

InterAmerican Committee on Ports
9th Ordinary Meeting

Port Logistics and
Competitiveness in Latin
America and the Caribbean

Tomás Serebrisky

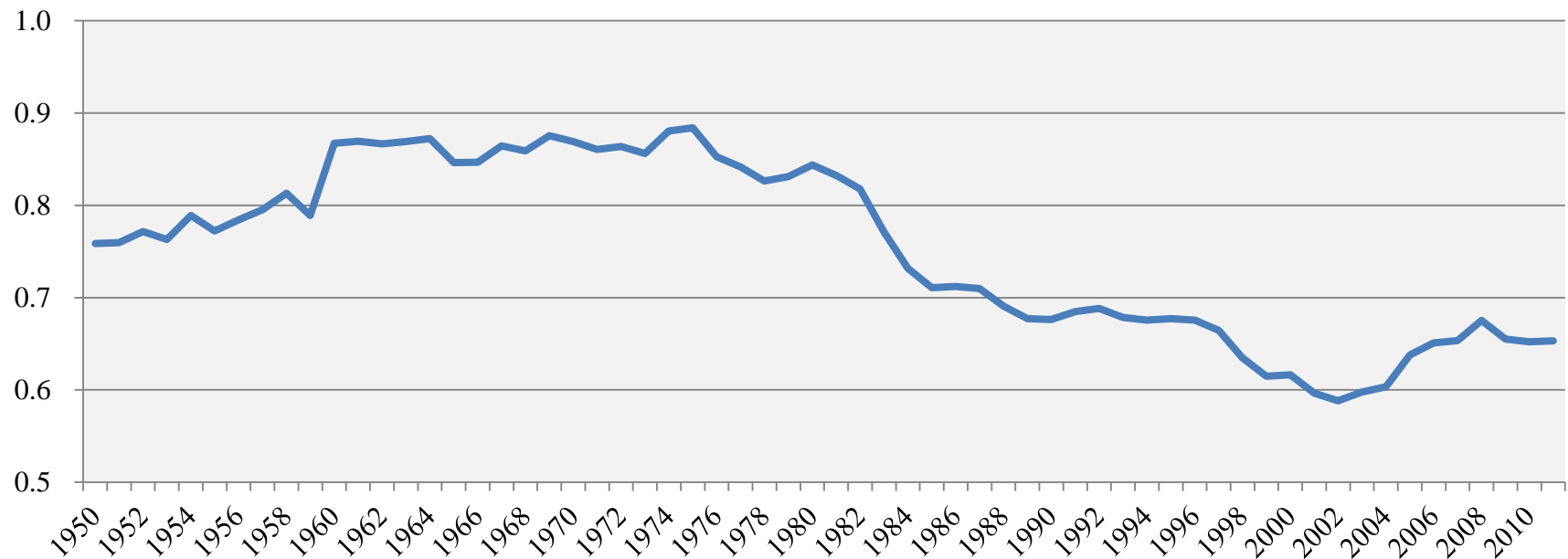
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Productivity in LAC is lagging behind

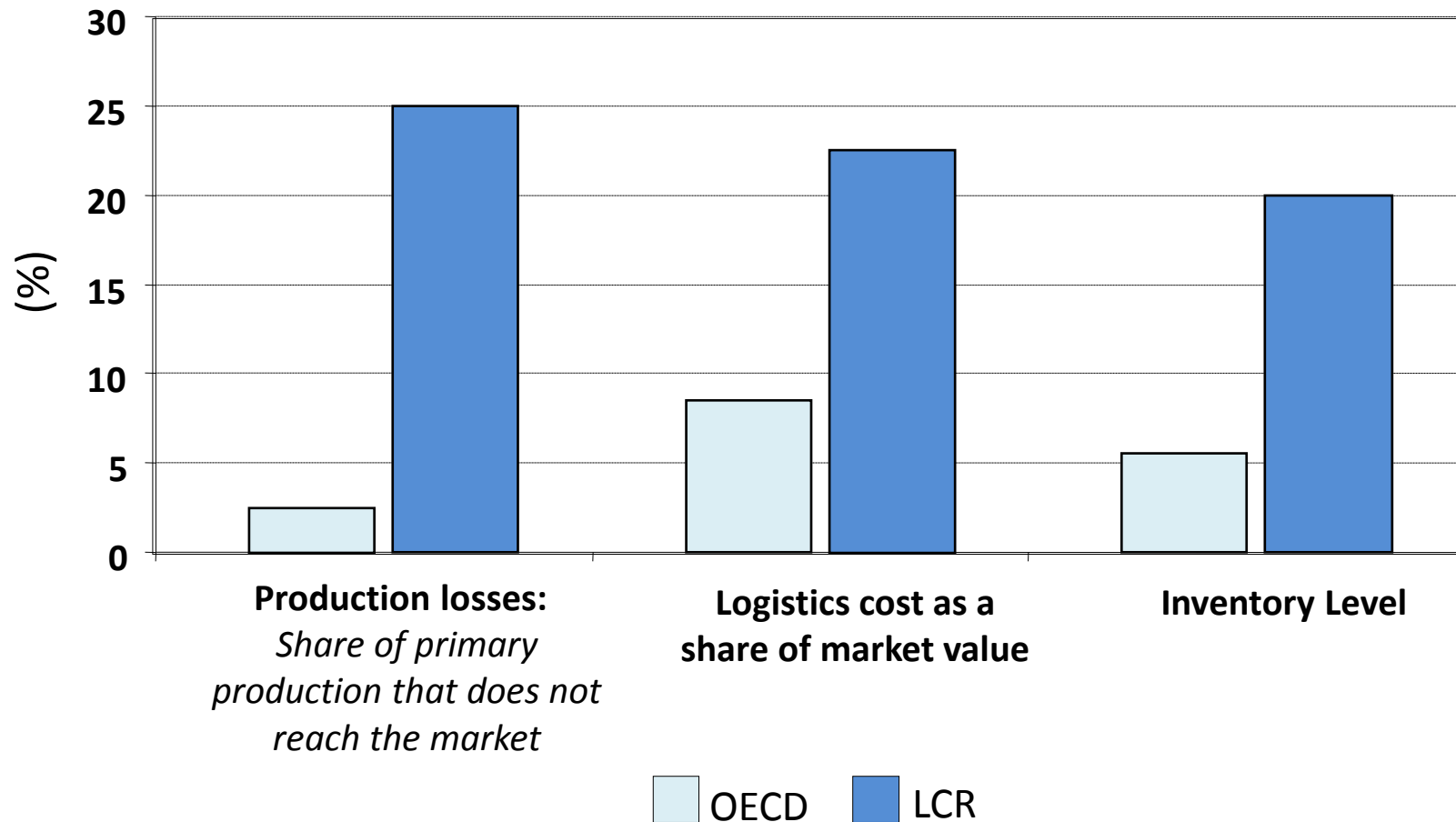
Total Factor Productivity $TFP_{LATIN\ AMERICA}/TFP_{UNITED\ STATES}$



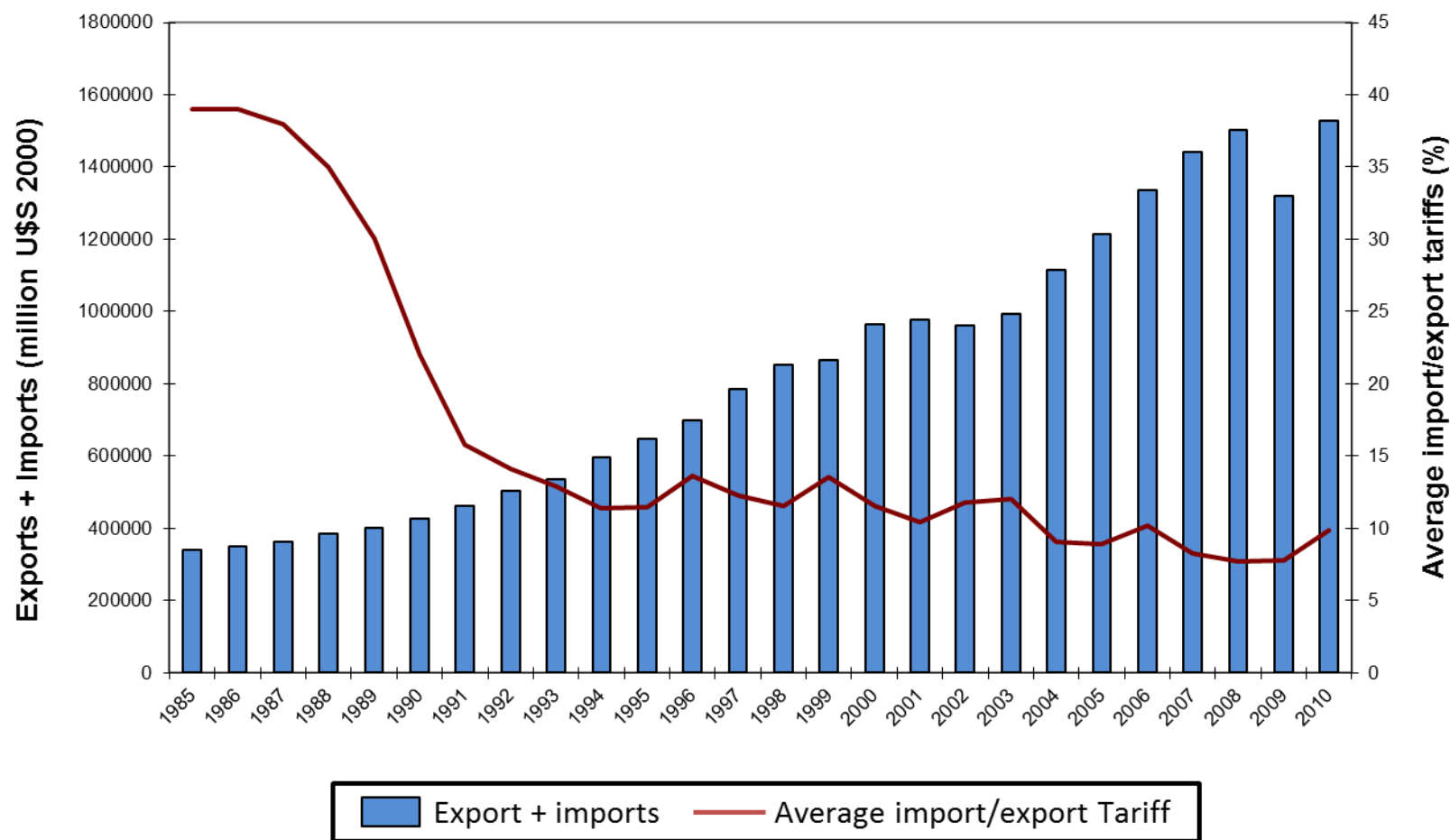
Note: Total Factor Productivity measures the growth of GDP over the combined contributions of total hours, workforce skills, machinery and structures and IT capital.

Source: Penn World Table 8.0 (January 2014)

Logistics costs are key to competitiveness: *Latin America has plenty of room to improve*



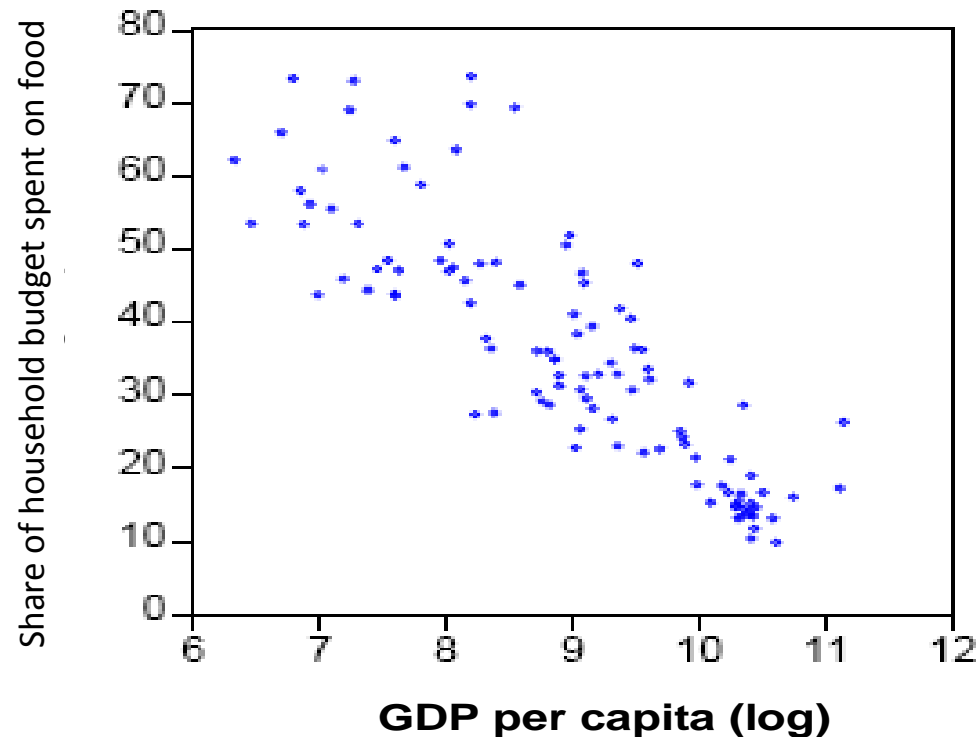
Logistics costs are vital as Latin America opens to the world and trade expands



Source: World Development Indicators

Logistics Costs are key to Poverty Alleviation:

Logistics is a significant component of retail food price



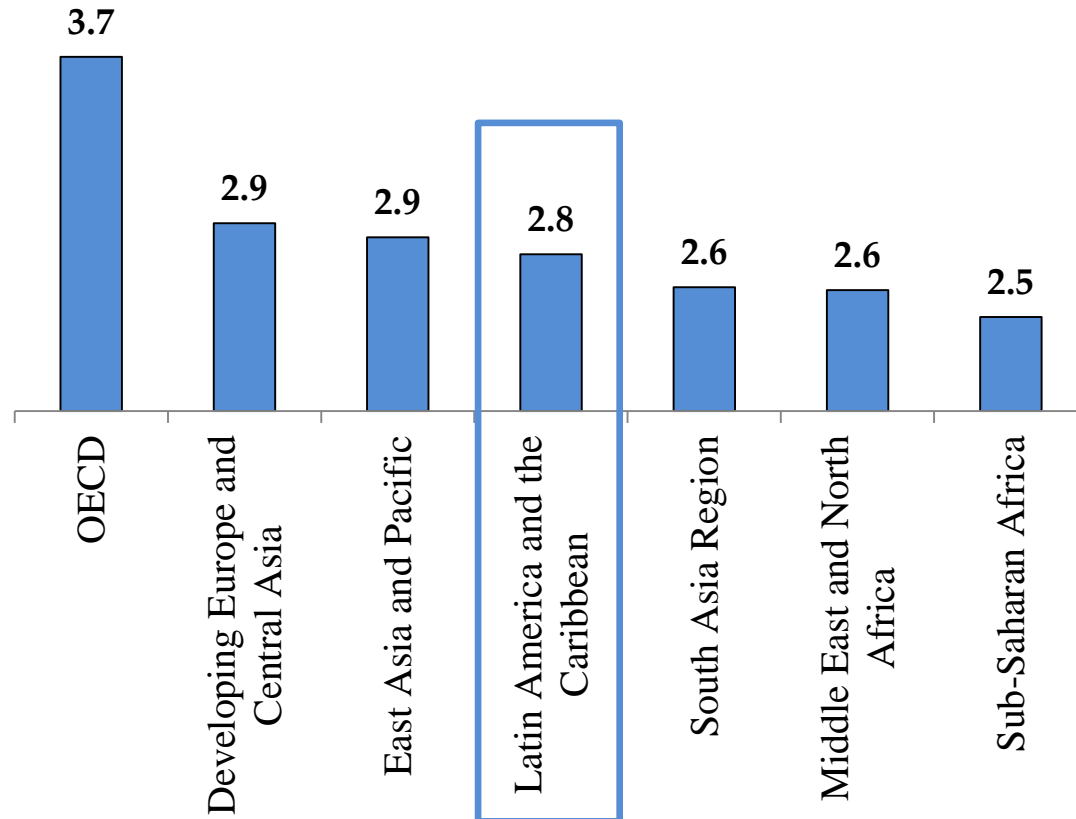
Source: Dessus, et al, World Bank (2008); data from household surveys.

Where does LAC stand in logistics performance?

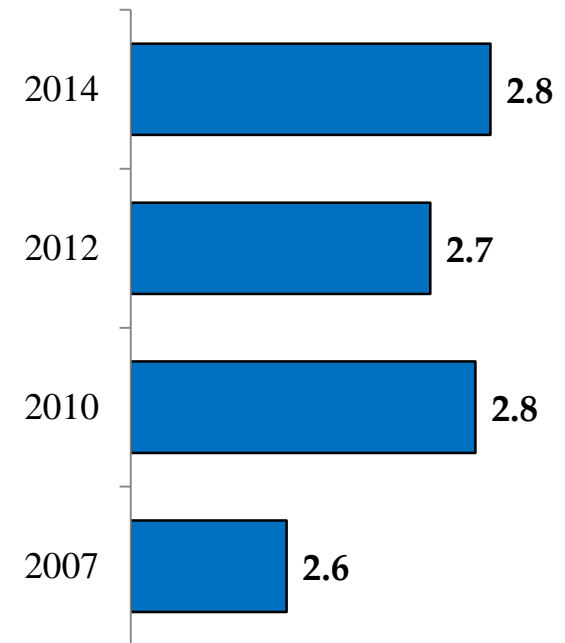
Average: no better than other developing regions

Average Logistics Performance Index 2014

By regions



Evolution of the Logistics Performance Index Latin America and the Caribbean

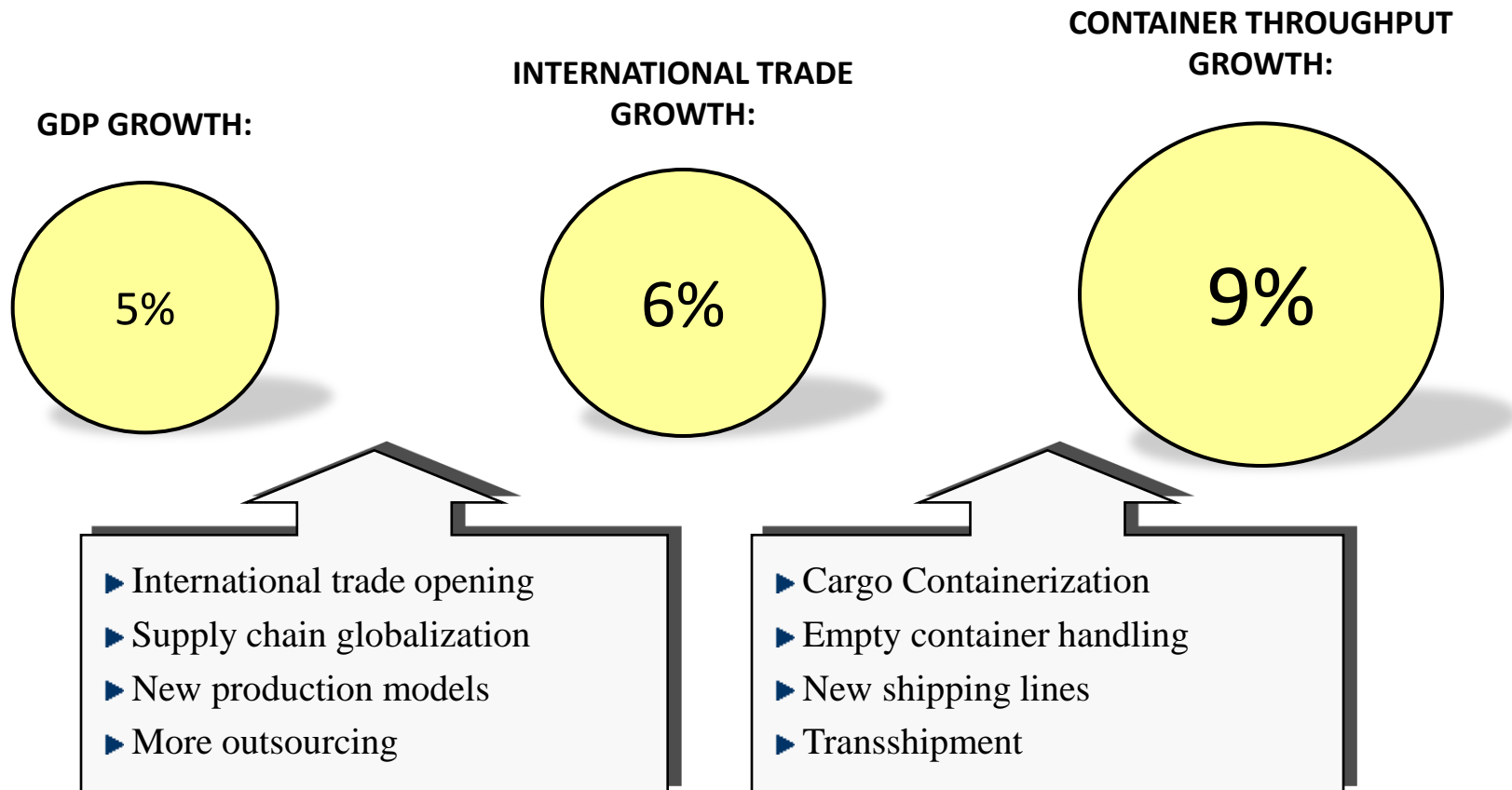


Source: World Development Indicators

Ports: fundamental to improve logistics in LAC

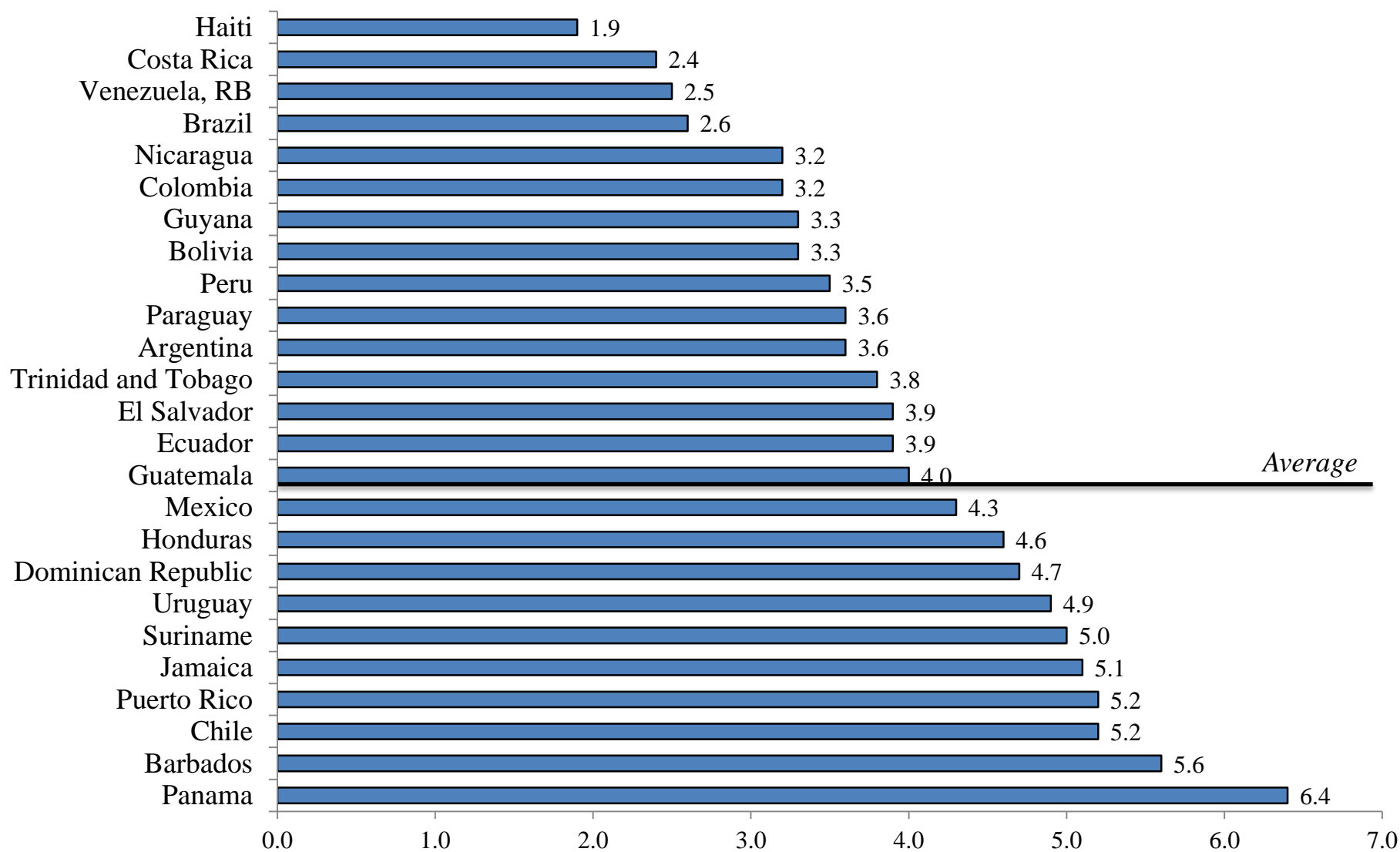
Supply chain globalization has made the economy more transport and container intensive

Over the last 10 years in Latin America:



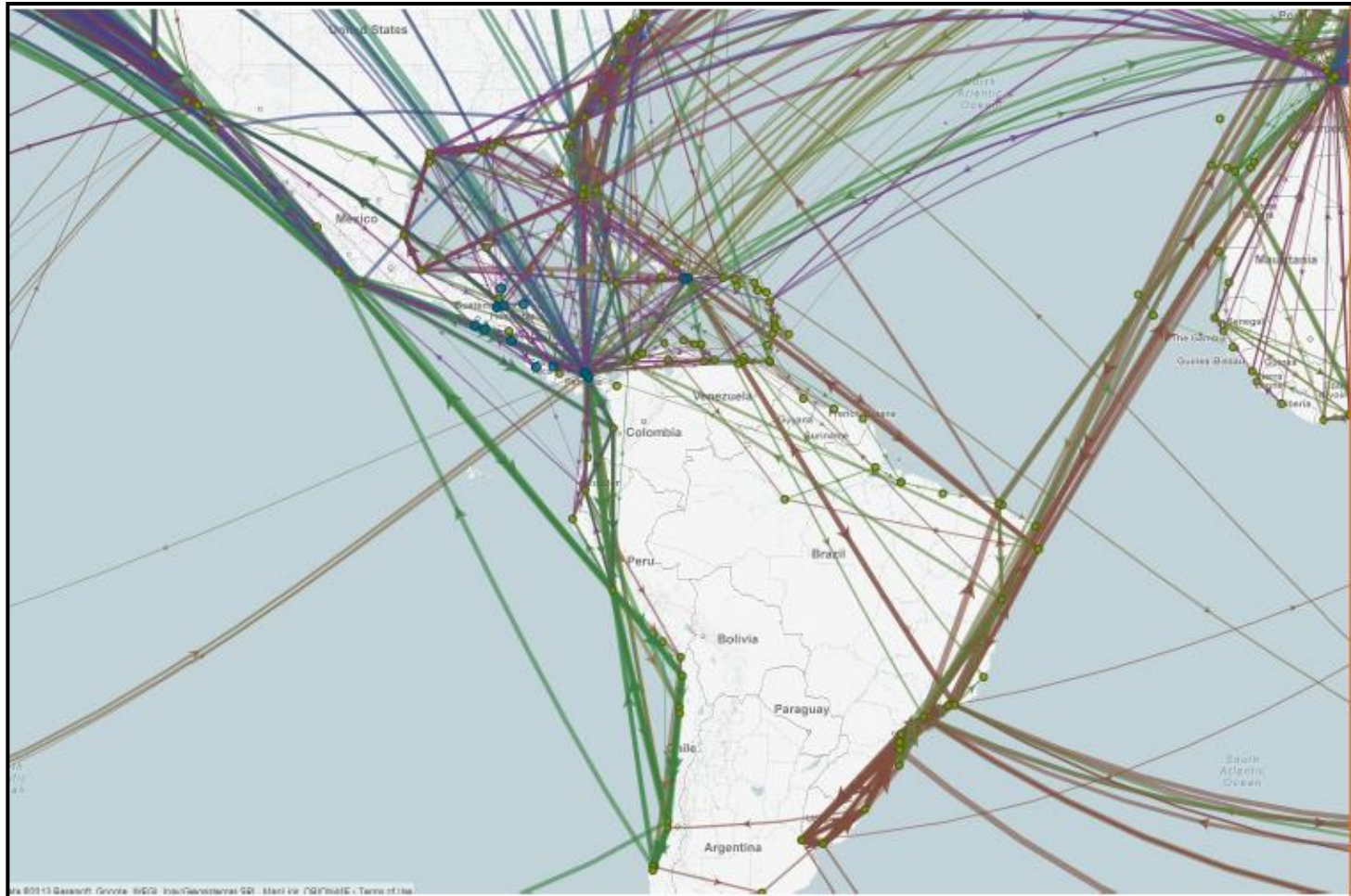
Globalization has been transport intensive

Perception of port quality varies widely in LAC...

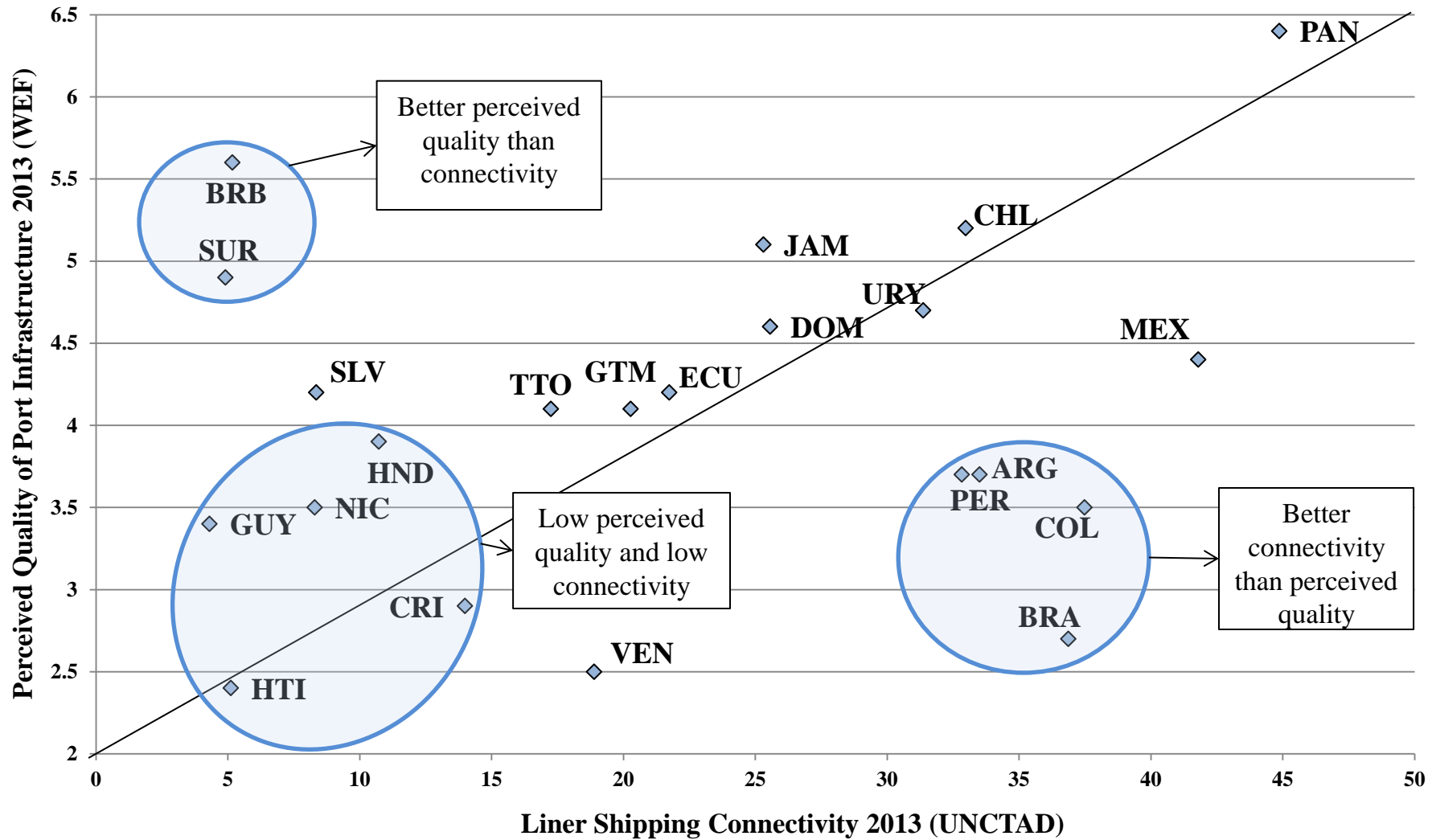


Caribbean transshipment hubs and large import/export markets concentrate shipping lines

Worldwide container shipping line services, zooming in Latin America and Caribbean region

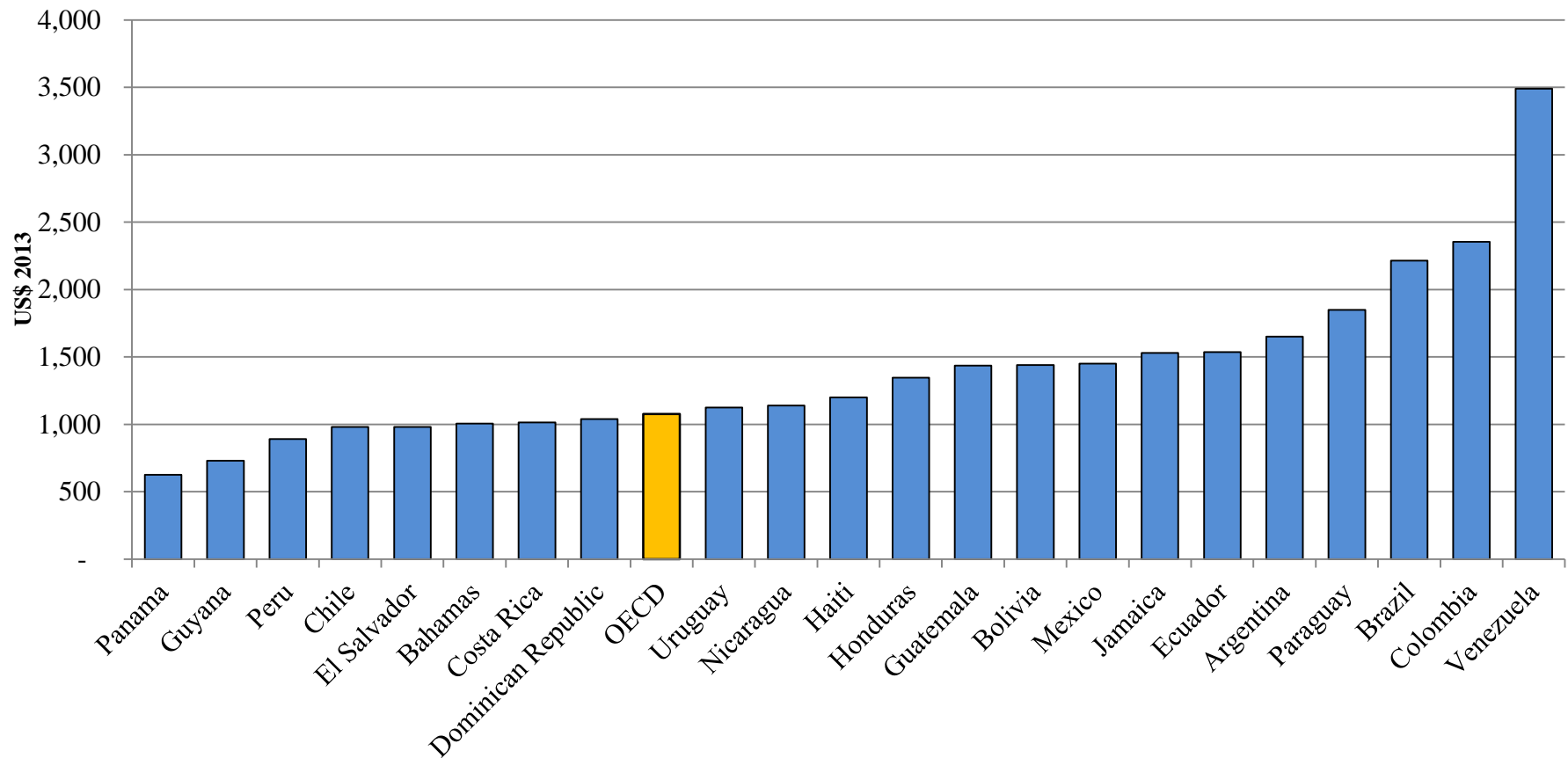


Port quality and liner connectivity in LAC



How much does it cost to export a container in LAC?

Costs much higher than in OECD countries (bigger economies have high costs!!)



Source: World Bank Doing Business (2013)

What do we know about
port efficiency?



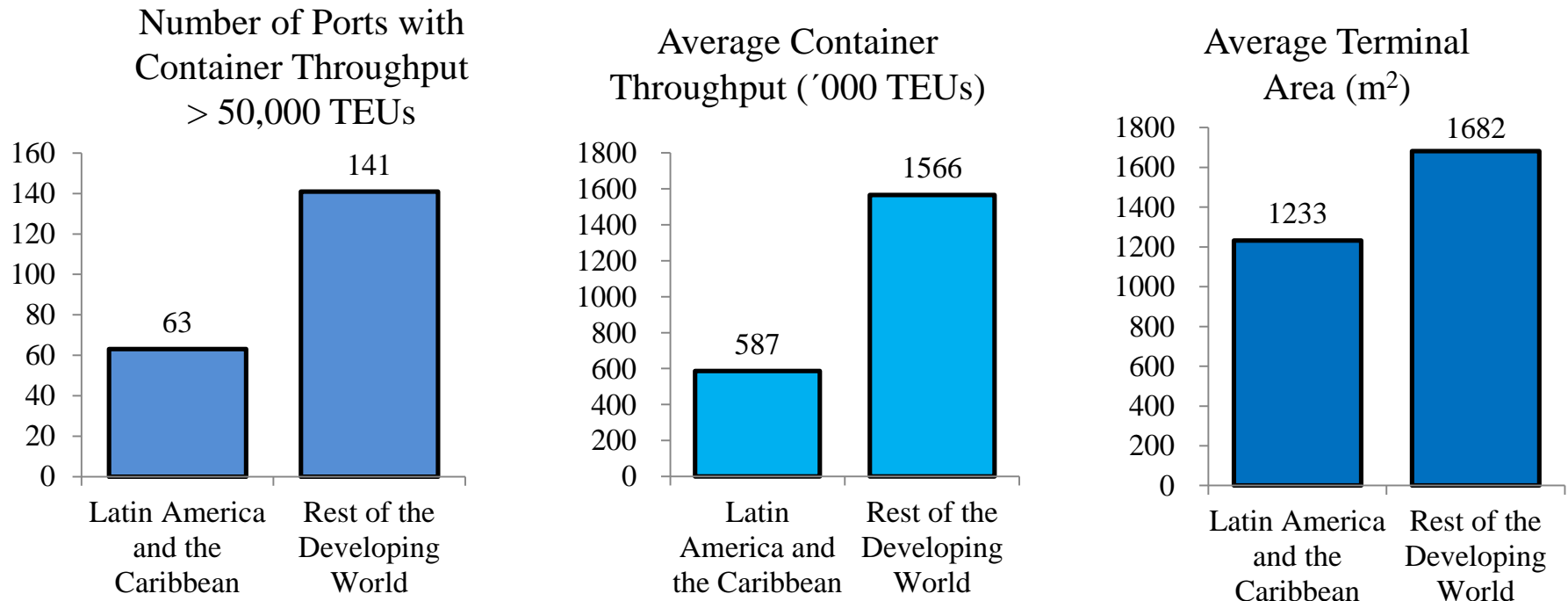
IDB WORKING PAPER SERIES No. IDB-WP-474

Benchmarking Container Port Technical Efficiency in Latin America and the Caribbean

Javier Morales Sarriera
Tomás Serebrisky
Gonzalo Araya
Cecilia Briceño-Garmendia
Jordan Schwartz
December 2013

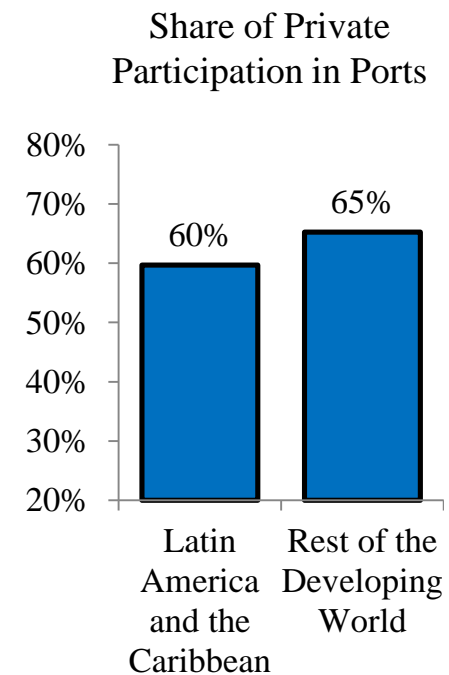
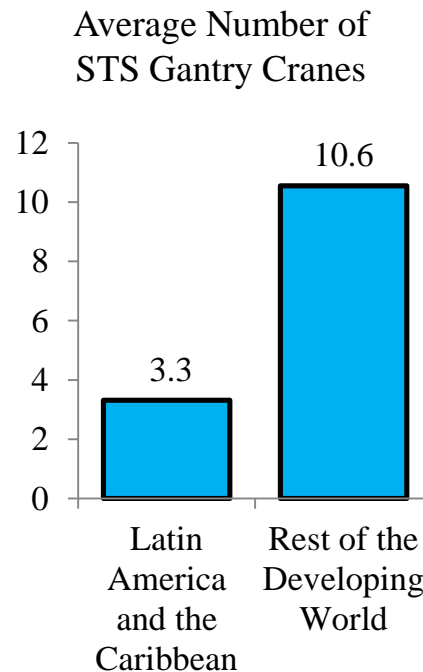
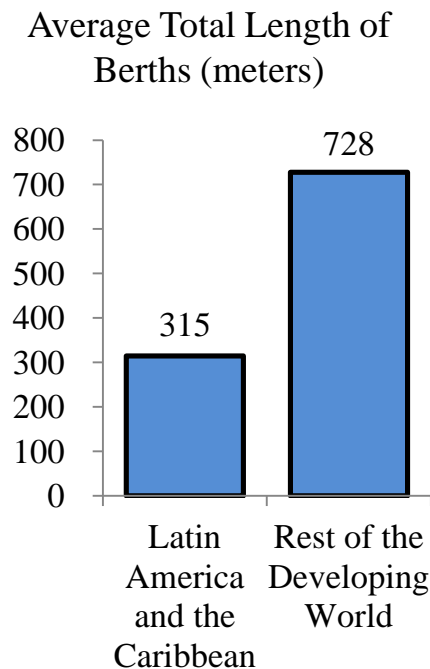
Inter-American Development Bank
Infrastructure and Environment Sector

The average port in LAC handles less throughput than the average port in the rest of the developing world...



LAC: 37 million TEUs in 2010, 14% of the developing world total.

...and is also smaller in terms of infrastructure assets
(terminal area, length of berths and cranes)



50% of LAC ports have rail connection, the same proportion as in the developing world.

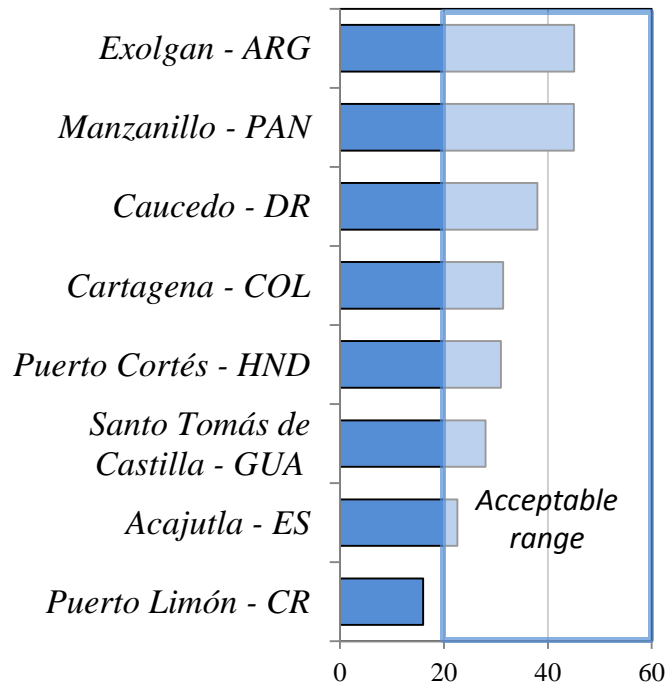
*Rest of the Developing World: Countries outside LAC with GDP per capita under USD20,000.

Source: Data collected from Containerisation International.

In terms of time productivity, there is large variation among ports...

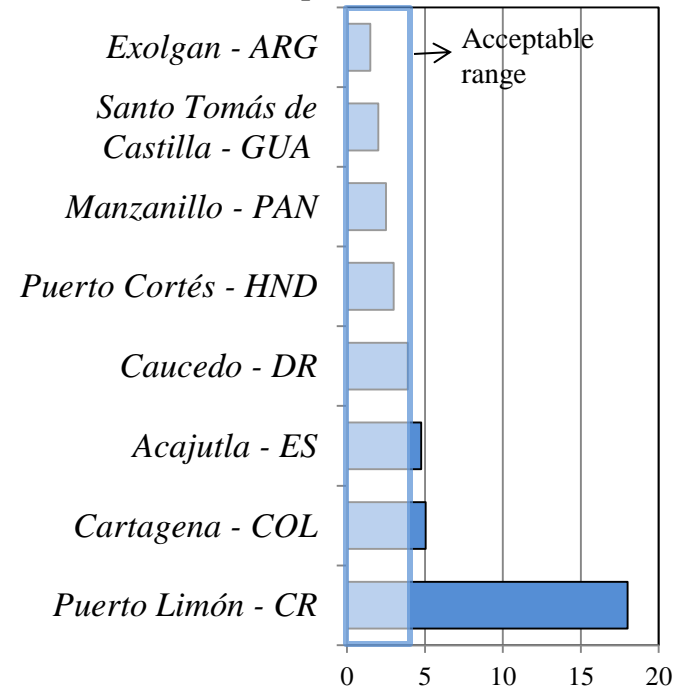
Ship Productivity

Moves/ship-hour, for calls involving less than 500 moves



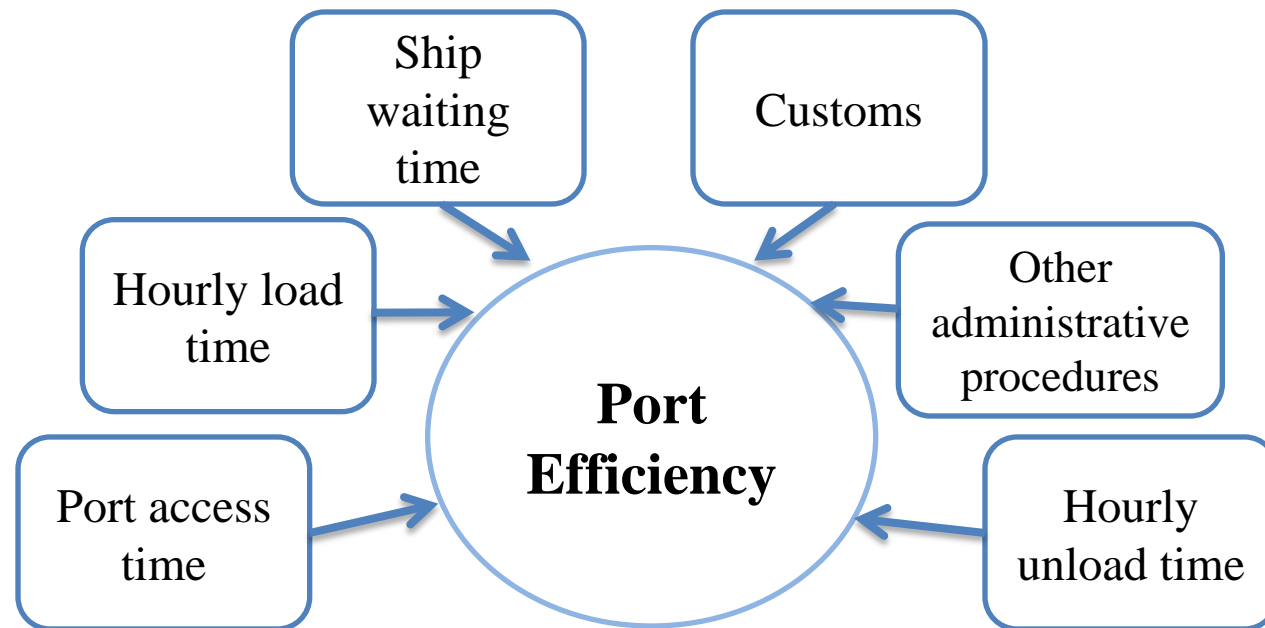
Ship Delay

Average time in hours between vessel's arrival at the port and at the berth



Measuring port efficiency is a difficult task

Benchmarking studies have addressed efficiency with *Partial Productivity Indicators* or with the estimation of *Technical Efficiency Frontiers*

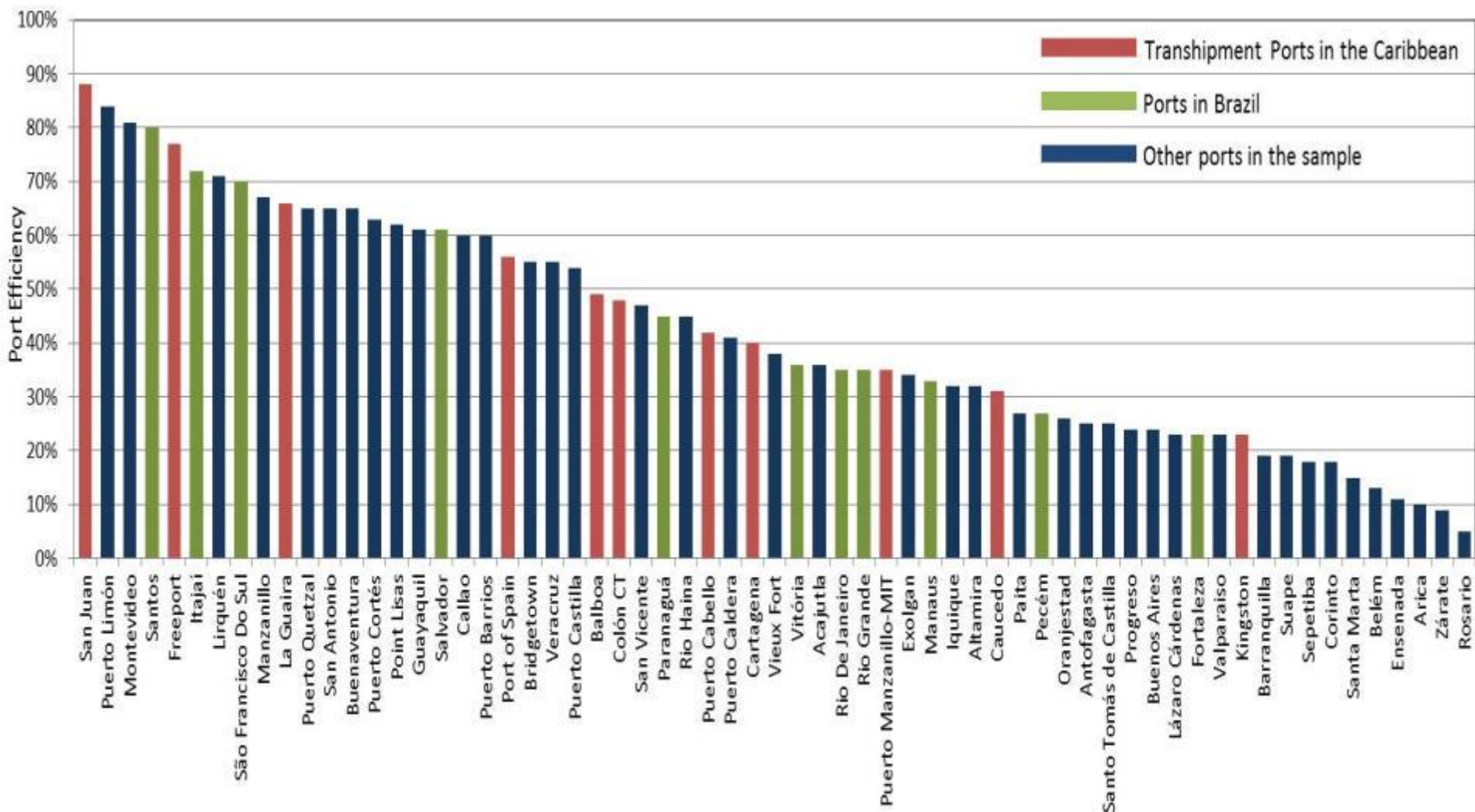


Focus on **Technical Efficiency**:

A technical efficient port generates the maximum container throughput with the lowest quantity of infrastructure inputs

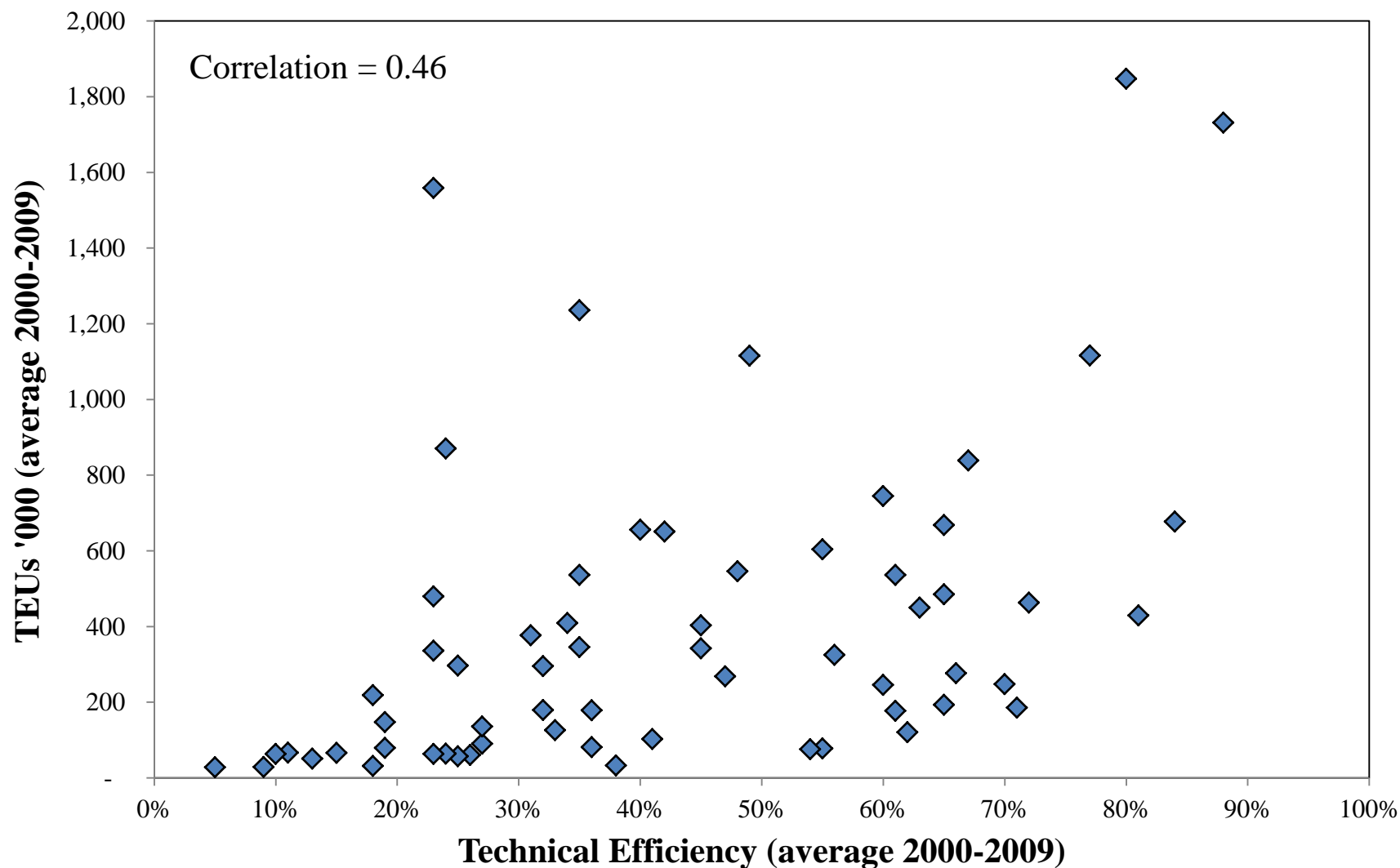
Distribution of technical efficiency in LAC ports

(average 1999-2009):



Port size and Technical Efficiency

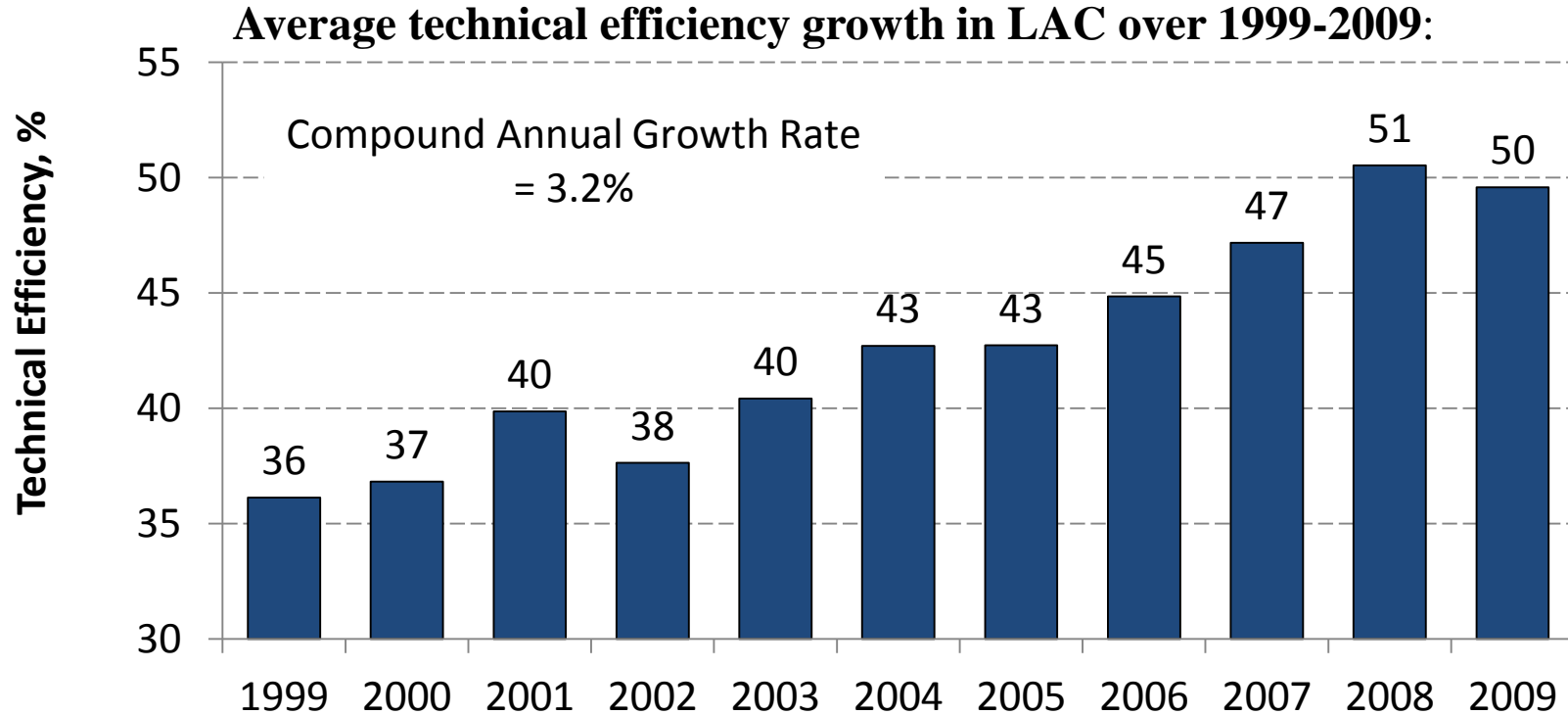
Is there a minimum efficient scale?



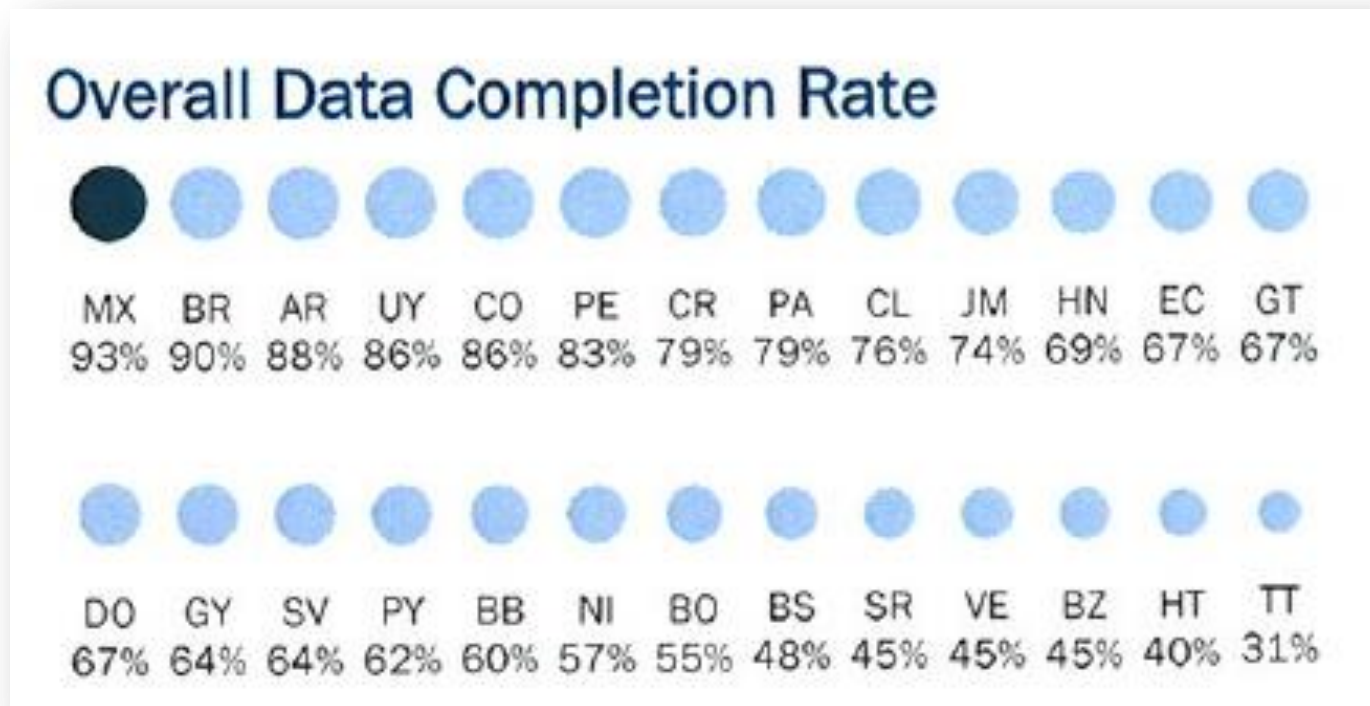
Overall technical efficiency in LAC ports is 43%

(Africa 30% and Europe 60%)

Good news: TE has improved significantly!!



Data, data, data... Can't do better without it



Final Remarks

- Logistics costs are key determinants for productivity, competitiveness and poverty alleviation
- Logistics and port quality: LAC is not in a good position relative to other developing regions
- Growth in international trade has put pressure on ports to accommodate increasing demand: expansion of infrastructure is not the only solution. What about efficiency?
- Data availability is a major constraint. Scarcity of data does not allow a thorough benchmarking of our ports. Major barrier to improve public policies.

