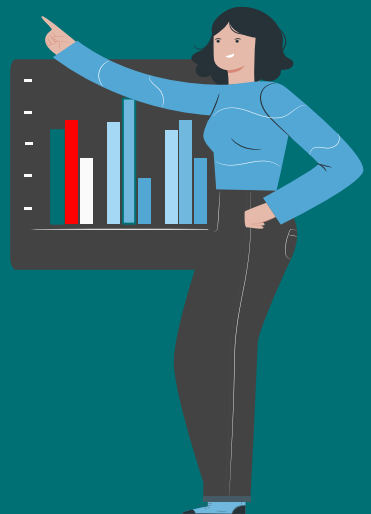
Congresso Paulista de Economia 2024

WHY BRAZIL NEEDS TO RE-INDUSTRIALISE

HA-JOON CHANG



THE DECLINE OF BRAZILIAN MANUFACTURING

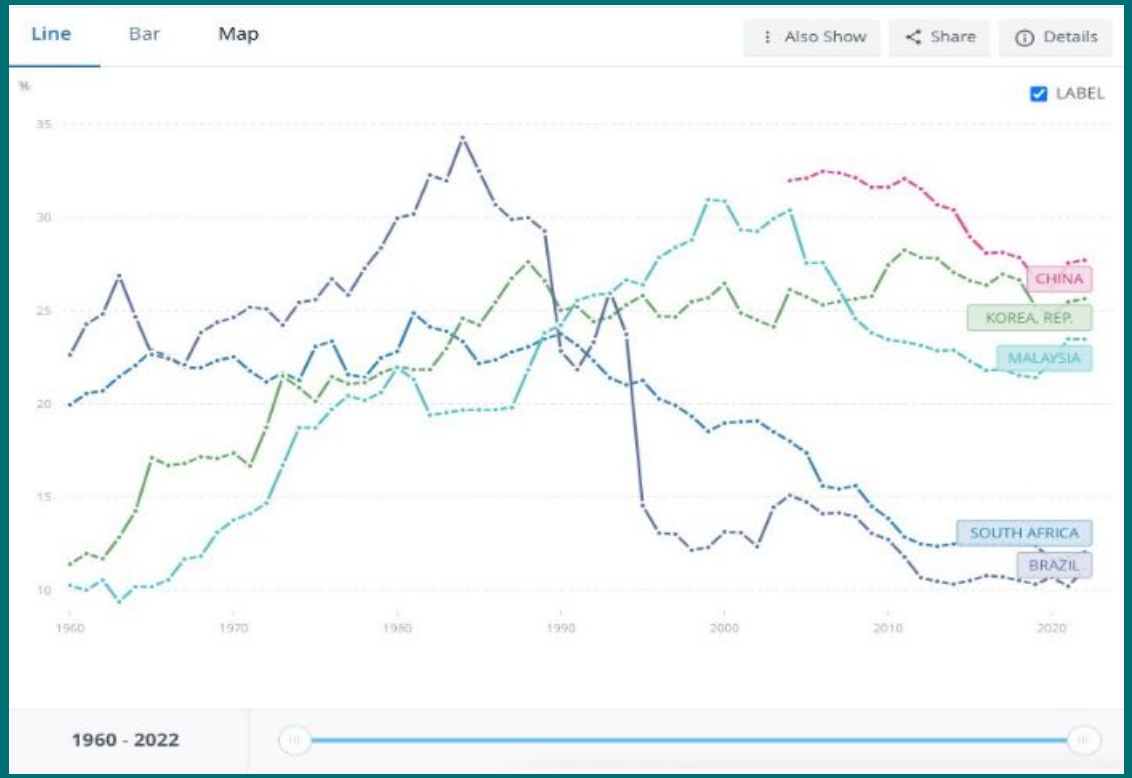
In the late 1970s, Brazil's manufacturing output (US$ 56 billion) was almost as large as the combined output of China, India, Korea, Malaysia and Thailand (US$ 57.8 billion).

Today (2022), Korea alone produces twice of Brazil's ($427 billion vs. $214 billion), whereas China now produces nearly 24 times that of Brazil's ($5 trillion vs. $214 billion).

In 1980, Brazil produced over 1.16 million cars, whereas Korea produced only 120,000 cars.

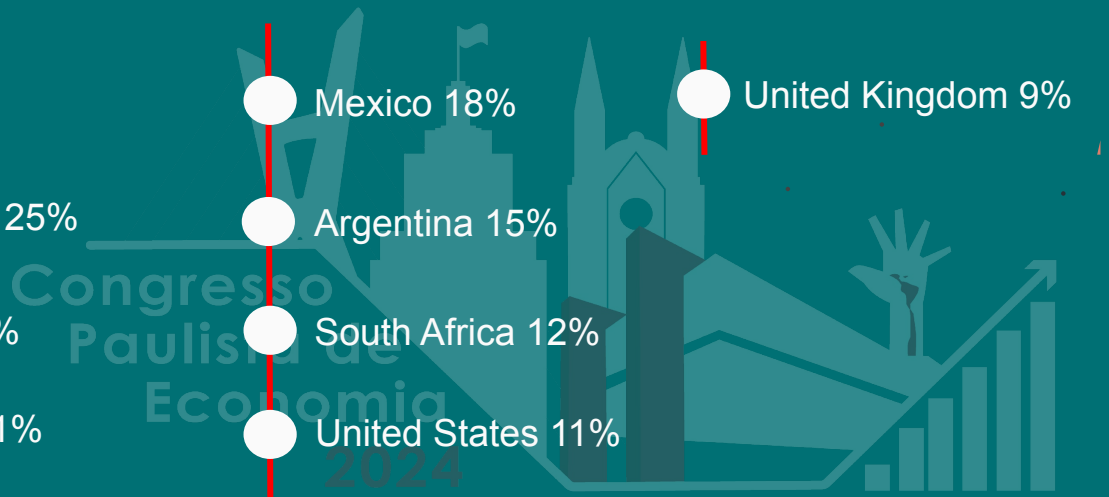
Today, Hyundai-Kia, the biggest Korean car company, alone produces 4 million cars worldwide while Brazil produces 2.3 million cars (none of which is produced by a Brazilian company and 0.2 million of which 0.2 are produced by Hyundai)

SHARE OF MANUFACTURING IN GDP, 1960-2022 - SOUTH AFRICA, BRAZIL, MALAYSIA, KOREA, AND CHINA



SHARE OF MANUFACTURING, 2021 (MANUFACTURING VALUE-ADDED / GDP)

- China 27%
- South Korea 25%
- Malaysia 23%
- Singapore 21%
- Germany 19%
- Mexico 18%
- Argentina 15%
- South Africa 12%
- United States 11%
- Brazil 10%
- United Kingdom 9%



Source: World Bank

MANUFACTURING VALUE ADDED PER CAPITA, 2017 (IN CONSTANT 2010 US DOLLARS; INDEX USA=100)

• Switzerland	$14,688	242 (world ranking: 1)
• Japan	$10,191	168 (2)
• Germany	$10,064	166 (3)
• Singapore	$9,437	156 (4)
• Austria	$8,913	147 (5)
• Sweden	$7,766	128 (6)
• Korea	$7,548	125 (7)
• USA	$6,058	100
• China	$2,254	37
• Argentina	$1,487	25
• **Brazil**	**$1,189**	**20**
• South Africa	$927	15
• India	$330	5

Source: UNIDO, *Industrial Development Report, 2016*
*Excludes Ireland, whose 'tax haven' status makes the 'booked' MVA fluctuates wildly

SHARE OF MEDIUM- AND HIGH-TECH INDUSTRIES IN MANUFACTURING VALUE-ADDED, 2017

• Singapore	78%
• Switzerland	65%
• South Korea	63%
• Germany	62%
• USA	47%
• Malaysia	44%
• China	41%
• Thailand	41%
• **Brazil**	**35%**
• Argentina	26%
• Pakistan	25%
• South Africa	24%
• Colombia	23%
• Senegal	22%

Source: UNIDO, *Industrial Development Report 2020*

RESEARCH AND DEVELOPMENT (R&D), 2019 (R&D / GDP)

• South Korea	4.6%
• United States	3.5%
• Sweden	3.4%
• Germany	3.2%
• China	2.2%
• United Kingdom	1.7%
• Malaysia (2016)	1.4%
• **Brazil**	**1.2%**
• South Africa	0.6%
• Argentina	0.5%

Source: World Bank

IMPORTANCE OF MANUFACTURING

Manufacturing has **inherently faster productivity growth** than agriculture or services because it lends itself far more easily to mechanisation and chemical processing.

However, in Brazil (and other Latin American countries) during the neo-liberal period, the manufacturing sector has had lower productivity growth than agriculture and mining because there was virtually zero growth in manufacturing productivity

It is the sector **where most R&D is conducted**.

Even in the US and the UK, where manufacturing accounts for only around 10% of GDP, 60-70% of R&D is conducted in the manufacturing sector.

The ratio is 80-90% in countries with a larger manufacturing sector, like South Korea or Germany.

IMPORTANCE OF MANUFACTURING II

Manufacturing **enables productivity growth in other sectors** by supplying inputs (e.g., fertilisers, computers) and organisational innovations (e.g., inventory management technique in retail, computer-controlled feeding and spraying in agriculture).

Many **high-value services** (e.g., banking, transport, design, management consulting) are **heavily dependent on manufacturing firms as customers**.

Switzerland and Singapore, often touted as examples of post-industrial prosperity, are in fact some of the strongest manufacturing nations in the world.

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Importance of Manufacturing III

Manufacturing is **the strongest driver for secure livelihood through more secure employment**.

Income transfers, like Bolsa Familia, can be easily reversed with political change.

Manufacturing is **good for macroeconomic stability, as it is far more stable as a source of government revenue and export earnings** than primary commodities and sectors associated with them.

In the case of Brazil, reducing dependence on primary commodity (especially agriculture) export is vital in fighting climate change (by preserving more rainforests)

WHAT TO DO?

Increase investments

Less restrictive macro-economic policies

Restraints on short-term profit-making opportunities the financial sector, to make ‘real sector’ investments more attractive

More active industrial policy

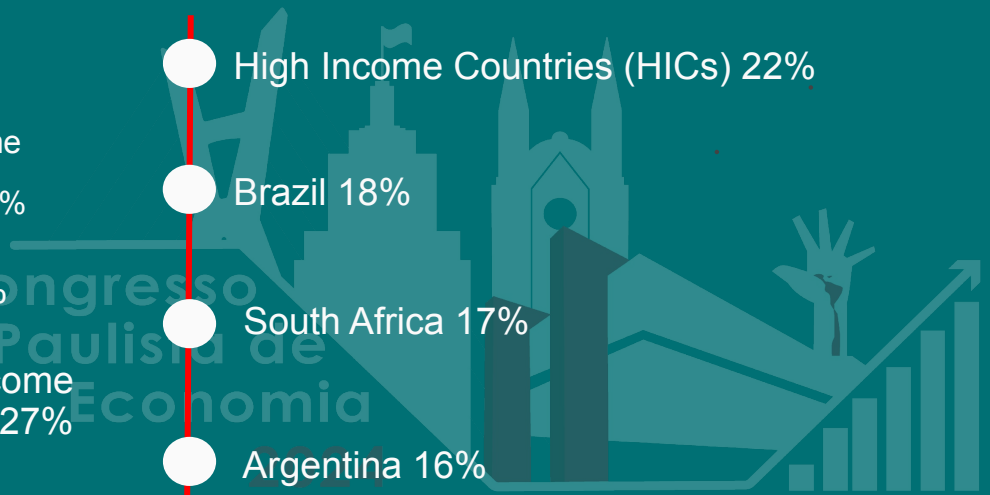
Brazil has good capacity to conduct industrial policy (especially through BNDES and state-level development banks)

It is especially well positioned to take advantage of ‘ecological transition’

Need to promote more hi-tech industries, partly by promoting R&D (but promotion of those sectors thorough means other than R&D support will naturally lead to increase in R&D expenditure)

INVESTMENT RATIO, 2004-21 (GROSS FIXED CAPITAL FORMATION / GDP)

- China 42%
- Upper-middle Income Countries (UICs) 31%
- South Korea 30%
- Lower-middle Income Countries (LICs) 27%
- Malaysia 23%
- High Income Countries (HICs) 22%
- Brazil 18%
- South Africa 17%
- Argentina 16%



Source: World Bank

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THANK YOU!