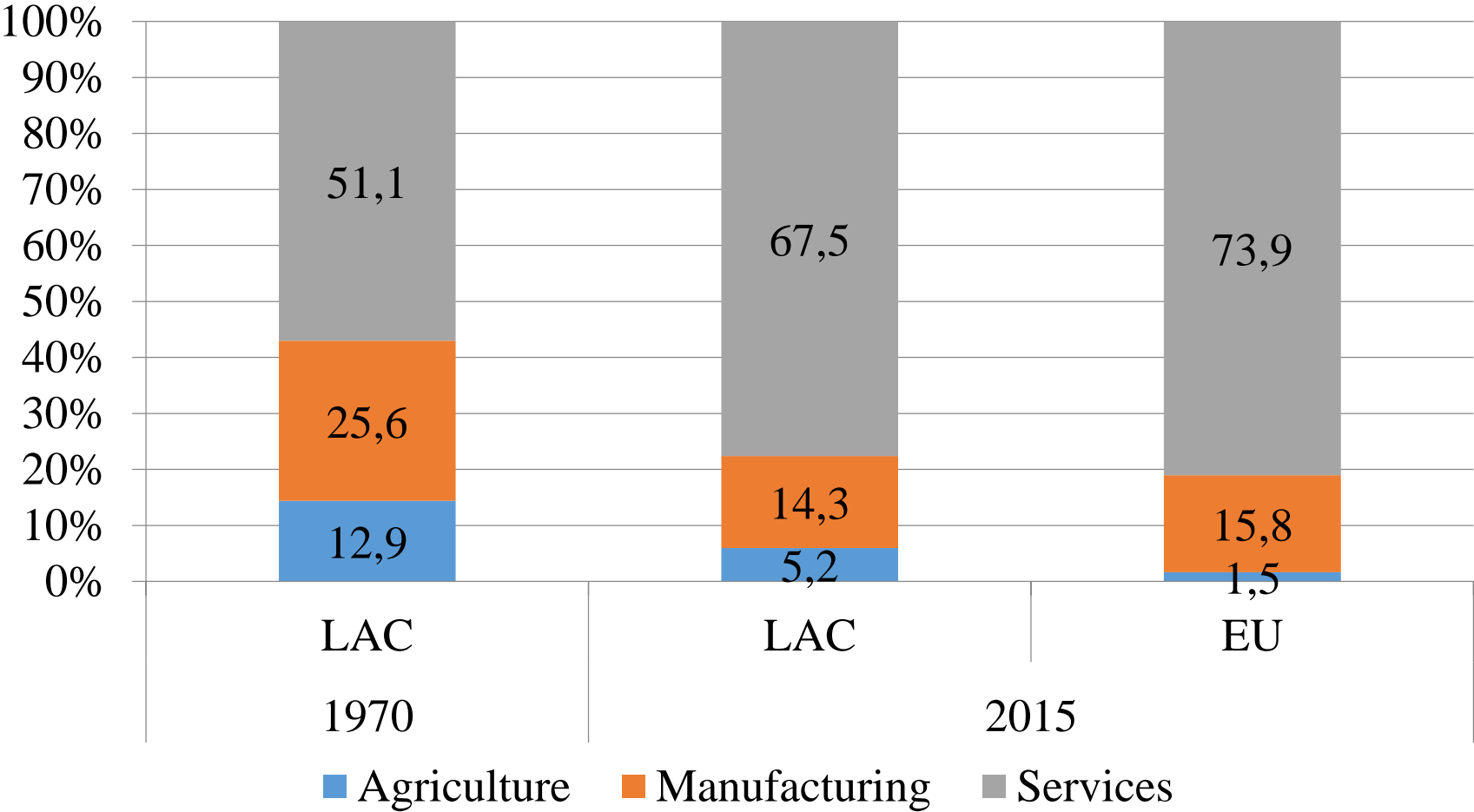


# Innovation and internationalization of Latin American services

**Nanno Mulder**  
UN-ECLAC, REDLAS

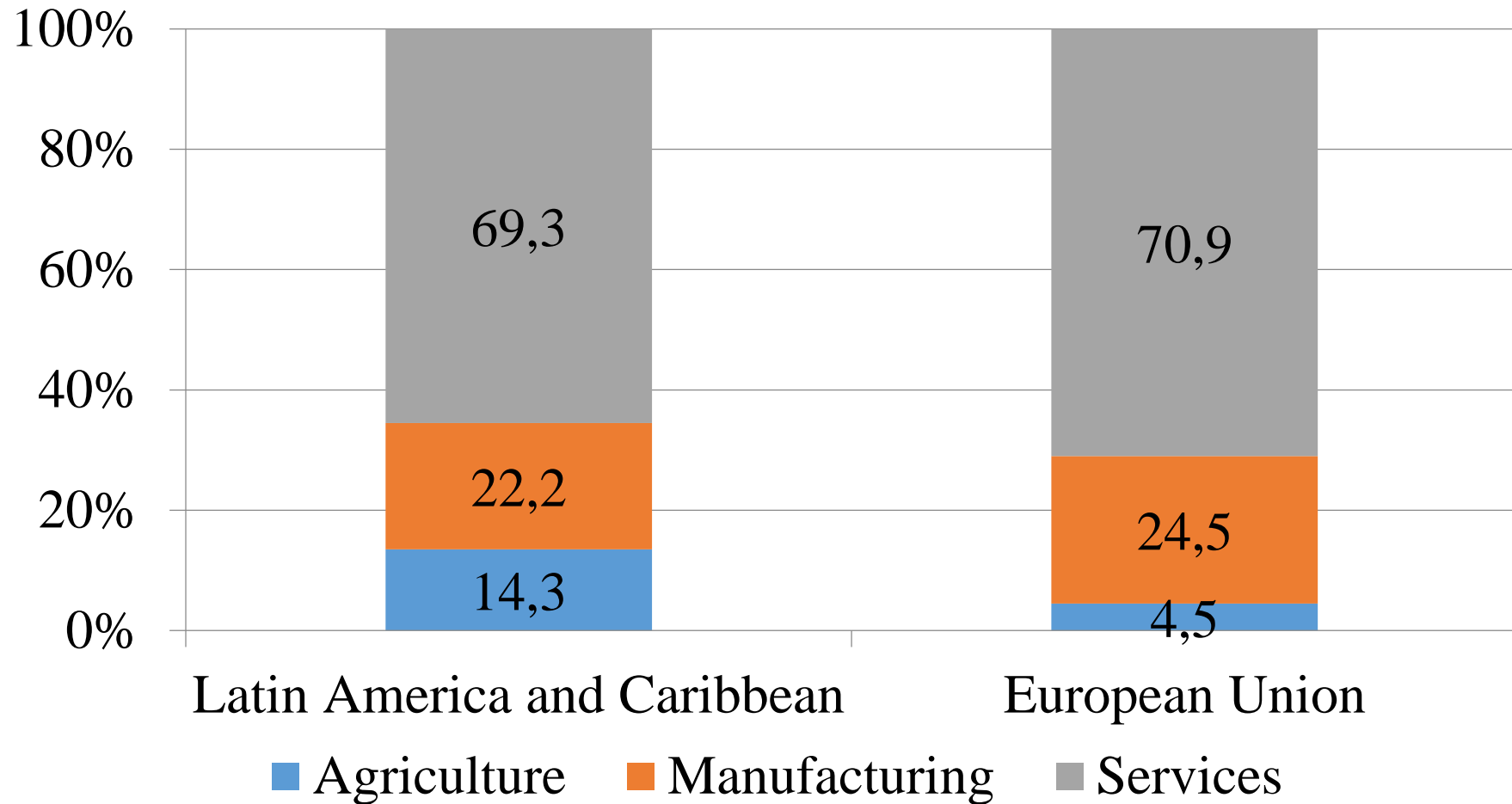
RESER, 9 September 2017

# Latin American and Caribbean economy has become services dominated



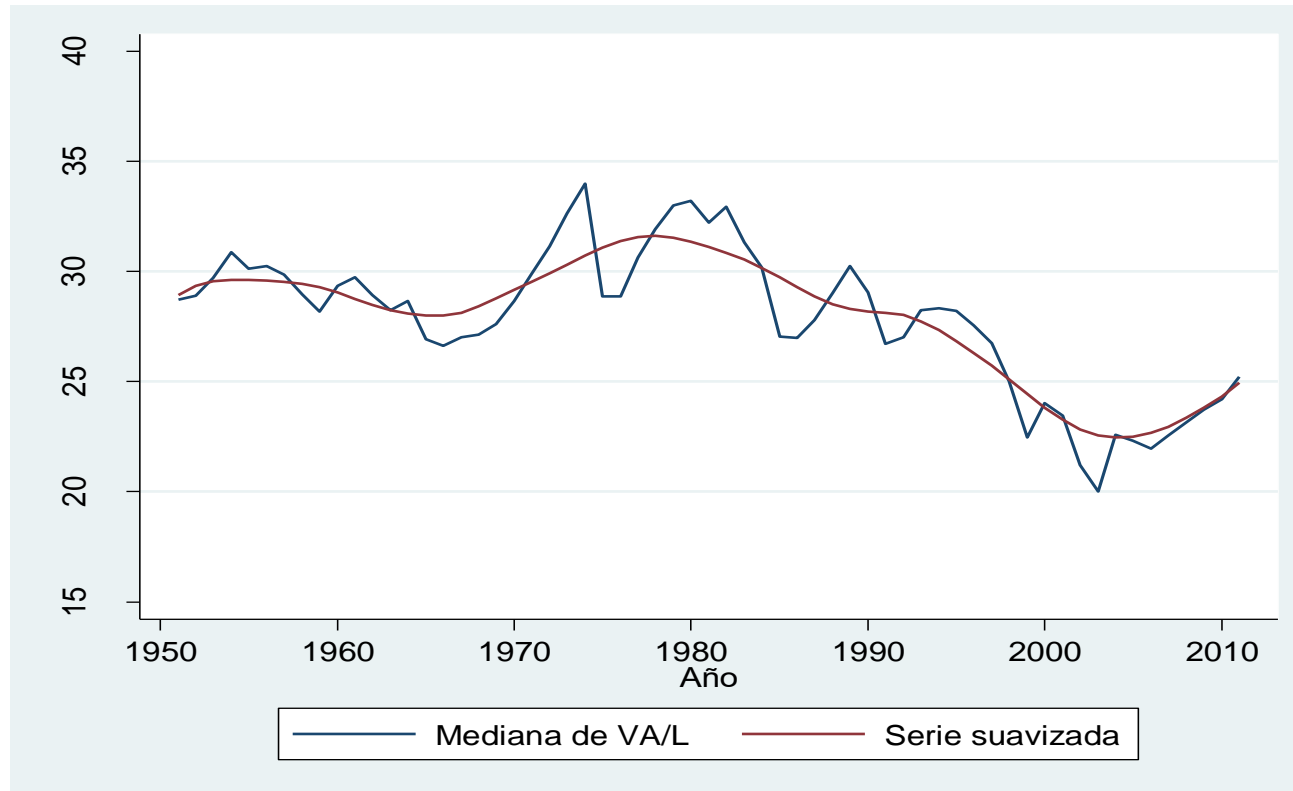
Fuente: World Bankd, World Bank Development Indicators

## Latin American and Caribbean employment is also dominated by services (2015)



# Labor productivity of the region is low and has declined since the 1980s

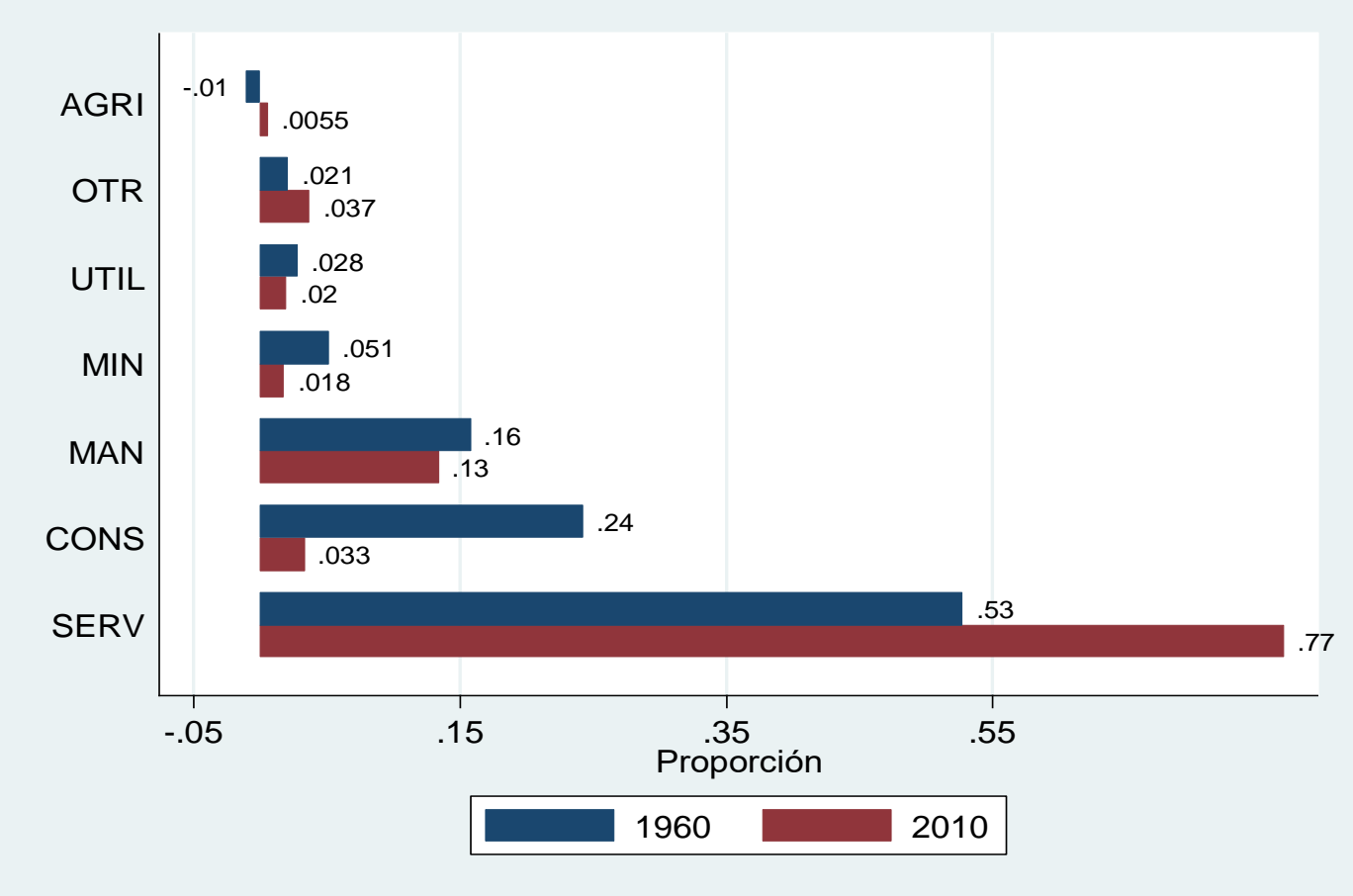
Relative labor productivity: (United States = 100)



- In 2010, labor productivity was about 25% of the US level.
- After 1980, relative labor productivity has fallen

# Gap in labor productivity with the United States is concentrated in the service sector

Contribution of each to labor productivity gap in 1960 and 2010



- Services sector explained *77% of the labor productivity gap* with the US.
- Its contribution to the gap increased between 1960 and 2010

Fuente: Cálculos propios en base a GGDC 10 Sector Database, Timmer, de Vries y de Vries (2014)

# What is ECLAC?

<https://www.youtube.com/watch?v=erZvNr0HRRE>

# Presentation

- A. Little innovation and internationalization of firms slow down productivity**
- B. Some intermediate services may be a drag on manufacturing competitiveness**
- C. Public-private policies to promote global services exports**

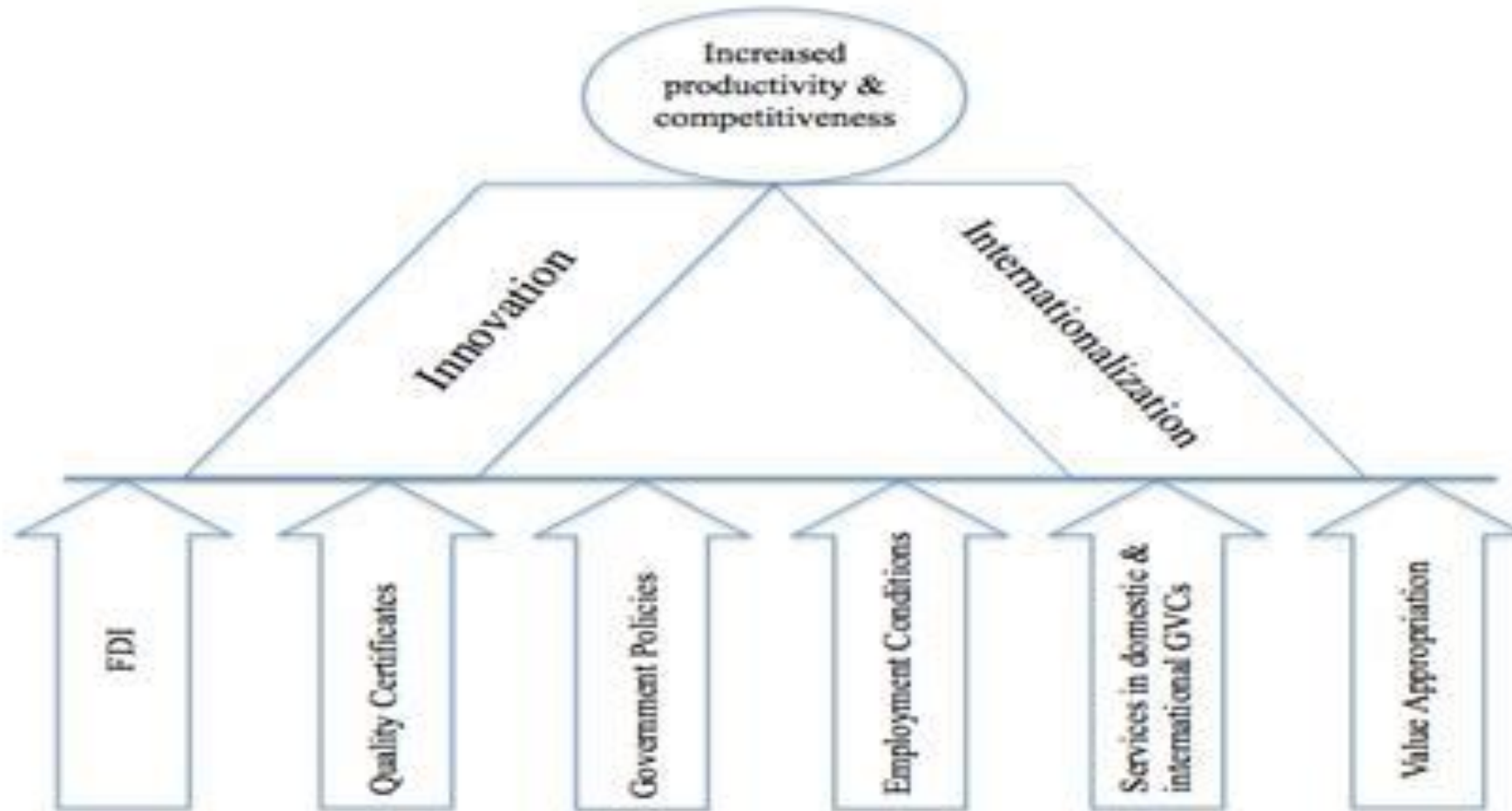
# A. Subdued innovation and internationalization efforts by services firms



# Synergies between Innovation & internationalization

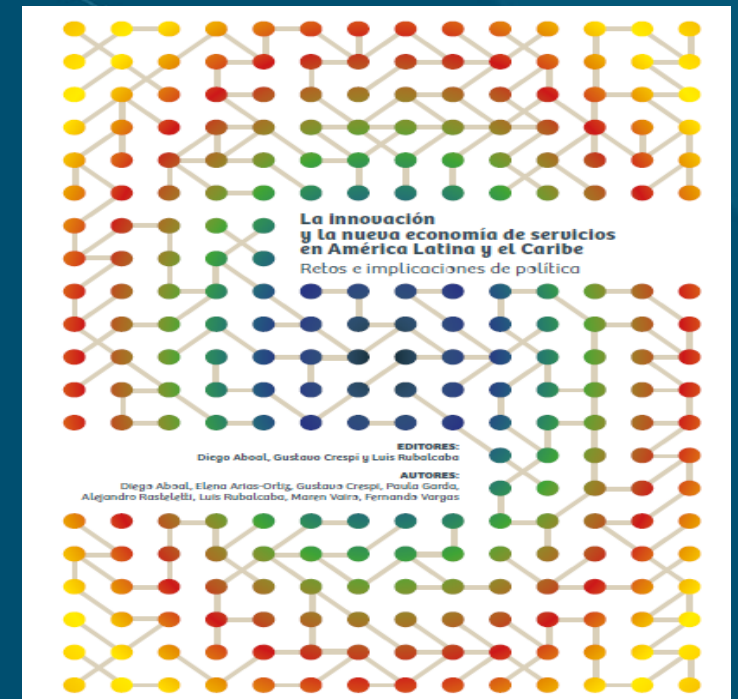
- Service firms operating in foreign countries require continuous innovation: as they are required to (Castro-Lucas and others, 2012):
  - adapt to complex legal systems and regulatory environments, overcome cultural barriers,
  - adopt international quality standards or tailor product offerings to local market conditions.
  - Adapt to higher levels of competition, which may also increase the pressure to innovate.
- Empirical evidence suggests that innovative firms have a greater export potential than non-innovative firms, and exporting firms are more likely to innovate than non-exporting ones (Ganotakis and Love, 2011).
- Innovation and internationalization in services offers firms scope for new growth strategies.
- Successful firms seem to use innovation and internationalization as a basis for building and maintaining their competitive advantages.
- Innovation enables firms to improve efficiency, productivity and quality.
- firms internationalize to gain access to specialized knowledge in foreign locations.
- Firms wishing to internationalize must typically innovate first (Park, 2014).

## Internationalization and Innovation as drivers of productivity growth



## B. – 1 Subdued innovation efforts

Aboal, Crespi y Rubalcaba (eds.) (2015) La Innovación y la Nueva Economía de Servicios en América Latina y el Caribe. Retos e Implicaciones de Política. IDRC, CINVE, BID.



**TABLA 4.1.** Encuestas de innovación

	Chile	Colombia	México	Perú	Uruguay
Encuesta de innovación	EIE	EDIT <sup>d</sup>	ESIDET	ENCYT	AEAI <sup>e</sup>
Ola <sup>a</sup>	2009	2009/2010	2010	2005	2010
Período de referencia	2 años	3 años	2 años	1 año	3 años
Fuente	INE	DANE	INEGI	CONCYTEC	INE
Actividades económicas <sup>b</sup>					
Servicios					
Servicios tradicionales	E, F, G, H, J, N, O	E(40), G, H, I(60), O(90)	43, 48-49, 51, 52, 531, 56,71, 72, 81	E, G, H, K(71), N, O	E(40), H, I, K(71), N
KIBS	I, K	E(41), I(62, 64), J(65), K(72), O(92)	533, 54, 55	I, J, K(72, 73, 74)	K(72, 73, 74)
Manufacturas	D	D	31-33	D	D
Tamaño de muestra	7.192	8.830	4.156	3.888	3.595
Tamaño mínimo de empresa	US\$100K Facturación <sup>c</sup>	10 Empleados	20 Empleados	US\$35K Facturación	5 Empleados

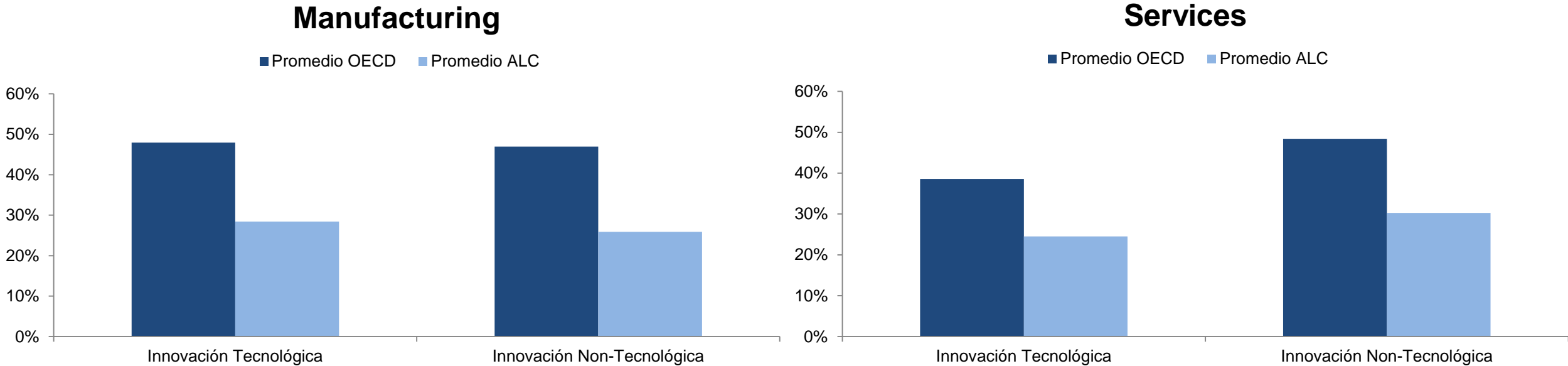
(a) Año de implementación. (b) CIUU rev. 3.1 para Chile, Colombia, Perú y Uruguay; NAICS para México. (c) Para las manufacturas, también se requiere que las empresas tengan 10 empleados o más. (d) Los datos de esta encuesta se emparejan con la Encuesta Económica Anual para el sector servicios (EAS) y la Encuesta Económica Anual para el sector manufacturero (EAM). (e) Los datos de esta encuesta se emparejan con los de la Encuesta Anual de Actividad Económica (EAS).

## Innovation efforts: total, manufacturing and services

<b>Variable</b>	<b>Total</b>	<b>Manuf.</b>	<b>Total serv.</b>	<b>Distr- bution.</b>	<b>transport and comm</b>	<b>Finance</b>	<b>Business services</b>
Internal R&D	1.00	1.060	0.791	0.601	0.627	0.815	1.213
External R&D	1.00	1.017	0.964	0.932	0.873	1.142	1.112
Impacts on costs	1.00	1.005	0.677	0.656	0.841	0.888	0.576
Impact on quality	1.00	1.010	1.033	0.907	1.063	1.118	1.170
Impact on speed	1.00	1.007	1.227	1.250	1.330	1.307	1.113
Patents	1.00	1.033	0.517	0.575	0.254	0.125	0.825
Copyrights	1.00	1.014	1.598	1.065	0.531	0.764	3.632

# How much do services firms innovate compared to manufacturing firms?

Shares of firms



- Firms in Latin America innovate less than in OECD countries
- Innovation efforts of services firms is concentrated in organization and sales (non-technological)

## Characteristics of services innovation in Latin America

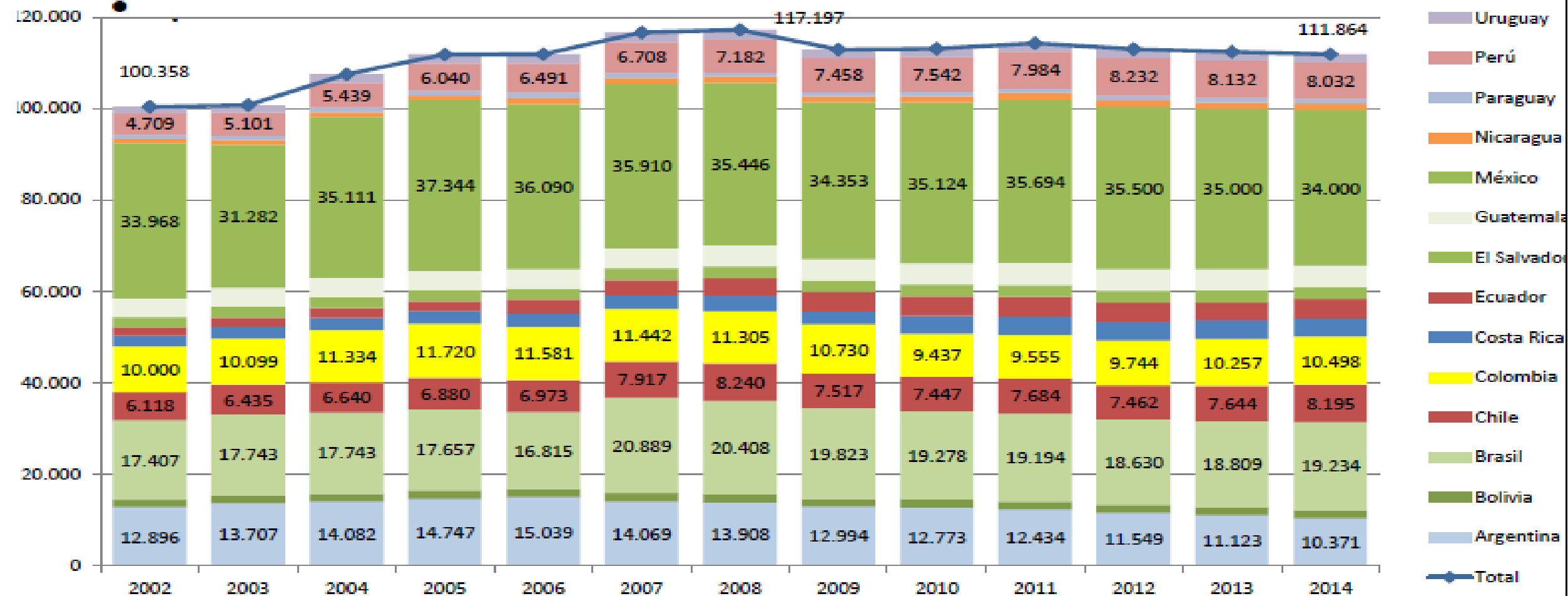
• :

1. Few firms conduct formal R&D
2. Non-technological innovation predominates
3. Key role of ICT
4. Innovation in services is more “open” and based on external cooperation.
5. Dependent on external financing , in particular public support
6. Firms depend on public support for innovation
7. Firms protect intellectual property through informal and ad-hoc mechanisms



## B. – 2 Subdued internationalization

# Low number of (goods) exporting firms



<b>Firm size</b>	<b>Latin America: % of firms that export</b>	<b>Latin America: Contribution to the value of exports (%)</b>	<b>Latin America: Contribution to employment in export sector (%)</b>	<b>(%)European Union: Contribution to the value of exports (%)</b>	<b>European Union: Contribution to employment in export sector</b>
<b>SMEs</b>	<b>0,01</b>	<b>6,1</b>	<b>25</b>	<b>46,6</b>	<b>42</b>
<b>Large</b>	<b>20</b>	<b>94,9</b>	<b>75</b>	<b>53,3</b>	<b>58</b>
<b>Total firms</b>	<b>0,90</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Frohmann and others (2016).

# Internacionalización de las pymes

INNOVACIÓN PARA EXPORTAR

Alicia Frohmann  
Nanno Mulder  
Ximena Olmos  
Roberto Urmeneta



RECHERCHES UNITED

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# **Innovation** and internationalization of **Latin American** services

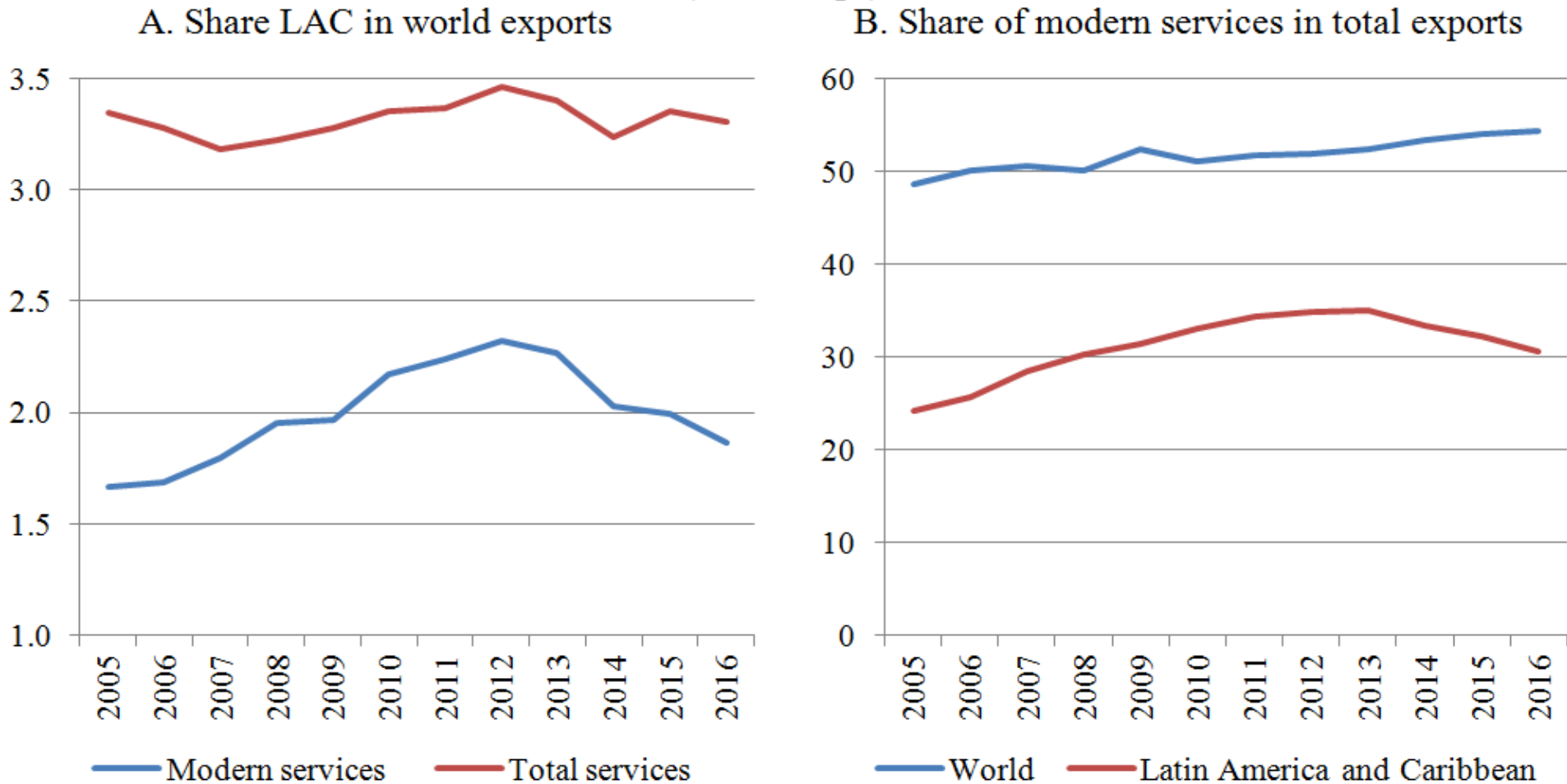
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René A. Hernández • Alfredo Hualde • Nanno Mulder • Pierre Sauvé  
*Editors*

Descargar sin costo en: <http://www.cepal.org/en/publications/40301-innovation-and-internationalization-latin-american-services>

# The region's share in global services exports stagnated. Until 2012 regional exports of modern services grew faster than those of the world

World and Latin America and Caribbean: Shares of Modern and total services, 2005 and 2016  
(Percentage)

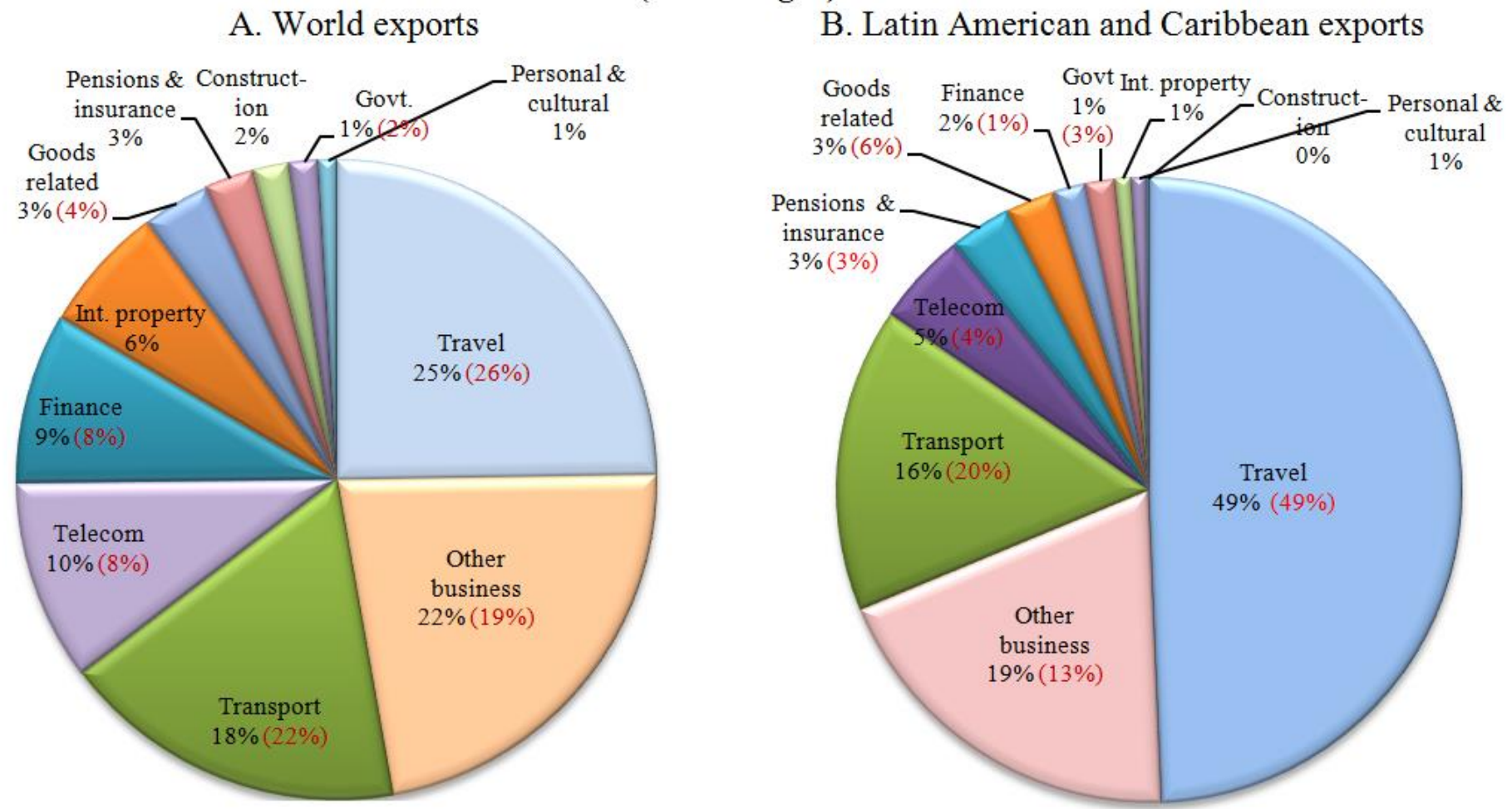


Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of World Trade Organization (WTO), Statistics.



Almost half of the region's exports are concentrated in tourism, whereas several modern services (telecom, finance, other business s) play a small role

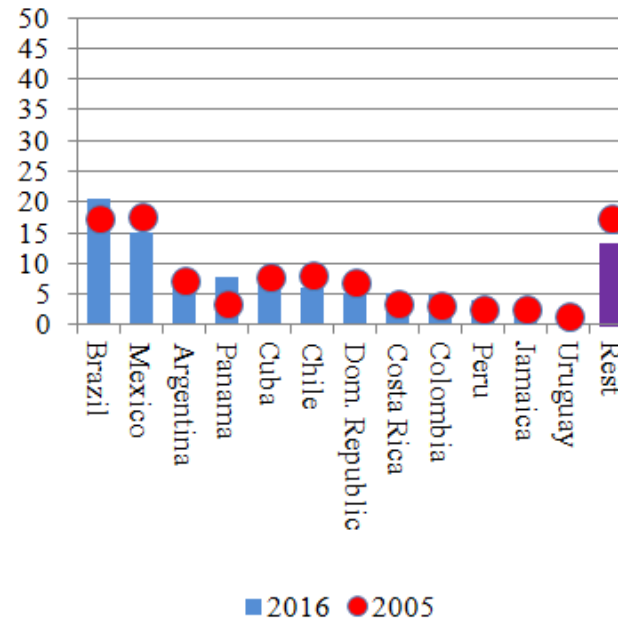
World and Latin America: Main categories of exports and imports, 2005 and 2016  
(Percentages)



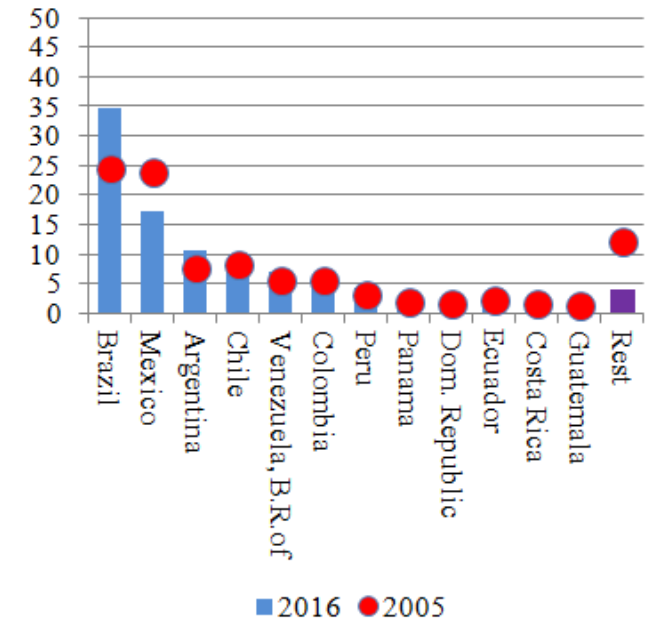
Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of World Trade Organization (WTO), Statistics.

Latin America and Caribbean: Shares of countries in regional total and modern services trade, 2005 and 2016  
and 2016  
(Percentages)

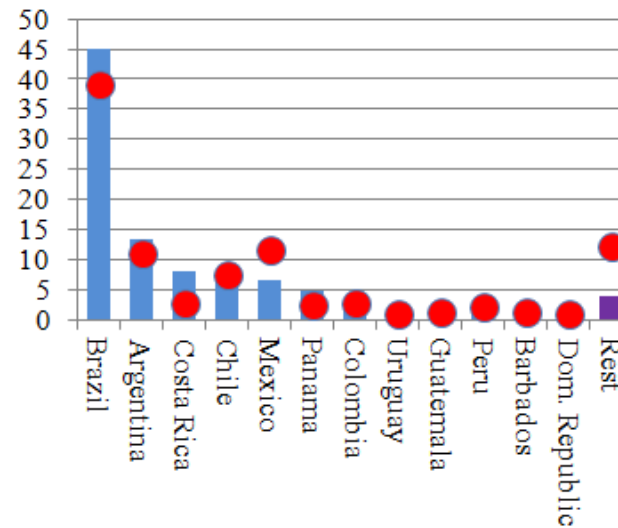
A. Total services: main exporting countries



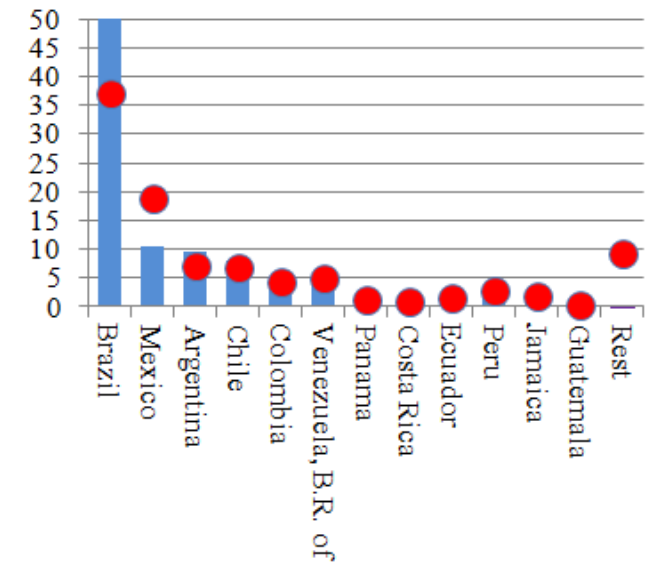
B. Total services: main importing countries



C. Modern services: main exporting countries



B. Modern services: main importing countries



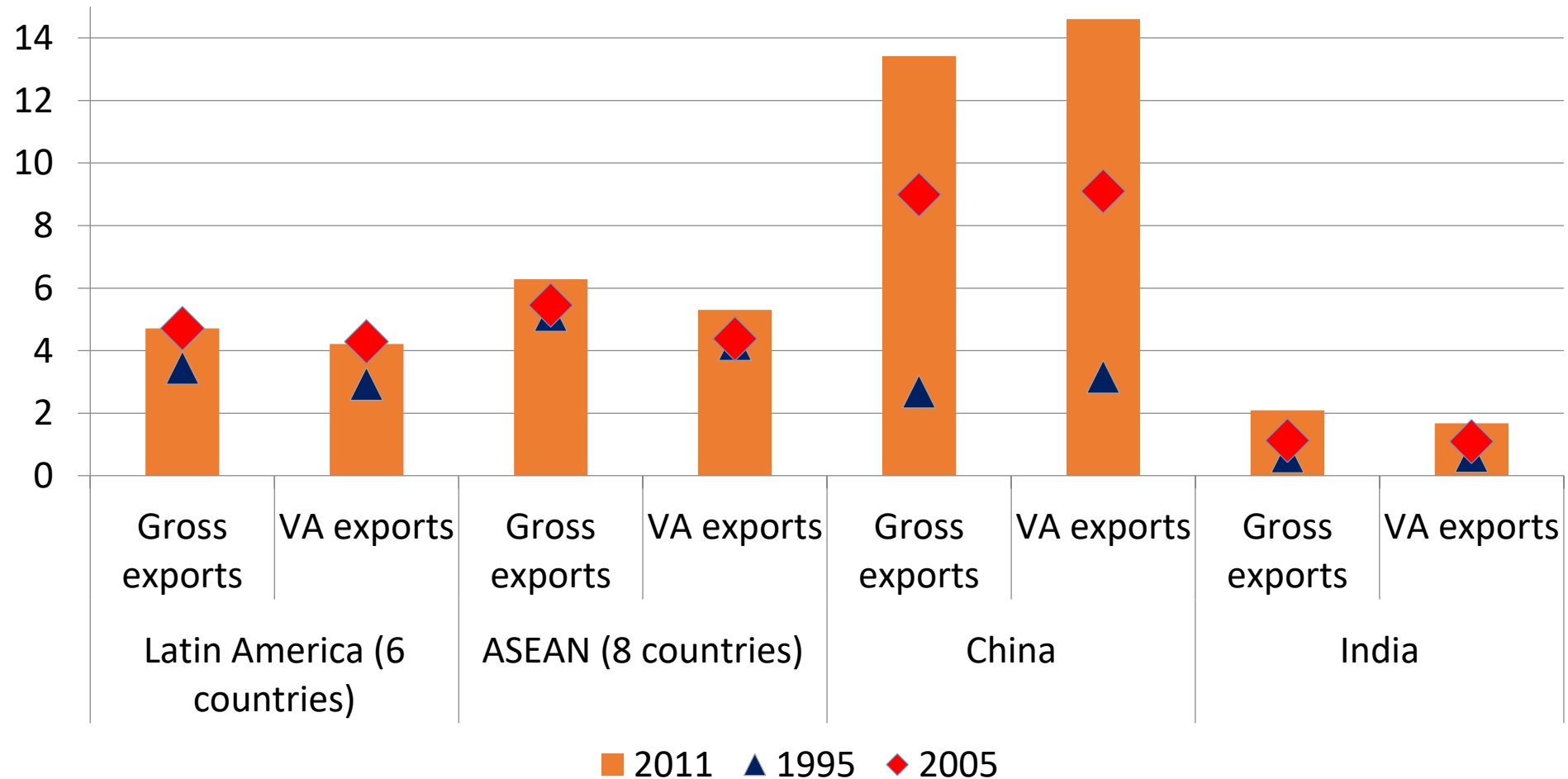
Brazil, Argentina and Costa Rica are the main exporters of modern services; Mexico lost market shares



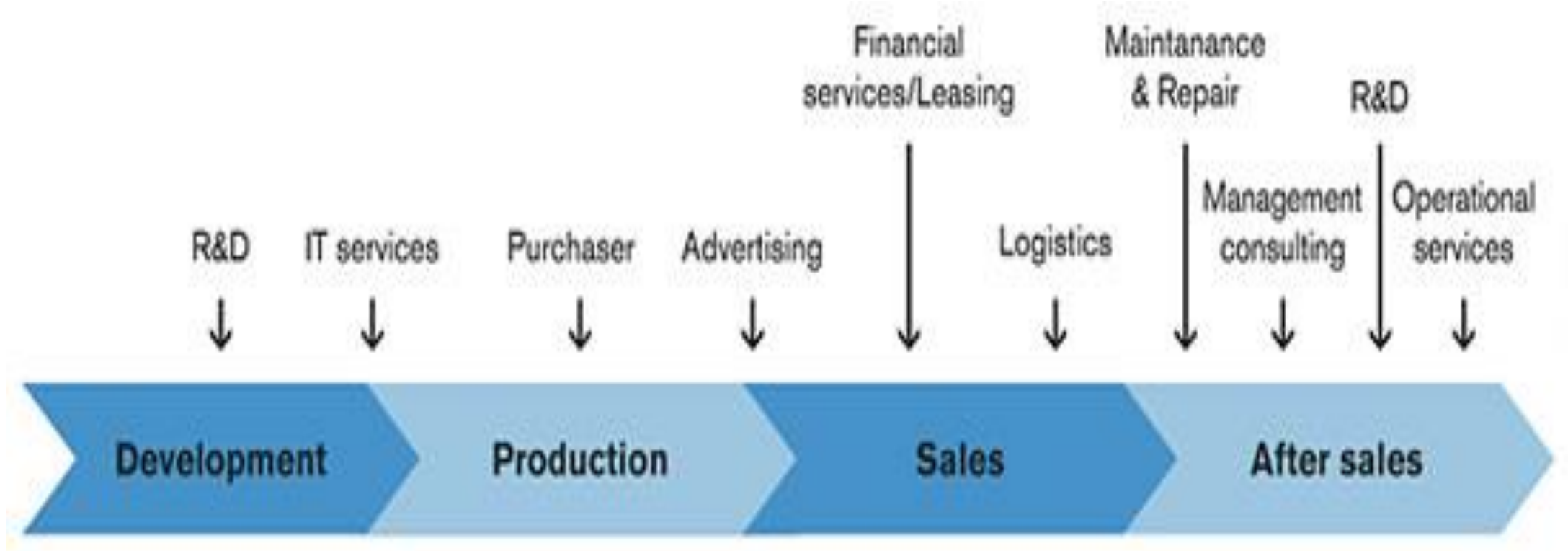
B. Some intermediate services may  
be a drag on manufacturing  
competitiveness

# Why has Latin America's market share in global manufacturing stagnated?

**Latin America, ASEAN, China and India: Participation in world manufacturing exports, 1995-2011**  
(Percentage)

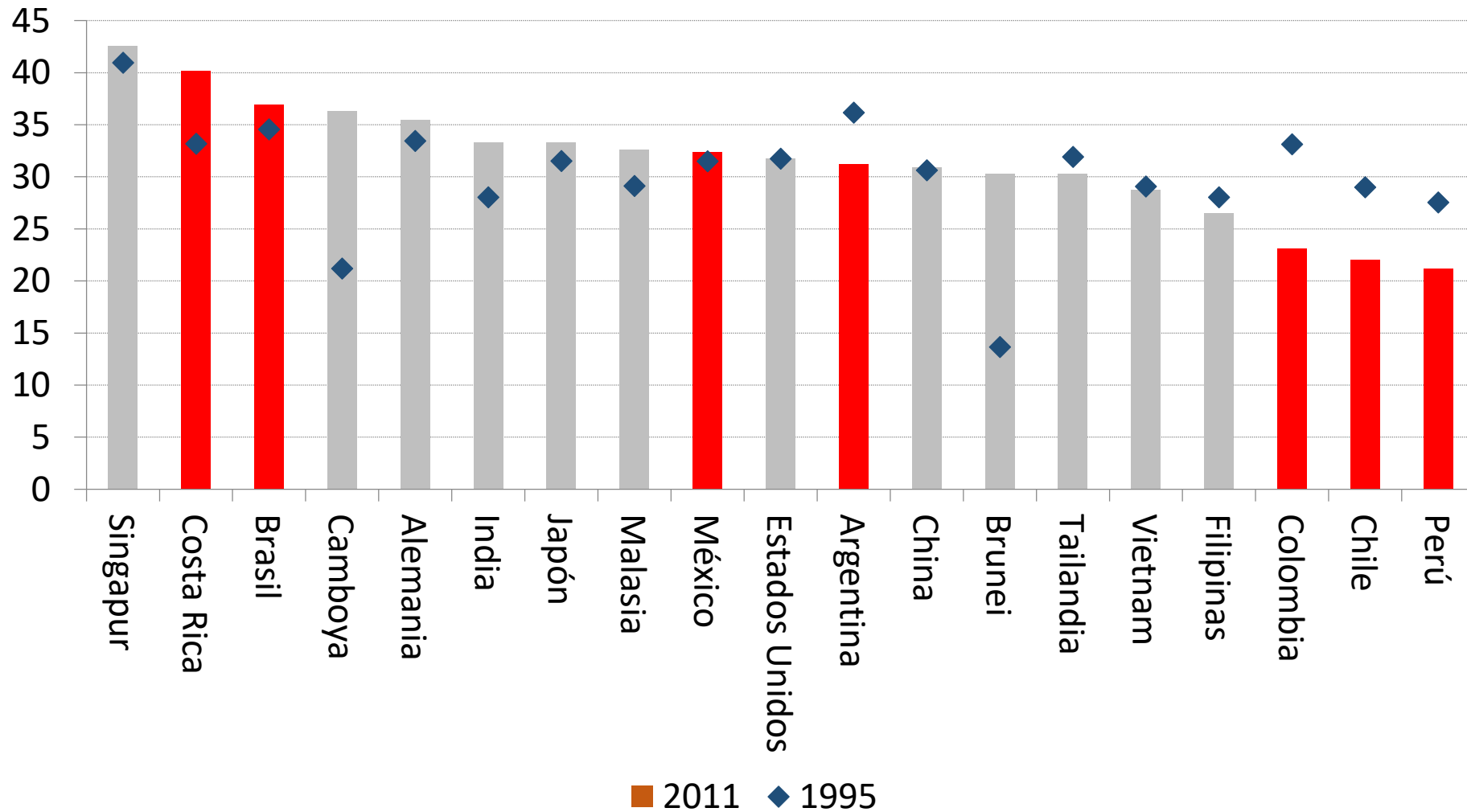


“Cost Services” and “Value services” play a key role in different parts of the manufacturing value chain



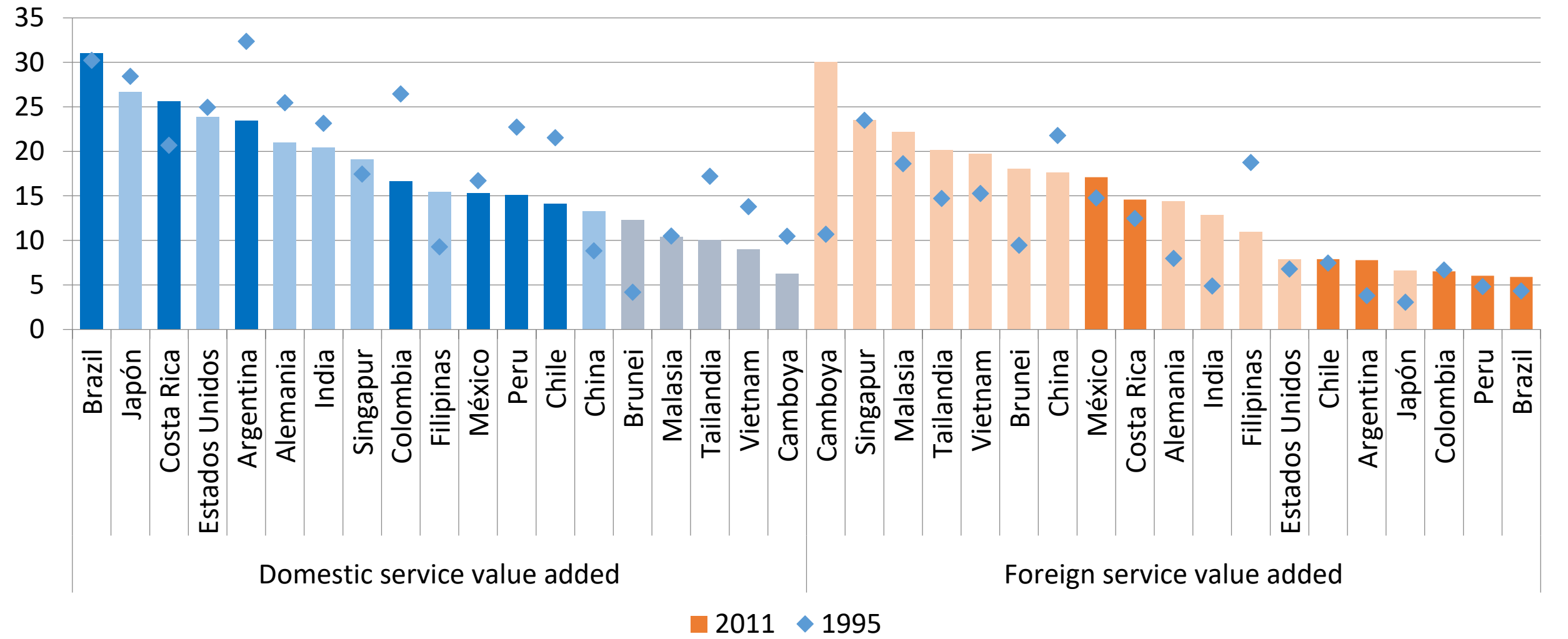
# Latin America does not stand out in terms of a low share of incorporated services

Selected countries: Share of services in gross value of manufacturing exports, 1995 and 2011



# LA manufacturing exports are more intensive in domestic services and less in foreign services

Selected countries: Share of domestic and foreign in gross value of manufacturing exports, 1995 and 2011  
(Percentage)



# Regression results for 61 countries, 1995 to 2011

Dependent variable: % in global exports    Regr 1    Regr 2    Regr 3

## **Control variables**

Lag market share	+++	+++	+++
Product Market Regulation	--	--	--
Cost to Exports	---	---	---
Unit labor cost	+++	+++	+++
FDI stock % of GDP	--	--	--
Exchange rate (REER)	---	---	---
Manufacturing size	n.s.	n.s.	n.s.

## **Other variables**

Domestic services contents	---
Foreign services contents	+++

## **Domestic business services content:**

- Rental of machinery & equipment	+++
- Computer services	n.s.
- R&D and business services	++

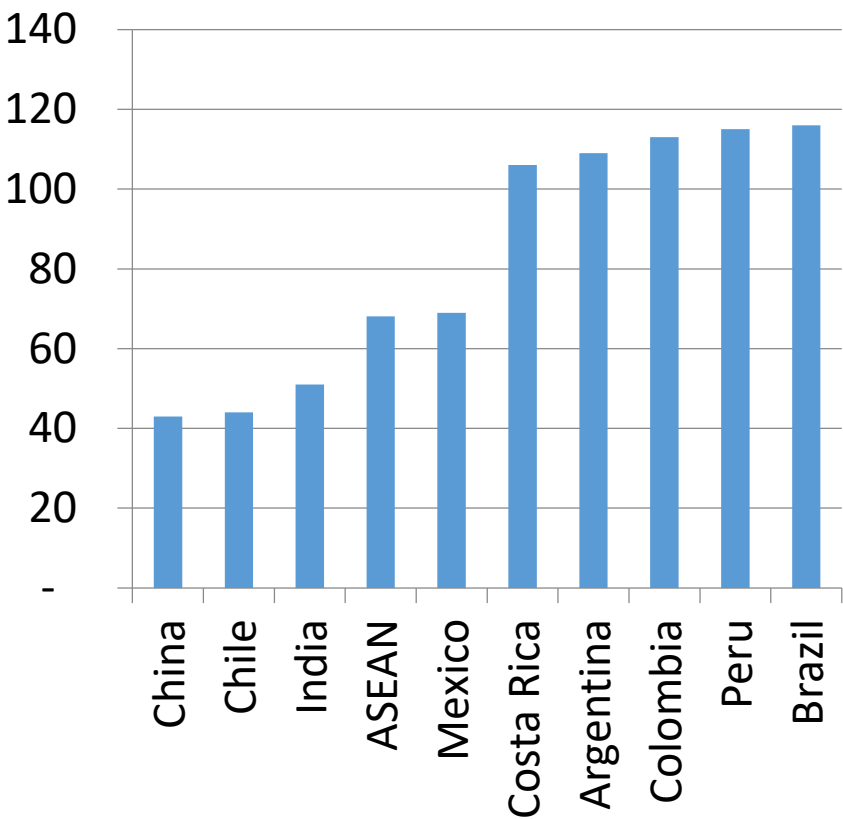
## **Imported business services content:**

- Rental of machinery & equipment	++
- Computer services	---
- R&D and business services	++

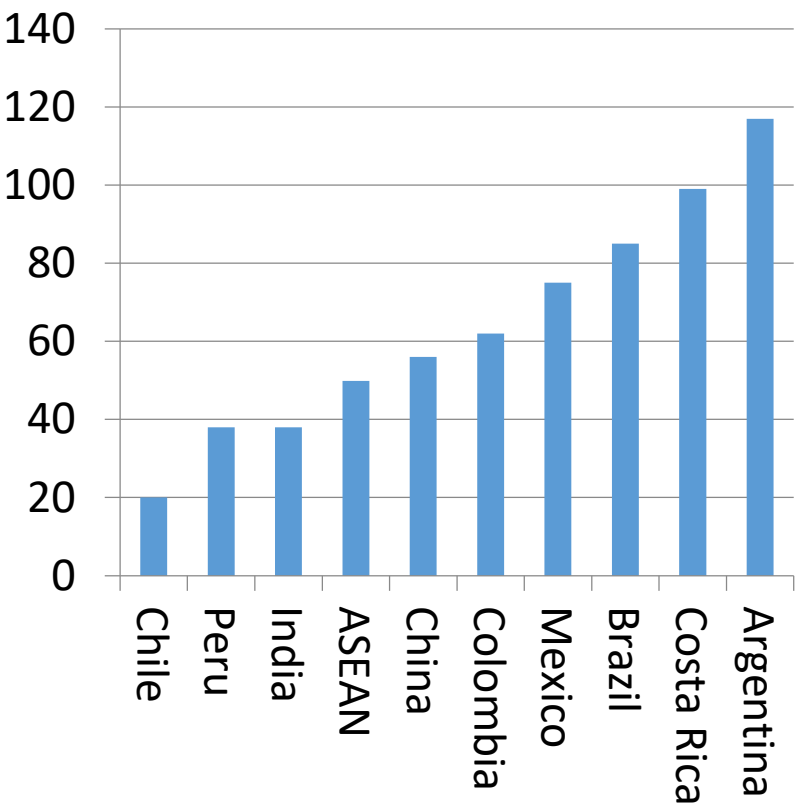
# Poor performance of infrastructure services and access to loans in relation to Asia

Selected Latin American countries, ASEAN and China: Selected services performance indicators, 2016

Infrastructure quality



Ease of access to loans



# Main messages

- Successful manufacturing exporters incorporate multiple intermediate services ...
- ... some reduce costs while others add value
- It seems that some domestic services contribute differently from imported services
- Poor manufacturing export performance is not due to lack of incorporated services
- ... but may be associated to high share of “cost services” (distribution, finance, ...)
- Domestic business services show a significantly positive contribution



C. Public-private policies to  
promote synergies among both

# The region exports few modern services in part because few countries have active strategies

- Export dynamism depends heavily on **active policies**
- A **private public strategy** is required for clear objectives
- The main factor is **human capital**:
  - Adjust the academic supply to the demand of the modern service sectors
  - **Specialized courses** and certification can help in this process
- Several countries adopted **favorable tax treatment** with treaties to avoid double taxation
- Key Role of **Export Promotion and attracting FDI**
- Importance of promoting **the digital ecosystem**, especially among firms
- As the regional market is key, it is necessary to **re-activate subregional integration agendas** and incorporate requirements of the 21st century

# Examples of countries that actively promote global services exports: Chile, Colombia, Mexico, Peru, Uruguay



Plan Estratégico Nacional Exportador

Programa de Servicios Globales



Thank you

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RESER, 9 September 2017