### Latin America's Productivity Challenge

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# Productivity contributes little to growth in LAC

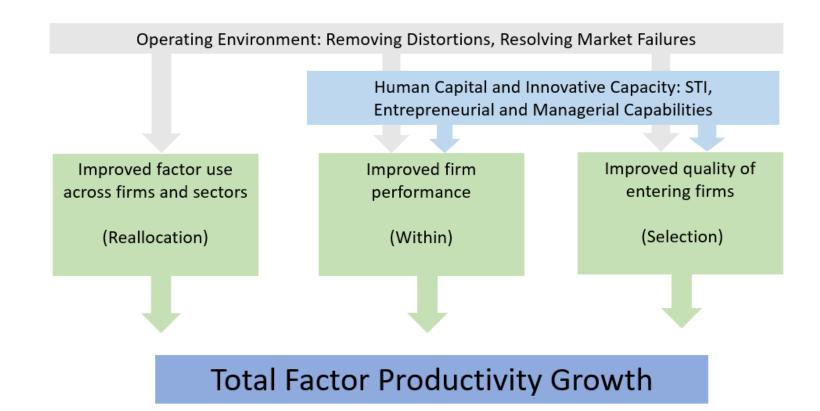
Figure 1.9. Low Rates of Capital Investment and Productivity are Impeding Growth in LAC Compared to Emerging Market and Developing Economies



Source: Kose and Ohnsorge 2023.

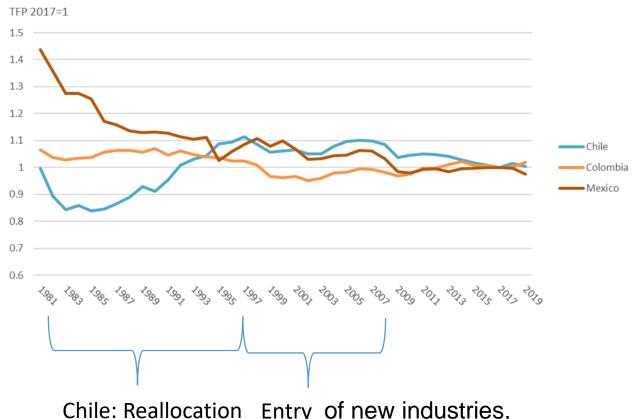
Note: EMDEs = emerging market and developing economies; LAC = Latin America and the Caribbean; TFP = total-factor productivity.

## Sources of Productivity Growth



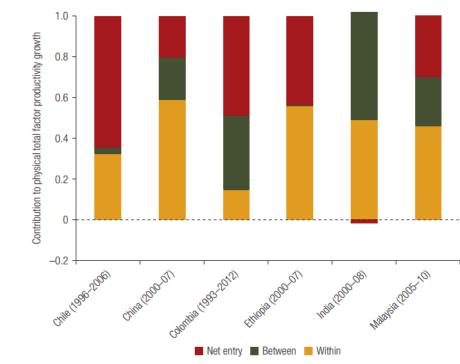
Cusolito and Maloney Productivity Revisited 2018

## Sources of productivity growth



Chile: Reallocation Entry of new industries, period upgrading?

FIGURE 1.11 Which Dimension Contributes Most to Productivity Growth?



Source: Physical total factor productivity decompositions using Melitz and Polanec's (2015) methodology.

Cusolito and Maloney 2018

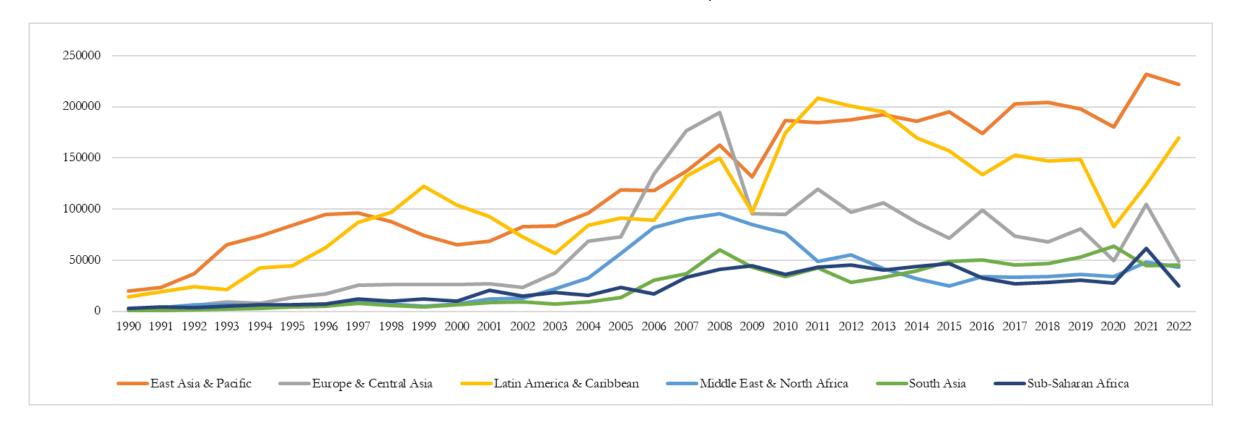


Operating Environment: We still lag on the non-exotic basics

# In spite of all the reshoring hype, FDI in LAC is below 2010

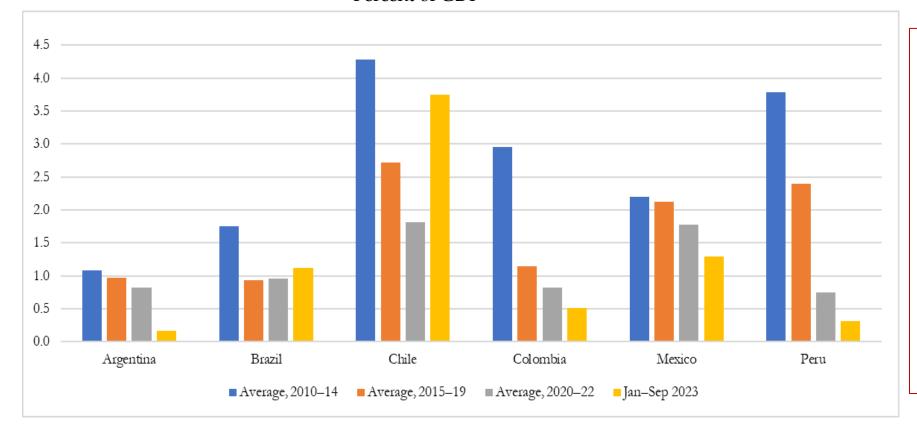
Figure 1.12. FDI to LAC Increased Considerably in 2022

US\$, billions, at constant 2015 prices



# Announcements of Greenfield FDI are generally decreasing.

Figure 1.14. Greenfield FDI Announcements Have Slowed Percent of GDP

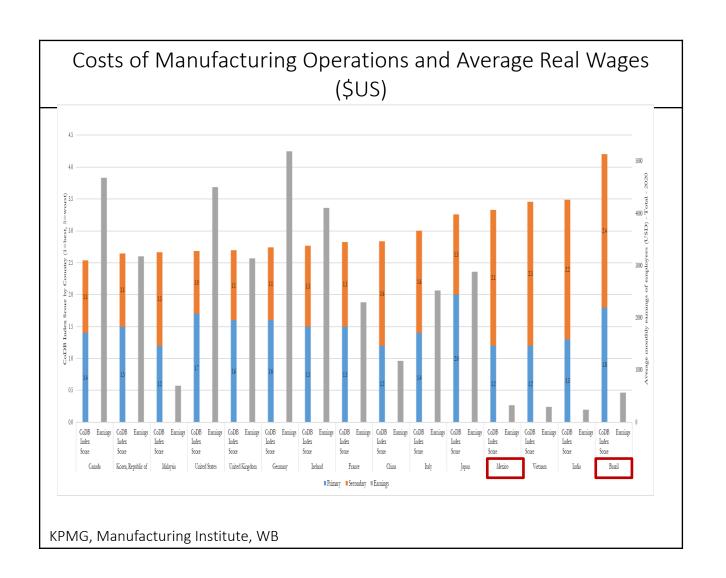


Mexican displacement of Chinese exports to US about 5% of exports in 10 years!

#### **Despite**

- 6 years of Trump tariffs
- Rising Chinese wages
- Revealed supply chain fragility 3 years ago.

# Business says LAC is now wage competitive, but needs other reforms to make attractive



#### **Primary Costs**

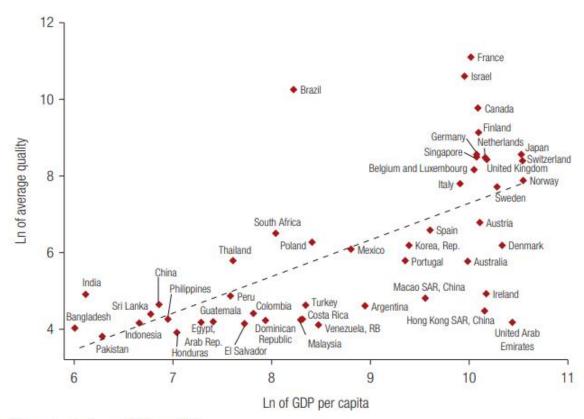
- Wages- LAC is wage competitive- below Chinese levels
- Taxation, Cost of Capital- high in LAC

#### **Other Costs**

- Political and Institutional confidence
  - Falling since 2009
- Ease of Trade and Competition
  - Modest tariffs, but trade costs 4X OECD.
- Infrastructure
  - Investment low: 3.5% in LAC vs. 7% in Asia
  - Digital: costly.
- Enabling Environment and Cities
  - Cities are low productivity and congested.
- **Workers:** 29% can't expand for lack of skilled workers

# Thin financial markets discourage risk-taking

#### Average Export Unit Values vs. GDP/Capita



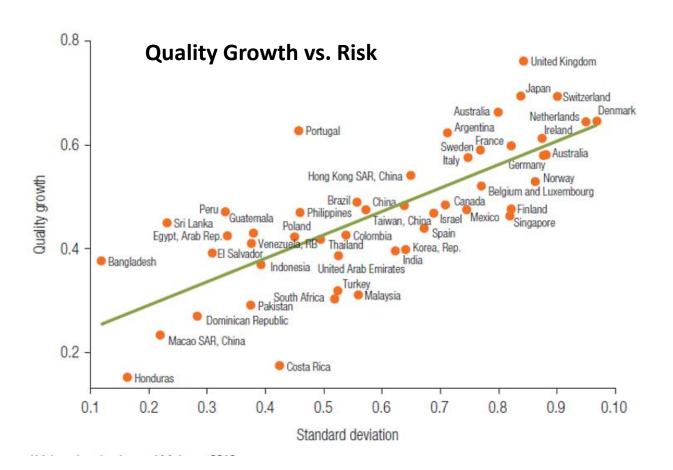
Source: Krishna, Levchenko, and Maloney 2018.

Note: The figure plots average cross-good unit values standardized by the 90th value of HS-10 against log GDP per capita for countries with more than 50 products. Ln of average quality versus ln of gross domestic product per capita. Slope = 0.956 (t-statistic = 5.73). HS-10 = 10-digit level of disaggregation in the Harmonized System of industrial classification.

 Quality as a proxy for/component of productivity

- TFP=TFPQ\*P
- P contains mark- ups but quality, too!

# Quality growth rises with risk taking



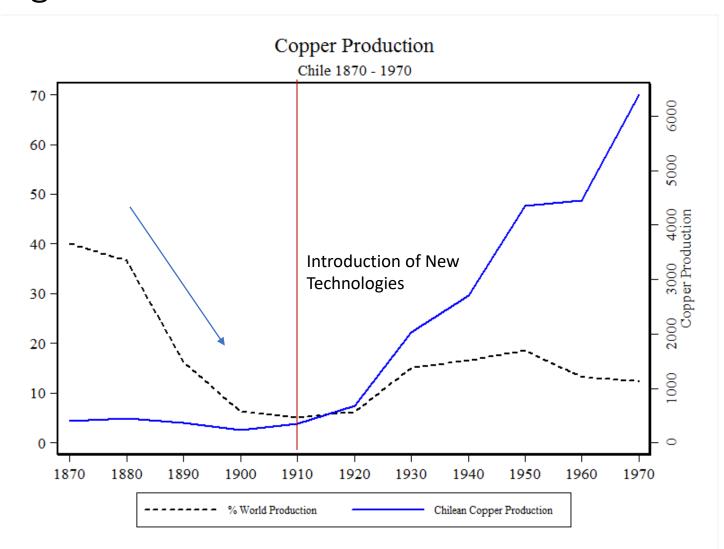
- Advanced countries take more risk, grow faster.
- Quality growth correlated with capital market deepening.
- But clearly entrepreneurial capital-ability to identify and manage risk are key
- Yes, some goods offer more risk opportunities than others. But must be able to take them!



LA's slow structural transformation is less a function of what it produces, than how.

Lessons on Capabilities from Ancient History

# Persistent missed opportunities for growth and diversification, regardless of economic structure



Same product, but different development outcome at different times

Also in different countries....



Counterexample 1:

# Japan- the Natural Resource Miracle

Second largest copper exporter after.....Chile in mid 1800s. Gave rise to numerous zaibatsu that propelled growth

**Sumitomo:** Masatomo Sumitomo (1585 – 1652): "Father of Copper" in Japan

**Hitachi:** Developed electric motors for ..Hitachi copper mine ..and diversified

**Fujitsu:** 4<sup>th</sup> largest information company in the world Ichibei Furukawa "The Copper King" 1877 to top Zaibatsu

Where are LAC's analogues in either NRs or Manufacturing or any sector?!!!!

US: Copper as a driver of National Learning (Wright 1999)



### LAC also missed opportunities in manufactures.

- Electronics: Mexico and Korea began assembly in 1980s.... But there is no telefono Azteca to match the Galaxy.
  - Will next round of nearshoring have a bigger impact?
- **Textiles:** Antioquia- entered early into US textile market but lost it due to problems of quality, costs, timeliness, access to inputs, trade frictions- Morawetz (1981).

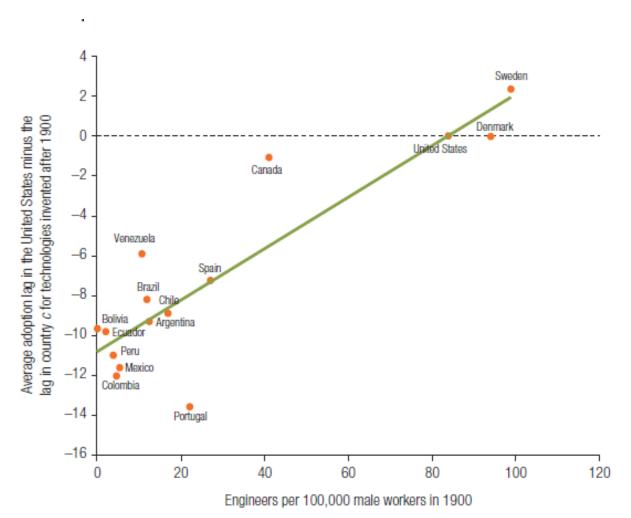
Will implementing incentives to ST (Stiglitz, Rodrik) without knowing why this happened work?



Why?

Lack of technological and entrepreneurial capabilities.

# LAC entered 2<sup>nd</sup> IR unarmed technologically



Was unable to leverage new technologies.

Deeper Query: Why was there no demand for engineers?

Source: Alfaro and Comin, forthcoming, based on data from Comin and Mestieri 2018 and Maloney and Valencia 2017.

# Entrepreneurial capital: Despite business climate, foreigners started businesses where locals couldn't.

TABLE 4.1 Immigrants, Rather Than Locals, Dominated Industrialization during the Second Industrial Revolution in Many Places around the World

Country	Year(s)	Percentage of immigrants among business owners	Percentage of immigrants in the population	Ratio of male immigrant business owners to male population
Argentina	1900	80.0	30.00	1.3
Brazil (São Paulo)	1920–50	50.0	16.50	1.5
Brazil (Minas Gerais)	1870–1900	3.6	1.50	1.2
Chile	1880	70.0	2.90	12.1
Colombia (Antioquia)	1900	5.0	4.70	0.5
Colombia (Barranquilla)	1888	60.0	9.50	3.2
Colombia (Santander)	1880	50.0	3.00	8.3
Mexico	1935	50.0	0.97	25.8
USA (5 percent census sample)	1900	31.0	13.60	1.1
USA (Fortune 500 firms)	Various	18.0	10.50	0.7
Comparator				
Japan (Shizoku, former Samurai)	1868–1912	50.0	5.00	5.0

Source: Maloney and Zambrano 2016.

*Note:* The final column shows the ratio of foreign entrepreneurs to the local male population because women were largely precluded from productive entrepreneurship during the study period.

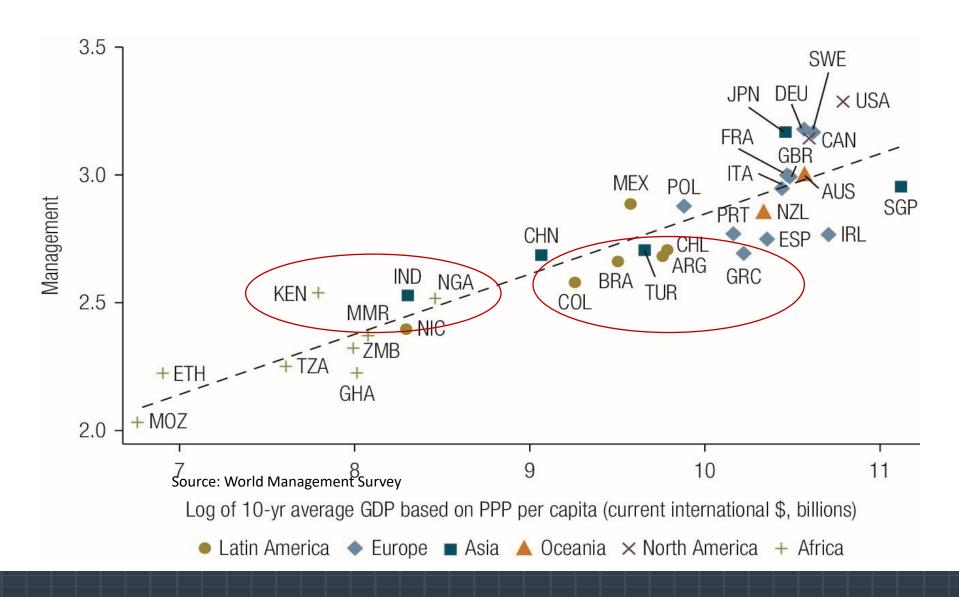
#### A view from Chile:

'Chilenos didn't lack either an entrepreneurial spirit, nor the energy to work, characteristics which are incarnate in the first railroads and telegraphs, in ports and piers, the irrigation canals in the central valley. But these qualities have been lost."

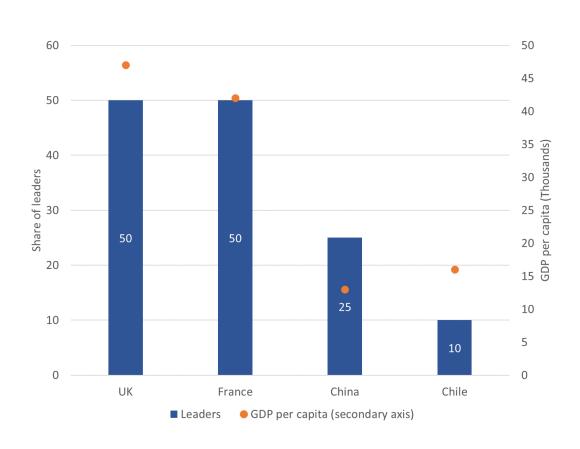
Enrique Mac-Iver (1900)

Loss of Frontier Adjusted Entrepreneurial Capital!!

# We're still lagging in Entrepreneurial Quality



# Firm capabilities and supporting institutions critical to any intervention



- More competition: Aghion "fewer leaders, lower growth"
- But also to leveraging FDI and new green sectors
- Critical to export sophistication and expansion in Colombia.
- Failure of Brazil Oil platforms and ships mission in 2000s

# The Expanded National Innovation System

### Integrated approach to innovation

Government oversight, resolution of market and systemic failures, coordination

#### **SUPPLY**

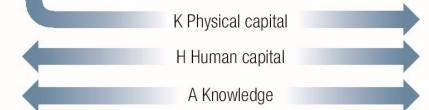
### Universities / think-tanks / technology extension centers

► Human capital

NIS INSTITUTIONS

- ► Support to firm capability upgrading
  - Productivity/quality extension services
  - Process/best practice dissemination
  - Advanced consulting services
- Domestic science and technology system
- International NIS

#### ACCUMULATION/ALLOCATION



#### Barriers to all accumulation

- Credit
- Entry/exit barriers
- ► Business/regulatory climate
- ▶ Rule of Law

#### Barriers to knowledge accumulation

- ► Rigidities (labor etc)
- Seed/venture capital
- ► Innovation externalities

#### **DEMAND**

#### The firm

- Incentives to accumulate
  - Macro context
  - Competitive structure
  - Trade regime and int. networks
- ► Firm capabilities
  - Core competencies (management)
  - Production systems
  - Technological absorption and production

#### The Innovation Paradox

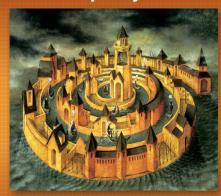


Developing-Country Capabilities and the Unrealized Promise of Technological Catch-Up

Xavier Cirera and William F. Maloney



## Place, Productivity, and Prosperity

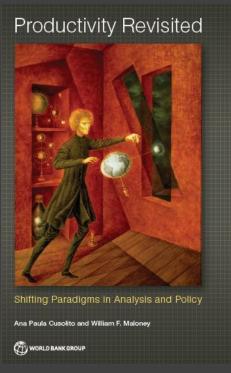


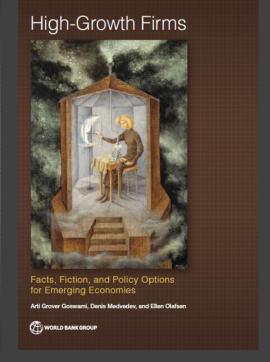
Revisiting Spatially Targeted Policies

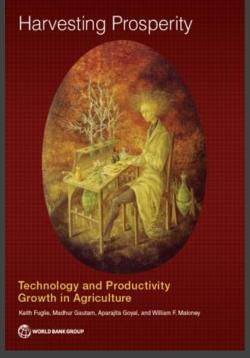
for Regional Development

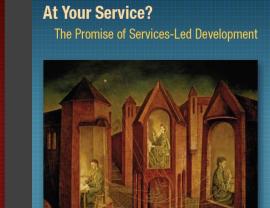
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# Bridging the Technological Divide

Technology
Adoption by Firms
in Developing
Countries

Xavier Cirera
Diego Comin
Marcio Cruz

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"Fortune favors the prepared" - Pascal

World Bank Productivity Project

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