

# Productivity and Varieties of Structural Change in Latin America

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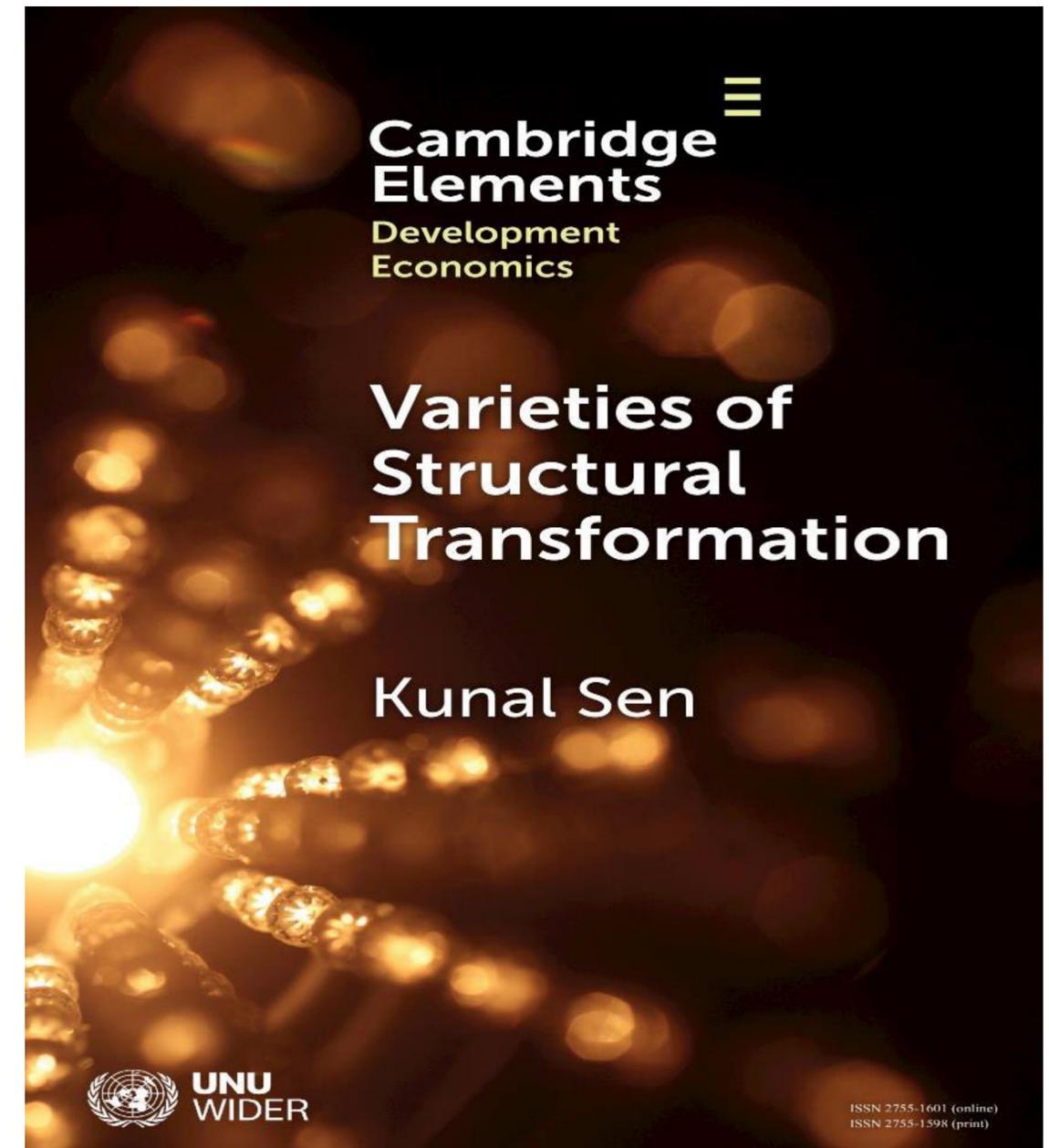
Director, UNU-WIDER



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# Structural Transformation and Economic Growth

- A key feature of modern economic growth is the movement of workers from agriculture to manufacturing and services (Kuznets and Murphy, 1966; Chenery and Taylor, 1968; Timmer, 2013).
- Usually, accompanied by large increases in aggregate productivity.
- The movement of workers from agriculture to manufacturing, and then to services is the path of structural transformation that has been witnessed in all countries which comprise the high-income club as well as the successful growth experiences of East Asia.
- A key concern is that Latin America has not traversed this path of structural transformation in the same way as the high growth economies of East Asia.
- **THE BOOK IS AVAILABLE OPEN ACCESS ON UNU-WIDER'S WEBSITE.**



# LAC versus the Rest of the Developing World

- How is LAC's pattern of structural transformation different from other developing regions?
- Are there successful sectors? Which ones are they?
- How does LAC fare in sectoral productivity levels as compared other developing regions?
- Do we see different patterns of structural transformation *within* the LAC region? Does it make sense to talk of one region?

# Manufacturing vs Business Services Driven Structural Transformation

- **One set of questions around employment.**
- Do we observe premature de-industrialisation in LAC? Can Manufacturing still provide the route to structural transformation?
- Can Business Services provide a different route to structural transformation?
- Business Services is as productive as manufacturing and has some of the properties that we observe in manufacturing – scale economies, spillover effects, tradability.
- “Services is the new manufacturing” (Baldwin and Forslid 2019). Tradable services positively correlated with income (Inklaar et al. 2023)
- **Another set of questions around productivity.**
- Has productivity growth in LAC lagged behind?
- Are there successful and laggard countries in LAC?

## SUPPLY CHAINS

# Why Latin America Lost at Globalization—and How It Can Win Now



BY SHANNON K. O'NEIL  
JULY 26, 2022

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## Why are Latin American workers so strikingly unproductive?

# Data

- A key challenge that researchers faced in examining patterns of structural transformation in the developing world was the lack of reliable data on sectoral employment and value-added that is comparable across countries and over time.
- Most previous studies used the Groningen 10 sector database, which covers 33 countries from Asia, Africa, LAC and MENA for 1950-2012, plus US and Europe. Several LICs missing, and data does not cover 2010s.
- We use the newly launched GGDC/UNU-WIDER Economic Transformation Data-base (ETD). The ETD provides time-series of employment and real and nominal value added by twelve sectors in fifty-one countries for the period 1990–2018.
- It includes twenty Asian, nine Latin American, four Middle East and North African (MENA), and eighteen sub-Saharan African countries/economies at varying levels of economic development.
- The ETD is constructed from an in-depth investigation of the availability and usability of statistical sources on a country-by-country basis.
- The ETD is a new dataset; it is not an update of time series in an existing sectoral dataset.
- The ETD has the best coverage of low-income developing countries among all available data-sets, distinguishes twelve sectors in the ISIC revision 4 classification, and has time series data that run until 2018.

# Countries included in ETD

## *Countries included:*

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Developing Asia (14)	Bangladesh, Cambodia, China, India, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Viet Nam
Advanced Asia (6)	Hong Kong (China), Israel, Japan, Korea (Rep. of), Singapore, Chinese Taipei
Latin America (9)	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Peru
Middle East and North Africa (4)	Egypt, Morocco, Tunisia, Turkey
Sub-Saharan Africa (18)	Botswana, Burkina Faso, Cameroon, Ethiopia, Ghana, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Rwanda, Senegal, South Africa, Tanzania, Uganda, Zambia

# 12 Sectors, Real Valued Added and Total Employment, 1990-2018

# of sectors	Brief description (ISIC rev. 4)
1.	Agriculture (A)
2.	Mining (B)
3.	Manufacturing (C)
4.	Utilities (D+E)
5.	Construction (F)
6.	Trade services (G + I)
7.	Transport services (H)
8.	Business services (J + M + N)
9.	Financial services (K)
10.	Real estate (L)
11.	Government services (O + P + Q)
12.	Other services (R + S + T + U)

# Non-Manufacturing Industry, Business and Non-Business Services

- Non-manufacturing Industry: Mining, Utilities and Construction
- Business Services: Business and Financial Services (mostly tradable)
- Non-business Services; Trade, Transport, Govt Services and Other Services
  
- We drop real estate in our analysis

# A Typology

## Structurally Underdeveloped

- Agriculture is still the largest sector in terms of the share of employment in the most recent time period available.
- In our sample, these countries are Burkina Faso, Bangladesh, Cambodia, Cameroon, Ethiopia, India, Kenya, Lao PDR, Malawi, Mozambique, Myanmar, Nepal, Nigeria, Pakistan, Rwanda, Tanzania, Uganda, Vietnam, and Zambia.
- These countries are in Asia and sub-Saharan Africa.

## Structurally Developing and Developed

- **Structurally Developing**
- More people are employed in the services sector than agriculture, with agriculture being the second largest sector.
- These countries are **Bolivia**, Botswana, China, **Colombia**, **Costa Rica**, **Ecuador**, Egypt, Ghana, Indonesia, Lesotho, Morocco, Namibia, Philippines, **Peru**, Senegal, Sri Lanka, Thailand, Turkey, and South Africa.
- These countries span all three continents – Africa, Asia and Latin America.
- **Structurally Developed**
- The final set of countries has more people employed in manufacturing sector than agriculture.
- These countries in the sample are **Argentina**, **Brazil**, **Chile**, Hong Kong, Israel, Japan, Malaysia, Mauritius, **Mexico**, Singapore, South Korea, Taiwan, and Tunisia.
- These countries are either in East Asia or Latin America (with the exception of Mauritius, which is in Africa).

# Group Characteristics

**Table 3** Selected characteristics by stage of structural transformation (ST), country groups (means)

<b>ST Groups</b>	<b>Exports (% of GDP)</b>	<b>Manufacturing Exports (% of GDP)</b>	<b>Gross Capital Formation (% of GDP)</b>	<b>GDP per capita (PPP, 2017 US\$)</b>	<b>Population (millions)</b>
Underdeveloped	26.8 (18.6)	9.1 (15.8)	27.2 (8.1)	3355.4 (1565.5)	123.9 (281.7)
Developing	31.1 (12.4)	12.9 (11.6)	26.5 (6.9)	11035.7 (5050.9)	118.8 (315.5)
Developed	62.2 (64.4)	31.3 (27.6)	23.0 (3.5)	32585.7 (18550.9)	49.9 (61.9)

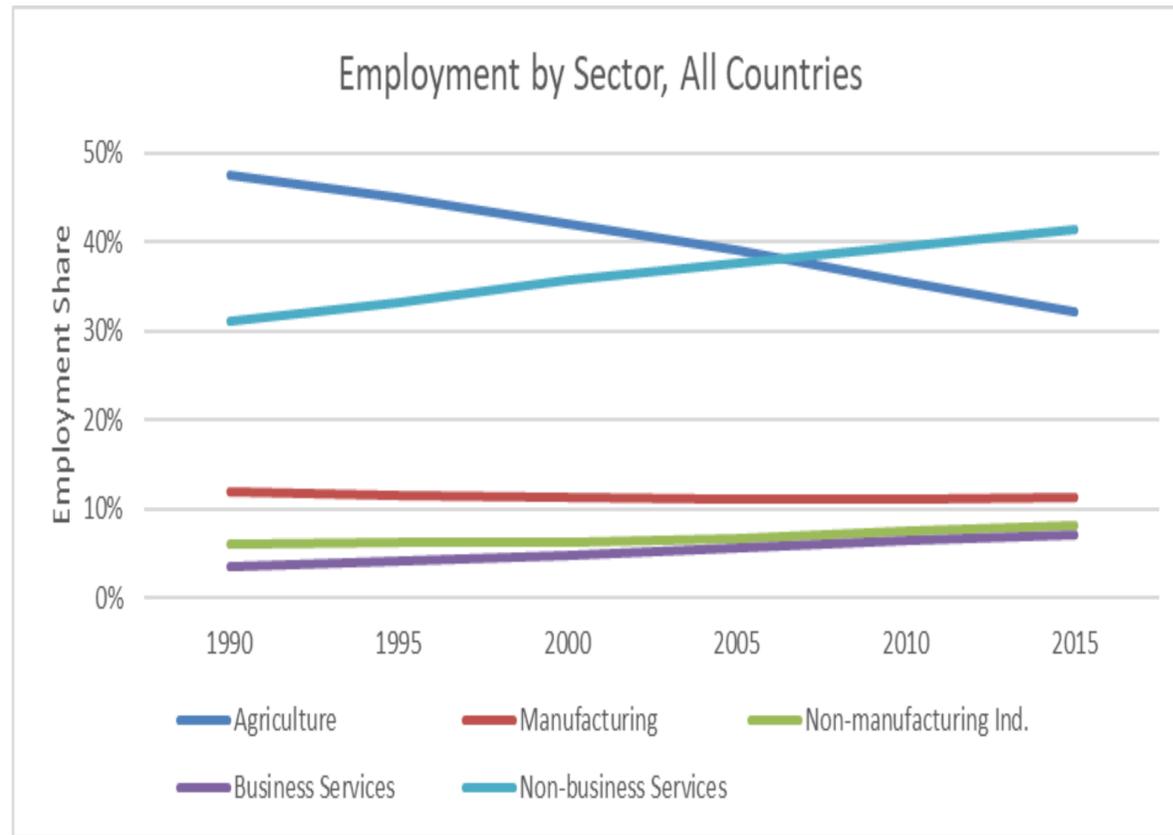
**Note:** standard deviations in parentheses.

**Source:** author's calculations, from World Bank's *World Development Indicators*.

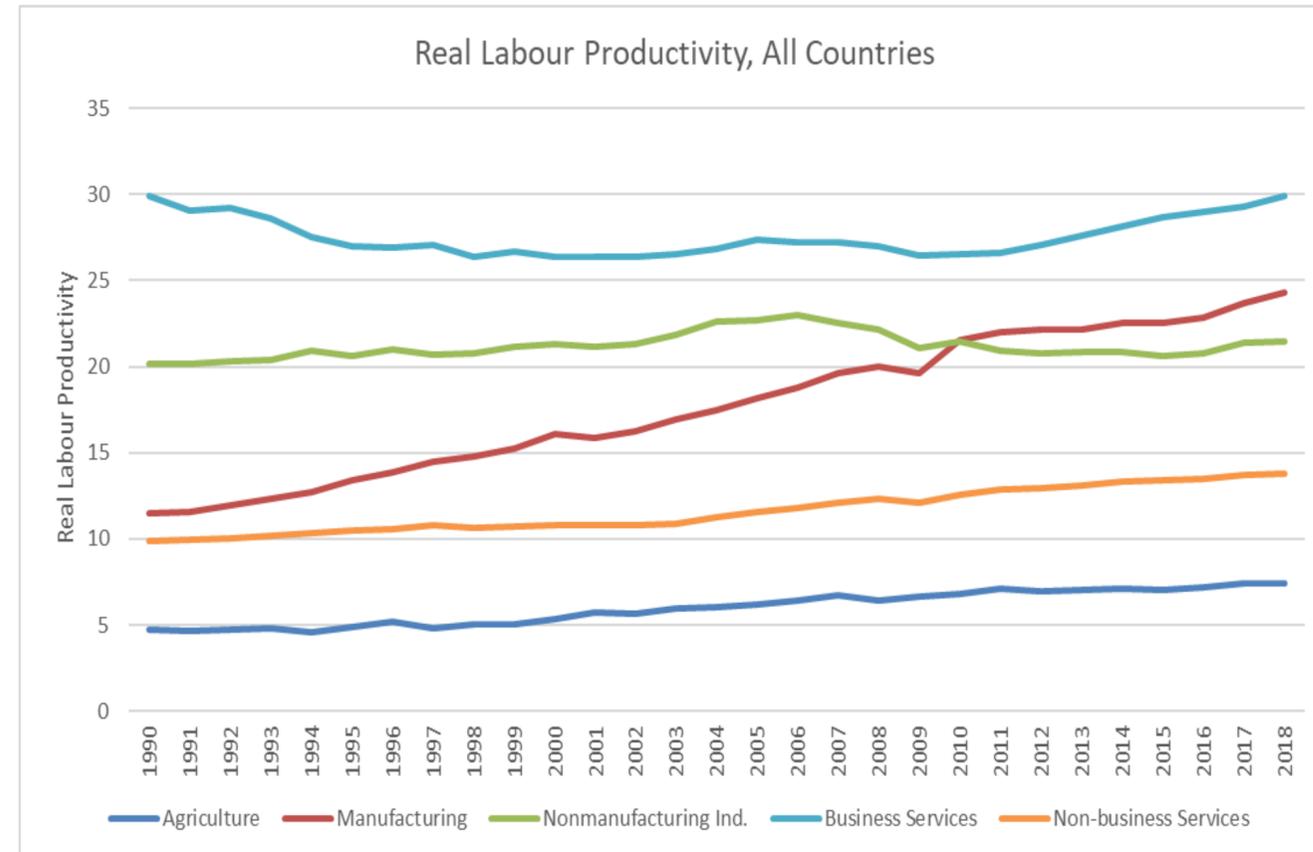
# Patterns of Structural Transformation

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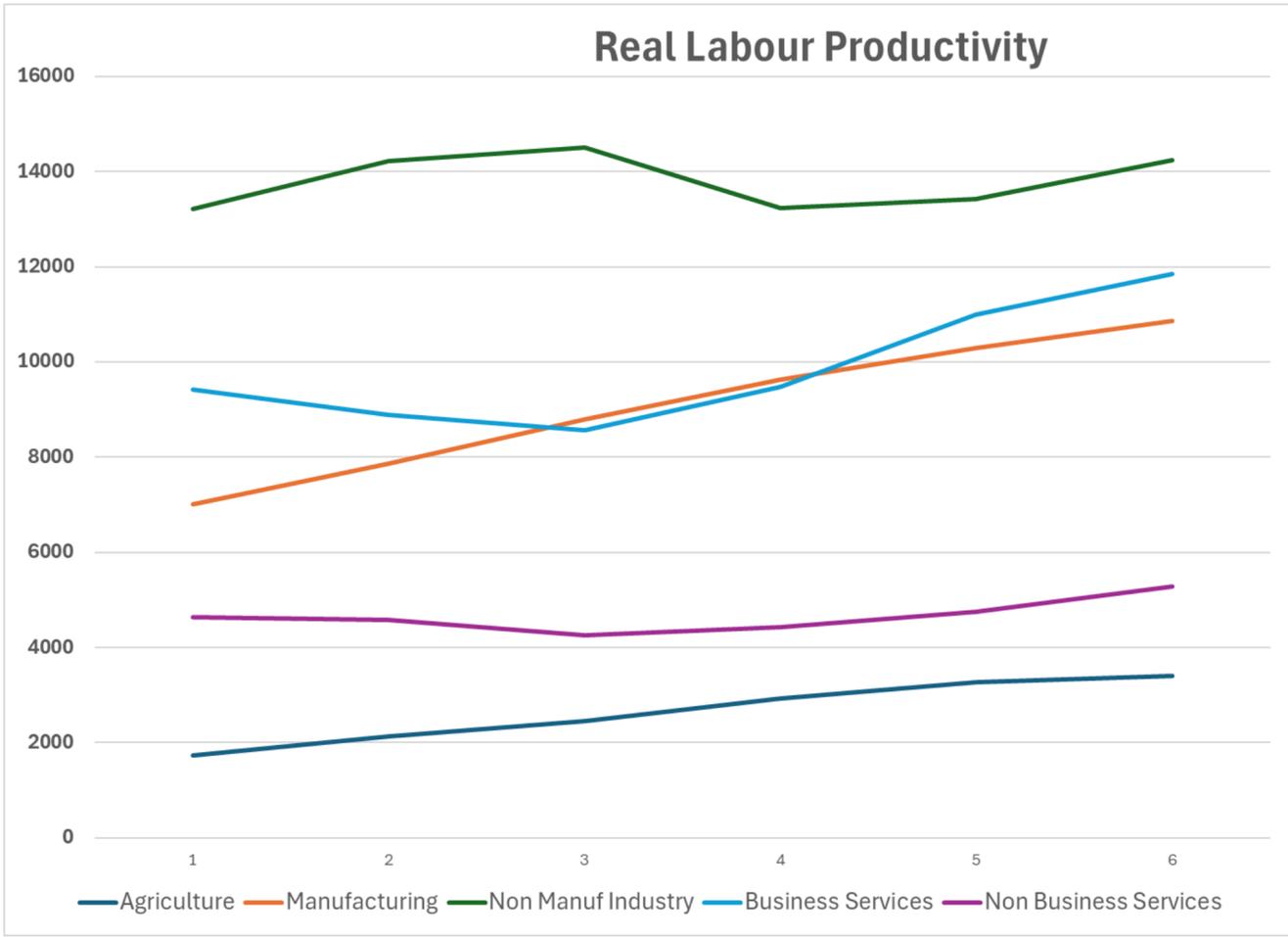
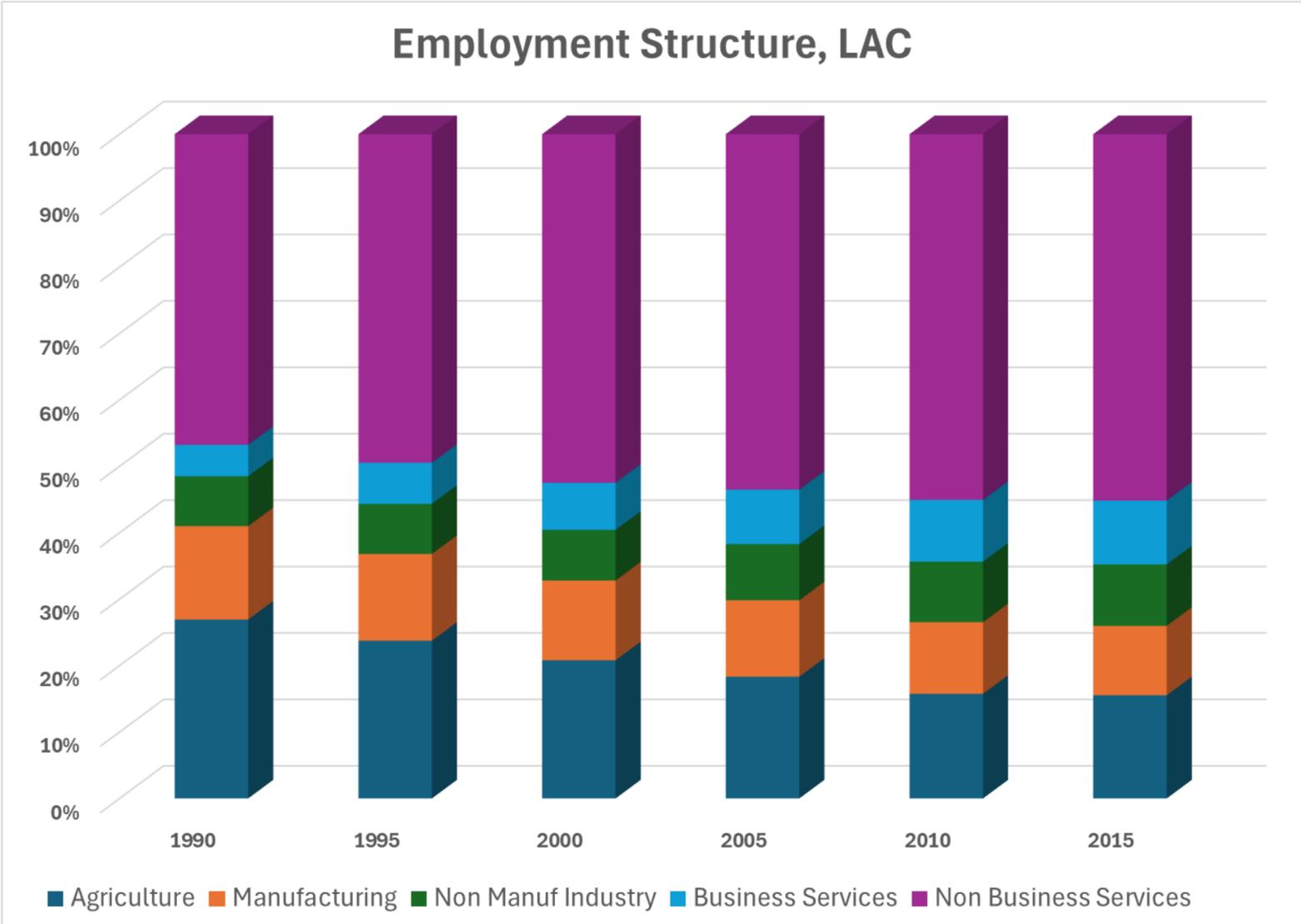
## Employment



## Real Labour Productivity

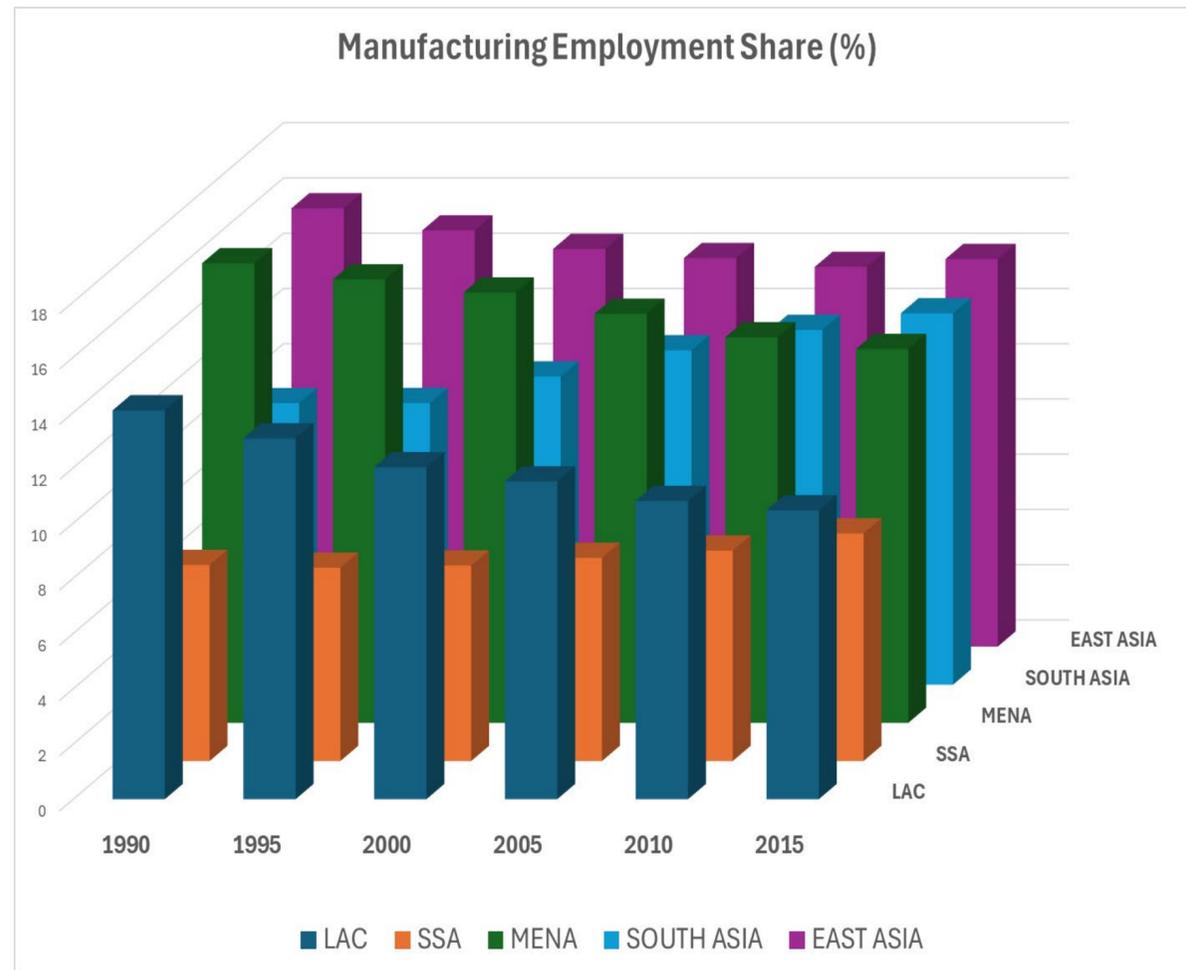


# Employment Structure and Productivity Levels, LAC

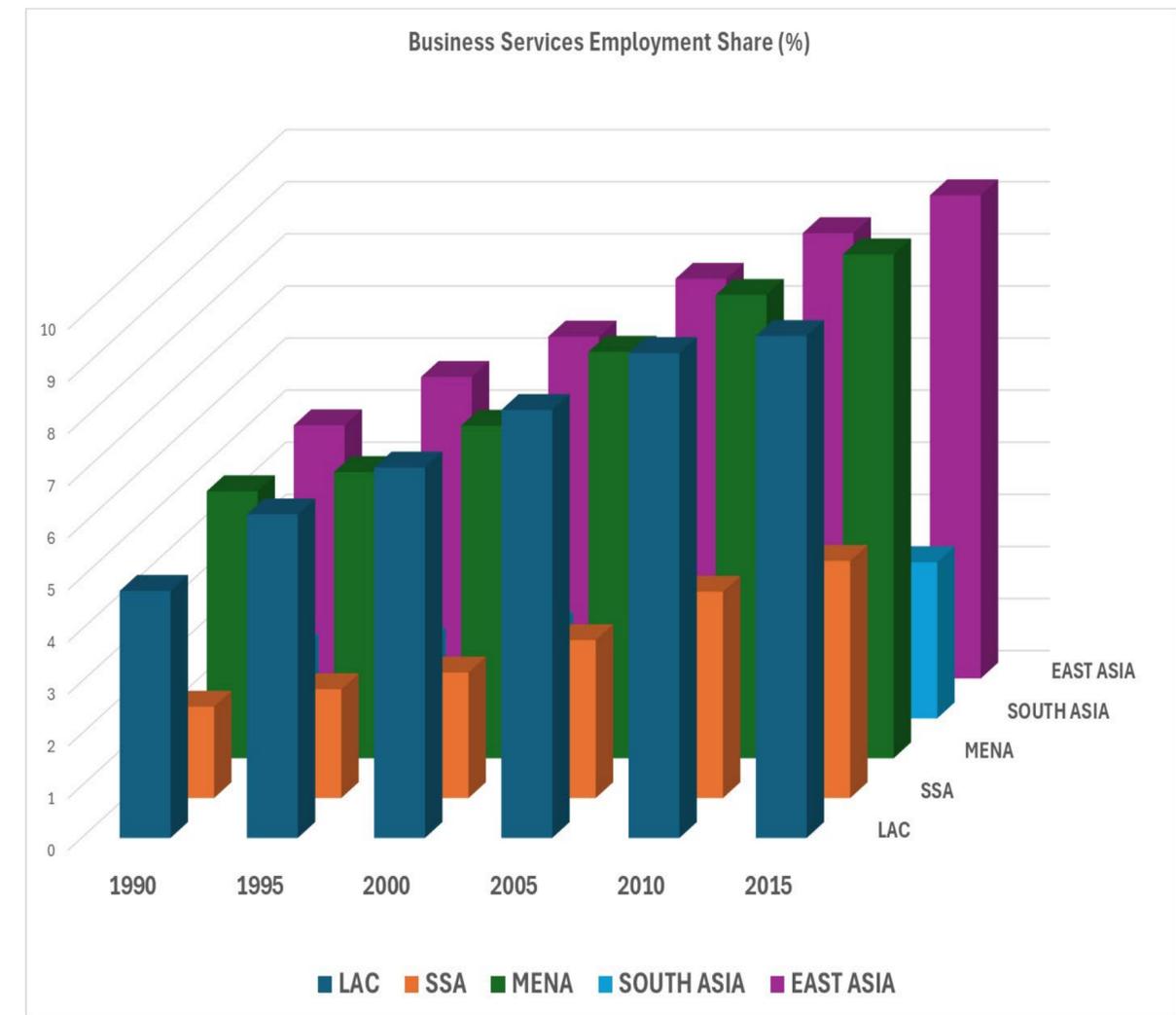


# LAC vs the Rest: Employment

## Manufacturing Employment Share

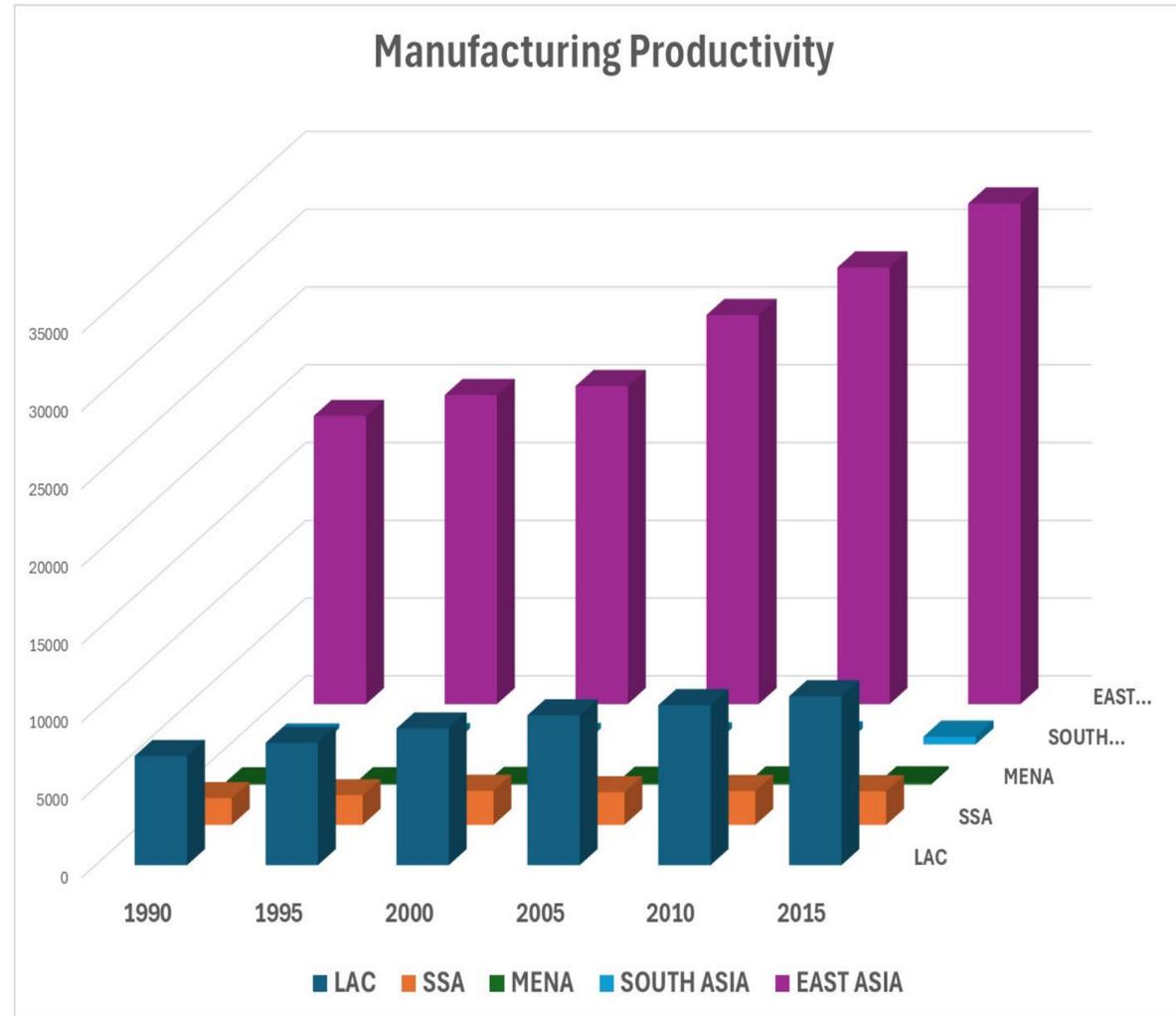


## Business Services Employment Share

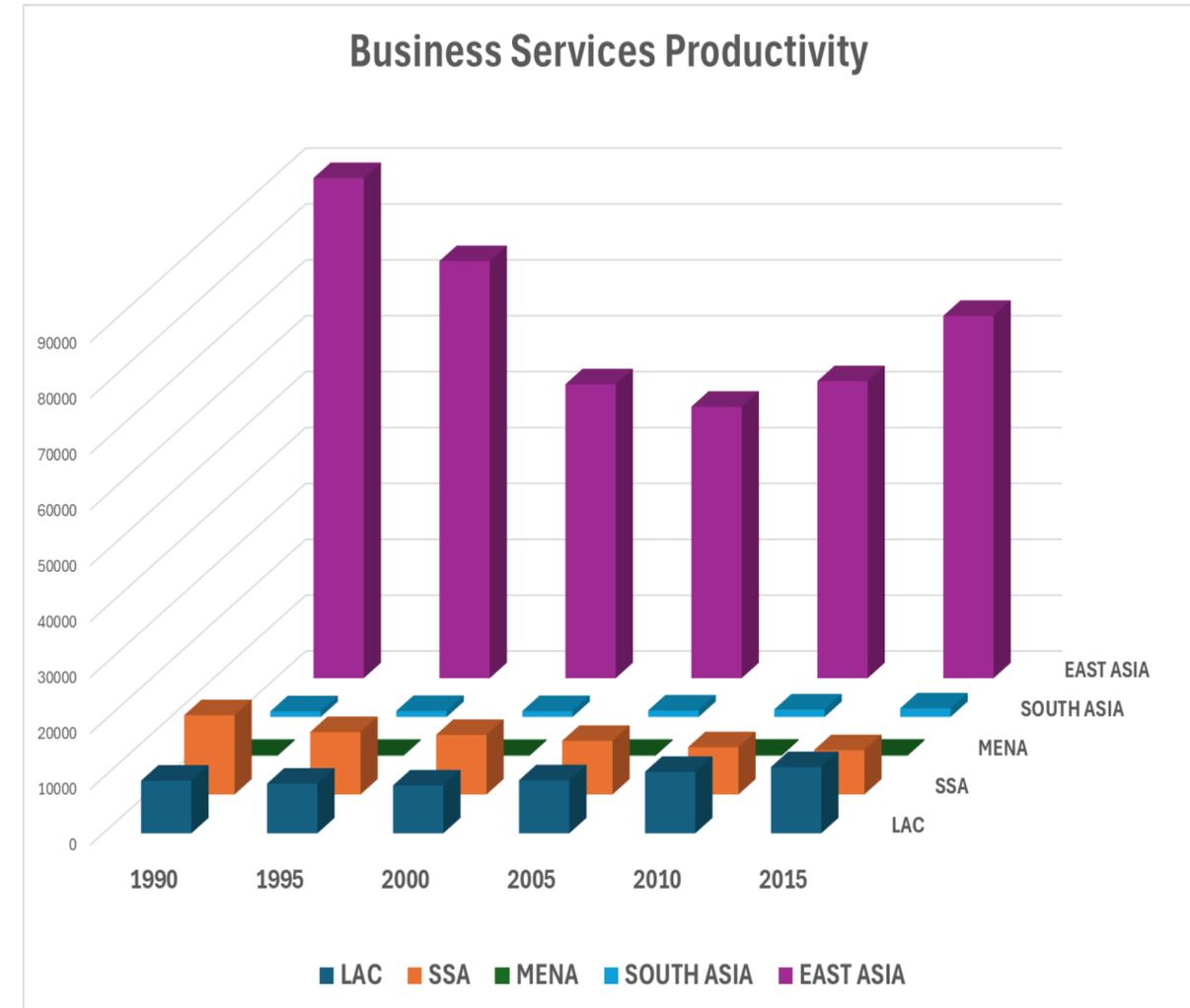


# LAC vs the Rest: Labour Productivity

## Manufacturing Labour Productivity



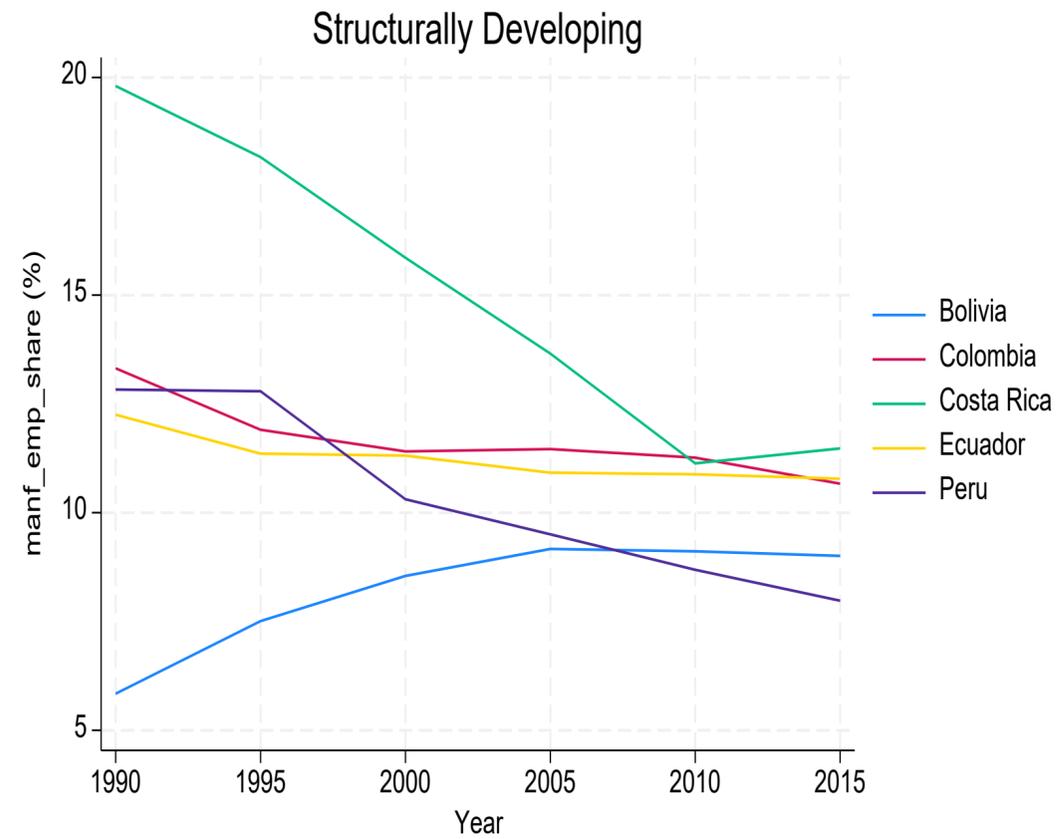
## Business Services Labour Productivity



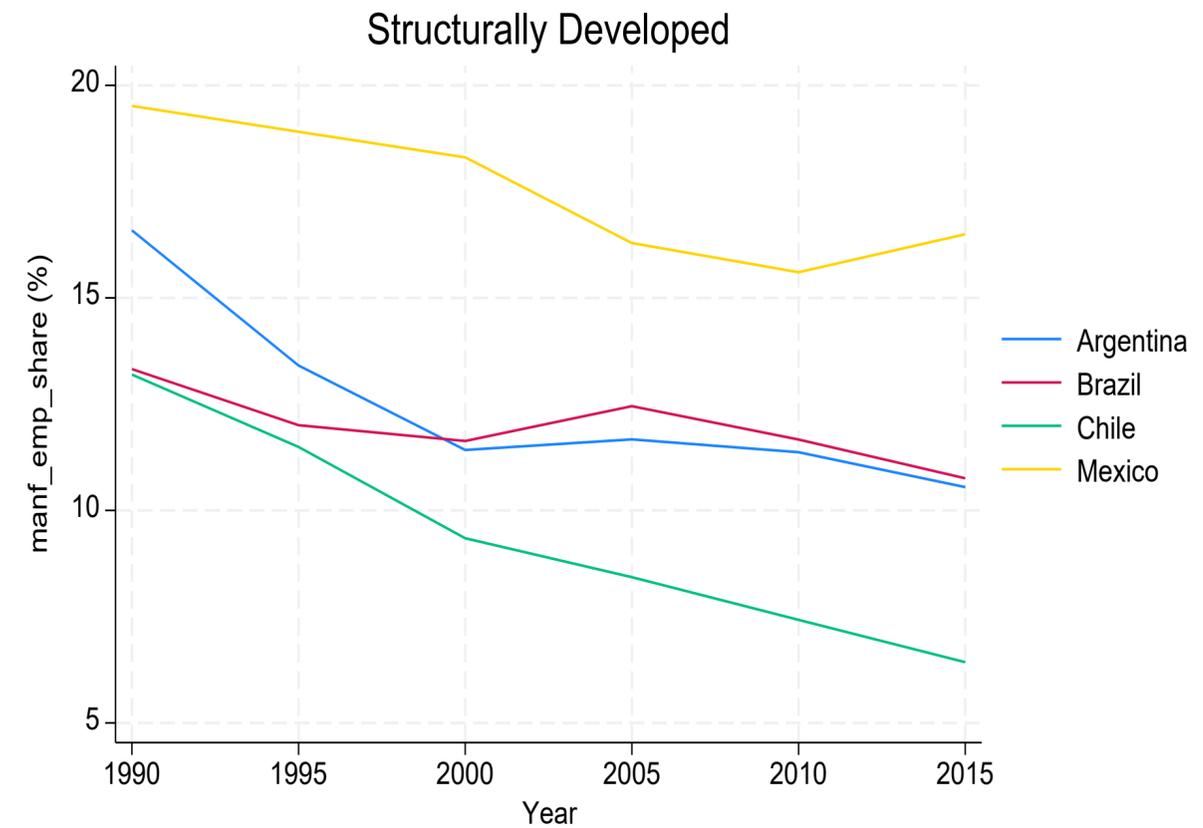
# Country Level Analysis

# Manufacturing Employment Share

## Structurally Developing

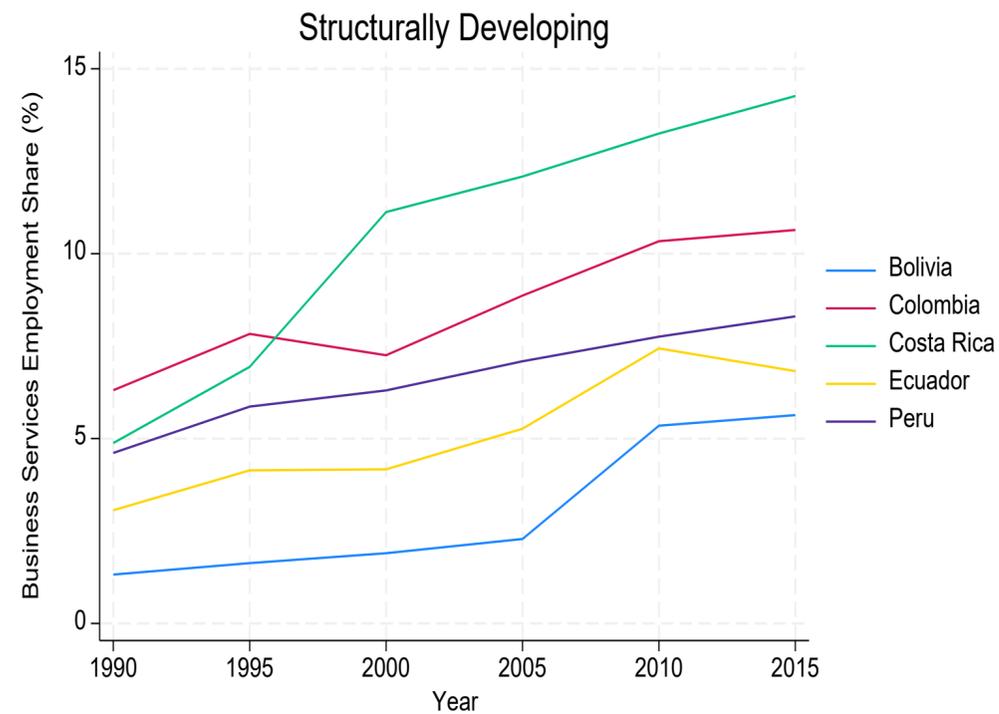


## Structurally Developed

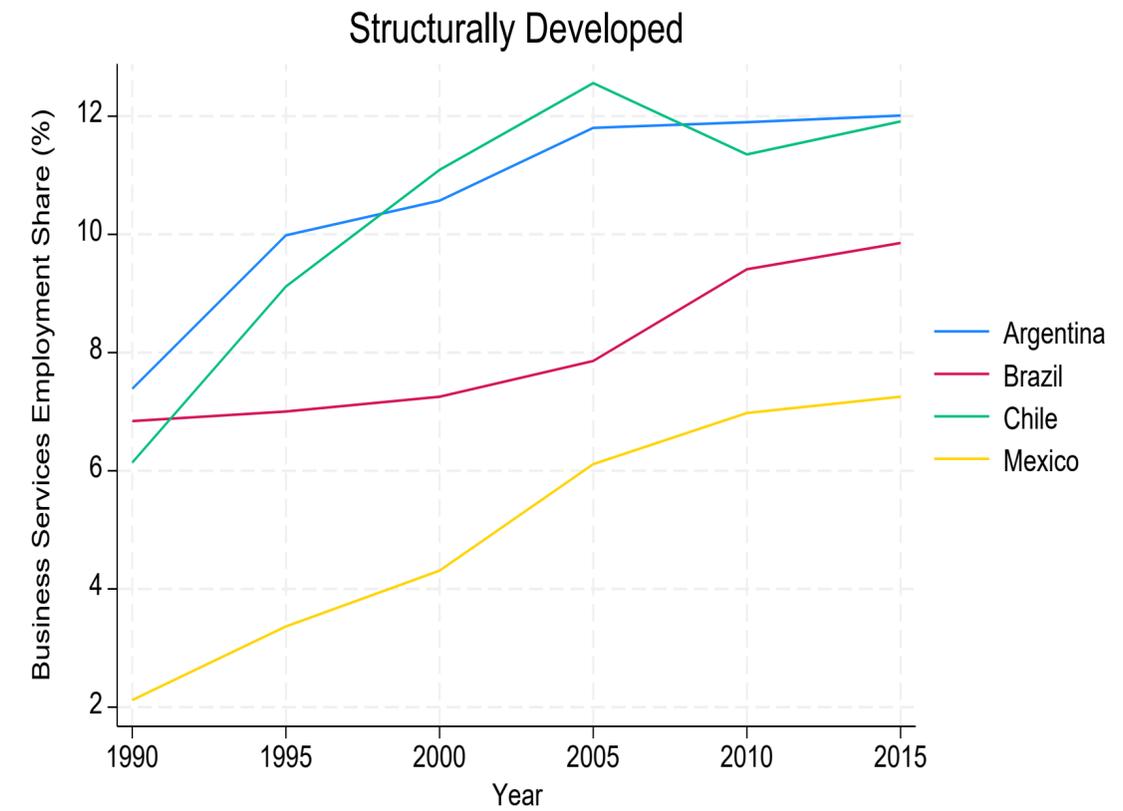


# Business Services Employment Share

## Structurally Developing

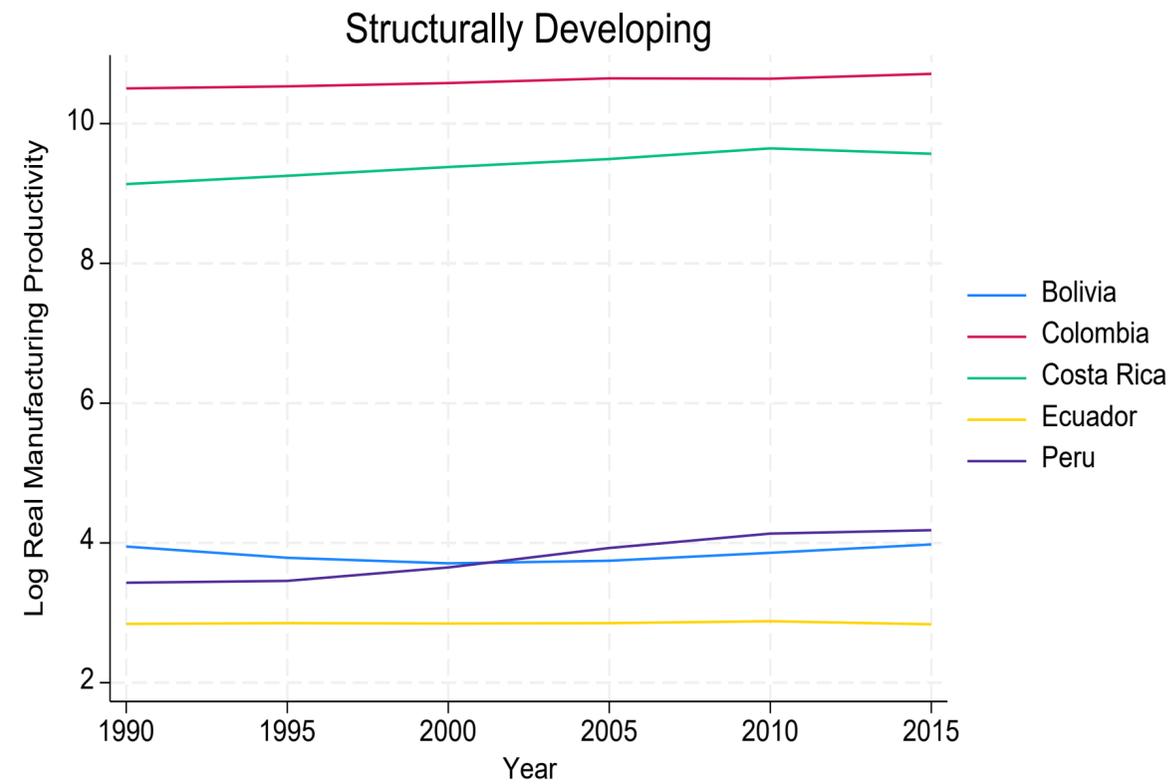


## Structurally Developed

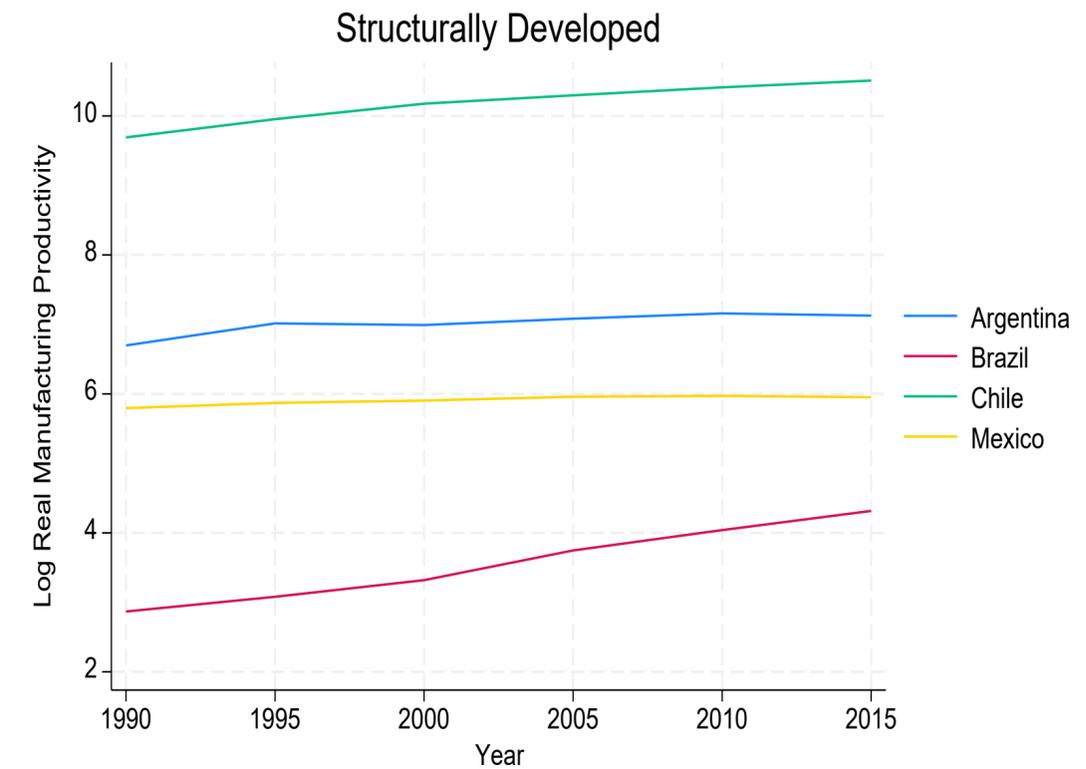


# Manufacturing Productivity

## Structurally Developing

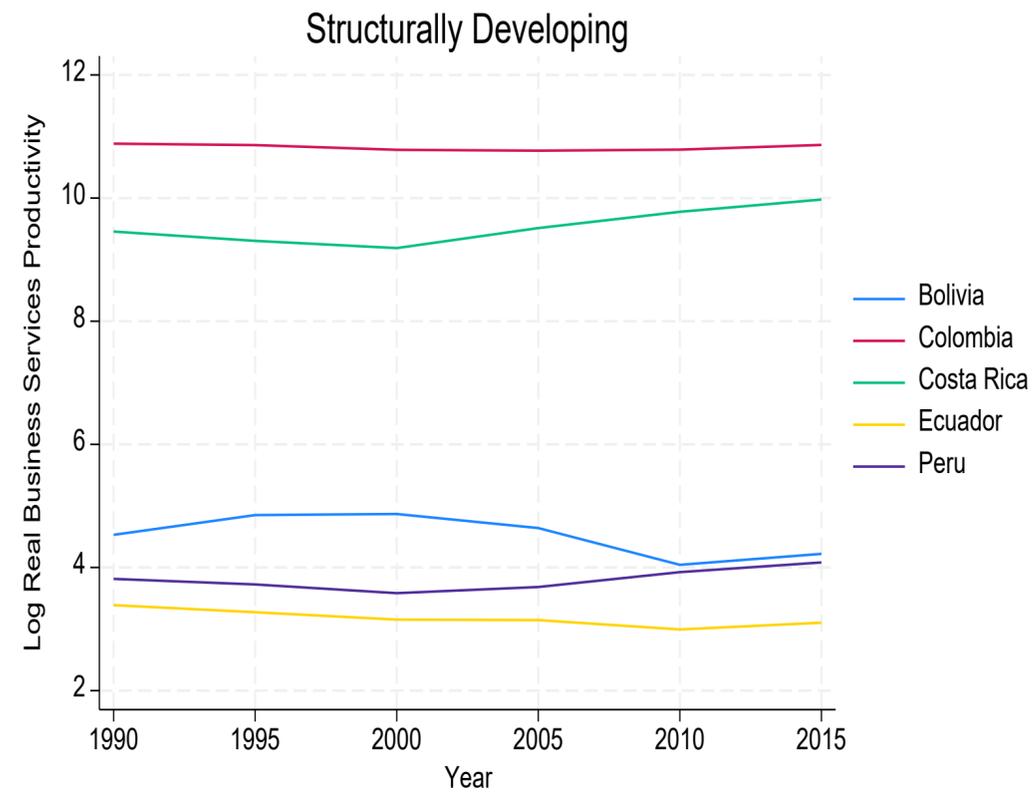


## Structurally Developed

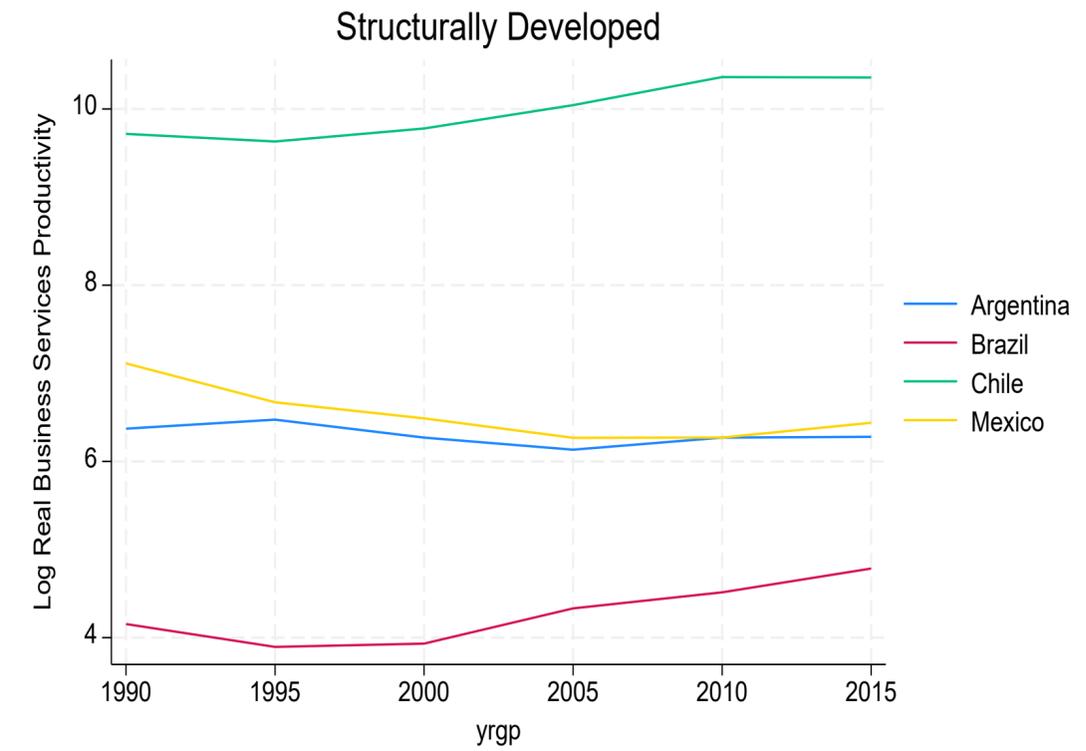


# Business Services Productivity

## Structurally Developing

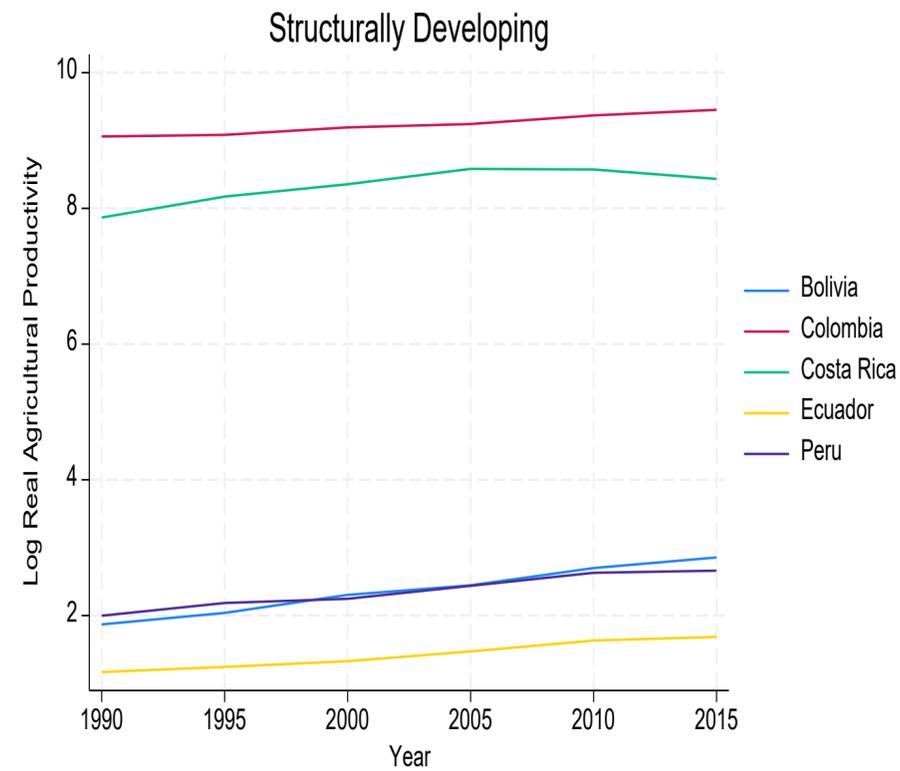


## Structurally Developed

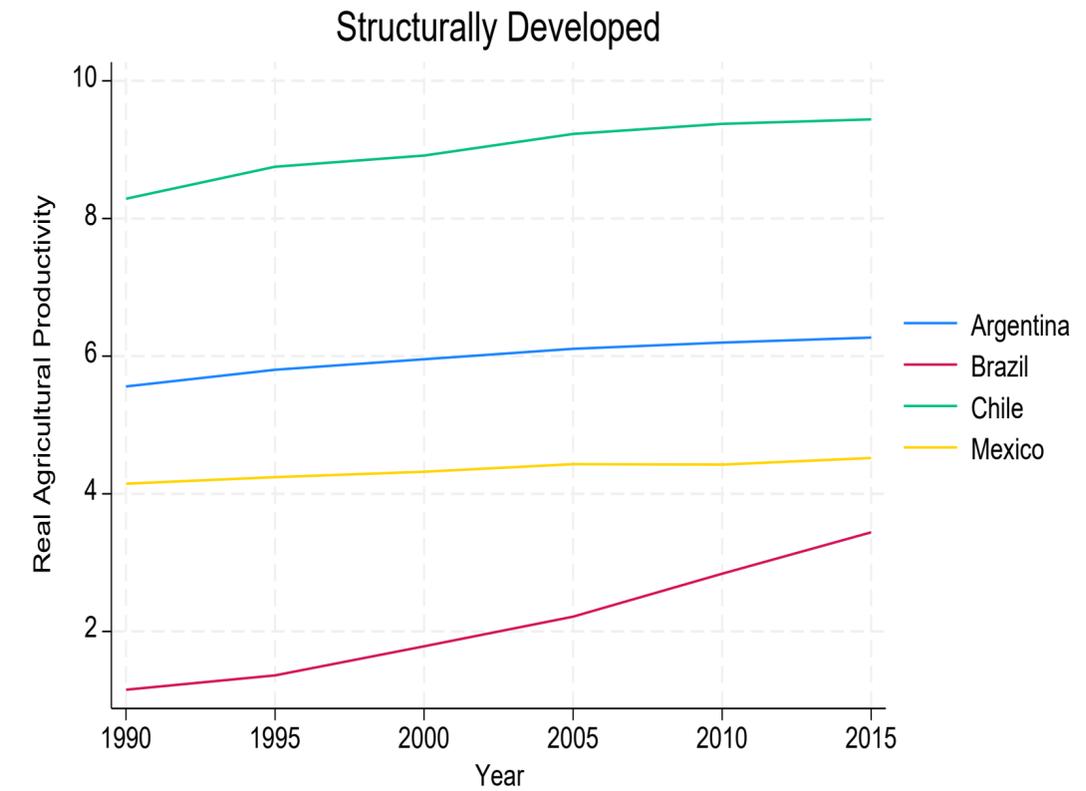


# Agricultural Productivity

## Structurally Developing



## Structurally Developed

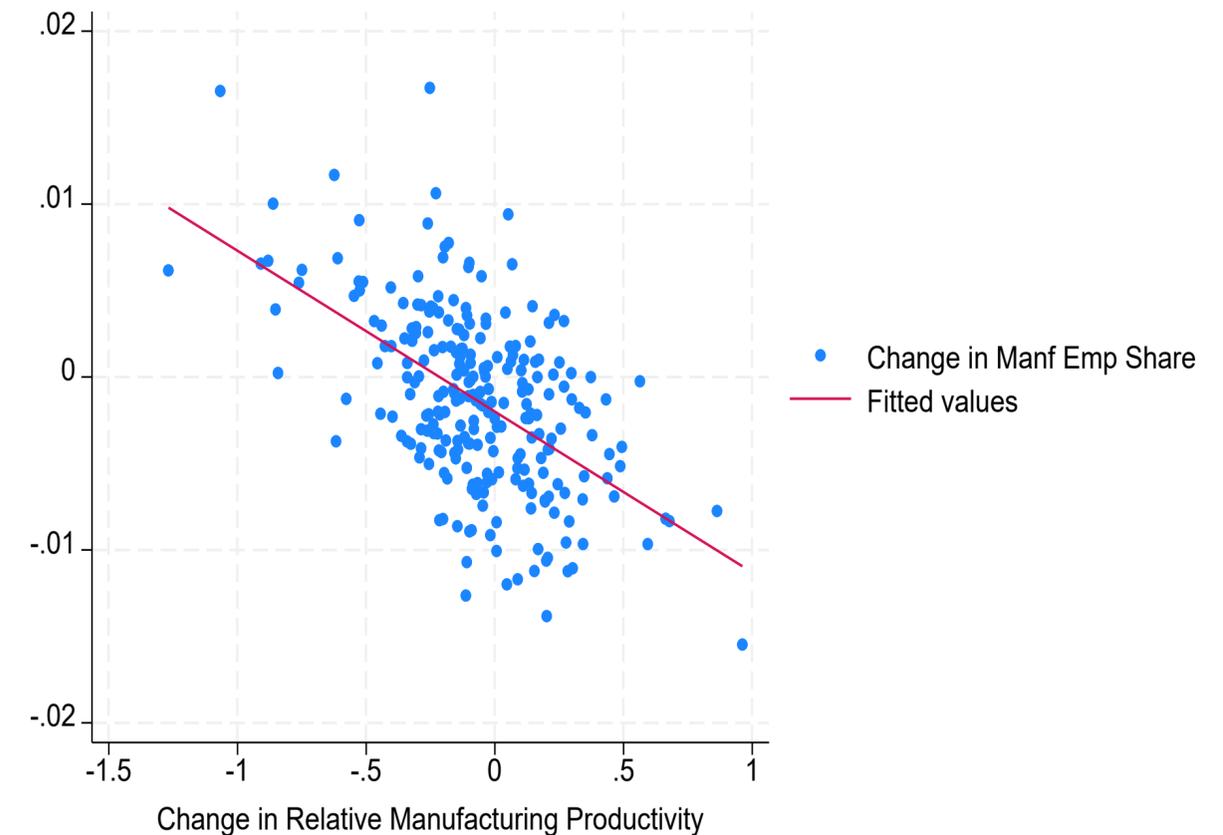


# How are Sectoral Productivity Growth and Sectoral Employment Shares related?

## Supply Side Theories of Structural Transformation

- Relative productivity differentials across sectors can explain why some countries do better than others in moving workers out of agriculture to manufacturing and services (Ngai and Pissarides 2007, Huneus and Rogerson 2020)
- If productivity growth in agriculture out-strips productivity growth in manufacturing, leading to a fall in the relative demand for labor in agriculture, the share of workers in manufacturing will increase over time.

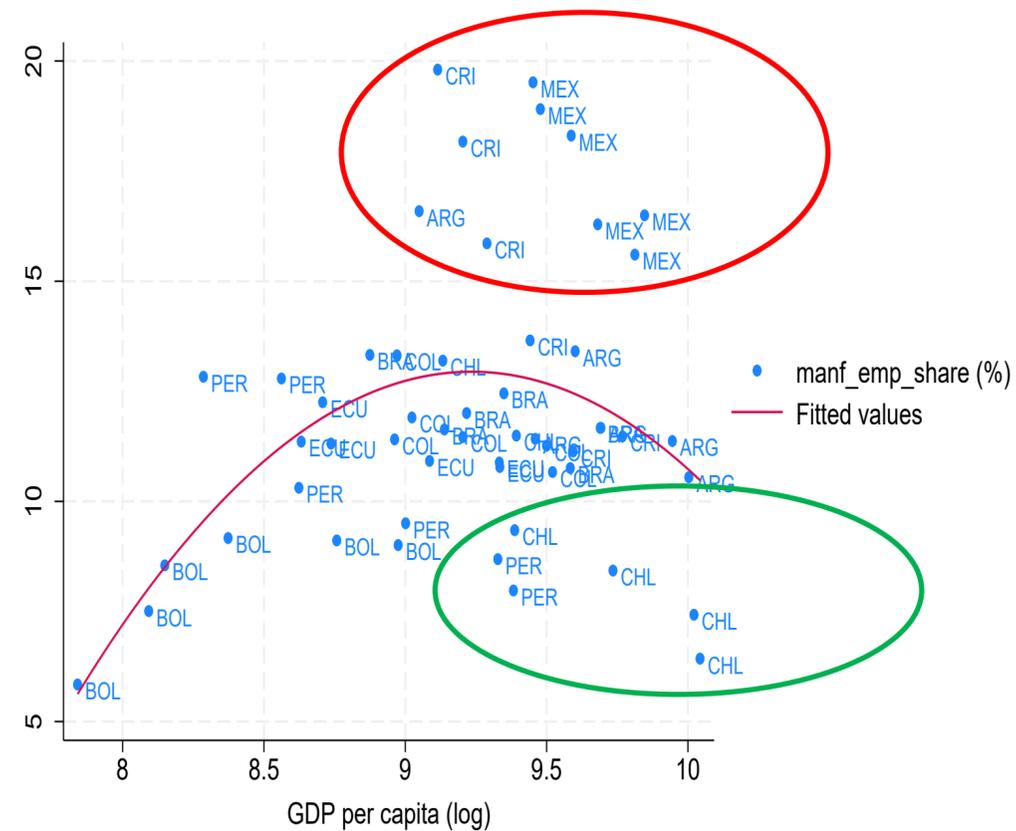
## Some evidence for LAC



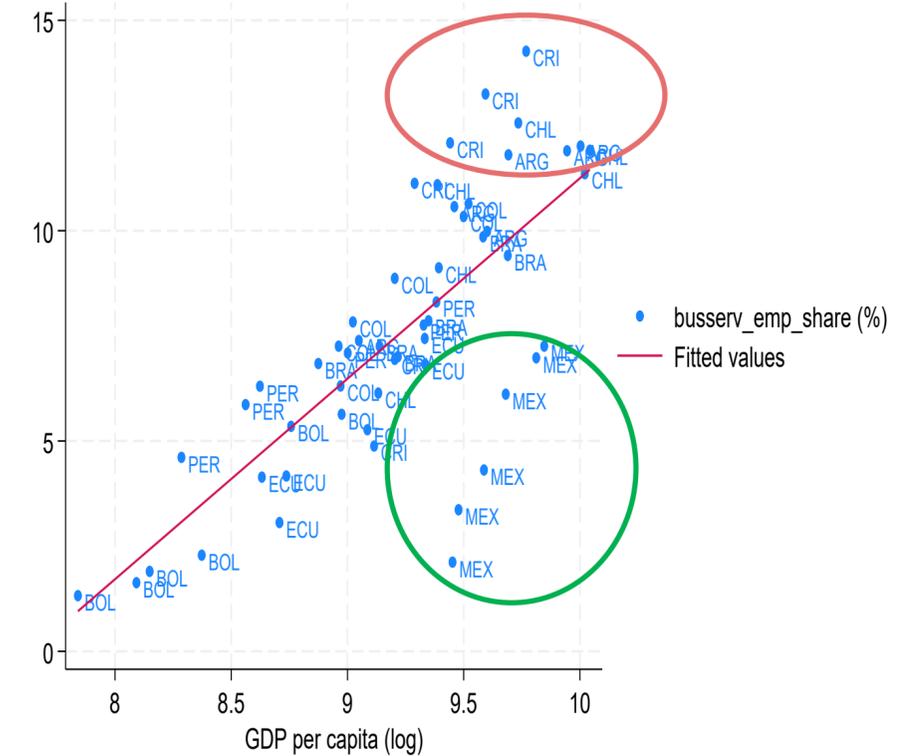
# Manufacturing vs Business Services Driven Structural Transformation

# Which Route to Structural Transformation?

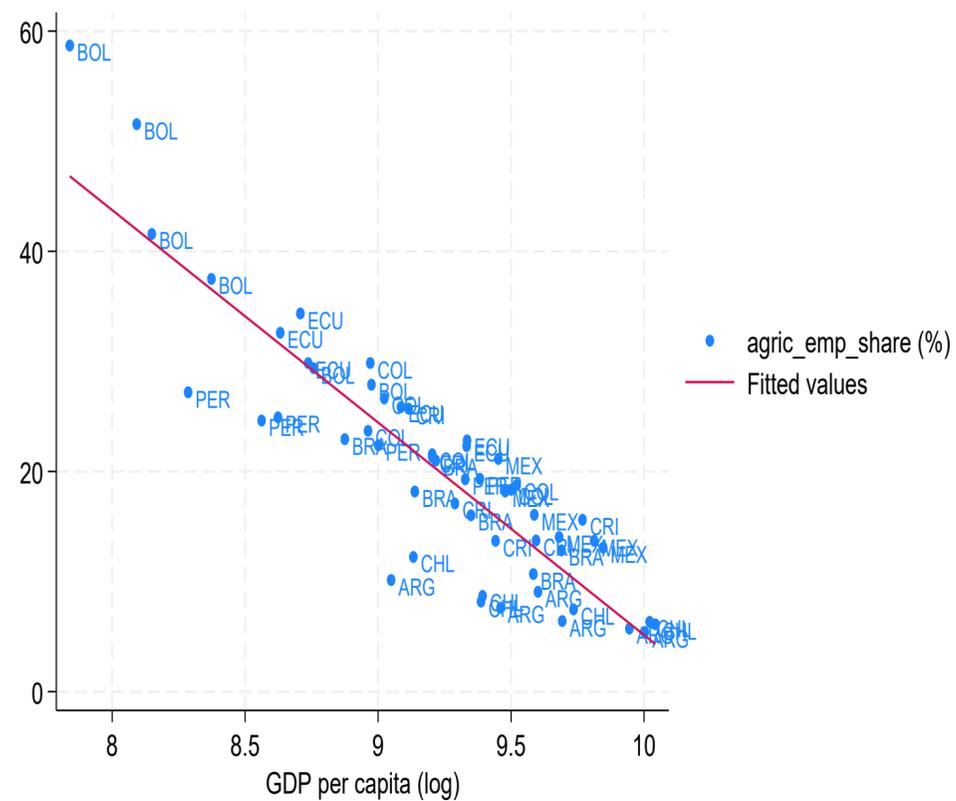
## Premature De-Industrialization?



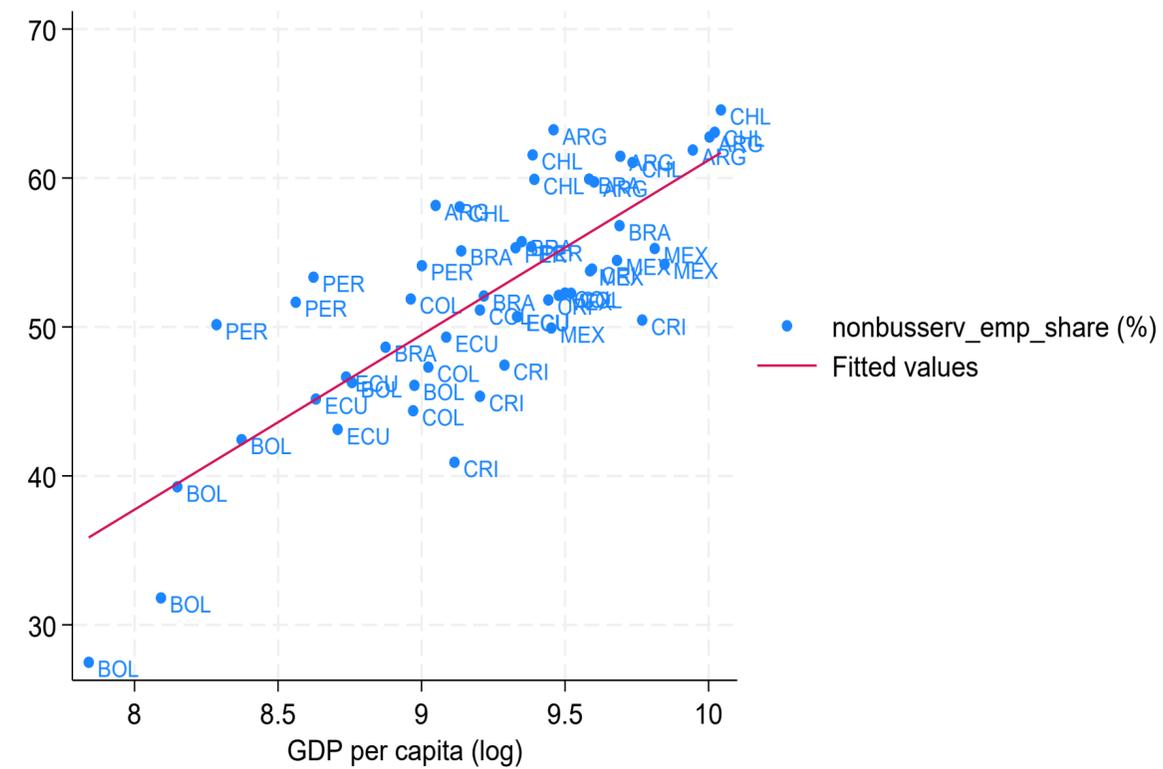
## Business Services Driven Structural Transformation?



## Agriculture Employment Share vs GDP PC



## Non Business Services Employment Share vs GDP PC



# Conclusions

# Conclusions

- LAC has seen increasing de-industrialisation.
- However, it has done relatively well in business (tradable) services.
- Its manufacturing productivity performance is better than most other regions expect East Asia. But Business Services Productivity has flatlined.
- **Within the continent**, we see *huge variations* in structural transformation.
- Some successes in manufacturing driven transformation (Bolivia, Mexico), but mostly declining employment shares in manufacturing. More widespread success in business services.
- In productivity, a group of high performers (Chile, Colombia, Costa Rica) and a group of weak performers (Brazil, Ecuador, Peru)
- Premature deindustrialisation not across the board. Business services show clear positive correlation with income.
- Potentially, except for Costa Rica and Mexico (where manufacturing is still important), **tradable modern services may well be the route to productive structural transformation, if productivity in this sector can be improved.**

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- This course brings together years of research by UNU-WIDER on structural transformation, the developer's dilemma, transforming informal work, the job ladder and formalization, and the impact of COVID-19 to informal workers.
- The course translates the research into set of videos and activities especially designed to be useful for policymakers and experts involved with, or interested in, policy processes in the Global South.

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