bell Labs
- but is this relevant for middle income countries?

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3. The escape-competition motive

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Incumbent innovation responds to incremental profit, not total

Incremental profit increased by stronger anti-collusion laws

A firm must innovate to escape competition

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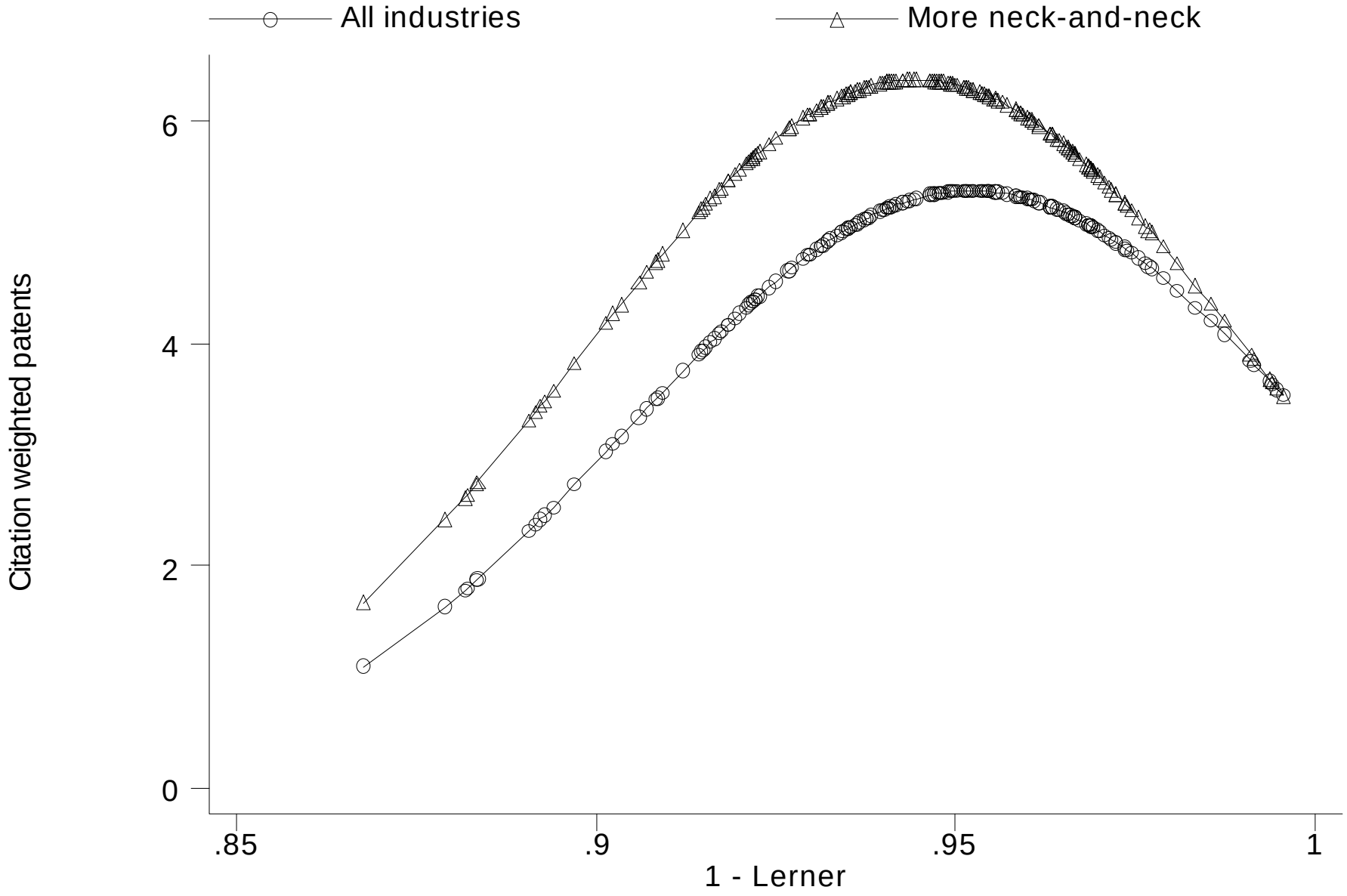
Either increasing or inverse-U competition-innovation relationship

The Inverted U

Aghion, Bloom, Blundell, Griffith and Howitt (2005)



Policy lessons from the AHHV model

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What matters is *ex ante* competition

- concentration ratios are the wrong measure

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Strong competition laws weaken the case for strong IPR

- ex ante competition creates ex post monopoly
- needs to be challenged from time to time

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5. Adopt smart IPR laws that don't coddle monopolies
6. Remove labor market regulations that inhibit reallocation

Final word

As you approach the frontier, appropriate policy changes

Changing from state protected monopolies a big challenge