How Latin America Sinks into the Quicksand of Inertia:
on getting bogged down between a fading “extractivist” model and more productivity-enhancing alternatives that just can't generate enough credibility —while populism looks for magical solutions...

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Abstract
Krugman identified the enigma of Latin America's economic underperformance as one of the greatest analytical challenges of economic theory today. I shall attempt to answer this challenge by interlinking the key three facets of Latin America’s current “trilogy of contrasts”: i) when compared with all other regions and main countries since the 1980s economic reforms, Latin America’s capacity to generate employment in services and construction ranks top in the world; ii) however, its productivity-growth (increase of output per worker) ranks bottom; and iii) despite some progress in poverty reduction and in the income-share of the bottom 40%, Latin America still ranks almost top in terms of inequality. Post-1980 LA is indeed a region of contrasts! What follows (even if you have the advantage of having an Amazon, or proximity to the US) is that as the old productive strategies have run their course —“extractivism” for some, assembly platforms for foreign conglomerates for others—, the only way forward is to generate new engines of productivity-growth. Trying to stretch the “shelf-life” of the old one is a recipe for falling in the middle-income trap. Exporting “more of the same” unprocessed commodities or products from “shallow” manufacturing assembly-operations is no longer a valid growth-option for LA. But domestic rigidities and markets imperfections and failures (home and abroad) are blocking the necessary “upgrade” of these exhausted productive strategies; and it is unlikely that change would be led by rentier domestic elites, FDI or weak governments. But the conventional hegemonic wisdom still expects these countries to leap from mid-table to higher income-per capita through policies based on the same institutional setting, elite-preferences, and ideology that got them stuck in mid-table —this is not a realistic solution.

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How Latin America Sinks into the Quicksand of Inertia: on getting bogged down between a fading “extractivist” model and more productivity-enhancing alternatives that just can't generate enough credibility —while populism looks for magical solutions...

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The crisis consists in the fact that the old is dying and the new cannot be born; in this interregnum a great variety of harmful symptoms appear.

Antonio Gramsci

We are all just prisoners here, of our own device.

“Hotel California”

[…] we did what everything we wanted, but whatever we did, we did it well.

Governor of the Bank of Korea
(When asked about Korea’s comparative advantages)

Productivity isn’t everything, but in the long run, it’s almost everything.

Paul Krugman

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Introduction

Krugman (2011) identified the enigma of Latin America’s economic underperformance as one of the greatest analytical challenges of economic theory today. In this chapter I shall attempt to answer this challenge by interlinking the three key facets of Latin America’s current “trilogy of contrast”: i) when compared with all other regions and main countries since the 1980s economic reforms, Latin America’s capacity to generate employment in services and construction actually ranks top in the world; ii) however, its productivity-growth (increase of output per worker) ranks bottom; and iii) despite significant progress in poverty reduction until the Covid-19 pandemic (these have been reverted since then; see below), and in the income-share of the bottom 40% of the distribution, Latin America (LA) still ranks almost top in terms of inequality, with only Southern Africa being even more unequal. Although, in terms of the share of the top 1% (pre-tax income), Chile is already well ahead of South Africa (23.7% vs. 19.3%); and Brazil is catching up. Post-1980 LA is indeed a region of contrasts!

What I shall call its post-reforms “dual-extractive” model (DE) may have helped the region become highly competitive as commodity producers, while generating high levels of employment—with current levels of overall employment being two and a half times that of 1980. Furthermore, (when measured at US$5.50 a day at 2011 PPP) the average poverty rate has fallen by nearly half; although ECLAC indicates that there are still huge challenges ahead, and in some areas there have been significant reversals. However, productivity-growth has ground to a halt even in commodity extraction—as the inability to “upgrade” its “extractivist” productive strategy when it became exhausted (even counterproductive) has turned the region into the world’s worst performing in growth of output per worker (Figure 1).

Therefore, this chapter’s key message is that “the more of the same, but (hopefully) better” is no longer an option for reactivating the regional economy. In my analysis I shall often refer to Chile, as it was held up as the example to follow after its fastest recovery from the 1982 crisis—leading to a 12-year period (1986-1998) without precedent in its modern history. Unfortunately, there was no continuity, as Chile also failed to “upgrade” its “extractivist” productive strategy when it ran out of steam at the turn of the century. So, its productivity-growth also ground to a halt, even in commodities; in fact, the latest IMF forecast envisages that now Chile will be in 2024 LA’s worst performer! So, this is a rather intriguing story about how to go from top to bottom.

I have labelled LA’s current economic, political—and ideological—trap a “Gramscian Moment”, after Gramsci (1930): one in which the old fades, but the new fails to be born. It is as if the witches in Macbeth had prophesied: LA will live bogged down between an “extractivist” model that lost all its drive—and legitimacy,—and alternative ones that fail to generate enough credibility! In this interregnum, as Gramsci warned us, it is almost inevitable that “a wide variety of harmful symptoms will appear” (Ibid.)—as all sorts of radical populist projects around the region testify (all searching for “magical” solutions to structural problems).

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2 See Palma (2019a).
3 WID (2023).
4 The corresponding poverty headcount ratio fell from 54% in 1981 to 28% in 2019, but this rate has increased since the pandemic (https://www.macrotrends.net/countries/LCN/latin-america-caribbean-poverty-rate).
5 ECLAC (2023).
6 https://www.imf.org/-/media/Files/Publications/REO/WHD/2023/October/English/text.ashx. Only Brazil competes with Chile for the bottom slot.
7 On how Chile aborted its rapid process of catching-up after the turn of the century (by failing to “upgrade”), see Palma (2019b), and https://www.ineteconomics.org/perspectives/blog/chiles-outburst-of-discontent.
8 See Palma (2020a), and (2023).
LA is also a region whose critical social imagination has stalled. What happened in Chile with its two recent Constitutional plebiscites is paradigmatic: first, 80% of the population voted in 2020 in favour of changing Pinochet’s Constitution. But then, over 60% rejected a first democratically-written proposal (the first ever in Chilean history) for supposedly being too ‘left leaning’; and then, and almost by the same margin, it rejected a second draft for exactly the opposite reason. Thus, neo-liberal Chile became a country that can’t bear its status quo, but doesn’t dare to leave as all alternative discourses fail to generate enough credibility. It seems that in neo-liberalism you end up as in Hotel California: “You can check-out any time you like, but you can never leave!”

1).- The collapse of LA’s productivity-growth since 1980
Figure 1 shows the productivity-performance of the world’s main regions and countries, and how LA has sunk to the bottom since its economic reforms in the 1980s.

FIGURE 1
All regions and main countries: average annual productivity-growth, 1950-1980 and 1980-2019

- The acronyms for countries are those of their Internet domains; and N1=Korea, Hong-Kong, Singapore and Taiwan; N2=Indonesia, Malaysia and Thailand; WE=Western Europe; NAF=North Africa; EE=Eastern Europe (data available only since 1970); SSA=Sub-Saharan Africa (including South Africa); Oc=Oceania (Australia and New Zealand); SA*=South Asia, excluding India (Bangladesh, Pakistan, and Sri Lanka); and Ru*=countries of the former Soviet Union. In this figure (and others), the second period ends in 2019 to avoid the impact of the pandemic.
- TED (2022; data in 2021 International Dollars, PPP).

Despite some sector and country diversities, the average worker in LA produces today the same output as they did in 1980 —about US$38 thousand per annum (PPP), or 20 thousand in 2015 US dollars. Meanwhile, China increased its output per worker 20 times (PPP); India by over six; Korea, Taiwan and Viet Nam by five; Thailand by four; and Indonesia and

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9 Palma (2014).
10 TED (2022).
11 WDI (2023).
Malaysia by three. Even in Chile, as Figure 5 indicates, this has not even doubled, increasing by just 77% (1980-2019)—or at 1.5% per annum (p.a.).

Figure 1 also shows Western Europe falling from third to tenth, as it struggled to respond to the twin challenges posed by the US and China; its increasing “market” inequality has not helped (Figure 19). India, meanwhile, jumped from penultimate place to second, and China to first. Clearly, some have been more capable than others in adapting to the post-1980 new world and financial orders, and the new technological paradigm—even if domestic challenges have been dealt with in deplorable ways.

The remarkable four-decade stagnation of LA’s average productivity is hardly what the Washington Consensus promised when it was promoting its new narrative. However, in LA the fundamentalist way in which the reforms were implemented didn’t help, especially the way the previous development strategy was abandoned—which Hirschman calls LA’s “fracaso mania”. Nor did the huge corruption in its vast process of privatisation—the plundering of State assets. Furthermore, despite appearances, I would argue that LA never really got over its “original sin”: the way its neo-liberal economic reforms were brought to the region by its “Magnificent Seven”—Pinochet, Salinas, Menem, Fujimori, Collor, Pérez and Bucaram. (Figure 2.)

FIGURE 2

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12 For a detailed analysis of the Chilean economy during this period, see Palma (2019b).
13 For the latter, see Palma (2019a), and (2023).
14 On how key countries have adapted to the new technological paradigms, see Pérez (2024, forthcoming).
15 Hirschman (1982).
16 For the “piñata” of Chilean State assets, for example, see Mönckeberg (2015), and Gárate M (2012).
• **ISI**—import-substitution model; and **DE**—“dual-extractive” model. Each series is an index number on a logarithmic scale (three-year moving averages), with a base of 1 in 1950 for employment, 2 for productivity, and 3 for GDP.

• Source: TED (2022).

As Figure 1 indicated, LA’s post-1980 productivity stagnation contrasts with its own performance over the three previous decades (1950-1980), when despite all the well-known problems and distortions of its ISI—or State-led—industrialisation, LA posted among the world’s fastest productivity-growths.

In fact, during the three post-war decades, LA’s productivity increased 2.5-fold—from US$15 to US$38 thousand dollars (PPP); or nearly doubled in just two decades if in 2015 US dollars—from less than 12 thousand (1960) to 20 thousand (1980). So although LA has been perfectly capable of generating productivity-growth, it has lacked the capacity to sustain it—especially the policy-pragmatism ("second best theorem"-style) and the productive-flexibilities needed for inevitable “upgrades” in productive strategies. Basically, no matter how successful they may be, *they all have a sell-by date*, and start to run out of steam once they have delivered the goods. Therefore, the key challenges for sustaining productivity-growth—and “catching-up”—is the capacity to move on, doing these continuous “upgrades”.

As I have analysed elsewhere, having these ideological and productive flexibilities to “upgrade” productive strategies when necessary is the (open) secret of emerging Asia’s success. LA’s rigidities, especially its “neophobia” (its fear-of-the-new), and perennial preference for “easy rents”—especially from “non-produced” assets, such as natural resources, and from artificially-created market distortions and failures—have had the opposite effect. This happened in ISI as well as in DE (see below). In LA, as in *Hotel California*, “We are all just prisoners here, of our own device”.

Thus, LA got stuck in its “extractive” productive strategy after it had run out of steam, ignoring the lessons from the Nordic countries, Australia, New Zealand, and some commodities-rich Asian countries. These had already shown the way forward: how to sustain productivity-growth in commodity-rich countries via the transition towards a selective (i.e., not indiscriminate) processing of their primary exports (the “upgrade”); this also extended towards improving backward linkages.

Furthermore, even at its best, “extractivism” has never proved a very good engine of productivity-growth, as it has been unable to *pull the productivity levels in the rest of the economy with it* (Figure 13). During the three post-war decades, in contrast, manufacturing—despite all the well-known problems of ISI (see, for example, Figure 15 below)—managed to do so. Consequently, and helped significantly by its two main powerhouses (Brazil and Mexico), LA achieved one of the fastest rates of GDP-growth in the world (6.1% annually) —*with output increasing six-fold* (1950-1980). Furthermore, productivity and employment made a similar contribution (3.1% p.a., and 2.9%, respectively).

But this being LA, in ISI the “more of the same” eventually prevailed—even though already by the late 1960s it was patently clear that subsidies should start to be given with “performance-related conditionalities” (as in emerging Asia); and the “closed-economy” model should have given way to a progressive opening-up of the economy (and so on); see Figure 15. But for the business elite, there was such an abundance of “easy” rents during ISI, and weak States had such ‘fear-of-the-new’, that the necessary “upgrade” of that productive strategy never came. By the 1982 financial crisis, this geriatric ISI collapsed like a house of cards.

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17 TED (2022) and WDI (2023; data available only since 1960).
18 Palma and Pincus (2022); Palma (2022c), and (2023).
According to Hirschman (1982), it is not uncommon for people to stick with policies after their usefulness has ended. I would add that this syndrome is particularly true when policies had been able to deliver dynamic growth at some point in the past—as in Chile between 1986 and 1998—, as memories of past glories tend to stick for much longer than those of economic downturns.

A by-product of Hirschman’s syndrome is the “rebound effect”: sticking with a productive strategy well after it has become counterproductive leads to such frustration and disappointment with existing policies and institutions that is not uncommon to experience a “bounce-back” in search of the opposite. A good example is Chile’s neo-liberal reforms of the 1970s: the remarkably simplistic core of its discourse was merely to reverse as many aspects of the previous development strategy as possible. I have extended this Hirschmanian “bounce-back” analysis to explain why inequality also moves “in waves”.19

After the 1982 collapse, LA moved to “extractivism”, which (except for a short while in Chile) proved to be an unremarkable engine of productivity-growth; and, even worse, it then got stuck in it when the engine got exhausted. Unsurprisingly, productivity-growth collapsed after 1980 and GDP-growth decelerated to about one-third of its previous rate (2.4% p.a.). Furthermore, with no productivity-growth on average, this ordinary rate was entirely the result of employment creation—with overall employment jumping from 100 to 250 million between 1980 and 2019.20

This dynamic increase in employment became the second fastest in the world. However, it is even likely that it was the highest as most Sub-Saharan African countries (the top region) do not carry out annual labour surveys—so theirs 2.7% p.a. rate is simply deduced somehow mechanically from its high rate of population-growth.

The problem with LA’s fast employment creation is that over 90% of jobs were created in (low-productivity, low-wage, and low-productivity-growth-potential) services and construction—with their share in overall employment jumping from under half in 1980 to three-quarters in 2018. Meanwhile, manufacturing jobs collapsed to 11%—below 10% if Mexico’s “maquila” is excluded.

And the collapse of productivity-growth was not just a “Venezuelan-phenomenon”, as it remained stagnant throughout in Brazil, Mexico and Argentina (0.1% p.a., -0.1% and 0.1%, respectively)—economies that after the collapse of Venezuela, together represent more than 80% of LA’s GDP. In fact, the remarkable contrast after 1980 between LA and emerging Asia is entirely due to their differences in productivity performance (Figure 8 below).21

Recovering productivity-growth is not only the key challenge for reigniting economic growth, but also for closing the productive gap with the technological frontier (the “catching-up”). It is also the basis of the Myrdalian/Youngian/Keynesian/Kaldorian concept of “cumulative causation”, with its emphasis on positive feedback loops capable of generating self-perpetuating growth.22

Finally, together with high employment creation and the inability to increase output per worker, the last component of LA’s post-1980 “trilogy” is that its inequality remains among the highest in the world—despite some significant improvements in poverty-reduction, and in the lot of those just above this level (e.g., increases in the minimum wage, in the formalisation of labour contracts, in female participation in the labour force, etc.). This is so especially in terms of the share of the rich, which has changed little—if at all! (Figure 3).
Brazil, for example, while its economy added 50 million jobs during these four decades —48 million of them in services (including 10 million in government!), and nearly 3 million in construction—, its average productivity in 2019 was similar to that of 1980 (US$ 36 thousand in PPP terms, or US$ 19 thousand in 2015 US$). Meanwhile, the richest 1% still appropriates today (pre-tax) one-fifth of national income —with the richest 10% getting nearly 60% of the total. Furthermore —and crucially— (as Figure 3 indicates), little of the huge share of its rentier elite has been used productively! This is a country caught in a true “middle-income trap”.

**FIGURE 3**
Brazil: share of the top 1% and 10% in “market income” (i.e., before taxes and transfers), and share of private investment in GDP, 2000-2020

- a=election of President Lula da Silva; b=election of President Rousseff; and c= Parliamentary coup d’état that ousted President Rousseff.
- Sources: WID (2023); and IMF-WEO (2023; data available only from 2000).

In this scenario, unsurprisingly, Brazil’s productivity, which in 1980 (in PPP terms) had already reached 40% of the US’s, by 2019 had fallen to just 26% —reversing all the “catching-up” achieved during ISI (Figure 20 below).

So it should be no surprise that Krugman (2011) identified the enigma of Latin America’s economic underperformance as such a major challenge. Reluctance to move forward is a key part of the answer. And to the ‘why’ of such rigidities and perennial preferences for the “more of the same”, my emphasis is on “neophobic” elites’ preferences for

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23 TED (2022); ETD 2021; and WID (2023).
24 For the “middle-income trap”, see Palma and Pincus (2022), and below.
25 In 2015 US dollars, Brazil’s productivity had fallen from 28% to 16% of the US’s, respectively. TED (2022); and ETD 2021.
26 For an earlier attempt to answer Krugman’s challenge, see Palma (2023).
‘known’ and secured “easy rents”, and “neophobic” governments turning a blind eye to necessary “upgrades”—all in the context of operating in highly distorted markets.

In other words, the current reluctance to confront the “best before” phenomenon in productive strategies seems to be an intrinsic part of the region’s ideological hegemonies and political settlements. That is, its current ideological, political and productive rigidities—those that got LA stuck in its current “Gramscian moment”—need to be understood in an historical context! As should the region’s weakness for falling, from time to time, for “magical solutions” in that interregnum between the old fading and the new failing to generate sufficient credibility.

2).- Some alternative explanations

As is well-known, a common alternative explanation to LA’s current problems (e.g., Group of Thirty, 2023; and Edwards, 2023) is that neo-liberalism was somehow working (or could work, as it did temporarily in Chile), but got derailed by unfortunate shocks, such as “populism” à la “Tocqueville-paradox”: “as social conditions improve, tolerance for inequality drops, and therefore frustration can grow more quickly”.27

Basically, “populism” has been all about perceived—rather than real—inequalities, injustices, corruption, weak States and the free appropriation by a lucky few of the “easy” rents from natural resources, and those associated with market distortions. On the latter, for example, at a time when Brazil’s inflation was just 5.4% p.a. (2012), interest rates on credit cards reached on average 240% p.a.—and up to 490% at HSBC; was that just a perceived distortion, or evidence that Brazil had actually become a rentier paradise?28

In this narrative, the fact that the worst outburst of discontent took place in Chile in 2019—a country that in the 1990s had performed by far the best in the region—is a confirmation of the “Tocqueville paradox”. However, little attention is given to the long period in between, when Chile had aborted its attempt at catching-up (see Figure 21 below), and had become a great example of the limits to which domestic elites can use a country as a cash cow for “easy” rents. For example, during this period, while the top 10% in Chile appropriated more than 60% of pre-tax income (more than its counterpart in Brazil), and the top 1% about one-quarter (while the bottom 50% took just about 7%), productivity-growth collapsed from an average of 3.9% p.a. (1986-1998) to just 0.4% (2008-2019; see Figure 5). Surely a wasted opportunity to make productive use at home of those massive resources (see Figure 14 and 18 below).

According to the World Bank, during the “super-cycle” of commodities that occurred during this period of deceleration, rents from natural resources reached an equivalent of more than 20% of Chile’s GDP. And at the time the country’s elite also had unprecedented access to cheap foreign and domestic finance. But there was very little to show for it productivity-wise; instead, there was a consumption-boom at home, and another of FDI by Chilean corporations abroad (seeking more of the same in neighbouring countries, as “extractivism” had run out of steam at home). As Palma (2013) calculates, if in 2012 the price of copper had abruptly returned to its pre-boom level (that of 2003), and the rest continued undisturbed, the current account would have jumped to a deficit of 18% of GDP! Unsurprisingly, when the “super-cycle” was over, what followed this wasted opportunity was a painful adjustment—and an accumulation of discontent!

27 Group of Thirty (2023, p. xii). In political theory, “populism” is a far more complex concept than the simplistic one often found in economic analysis (see, for example, Lacalu and Mouffe (2014).
28 https://www.ft.com/contenanalysis t/6de7d288-d745-3325-9cee-bbd7bf64d20. For an analysis of these market distortions in finance, see Palma (2022c).
29 WDI (2023); see also Figure 21.
In other words, LA’s “populism” probably relates more to real rather than just “perceived” inequalities, distortions and injustices—in a Tocqueville-style narrative. Perhaps an interregnum of a “Gramscian moment” is more realistic. In that scenario, according to Gramsci, it is almost inevitable that “a wide variety of harmful symptoms will appear”.\(^{30}\) LA’s radical populist projects (from those of the extreme right to the bureaucratic left) testify to this.

As the Group of Thirty (2023) emphasises, LA was surely hit by a succession of “exogenous” global shocks as well; they highlights “the COVID-19 pandemic, the return of [world] inflation, higher interest rates, and slowing growth [in the world economy]” (Ibid, p. xi). However, little is said convincingly on why these shocks had a worse effect in LA that in other regions. Why was LA more fragile?

My own perspective (e.g., Palma, 2014, 2023b) is that this fragility relates to LA having little in the way of social cohesion. So in these interregna, different groups can easily fall prey to “absolute certainties”. The messianic way that neo-liberalism was sold in 1980s LA was no exception. Unfortunately, there has been little room for—far more creative—uncomfortable uncertainties.

Good examples of these “absolute certainties” in LA are those of the “Chicago-Boys” in Chile, and those of Cardoso’s team in Brazil. When Gustavo Franco won the Euro Money’s prize for the best President of a Central Bank, for example, he described their messianic endeavour: "The main aim of our reforms is to undo 40 years of stupidity [besteira]." Adding "[Today, either you are] neo-liberal or neo-idiotic [neo-burros]."\(^ {31} \)

This approach helps to explain the peculiar set of priorities and the rigidity with which neo-liberal reforms were implemented throughout the region, as well as their poor outcome. The contrast with emerging Asia could not be clearer; there, economic reforms were not implemented to undo previous productive strategies, but as pragmatic changes to reengineer their existing ambitious industrialisation strategies. From this perspective, what most differentiated LA (and most of the West) from emerging Asia in the 1980s was not just the strength with which the new neo-liberal ideology was adopted, but also the haste with which the previous ideology was abandoned.

As Gramsci (1930) said, for an ideology to remain hegemonic it must be able to absorb (in a creative sense) elements from alternative ideologies. But in the case of LA (and beyond), new ideas, instead of interacting creatively with existing ones, ended up shattering the previous belief system; so a new set of ideas and beliefs ended up simply replacing the preceding ones. This did not happen in Asia, at least nowhere to the same extent.

Therefore, in LA, “populism”—and a preference for “magical solutions”—have been the outcome rather than the cause of decades of underperformance, distortions and inequalities. In output per worker, it boasts the world’s worst performance since 1980; in the income-share of the rich, LA has now overtaken top competitors; and on the unproductive use of “easy rents”, LA has some of the lowest rates of private investment as a share of the income of the top 10%.\(^ {32} \)

We are told that in neo-liberalism people were supposed to put up with their lot in life—not seek “populist” solutions at times of hopelessness. Reports of the end of history turned out to be premature. In a way, the conventional narrative has also fallen for its own “magical solution”: the only way out for LA’s sorry state is more of the same orthodox policies—e.g. even more liberalisation of trade, finance and investment, and better enforcement of intellectual property rights. To this its is now added a stronger focus on research, education

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30 Gramsci (1930).
31 Veja, 15/11/1996.
32 See Palma (2019b).
and skills training to attract the type of FDI that would facilitate entry into niche industries and products that benefit from knowledge spillovers.\textsuperscript{33}

However, it does not seem to be a realistic solution to propose a package that, while it has some interesting ideas, is based on the same institutional setting, ideology and policies that got LA stuck at the bottom of key world-tables. The core of the current conventional supply-side strategy is about how to become more attractive in a highly competitive international environment for FDI. Sometimes it seems that this narrative has given up on domestic elites, as little is said about how to overcome domestic ideological and institutional rigidities that keep leading the region to such underperformance, distortions and inequalities.

3).- Latin America’s sectoral dichotomies since its 1980s economic reforms

3.a).- Chile: output, employment and productivity in commodities and non-tradables

Chile is a good example of the key growth stylised fact of the region’s economies: the remarkable contrast of their two major sectors —commodities, and services and construction, which typically generate well over 80% of GDP (in Chile it was 86% in 2018)\textsuperscript{34}— in terms of their contributions to GDP. While one, commodities, (Mexico apart) has generated all the productivity-growth (at least until “extractivism” ran out of steam), the other, services and construction, has done all the employment creation (Figure 4).

**Figure 4**

Chile: output, employment and productivity in commodities, and in services and construction, 1950-2018

\textsuperscript{33} In some World Bank reports, it seems that all that LA needs is just better governance, human capital and connectivity…

\textsuperscript{34} ETD (2021).
● commodities = agriculture and mining; and const. = construction. Each series (as in Figure 2) is an index number on a logarithmic scale; 3-year moving averages.

● Source: ETD (2021; 2015 prices, local currency).35

This remarkable dichotomy led me to refer (Palma 2019a) to the post-1980 Latin American economic model as “dual-extractive” (DE): “dual” because of the inability of any one sector to deliver both productivity and employment-growth — just one thing at a time. And “extractive”, because commodities (at least until they had delivered their productivity-growth potentials) were the main — and often only — productivity-growth driver of these economies. That is, the regional norm is that there is no sectoral ‘multitasking’; by contrast, in emerging Asia, the norm is that sectors generate both productivity and employment (see Figure 17 below).36

Furthermore, as already indicated, an “extractivist” productive strategy (like any other) is bound eventually to lose impetus after it had delivered — as only Brazil had an Amazon frontier to raid in order to extend the lifespan of its extractive productive strategy (see Figure 6 below). In the case of Chile, as highlighted in Figure 4, productivity-growth in the commodity sector had averaged 5% p.a. between 1960 and 1982, then jumped to 11.2% between 1986 and 2000 — only to plummet abruptly to just 0.3% p.a. afterwards.37

Chile’s commodity sector had already become dynamic during ISI due to the 1960s agrarian reform, and the “chilenisation” of the copper industry — when the government bought a 51% stake in all four major copper mines. Then, after the 1982 debt crisis, it led the rapid recovery of the economy (Figure 14); but after the turn of the century, the sector lost its productivity-momentum.

A further sign that Chile’s “extractive” strategy had run its course towards the end of the 1990s is that the country began to lose its market share in copper, its main export product: while in the early 2000s its share in world copper exports stood at 40%, by 2019 it had fallen to 27%!38

This became the key flaw of all post-1980 commodity-rich LA: as the productivity-growth potential of extractive industries began to fade, neither the “invisible” hand of distorted markets (if it exists!) nor weak governments or rentier elites (domestic or foreign) were interested in the “upgrade” needed for generating much-needed new engines of productivity-growth. And there were many obvious options, such as promoting backward and forward linkages in natural resources; a “green new-deal” based on investment in renewable, clean energy systems and technologies, and more — e.g. the reengineering of mining activities to make them more sustainable from an environmental perspective, and transforming agriculture — making it more organic while reducing environmental damage. But in LA, despite some progress, the region is moving in the opposite direction: over the last decade,

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35 The ETD (2021) dataset spans from 1990 to 2018. This was brought back to 1950 with growth rates from a previous version of this dataset (see Palma, 2022c).
36 See, for example, Palma and Pincus (2022).
37 As the dataset is calculated in domestic currency (2015 prices), fluctuations in exchange rate can affect these rates. Moreover, this rate is pulled down in mining by a sudden increase in employment following the “super-cycle”: exorbitant copper prices gave a new lease of life to previously abandoned mines. The world-famous “33” are a paradigmatic example — the 33 miners that became trapped for 69 days after the collapse in 2010 of a previously abandoned mine (San José; https://www.britannica.com/event/Chile-mine-rescue-of-2010). But even taking this factor into account, there was a sudden slowdown of productivity-growth in mining after 2000. And in agriculture, whose productivity-growth rate had stood at 9.5% p.a. during the golden years of 1986-1998, it also fell to less than 3% p.a. after 2000 (ETD, 2021).
38 Data from UNComtrade (http://comtrade.un.org).
emissions linked to the destruction of forests and green areas have doubled!\textsuperscript{39} A new government in Brazil is trying to make a difference.\textsuperscript{40}

In Chile, as “extractivism” faded away, employment creation (as in the rest of the region) became the sole driver of GDP growth. Thus, Chile ceased to be the exception, joining the rest in their incapacity to increase output per worker by creating new engines of productivity-growth. (Figure 5.)

Figure 5
Chile: output, employment and productivity, 1950-2018

As Figure 2.

3.b).- Brazil

As suggested above, if you have an Amazon frontier to raid to prolong your extractive strategy — in just six years (2016-2022), more than 800 million trees were cut down in the Amazon rainforest in order to extend the availability of land for cattle ranching (and more were felled for additional soybean production) — , it becomes possible to sustain productivity-growth in commodities for a longer period.\textsuperscript{41} But as the negative externality of the

\textsuperscript{40} https://www.theguardian.com/environment/2023/dec/02/lula-climate-leader-cop28-brazil-undermined-by-opec-move
\textsuperscript{41} https://www.theguardian.com/environment/2023/jun/02/more-than-800m-amazon-trees-felled-in-six-years-to-meet-beef-demand
environmental costs is not priced into its output, this is the outcome of a major market distortion, and a colossal government failure! (Figure 6.)

Figure 6
Brazil: output, employment and productivity in commodities, and in services and construction, 1950-2018

However, what’s remarkable in Brazil is that continued productivity growth in commodities did not help boost the average productivity-growth of the economy as a whole, as it came with a surprisingly poor productivity performance in both services and construction, and in manufacturing. In fact, productivity levels in services fell by about half between 1980 and 2018 —as employment increased 3.4-fold, but output did so by just 82%.

Figure 7 clearly shows the productivity strength and weakness of Brazil’s ISI and “extractivist” models, by contrasting their sectoral productivities with those of the production frontier.
**Figure 7**
Brazil: sectoral productivity gaps with the US, 1980-2018

- **ED**=extractivist (and dual) model; **com**=commodities (agriculture plus mining); **mf**=manufacturing; and **ser**=services. Each line is an index number (1950=100) of the ratio of labour productivity in both countries, each in real terms and domestic currencies (2015 prices); 5-year moving averages. An increase implies that Brazil’s productivity in respective sector is “catching-up” with the US; and a decline, that it’s falling even further behind.


The picture that emerges in Figure 7 shows the dichotomy of Brazil’s two development models since the war —having in common, though, the “one-thing-at-a-time” factor, except for services following the fortunes of manufacturing (as predicted by Kaldor’s “third growth law”; see Figure 13 below). This figure shows Brazil’s strong process of manufacturing “catching-up” during ISI (see Section 4 below), while commodities are being left behind until the 1970s. In turn, during Brazil’s “extractivist” model, commodities surge ahead following its 1990s economic reforms, at a cost of a remarkable neglect of output per worker in manufacturing (and services). In fact, the relative post-1980 productivity collapse of its manufacturing sector vis-à-vis the US (followed by services) —it does so by a factor of 4.4— is one of the steepest (if not the steepest) in the world.

Consequently, and despite the growing destruction of the Amazon, Brazil’s overall productivity-growth in its “extractivism” has been stagnant since 1980 —as opposed to the previous three decades, when it more than trebled. Figure 8 shows that this meant that Brazil managed a similar performance with Korea in the earlier period, and a growing contrast after that.
As Figure 2.

Brazil was quite capable of keeping up with Korea until 1980; in fact, their 1950-1980-rates of GDP-growth were almost identical (7.5% and 7.4% p.a.). Furthermore, productivity and employment-growth rates were also similar. After 1980, however, it’s a different story: Brazil’s output per worker stalled, while Korea’s forged ahead, with the productivity of its average worker growing five-fold in the following four decades (from US$18 thousand to US$90 thousand) —or from a level that was just half of Brazil’s in 1980, to one 2.5 times higher in 2019.

In fact, in income per capita (PPP), Korea only overtook Brazil in 1988 (or in 1984 if in 2015 US dollars); and in terms of output per worker, it did so only in 1986 if the former, or in 1990 if the latter! But then it propels ahead. That’s the difference between being a marathon runner and a middle-distance one!

3.c).- Argentina

Space prevents me from even beginning to analyse the huge complexities of the Argentinean economy. So I merely want to note here that after 1980, this country followed a similar “extractivist” pattern to Brazil and Chile, although generating a much lower rate of productivity-growth in commodities even before its 2001 crisis, and the following “Kirchner-

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42 TED (2022); and WDI (2023).
cycle” — and this despite developments such as the transformation of its soya industry and lithium-extraction.

Figure 9
Argentina: output, employment and productivity in commodities and in services and construction, 1950-2018

The figure indicates that from beginning of Néstor Kirchner's government (two years after the 2001 financial crisis) employment increased significantly in both the commodities and the service and construction sectors, but their productivity slowed down. But even before that, Argentina had not had the fast productivity-growth in commodities achieved by some of its neighbours.

3.d).- Mexico

Mexico’s rather large commodity sector has been unable to deliver much productivity-growth since the 1982 debt crisis and its radical economic reforms (Figure 10).
However, services and construction have generated employment at a rate even faster than Brazil, Argentina or Chile, increasing 2.7-fold between 1980 and 2018 (generating 27 million jobs). However, their productivity levels, as in Brazil, collapsed during this period —down by one-third since 1980, and by more than 40% since 1971! Furthermore, its 2018-average productivity level in manufacturing was almost identical to that of 1981, but this sector had generated 5 million jobs (Figure 12). As a result, as Figure 11 below indicates, its overall average productivity-growth since 1980 has actually been slightly negative, indicating that this is again an economy led by job creation!43

In sum, in all four, the “one thing at a time” rules; as it does in the rest of the region; in Colombia, for example, while productivity-growth in commodities reached 3.1% p.a. until 2012 (then began to decline), employment in services and construction grew at 3.7% p.a. (1980-2018), adding more than 11 million jobs (80% of the total). In Peru the same; while the latter added more than 10 million jobs (over 80% of the total), growing at 5.3% p.a., productivity in commodities grew more slowly than in neighbours (nearly 2% p.a.).

Perhaps the success of the Chilean economy between the aftermath of the 1982 crisis and the end of the 1990s boils down simply to the fact of having been able — at least

43 See Palma (2005); for a comprehensive analysis of Mexico’s economy, see Moreno-Brid and Ros (2009).
temporarily — to do just more than “one thing at a time”! That is, while between 1986 and 1998 it achieved a fast rate of productivity-growth in commodities (11.2% p.a. until 2000), in manufacturing (or what was left of it) it also grew at 2.5% p.a., and in services and construction at 2.6%. However, after 1998, Chile slowly but surely rejoined the rest of the region, with productivity-growth collapsing, and employment-growth progressively becoming the sole driver of GDP-growth.

Returning to Mexico, its striking contrast with Viet Nam helps explain the huge differences between LA and emerging Asia (Figure 11). Both countries have emerged as assembly platforms for foreign manufacturing firms —Mexico because of proximity to the US and trade agreements that have given this country full access to the US’s market, and Viet Nam because of proximity to China, low wages, stability, and improving infrastructure. (Figure 11.)

Figure 11
Mexico and Viet Nam: output, employment and productivity, 1950-2019

- In Viet Nam, the beginning of economic reforms (Đổi Mới) took place in 1986.

Despite enjoying preferential access to the US market since the 1980s, and full access since 1990, and having received the highest proportion of FDI in the world relative to its working population, Mexico remains another Latin American case of overall productivity stagnation since 1980 — posting stagnant rates in all its main sectors (Figure 10 and 12). The contrast with Viet Nam could not be starker.

As the figure indicates, Viet Nam has achieved among the fastest sustained rates of average productivity-growth in the world since the introduction of reforms in the late 1980s. Only China and India have done better in this respect. In all three, initial average productivity...
levels were extremely low, and even now are below some of LA’s higher middle-income countries—but in PPP terms, Viet Nam is now not far behind Peru!

4).- Manufacturing: the elephant in the room. The “non-creative destruction” of a former engine of productivity-growth

i) The collapse of LA’s manufacturing.

The neo-liberal economic reforms marked the end of a dynamic period of industrialisation since 1950, which in many countries stretched to the 1930s, and in Brazil and Chile to at least the First World War. In fact, between 1950 and 1980, LA’s two powerhouses, Brazil and Mexico, multiplied their manufacturing output by a factor of 11 and 9, respectively—in the next and longer period (1980-2018), however, Brazil didn’t even manage to double its manufacturing output, while NAFTA-Mexico did just manage that. (Figure 12.)

Figure 12

Brazil and Mexico: output, employment and productivity in manufacturing, 1950-2018

What followed the 1982 crisis and subsequent neo-liberal reforms—with its abrupt and indiscriminate trade and financial liberalisation (foreign and domestic), the plundering of State assets and across-the-board deregulation—was the world’s fastest growth-deceleration in manufacturing. Only post-Plaza-Accord Japan had a comparable downturn. Brazil’s average growth of manufacturing output dropped from 8.3% p.a. (1950-1980) to just 0.9%

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45 TED (2023); see also (Palma, 2010, 2019a and c).
(1980-2019) —a 90% fall! In turn, Mexico’s rate fell from 7.7% p.a. to 2.2% p.a. Palma (2005) labelled this process “premature de-industrialisation” (see below).

As post-1980 productivity-growth in manufacturing stagnated in Brazil (-0.7% p.a. between then and 2018) and in Mexico (0.2%) —as well as in several other countries, such as Colombia, Costa Rica and Peru (0.2%, 0.9%, and 0.5% p.a., respectively)—, average output per worker in LA’s manufacturing today is similar to that in 1980. In fact, in Brazil it’s similar to that recorded in the mid-70s. And in Mexico, this occurred despite the reallocation of American and Asian manufacturing facilities into the country seeking an assembly platform to export to the US.

The ideological contrast between LA and emerging Asia —the “undoing stupidities” (à la Gustavo Franco’s fundamentalism) vs. the pragmatic reengineering of already ambitious industrialisation strategies— led their reforms in different directions, especially in terms of manufacturing. While LA’s output per worker in manufacturing stagnated after 1980, in China it increased by a factor of 20, in Korea by nearly 10, in India, Singapore and Taiwan by 5, in Malaysia by 3.5 and in Thailand by nearly 3.46

ii) LA’s de-industrialisation.

The orthodox theory of international trade, new and old, predicted that trade liberalisation and growing competition from cheap labour abundant emerging Asia would lead to the off-shoring of LA’s labour-intensive (and often lower productivity) manufacturing activities (or segments of value-chains). However, there was no reason why the region would be unable to retain most of its higher productive (and productivity-enhancing) activities. In turn, greater concentration on higher value-added products could help productivity-growth due to specialisation and increasing returns. Thus, from a simple arithmetical perspective, deindustrialisation in LA could well increase average sectoral productivity levels, as employment in manufacturing could well drop more than output.

However, what actually happened was rather different: in Brazil and Mexico, the opposite was the case as employment continued to grow (especially in Mexico) while productivity stalled. Not for the first time, the real world did not fit into orthodox models. Basically, industries that were transferred to emerging-Asia were simply those that were more mobile or “footloose”, and not necessarily those that were less productive —i.e., those easier to move, as they didn’t need to be located either close to their consumer-market, or tied to the geographical source of their main input.47 Furthermore, reduction in transport costs (plus China’s industrial policy) led to an increased transfer of those that had been tied to the geographical source of their main input (such as the processing of bulky commodities in mining).

As indicated above, Palma (2005) labelled this process “premature de-industrialisation”48 —as it is associated to LA’s radical economic reforms obstructing the transition towards a more mature (i.e., self-sustaining) process of Kaldorian industrialisation.49 From this perspective, “premature” deindustrialization became a policy-led process of ‘uncreative destruction’ (as in Franco’s Brazil).

The slowdown of manufacturing in the three largest economies of the region (and in many of the smaller ones), as well as the collapse of this activity in Venezuela, reduced LA’s share of emerging market manufacturing output from about half of all manufacturing

46 ETD (2021).
47 Palma (2010). For the original formulation of this industrial desegregation, see Sutcliffe (1971).
48 Ten years later, Rodrik (2015) used this concept in a similar context (but there is no acknowledgement to its original formulation). For the original concept of “premature” de-industrialisation, see Palma (2005a) and (2008); see also and Palma (2019c).
49 Kaldor (1967).
production in 1980 to just one-tenth in recent years.\textsuperscript{50} In fact, statistically, in manufacturing, the relative rise of China is almost the mirror image of LA’s decline.\textsuperscript{51}

This raises the obvious question (one beyond the scope of this chapter, of course): why did LA waste its unique opportunity to benefit from globalisation given its pre-1980 supremacy in manufacturing within the developing world?\textsuperscript{52} Instead, LA’s manufacturing was crushed by globalisation!

iii) Kaldor’s “third growth law”.

Figure 13 revisits Kaldor’s “third law”.\textsuperscript{53} It highlights the contrast between commodities and manufacturing as engines of productivity-growth —understanding this as the capacity of a leading sector to foster productivity-growth not just in its own activity, but also in the other sectors of the economy. It shows the post-1980 relationship for some emerging Asian countries between output-growth in manufacturing and that of productivity-growth in the rest of the economy, and a similar the relationship for some in LA, but this time between output-growth in commodities and productivity-growth in the rest of the economy.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure13.png}
\caption{Latin America and emerging Asia: commodities vs. manufacturing as engines of productivity-growth, 1980-2018}
\end{figure}

- Emerging Asia: $g_{\text{output in mf}}$ (blue bar)=output-growth in manufacturing (1980-2018), and $g_{\text{prdt in non-mf}}$ (green bar)=productivity-growth in the rest of the economy. And LA: $g_{\text{output in}}$

\textsuperscript{50} WDI database (http://databank.worldbank.org). These percentages should be taken with caution, as this source keeps changing its estimates of manufacturing in China.

\textsuperscript{51} Palma (2010), and (2019c).

\textsuperscript{52} At that time, one would have certainly preferred a Latin American-built car to an Indian one, a Latin American electronic product to a Chinese one, or to fly in a Brazilian-made airplane rather than a Russian one.

\textsuperscript{53} The third Kaldor’s “growth laws” (Kaldor, 1967) states that “The productivity of the non-manufacturing sector is positively related to the growth of the manufacturing sector.”
commodities (blue bar)=output-growth in commodities; and g prdt in non-com (green bar)=productivity-growth in the rest of the economy.


Figure 13 indicates that Kaldor’s “third law” —as he predicted— applies for manufacturing, but not for commodities: “extractivism”, even at its best, is not a very powerful engine of productivity-growth. For Kaldor, manufacturing was a better engine essentially for two reasons: growth tends to be more rapid within manufacturing because of opportunities to realise increasing returns to scale —as there are more opportunities for innovation; and its output growth has a stronger positive productivity-impact on the other sectors of the economy. There are “between-sector” effects, as average output per person in the economy increases when labour moves from low-productivity activities (e.g., services) into manufacturing, and manufacturing (not commodities) has a greater capacity to pull productivity-growth in services and construction—which, as non-tradables, depend crucially on domestic demand factors.

As the figure shows, not only was manufacturing able to deliver faster output-growth, but also growth in commodities did not induce (or was not associated with) much productivity-growth in the rest of the economy —if any! Manufacturing, meanwhile, was quite capable of “pulling” the rest of the economy with it.

There is, of course, nothing automatic about Kaldor’s “third law”, as it depends on such things as enlightened government policy to provide the physical infrastructure and maintain it, and to promote technological change (through support for research and financing for capital equipment).

In LA (as already indicated), while post-1980 output in commodities surged (at least until it ran out of steam, except for those with an Amazon to destroy), productivity-growth in services and construction actually fell in Brazil (-1.6% p.a.), and Peru (-0.9%), and it hardly grew in Chile (0.8%) or Colombia (0.6%). Thus, even when “extractivism” was actually delivering dynamic output growth in agriculture and mining, it failed to induce productivity-growth in the rest of the economy; and when LA got stuck in it after its “sell-by” date, it was even worse.

In emerging Asia, meanwhile, as output in manufacturing thrived in this period, it fostered productivity-growth in services and construction —increasing by 6.3% p.a. in China, 3.3% in India, 3% in Taiwan, 2.9% in Malaysia, 2.2% in Indonesia, and 2.1% p.a. in Korea.

From all of the above, my understanding of the “curse” of natural resources (if that is really the appropriate concept to use…) is different from Sachs and Warner’s (1995), as it places the emphasis on three different spheres.54 One is that rentier elites and weak governments tend to get stuck in the “milk and honey” life of the “easy rents” of natural resources and market distortions. Another is that as natural resource-rents are entirely appropriated in the very early stages of extraction (e.g., in the case of copper, in concentrates), neither the “invisible” hand of distorted markets nor weak governments can provide effective incentives for those rents to be used productively —other than for more of the same “extractivism”. And, finally, as processing operations tend to be highly capital intensive, particularly in mining, and the processed mineral tends to be a homogenous product, their outputs operate in more competitive markets in which what’s on offer are mostly operating profits and few rents. So, rentier elites are unlikely to be willing to move to these activities (see below, Section 6).

54 See also Sachs and Warner (2001).
The fact that “easy” rents from natural resources do not tend to be used productively is not a new issue in economics: Ricardo emphasised the same thing.\textsuperscript{55}

In sum, unless the “visible hand” of the State is able and willing to do something about it, mere “extractivism” is likely to continue even after it has run its course. But as powerful rentiers can easily capture governments; so, as often seen in LA, it becomes a vicious circle.

iv) Is manufacturing still an effective engine of productivity-growth?

Finally, one often hears the argument nowadays that while manufacturing \textit{used to be} the most effective engine of growth ever, as demonstrated by countries like Japan, Korea, Taiwan, China and Singapore, it isn’t anymore. New technologies have blurred the distinction between manufacturing and services: Apple sells you an iPhone so it can sell you software and services; GE sells jet engines at a loss so it can earn high profits servicing them. And automation will destroy labour intensive jobs and (supposedly) redirect productivity-growth from factories in the developing world to office buildings in the advanced countries where clever engineers build robots to make our shirts and telephones —even food!

It’s true that products and services are changing, but it was always thus. And the use of machines to replace human power is not a new phenomenon —it has been at the core of each technological revolution since Cartwright patented the power loom in 1786. The evidence presented in this paper shows that manufacturing is still crucial for commodity-rich middle-income countries —and its neglect lies at the core of LA’s failure to sustain productivity-growth and “catching-up”. Countries that have achieved more rapid growth of manufacturing have grown faster for the last three centuries.\textsuperscript{56} And we believe that they will continue to do so —provided they raise to the challenge of a continuous “upgrade” of their development strategy. And in commodity-rich LA, insisting on “more of the same” but hopefully better extractivism, or in Mexico on “shallow” assembly-operation, is a tacit acceptance of permanent mid-table status.

5).- Latin America’s inability to “upgrade”

What follows from the above —even for those with an Amazon at their disposal— is that when old productivity-growth engines have run their course, the only effective way forward is to generate new ones (“upgrade”). Trying to stretch the “shelf-life” of the old ones is a recipe for being left behind —i.e., failing in the process of “catching-up” (see Figures 21 and 22 below). Exporting “more of the same” unprocessed commodities is no longer a valid growth-option for LA.

The most obvious candidates are: adding manufacturing value to commodities; developing backward-linkages activities; a “green new deal”; and high-tech services.

Figure 14 compares sectoral productivities in Chile with those of the production frontier, and clearly shows the two facets of a purely extractive export strategy. With the recovery from the 1982 crisis, Chilean agriculture (including forestry, fish-farming, fruit, vegetables and wine) became the leading edge of the “catching-up” process. But in the mid-1990s, agriculture lost its productivity-growth momentum, being replaced by mining as the engine of productivity-growth. But, again, from around the mid-2000s, mining also ran out of “catching-up” steam.

\textsuperscript{55} For Ricardo’s perspective on “easy” rents from natural resources, see Palma (2023).

\textsuperscript{56} https://www.project-syndicate.org/commentary/poor-economies-growing-without-industrializing-by-dani-rodrick-2017-10
Chile’s sectoral productivity gaps with the United States since 1980

- **agr**=agriculture; **mf**=manufacturing; **min**=mining; and **ser**=services. Each sectoral line is an index number (1980=100) of the ratio of labour productivity in Chile vis-à-vis the US (each in real terms and domestic currencies; base year 2015); 3-year moving averages. An increase implies that Chile is “catching-up” with the US, and a decline that it is falling even further behind.

- Source: ETD (2021). For presentational purposes, this figure provides information only until 2012.

But why did fast productivity-growth in Chile’s extractive sectors plateau so soon, and then reverse? Part of the answer is straightforward: sustaining productivity-growth would have required developing higher value-added forward and backward-linkages activities within the sector —i.e., both “downstream” and “upstream”. However, this was clearly not the priority of foreign or domestic conglomerates —for reasons that had little to do with “comparative advantage” (i.e., relative production efficiencies) and a lot to do with trade distortions, such as China distorting export markets by indiscriminately biasing its imports towards commodities as unrefined as possible (see Section 6 below). Also, the preference of domestic elites for more of the same “easy” extractive rents, rather than hard-earned processing operating profits, hasn’t helped.

The poor relative performance of Chile’s manufacturing also becomes evident in Figure 14, as this is the sector that fell furthest behind with respect to the US, something shared by all Latin American countries (even NAFTA’s Mexico). For example, the productivity gap in manufacturing since 1980 between Mexico and Singapore or Taiwan has increased by a factor of 5; that of Colombia or Peru with Malaysia by 3; and that of Brazil vs. Korea by 12!\(^{57}\)

However, “aborted catching-ups” —like those of agriculture and mining in Chile in Figure 14— are not new in LA. During ISI, manufacturing also reached a “catching-up

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\(^{57}\) ETD (2021). See also Palma and Pincus (2022).
plateau”, and got stuck in “more of the same” just when “upgrading” the ISI productive strategy was becoming absolutely essential. (Figure 15.)

FIGURE 15
Chile's sectoral productivity gaps with the United States between 1950 and the 1973 Coup d’état

Therefore, there is an underlying common phenomenon in the two productive strategies followed by LA since 1950 (ISI and DE): the inability of (distorted) markets, (rentier) elites and (captured) governments to force an “upgrade” when it became necessary in order to sustain the process of catching-up with the productive frontier. Just as the DE model got stuck in its purely extractive activities, ISI also proved unable to move towards more specialisation and openness when needed.

This is a key feature of a “middle-income trap”: thinking that the way to transit from middle to high-income status is by doing “more of the same”, just hopefully better. LA’s apparent fear of anything new, its elite’s inability to move away from “easy” rents, and weak governments have become its greatest obstacles to sustaining the process of “catching-up”. And, if anything, they are getting worse…

6).- Obstacles to the “upgrading”

i).- China’s preference for importing unprocessed raw materials

One key obstacle, which has already been mentioned, is China’s preference for importing unprocessed raw materials —so as to retain at home the profitable business of processing commodities. In mining, for example, China’s willingness to put pressure on countries and
multinationals to export just ore to China has been very effective.\textsuperscript{58} And now Chinese state-owned companies are even doing some of the extracting as well—in Peru, for example, they are already the main copper producer, as in Argentina and Chile for lithium. And Latin American governments have not yet been prepared to do anything about it—not even to restore the level playing-field that their neo-classical theory (in no uncertain terms) tells them they should.\textsuperscript{59}

In the case of copper, for example, China only wants “concentrates”—a mud with about only 30% purity. So, even though a study conducted by a think-tank close to the copper multinationals operating in Chile highlights that smelting and refining those concentrates would be a profitable business, they are not carried out.\textsuperscript{60} In fact, China is the only country in the world that buys Chilean walnuts \textit{in their shell}! Also, it only wants Brazilian iron as ore, Argentinean soya as beans, oil (even Venezuelan heavy-oil) unrefined, and so on.

And since China imports such a huge proportion of local commodities, it has a lot of leverage to keep those exports unprocessed. For example, a study carried out by BBVA indicates that about 95% of Peru’s iron is exported as ores to China, as well as 80% of Chile’s and two-thirds of Brazil’s; about half of Peru’s copper is exported unprocessed to China, as are Chile’s; similarly about 90% of Argentinean soya beans and 80% of Brazil’s have the same destination.\textsuperscript{61} This BBVA research paper also develops an index of LA’s “export dependence” on China, and concludes that “[export] dependency on China increased [across the board] for all countries and all sectors”—making the region highly “exposed to fluctuations in Chinese demand”, and to Chinese pressures to keep these exports “simple”.

The BBVA index shows that commodity dependency on China was highest amongst members of MERCOSUR, followed by Chile, Peru and Colombia.\textsuperscript{62} At least Mexico has been helped by geopolitical tensions leading the US to shift the source of its imports westwards. In fact, the US did this to such an extent and speed that (according to Bloomberg) as of July 2023, Mexico had overtaken China in terms of share of US imports. This is a remarkable shift, as only in 2018 China’s share was nearly two-thirds higher than Mexico’s!\textsuperscript{63}

However, trade in commodities is a different story. China has invested so much in processing commodities at home (e.g., in copper, this has been growing at double-digits per year), that according to Bloomberg it already accounts for well over half the world’s capacity to smelt and refine copper concentrates.\textsuperscript{64} So, China’s imports of refined copper from Chile’s State-own corporation—the only large producer that bothers to add value to copper ores—are falling rapidly (today they represent just 40% of its exports, while a decade ago it was 60%). Meanwhile, exports of concentrates from private conglomerates operating in Chile keep rising.\textsuperscript{65} In fact, as Indonesia, India and even the Democratic Republic of Congo (already the second largest copper producer in the world) are increasing their smelting and refining capacities, Chile, as well as Peru—some of the most “ideologically purist” countries in the region—are being left ever further behind.

\textsuperscript{58} See, for example, Gallagher and Porzecanski (2010).

\textsuperscript{59} The current Chilean government is trying to get a higher share of the rents in lithium extraction by exchanging new contracts with some ownership of the conglomerates that do the extraction; but despite rhetoric, this will not ensure that at least some of its processing should be done at home.

\textsuperscript{60} Lagos, et al. (2020).


\textsuperscript{62} Ibid. Absolute dependency levels were highest in Costa Rica, Colombia, Uruguay, Venezuela, Brazil, Panama, Peru, Chile, Guyana and Argentina.

\textsuperscript{63} https://www.bloomberg.com/graphics/2023-mexico-china-us-trade-opportunity/. See also https://www.ft.com/content/28f0f57a-d5f0-442c-9f8e-75672d012742. On Biden’s attempt to re-industrialise the US, see https://www.ft.com/video/9f002882-c330-4c7f-88c0-4cc5112125a2

\textsuperscript{64} Quoted in https://www.df.cl/empresas/mineria/la-creciente-produccion-de-cobre-de-china-deja-menos-espacio-para-codelco

\textsuperscript{65} Ibid.
ii).- A Chinese-led *flying-geese “in reverse”* scenario

The above indicates how different the roles played by Japan and China have been in enhancing the industrialisation of emerging countries. The Japanese economist Akamatsu used the concept of “flying geese” to characterise Japan’s led model of supply-upgrading industrialization in East Asian (Akamatsu 1962). He describes a sequential movement along the “learning curve” involving products for which Japan had exhausted their productivity-enhancing potentials. In this sequential movement, export-productive capacities that tended not to be very high up the “learning curve” were successively transferred initially from Japan to the first-tier NICs, and then from these countries to the second-tier NICs, then to China, India and Viet Nam, and so on. The crucial issue here is that when productive capacity is transferred to the following geese, this creates sequences which “upgrade” both the more, and the less advanced country.66

So, while in the 1960s Japan was a leading Nike producer, by the 1970s it had little interest in this product, which helped Korea and Taiwan take this over. Then, in the 1980s, production moved to Indonesia and then into China, which now account for two-thirds of Nike’s output; meanwhile, Viet Nam is already attracting some of this productive capacity—a country that (like Mexico) is a great beneficiary of the geopolitical tensions between the US and China.

China’s role in LA’s industrialisation—or lack of it—, is a different story altogether. This is a country that wants to retain (and quite indiscriminately) the whole range of *industrial capacities associated with commodities*. No “flying geese”-style transfer of commodity-processing productive capacities to middle-income, commodity-rich countries here—unless, of course, they implement effective industrial policies, as Indonesia has done using its high market-share of nickel to force Chinese steel corporations (in need of that nickel) to relocate there—and has become the second largest steel producer in the world!67

In laissez faire LA—no matter how distorted markets could be (fundamentalist ideas tend not to be too sophisticated)—China’s message to commodity multinationals is clear: if you want to operate in China, or do other business with us, behave! Keep your commodity exports from LA “simple”. And for LA’s governments, there are carrots and sticks; among the former, market access for other products (e.g. to wine, salmon and cherries in the case of Chile, with 90% of the latter going to China), and also loans and investment in the infrastructure needed for “extractivism” (as in its Belt and Road Initiative).68 And among the latter, with such market power, China can become a formidable adversary (so, Latin American governments happily look the other way).

In LA’s laissez faire, markets are about “invisible hands”, not power… Chile’s share of the world’s copper reserves are similar to Indonesia’s in nickel (over 20%). But the former believes that the best growth-strategy is to win a beauty contest: how to become the most attractive country for FDI, in its highly competitive international environment (so, happy that none of the largest copper multinationals operating in Chile does any smelting of its...
concentrates); the latter, instead, using the market-power given by its resource abundance, has forced multinationals to reallocate their processing productive capacities there.\textsuperscript{69}

In fact, a “magical realist” twist to Chile’s laissez faire is that Codelco, the state owned copper corporation, is a member of the local association of large copper producers (the “Consejo Minero de Chile A.G.”), which are the main lobbyists against any kind of royalty. So, in Chile, a State owned corporation helps finance the multinational’s lobby against the interests of the State…

Furthermore, Codelco has recently closed one of its smelters, located in a saturated industrial area of the central coast that has been the site of pollution-related health incidents. Built in 1964, it reached the end of its life expectancy, having already smelted more than 18 million tonnes of concentrate; however, instead of building an alternative environmentally-friendly one, with the latest technology, and in a more appropriate area, Codelco decided to give up the smelting it did in its Ventanas’ operations.

Consequently, yet more Chilean copper concentrates are going to be smelted in China. The last Chilean smelter was built in 1990! In the meantime, copper extraction has more than trebled (from 1.5 million tonnes to 5.3); so, unsurprisingly, the share of concentrates in overall copper exports is growing at a remarkable speed: if at the time of economic reforms in the 1970s, copper exports hardly contained any “concentrates”, by 1990, the share of this primitive form of mineral had already increased to 12%, and today it represents more than half of the total! Furthermore, it is estimated that by 2035 this share is likely to reach three-quarters (see also below).

What an example of a flying-geese “in reverse” scenario! Productive capacities (that are relatively low in the “learning curve”) are being transferred to—and not from—the leading geese.

In other words, while Japan helped emerging Asia to acquire a more flexible and growth-enhancing set of comparative advantages via the successive transfer of products along the “learning curve”, China (quite indiscriminately) prefers to absorb those productive capacities, and keep LA stuck in its “extractivism”.

iii).- The abundance of “easy rents” do not generate Schumpeterian elites.

One should add to the list, of course, the domestic component of these contrasting regional scenarios. While emerging Asia was able to build a structure of property rights and incentives, an institutional capability and a political settlement that helped it develop a more flexible export productive capacity—in part following this “flying geese” dynamic—, LA passively let China get the upper hand.

And relatedly, as already mentioned—and discussed in detail in Palma (2023)—, from a Ricardian perspective, the abundance of “easy rents” from “non-produced” assets (e.g., natural resources) do not lead to the generation of Schumpeterian elites… Rather, the opposite; and the “invisible hand” of distorted markets does not really care. So, the “visible” hands become essential. But powerful rentier elites can easily capture governments, and stop any form of intelligent industrial policy; so the vicious circle of underdevelopment continues.

\textsuperscript{69} Indonesia’s Parliament passed in 2009a “Mining Law”, which included a provision that mineral ores must be processed at home starting Jan. 12, 2014. It later agreed on an extension, provided that mineral conglomerates committed to building new smelters—but they have to pay a new export tax until then (https://finance.yahoo.com/news/indonesia-implements-ban-unprocessed-ore-export-051547853--finance.html?guccounter=1)
iv).- Low levels of research and development (R&D)

Another issue that is crucially obstructing the “upgrade” from “extractivism” is low investment in R&D. While R&D in Korea and Israel reached about 5% of GDP, Brazil was the only country in the region where it exceeded 1% (1.17%, but even here, its efficiency has been questioned by IPEA, a Brazilian think-tank associated to the Ministry of Planning, Budget and Management).70 In fact, in no other country in LA does it exceed Argentina’s 0.5% —in Mexico it reached just 0.3%!71

In fact, Chile’s 0.34% of GDP is less than 2% of Korea’s R&D in dollar terms —and only one-third of its minute R&D expenditure comes from the private sector (in Korea, this is about 80%).72

LA also ranks low in education. E.g., in the Pisa test, that ranks countries according to the quality of students’ reading, mathematics and science, the average score for the region is equivalent to a rank of 62 among the 81 Pisa-countries…73 It also invests little in skill training —a recent OECD studies indicates that “… [in the] case of problem solving in technology-rich environments, substantial shares of [LA’s] populations did not have the ICT skills needed [even] to complete the assessment at all”.74

Their own endogenous growth theory tells LA’s academics and politicians that what is needed most for raising productivity is precisely a stronger focus on research, education and skills training in order to facilitate entry into niche industries and products that benefit from knowledge spillovers; however, they seem just to turn a blind eye to it.

v).- LA’s low level of investment does not help!

The processing of raw materials may not be the most sophisticated form of manufacturing, but in many products (especially mining) it is highly capital intensive (see Figure 16). But investment is not LA’s forte (see for example Figure 3 above). Even before the pandemic, its average investment-rate was just 18% of GDP, while China’s was 43%, East Asia and the Pacific 35%, the average for middle-income countries 34%, for low-income ones 26%, for Sub-Saharan Africa 23%, and so on.75 So capital intensive activities are just not welcome in LA —unless they are full of “easy rents”.

But, as already suggested, since the processed mineral tends to be a homogenous product, these activities usually operate in more competitive markets; therefore, other than operating profits, it is only rents associated with innovation that are on offer —again, not LA’s speciality.

As Figure 16 indicates, investment per worker in the countries that have embarked on the industrialisation of resource-based activities, such as the Nordic countries and Australia, is between four and five times higher than in Chile —and even more vis-à-vis other Latin American countries. In fact, these levels are even higher than those of advanced emerging Asian countries where industrialisation strategies have concentrated on knowledge-intensive and “knowledge-spillover”-intensive products, such as Korea, Taiwan or Singapore!

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71 WDI (2023); see also https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm.
72 Ibid.
74 https://www.oecd-ilibrary.org/education/skills-in-latin-america_5ab893f0-en; see also https://unesdoc.unesco.org/ark:/48223/pf0000384184
75 WDI (2023).
Thus, the processing of many commodities tends to be highly capital-intensive, with little on offer but operating profits —plus China’s disapproval! So domestic and foreign capital involved in commodity extraction has been reluctant to move “downstream”. As mentioned above, in Chile only a state-owned company (Codelco) has made the effort —although even that commitment is now weakening.

Indeed, as Chile is actually moving in the wrong direction, absurdly enough, the slag of that “concentrate” has become Chile’s main export product by volume —a product that mostly ends up in a foreign dump. What an indictment of the inefficiencies of distorted markets and emasculated States —and ideological double-standards in terms of concern for the environment!

vi).- “Subsidiary” states

Another issue obstructing the “upgrade” is that the lack of government action is not just a consequence of powerful lobbies. It also has a fundamentalist ideological element, with those promoting extreme forms of “subsidiary” states having been unhelpful in this area. Foucault’s (1979) understanding of the relationship between power and knowledge, in particular the role of the economic “discipline” in democracy—as a form of “disciplinary” power via the production of particular kinds of knowledge—helps us understand this. By justifying (even idealising) governments’ inaction, many mainstream economists have their share of responsibility for LA getting stuck in its “extractivism”. From Foucault’s standpoint,
what we really need in LA is a more critical perspective within economics on the range of our options for participation.

Saint Augustine argued that our free will had been weakened but not destroyed by original sin. Perhaps in LA it had a more devastating effect.

In fact, the willingness of successive centre-left governments (such as in Brazil, Argentina or Chile) to “interfere” in the market to support purely extractive activities (such as forestry, fish farming and mining) —and with shamelessly “vertical” policies76—, contrasts with their reluctance to do the same for the industrial processing of commodities, or the improving of backward linkages; the same with the need for “deepening” assembly operations in Mexico.

It seems that LA’s “new left” has never been able to banish the ghosts from the past —its support for manufacturing-at-any-cost during ISI! When it comes to adding manufacturing value to commodities, or regulating extractive activities to reduce their huge environmental impact, or controlling the quality of primary production (e.g., the excessive use of antibiotics in fish farming), they suddenly turn into strict free-marketeers.77

From this perspective there are many issues in which fundamentalist ideologies trump economic theory. When markets don’t price in a negative externality, neo-classical economics tells us that governments should; but LA does not even act to secure a level playing field vis-à-vis China’s market interferences; or to pricing in the concentrate the costs of creating pollution by unnecessarily transporting more bulky and toxic products. In fact, if copper concentrates were to be smelted in Chile rather than sent to China as concentrates, the overall environmental impact of copper extraction and smelting would decline by one-third —as the pollution created by the unnecessary maritime transportation of slag contributes significantly to global warming.78

Basically, over a thousand cargo ships sail each year from Chile with copper concentrates; but as this product only has about 30% of copper and some other useful minerals (including precious metals) —the rest being waste matter—, the equivalent of some 700 of those ships sail with just slag. And this bizarre pollution is Chile’s most easily avoidable contribution to climate change!

Furthermore, the unnecessary transport of the slag, which contains highly toxic substances, also risks great pollution in the event of a maritime accident. So yet another “unpriced” negative externality, and another reason to smelt the concentrate at home and remove those toxic by-products. If governments really cared about the environment, they should at least insist that concentrates be transported in containers that are much safer than those currently in use.

Therefore, I have suggested in many different forums (see, for example, Palma 2022a) that one way of doing this is for Chile to apply a “differentiated” royalty to copper in order to internalise their negative externalities into relative prices: the lower the purification level, the higher the level of the royalty. That is, high on the exports of concentrates, medium if the mineral is exported smelted, lower if refined, and even lower (or non-existent) if transformed into copper wire (or similar).

Such a simple and clear industrial policy could deal with two market failures —the environmental ones, and an elite one (their reluctance to productively invest the “easy” rents from “non-produced” assets, such as from natural resources). However, no government in Chile, not even “centre-left” ones —and there have been six of them since the return to

76 In the language of neo-classical theory, a “vertical” policy is one directed to a specific activity, while a “horizontal” one is open to all sectors of the economy.
77 A Chilean salmon can have up to 1,400 times more antibiotics than a Norwegian one —and those produced by Norwegian corporations operating in Chile are among the worst offenders (Avendaño-Herrera, 2023).
78 Sturla-Zerene, et al. (2020).
democracy in 1990, including the current one (which has explicitly said it agreed with my proposal)—, has even tried to transform rhetoric into action, and get parliamentary approval for a royalty of this type, or any other policy pointing in the same direction.⁷⁹

Basically, LA’s “free-marketeers” of all political trappings seem to be immune to the caveats of their own economic theory —à la Milton Friedman: a recent book on Friedman’s work, published by no other than the Stigler Centre of his own University of Chicago, criticises Freedman precisely on this!⁸⁰ They focus on one of Friedman’s most influential propositions: that the ‘only’ social responsibility of business is to increase its profits.⁸¹ And they ask the obvious question: “Under what conditions is it socially efficient for managers to focus only on maximising shareholder value?” After all, opioid maker Purdue Pharma did just that!⁸²

And their answer is extremely relevant for what has happened in LA since its economic reforms. And as Martin Wolf of the Financial Times rightly remarks, “Needless to say, none of these conditions holds.”⁸³ Friedman simply completely disregarded his own neoclassical theory. Basically, for someone who was wrapped in the “worship of a concept”—the magnificence of unfettered markets—, those necessary conditions for social efficiency became just optional extras.

Similarly, so many Latin American economists and politicians had no qualms in practice with issues such as the market inefficiencies and distortions likely to be created by market concentration (e.g., leading to agents being “price-makers” and “rules-makers” rather than the opposite), by externalities, or by contracts not being “complete”—and so on. In Chile, for example, just 0.1% of firms account for 70% of overall sales; so, these are not really “rules-taking” conglomerates…⁸⁴ And these few entrepreneurs have become ‘too-big-to-fail’, ‘too-big-to-challenge’, or ‘too-big-to-jail’! As Theodore Roosevelt remarked, “Of all forms of tyranny the least attractive and the most vulgar is the tyranny of mere wealth, the tyranny of plutocracy.⁸⁵

And the excuse is always the same: action in any of these areas would deter FDI. Korea, meanwhile, is not afraid: it has just banned short selling, because “… concerns remain high over fair price formation in the domestic stock market due to repeated illegal naked short selling by global institutional investors.”⁸⁶ And it actually imprisoned the son of the owner of its largest corporation for illegal political contributions. Both actions would be unthinkable in LA!

Perhaps this is the one of the main transferable lesson from emerging Asia: when Indonesia banned the export of unprocessed commodities, the government had the support of the domestic elite (as it obviously opened many investment opportunities to them).

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⁷⁹ As already indicated, in Chile even the state owned Codelco helps finance the copper multinational’s lobby against a royalty of any kind…
⁸⁰ See Zingales (2020).
⁸² https://www.ft.com/content/8112c484-c8f9-49f8-8d6d-bffeff9ccbb5
⁸³ https://www.ft.com/content/e969a756-922e-497b-8550-94fbb1302cdd. Emphasis added.
⁸⁴ To make fishing sustainable, the Chilean government imposed fishing quotas; but instead of auctioning them (as their own neo-classical theory tells them to do), and with the approval of a captive Parliament, they gave them for free —and in perpetuity (which made them worth billions of dollars)— to the five largest domestic fishing fleets. As we now know, top executives of those fleets sent e-mails to the head of Parliament’s fishing committee, given her the exact wording of the law; and some senators received generous commissions for their help.
⁸⁵ In any case, in the unlikely situation that they were prosecuted, they don’t need to worry since, if convicted, instead of going to prison they could just be sent back to university! A judge sent two big corporate executives convicted of major tax fraud on a one-semester course in corporate ethics —on condition they got a passing grade…
⁸⁶ https://www.ft.com/content/d70585d4-295e-4484-94db-49cc7efb9635
And the argument that actions in these areas would deter FDI is particularly wrong in natural resources. Indonesia showed the way in steel. Also, a large copper multinational that operates in both Chile and Indonesia —i.e., in the world’s leading producer, with some 5 million tons produced a year, and in one with just one million tons, respectively— decided to build a technologically advanced smelting plant. Which country did it choose? The largest and more “free-marketer” producer, which has signed every possible ‘investment protection’ treaty —and that is completely unable to use its dominant position to exploit its market power for its own benefit—, or (despite protestations) in the one that is able to have an industrial policy banning multinationals from exporting unprocessed commodities, such as concentrates?

vii). - Douglass North’s “limited access order”

One way to summarise many issues discussed above that obstruct change is by referring to Douglass North’s “limited access order” analysis —where rentier elites are able to divide up the control of rents and block the access of others (Latin American-style, and now also “big-tech” conglomerate-style). 87 By contrast, although during the earliest stages of Korean industrialisation the government delayed the entrance of domestic competitors to leading corporations (e.g., in the car industry), 7 of the top-10 conglomerates in the 1970s were new entrants to that top position; and, again, 4 conglomerates of the top-10 in the 1980s were also new entrants, as were 4 in the 2000s. And two in that position today were not part of that privileged few then. In all, only 2 of the current 10 largest conglomerates were in that position in the early stages of the Korean productive transformation (Samsung and LG).

This constant renovation of the business elite seems to have been vital for sustaining a process of systematic ‘upgrading’ of the productive strategy. But little elite’s renovation in “limited access orders” —as dominant ones succeeds in blocking the access of others!

But the fact that in LA, even in stagnant economies, large conglomerates still make huge returns thanks to its “limited access order” is a major disincentive for change. The largest Chilean conglomerate (Quiñenco), 83% of which is owned by LA’s richest family, for example, in 2022 reported record returns in its 65-year history, despite a stagnant economy (one in “technical recession”). 88 And according to Bloomberg, it also doubled its fortunes thanks to its investment in maritime transport. 89 It also helped that in Chile, cabotage is reserved exclusively for ships registered in the country. But what Bloomberg failed to mention is that this conglomerate also owns key mines in Chile’s copper industry; so it’s revealing that it prefers to invest in the unnecessary sea-transportation of the slag of its copper concentrates, rather than in its processing in Chile.

In fact, according to Bloomberg, of all the conglomerates in the “materials sector” of the FTSE100, it was the mining division of this Chilean conglomerate that distributed the highest dividends in the world in the period under study. 90

Some of the so-called “free-trade agreements”, such as the “TPP-11”, are in fact mainly mechanisms to reinforce “limited access orders”. They are just mechanisms for protecting current conglomerates’ interests (foreign and domestic) in issues such as so-called “indirect expropriations” —and the trade component is just the bait to attract countries and help them sell those treaties at home. 91 In the “TPP-11”, a paradigmatic example, “indirect

87 See North et all. (2007).
90 See Palma (2023).
91 On how two Chilean governments, of supposedly very different persuasions, did their best to mislead people on the TPP-11, see https://www.ciperchile.cl/2019/03/26/el-tpp-11-y-sus-siete-mentiras-de-democracia-protegida-a-
“expropriations” means that any change in policy or regulation seeking to change the current productive strategy that may affect the profitability of a multinational or large domestic conglomerate should be compensated. And the amount should be determined not by professional domestic courts, but by what are now highly disreputable ad hoc international tribunals. This, of course, makes both elite renovation and the “upgrade” even more difficult.

vii) No Keynesian and structuralist macro-policies

Finally, a major obstacle for the “upgrade” comes from a lack of Keynesian and structuralist macro-policies—especially in the management of the exchange rates: relatively stable and competitive exchange rates have been at the core of emerging Asia’s success in tradable investment. In LA, meanwhile, ‘real effective exchange rates’ have gone up and down like a series of loops in a rollercoaster.

As Brazilian “Developmentalist” economists rightly insist, overvalued commodity-exchange-rates are a key macro-disincentive to LA’s industrialisation. The fact that I have emphasised some “supply-side” issues obstructing LA’s catching-up—and “upgrade”—does not in any way mean we should not appreciate how conventional-macros have also hindered the transition towards a sustained process of productivity-growth. Constraints of space prevented a proper analysis of these issues.

7).- LA’s unsophisticated “DE” niche in a broader perspective.

As Figure 17 indicates—by organising countries according to productivity and employment growth since 1980—LA’s blend of success in employment generation, but abject failure in productivity-growth, standout in the world.

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93 https://data.imf.org/?sk=388dfa60-1d26-4ade-b505-a05a558d9a42&sid=1479329132316

94 See, for example, Bresser-Pereira and Oreiro (2023).
Acronyms as above, and EE=Eastern Europe; EU=European Union; and ve*=Venezuela (average productivity growth=-2.3).

Source: TED (2022). Sub-Saharan Africa is excluded, as their employment statistics are just econometric guesstimates from population data.

From this perspective, the global average (black circle in the figure) identifies four quadrants. In “1” are those countries whose productivity and employment growth since 1980 are below average —and almost all of them are so-called developed (geriatric?) countries. In turn, quadrant “2” is populated entirely by LA, countries able to generate employment well above the world average, but unable to generate much productivity-growth, if any.

In turn, emerging Asian countries monopolise quadrant “3” (with China at its edge in employment creation), including those from the first wave of its industrialisation (N1: South Korea, Taiwan and Singapore), its second (N2: Indonesia, Malaysia and Thailand), and its third (China, India and Viet Nam). In fact, these are the only countries in the world able to generate high levels of productivity and employment growth simultaneously.

Finally, Figure 18 shows what I call “Latin American syndrome”: whenever a country manages —like Chile between 1986 and 1998— to move from quadrant 2 to 3, this turns out to be a temporary state of affairs. That’s the real difference between LA and emerging Asia: although both are able to achieve high rates of productivity-growth, only emerging Asia knows how to sustain them long-term.
The key message of Figure 18 is that LA seems to be cursed with a particularly strong “gravitational pull” towards quadrant 2. If the country manages to shift gear and move from quadrant 2 to 3, sooner rather than later it returns home to 2. Whereas when an emerging Asian country moves to 3, it tends to remain there. In LA one finds countries that can speed up, but before long, run out of oxygen, and have to slow down again productivity-wise.

Emerging Asia’s strong States, and productive and elite flexibilities have a lot to do with their marathon stamina. For example, South Korea opened up its ISI early, so as to transform it in an export-oriented industrialisation; Taiwan “governed the markets” in search of sustaining their upgrades; and China quickly turned the tables on the European Union and the US. Trying artificially to extend the shelf-life of “extractivism” by (for example) moving abroad in search of horizontal extractive diversification, or bringing cheap immigrant labour to extend its life at home—as Chile has been doing for about two decades—is a recipe for remaining in quadrant “2”. Delaying tactics for the “upgrade”, as those used with ISI in the 1960s or those tried now, have little chance of success.

As is well known, Korea was strongly advised against pursuing its new industrialising project by the Washington Consensus—as a Governor of the Bank of Korea reminds us, when they wanted to industrialise, they were told: “you don't have the comparative advantage for

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95 On Taiwan, see Wade (2003).
96 According to a Financial Times columnist, “Germany once saw China as an export market for machinery with which China would develop its industrial base. Today, China is becoming the senior partner in the relationship. [Germany’s] biggest problem is falling behind in the technological race. … [This] is symptomatic of a fundamental European problem. … [Now there] are signs that complacency is about to turn into panic”. (www.ft.com/content/19fd8544-3c2f-11e9-b856-5404d3811663).
that”. In fact, several World Bank documents wondered what the point was of transforming first-rate iron into second-rate steel, or (even worse) into third-rate cars. However, it was not long before Korean cars (like their Japanese counterparts) became as common on world markets as Scottish whiskey, Norwegian salmon, or French wine. In fact, as the same South Korean official said, their real comparative advantage for sustaining productivity-growth was that “…we did everything we wanted, but whatever we did, we did it well”.

8).- How to deal with Latin Americas’ persistent inequality? More redistributive polices, or anchoring low levels of inequality in new productive structures?

As Figure 3 above already indicated, LA’s inequality is particularly high at the top. While, for example, Taiwan’s top 1% appropriates rents from knowledge by manufacturing semiconductors and high-end chips, and Korea’s by its electronics and cutting-edge cars, Chile’s counterpart does it (other than by appropriating rents of natural resources and distorting domestic markets) by generating rents from building shopping malls to sell those electronic gadgets, and by filling the tank of those Korean cars with petrol. And in doing so, Chile’s 1% earns a share of market income that is twice as large as in Korea.

Basically, as new income distribution theory teaches us (e.g., Palma, 2019a), low levels of inequality are only sustainable when they are anchored in productive structures that deliver low levels of inequality in the market (i.e., before taxes and transferences) —such as those of Korea and Taiwan. Social democratic redistributive policies, as Figure 19 indicates, are becoming unsustainable due to their enormous dimensions. Worse still, they have become de facto a subsidy to obscene market inequalities.

FIGURE 19
Germany and Taiwan: market vs. disposable income inequality, 1960-2019

98 Chang (2002).
99 Palma (2019b).
100 WID (2023).
101 See also Palma (2023). And on how the European Welfare State has become de facto a subsidy to market inequality, see José Gabriel Palma’s “Amartya Sen Lecture” at the 2020 HDCA Conference (https://www.youtube.com/watch?v=G6Bk12RxojQ).
● **market** = market inequality (i.e., before taxes and transfers); and **disposable** = disposable income inequality. a = German reunification. Percentages indicate the relative reduction of the market Gini due to taxes and transfers.

● Source: Solt (2023).

The key point of Figure 19 is that both Germany and Taiwan *arrive at a similar destination*: a low level of disposable-income inequality of around a Gini of 30.\(^{102}\) But they get there *via two very different routes* — with Germany (like most of Western Europe) choosing a rather byzantine one. While Taiwan attains a Gini of 30 *in the sphere of production*, Germany chooses to follow a tortuous path to get there: it lets its market-distribution deteriorate by 13 points on the Gini-scale (and reach a market-Gini of 52 — higher than all Latin American countries except for Brazil and Haiti), only then to have to reverse this by implementing a massive redistributive policy. In fact, most Western European countries need to spend over a quarter of their GDP in redistributive policies in order to achieve this.

The key point here, of course, is that *there was nothing ‘inevitable’ about this Western inequalising drive*; in a world of multiple equilibria, Germany’s rising market-inequality was simply its choice.\(^{103}\) And as in LA, Germany’s high market inequalities have been associated with a low share of investment in GDP, and a collapsing rate of productivity-growth — in fact, both are now also similar to LA’s. No one forced Germany to embark on this route — which Palma (2019a) called a process of “reverse catching-up”.

As is well known, the Washington Consensus promised that if their package of policies and structural transformations were implemented, what would follow for emerging economies would be a process of “catching-up” with the production frontier. If everyone ‘behaved’, there would be a process of “upwards” global convergence. And this convergence would occur not only in levels of productivity, but also in institutions, in inequality, etc…

In fact, market deregulation with financial liberalisation and “subsidiary” States, globalisation and financialisation did indeed achieve a process of convergence, but in the opposite direction! Instead of encouraging LA to Europeanise, it led the high-income OECD to “bananise”; i.e., to resemble countries where mobile rentier-elites feel that they have the right to the whole surplus — and to use as they wish.

The US may not spend as much as Western Europe in redistribution, but in terms of market inequality and investment rates it has followed the same route. As I analyse in detail in Palma (2023), if the US today had its current level of GDP, but with the income share of the top 1% having remained stable since 1980 (when Reagan was elected), this small group would earn today *almost 2 trillion dollars less than they currently do*. In turn, for the other 99%, of course, it would be the other way round — hence so much additional need for social protection at the bottom of the scale. But this gift for the top 1% is just one side of the toxic neo-liberal coin; the other being that if the share of investment in GDP had also remained stable since 1980, *overall investment would now actually be about US$1 trillion above its current level*.

And for Western Europe, in order to sustain this double act — keeping rentiers sweet while making this somehow politically acceptable for the rest of the society — its share of social protection has increased on average to about two-thirds of public expenditure.\(^{105}\) While in Taiwan (and a few other countries), the economic and social agendas point in the same direction, in most of Western Europe, the two agendas — the idealisation of greed at the level

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\(^{102}\) Taiwan’s disposable income-Gini is roughly equivalent to a “Palma ratio” of 1, while Germany’s is equivalent to one of 1.1.

\(^{103}\) On how inequality is just a choice, see Stiglitz (2012); see also Palma (2011) and (2019a).

\(^{104}\) On this process of “Latinamericanisation” of Western Europe and the US, see also Palma (2023).

of the market vs. the idealisation of social solidarity at that of disposable income—point in opposite directions, obstructing each other, and at a great cost.\textsuperscript{106}

So, as Figure 20 indicates, if LA wanted to do something significant about its inequality, the choice of policy could not be clearer: does it do it at the level of the market, or just at the disposable income one?

**FIGURE 20**
Brazil, Chile, Korea, and Sweden: market vs. disposable income-inequality, 1960-2019

- a = East Asian financial crisis. Percentages indicate the relative reduction of the Gini market due to taxes and transferences.
- Source: Solt (2023).

Either one generates a low level of inequality in the market, or one follows the convoluted (self-destructive) path of Western European. This is surely preferable than doing nothing—or little, as in LA—, but inequality is really a choice. And can become a rather expensive one!

\textsuperscript{106} Furthermore, as the real winners can usually get away with their gains through many forms of tax avoidance, those not invited to the party typically get left with the bill. However, since there are limits to taxing those ‘not-the-real-winners’, governments’ debts are skyrocketing—with the current average debt-to-GDP ratio in the Euro area above 90% of GDP. As the IMF indicates, the OECD’s public sector finances are in a sorry state (IMF, 2018a).
9). Catching up or falling behind? On “middle-income traps” and glass ceilings

One way to summarise most of what is analysed in this chapter is to compare Chile with Taiwan’s in terms of catching-up. (Figure 21.)

FIGURE 21

Chile and Taiwan: productivity gaps with the US, 1950-2019

What a contrast! And Chile was by far the most successful economy of the region from its recovery from the 1982 crisis until the end of the 1990s. One key point to note in Figure 19 is that for Chile, other than having more cycles post-1973, there is little difference between the two post-war development strategies (ISI and DE) in terms of them getting stuck in their “catching-up”. In fact, Chile’s relative productivity in 2019—about 42% of the US’s in PPP dollars—is exactly the same as in the mid-1950s! And in non-PPP (with data available only since 1960), the picture is the same, with Chile in 2019 having a similar relative position to that of the mid-1960s (about 25%). It is as if there was a glass ceiling, which Chile cannot break but emerging Asia knows how to smash. This glass ceiling is how I understand LA’s “middle-income trap” (see below).

This figure also shows the wasted opportunities of the so-called “super-cycle” of commodity prices and the unprecedented access to cheap finance (foreign and domestic) that
came with it. As the figure indicates—point “e”—this unprecedented positive scenario left no permanent “catching-up” trace as those extra resources were not used for the necessary “upgrade”.

However, in Chile (as in the rest of the region), the “super-cycle” had another impact: LA increased its relative number of millionaires, centimillionaires and billionaires faster than any other region (China apart), with Chile at or near the top (according to the category of millionaire).¹⁰⁷

Figure 21 also shows Chile’s monumental collapse (starting at “b”) following the 1982 financial crisis—which brought the tyrannical rule of the Chicago Boys to its ignominious end. As the private sector’s excess expenditure (mostly consumption) approached nearly 20% of GDP on a quarterly basis, what followed the 1982 crash became Chile’s worst self-made crisis.

These abrupt cycles are not found in emerging Asia, even though they had to deal with the same unstable world economy and self-destructive international finance, and their own financial turbulence (1982 and 1997).¹⁰⁸ Their Keynesian pro-growth and anti-cyclical macroeconomics obviously helped.

Finally, Figure 21 shows how remarkable Chile’s recovery from the 1982 collapse was—after the changing of the economic guard at the palace, and among the capitalist élite (replacing those who had gone bust due to astronomical debts). It is this fast recovery that sets Chile apart in the region; other countries are still far from recovering their pre-1982 relative productivity position vis-à-vis the US (Figure 22).

¹⁰⁸ For South Korea’s macroeconomic policies, see Chang (1993); for Chile, Ffrench-Davis (2018). For a comparison, Palma (2012). For the subject in general, Taylor (2010).
Brazil and Mexico (like Chile) are today roughly back where they were in the 1950s vis-à-vis US productivity levels; meanwhile, as the figure indicates, China’s average productivity has already caught-up with Brazil’s (and Colombia’s), and India and Viet Nam are about to catch-up with Peru. Gardel’s Argentina is still going downhill (“cuesta abajo en su rodada”); Chile was hitting a glass ceiling; Brazil and Mexico, having hit theirs in 1980, have reversed all their 1960s and 1970s ISI gains.

The middle-income trap is a term coined by Gill et al. (2007); following the neoclassical growth model and assumptions, they predict that growth will taper off as capital–labour ratios rise and middle-income economies approach the global technological frontier (Kharas and Gill, 2015). Since in the mainstream narrative, the middle-income trap is the result of diminishing returns to capital as countries exhaust the relatively easy gains from importing technology, then the solution must lie in transitioning to industries and activities that generate increasing returns to scale. According to Gill et al, middle-income countries can do that and escape the trap by adopting more orthodox economic policies, such as even more trade and investment liberalization, enforcement of intellectual property rights, and a stronger focus on research, education and skills training to benefit from knowledge spillovers. This is the core of the “more of the same but better” strategy favoured by the international
institutions: to create supply side conditions conducive to the growth of more technology-intensive industries.  

In LA, however, the trap has manifested itself much earlier as labour productivity levels slow-down, even stagnate, far removed from the technological frontier. This happened when the merely extractive development model either failed to pull non-extractive sectors with it—and thus failed to generate overall productivity-growth in the economy (see Figure 13 above)—or when countries were unable to take the next step when this model became exhausted (e.g., Chile after point “d” in Figure 21). And in the case of Mexico, this happened as a result of failing to “deepen” its assembly operations when becoming an assembly platform for foreign manufacturing firms.

There’s no such thing in emerging Asia as a middle-income trap (or “glass ceiling”) for the First-tier NICs. When Singapore split from Malaysia in 1965 (two years post-independence), for example, its relative productivity vis-à-vis the US was just 37%—just below Chile’s 40%. Less than 30 years later, while Chile had gone backwards (38%), Singapore was already ahead of the US in PPP terms.

This comparison is particularly relevant, as Singapore’s key driver of growth at the time was the rents from its main natural resource—it’s port, which, like the canal in Panama, was the very reason for its establishment. Singapore kept it in the public sector so it could use its rents and profits to finance its ambitious industrial and trade policies, which brought it from low-middle income to a technological leader in one generation. For this, and to finance its thriving educational and health sectors, it also used the profits from its many public sector enterprises, and the rents of its other natural resource, land—in this free-market paradise, 87% of land is still owned by the government, and 85% of housing is supplied by the government housing board. Overall, while Singapore increased its investment per worker by a factor of 11 in the three decades after independence, Chile’s did not even double.

In other words, in contrast to LA since its economic reforms, in highly “right-wing” Singapore, free market “fetishism” has never been part of its pragmatic hegemonic ideology—no “anarcho-capitalism” here (as is now fashionable in LA). It simply made no sense to privatise its natural resources, as their rents could be used more productively by the public sector—and even today, public sector enterprises generate more than 20% of GDP.

Conclusions

The middle-income trap has attracted considerable attention in recent years, and for good reason: very few countries—except from emerging Asia and the EU-periphery—have successfully broken free from the pack to close the productivity-gap with advanced countries. Moreover, productivity levels in LA have hit (at best) a “glass ceiling” relative to the technological leader at less than half the US’s average labour productivity (in PPP terms)—or one-quarter in 2015 dollars. This finding casts doubt on the original (neo-classical) formulation of the middle-income trap, which hypothesised that growth would slow down in these countries only when they approached the productivity frontier. Since this is happening nowhere near the frontier, we needed to find other explanations for their productivity slowdown—as this chapter has attempted to do.

The alternative explanation for the middle-income trap suggested here focuses not only on LA’s external constraints (e.g. China’s preference for unprocessed commodities), but

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109 For an analysis of these issues, see Palma and Pincus (2022).
110 Due to its geographical location and deep waters, the British East India Company created Singapore as a trading post.
112 https://www.ft.com/content/d2c033c5-65cb-41e8-bb06-b995fc25f9c5
113 See Palma and Pincus, (2022), Figure 1.
also on *domestic rigidities* (ideological, institutional and “limited access order”-elites) that obstruct the “upgrade” of its productive strategies, which is in desperate need of new engines of productivity-growth. The capacity to carry out these upgrades was what helped countries such as Korea, Taiwan and Singapore to avoid this trap and break their respective glass ceilings. The “NICs-2” (Malaysia, Indonesia and Thailand), although having made great strides, are now faltering in this since their 1997 financial crisis. China, India and Viet Nam, instead, have had (so far) no such problems.

LA’s rigidities are such that, for example, Chile has been stuck in its “extractivist” productive strategy for over half a century. Unsurprisingly, today it scores particularly badly (even by LA’s low standards) in the export “complexity” index.

More worrying still for LA, the region is now trapped in what I am calling a “Gramscian moment”. And as Gramsci analysed, in these interregna —when the old fades, but the new fails to be born— it is almost inevitable that certain experiments, like LA’s multiple different types of radical populist project, will get some traction.

Latin American countries have pursued a “dual-extractive” model, relying on a combination of commodity extraction for exports delivering sectoral productivity-growth, and services and construction delivering low productivity (low wage, and low productivity-growth potential) employment creation. This model helped them become highly competitive commodity producers while generating low levels of unemployment even with low levels of GDP-growth. In Palma (2019b), I show how LA probably has the highest “gross” employment elasticity in the world (i.e., the ratio of employment-growth over GDP-growth). This is mostly the result of high inequality making services cheap, and as inequality in the middle and upper-middle is not as obscene as in Southern Africa, in LA deciles 5 to 9 can at least have access to these cheap services.

But with the exception of Brazil—at the cost of the devastation of the Amazon—, productivity-growth has ground to a halt in commodity extraction. Therefore, output growth has become restricted to the rate of growth of low wage employment in services and construction—as well as in assembly manufacturing in NAFTA’s Mexico.

The main policy implication of this analysis is that LA must urgently revisit its dominant growth strategies to reignite productivity-growth by adding manufacturing value to their commodity exports, at the same time as improving backward linkages to their extractive activities—as well as transforming environmental sustainability from “a problem” to “a solution”: i.e., making a “green new deal” a new engine of productivity-growth. And in Mexico, assembly-style manufacturing must “deepen” productive structures in the domestic economy—or, in Hirschman’s terminology, develop the required backward linkages that would set in motion a more self-propelling growth. As Krugman said, “productivity isn’t everything, but in the long run, it’s almost everything…”

But to achieve this, LA needs to stop being the worst performer in terms of the ratio of private investment to the income share of the top 10% (see, for example, Figure 3 above). There is no greater obstacle to LA’s catching-up than the laid-back nature of its rentier elite. As Oscar Wilde would suggest, they can resist anything, except temptation (for an “easy” rent”).

I have also argued that there are “transferable lessons” from emerging Asia on how to acquire a more flexible and growth-enhancing set of comparative advantages via the ability to build a structure of property rights and incentives, an institutional capability and a political settlement that could help LA build a more flexible export productive capacity. LA should learn, for example, how strong States managed to “discipline” domestic elites and FDI to invest their “easy” rents productively —particularly those from “non-produced” assets, such

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114 Palma and Pincus (2022).
as natural resources. In fact, in Korea initially the government even helped its large conglomerates to make “easy” rents, but with the clear conditionality that they should invest them productively according to specific industrial policies. LA should also learn from their successful Keynesian macro-policies — especially in their helping to achieve a more competitive and stable exchange rate!

In fact, a common factor that conventional and many heterodox analyses have in common is their inability to understand emerging Asia’s success. For the former, it seems to contradict all its Washington Consensus ideology, and for the latter all its analysis of the incapacity of capitalism to develop the productive forces of middle-income societies. Nobody has a monopoly on fundamentalism!

LA countries need to recognise that an exhausted dominant growth strategy is the cause of the middle-income trap, not the escape route. “More of the same” will get LA nowhere: according to the WDI (2023), in Chile natural resource rents reached an equivalent of over 20% of GDP in the “super-cycle” of commodity-prices, and at the same time, the country had unprecedented access to cheap foreign and domestic finance, but even these favourable conditions still didn’t stop Chile from continuing in its downhill path!

But since those in power in LA, and especially now due to the lack of critical social imagination among those opposing them, are wrapped in the ‘worship of a concept’ — the magnificence of unfettered markets —, it is likely that LA will remain stuck in mid-table, while trying every possible “magical solution”, in its “Gramscian moment” for a while yet…

As Robert Lucas told students graduating from the University of Chicago, “Economists … are basically storytellers, creators of make-believe economic systems”. After all, in Solow’s neo-classical growth model, investment doesn’t matter for long-term growth (because the capital-output ratio will passively adjust so as to revert growth to its “natural” rate). He might have had LA in mind.

Therefore, my analysis of obstacles to change in LA’s productivity-stagnation and persistent inequality at the top differs fundamentally from conventional ideas. These conventional accounts, like endogenous growth theory, approach the problem from a different supply-side angle: slow productivity-growth must either be an indication of supply constraints (human capital or finance) or market imperfections (government intervention, corruption, trade barriers) that can only be overcome through more market liberalisation and deregulation. Raising productivity, therefore, needs even more trade, investment and financial liberalisation, better enforcement of intellectual property rights, and a stronger focus on knowledge spillovers.

My alternative narrative emphasises that LA’s problem is one of domestic rigidities and markets imperfections and failures (home and abroad) blocking the “upgrade” of exhausted productive strategies — and that it is unlikely that the necessary change would be led by distorted invisible hands, rentier domestic elites, or FDI — unless governments do something credible about it…

Expecting these countries to leap from mid-table to higher income-per capita by closing the productivity gap with advanced countries through policies based on the same institutional setting, elite-preferences, and ideology that got them stuck in mid-table — is not a realistic solution. As HL Mencken wrote: “For every complex problem, there is an answer that is clear, simple and wrong.”

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116 For an analysis, see Palma (2023).
117 I have been arguing about this since my first academic paper (Palma, 1978).
118 https://home.uchicago.edu/~vlima/courses/econ203/fall01/Lucas_wedo.pdf
Bibliography


Chang, H-J, and R Rowthorn (Eds.) (1995), *The Role of the State in Economic Change*, OUP.


KLEMS (2022), *World KLEMS Data*, at https://www.worldklems.net/data.htm


Moreno-Brid, JC and Ros, J (2009), *Development and Growth in the Mexican Economy*, OUP.


Palma (2009), ‘Flying-geese and waddling-ducks: the different capabilities of East Asia and Latin America to “demand-adapt” and “supply-upgrade” their export productive capacity’, in M Cimoli, G Dosi and J Stiglitz (eds.), The Political Economy of Capabilities Accumulation: the Past and Future of Policies for Industrial Development, OUP.


Palma (2013), ‘La economía chilena, como el elefante, se balancea sobre la tela de una araña’, at https://www.ciperchile.cl/2013/03/25/la-economia-chilena-como-el-elefante-se-balancea-sobre-la-tela-de-una-arana/.


Palma, JG (2022c), Finance as an (ever more fragile) ‘perpetual mania’: have they all lost their collective minds? How the new alchemists distorted Kindleberger’s financial-crisis cycle, and how the abundance of easy rents led to lazy elites, CJE 46(4), at https://academic.oup.com/cje/article/46/4/773/6674383.


Pérez, C (2024), The Social Shaping of Technological Revolutions, forthcoming.

Pérez, C (2024), The Social Shaping of Technological Revolutions, forthcoming.


Sulliva, B (1971), Industry and underdevelopment, Addison-Wesley.


TED (2023), The Conference Board Total Economy Database, at https://www.conferenceboard.org/data/economydatabase


