New Directions in Latin American Structuralism

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What is LAS?

- LAS is part of the core of heterodox thinking in economic development
- The backbone of LAS is the center-periphery theory
- The international system is **fundamentally asymmetric** in three dimensions
  - *Technological and productive*: there is a technology gap that gives rise to different patterns of specialization (the periphery specializes in low-tech sectors, the center is diversified and compete in high-tech sectors)
  - *Financial*: the periphery does not issue a currency accepted as an international reserve currency (hierarchy of currencies), hence incurs in the ¨original sin¨ to finance imports (de Paula, Prates, Botta)
  - *Power*: the periphery has little influence over the rules of the game of the international trade and financial system
- These asymmetries have strong implications for the analysis and policy of sustainable development

Defining sustainable development

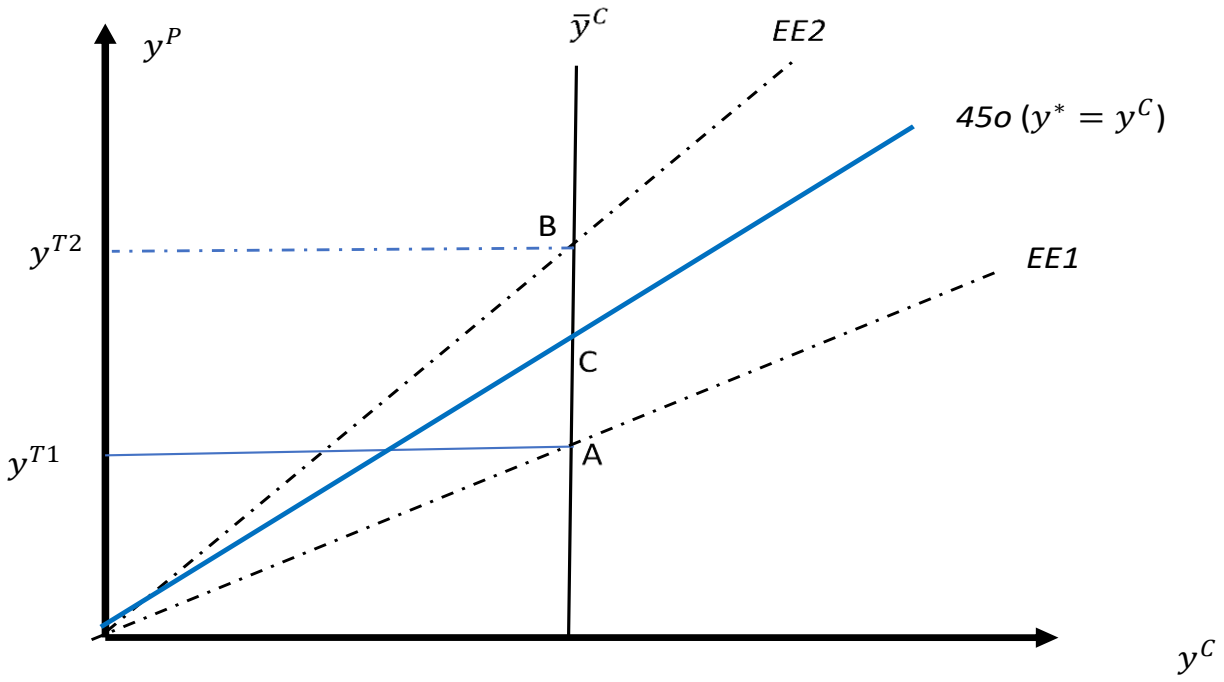
- A growth path can be considered sustainable if it complies with three conditions:
- It is sustainable from the *economic perspective*; in a center-periphery model, this means that is consistent with external equilibrium (BOP-constrained growth rate)
- It is *inclusiv*e, which means that inequality is falling and poverty tends to be eradicated
- It *protects the environment* for the development needs of the future generations

External equilibrium and the technology gap

- BOP-constrained growth:
- $y^T = \frac{\varepsilon}{m} y^W$, where convergence requires $y^T > y^W, \varepsilon/m > 1$
- The pattern of specialization of the periphery (low diversification, low technological capabilities) is associated with a low income elasticity of exports and high income elasticity of imports, hence divergence ($\frac{\varepsilon}{m} < 1$)
- Technological change and demand growth reinforce each other: more technological capabilities (SE) allow the country to diversity towards more dynamic markets; and higher demand growth in the international economy (KE) encourages learning by doing, investment and R&D
- Real exchange rate: important to prevent periods of excessive appreciation (Blecker)

Structural change and convergence

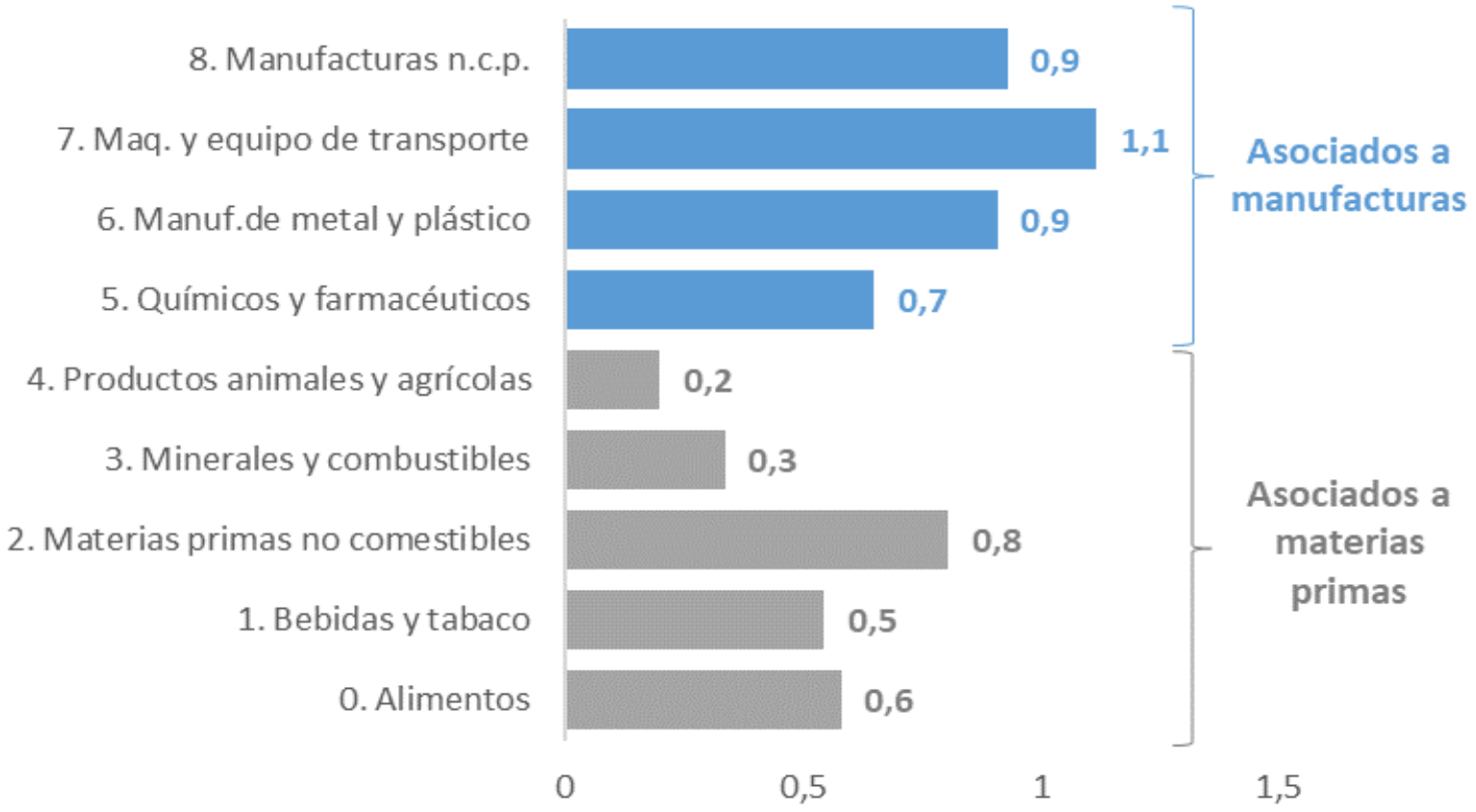
Figura 1. Structural change and income elasticities



Keynesian and Schumpeterian efficiency of the pattern of specialization (Riccio, 2022)

- The key link between technological catching up, structural change and growth can be captured by the concepts of SE and KE (Dosi et al, 1990; Riccio, 2022)
- KE = weighted average of the income elasticity of exports (weight = share of the good in total exports)
- SE= sum of all the goods whose patent intensity is higher than 1, weighted by the share of those goods in total exports
- Patent intensity = % of the good in total world patents / share of the good in total world exports

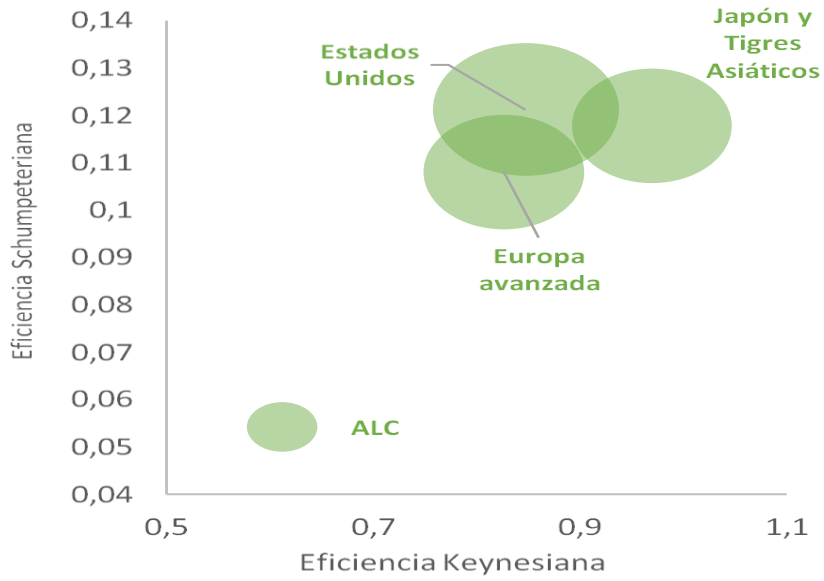
Structural change, technical change and the income elasticity ratio



In the long run Schumpeter and Keynes are alive

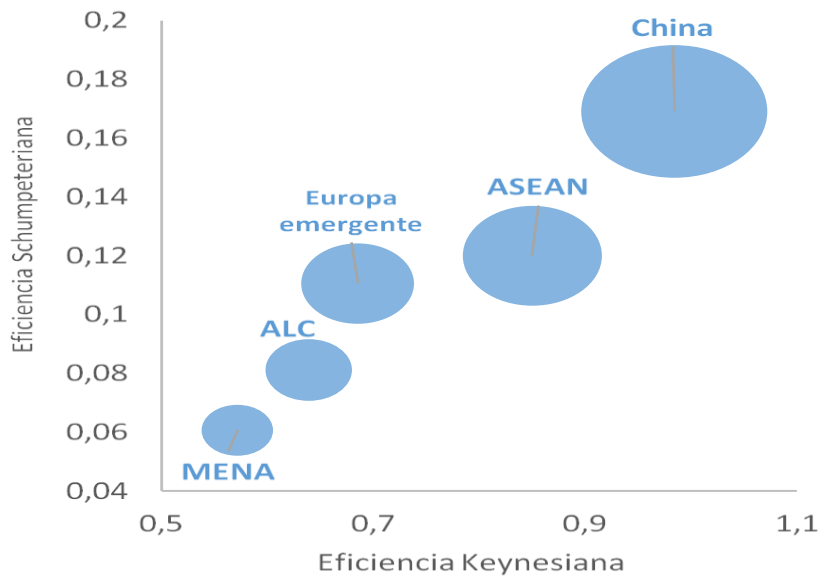
Panel A. ALC y grupos de economías avanzadas

(El tamaño de las circunsferencias indica el nivel del PIB per cápita)



Panel B. ALC y grupos de economías emergentes

(El tamaño de las circunsferencias indica la tasa de crecimiento del PIB per cápita)

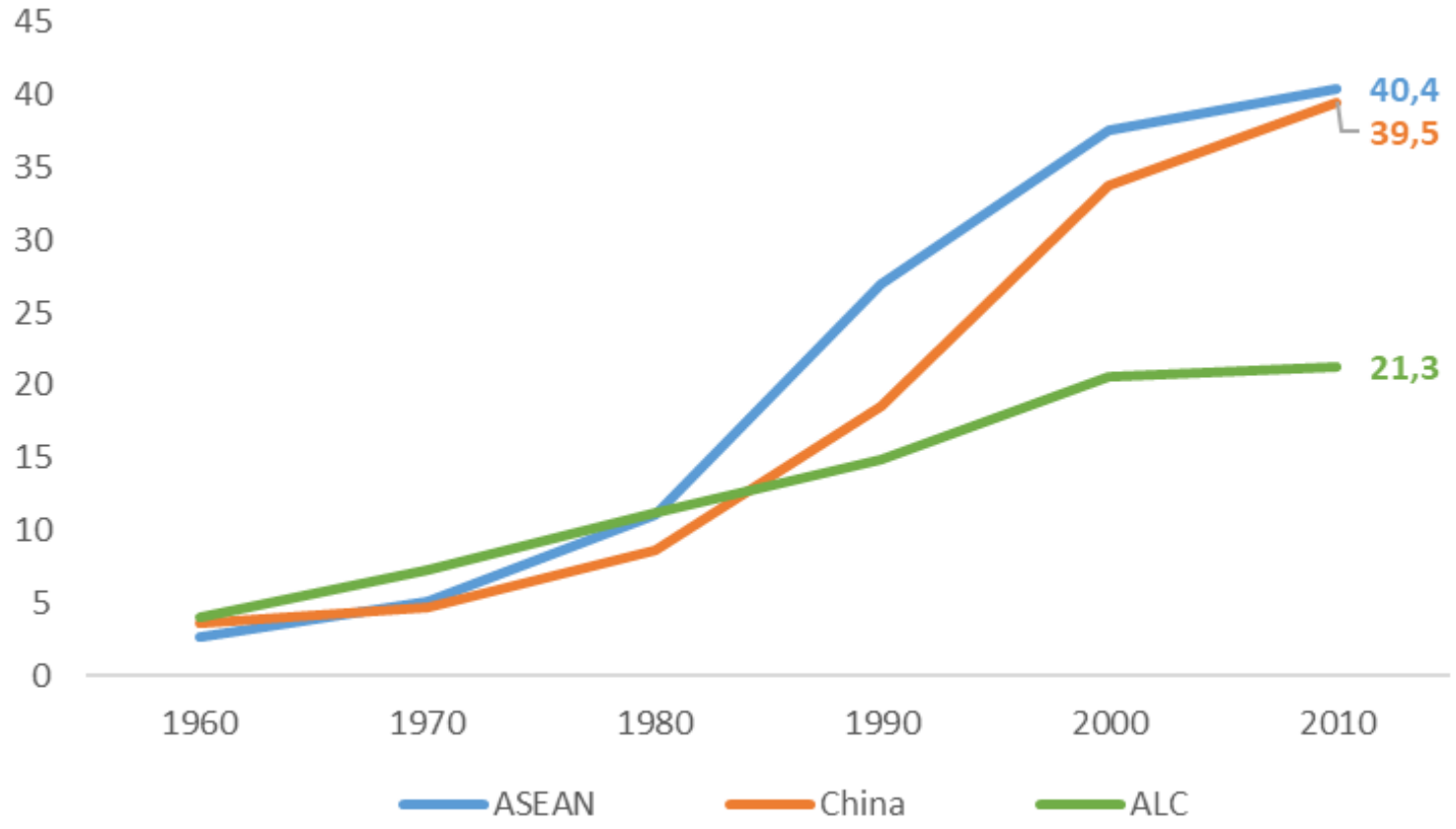


Fuente: elaboración propia con base en COMTRADE. **Nota:** los valores representan el promedio simple por región para el período 2010-2019. MENA incluye Arabia Saudita, Argelia, Armenia, Bahrein, Catar, Egipto, Emiratos Árabes Unidos, Georgia, Irak, Irán, Jordania, Kuwait, Libano, Libia, Marruecos, Omán, Pakistán, Qatar, Siria, Tunez y Turkmenistán; ASEAN incluye Indonesia, Filipinas, Malasia y Tailandia; Europa emergente incluye Albania, Azerbaiyán, Bielorusia, Bosnia y Herzogobina, Bulgaria, Croacia, Hungría, Kazajistán, Macedonia del Norte, Montengro, Polonia, Rumania, Rusia, Serbia, Turquía y Ucrania.

Key insights from evolutionary theory of technical change: cross-fertilization with PK growth models

- Growth is demand led because changes in the supply side (structural change) only affects growth through changes in the demand side (i.e. changes in the income elasticity ratio)
- "Microfoundations of divergence": tacitness, learning by doing, path dependence and lock in phenomena; what I can produce today depends on what I produced in the past; industrial and technological policies key to overcome slow-learning, slow-growth traps (Nelson and Winter, Freeman, Dosi, Verspagen, Cimoli, Katz, Fagerberg, among others)
- The supply side in evolutionary theory and LAS is completely different to the neoclassical one, with a central role for the state in fostering structural change

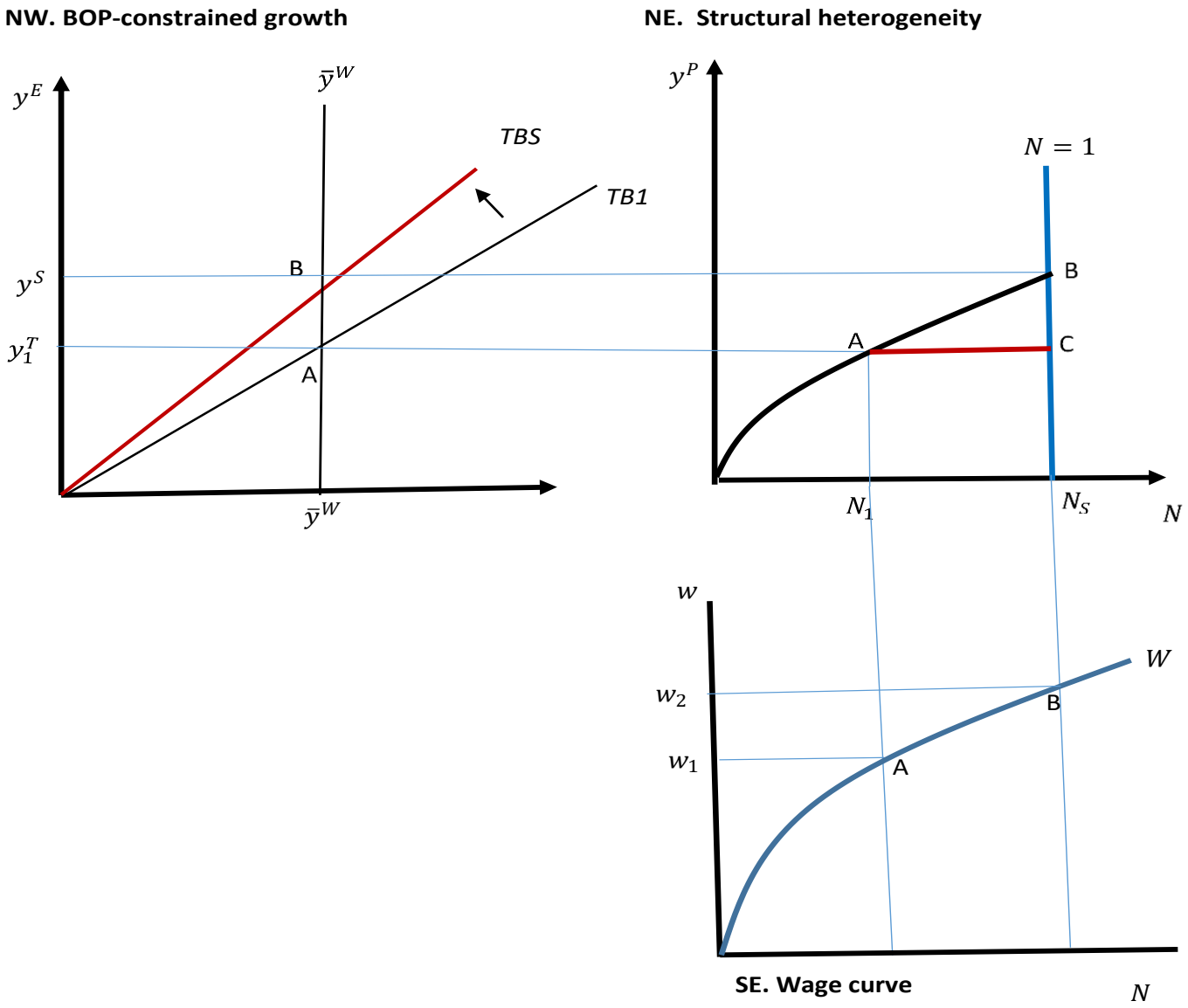
Specialization is not fate (policy matters): export share of Pavitt's science based industries and specialized suppliers



Social equilibrium: an inclusive path requires the redistribution of income along with structural change

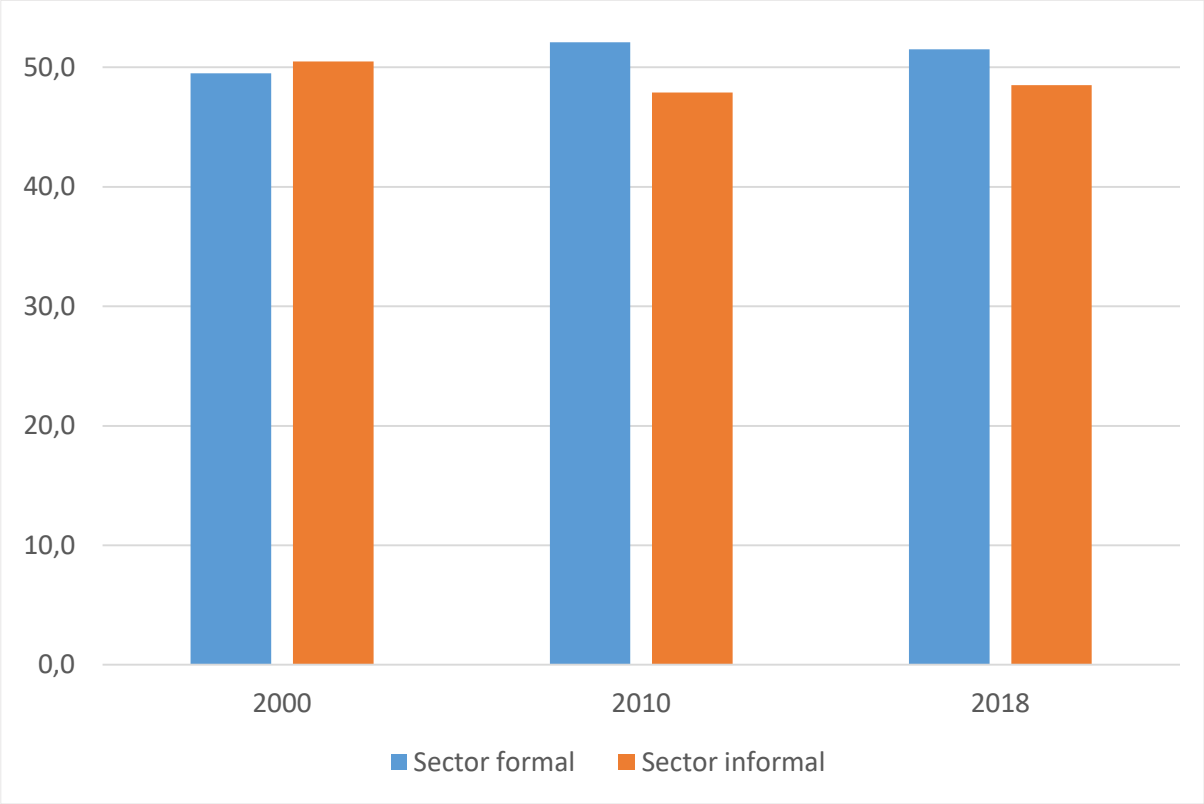
- Policies aimed at redistribution, universal social protection and the reduction of inequality are a necessary condition for having an inclusive growth path
- This should be complemented by the creation of formal employment with increasing productivity
- A more complex economic structure demands more skilled workers, strengthens the formal labor market where unions can organize, and helps boost demands for social protection
- In sum: pari passu with advancing towards a welfare state in the periphery, a critical rate of growth must be attained, which we will call the rate of growth for social equilibrium, y^S

Structural change is the avenue to reduce structural heterogeneity



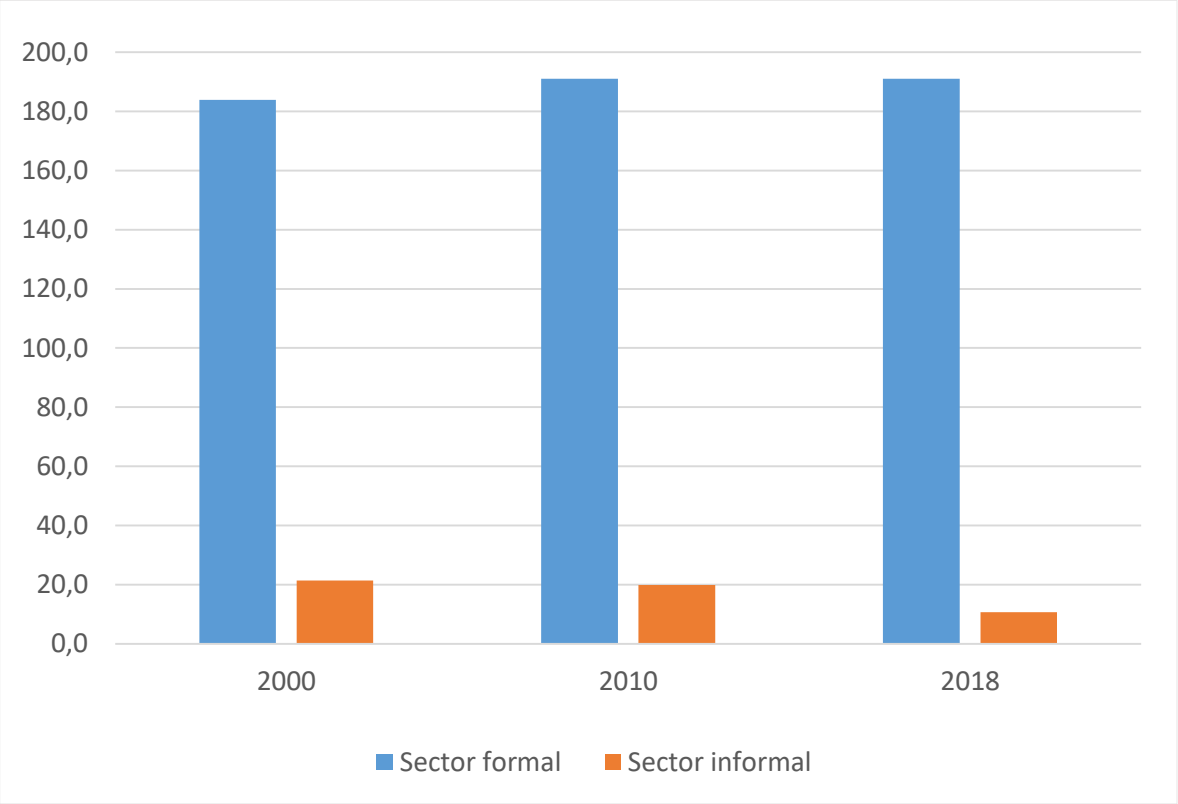
Latin America: half of the labor force allocated in the informal sector, with extremely low levels of productivity – a crucial part of the story of falling behind (ECLAC, 2020)

Workers in the formal and informal sectors
(*% employment*)



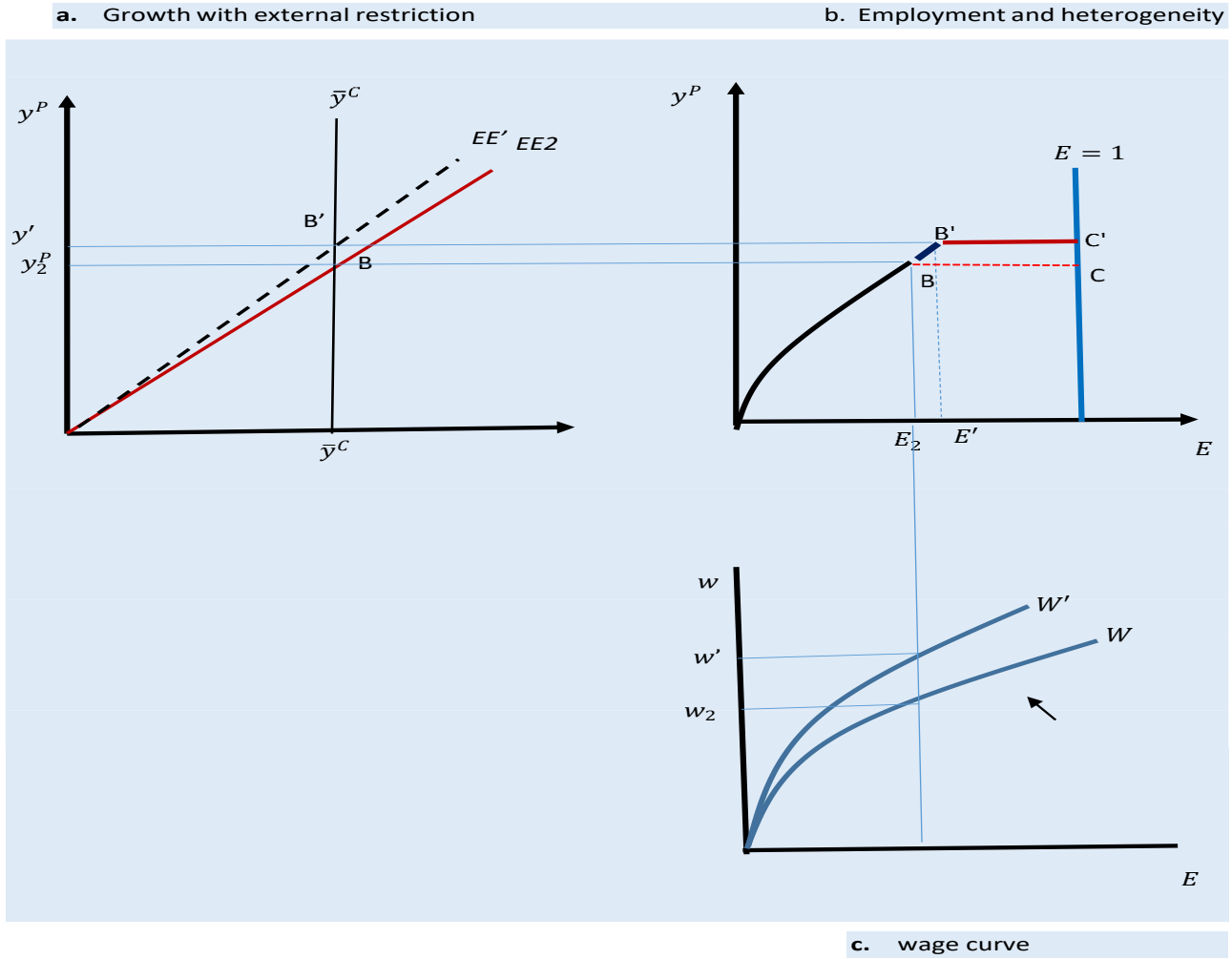
Fuente: Elaboración propia en base a estadísticas CEPAL.

Productivity of formal and informal workers
(*average= 100*)



Fuente: Elaboración propia en base a estadísticas CEPAL.

Reverse causation or the equation of Sylos Labini (Fontanari and Palumbo, 2022; Storm and Naastepad, 2012)



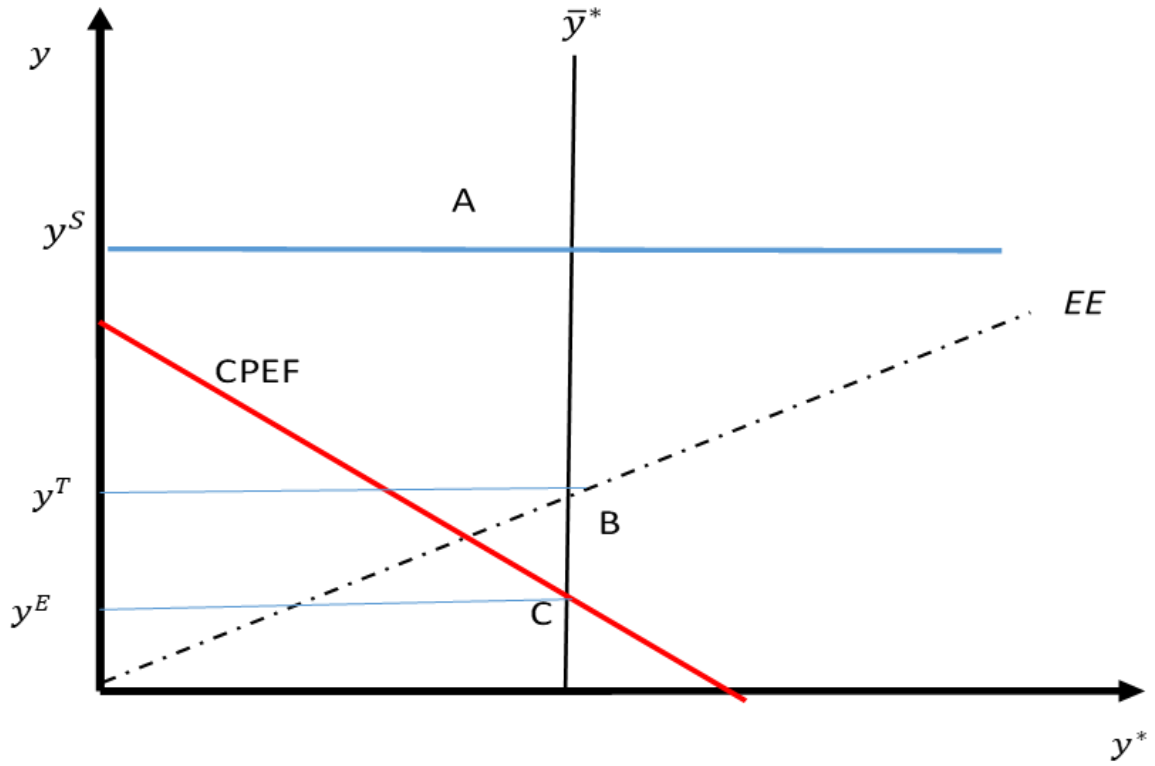
The center-periphery environmental frontier

- $y^L = \frac{1}{a}\left[\left(\underbrace{z^C - x}_{A}\right) + a\left(\underbrace{z^P - z^C}_{B}\right) - (1-a)y^W\right]$
- x is the rate of decarbonization to be attained to prevent a climate crisis, as defined by climate change science (Althouse et al 2020)
- z^C is green technical change (decarbonization) in the center, z^P is decarbonization in the periphery
- $Z = (Z^C/Z^P)$ is the green technology gap, and $(z^P - z^C)$ is the rate at which the green technology gap is falling
  - A: rate of growth of the green technological frontier
  - B: fall in the green technology gap (catching up by the periphery)
  - C: consumption of the carbon budget by the center

A formal model on catching up in green technologies and impact on growth can be found in the paper

The three gaps of sustainable development

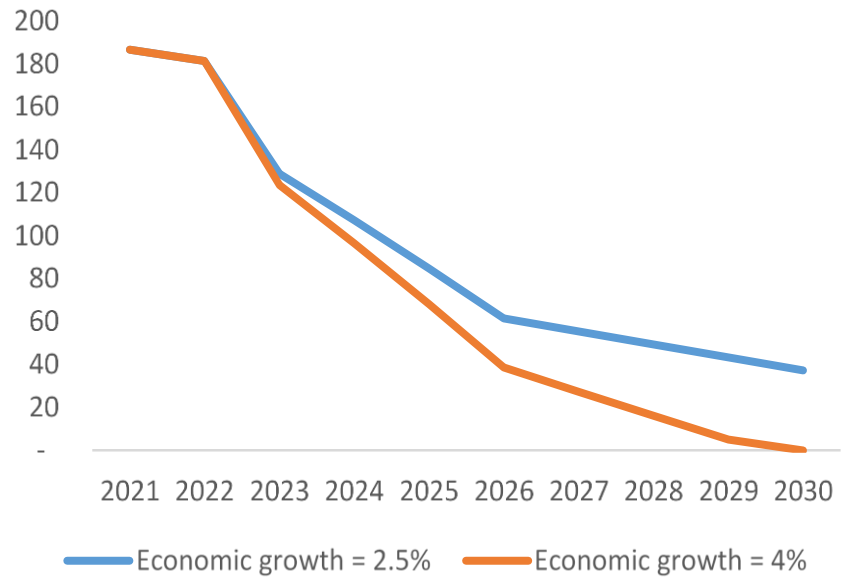
Figura 3. Three gaps in sustainable development



y^T: rate of growth with external equilibrium
y^L: rate of growth which for environmental sustainability
y^S: rate of growth for social equilibrium
AB social gap; BC environmental gap; AC gap of sustainable development

Social inclusion: eradication of poverty until 2030 ($y^S = 4\%$)

Graph 1. Poverty and growth: estimated number of people in poverty in Latin America in 2030 with income redistribution under two different scenarios of economic growth (Million people)

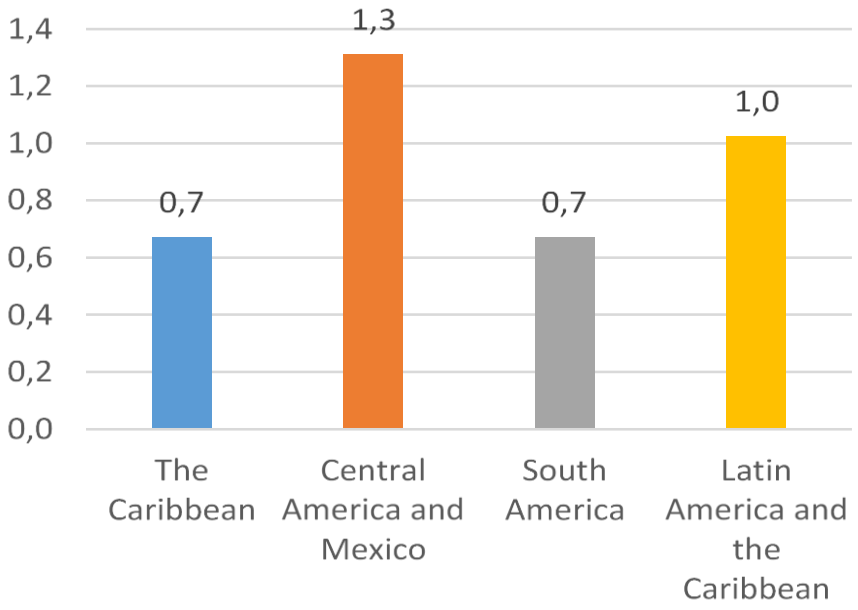


Note: Vertical axis: Millions of people; horizontal axis: year

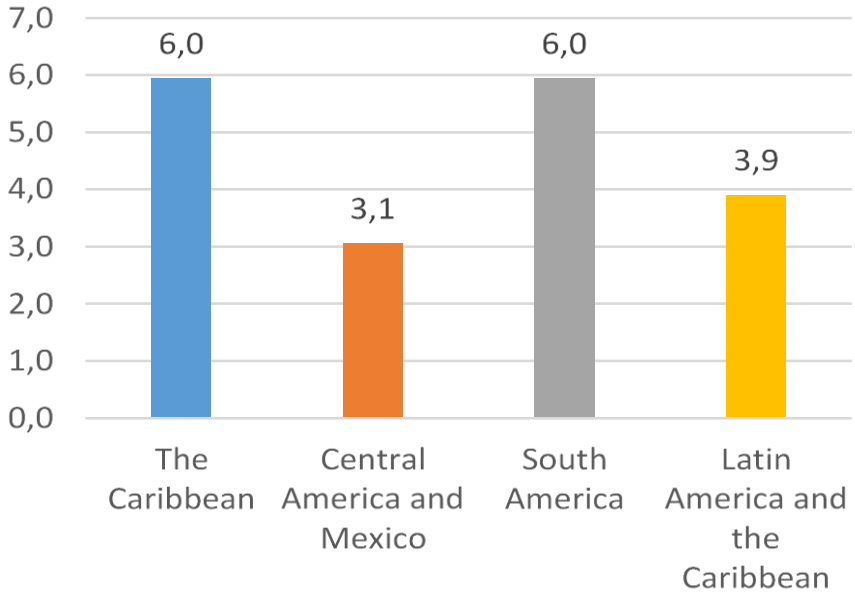
Is y^S attainable in LAC (assuming that inequality falls)? $y^S > y^T$

Latin America and the Caribbean: is the rate of growth with social equilibrium compatible with the BOP-constrained rate of growth?

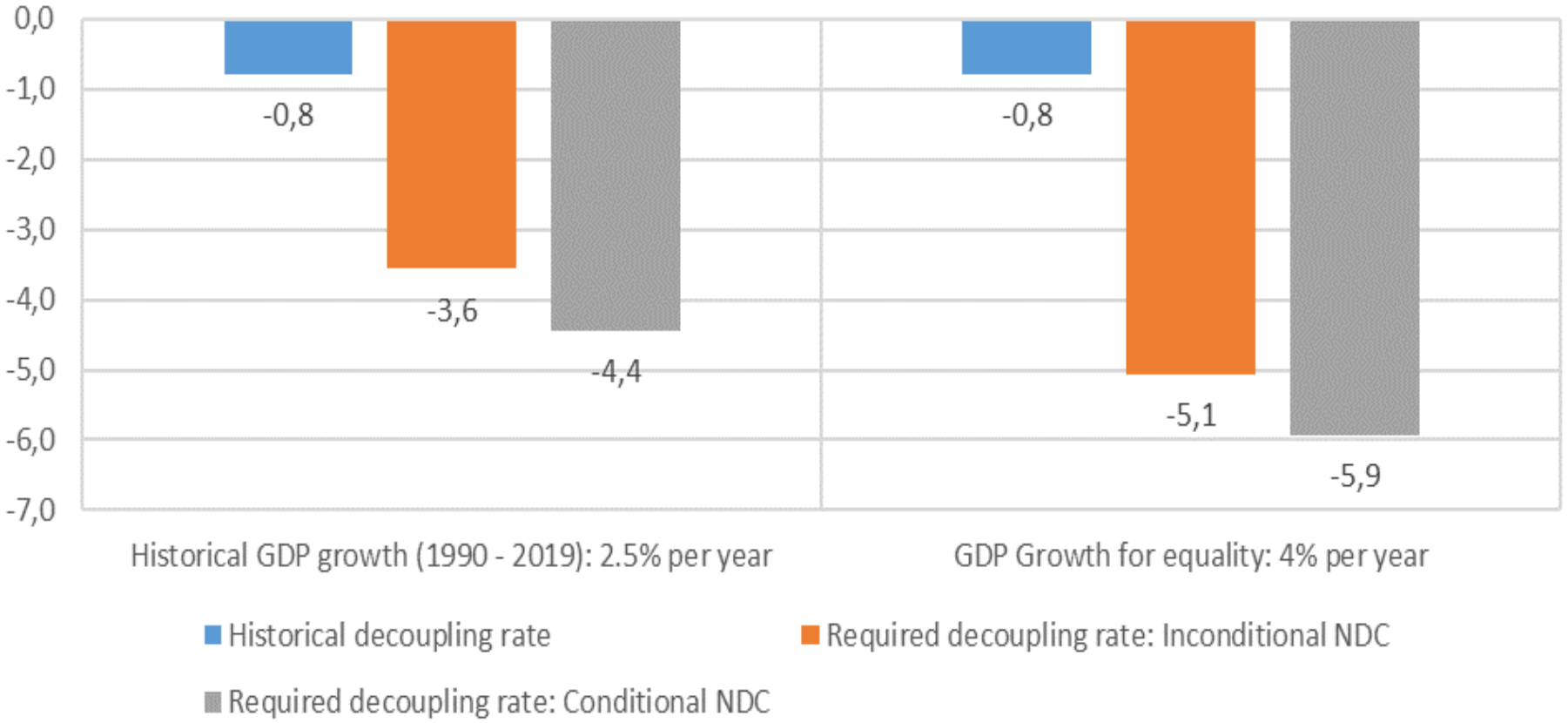
Elasticity ratio by subregion



Rate of growth n the rest of the world (y^W) necessary to make $y^T = 4\%$ *(Percentage)*



Decoupling required for in two growth scenarios: historical trend and growth for social equilibrium (in percentage), $y^T > y^L$



Concluding remarks: sustainable development as the convergence of y^T and y^L to y^S

- What we observe in LAC is that $y^S > y^T > y^L$
- Key role of the *direction* of technical change: catching up in green innovations may be demand-expanding technical change
- Technical change focused on increasing labor productivity may improve price competitiveness but the effects are ambiguous on employment
- *Overcoming LAS "truncated welfare state"* (Holland, 2018) must go hand in hand to structural change to create formal jobs of increasing productivity (overcoming structural heterogeneity)

Topics for further research

- Exploring green technologies to boost international competitiveness (international rules for trade, changing consumption preferences, carbon tax etc.)
- The political economy of sustainable development (a new model of growth?) → “big push” for sustainability?
- A major change in domestic political economy but also in international political economy: from hyperglobalization to democracy-enhancing multilateralism / governance (Keohane, Rodrik) that gives more policy space to policies of income redistribution and diversification

Thanks, Danke, Gracias, Obrigado