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Latin America's Growth

Looking through the Demand Glass

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Abstract

This paper revisits the historical roots of Latin America's disappointing growth using a novel macro and trade-based growth decomposition and a simple model of industrialization in a commodities-exporting country with a large informal sector. The approach suggests the need to better qualify two opposite narratives: that the post-1982 ("neoliberal") reforms have failed, and it is time to look back to the import substitution industrialization era for policy inspiration; and that the post-1982 reforms went in the right direction but must be completed to unleash significant productivity gains. Both can be misleading because they downplay the role of demand. The apparent "miracle" of import substitution industrialization does not provide a realistic point of comparison because it reflected an unsustainable, demand-induced boost in productivity. And the gains expected from Washington Consensus-style reforms alone can be overstated because they are derived from overly restrictive assumptions on demand. By allowing demand to play a more central role, the paper finds a close and revealing relationship between the growth patterns followed by Latin American countries, the quality of their macroeconomic policies, the nature of their trade, and the segmentation of their labor markets. Going forward, the policy agenda calls for an outwardly oriented growth strategy, supported by a more proactive role for the state that promotes not only efficiency in supply, but also the appeal to demand.

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Latin America's Growth: Looking through the Demand Glass

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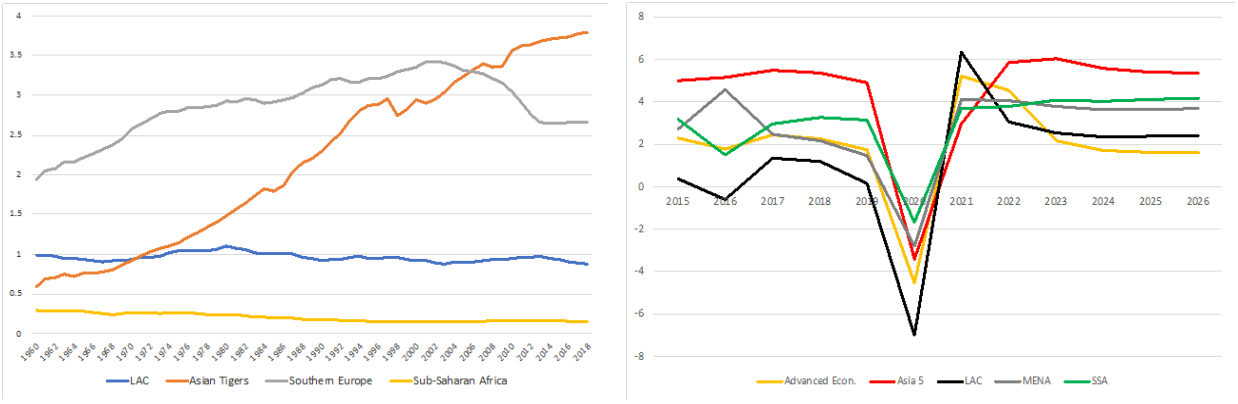
I. Introduction

Economic growth in Latin America (LA) over the last six decades (1960-2020) has been disappointing. It barely kept up with that of the world and was greatly outpaced by growth in Southeast Asia and Southern Europe (Figure 1a). Moreover, LA's post-Covid growth prospects are dispiriting, expected to trail substantially behind that of other emerging economies (Figure 1b). The interaction between disappointing growth, substantial macro-financial instability, and high inequality of income has driven much of the social and political tensions that have plagued the region's history and constrain its growth agenda going forward. The rising challenges associated with the need for a more socially and environmentally sustainable economic development further compound the region's growth conundrum.

Figure 1. LA's Historic Growth Performance and Short-Run Growth Prospects

(a) Per Capita GDP relative to the World ***(b) Actual and Projected GDP Growth Rates***



Note: LA is Latin American and the Caribbean as per the World Bank's definition. The Asian Tigers include the Republic of Korea, Hong Kong SAR, China, and Singapore; Southern Europe includes Greece, Italy, Spain, and Portugal. *Sources:* WDI (World Bank) and WEO (IMF).

Views on the key determinants of LA's uninspiring growth performance abound. For the analysis in this paper, it is useful to organize them into two contrasting narratives that have dominated much of the debate, one associated with the "supply side" (Washington-centric) approach to assess productivity and growth, and the other with an "import substitution industrialization (ISI)-inspired" (ECLAC-centric) narrative that contrasts ISI and post-ISI growth and productivity records.[1]

The supply side approach focuses, at the macro level, on the determinants of the region's large productivity gaps relative to the advanced economies and, at the micro level, on the unusually wide variance of productivity across firms. This approach attributes much of the region's low growth to deficiencies in factor inputs (human and physical capital) and inefficiencies in the

[1] The two narratives are contained within the vast debate between "neoliberalism" and "neostructuralism".

allocation and use of such factors, aggravated by the migration of resources towards low-productivity informal activities. At the policy level, it favors "horizontal" (sector-neutral) reforms aimed at improving the enabling environment in all relevant dimensions (contract rights, information, taxation, regulation, etc.) and boosting the resource allocation function of markets, particularly labor markets. Thus, the culprit behind the unexploited productivity potential in the LA region is an incomplete or insufficiently implemented set of supply-side policy reforms that failed to fully unleash the power of markets and awaken private investment optimism.

The ISI narrative, on the other hand, contrasts the higher growth and faster productivity gains obtained (most visibly in Brazil and Mexico) under the ISI era with the region's dispiriting growth performance under the post-1982, Washington Consensus-style macro stabilization and market-oriented reforms. It concludes that the latter have largely failed to deliver on the growth and productivity front, and it is therefore time to look back to the ISI era as a source of inspiration. Thus, this approach invites policy makers to abandon the excessive faith in *laissez faire* and to go back to a more proactive government, one that is engaged not only in horizontal interventions, but also and decidedly in "vertical" (industry, sector, or cluster-focused) policies and reforms.

This paper revisits this growth debate based on the premise that both narratives can be misleading because they downplay the role of demand, aggregate or idiosyncratic, as a driver of growth. This raises identification issues that require careful consideration. At the aggregate level, the supply side approach does not fully account for the growth impact of macro and trade shocks. Yet, much of the region's growth fluctuations have reflected changes in demand (domestic or external) rather than supply-based productivity. At the micro level, the approach tends to interpret the wide differences in revenue productivity across firms as reflecting mainly resource misallocations. Yet, as emphasized by the more recent literature on firm-level productivity, such interpretation hinges on very restrictive assumptions on underlying demands. Under less restrictive assumptions, firms can display differences in revenue-based productivity not only because of differences in production efficiency but also because of differences in demand (e.g., associated to product quality and appeal) leading to differences in prices.

As to the ISI narrative, contrasting the growth and productivity performance of LA during and after ISI only makes sense if the ISI growth trajectory was sustainable and, thus, could have smoothy evolved into an Asian-type outward-led industrialization model. By raising consumer demand for locally produced goods, hence raising their price above the international level, the import restrictions at the core of the ISI model allowed for a large, one-time, demand-driven, productivity-enhancing labor shift to the industrial sector. Yet, it also gave rise to a competitiveness gap that left manufactures producers too much inside the innovation frontier, making it difficult for them to work their way up to the frontier to compete in open international markets. Thus, rather than a "golden age", ISI turned into an unsustainable and costly mirage that deepened the commodity dependence it had promised to reduce. Moreover, excess domestic demand planted the seeds for the loss of macro control that unleashed inflationary dynamics with

enormous stabilization costs in the 1980s and 1990s. The combination of the above factors helps explain the sharp post-ISI reversal of the one-time ISI gains in output, wages, and productivity.

To help uncover these identification issues and explore the implications, the paper develops four analytical tools. The first is a simple micro-anchored model that focuses on the interface between commodity exports, labor informality, and industrialization. The model (described in detail in Appendix I) shows how and why—after producing one-time gains in output, real wages, and productivity—ISI could become a low-growth trap. The second tool is a macro and trade-based growth decomposition (technical details in Appendix II). In addition to helping sort out supply from demand effects, such decomposition provides an alternative to the conventional, Solow-style factor accumulation and productivity decomposition, one that is better suited to LA's turbulent macro history and varied trade patterns. Our growth decomposition method helps uncover the links between the sharp contrasts in trade structures and the differences in growth dynamics between LA's three main sub-regions (Mexico, South America, and Central America). The third tool is a comparator group (CG) of countries with a similar range of per capita incomes as LA countries (details in Appendix III), which is used as a point of reference to systematically assess the growth record of the region. The fourth and final tool is a regression exercise that provides country-specific benchmarks against which to compare and assess individual countries' growth patterns, depending on the composition of their trade and key structural characteristics (regression results in Appendix IV).

At the policy level the analysis finds common ground with the two above narratives, but subject to important qualifications. While concurring with the supply side approach on the importance of enabling-environment reforms geared at enhancing the resource allocation function of markets, we are less optimistic on the size of the growth dividends to be expected from such an agenda alone. And while concurring with the ISI narrative that the state needs to become more engaged, we justify it mainly on the ever more predominant presence of supply and demand externalities rather than on the alleged success of the type of state intervention that characterized the inward-looking ISI era in Latin America. We thus argue that the state's activity should be mainly that of a scout and a coordinator rather than a direct doer. What is needed are smart, soft touch, market-friendly interventions guided by an outward-oriented strategy and aimed at helping formal firms coordinate investments so as to more effectively expand output and formal employment, in large part by capturing external economies of scale, cluster and network benefits, learning spillovers, etc. What is not needed are heavy-handed, market-unfriendly intrusions of the state in productive activities and in resource allocation deployed in the context of a protectionist, inward-looking strategy that end up promoting rent-seeking and stifling efficiency and innovation.

Our demand lens also highlights the relevance for growth of the types of goods produced—tradable versus nontradable, commodities versus manufactures or services—as well as of the quality and attractiveness of the individual goods produced within these broader categories. The magic of growth is of course about the availability and quality of production inputs and their efficient allocation and use. But it is also about the economy's capacity to produce attractive goods

that find market niches for products with demands that are more price inelastic (hence supporting higher mark-ups) and more income elastic (hence growing faster); to attract and retain people (not just capital) who may contribute to growth as consumers or producers; and the state's capacity to stabilize aggregate demand through sound macro policies and to harness self-reinforcing, virtuous dynamics that stem from internalizing (supply as well as demand) externalities.

At the country or sub-regional level, we analyze Latin America's growth in light of the sharp bifurcation of trade structures that materialized in the aftermath of the devastating ISI-induced crises of the early-1980s: Mexico moved decidedly to manufacturing exports, South America concentrated on commodity exports, and Central America shifted to services exports.

Mexico's momentous shift from inward to export-led industrialization, while successful in many respects, has thus far failed to accelerate its GDP growth. Mexico's stunning underperformance (with the second lowest average growth, after the República Bolivariana de Venezuela, in LA over the past 40 years) was due to a mix of factors, including China's stiff competition, the US slow growth and protectionism, Mexican exporters' struggle to broaden the value added of their exports, and Mexico's domestic productive capacity constraints arising from its deeply fragmented economy that curtails the diffusion of know-how and feeds informality. Mexico's growth agenda must therefore emphasize measures to overcome the demand limitations for its exports, promote entrepreneurship and innovation, broaden the spillovers of its exports on the rest of the economy, and improve the allocative function of its markets, including labor and financial services markets.

South America's recoil to commodity exports has confronted the twin problems of volatile export prices and slow-growing export volumes. Some South American countries (Chile, Peru) have delivered relatively strong growth performances over the past four decades, but others (mainly the República Bolivariana de Venezuela, but also Argentina and Brazil) have shown symptoms of the resource curse. In the latter subgroup, the effects of volatile terms of trade have been systematically amplified by procyclical macro (especially fiscal) policies, leading to pronounced boom-bust patterns in growth rates. The slow growth in export volume, for its part, helps explain much of the differences in GDP growth across South American countries, including the flip in growth performances of Chile and Peru, with the former being the superior performer in the 1990s and the latter in the 2000s. The policy agenda in South America should therefore pay special attention to moving up the value-added in commodities, discovering and exploiting new exporting opportunities, and strengthening counter-cyclical macro policy capacity, particularly in the fiscal domain.

As regards Central America (defined to include the Dominican Republic), its shift toward services exports has delivered mixed growth results, depending on the countries' capacity to attract, rather than expel, people and capital. The more successful countries (Panama, Dominican Republic, Costa Rica) have benefitted from human and financial inflows, including services-seeking foreigners and FDI inflows. The less successful (Guatemala, El Salvador, Honduras) have

received little FDI inflows and send their workers abroad (rather than retaining them to provide services to foreigners at home). Central America's growth agenda must therefore put a premium on boosting its capacity to attract FDI on a sustainable basis and improving incentives for workers to stay and foreigners to visit, temporarily or permanently. More generally, the entire region needs to become more attractive (i.e., being more demanded) not only to investors but also to short or long-term visitors, in particular through strengthening its rule of law, better harnessing its natural and cultural assets, and healing its social fractures.

Given LA's biased income distribution and weak governance, mobilizing collective action (socially and politically) in support of the needed growth agenda will no doubt be a major hurdle. The social scars left by Covid-19 and the stagflationary forces and intensified uncertainty unleashed by the Russian invasion of Ukraine will clearly add to the difficulty while perhaps also raising the motivation for a comprehensive growth agenda. In any event, countries in the region should not give up on the quest to achieve higher growth. They should rather seize whatever opportunity is given by the rapidly changing global environment and be encouraged by a key lesson from international growth experiences—that a few, well designed and targeted policy interventions can give rise to a wave of investment optimism and *ignite* growth and, once that happens, social and political support can be more easily mobilized in favor of the institutional and structural reforms that are necessary to *sustain* higher growth over the longer-term.

The rest of this paper is organized as follows. Section II presents a brief overview of LA's growth literature, contrasting the supply side and ISI perspectives and adding relevant nuances and complements. Section III describes the dominant and recurring features of LA's growth under a macro and trade-based perspective. Sections IV, V and VI break down the analysis by sub-periods. Section IV explains why the ISI years (1960-82) should be viewed as a costly trap rather than a source of inspiration for today's policies. Section V discusses how the ISI legacy undermined the supply side-oriented growth policy agenda during the last two decades of the last century (1982-2003). Section VI reviews LA's growth experience during this century (2003-2020) for three main subregions (Mexico, Central America, and South America) separated by sharp differences in the trade structures and identifies subregion-specific policy implications. Section VII concludes by discussing more general policy issues, with a focus on policy directions and the reform process, rather than on country-specific policy packages.

II. Perspectives on Latin American growth

The literature on productivity and growth for the LA region can be broadly associated with two perspectives: an efficiency-oriented supply side approach, which draws on the conventional Solow-type, production function-based growth literature; and a history-oriented ISI narrative, which reinterprets the region's growth challenges by revisiting its ISI experience. The section also briefly reviews three related and qualifying streams of literature, including on cross-sectoral labor shifts and on certain region-specific structural features such as informality and growth traps.

1. The supply side perspective

At the aggregate level, studies of LA growth based on a Solow-type approach decompose growth into factors accumulation and total factor productivity (TFP)—where the latter is obtained as a residual, i.e., as the excess of output over what can be attributed to factor accumulation—and generally conclude that productivity explains a large, if not dominant, share of growth gaps and growth fluctuations.[2] The literature then seeks to identify the drivers behind LA's growth gaps (relative to advanced economies) using panel or cross-country growth regressions that include a wide range of possible explanatory factors. It typically concludes that while the adverse growth impact of macro stabilization policies has lessened over the past decades, supply side variables (structural or institutional) have increasingly become the binding constraints on growth.[3]

Applying the Solow-inspired approach at the firm level has led to a similar emphasis on supply-based productivity. Following in particular the work of Hsieh and Klenow (2009), this literature finds unusually wide (by advanced economy standards) productivity differences between firms, which are broadly interpreted as "resource misallocations". The high positive correlation between per-capita income and misallocation intensity is then viewed as evidence that correcting the misallocations (i.e., shifting resources from low productivity to high productivity firms) should, in and by itself, have a significant expansionary economic impact. And the high negative correlation between the extent of resource misallocation and the quality of the enabling environment is seen as an indication that the best way to correct the misallocations is through addressing their structural and institutional roots.[4]

Thus, at either the aggregate or micro levels, the supply side approach suggests that LA's disappointing growth performance stems mainly from large productivity gaps resulting from the poor quality of factors of production (particularly human capital) and an inefficient allocation and use of such factors. The policy agenda that flows from this diagnosis emphasizes, therefore, the need for "horizontal" (sector-neutral) reforms aimed at improving the enabling environment (contract rights, information, taxation, regulation, etc.) for all economic initiatives, and places a premium on the goal of boosting the allocative function of markets, particularly labor markets.

The supply side narrative is, however, too narrow and can become misleading in its diagnosis and policy emphasis because it downplays the role of demand, domestic as well as external, aggregate as well as idiosyncratic.[5] At the aggregate level, because of the high

[2] Good examples of LA growth studies along these lines include Blyde and Fernandez-Arias (2004), Loayza, Fajnzylber and Calderon (2005), and Alfaro and Kanczuk (2020).

[3] See Loayza, Fajnzylber and Calderon (2005), Araujo et al (2014) and David, Komatsuzaki and Pienknagura (2020).

[4] Contributions along these lines include Pages et al (2010); Busso, Madrigal, and Pages (2013); Leal (2014); and Saborowski and Misch (2019).

[5] See in this connection a recent literature review on the determinants of productivity by Syverson (2010), which highlights the need to better incorporate demand as a top priority in forthcoming research on growth.

endogeneity and missing variables that would better capture demand effects, a correct identification of causality between dependent and independent variables and supply versus demand effects is no simple matter. Thus, the supply side perspective often fails to sufficiently account for the growth implications of the recurrent macro and trade shocks and large demand fluctuations (both domestic and external) that have dominated LA's growth history.[6]

Similarly, at the firm level, the Hsieh and Klenow (2009) conclusion that differences between firms in revenue-based TFP measures reflect resource misallocations is critically dependent on the strong assumption that firms face iso-elastic demand functions. As shown by Restuccia and Rogerson (2017) and Haltiwanger, Kulick and Syverson (2018), and as illustrated in the model of Appendix I, it is only under this assumption that differences in revenue between firms using similar factors of production can be uniquely associated with resource misallocations. Moreover, the research inspired in the Hsieh and Klenow approach typically assumes that firms within the same industry do not compete based on different mark-ups associated with product quality differences. As a result, the higher revenues of a firm with the same factor usage as another are attributed solely to higher productive efficiency. But under less restrictive assumptions, firms with similar factors could have different revenues not only because of differences in efficiency but also because of differences in demand leading to differences in mark-ups (hence in prices) due to differences in quality and product appeal (see Appendix I for a simple overview; and Cusolito and Maloney, 2018, for a deeper discussion based on a comprehensive survey of the literature).[7]

As a result, the supply side perspective tends to understate the growth relevance of "what" is produced, that is, of differences in the broad categories of goods being produced—tradable and nontradable, commodities, manufactures or services—as well as in the quality of individual goods produced within these categories.[8] Yet quality changes or lags in quality improvements can quickly translate into major shifts in demand that deeply affect firm growth but are hard to measure.[9]

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[6] While there is an important literature on the growth impairment effects of macro-financial volatility in Latin America—see, for instance, IDB (1995), Calvo (1998), and Mendoza (2010)—this literature has few direct linkages with the growth literature. For its part, the growth literature's lack of connections with potentially key explanatory demand factors leads to puzzling enigma such as the difficulty in explaining Mexico's lack of growth when only supply side factors are considered and China's impact on the demand for Mexican exports is ignored.

[7] For example, Canales and Garcia Marin (2018) find that 80 percent of the growth of high performing firms in Chile reflects increased demand rather than efficiency gains.

[8] By focusing on economic complexity and the capabilities that support it, Hausmann et al (2007) provide one of the most visible and well-known cases in favor of the growth relevance of "what" is produced.

[9] Lederman and Maloney (2012) argue that "how" goods are produced matters more than "what" is produced. However, their conceptual understanding of the "how" is congenial with our "what" and associated emphasis on the role of demand. Lederman and Maloney's "how" not only captures efficiency and creativity in the use and combination of resources (including knowledge) within suitable production technologies, but also managerial and technological innovations geared at responding to demand, for instance, by upgrading product design with a view to raise quality and appeal as needed to seize and develop market niches with auspicious demands. Importantly, Lederman and Maloney recognize that moving from concept to empirics is not a simple matter, not least because of the difficulty in adequately measuring quality (the "what") based on the 3- to 6-digit classifications available in trade statistics.

2. The ISI narrative

The collapse of ISI and the ensuing "lost-decade" of the 1980s led to early critical reviews of inward-looking import substitution strategies in LA, opening the grounds for the drastic policy reshuffling of the Washington Consensus.[10] However, a stream of literature, including Bértola and Ocampo (2013) and many ECLAC-related contributions, have recently revisited LA's ISI experience and argued that, with the right policy tweaking, import substitution in LA could have eventually led to a successful outward-oriented industrialization, much like in Asian countries. The economic problems LA faced at the end of the 1970s are viewed as not inherent to the ISI model but rather as the consequence of factors exogenous to it (bad fiscal policies at home, shocks from abroad). And the rise of inflation is attributed to factors outside ISI, such as the rapid depreciations caused by the debt crisis and the falling terms of trade.

This narrative, therefore, advocates the return to the ISI experience as a source of inspiration, especially to tame the excessive faith in *laissez faire* and to promote a more proactive government, one that is engaged in more vertical (industry, sector, or cluster-oriented) policies. As we will show in subsequent sections, however, this narrative also can be misleading due to its failure to adequately identify the sustainability conditions and macro/demand implication of the inward-looking ISI model as applied in the LA region.

3. Some structural aspects

At least three additional streams of research deserve mention because they complement or qualify the above perspectives by focusing on structural features that are germane to LA's growth history. A first stream, inspired by the work of McMillan and Rodrik (2011), highlights structural change, defined by the movement of resources (particularly labor) across sectors. It highlights the observed contrast between the rise in productivity growth during the ISI years (which reflected the massive movement of labor from the lower productivity agricultural sector to the higher productivity industrial sector), with the subsequent stagnation and decline in aggregate

Gauging quality requires therefore appropriate proxies, whether at the macro level, as in the case of Hausmann et al (2007), or at the micro level, based on enterprise and market surveys or granular price data. Thus, as recently shown by Bernard et al. (2020) for enterprises in advanced economies, differentiating products based on the product mix and prices, as well as on the skills used in production, uncovers quality differences that are associated with very different growth performances across firms. Along similar lines, Comin et al. (2020) find that demand shifts toward expenditure-elastic sectors (rather than technical change) explain a large share of the labor market polarization in advanced economies.

[10] See Baer (1972) for an early assessment of the impact of ISI policies on the LA region and Irwin (2020) for a comprehensive review of the evolution of the academic discussion on this topic.

productivity growth (which reflected mainly the poor performance of within-sector productivity, and the labor shift to the less productive, and arguably more informality-prone, services sector).[11]

A second stream focuses on informality, a Latin America trademark. As noted by La Porta and Shleifer (2014), the interaction between informality and growth can be viewed from sharply contrasting angles. The first, following Hernando De Soto (1989), sees informal firms as an untapped reservoir of entrepreneurial energy, held back by ill-defined property rights and tax and regulatory distortions (such as those emphasized by Levy, 2008) that penalize formality and foster informality. The second, as described in a McKinsey Global Institute report, characterizes informal firms as parasites competing unfairly with law-abiding formal firms (Farrell 2004). The third follows the development tradition of Lewis (1954) and Harris and Todaro (1970) and sees informality as a byproduct of low growth and poverty or a corollary of a dual economy, which will be overcome mainly and gradually through the more rapid expansion of the formal sector.

A third stream highlights the potential for growth traps, where feedback loops and other self-reinforcing dynamics ensnare economic activity into a stable low-growth syndrome. This stream harks back to Cardoso and Faletto (1979) or Hirschman (1958), who described the failure of forward and backward linkage development in "enclave" or dual economies. A more recent literature has expanded these early intuitions by focusing more directly on the incentives to innovate depending upon firms' distance from the innovation frontier. As shown by Aghion et al (2005 and 2021), Goñi and Maloney (2017), or Maloney and Zambrano (2021), firms and countries may find it too expensive to "learn to learn" to use new technologies (including through R&D) if the initial endowment of entrepreneurial capital is low. Alternatively, it may not be worth it to invest in entrepreneurial capital in an environment of high commodity-related rents (a "learning displacing" resource curse). Similarly, countries may also be trapped in a bad equilibrium if self-fulfilling expectations and other forms of collective action failures prevent them from capturing the benefits of external economies of scale, synergies, learning spillovers, etc. associated with agglomeration, clustering, and critical size effects (see, for instance, Murphy, Schleifer and Vishny, 1989; Krugman, 1991; and Lanaspa and Sanz, 2001). Thus, low-growth traps widen the scope for non-linearities and tipping points, pointing toward the need for a more sectoral- or cluster-focused "big push" in public policy aimed at coordinating expectations and investments.

III. LA's dominant growth features from a macro and trade perspective

This section uses a macro and trade-oriented growth decomposition to help uncover, for the entire 1965-2020 period, the key differentiating features of LA's growth compared to world growth. As we will see, because LA growth was largely driven by demand rather than by uniform

[11] See Firpo and Pieri (2016) for the case of Brazil and Alfaro and Kanczuk (2020) for the cases of Mexico and Brazil. Sanguinetti and Villar (2012) provide abundant evidence to show that within-sector productivity growth collapsed in the region after ISI because of the exhaustion of rural-to-urban labor migration and the inability of the manufacturing and services sectors to generate sustained increases in productivity.

supply shocks, these features do not fully fit the supply side perspective. Subsection 1 provides a brief overview of the macro and trade growth decomposition (a more technical presentation of the decomposition method can be found in Appendix II). Using this framework, Subsection 2 underlines the unique role played by demand in the growth dynamics of the region. Subsection 3 identifies three region-wide cycles—Protection (1960-1991), Stabilization (1991-2003), and Commodities (2003-2020)—and their underlying dynamics. To enhance the analysis, we assess LA's developments using a comparator (CG) group (the composition of LA and CG groups and the criteria for country inclusion can be found in Appendix III).

1. A macro and trade-based growth decomposition

Consider the following accounting identity:

$$G_Y = G_X + (G_Y - G_M) + (G_M - G_X)$$

where the *G*s are the logs of the backward-looking ten-year moving averages of growth rates of a country's GDP (*Y*), exports (*X*), and imports (*M*) of goods and nonfactor services, all relative to the rates of growth of the same variables for the world (and all measured in constant dollars).[12] The first right hand term in the identity is labelled "export pull" (*EP*) because it can be interpreted as the traction that export expansion exerts on a country's growth. The second term is labelled "domestic response" (*DR*) because it can be interpreted as the country's capacity to lift GDP growth above import growth (i.e., the country's efficiency in using its imports to grow). The third term is labelled "external leverage" (*EL*) because it can be interpreted as the impulse or drag on growth linked to changes in the country's trade deficit or, alternatively, to changes in the availability of external finance. Thus, the above identity can be rewritten as:

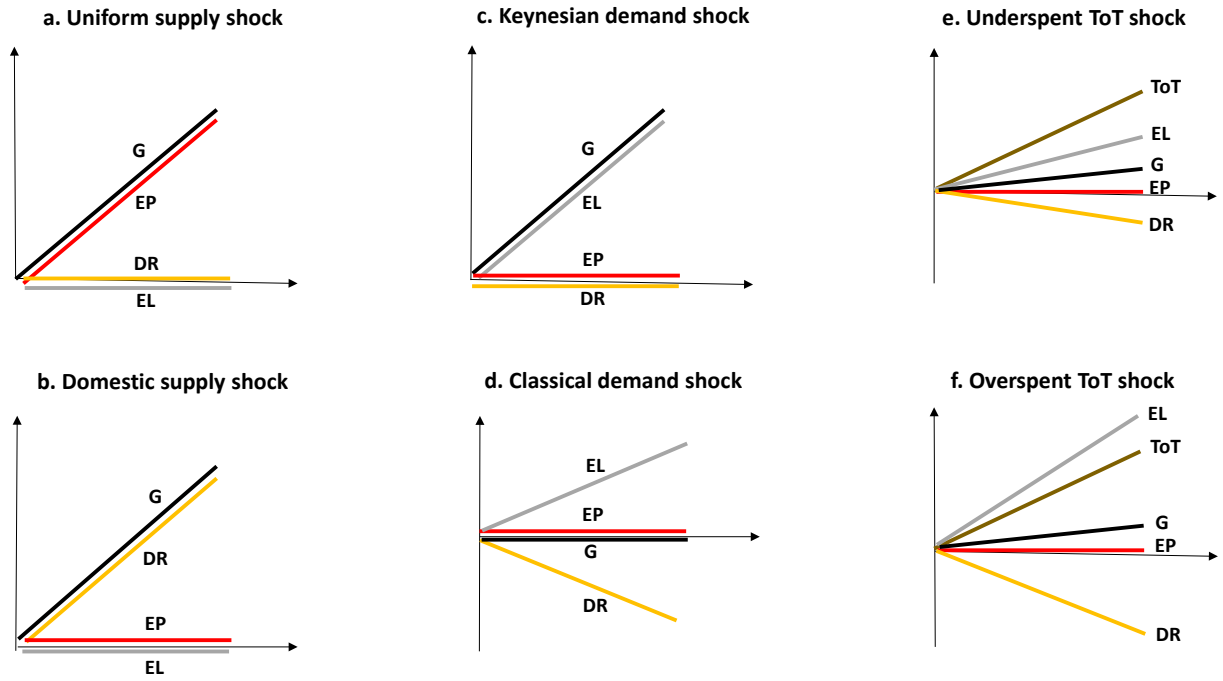
$$G = EP + DR + EL$$

We add a terms of trade windfall term, *ToT*, calculated as the difference between *EL* expressed in constant and *EL* expressed in current dollars. A country's "growth spectrum" for any given year or period can then be expressed as the vector {*G*, *EP*, *DR*, *EL, ToT*}. As shown in Appendix II, the growth spectrum underpins a simple identification grid that helps separate supply from demand shocks according to their impact on the different components of the spectrum. We will now apply the identification grid to the effects on the growth spectrum of three basic types of shocks that will appear recurrently in the analysis of LA's growth history.

[12] We use logs of rates of growth and (generally) ten-year backward-looking moving averages to better approximate elasticities (hence the underlying fundamentals), as in Thirwall's (1989) growth model. Ten-year moving averages provide a smoother, hence more revealing and less noisy perspective on medium-term growth dynamics than yearly observations. At the same time, the ten-year moving averages provide a richer view on cycles than lengthier averages. However, we will occasionally use longer (twenty-year) moving averages when seeking to illustrate longer term growth trends rather than cycles. Appendix II describes in more detail the growth decomposition database and provides a link where the ten-year moving averages version of the database may be downloaded.

Consider first a pure domestic demand shock. Because, by stimulating imports, a domestic demand shock should raise *EL,* changes in the external leverage provide a simple indicator of domestic demand fluctuations (whether consumption or investment driven). In an economy with substantial underutilized capacity (the Keynesian case), the increase in *EL* should be matched one-for-one by an increase in *G*, with both *DR* and *EP* remaining unchanged (Figure 2c). Instead, in an economy at full employment (the Classical case), the increase in *EL* would leave *G* unchanged but lead to a reduction in *DR*, as imports rise but GDP does not (Figure 2d). As economies should generally lie somewhere in between the Keynesian and Classical cases, the trademark of a demand shock is therefore some co-movement of *G* and *EL*, with partial opposite fluctuations in *DR*. In the absence of a domestic supply shock also affecting *DR* independently (as discussed next), the *net impact* on *G* of a domestic demand shock should thus be given by the sum *EL* + *DR*.

Figure 2. Growth Spectra under Alternative Shocks



Note: Time is measured along the horizontal axis; the change in the growth spectrum components along the vertical axis.

Consider now a pure supply shock. A Solow-type positive uniform shock should raise the economy's output of both tradable and non-tradable goods, whether as a result of a build-up in factors of production or a boost in across-the-board productivity. Because the shock affects all goods, exports (hence *EP*) and GDP (hence *G*) should rise equally. But absent changes in domestic demand, *EL* should not budge and, hence, the rise in imports should match one-for-one the rise in exports and output. As a result, *DR* should also remain unchanged. Thus, the trademark of a uniform supply (Solow) shock is a co-movement of *G* and *EP*, with *DR* and *EL* hovering around zero (Figure 2a). Instead, a purely domestic supply shock that only boosts non-tradable goods will

raise output, hence *G*, without affecting exports (hence leaving *EP* unchanged). In the absence of a simultaneous demand shock, *EL* will not change either; and since exports have not changed, nor will imports; hence the counterpart of the rise in *G* should just be a rise in *DR* (Figure 2b).[13]

Consider finally a positive terms-of-trade shock (a rise in *ToT*). To the extent the windfall is spent, its impact on growth should be the same as that of an expansionary domestic demand shock. But the macro response will be countercyclical if the windfall is "under-spent", i.e., when the rise in *EL* falls short of the rise in *ToT* (Figure 2e). Instead, it will be procyclical if the windfall is "over-spent", i.e., when the rise in *EL* exceeds the rise in *ToT* (Figure 2f).

We will use the above decomposition method to look at growth levels, growth fluctuations over time, and growth differentials between countries. In the first case we will directly use the above accounting identity. In the second and third cases we will take it as a basis to calculate growth variance decompositions, in one case with respect to the yearly time series of growth spectra for a given country, in the other case with respect to the distribution of growth spectra across countries for any given period.

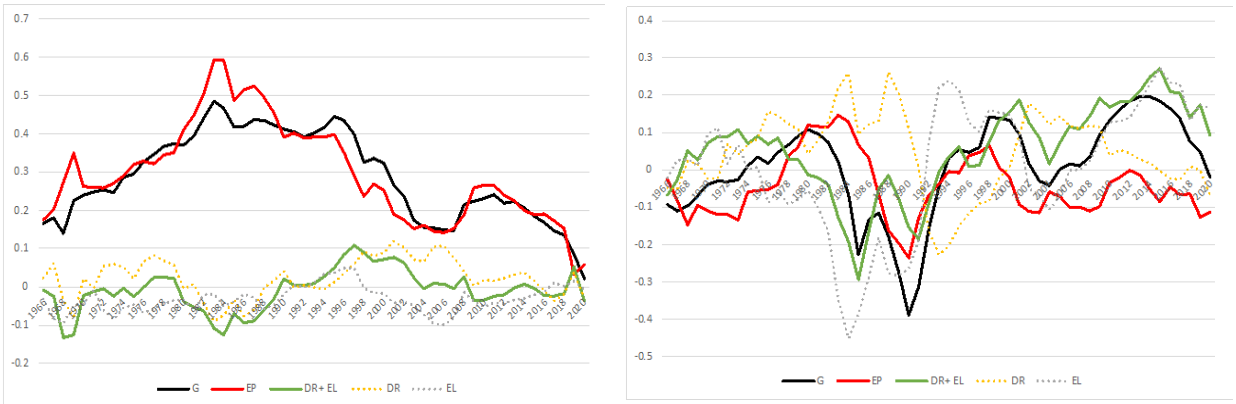
2. Key growth features

Clearly, our growth decomposition method has more analytical value in countries where macro and trade shocks, and not only the Solow-style uniform supply shocks, play a significant role. As shown in Figure 3 this has been indeed the case for LA. The growth spectrum of the Asian Tigers (Hong Kong SAR, China, the Republic of Korea, Singapore) over the last six decades has closely matched that expected under uniform supply shocks, as described in Figure 2a: *G* closely followed *EP,* and both *DR* and *EL* hovered around zero (Figure 3a). The Asian Tigers' growth has therefore been mainly supply-driven, hence consistent with Solow modeling. By contrast, LA is clearly a case of an unbalanced and unstable growth, with *G* mainly driven by domestic demand (as measured by *EL* + *DR*) (Figure 3b). Not only has the region's *G* deviated from *EP*, especially in the 2000s but, more notably, *EL* and *DR* have fluctuated greatly yet moved systematically in opposite directions. This is confirmed in Figure 4, which shows the average growth spectra for the two groups of countries over the 1965-2020 period. For the Asian Tigers (Figure 4a), *G* is mainly about *EP* (uniform supply). In LA (Figure 4b), by contrast, *EL* and *DR* played the most salient roles.

[13] A rise in non-tradable output would of course imply a rise in imported inputs. However, given the assumed absence of a simultaneous aggregate domestic demand shock, final imports would fall to match the rise in imported inputs, so as to keep total imports unchanged.

Figure 3. Asian Tigers and Latin America: Growth Decompositions

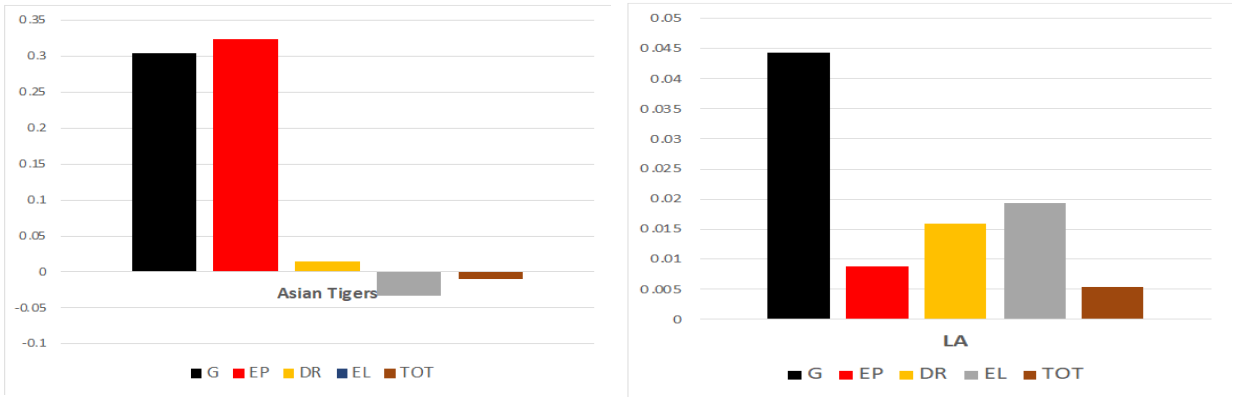
(a) Asian Tigers *(b) Latin America*



Note: The Asian Tigers include the Republic of Korea, Hong Kong SAR, China, and Singapore. Growth components in panels (a) and (b) are calculated over a ten-year, backward-looking moving window. *Source*: WDI, World Bank.

Figure 4. Asian Tigers and Latin America: Average Growth Spectrum, 1965-2020

(a) Asian Tigers *(b) Latin America*



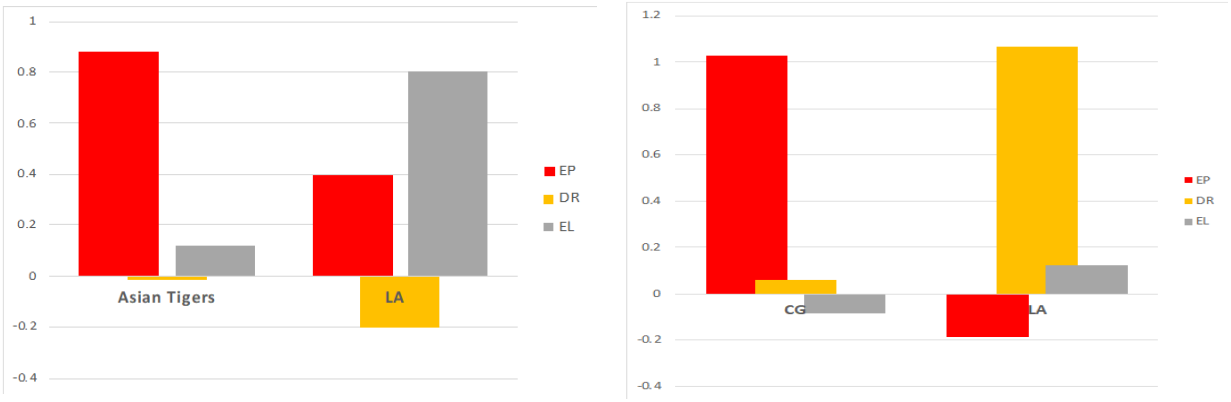
Note: The Asian Tigers include the Republic of Korea, Hong Kong SAR, China, and Singapore. Growth component in panels (a) and (b) are calculated for the entire 1965-2020 period. *Source*: WDI, World Bank.

The growth variance decompositions reinforce the same message (Figure 5). Growth fluctuations have been nearly totally dominated by *EP* in the case of the Asian Tigers; by contrast, for LA, the towering *EL* and the opposite sign of *DR* are the tell-tale signs of a dominating domestic demand (Figure 5a). As regard growth differentials within country groupings, we compare LA to its comparator group, CG (Figure 5b). While CG growth differentials were explained mainly by *EPs*, in LA they were explained by *DRs*. In other words, the CG countries that did better in terms of growth have been the ones that exported more. Instead, the LA countries that have done better were the ones that imported less, relative to their growth. *This provides a clear indication that the region has not integrated its trade satisfactorily with the rest of the world.*[14]

[14] This manifestation of LA's imperfect trade integration (growing more by importing less, rather than by exporting more) is consistent with many of LA's globalization gaps documented in the literature. For example, compared to

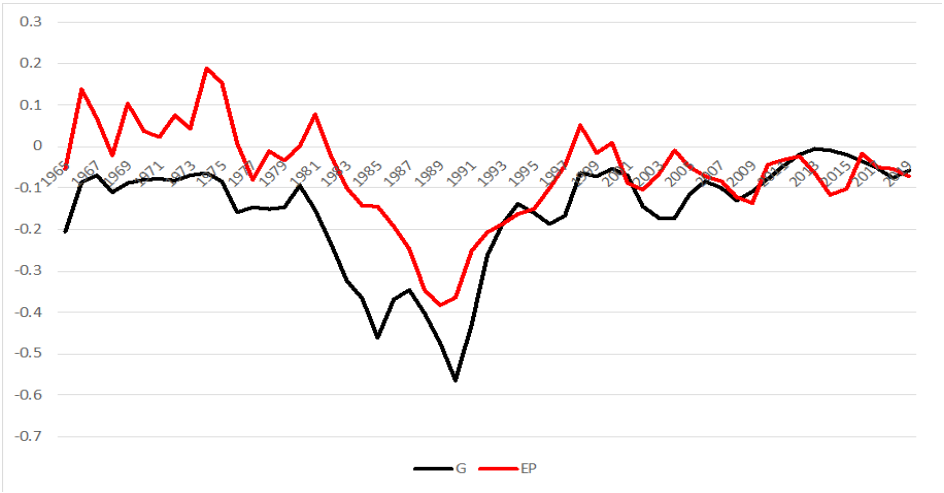
Figure 5. Tigers and LA: Growth Variance Decompositions, 1965-2020

(a) Growth Fluctuations *(b) Growth Differentials*



Note: The Asian Tigers include the Republic of Korea, Hong Kong SAR, China, and Singapore. Growth components in panel (a) are calculated based on country averages of growth variance decompositions for yearly, ten-year, backward-looking moving windows over the 1965-2020 period. Growth components in panel (b) are based on cross-country growth variance decompositions for growth spectra calculated for the 1965-2020 period as a whole. *Source*: WDI, World Bank.

Figure 6. Growth and Export Pull Differentials: LA minus CG



Note: *G* and *EP* are calculated based on country averages using ten-year, backward-looking moving windows. *Source*: WDI, World Bank.

Southeast Asia, LA exhibits a significant shortfall of insertion into global value chains (Blyde, 2014); its share of intra-industry trade is very low (except for Mexico) (De la Torre, Didier, and Pinat, 2014); and its cross-border trade network is much less dense, dominated by bidirectional trade with a few global players and little multidirectional connectivity (De la Torre et al., 2015). Largely as a result, LA firms have had less room to expand and instead have suffered from a "growth stunting" syndrome: LA firms that survived beyond 30 years have been, on average, one-third the size of comparable firms in Southeast Asia (Lederman et al., 2013).

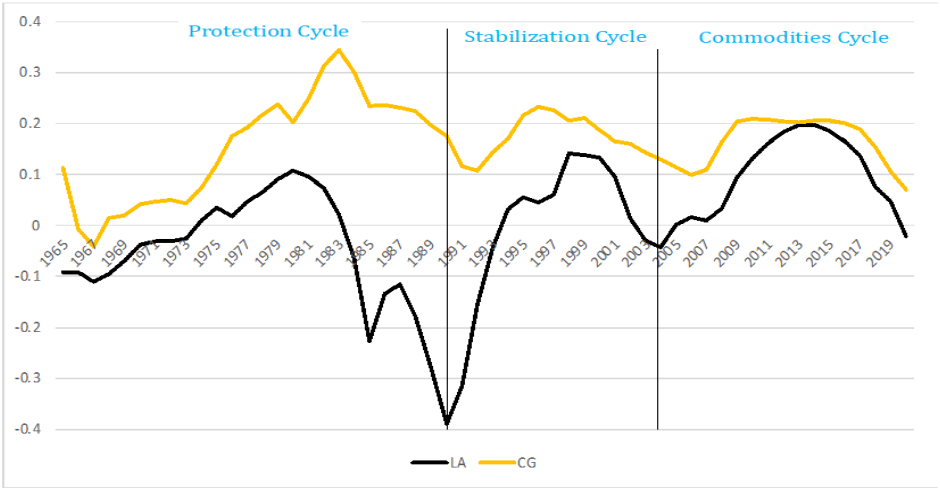
Figure 6 further reinforces this last conclusion. When comparing LA's *G* and *EP relative to* CG (i.e., the first differences between LA and CG), two features stand out: (i) LA has grown more slowly from the very start, although this difference in trend growth has narrowed over time; and (ii) the difference in growth has closely correlated with that of the export pulls, which clearly indicates that LA's disappointing *average* growth compared to CG was due to its uninspiring export performance. Thus, the region's underwhelming growth reflected its deficient trade integration on either side of the trade account: *too many imports, not enough exports*.

3. Cycles

Figure 7, which compares LA to CG in terms of their *Gs*, shows that the two groups of countries went through the same three cycles, a clear indication that they were exposed to the same world events. As shown in greater detail in Figure 8, we refer to the first cycle as the "Protection Cycle" (1960-1991) because import restrictions first rose in support of domestically oriented industrialization (the ISI years of 1960-1981), and then fell following the 1982 debt crisis, as the region liberalized in a hurry to help overcome its macroeconomic woes. We refer to the second cycle as the "Stabilization Cycle" (1991-2003) because it started on the way up with exchange rate-anchored inflation stabilization programs complemented by fiscal consolidation and important Washington Consensus-style structural reforms (particularly in the areas of trade and financial liberalization). The cycle entered its downward phase in the late-1990s as stabilization dynamics triggered real exchange rate appreciations that fed spending booms and culminated with financial crises (more on this below). Many of the larger Latin American countries (chiefly, Brazil, Chile, Colombia, Mexico and Peru) then switched to *inflation targeting* and greater exchange rate flexibility, thereby gaining credibility and maneuvering space in monetary policy. Finally, we refer to the third cycle as the "Commodities Cycle" (2003-2020) because, with admittedly stronger macro-financial policy frameworks, GDP fluctuations were driven mainly by the global impact of China, including on commodity prices.

Yet, the amplitude of the cycles was much deeper for LA than for CG. LA's enhanced growth volatility largely reflected the larger fluctuations in *EL*, which in turn closely followed the fluctuations in *ToT* (Figure 8). The remarkably close coincidence between growth booms (busts) and real exchange rate appreciations (depreciations), also shown in Figure 8, is indeed consistent with deep demand-driven fluctuations along the Stabilization and Commodity cycles. Moreover, since the early 1980s, *EL* and *TOT* have moved in the same direction, but *EL* fluctuations have systematically exceeded in amplitude the *ToT* fluctuations, a clear manifestation of pro-cyclical macro policies. Thus, much of the region's growth volatility has been the product of its strong exposure to terms of trade shocks and its inadequate (highly pro-cyclical) macroeconomic policy management, particularly in the fiscal domain, which ended up penalizing growth by exacerbating the spending effects of terms of trade shocks. Section VI will expand on this key feature when reviewing in more detail South America's recent growth history.

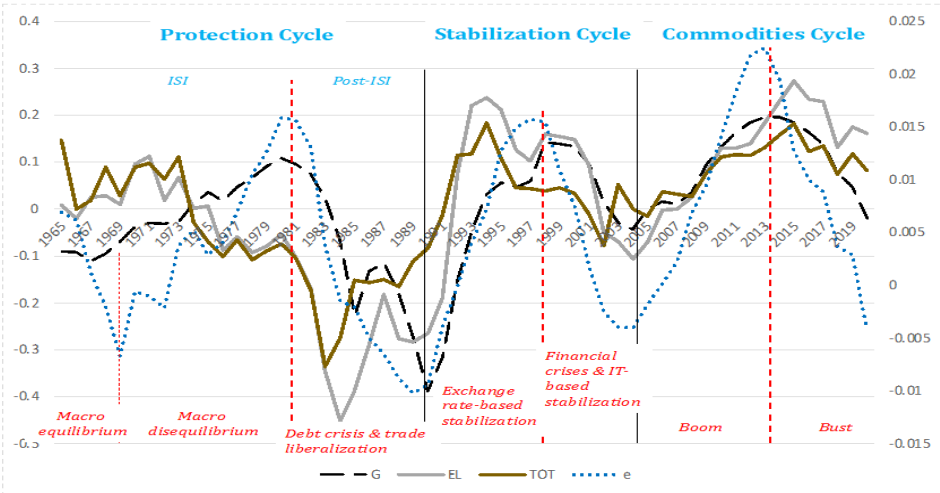
Figure 7. GDP Growth: LA vs. CG



Note: Real GDP yearly growth is calculated based on country averages using ten-year, backward-looking moving windows. *Source*: WDI, World Bank.

Note, however, that during the ISI period (the ascending part of the Protection Cycle) *G* moved in the opposite direction to *EL* and *ToT*. This reflected the limited external financing, which required that countries maintain their current accounts close to equilibrium through an active management of import tariff and non-tariff barriers. Moreover, the real exchange rate only started to appreciate with the rise in output growth during the latter part of the ISI period. We come back to these features in the next section.

Figure 8. LA: Demand and GDP Growth



Note: Yearly growth components are calculated based on country averages using ten-year, backward-looking moving windows. The real exchange rate (e) is derived from the bilateral US$ nominal exchange rate, using GDP deflators and calculated as the log of one plus the average rate of depreciation over ten-year backward-looking moving windows. *Source*: WDI, World Bank.

IV. The ISI trap

This section brings to light the key features of LA's growth during the ISI years and argues that these features do not fit the ISI narrative (see Section II.2). While ISI produced a boost in growth and productivity during the 1960s and 1970s, at least in a few countries (particularly in Brazil and Mexico), its model, as applied in LA, was not sustainable. Comparing growth and productivity records during and after ISI is therefore deeply misleading as the good ISI outcomes were not long-lasting and could only be reached through policies that planted the seeds for the bad outcomes that followed. Rather than a "golden age", ISI was a "costly mirage".

1. The ISI productivity boom

The industrialization model of Appendix I helps explain why ISI was initially successful, in at least some countries, but eventually turned into a trap. The model considers an open economy where commodities initially account for the bulk of exports whose proceeds can be used by a formal manufacturing sector to buy imports of intermediate and capital goods. A formal manufacturing sector can thus develop and eventually export manufactures. However, there also exists a large informal economy that residually employs the labor that is not formally employed. Thus, for the formal manufacturing sector to take off, its productivity and wage levels need to match or exceed those in the informal sector. Hence, unless the formal sector's TFP exceeds some minimum threshold, outward-driven industrialization will not happen, and the economy will remain stuck in a commodity trap.

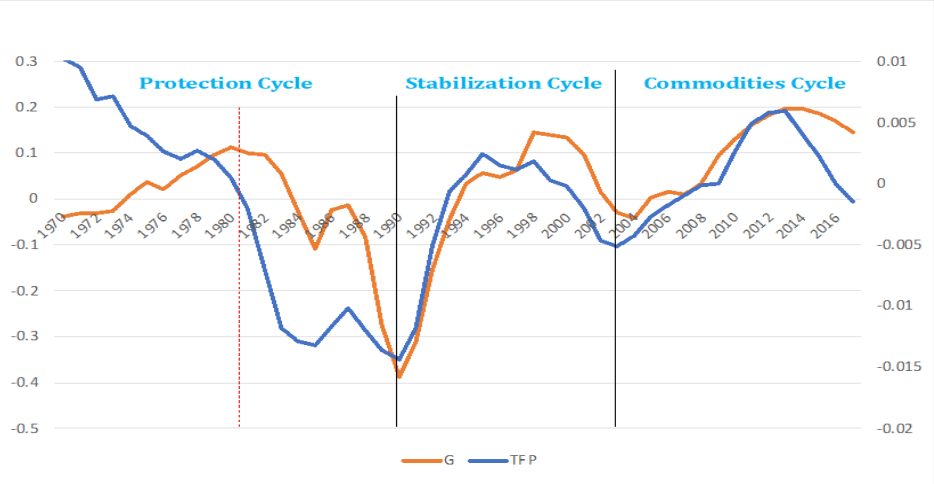
If trade protection is introduced into the model, commodity producers could use their export proceeds also to purchase locally produced (final) manufactures instead of imported manufactures. By boosting the demand for local manufactures (and hence pushing their price above the world price), this will allow—within a range of TFP values that lie below the commodity trap threshold—the formal manufacturing sector to pay wages that equal or exceed that of the informal sector. Inward-driven industrialization will thus take off and absorb the available labor. And marginal labor productivity will rise as the formal wage exceeds the informal wage. This is consistent with the observed rise in LA's productivity during ISI, as stressed by McMillan and Rodrik (2011), which is indeed the result of a labor shift from the agricultural (or informal, in the case of our model) sector to the formal manufacturing sector. It is also consistent with the positive (yet rapidly declining) rate of TFP growth during the ISI years, as shown in Figure 9.[15] *But, in line*

[15] Arguably, the decline in productivity of the 1970s and 1980s was a worldwide, nor just an LA, phenomenon. But the two phenomena might have followed similar dynamics, as the worldwide decline in productivity coincided with global trade surges (see Appendix V), following trade liberalization and the post-Bretton Woods switch from fixed to floating exchange rates. By compressing the price of tradables, the surges in global trade could have led to a labor shift from tradables to non-tradables that reduced aggregate productivity. The major rise of the largely non-tradable services sector's share in US GDP during the 1970s and 1980s is consistent with this interpretation.

with our model, this shift was achievable only because, by raising the price of locally produced goods, the barriers on imports opened the necessary space for inward-oriented industrialization.

However, the one-time ISI boom can turn into an ISI trap if TFP remains below the commodity trap threshold. Raising productivity and lowering the price of manufactures to the world level (or raising their quality) is similarly difficult under the ISI and commodity traps. In fact, it may become even more difficult to exit the ISI trap because sheltering the local manufactures from world competition is likely to raise local mark-ups.[16] If so, the resulting rents earned by the manufacturing producers are likely to further limit their incentives to invest in a search for non-commodity export niches and improvements in productivity. Rather than investing to raise productivity, they may prefer to lobby for additional import restrictions. Thus, because the local manufactures are not internationally competitive, commodities remain the only source of foreign exchange available to pay for the needed imports of intermediate and capital goods, and ISI growth may deepen the economy's dependence on commodities exports. As shown next, based on growth decompositions, this is indeed what happened.

Figure 9. Output and TFP Growth: LA, 1970-2017



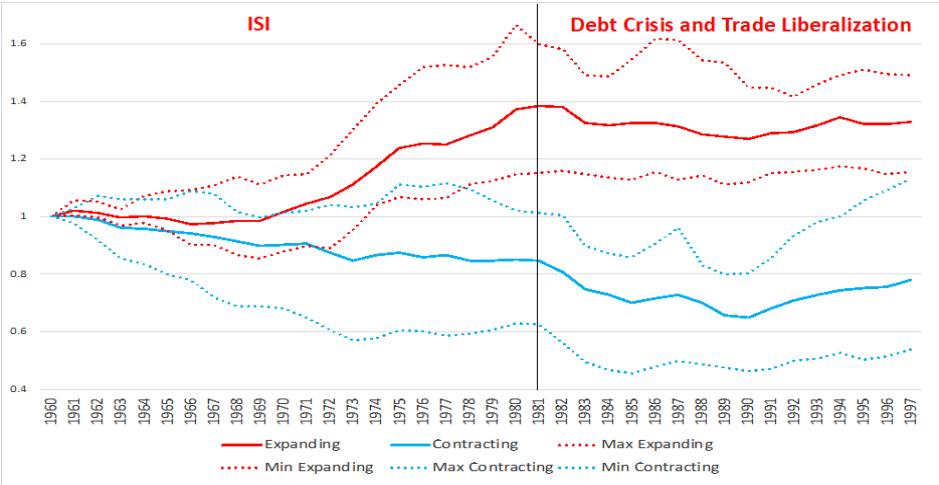
Note: The rate of growth of TFP growth for LA is calculated as an average for all LA countries over ten-year, backward-looking moving averages. *Sources*: WDI (World Bank) and Penn Tables.

[16] Notice that in our Appendix I model the impact of protection on productivity takes place through prices *even under perfect competition and zero mark-ups*. While local prices could rise further due to an increase in mark-ups, the local price rise in our model is demand-induced (protection restricting consumer choice) rather than supply-induced (local firms acquiring more market power as they become less exposed to foreign competition). Thus, our model uncovers an effect that had remained largely ignored in the trade and productivity literature and which broadens the argument made by Cusolito and Maloney (2018), namely, that McMillan and Rodrik's structural change narrative needs to be reviewed and adjusted for the trade-induced productivity implications of changes in mark-ups.

2. The exacerbated dependence on commodity exports

Growth performances across LA countries varied widely during the ISI period (Figure 10). Setting aside the Central American and Caribbean countries, which were less enthusiastic participants in the ISI hype, we sort the rest of LA countries into two groups, depending on whether their economies expanded or contracted during ISI relative to the world. The expanding group includes mainly Brazil and Mexico and, to a lesser extent, Colombia, and Ecuador. The contracting group includes Argentina, Bolivia, Chile, Peru, Uruguay, and the República Bolivariana de Venezuela. What was behind these contrasting growth performances?

Figure 10. Winners and Losers: LA Growth a during ISI
Relative to World GDP (Index, 1960 = 1)



Note: The expanding group includes Brazil, Colombia, Ecuador, and Mexico; the contracting group includes Argentina, Bolivia, Chile, Peru, Uruguay, and the República Bolivariana de Venezuela. Countries included in LA's average tariff rate include Argentina, Bolivia, Brazil, Chile, Colombia, Mexico, Paraguay, Peru, the República Bolivariana de Venezuela. *Sources*: WDI, World Bank.

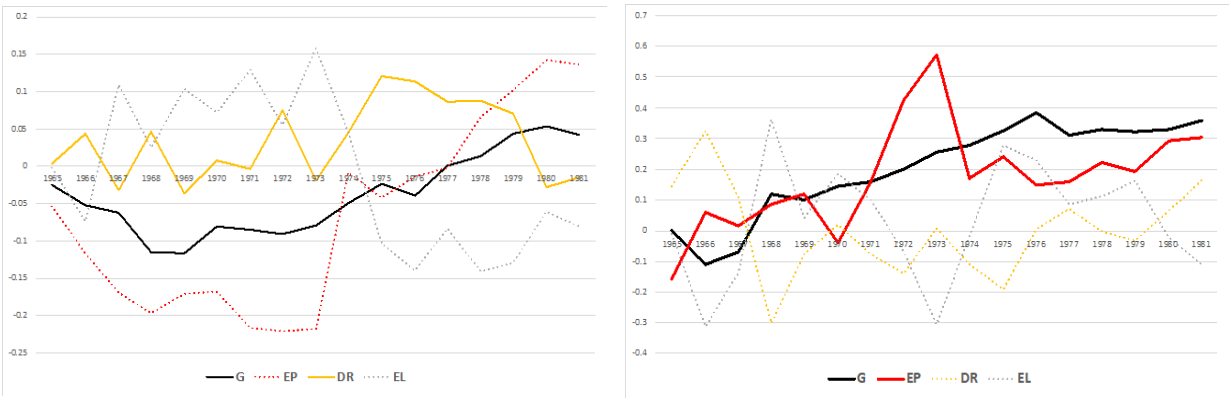
Figure 11 provides the answer. It shows that growth was critically dependent on the balance of payments. Panel (a) displays the growth spectra for the average of all countries in the two groups, and panel (b) shows the difference in the decomposition terms between the two groups. For the average, growth was sustained by positive *DRs* (Figure 11a): the rise in the production of importables (to be sold in the highly protected local or subregional markets) raised GDP while lowering the countries' propensity to import. Yet, as shown in Figure 11b, it is *EP* (not *DR*) that explains the growth differential between the expanding and contracting countries. As predicted by our industrialization model (Appendix I), the success of ISI hinged on the availability of the foreign

exchange generated by commodity exports. The returns to scale associated with country size may also have played a role, but local market size was not the binding constraint.[17]

Our simple micro model in Appendix I does not spell out the conditions under which it is possible to raise productivity above threshold and exit the ISI trap (for instance, by boosting R&D and improving firm's management). However, as noted in Section II.3, a rich literature has sprung up in recent years that analyzes the capacity and incentives to "learn to learn". The distance to the world competitiveness frontier is a key parameter, which largely explains why one region (Southeast Asia) was able to transit to outward-led industrialization while another (LA) was not.

Figure 11. LA's Expanding vs. Contracting Countries: Growth Decompositions during ISI

(a) Average ***(b) Difference***



Note: Each growth component is calculated over a yearly backward-looking moving window (a five-year window between 1965 and 1969 and a ten-year window thereafter). *Source*: WDI, World Bank.

Many factors can explain why different production orientations ended up giving rise to different distances from the frontier. These likely include cultural differences (more egalitarian, consensual, and practical in Asia, more fractured and ideology-driven in LA). They also include stark differences in external pulls: in Southeast Asia, the start of outward-oriented supply chains driven by highly dynamic Japanese exports; in LA, a much less dynamic US-centered pole of regional development and the coming in of US multinationals attracted by the high inward-oriented rents, rather than by the potential for exporting goods manufactured locally. But differences in the availability of commodities as a source of foreign exchange are likely to have also played a major role. Looking inward by sheltering the local production of manufactures from import competition was feasible in LA thanks to the relative abundance of commodity export proceeds. By contrast, lacking in commodities, Southeast Asia had no choice but to opt, from the outset, in favor of an

[17] Indeed, a large country like Argentina performed poorly in terms of growth during ISI, as the weakness in its commodities' prices trumped the economies of scale that its local market offered. A small ISI country like Ecuador performed strongly in the 1970s, as the oil boom relaxed its foreign exchange constraint (see De la Torre, 1987).

outwardly oriented industrialization strategy, where the state's support for firms was linked to their exporting success, which helped firms remain at shorter distances from the innovation frontier.[18]

3. The loss of macro control

Protectionism in the ISI years gave rise to substantial domestic demand pressures. Initially, measured inflation was low, arguably because local manufactures responded with downward quality adjustments rather than price increases: price pressures were mitigated because there was a reduction in the quality of the locally manufactured goods compared to imported goods. Thus, the closing of the economy raised output, wages, and productivity without initially raising inflation. Furthermore, domestic demand pressures did not show up as a rise in *EL* mainly because of foreign exchange rationing: the shortages were managed on a year-to-year basis mainly through import permits. While yearly information on import permits is unfortunately not available, the initially rather stable inflation and the lack of real exchange rate appreciation are consistent with this interpretation.

However, as shown in Figure 8, the region's average real exchange rate appreciated strongly from the early 1970s onwards as inflationary dynamics took off. And as Figure 12 shows, LA's inflation dynamics contrast starkly with CG's.[19] Whereas CG's inflation remained low and constant during and after the ISI years, LA's inflation started to rise in the 1970s, *well before the crisis*. Reflecting tighter balance of payments, inflation in LA's contracting group (countries that grew less than the world, many of which in the Southern Cone) started rising earlier than for the expanding group.

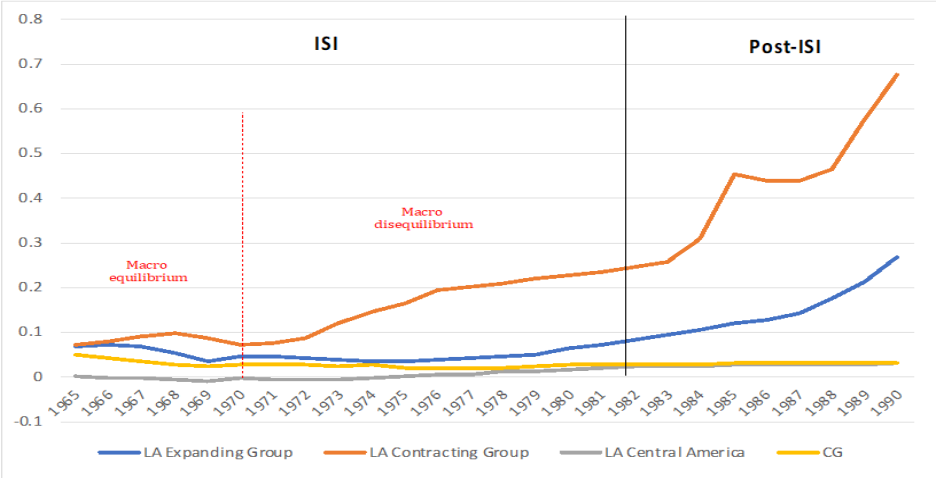
Thus, the exhaustion of the ISI project triggered a loss of macro control that set the stage for the abrupt and lengthy growth downturn that followed the 1982 eruption of the great Latin American debt crisis. The loss of macro control took place in three steps. First, the bottling up through rising protection of the expanding demand vis-à-vis inefficient and inflexible supply eventually started pushing inflation up, notwithstanding the declines in product quality. Second, the tightening of the foreign exchange constraint and associated growth deceleration of the second half of the 1970s, together with the low world interest rates, motivated a debt-financed public spending boost, which made the macro even more vulnerable by further raising inflation and appreciating real exchange rates. Third, given the weakened fundamentals, the sharp monetary

[18] Thus, contrary to the historic perspective of Bértola and Ocampo (2013), we see the possibility for LA of a smooth transition from inward-oriented to outward-oriented industrialization as quite remote. Unlike in Southeast Asian countries, LA firms became increasingly addicted to the rents and absence of competition afforded by protection. Hence, attempts to induce them to become more internationally competitive hit hard political economy constraints. Mexico's 1976 choice to develop its oil fields rather than to open its international trade, as proposed at the time by President Reagan to President Lopez Portillo, is a good illustration of such a preference for relying on the expansion of commodity exports rather than the liberalization of trade.

[19] The chart breaks down LA into the same expanding and contracting groups, relative to world GDP, as in Figure 12, plus Central America; to control for imported inflation, US inflation is subtracted from all series.

tightening by the US Fed that started in October 1979 easily nudged the region into a major currency and debt crisis which, through accelerated depreciations, sent inflation through the roof, marking the beginning of the 1980s lost decade.

Figure 12. ISI and Post-ISI Inflationary Dynamics: LA vs. CG



Note: Expanding and contracting country groupings are the same as in Figure 10. Central America includes Costa Rica, Dominican Republic, Guatemala, Honduras, and Panama. US inflation is subtracted from the rates of inflation. which are calculated as the log of one plus the average inflation rate over a 5 or 10-year backward-looking moving window. *Source*: WDI, World Bank.

V. The ISI legacy

The post-ISI years (1982-2003) were years of slow growth, high and stubborn inflation, lagging productivity, deindustrialization, and the bifurcation of exports composition across LA's three main sub-regions (Mexico, Central America, and South America). This section documents these features and discusses how they relate to the ISI collapse. The section also argues that (and illustrates why) these adverse features were worsened by the ISI-induced chaotic macro and financial environment and the shortfall in the required supply side reforms, which compounded the region's difficulty in responding promptly and effectively to the cheap imports surge and the emerging export opportunities.

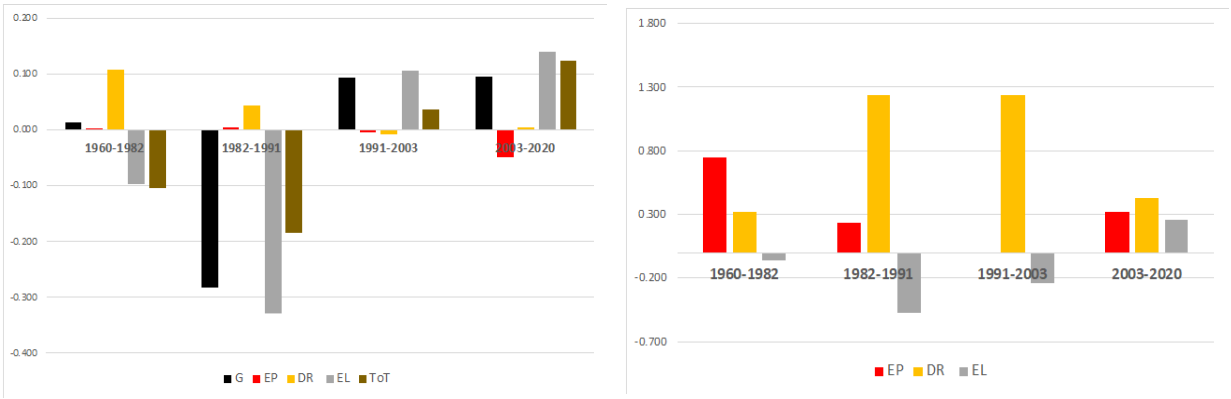
1. Growth dynamics

Figure 13 contrasts LA's growth spectra by cycle (with the Protection Cycle subdivided between ISI and post-ISI). During the ISI years, the dominating positive *DR* in Figure 13a and the positive *EP* in Figure 13b confirm earlier findings. The former reflects the strong incentives to produce for the highly protected local (or subregional) market, the latter the dependence on commodity-sourced foreign exchange.

But, consistent with the idea that inward-oriented ISI can lead economies into a lethal trap, Figure 13a shows that the ISI boom was followed by a huge post-ISI growth collapse during the downturn of the Protection Cycle (the so-called "lost decade"). And as shown in Figure 9, this collapse was accompanied by a large contraction in productivity, which is consistent with the prediction of our micro model. Remarkably, however, the "lost decade" was dominated by an enormous compression of domestic demand, as captured by the very negative *EL,* rather than a collapse in supply, which would have taken the form of a negative *DR*. Instead, the *DR* was modestly positive, reflecting the net effect of, on the one hand, a large negative supply shock (which lowered GDP growth) and, on the other, an even more negative domestic demand shock (which raised *DR* by sharply compressing import growth). The latter reflected the aggressive contractionary adjustment in spending in response to deteriorating *ToT* and the 1980's debt crises.

Figure 13. Growth Spectra by Growth Cycle: LA, 1965-2020

(a) Growth Rates ***(b) Growth Rate Differentials***



Note: Yearly growth rates in panel (a) are calculated based on LA country averages for each of the time subperiods. Growth rate differentials in panel (b) are based on cross-country growth variance decompositions for growth spectra calculated for each of the time subperiods. *Source*: WDI, World Bank.

Similarly, Figure 13 also shows that the region's growth during the 1991-2003 period (the Stabilization Cycle) was dominated by a positive domestic demand shock (a positive *EL* reflected in rising imports relative to exports), rather than by a positive supply shock (*DR* remained close to zero, as GDP growth barely kept up with import growth). As discussed below, the anemic supply response to the Washington Consensus-style macro stabilization and structural reforms reflected the deindustrialization process and the insufficiency of complementary reforms to improve the allocative function of markets (particularly the markets for labor and other inputs). As a result, supply constraints did not relax, which limited the region's capacity to quickly shift from an inward to an outward-driven production orientation. As to the positive demand shock, it largely resulted from the endogenous stabilization dynamics, which triggered real exchange rate appreciations and interest rate wedges that fueled short-term capital inflows and spending and credit booms, ending up in sudden stops and financial crises. While the crises have been often interpreted as evidence of the failure of post-ISI reforms, they were for the most part a hard-to-avoid consequence of the need for draconian stabilization, hence another unfortunate legacy of the ISI years.

Note also that the sharp yet strongly correlated fluctuations of TFP and output after ISI in Figure 9 point in the (Solow-inconsistent) direction of demand-induced reverse causality: rather than output growth being caused by TFP growth (TFP growth is indeed not expected to be as volatile as displayed in Figure 9) measured TFP fluctuations were a mechanical residual of demand-induced GDP fluctuations. In other words, output fluctuations were driven mainly by demand, both domestic and external, and that led to accommodating changes in measured TFP.

Finally, note in Figure 13b that it was *DR* (rather than *EP*) that made the difference in post-ISI growth capacity across LA countries. In other words, after LA started to liberalize trade and finance, it was the region's capacity to use its imports more effectively (rather than its capacity to grow its exports) that mattered the most, although this feature became less pronounced during the Commodities Cycle. This confirms the findings from Figures 5b and 6 that, following the ISI collapse, the region was not able to integrate its trade satisfactorily with the rest of the world. Compared to its CG peers, not only was LA growth lower than that of CG but also the LA countries that did comparatively better in terms of output growth were the ones that imported less rather than those that exported more.

2. Trade liberalization: The Mexican experience

Reflecting ISI's legacy, trade liberalization was initially more traumatic for LA than for the rest of the world. Because the region fell much deeper behind the world competitiveness frontier during ISI, the removal of protection had on impact a wider depressing effect on local output and exerted a greater boost on imports, as the local production of importable goods was suddenly overwhelmed by foreign competition.[20] Thus, *DR* (output growth minus imports growth) fell much more than in the rest of the world. Moreover, the greater distance from the competitiveness frontier hindered the region's capacity to rapidly boost its exports through innovation and efficiency gains. Thus, both *EP* (the capacity to raise exports) and *DR* (the capacity to lower imports) took much longer to recover than in other parts of the world.

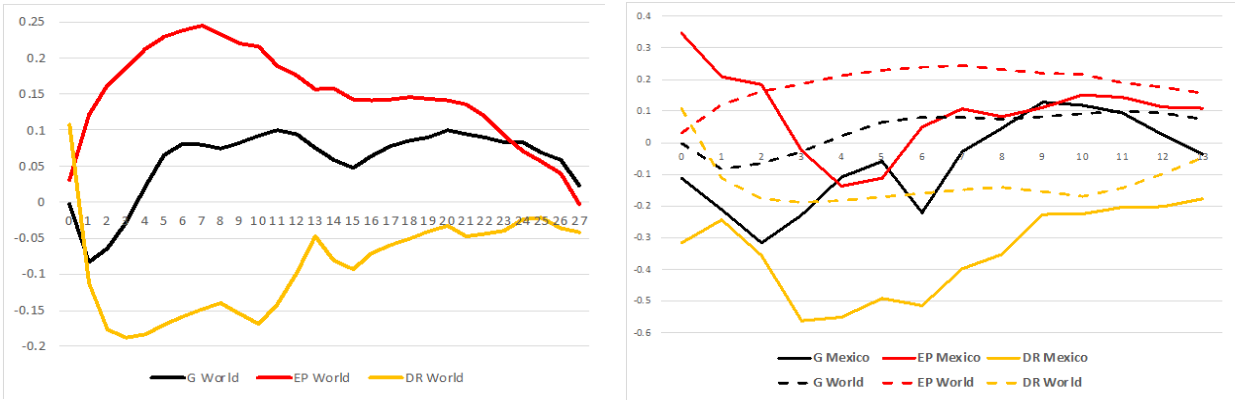
Figure 14 illustrates this using our growth decomposition methodology and the case of Mexico, which liberalized its trade during the mid- to late 1980s on the wake of the devastating 1982 debt crisis. Figure 14a sets a world benchmark based on 31 trade surges in high to middle

[20] The growth and productivity impacts of trade openness are found to depend on the time horizon (short versus medium term), the scope of the impact (firm, industry, or economy wide), and firms' (or economies') distance from the competitiveness frontier. The micro literature generally finds positive productivity impacts at the industry level, as foreign competition promotes the most efficient firms and forces out the least efficient ones (Melitz, 2003). And the productivity response also depends on how trade shocks affect mark-ups, or outputs versus inputs; cheaper inputs generally boost productivity (see De Loecker et al, 2016, for the case of India). But the distance from the competitiveness and innovation frontier also matters a lot. For example, Cusolito et al. (2021) find that only the upper 10 percent of Chilean firms (ranked in terms of their closeness to the frontier) responded favorably to Chinese competition through greater product innovation and improved quality.

income countries around the world (all surges are set to start at the same time; see the list of countries and initial dates of the surges in Appendix V). As could be expected, *EP* initially surges while *DR* falls. However, the decline in *DR* is sufficiently moderate and short-lived for output growth (*G*) to rise as early as in year two. Thus, after year five, the typical trade liberalization episode is followed by higher output growth over a cycle that lasts for nearly three decades.

Figure 14. Mexico's trade liberalization compared to the world

(a) World trade surges ***(b) Mexico's vs. the world***



Note: See Appendix V for details on the methodology used to derive these charts. Source: WDI (World Bank).

Figure 14b compares Mexico's trade liberalization with the average trade surges elsewhere in the world (shown in a more compressed scale and shorter time span than that in Figure 14a). Mexico's *DR* fell much below that of the world's average (nearly three times more), started to rebound after year 4 but remained in significantly negative territory thereafter. At the same time, export growth (*EP*) declined steadily through year 5. It took longer for Mexican firms to raise exports, notwithstanding Mexico's 1994 (year 5) entry into the North American Free Trade Agreement (NAFTA). As a result, it took eight years for Mexico's *G* to reach the world benchmark. However, *G* fell again in year 11 (2001), following China's entry into the WTO, which radically changed Mexico's fortunes (see next section). Thus, the induced growth cycle ended up being much shorter-lived than that in the rest of the world.

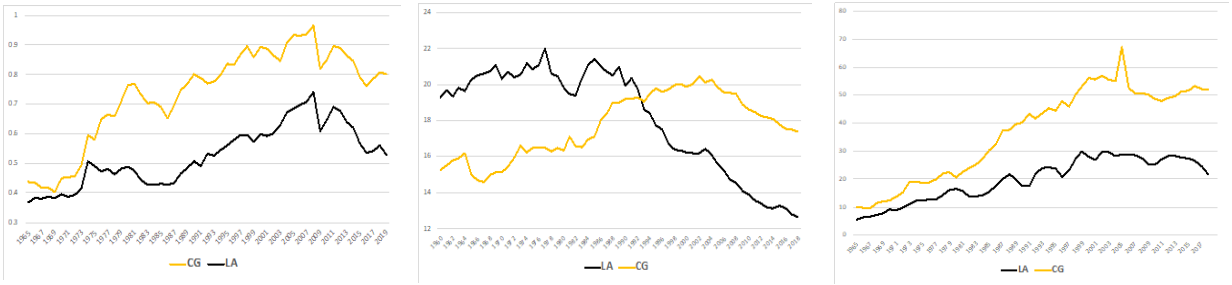
3. Deindustrialization

While LA and CG had a similar degree of trade openness in the early-1970s, trade surged during the 1970s and 1980s for CG well above the relatively modest increase for LA (Figure 15a). This mostly reflected a major post-ISI deindustrialization process in virtually all the region, with the notable exception of Mexico. The process started in the early-1980s with a sharp reduction in LA's participation of manufactures in GDP, while that of CG continued to go up (Figure 15b). LA's share of manufactures in exports, which was comparable to that of CG in the 1960s, rose

further during the 1980s and 1990s but at a much slower pace than that of CG (Figure 15c).[21] Thus, LA's industrialization, which was well ahead that of CG during ISI, did not survive the test of world competition under the subsequent trade liberalization. As predicted by our micro model, deindustrialization (mainly reflecting the stagnation or contraction in the production of importables) started as soon as protection, the key ingredient of the ISI boom, was removed.

Figure 15. Deindustrialization and Trade: LA vs. CG

(a) Trade Openness ***(b) Manufactures Share in GDP*** ***(c) Manufactures Share in Exports***



Note: Trade openness is defined as the sum of exports and imports (G&NFS) divided by GDP. *Source*: WDI, World Bank.

4. Supply constraints

The deindustrialization process was compounded by the lack of a sufficiently supportive enabling environment. Once exposed to world competition, manufacturing firms should have started to develop technologies and find export niches that could bring them up to the competitiveness frontier. But the harsh macroeconomic environment and the shortfall in complementary reforms (particularly at the micro and institutional levels) hampered new investment and the required reallocation of land, capital, and labor, thereby amplifying the magnitude and duration of the post-ISI collapse. LA firms had to cope with a variety of regulatory and tax-driven output and input market distortions and segmentations, weaknesses in the informational and contractual environment, and deficits in the supply of public goods.

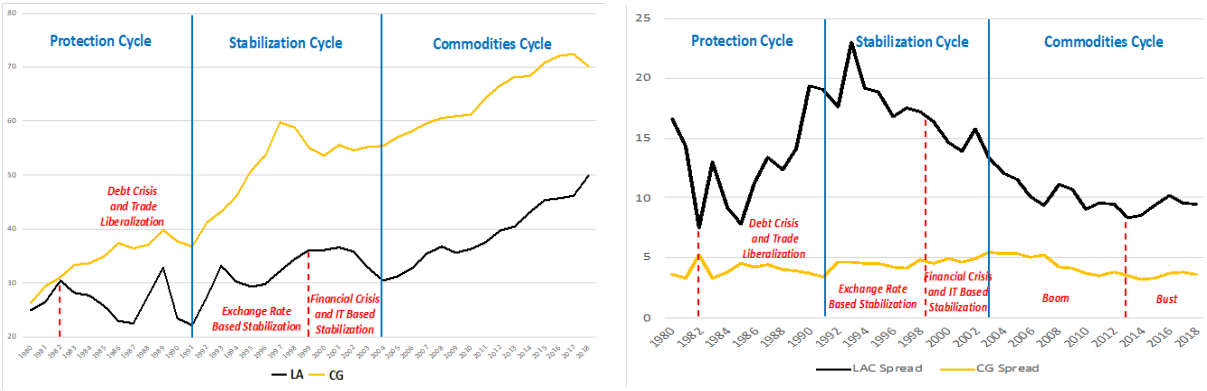
The economic relevance of these deficiencies, which had been concealed by high protection during ISI, rose to the surface and became abruptly binding once LA liberalized its trade regime. The shallow, expensive, and crisis-prone financial services industry (Figure 16), also a reflection of the heavy post-ISI macro turbulence (another unfortunate ISI legacy), clearly did not

[21] Note that the share of manufactures in LA's exports, while less dynamic than CG's, also rose during the ISI period. While this could be viewed as an indication that ISI policies were not inconsistent with a trend toward outward-looking industrialization, the figures would need to be corrected for intraregional exports within common market-type trade agreements (i.e., Brazil exporting manufactures to, say, Argentina or Paraguay within common external tariffs; or Ecuador exporting to Colombia and Peru within the Andean Pact common market), which took off under ISI but declined after the region liberalized its trade (Edwards and Savastano, 1988).

help local firms to restructure and reallocate their capital to respond to the incoming surge of imports and to find and exploit new export opportunities.[22]

Figure 16. Financial Indicators – LA vs. CG

(a) Bank Credit to the Private Sector ***(b) Interest Rate Spreads in Banking***



Note: Bank credit to the private sector is expressed as a percent of GDP. *Source*: FINSTATS, World Bank.

5. Trade specialization

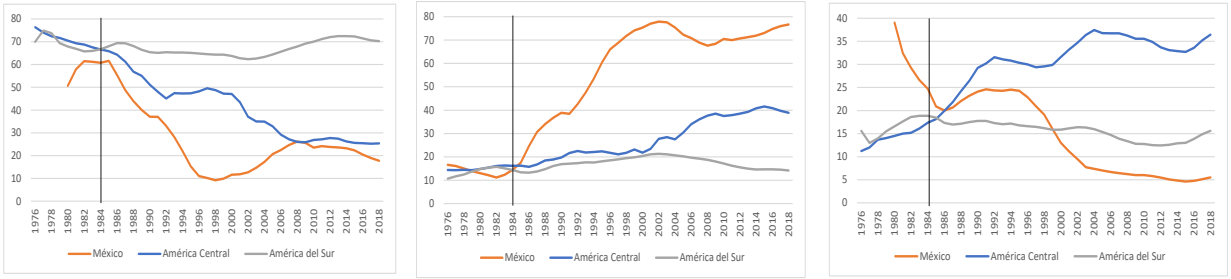
During ISI, virtually all LA countries were commodity exporters and, therefore, had similar export baskets. However, in the wake of the ISI-induced crises and the insufficiently supportive enabling environments to find and develop well-diversified export niches, countries had to redefine their growth model toward greater specialization. Thus, trade composition (i.e., the evolution of exports by broad type, commodities, manufactures and services) evolved differently by sub-region: Mexico, Central America, and South America (Figure 17).

Benefitting from its natural resource abundance, South America maintained or intensified its reliance on commodity exports (Figure 17a). Benefitting from its closeness to the US, Mexico shifted toward manufacturing exports and sought participation in NAFTA (Figure 17b). And arguably benefiting from its geographic position and characteristics, Central America moved gradually toward the export of services (Figure 17c). In the next section we use again our growth decomposition method to analyze recent growth patterns and dynamics in light of this bifurcation of trade structures within the region.

[22] Nor did LA's bankruptcy legislation facilitate the adjustment. While there are no comparable historical data to gauge the evolution of shortcomings of LA's bankruptcy procedures, current data suggest that flaws were significant.

Figure 17. Latin America: Export Shares by Broad Type of Product

(a) Commodities *(b) Manufactures* *(c) Services*



Note: The manufacture and services series are drawn from the WDI database. The commodities series is obtained as a residual from total exports of goods and services. Central America includes Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, and Panama. South America includes Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, and Uruguay. *Source*: WDI, World Bank.

VI. Growth in the 21st century

We now explore the impact of macro and trade shocks and the role of China on the growth of LA countries during the Commodities Cycle (2003-2020). To help tighten the links between trade, macro, and growth, we look at Mexico and break down the South American and Central American countries into two sub-groups, depending on features of their trade composition. A simple regression model is used to find the systematic connections between the growth spectrum of each country and the country's structural and trade composition characteristics. This allows us to derive country or subregion-specific benchmarks. The more specific policy implications of the links between growth, macro, and trade are briefly discussed for each subregion and the country groupings therein. More general policy implications are reviewed in Section VII.

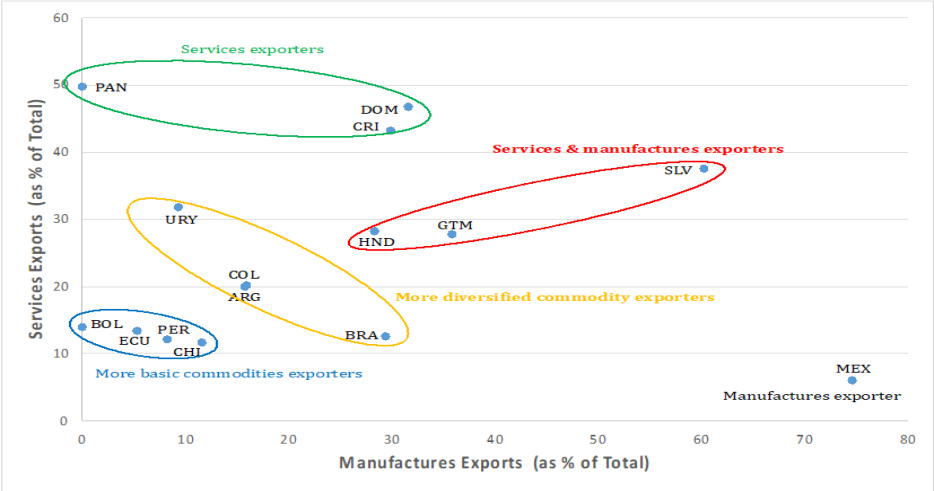
1. Salient growth patterns under the Commodities Cycle

Growth trajectories in LA during the Commodities Cycle evolved differently by sub-region, in line with the bifurcation of trade structures mentioned above. To sharpen the analysis, we first push the trade-based distinction between LA countries a further notch. As shown in Figure 18, the commodities-oriented South American region can be sub-divided into two subgroups of countries depending on the concentration of their exports along three broad export categories (commodities, manufactures, and services), and in line with the clusters observed in the manufacturing-services exports space shown in Figure 18. A first group of *more basic commodity exporters* (BCEs) comprises Bolivia, Ecuador, Peru, and Chile; a second group of *more diversified commodity exporters* (DCEs) includes Brazil, Argentina, Uruguay, and Colombia.[23] Similarly, the services-oriented Central American countries may be divided into a group of *services exporters*

[23] The concept of diversification used here relates to the composition of trade among the three aggregate types of tradable goods (i.e., commodities, manufactures or services), rather than to the diversity of products traded within each of the three types of goods.

(SEs) comprising Panama, the Dominican Republic, and Costa Rica and a group of *services and manufactures exporters* (SMEs) comprising Honduras, Guatemala, and El Salvador.

Figure 18. LA Countries Exports Composition



Note: The manufacture and services series are drawn from the WDI database. The commodities series is obtained as a residual from total exports of goods and services. The data is calculated as the yearly country average during the period 2003-2020. *Source*: WDI, World Bank.

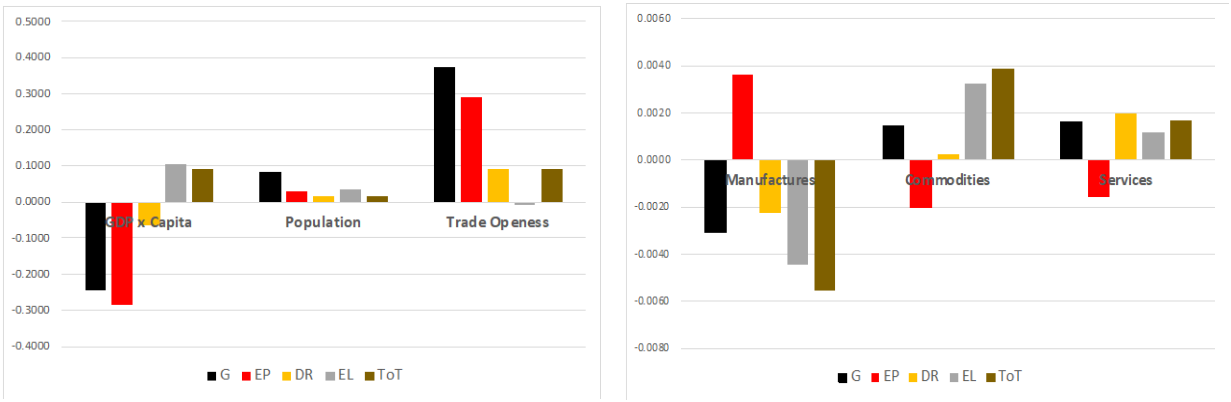
At the same time, we derive country- or subregion-specific benchmarks by running separate regressions for each of the terms of the growth spectrum (*G*, *EP*, *DR, EL*, and *ToT*). The benchmark indicates the expected magnitude of each term of the growth spectrum, after controlling for the country's structural characteristics (per capita income and population size) and the volume and composition of its trade (commodities, manufactures, and services). The regressions include fixed effects for each of the five LA sub-regions defined in Figure 19 (see Appendix IV for details).

Figure 19 displays the regression coefficients of the structural variables (Figure 19a) and trade composition variables (Figure 19b) based on the entire set of countries for the 2003-2020 period. It shows the expected proportional increase in each term of the growth spectrum resulting from a unit increase in the independent variable.[24] Main messages are as follows. Over the Commodities cycle, higher income countries grew more slowly than the world, in line with a large underperformance in their exports (the coefficients for GDP per capita are negative and of similar size for *G* and *EP*, as reported in Table IV.1 of Appendix IV). Instead, economies with a higher degree of trade openness grew faster, mainly on the strength of faster export growth. And so did the larger economies, arguably reflecting scale effects, although the positive link between population size and growth is more muted. Reflecting a large decline in their terms of trade, manufactures exporters "under-grew". Instead, commodities and services exporters benefited from favorable terms of trade and "over-grew".

[24] Given that the growth decomposition equation is an identity, the coefficients each for *EP*, *DR*, and *EL* add up to the coefficient of *G*.

Figure 19. World Growth Spectra, 2003-2020

(a) By Type of Countries *(b) By Type of Exports*



Note: The world spectra are obtained from the regression coefficients in Appendix IV Table 1. *Source*: WDI, World Bank.

All of this suggests that China exerted an overwhelming influence on world growth during the Commodities Cycle, benefitting its suppliers while harming its competitors. Remarkably, however, despite growing more slowly, manufacturing exporters continued to experience a fast growth in their trade (both exports and imports), resulting in positive *EPs* and negative *DRs*, an indication that the competition from China slowed their growth through price more than volume effects. Inversely, again due to export price effects, commodity exporters grew faster than the world despite a relative decline in their export volumes (negative *EP*), reflecting the spending effects (positive *DR*) of terms of trade improvements.

Based on the above results, one would expect China to have affected Mexico quite negatively, and South America and Central America positively. In view of the dominance of *DR* in the growth spectrum of services exporting countries in the world, we would also expect *DR* to have played a key role in the growth of Central American countries. In the next subsections we check these predictions.

2. Mexico and manufactures

Mexico is the most salient case in the region of a country that switched successfully from inward-looking to outward-looking industrialization. Indeed, Mexico has achieved the most diversified export structure in the region, dominated by complex manufactures.[25] That, however,

[25] Mexico ranks 1st in the region and 25th in the world (ahead of Canada; Hong Kong SAR, China' and Spain, for instance) according to MIT's Observatory of Economic Complexity. That alone should have led to higher growth for, according to Hausmann et al (2014), "countries whose economic complexity is greater than what we would expect, given their level of income, tend to grow faster than those that are 'too rich' for their current level of economic complexity. In this sense, economic complexity is not just a symptom or an expression of prosperity: it is a driver."

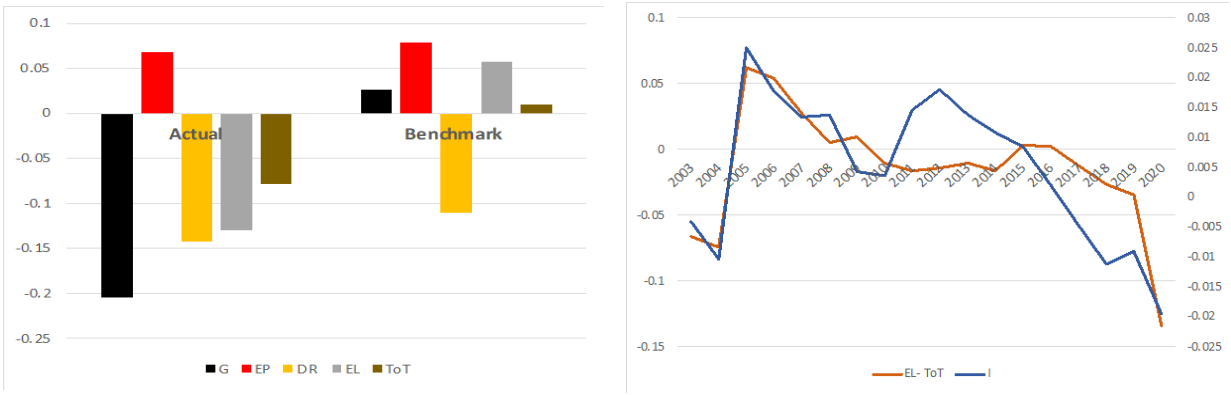
has not delivered growth.[26] On the contrary, Mexico is the second worst performer (after the República Bolivariana de Venezuela) in the region in terms of per capita income growth over the past 40 years. Why?

(a) The EL problem: Weak investment

Figure 20a, which compares Mexico's growth spectrum with its benchmark, shows that instead of rising (as expected from the benchmark) *EL* sharply declined. And that decline exceeded that of the *ToT*. Mexico's narrowing of its current account deficit in excess of the deterioration in its terms of trade reflected a country-specific collapse of investment rather than a rise in saving (Figure 19b). This collapse was worsened with the Covid-19 crisis, but started earlier, because of the rise in local political uncertainty.

Figure 20. Growth Spectrum, *EL minus TOT* and Investment: Mexico, 2003-2020

(a) Growth Spectrum: Actual vs. Benchmark ***(b) EL minus TOT and Investment***



Note: The benchmark growth spectra are obtained using the entire sample of countries and derived from the regressions presented in Appendix IV Table 1. *Source*: WDI, World Bank.

(b) The EP/ToT problem: Competition from China and dependency on the US

Figures 20a and 20b also show that Mexico underperformed relative to benchmark in that its *EP* fell somewhat short of expectations and, more importantly, its terms of trade deteriorated significantly. This indicates that China's competition hit Mexico not only through volumes (*EP*) but also (and more importantly) through prices (*ToT*).

Figure 21a sheds further light. Mexico's exports to the US collided head on with Chinese exports (i.e., an external demand problem). While the pace of increase of Mexico's export penetration of the US market rose in the wake of NAFTA, it flattened following China's entry into

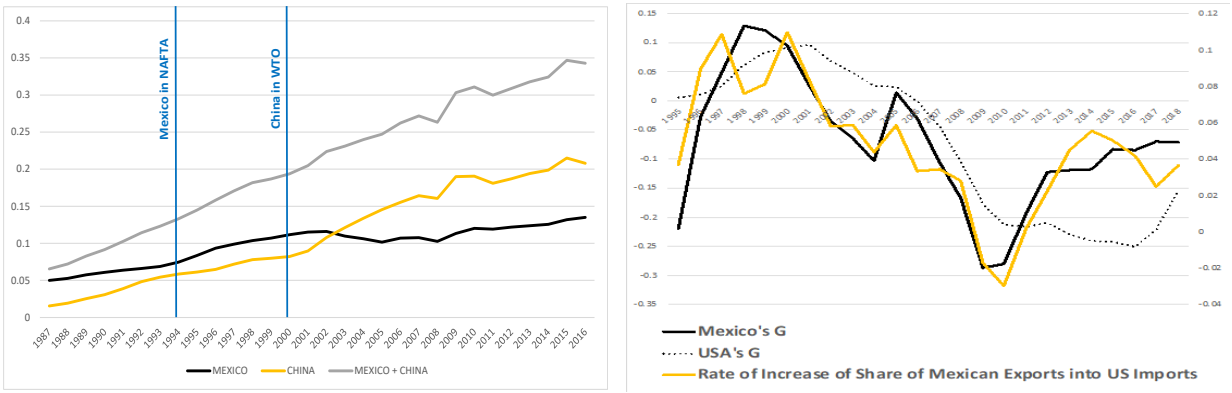
[26] An extensive literature has explored the sources of Mexico's disappointing growth (see Hanson, 2010 for a survey). For an analysis of Mexico's growth using a similar analytical framework as the one here, see Ize (2019 a and b).

the WTO. And as may be inferred from the remarkably high correlation between the changes in Mexico's penetration of the US market and Mexico's GDP growth (Figure 21b), Mexico's growth fluctuations have closely mirrored Mexico's exports to the US. Hence, the exports slowdown triggered a sharp slowdown of the Mexican economy as a whole. This suggests that the *timing* of Mexico's trade liberalization was an important factor behind Mexico's poor economic performance. Had Mexico liberalized and joined NAFTA, say 10 years earlier, its manufacturing export expansion would have had more time to consolidate before the China surge, thereby providing a firmer foundation for sustained economic growth.

Together with the crucial role played by China's competition, the other key defining feature behind Mexico's insufficient export growth has been Mexico's high dependence on the US. As Figure 21b illustrates, the GDP growth of Mexico and the US became much more closely correlated after the start of NAFTA, which is exactly what one would expect when growth is largely driven by external demand, in this case that coming from the US. But as the US has tended to grow more slowly than the world, Mexico's growth has been systematically held below what would have otherwise been expected from an emerging economy. Moreover, with Mexico's population growing much faster than that of the US, tightly linking its growth to the US has implied that Mexico's per capita income has continuously lost ground relative to the US.

Figure 21. Mexico: Trade with the US and Growth relative to the US

(a) Share in US Imports ***(b) Growth relative to the US***



Notes: Variables in Figure 21a are yearly observations. Variables in Figure 21b are calculated as ten-year, backward-looking moving averages. *Source:* US Census Bureau, Penn Tables, WDI (World Bank).

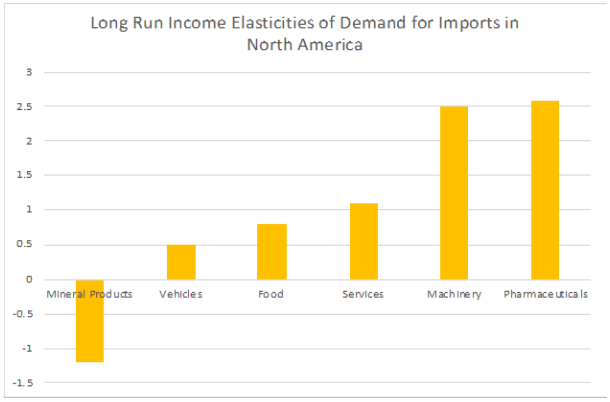
Mexico faces therefore a difficult policy dilemma in view of the very high concentration of its exports in the US market. Mexico could grow faster by consistently raising its penetration of the US market, which displaces either competing imports into the US or local US production. The fast growth of the Mexican automotive industry—which accounts for the bulk of Mexican exports to the US—has indeed been at the expense of relocating US industrial plants south of the border. But the obvious downside is that this displacement effect contributed to the revival of US protectionism, leading to the renegotiation of NAFTA under the Trump administration.

One way out of this dilemma is for Mexico to diversify its export destinations, particularly toward the faster growing Asian countries. While this objective makes sense in principle, Mexico's huge border with the US and much lower labor costs should continue to be its main assets for the foreseeable future. Moreover, the US-China conflict and post-Covid forces are pushing back in the direction of an enhanced regionalization and near-shoring of trade. Therefore, it behooves Mexico to focus more on raising the share of exports that are more income elastic, so that Mexican exports can grow faster based on satisfying US demand rather than displacing US supply. The relatively low income elasticity (of about one-half) of demand for automobiles in North America (Figure 22a) means that relying on the automotive industry alone cuts by half Mexico's expected growth relative to the US.

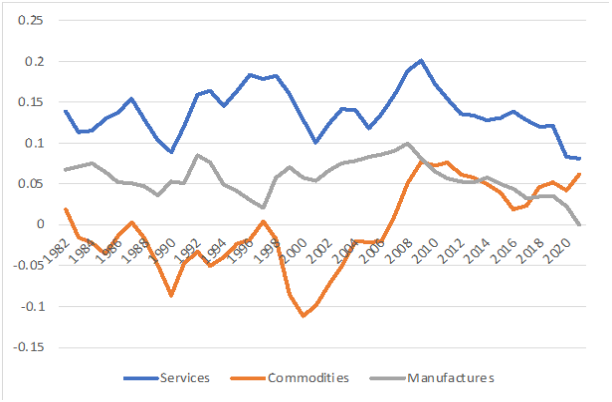
Indeed, as illustrated in Figure 22b, which compares the long-term growth rates of middle-income countries grouped depending on whether their exports are dominated by services, manufactures or commodities, it is clear that services exporters have grown faster on average than manufactures or commodities exporters. Mexico should therefore strive to diversify its exports toward products whose demand in recipient countries grows faster as the per capita income of those countries rises. In the case of manufactures, this implies moving at the margin towards more sophisticated and knowledge-intensive exports, such as machinery or pharmaceuticals (Figure 22a).

Figure 22. North America: Long Run Income Elasticities of Demand for Selected Imports

(a) Long run income elasticities



(b) Long run growth rates of middle-income countries



Note: Figure 22b shows GDP growth rates (*Gs*) for middle income countries grouped by their main export category (services, commodities or manufactures); the *Gs* are calculated using our same growth decomposition methodology but with longer moving averages (20 rather than 10 year) to better capture longer term trends. *Sources:* BIS and WDI (World Bank).

But Mexico also has ample room to expand exports of income elastic services.[27] These include cultural tourism and ecotourism as well as education, health, and old-age related services. In addition to its proximity to the US, Mexico's abundant and welcoming labor force (provided it is properly prepared and educated, including to speak English) is another strong asset. However, the key for raising Mexico's provision of such services is to raise the country's *attractiveness to people*. The latter is tightly linked to boosting the country's rule of law (including by reducing crime and corruption), properly preserving its historical and cultural heritage, and better protecting its environment and natural wealth. Mexico faces severe challenges in all of these regards.

(c) The DR problem: Domestic segmentations

As shown in Figure 20a, despite Mexico's *EP* remaining above its benchmark in the 2003-2020 period, Mexico's domestic response (*DR*) fell significantly below its benchmark. Thus, the pick-up of exports resulting from trade liberalization was accompanied by a much faster rise (relative to benchmark) of imports than GDP. There are many factors behind the limited capacity of the Mexican economy to respond more widely and vigorously to export expansion including economy-wide productivity problems. This is an area of intersection between the approach followed in this paper and the more conventional Solow-inspired growth literature, which highlights the adverse growth impact of distorted labor markets, concentrated market power, infrastructure and logistics gaps, limited financial depth, weak rule of law, and knowledge acquisition and diffusion gaps.[28]

But we are really talking about two, quite distinct, economic realities within Mexico. Its deep economic segmentation (both across firms, formal versus informal, and across regions, north versus south) has introduced a heavy bias against growth and productivity at the national level. The contrast between the sustained high growth of the Mexican states that export manufactures to the US or cater to foreign tourism and the slow growth of Mexico's southern states or the very volatile growth of the oil exporting states is indeed a striking manifestation of deep-seated obstacles to positive propagation and spillover effects (Figure 23a).

A salient expression of chronic segmentation is Mexico's informality problem. As shown by Figure 23b, LA countries' informality is much higher than that of CG and clearly correlates negatively with its growth. While this relationship is clearly bi-directional, it is much steeper for LA than for CG. And Mexico stands at the bottom of the scatter. As stressed by the supply side

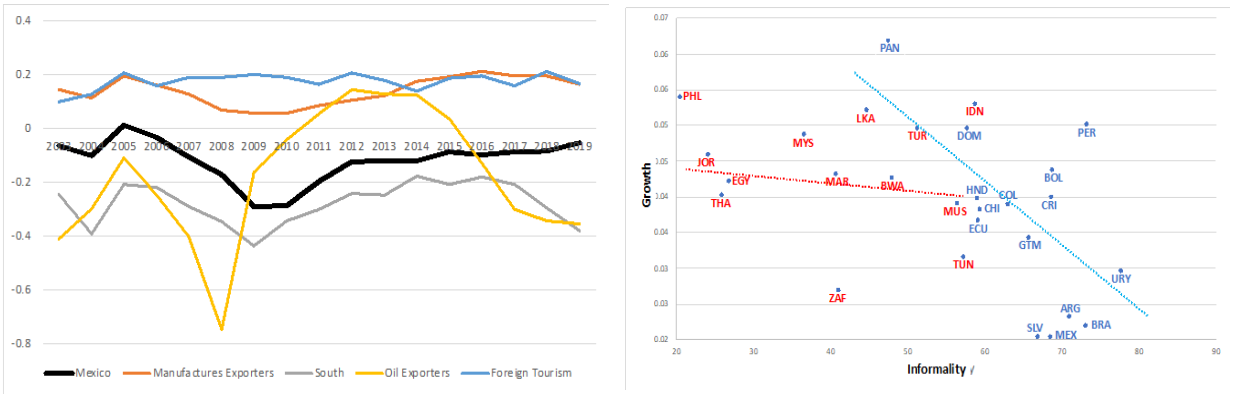
[27] For recent contributions on the scope for promoting growth and productivity-enhancing services in developing economies see Di Meglio et al. (2015) and Nayyar, Hallward-Driemeier and Davis (2021).

[28] Levy (2018) argues that Mexico's growth has been stunted by large misallocation of physical and human capital resulting from flawed tax, labor, and social insurance policies, together with malfunctioning contract enforcement. Guerrero, Lopez-Calva and Walton (2006) and several other contributions in Levy and Walton (2009) focus on market power and rents capture in basic non-tradable input markets, including energy and telecommunications, partly a heritage of corporatist institutional arrangements, as another key root of Mexico's lagging productivity.

perspective, informality reflects deep policy distortions, particularly in taxation and the labor market. As emphasized in Levy and Cruces' companion paper, it should be a matter of high priority to remove such distortions because they penalize the growth of formal firms, which is key for improving the region's trade integration. At the same time, however, as illustrated by the industrialization model of Appendix I, LA informality is also likely to be the residual from the limited demand for formal labor, which suggests that much of the reduction in informality will have to be driven by more robust growth of formal firms. Weak demand for formal labor in turn reflects the limited demand for the region's exports. Thus, the imperfect domestic integration (informality) is a mirror image of the imperfect external integration; the two problems reinforce each other and hence need to be addressed simultaneously.

Figure 23. Mexico's Imperfect Domestic Integration

(a) Fast vs. Slow Growing Mexican States ***(b) Informality and Growth: LA vs. CG***



Note: The rates of GDP growth for Mexican states shown in panel (a) are calculated relative to world growth as logs of backward-looking moving averages of average yearly rates of growth. The informality indicator in panel (b) is the regression residual after controlling for the "percent of firms competing against unregistered or informal firms" (from the World Bank's Enterprise Survey) for the 2000 per capita GDP and the average yearly rate of population growth during 2000-2018 (see Appendix VI). We use enterprise-based data (rather than employment-based data) because of its substantially broader coverage, both across time and countries. *Sources:* INEGI; and WDI and Enterprise Surveys (World Bank).

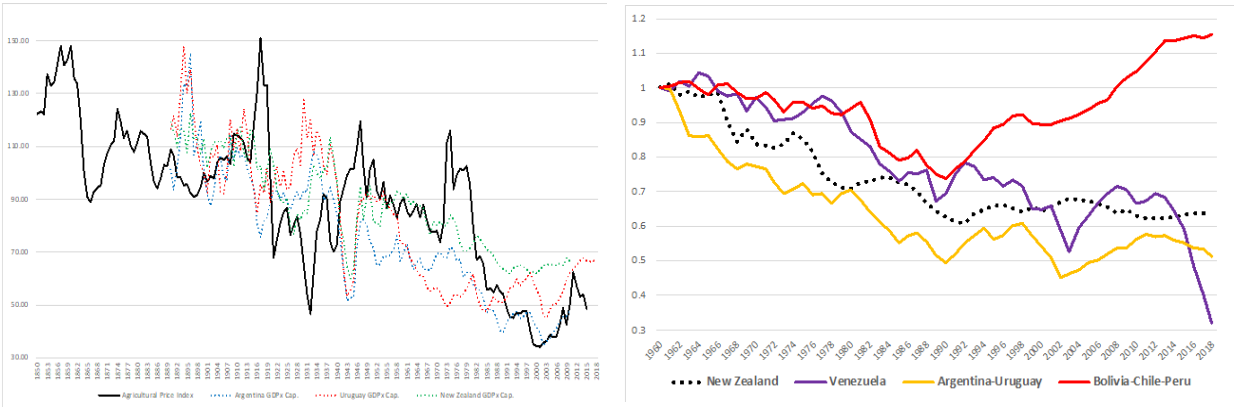
3. South America and commodities

Consider now some salient growth features of commodity producing South America. Figure 24a shows that Argentina, Uruguay, and New Zealand (all three agricultural exporters) experienced very similar declines in their GDP per capita relative to the world, which were mirrored by (associated with) systematic declines in (real) agricultural prices. Figure 24b shows that the GDP index (also relative to the world) for LA's most salient mineral exporters (Bolivia, Chile, and Peru) followed a similar downward trend until the early 1990s; thereafter, however, it decoupled and rose sharply. It is therefore difficult to escape the conclusion that South American

commodity exporters have tended to suffer "commodity curse" symptoms of varying severity.[29] These symptoms have shown up in lower and more volatile growth rates. However, and this is an important caveat, some South American countries seem to have developed a degree of immunity vis-à-vis the commodity curse and have managed to deliver strong growth for substantial periods of time without significantly reducing the degree of commodity export concentration. Why?

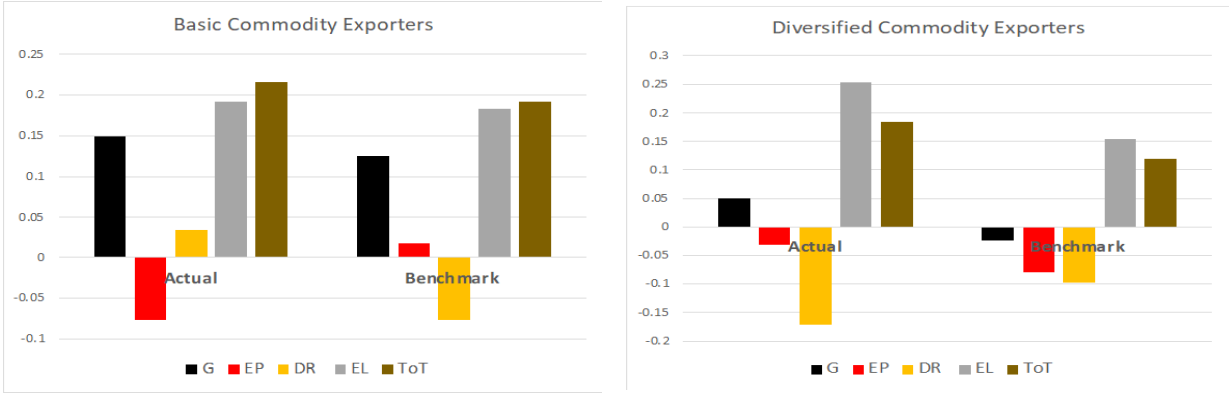
Figure 24. New Zealand and Selected South American Countries

(a) GDP per Capita and Real Agricultural Price ***(b) GDP***



Note: GDP figures in both panels are indices relative to the world. *Sources*: WDI and David Jacks Database.

Figure 25. Growth Spectra, Actual vs. Benchmark: South America, 2003-20



Note: The benchmarks are the average expected values for the two groups of countries derived from the regression coefficients in Appendix IV Table 1. *Source*: WDI, World Bank.

Some hints emerge from our growth decomposition benchmarks for South American countries (Figure 25). Both subgroups (the BCE, more basic, and the DCE, more diversified, commodity exporters) broadly met their *G* (growth) benchmarks, yet with some telling differences across their growth spectra. The more basic commodity exporters (Bolivia, Chile, Ecuador, and Peru)—countries with a lower share of services and manufacturing goods in their export baskets—

[29] The seminal paper is Sachs and Warner (2001). Rosser (2006) and Frankel (2012) provide reviews of the natural resource curse literature.

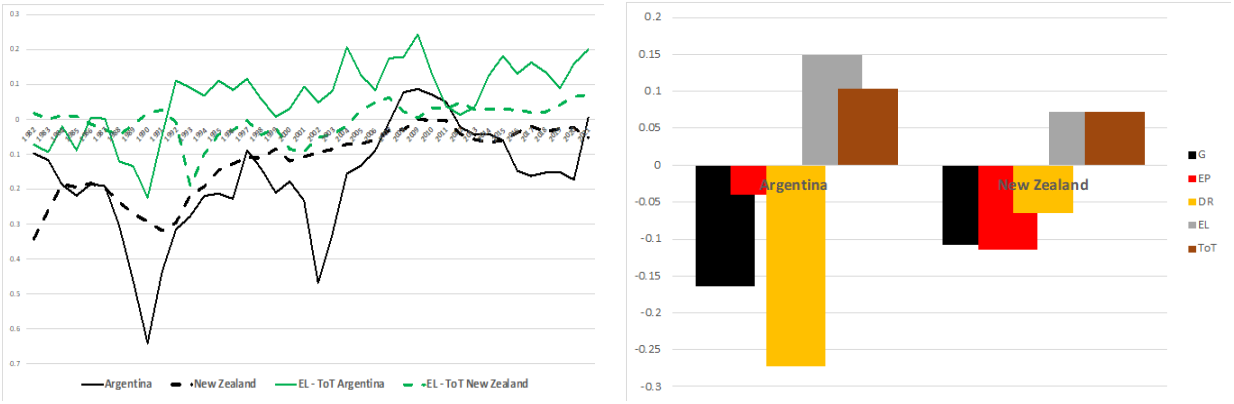
fell short of their *EP* benchmarks, whereas the more diversified commodity exporters (Argentina, Brazil, Colombia, and Uruguay) exceeded both their *EL* benchmarks and their *ToT* windfalls but fell short of their *DR* benchmarks. Thus, in one case the "problem" was supply-based (missing export volumes), in the other it was demand-based (excess domestic spending).

(a) The EL problem: Low saving and procyclical spending

Starting with the demand problem incurred by the more diversified commodity exporters, a first telling indication arises from comparing Argentina and New Zealand over the last six decades (Figure 26). As both countries specialize in agricultural commodities, they followed similar long run growth paths (Figure 26a). However, while New Zealand's path was smooth, that of Argentina was very volatile and punctuated by deep crises. Similarly, while New Zealand "excess demand" (i.e., its domestic spending in excess of terms of trade windfalls) remained close to zero during the whole period, that of Argentina was generally positive and pro-cyclical. Figure 26b shows that these procyclical demand pressures had a substantial growth cost. Reflecting their similar trade exposure, Argentina and New Zealand exhibited similar growth spectra: negative *Gs* paired with negative *EPs*, positive *ELs* and *ToTs,* and negative *DRs*. However, New Zealand did better in terms of growth due to a less negative *DR*, notwithstanding its substantially worse export performance (a more negative *EP*) and more modest *ToT* gains. Instead, Argentina had a larger positive *EL* (substantially in excess of its *ToT*) but a much more negative *DR*—that is, real imports grew consistently faster than both GDP and real exports, the telltale sign of excess domestic demand pressures. Hence, while New Zealand had to deal with worse cards than Argentina, it did a much better job at mitigating the growth impairing effects of the type of domestic demand binges that have characterized Argentina's history and led to recurrent inflation spirals and debt and financial crises.

Figure 26. New Zealand and Argentina

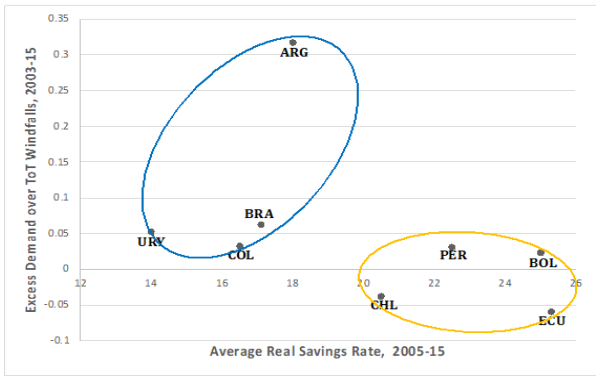
(a) Long Run Growth and Excess Demand ***(b) Growth Spectra, 1960-2020***



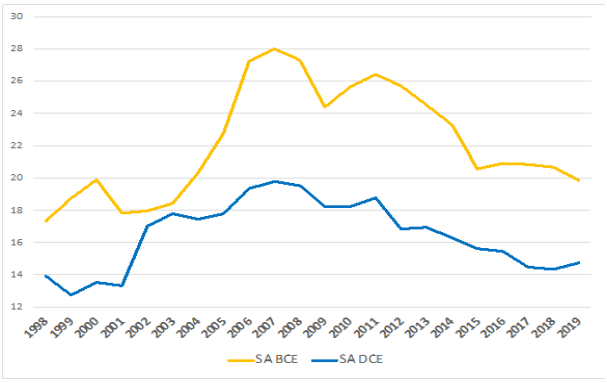
Note: Long run growth (*G*) and excess demand (*EL – ToT*) in panel (a) are calculated based on 20-year moving averages. Each component of the growth spectra in panel (b) is calculated as the log of the average yearly growth rate of that component over the 1960-2020 period. *Sources*: WDI (World Bank).

Figure 27. South America's Savings and Demand Management, BCEs vs. DCEs

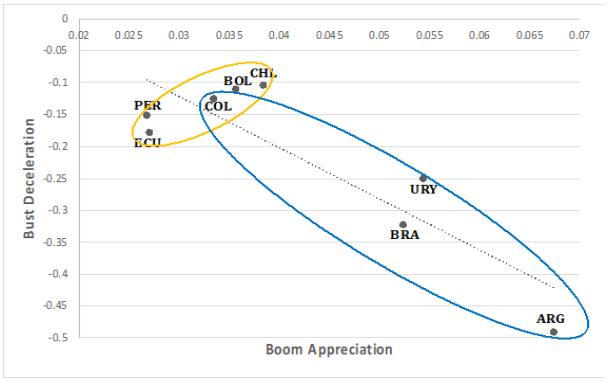
(a) Saving Rate and Demand minus ToT Windfalls



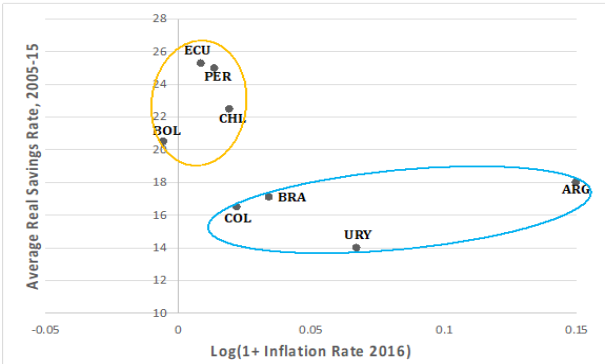
(b) Real Saving Rates



(c) Appreciations and Decelerations



(d) Saving and Inflation



Note: The excess of demand over ToT windfalls in panel (a) is calculated based on the *ELs* and *ToTs* obtained in the growth spectra for each country. The real exchange rate appreciations in panel (c) are calculated for the period 2003-2015; the GDP decelerations are the average *Gs* for the period 2015-2020 (2015 is taken as the boundary year between boom and bust because this is when regional domestic demand peaked, as measured through *EL*; see Figure 7). The inflation rate in panel (d) is obtained as the log of one plus the rate of inflation for the year 2016. *Source*: WDI, World Bank.

A second revealing piece of the puzzle comes from contrasting the saving rates and domestic spendings over the commodities cycle of the two subgroups of commodity exporters. Remarkably, the BCE group benefitted from substantially higher real saving rates than the DCE group (Figure 27b). While many factors may underlie this difference, it probably reflects, at least in part, the predominance of large, government-owned oil and mining enterprises in the BCEs, which makes it easier for the state to capture *ToT* windfalls. The resulting higher tax revenues and induced public sector savings in the BCE group seem to have induced a less pro-cyclical demand (measured by the difference between spending expansion and *ToT* improvements) compared to the DCE group, as shown in Figure 27a. The differences across the two groups regarding their inflation rates and real appreciations during the commodities boom, as well as their decelerations

during the bust (Figures 27c and d), suggest in turn that the differences in spending pro-cyclicality had important macroeconomic implications.[30]

Hence, a sensible growth agenda for South American commodity exporting countries must put a premium on enhancing countercyclical macro policy capacity, particularly on the fiscal side, which is easier to achieve with the support of a higher saving rate. That would enable a more prudent management of terms of trade windfalls and help immunize the economy against the boom-bust syndrome. By avoiding prolonged episodes of excessive real exchange rate appreciations followed by recurrent *DR* collapses and allowing for more sustainable *EL* increases, higher saving rates combined with stronger countercyclical policies would improve countries' financial integration with the rest of the world and promote higher trend growth.

(b) The EP problem: Weak export volume expansion

Consider now the role played by export volume expansion in avoiding commodity curse symptoms. This is nicely illustrated by comparing Chile with Peru, neighboring countries with very similar export concentration in mineral commodities. Chile was the top performer in the region during the Washington Consensus decade: between 1990 and 2000 its annual rate of per capita income growth was nearly four times that of the world (and that of LA) and around twice that of the East Asia & Pacific region. In the 2000s, by contrast, Peru delivered a better growth performance—its average growth rate for the 2003-2022 period was about twice that of Chile.

Chile's impressive growth performance in the 1990s was almost entirely driven by a strongly positive *EP*: its exports expanded in volume terms much more that those of Peru (Figure 28a). However, during the 2000s, despite the pull from China, Chile's growth slowed down even as that of Peru picked up. The single most important differentiating factor was their contrasting *EP* paths. As showed by both Figure 28a and Figure 28b, Chile experienced higher *ToT* gains than Peru, including during the 2000s, and hence increased its spending more. Yet, this was not a sufficient cure against the growth losses associated to its contracting export volume.

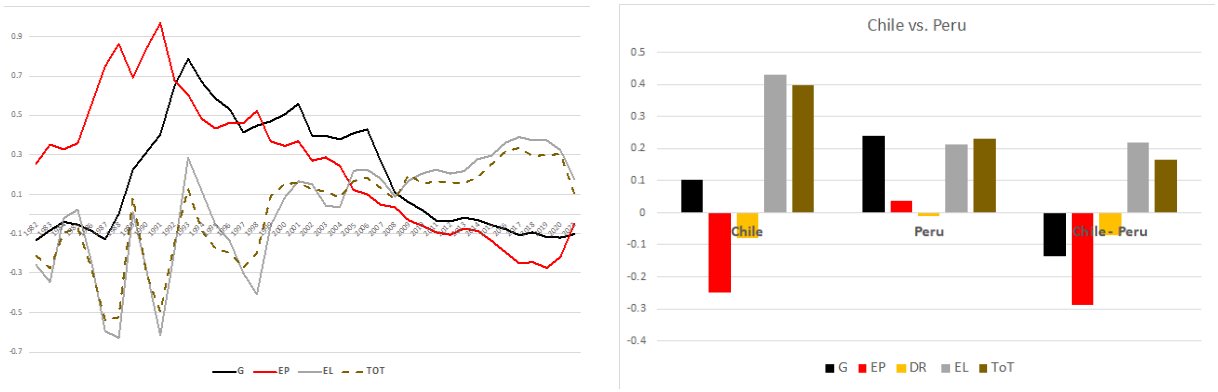
The message is again clear: export expansion driven by volumes rather than prices was crucial to sustain growth in Southern America commodity dependent economies. Temporarily

[30] While our trade-anchored grouping of South American countries into BCEs and DCEs helps uncover insightful patterns linking average growth performance with trade composition during the period 2003-2020 (as illustrated statistically in Table IV.1 of Appendix IV), it naturally falls far short of guaranteeing a one-to-one match between trade and growth. For example, although the DCE group grew more slowly on average than the BCE group (Figure 24), Colombia (a DCE country) grew faster than Ecuador (a BCE country). Note also that Colombia, while classified as a "more diversified" South American commodity exporter, lies at the frontier between the BCE and DCE groups in terms of the macro indicators in Figure 26. While Colombia saved a good part of the terms of trade windfall via its fiscal stabilization fund, that was not sufficient to fully dampen the expansion of domestic demand, in large part due to an unusually strong appreciation of the peso in real terms and a comparatively rapid growth of credit (see De la Torre, Ize, and Filippini, 2016; and De la Torre, Cueva, and Castellanos, 2020).

higher commodity prices alone cannot be counted on to deliver higher medium-term growth. Conversely, even if commodities continue to dominate its export basket, a country can escape the resource curse if it succeeds in expanding its exports in volume terms which, admittedly, may not be sustainable over the long haul. This conclusion is consistent with our industrialization model (Appendix I), which shows that export commodity concentration can become a trap because, by discouraging industrialization, it makes growth entirely dependent on countries' capacity to mobilize an increased supply of commodities-sourced foreign exchange.

Figure 28. Growth Decompositions: Chile vs. Peru

(a) Long run differential spectrum: 1982-2020 ***(b) Average spectra, 2003-2020***



Note: Panel (a) shows the long run growth spectrum for Chile relative to Peru (i.e., Chile – Peru), based on twenty-year moving averages. Panel (b) shows the average spectrum for each country during the period 2003-20, based on ten-year moving averages. *Source*: WDI, World Bank.

Two policy implications follow. First, commodity exporters need to avoid the "enclave" syndrome. As noted by McMillan and Rodrik (2011), countries with a larger share of natural resources in exports are likely to have a smaller scope for productivity-enhancing structural change. Moreover, unlike manufacturing industries and services, mineral and oil activities can operate at very high productivity but do not of themselves generate much employment. Thus, for a commodity exporting economy to escape the enclave syndrome and be able to absorb its growing labor force into formal jobs, it needs to build deeper linkages, clusters, and connections across economic activities, within and across borders.

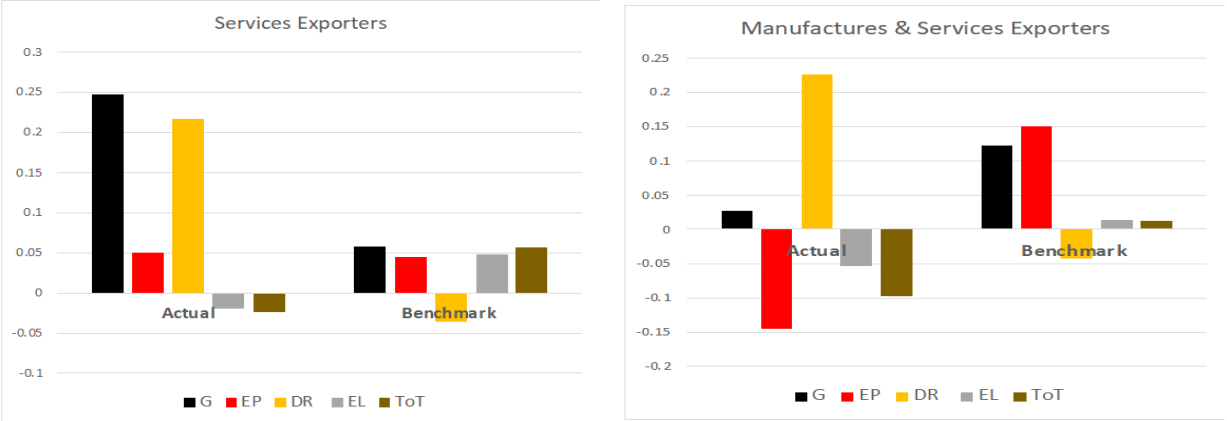
Second, South American countries need to better harness their natural resources to grow via upgrading (moving up the value-added chain within commodities), connecting better with the rapidly developing world value chains (particularly in relation with technologically advanced agribusiness ventures), and diversifying around (or building up upon) commodities. In all cases, the goal is to move up from the highly competitive world of pure commodities with narrow margins to a world of more differentiated products with higher mark-ups. In this latter world, demand attractiveness and marketing savviness (offering appealing, innovative, traceable, specialty, properly certified products with recognized brand names to the increasingly sophisticated final customers) counts as least as much as supply efficiency and frontier production technology. This

paradigm switch seems to be already happening in the case of some mineral exporters (particularly Chile) as well as several agro-industrial exporters across the region.[31]

4. Central America and services

As noted earlier, Central America (defined to include the Dominican Republic) has shifted over the past three decades toward a services-laden export structure. The shift was however more pronounced for Panama, the Dominican Republic, and Costa Rica (the "Services Exporters", SEs) than for Guatemala, Honduras, and El Salvador (the "Manufactures and Services Exporters", MSEs).[32]

Figure 29. Growth Spectra, Actual vs. Benchmark: Central America, 2003-2020



Note: The benchmark spectra are obtained using the entire sample of countries. The values shown are the average for the countries in each group, as derived from the regression coefficient in Appendix IV Table 1. *Source*: WDI, World Bank.

As a result, the growth spectra of the two groups show important contrasts, both relative to each other and in relation to their benchmarks. While growth (*G*) in the SEs overperformed the benchmark, this was linked less to the pull of exports (*EP*), which remained quite close to benchmark, and more to their domestic responses (*DRs*), which greatly exceeded the benchmark

[31] Mandel (2011) provides evidence of significant upgrading towards higher-quality, higher-value-added varieties within minerals in Chile and Peru. He shows that, contrary to popular perception, international trade in metals is characterized by a high degree of intra-industry trade and the room to upgrade within metal goods compares well to other manufacturing exports. Meller (2020) presents a relatively optimistic view of the scope to better leverage natural resources to growth, including by diversifying within commodities, developing production clusters that are well integrated at home and internationally, and strengthening institutions to curb rent-seeking behavior. A recent IDB report (2022) provides an enlightening review of the recent developments in the agro-industrial sectors across the region, and the challenges and opportunities for raising their value and better integrating them into world trade.

[32] El Salvador has a much larger share of (maquila-style) manufactures in total exports (nearly 60%, versus around 40% on average for the rest of Central America). Instead, the Services Exporters exhibit greater export diversification, including within services. While tourism has a significant weight across the board, including in the Dominican Republic, more sophisticated services exports are found in Costa Rica (e.g., medical, ecotourism, and educational services) and Panama (e.g., accounting, legal, financial, trans-shipment, etc.).

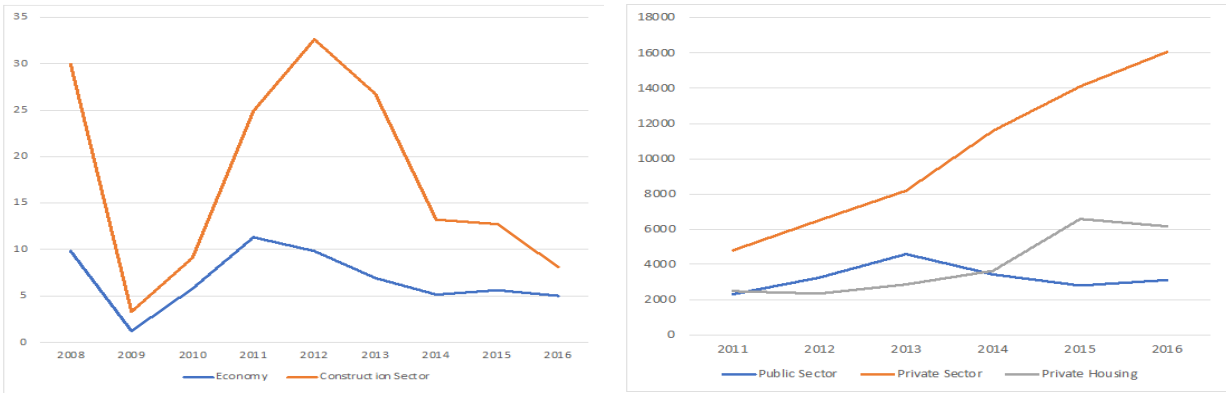
(Figure 29a). In contrast, the MSEs grew below benchmark as their *EP* collapsed instead of growing, and this was slightly more than offset by a strong and positive *DR* relative to benchmark (Figure 29b). It is also clear from Figure 29 that a stronger export pull (*EP*) accounts for the superior growth performance of the SEs compared to the MSEs. This raises two puzzles: why did both groups—that is, all of Central America—display *DRs* that were strongly positive and well above benchmark? And why did one group perform much better than the other in terms of its *EP*?

(a) The DR puzzle: The possible role of the construction sector

Because services exporters need less intermediate or capital imports than manufacturers or commodity exporters, they would be expected to generally exhibit higher *DRs*, as indeed reflected in Figure 19b. But the case of Panama (Figure 30) suggests that an important additional factor has amplified this effect across the region: growth was largely driven by a substantial construction boom, most of which undertaken by the private sector. This boom was in part linked to the supply of personal services to foreigners, in the form of tourist accommodations, health provision units, and housing and other services for foreigners relocating to the country (such as pensioners, tele-commuters, or safe-haven seekers).

Figure 30. Construction Booms: The Case of Panama, 2008-2016

(a) Real GDP Growth Rates ***(b) Construction Activity (in millions of balboas)***



Source: Panama's Instituto Nacional de Estadística y Censo.

Because construction typically has large employment impacts but arguably a more limited import incidence than that of other production sectors (such as manufacturing, at least that associated with global value chains), a reasonable conjecture is that construction booms contributed in an important way to boost the *DRs* (hence the *Gs*) of Central American countries.[33]

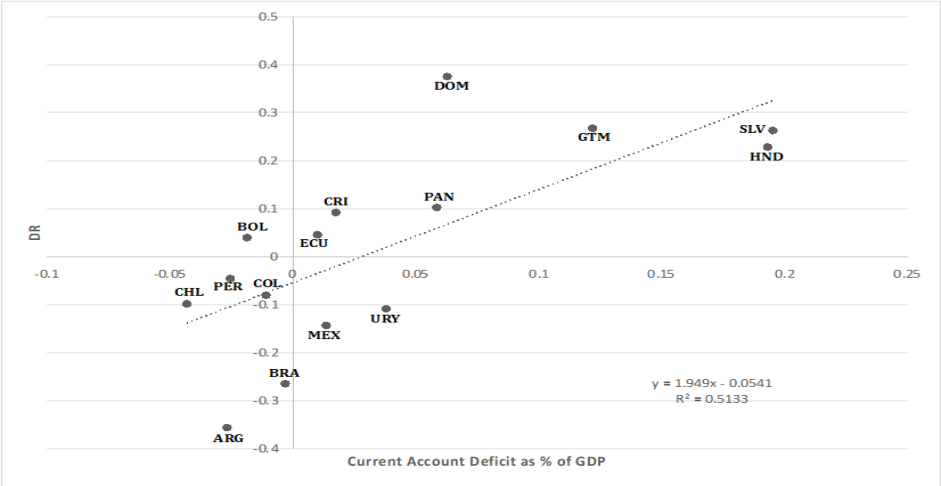
[33] While the construction sector is generally mentioned as a key component of Panama's growth in the growth-focused reports of multilateral organizations, the conjecture linking Central America's high *DR* to its construction activity requires fuller empirical verification. Reflecting in part problems of data quality and availability, the literature on the domestic activity and balance of payments impacts of construction booms is unfortunately very scarce.

At the same time, the higher income elasticity of the demand for personal services than for the average manufacture could also have favored a more rapid GDP growth. Moreover, Panama has been increasingly moving towards higher productivity services, capitalizing on the advantages afforded by the canal, including transshipment, call centers and hubs, accounting financial, and legal services.

(b) The EP puzzle: FDI vs. remittances

As to the *EP* puzzle, Figure 31 provides a first clue. Central America's high *DRs* were associated with high trade account deficits as larger external inflows provided the financing needed to sustain the higher levels of domestic activity.[34] However, while the MSEs financed their trade deficits mainly with remittances (Figure 32a), the SEs did so with other inflows from foreigners living or investing in the region, including in the form of FDI (Figure 32b). Whereas a significant fraction of the labor force in one group emigrated to provide services abroad, the labor force in the other group stayed to provide services at home. Thus, by retaining their labor force and putting to use the learning, productive investment and technology transfers provided by FDI inflows, the SEs managed to avoid the exports collapse that deeply undercut the growth of the MSEs.[35]

Figure 31. Domestic Responses vs. Trade Account Deficits: LA, 2003-2020



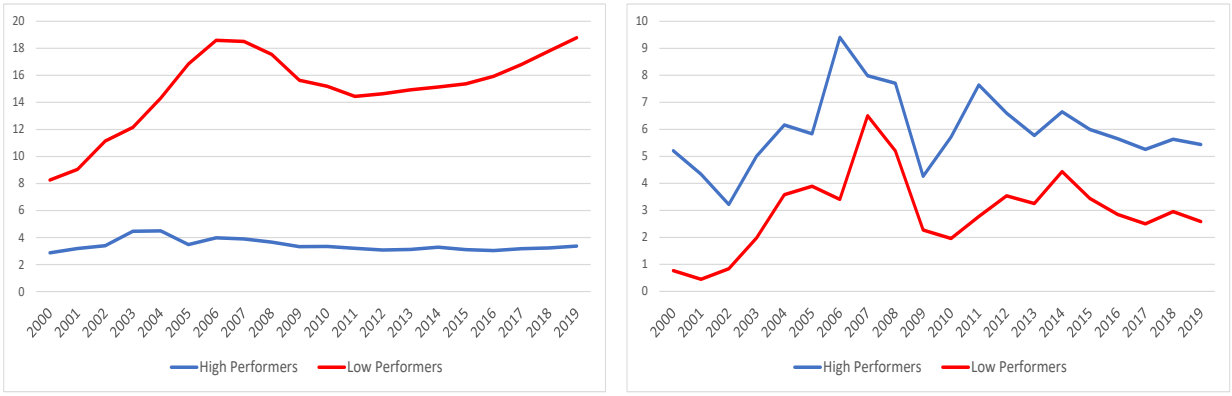
Note: The current account deficit is defined as the trade deficit in goods and nonfactor services. The *DRs* and trade deficits are the averages for the period 2003-2020. *Source*: WDI, World Bank.

[34] Notice that while Central American trade deficits (goods and nonfactor services) are large by Latin American standards, they are relatively stable, Hence, such deficits do not show up in major changes in *EL*, as the latter (as well as all the terms in the growth decomposition) reflect rates of change of the underlying variables (GDP, exports, and imports). That explains why Central American *ELs* were not particularly high during this period.

[35] Remittances support consumption and help alleviate poverty but do not help enhance productivity. Shapiro and Mandelman (2014) find adverse productivity effects of remittances, resulting from negative work incentives and weak firm dynamics. Higher remittances are also associated with lower saving rates, another factor behind slower growth (see De la Torre and Ize, 2015).

Figure 32. Central America: External Inflows as Percent of GDP

(a) Remittances *(b) FDI*

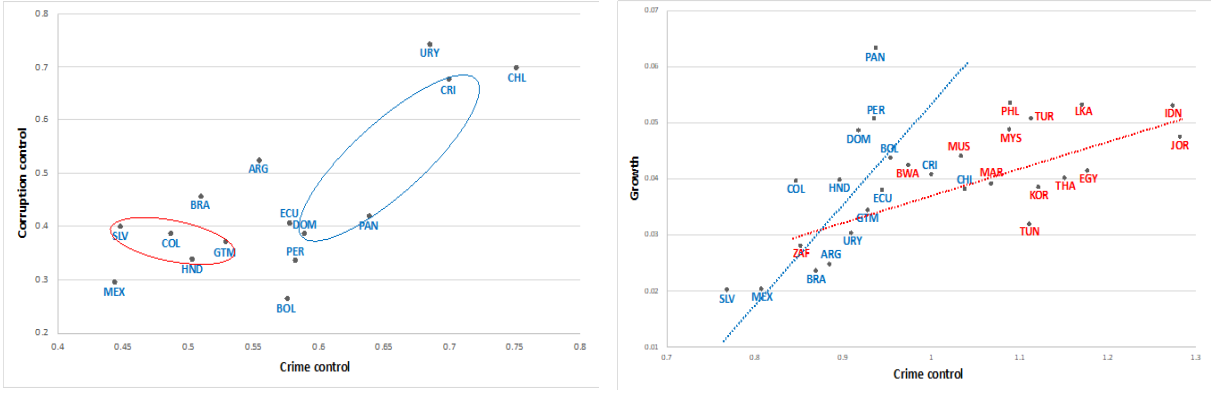


Note: The high growth performers comprise Panama, Dominican Republic, and Costa Rica. The low performers comprise Guatemala, El Salvador, and Honduras. *Source*: WDI, World Bank.

While a full explanation of the contrast between the better performing and worse performing countries in Central America cannot be reduced to a single factor, the differences in exports and growth performance must have had a lot to do with the quality of the rule of law. Indeed, the difference in this regard between the two groups of countries is obvious. Figure 33a, which shows the "crime control" and the "absence of corruption" indices for LA countries, and Figure 33b, which contrasts LA with CG in terms of crime and growth, illustrate this well.

Figure 33. Latin America: Crime, Corruption, and Growth

(a) Crime Control and Absence of Corruption *(b) Crime Control and Growth*



Notes: The corruption indicator is the "*absence of corruption"* index. The crime indicator is the "*crime is effectively controlled*" index, both for 2018 (a higher indicator corresponds to a better outcome). The crime indicator in panel b is controlled for GDP per capita (level and squared), population (level and growth), and regional dummies (see Appendix VII); panel b shows the average yearly real GDP growth rate during 2000-2018. *Sources*: World Justice Project and WDI.

Since capital and people can choose a country when moving into the region, the key policy implication is that services exporting countries must put a high premium on retaining and attracting people and promoting FDI inflows. Citizen security, the rule of law, and the quality of life are obviously crucial in this regard. This policy implication is of course of general importance beyond Central America, given that raising the production of high-quality, employment-intensive tradable services will have to be a key component of the growth agenda in most LA countries.

VII. Focusing policy

This final section deals with the general issues in policy, rather than with specific policy packages. The first sub-section shows that many key gaps continue to prevail and need to be addressed. The second sub-section switches glasses, briefly summarizing what it is that a demand-focused analysis brings to the growth policy discussion that is new. The third sub-section discusses the non-trivial policy implementation challenges the region faces given its institutional weaknesses and the current world environment.

1. Sharpening the supply-side glasses

Figure 34 shows a wide range of competitiveness-relevant variables where the region lags significantly relative to its comparator group (CG).[36] These include the quality of the region's rule of law, both in terms of outcomes (homicides, organized crime) and capacity (the police, the judiciary, and the legal and contractual framework in support of private firms); the functionality of its markets (particularly the labor market, which is arguably linked to lags in the quality of regulatory and tax regimes); the quality of its infrastructure (particularly in terms of its air, sea, land, and internet connections);[37] and its preparedness for rapid change and innovation (as measured by R&D expenditure, the number of new patents or the digital skills of the population, and the governments' inability to provide a long-term vision). Since these supply gaps do not necessarily constitute a binding constraint on growth and they are as much a cause as a consequence of growth, the expected growth returns from filling the gaps are uncertain. Nonetheless, they clearly point toward potential bottlenecks that must be assessed—and, if needed, addressed—as a matter of priority.[38]

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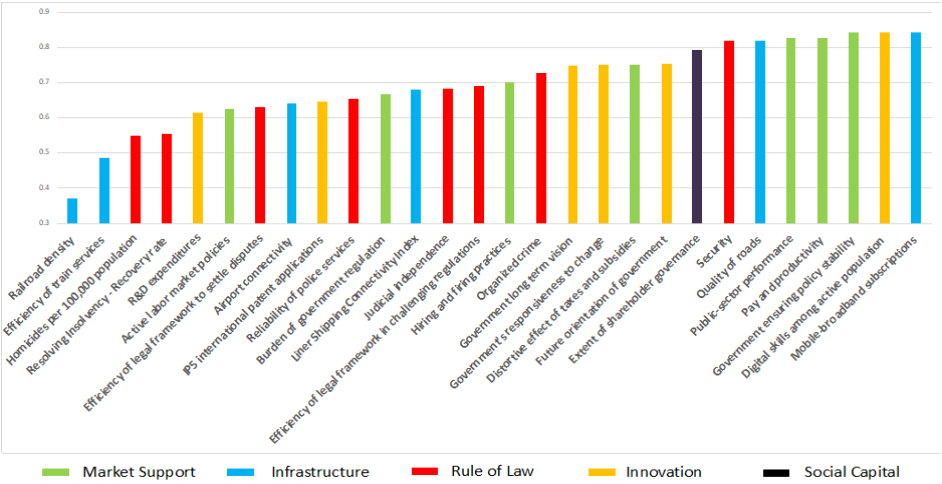
[36] The figure was constructed using the World Economic Forum's Global Competitiveness Index (excluding those associated with macro policy and the financial sector), which classifies indices of 130 indicators into seven categories: (i) Rule of law (security, violence, quality of police and the judiciary); (ii) Market support (the quality of laws and regulations in support of market activities); (iii) Infrastructure (transportation and communications); (iv) Social capital; (v) Innovation (the country's and the state's preparedness for change); (vi) Health and human rights (the attention to basic human needs and rights); and (vii) Trade openness (the country's openness to both foreign goods and foreign factors).

[37] For a recent assessment of LA's shortfalls in infrastructure, which highlights the costly implications for growth and welfare of gaps in transport infrastructure, see Perry, Guzmán and Benavides (2020).

[38] To better tailor policies to country circumstances, avoid unhelpful "laundry lists" of ill connected actions, and help identify areas more amenable to reform and with larger expected impacts, policy makers can use a variety of tools

Figure 34. Global Competitiveness Indicators where LA lags CG



Notes: The chart is constructed based on the 130 indicators of the Global Competitiveness Index that remain after setting aside the financial sector components and the global macro and trade indicators. Outlying observations (beyond two standard errors from the mean for each group) are excluded from each indicator. The cut-off ratio for inclusion in the chart is 0.85 for the lagging indicators and 1.10 for the leading indicators. *Source:* World Economic Forum.

2. Putting on the demand-side glasses

Putting on the demand glasses provided by our macro and trade-based growth decomposition adds to the supply-based policy agenda in at least three ways. First, at the macro level, by linking growth to macro fluctuations and trade structures, the approach naturally highlights the role of counter-cyclical macro policies and domestic saving rates. Counter-cyclical policy capacity is particularly important in the South American commodity exporting countries, where terms of trade gyrations need to be prudently managed—by saving more in good times and stabilizing domestic demand in bad times (through sovereign funds, fiscal rules, and the like) so as to dampen the spending effects of price bonanzas and thus curb the growth-impairing effects of Dutch-disease and boom-bust syndromes. A higher domestic saving rate, for its part, would not only lend firmer support to such countercyclical macro policies but also help relax external borrowing constraints and improve the quality of international financial integration. That would contribute to lowering country risk premia, making LA countries more attractive to longer-term oriented foreign investment, including to close the infrastructure gap.

Second, at the product and firm level, faster growth requires focusing on more attractive products with demands that are both more price inelastic (i.e., where greater product

such as benchmarking (as in De La Torre and Ize, 2003), growth diagnostics (as in Hausmann, Rodrik, and Velasco, 2008; and Izquierdo et al, 2016), and holistic assessments of a country's developmental challenges and opportunities (such as those embodied in the World Bank's "Systematic Country Diagnosis").

differentiation, better quality and higher brand consciousness allows producers to retain larger value by charging higher mark-ups) and more income-elastic (i.e., products whose demand grows faster relative to consumers' income). These demand-related desiderata need to be internalized through greater innovation and special attention given to marketing, applied research and development, and higher-end FDI.[39]

In this respect, the region's policy agenda should be guided by, and organized around, a clear outwardly oriented growth strategy. Indeed, growth is likely to benefit from scale economies when external demand for non-commodity goods gains ground vs. domestic demand. Growth is also more likely to thrive if increasingly complex tradable goods and services gain ground over nontradable ones. In the case of commodities-reliant countries, growth involves the upgrading and building up of value based on commodity derivatives that promote the diffusion of innovative technologies and boost learning spillovers.[40]

Third, appealing to demand also involves factors of production, not just output. In a globalized economy where capital and human talent is largely footloose and services will continue to gain in importance, it behooves Latin America not only to produce attractive goods and services but also to *become* a more attractive region, not only to technology and financial capital but also to people and human capital. Attracting and retaining talent and services-seeking foreigners as well as retaining at home the providers of services, are key to ensuring a successful integration into global markets. Capturing the globalization upside will thus hinge on good economic policy as much as on the quality of life, which puts a premium on developing greater capacity to harness cultural and geographic assets, preserve the environment, improve digital communications infrastructure, enhance citizens security, etc.

3. Getting there

Implementing a sufficiently ambitious and comprehensive policy agenda along the lines just sketched will require, first and foremost, a critical set of actors working together, including a well-educated labor force, able and willing entrepreneurs, and proactive and smart governments. Good entrepreneurship being unfortunately a rather scarce resource in much of the LA region, it needs to be nurtured (and attracted) by all possible means.[41] As regard governments, they need not only to strengthen the business environment through effective horizontal (sector-neutral) policies,

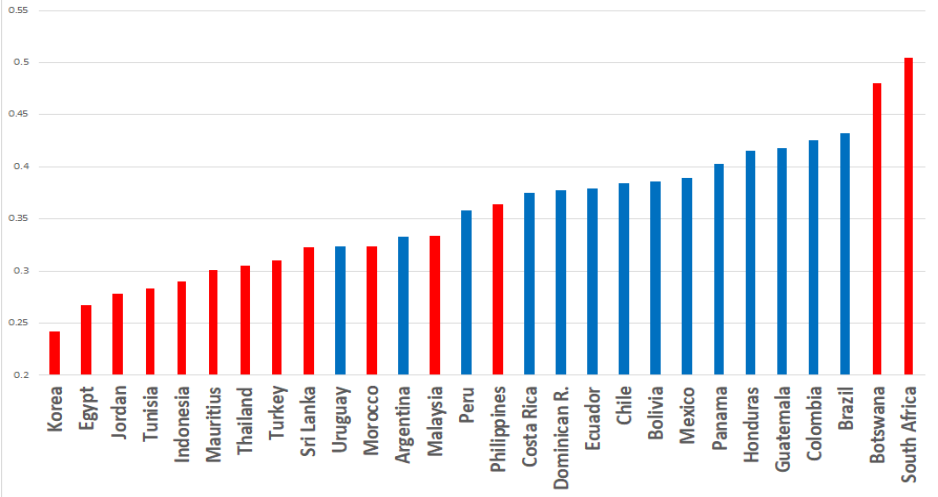
[39] Recent evidence (Bernard et al, 2020) indicates that the more successful offshoring firms in the high-income countries import from the low-income countries the more standardized, lower cost products and continue to produce locally the more innovative, higher quality items. Applying the same logic to LA's middle-income exporting countries implies capturing more of the upper-end, more demand-elastic markets by raising the knowledge and innovation-based content of their exports.

[40] On the superior positive externalities associated with the production of tradables, especially with rising complexity, see, for instance, Rodrik, 2008; Hausmann et al, 2014; and Hausmann, Hwang, and Rodrik, 2007.

[41] On the underpinnings and implications of LA's entrepreneurship scarcity, see Maloney and Zambrano (2021).

but also to engage, both strategically and opportunistically, in promoting well-designed vertical (sector-specific or cluster-specific) policy, including through research and experimentation. These interventions are justified by the growth relevance of positive externalities, both supply and demand-based, including those associated with external economies of scale, learning spillovers, and network and cluster effects. What is needed are market-friendly yet well-focused interventions, not the often misguided, expensive, market-stifling, protectionist, and unduly intrusive public policy characteristic of the ISI era in the LA region.[42]

Figure 35. LA vs. CG: Top Decile Income Share



Note: The top decile income is the average share during 2000-2018. *Source*: WDI, World Bank.

Equally importantly, however, policy makers will need to gather and sustain the necessary political support to make rapid and steady progress in the desired direction, and to adjust over time the policy agenda in view of lessons acquired and changes in world or domestic circumstances. The polarization around the two broad narratives discussed in this paper considerably raises the bar in this regard. The lack of consensus among the academic community with respect to the drivers of growth, the wide variance in views as regard the extent and modalities of the role of the state in promoting growth, and the disappointments with the growth models and promises of the

[42] See Bardhan (2016) for a survey of the literature on the developmental role of the state and Fernandez et al (2016), Cimoli et al. (2017), De La Torre, Gozzi, and Schmukler (2017), and IDB (2022) for case studies on successful vertical, smart, and market-friendly policy interventions, based on significant public-private collaboration. While examples of successful public-private dialogue and cooperation abound in the region—for example, the interventions that helped turn Panama City into a first-class air transport hub, Punta Cana into a most attractive tourism destination, and Costa Rican entrepreneurs into successful exporters of sophisticated medical equipment—the complexity associated with smart vertical policies should not be underestimated. In effect, identifying the sectors or clusters where uninternalized externalities can be usefully addressed by the state is not an easy proposition (Harrison and Rodriguez-Clare, 2010), even more so since policies to induce the internalization of externalities may exacerbate principal-agent frictions (asymmetric information, enforcement costs, etc.) and may heighten the risk of public sector overreach (for example, the pretention that the government knows what is best for individuals).

not-too-distant past, all give ground to populist and divisive discourses. The skewed income distributions across most of the LA region, which starkly contrast (with two exceptions) with those of the CG region (Figure 35), further raises the bar by feeding mistrust about the aims, reach, and fairness of public policies.

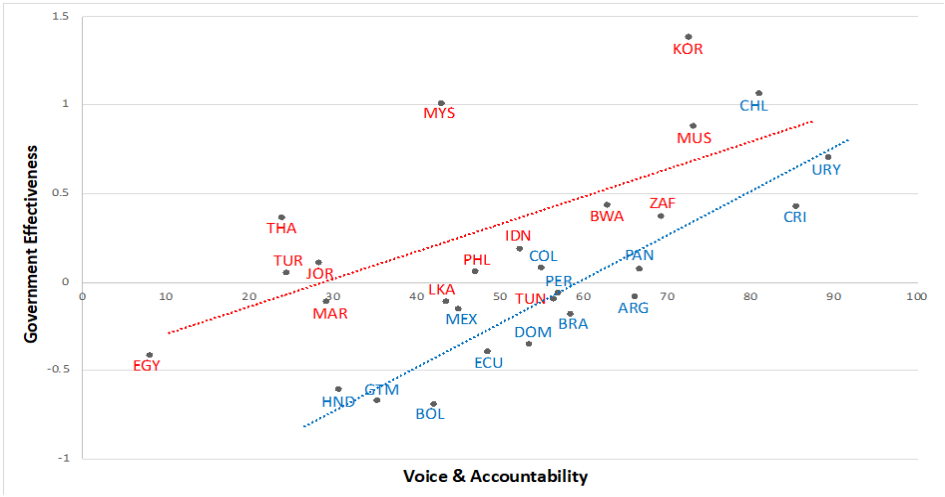
Thus, gathering and sustaining the necessary support will require a more open and broader discussion regarding the diagnosis of why growth in most of the region has been uninspiring. The search for a consensus on what to do to spur growth will in turn need to be backed by a consensus on how to distribute its benefits and how to ensure is sustainability. Hence, forging a new social contract, anchored on more inclusive and environmentally sustainable growth, will be key. Pedagogical abilities, consensus building capacity, enlightened leadership, and strong implementation capacity will be needed to boost this quest, now more than ever.

The above is likely to be an uphill battle, not least because LA countries severely lag CG countries in terms of government effectiveness (Figure 36). However, LA policy makers need not be discouraged by the seemingly daunting challenges. They should rather be encouraged by a key lesson from international growth experiences—that a few, well designed and targeted policy interventions can give rise to a wave of investment optimism and *ignite* growth and that, once that happens, social and political support can be more easily mobilized in favor of the deeper and broader institutional and structural reforms that are necessary to *sustain* higher growth over the longer-term. A self-reinforcing process—whereby reform spurs growth, and growth begets reform—is not out of reach of successful policy making.[43]

This said, the region should engage in earnest in the task of steadily building the capacities to *sustain* growth. This will require raising the quality of the civil service and focusing on results-oriented public policy. It will also require strengthening the constructive role that intermediate institutions and actors (academia, civil society, the business community, etc.) can play in feeding and steering the public policy debate. Improved governance arrangements should help extend the policy reform horizon beyond a given administration while facilitating the fruitful interaction of public and private entities in the definition and implementation of growth policies. This in turn calls for strong participation and control capacity of societies as well as effective checks and balances in democratic processes. While clearly lagging in terms of government effectiveness, LA tends to be ahead of CG as regard citizen participation in the electoral process and freedom of expression (Figure 36). Such democratic leanings are both a promise and a challenge. They broaden the scope for constructing more legitimate and democratically determined social outcomes. But they also set the bar higher in terms of what is demanded from the political system, thereby exacerbating the risks of populism.

[43] Rodrik (2005) and Hausmann, Pritchett, and Rodrick (2005) show that *igniting* growth does not require extensive institutional reform but instead rests on a narrow range of country-specific, often unconventional, policies. *Sustaining* growth, by contrast, hinges on broader structural and institutional reform.

Figure 36. Government Effectiveness vs. Voice & accountability: LA vs. CG



Source: WGI, World Bank.

The growth agenda will confront additional and difficult challenges in the post-Covid, post-Ukraine era. External conditions are likely to deteriorate under the forces of stagflation that seem to be spreading globally. And uncertainty about the future of world trade is likely to remain uncomfortably high. The difficulties in addressing these external challenges may be exacerbated by fiscal stress (arising from heightened pressure on public spending and heavy debt burdens); financial sector stress (due to rising NPLs, worsening credit conditions, and broad needs for corporate reconfiguration and recapitalization); and social and political stress (reflecting redistributive conflicts exacerbated by the Covid-induced contraction). The region will have to find ways to avoid the trap it fell in the aftermath of the debt crisis of the 1980s, when it devoted so much energy to fixing its short-term macroeconomic and political problems that it paid frankly insufficient attention to the longer-term, growth-oriented agenda.

But the aftermath of the Covid-19 and the Russian invasion of Ukraine might also present some opportunities for more rapid and ambitious structural change. For example, there could be a global relocation of production centers benefitting LA, particularly Mexico and Central America, if near shoring brings supply chains closer to the US; and the expansion of telecommuting could raise the scope for work relocations to countries with better weather and cheaper services. Opportunities like that can in addition help rekindle the pursuit of a deeper regional economic integration (that is, integration of markets for goods, services, labor, capital, technology, etc.), one that boosts (rather than hinders) the quality of LA's global integration. Finally, it is also possible that the scars left by Covid-19 and the impact of deteriorating external conditions may help Latin America policy makers present an earlier and stronger case for the growth-oriented reform agenda. Adversity could also give momentum to a new social contract, anchored on higher, more inclusive, and environmentally more sustainable growth.

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Appendix I

A commodities and informality-driven model of industrialization

In this section, we present a very simple micro-based model where an informal, subsistence sector competes with a formal industrial sector in an economy whose exports are initially dominated by commodities (as was the case of most, if not all, Latin American countries during their import substitution industrialization phase).

1. The setting

Consider a country where:

- Commodity producers produce at no cost a quantity X of commodities to be exported at a world price P_X and use the proceeds to consume tradable consumer goods at a price P_C.

- Manufactures producers (the formal sector) industrially produce a quantity Y_F of consumer goods at the price P_C, using imported intermediate inputs M at a world price P_M, and labor L_F at a real wage ω, based on a Cobb-Douglas production function:

$$Y_F = AM^{1-\alpha}L_F^{\alpha} \qquad (1)$$

  where A reflects total factor productivity.

- Home producers (the informal sector) produce and consume (as in a subsistence economy) a quantity Y_H of consumer goods at the price P_C using only labor:

$$Y_H = vL_H \qquad (2)$$

  where v, which reflects labor productivity in the informal sector, determines the real wage in that sector.

- Total labor, $\bar{L}$, is mobile between the formal and informal sectors, at the uniform wage ω:

$$\bar{L} = L_F + L_H \qquad (3)$$

- Agents cannot borrow or lend; hence the trade account is always in equilibrium.

- Under free trade, the price of consumption goods is set externally: $P_C = P_C^*$

- Instead, under an import substitution regime, protectionist policies introduce a wedge between the international and the local price of consumer goods, $P_C > P_C^*$. Hence, commodity exporters must use the proceeds of their exports to consume the higher priced locally produced goods. At the same time, the exports proceeds are used to import intermediate goods:

$$P_M M = P_X X \qquad (4)$$

2. The commodities and industrialization traps

Assume for simplicity that consumer goods are homogeneous final manufactures and perfect competition prevails. The first-order conditions for maximizing manufacturing firms' profits can then be expressed as:

$$\frac{w}{P_C} = \omega = \alpha A\left(\frac{M}{L_F}\right)^{1-\alpha} \qquad (5)$$

$$\frac{P_M}{P_C} = \frac{1}{p_C} = (1-\alpha)A\left(\frac{L_F}{M}\right)^{\alpha} \qquad (6)$$

where p_C is the price of consumption goods in terms of intermediate goods. Replacing the factor inputs ratio from (6) into (5):

$$\omega^{\alpha} = \alpha^{\alpha}(1-\alpha)^{1-\alpha} A p_C^{1-\alpha} \qquad (7)$$

Equation (7) defines an array of upward-sloping, iso-productivity curves for total factor productivity, A, in the $\{\omega, p_C\}$ space, which rotates clockwise around the origin as A rises (see Figure 1).

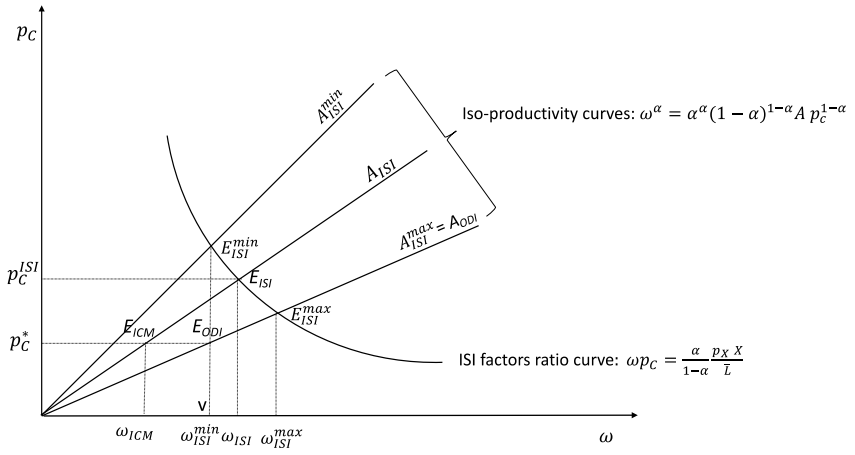
Suppose $A = A_{ISI}$, as pictured in Figure 1, and the economy is fully open. At that level of productivity, the economy remains in an informality-commodities trap (ICT), such that the real wage paid by formal consumption good producers is $\omega_{ICT} < v$ and all workers remain informal. For outward-driven industrialization (ODI) to occur, local productivity needs to jump to:

$$A > A_{ODI} = \left(\frac{v}{\alpha}\right)^{\alpha}\left(\frac{1}{(1-\alpha)p_C^*}\right)^{1-\alpha} \qquad (8)$$

Thus, the ICT equilibrium becomes a trap when local manufacturers are not competitive enough to sell their manufactures in the international market for consumer goods; that is, they are too far below the technological frontier to be able to bridge the gap from A_{ISI} to A_{ODI} by investing in productivity-enhancing technology and entrepreneurial capital. In the ICT, therefore, the country fully specializes in the production of commodities, growth hinges solely on commodity

export volume (X) and prices (p_x), all industrially produced consumer goods are imported, and the labor force that is not employed in the commodities sector remains in the informal sector (where it fully consumes the goods it produces).

Figure 1. Industrialization Equilibria: Perfect Competition



But suppose now that the authorities close the economy, so that commodity exporters can no longer consume imported goods (i.e., final manufactured goods produced abroad). For inward-driven (ISI) industrialization to occur and fully absorb the labor force, the price of domestically produced consumption goods and the real wage need to satisfy the factors ratio obtained by dividing equation (5) by equation (6) for M $= p_X X$ (where $p_X = P_X/P_M$) and $L_F = \bar{L}$:

$$\omega p_C = \frac{\alpha}{1-\alpha}\frac{p_X X}{\bar{L}} \qquad (9)$$

It follows that for the formal wage to rise above the informal wage ($\omega_{ISI} > v$) the domestic price of consumption goods must rise above p_{ISI}^C such that:

$$p_C > p_{ISI}^C = \frac{\alpha}{1-\alpha}\frac{p_X X}{v\bar{L}} \qquad (10)$$

In turn, this requires productivity to exceed a minimum threshold A_{ISI}^{min} such that:

$$A > A_{ISI}^{min} = \frac{v}{\alpha}\left(\frac{\bar{L}}{p_X X}\right)^{1-\alpha} \qquad (11)$$

Thus, the productivity space can be divided into three zones:

- $A < A_{ISI}^{min}$: Commodity trap

- $A \in \{A_{ISI}^{min}, A_{ISI}^{max} = A_{ODI}\}$: Inward-driven (ISI) industrialization
- $A \geq A_{ODI}$: Outward-driven industrialization

Moreover, within the ISI range, the shift from informality-commodities trap (ICT) to ISI implies a gain in labor productivity, as marginal labor productivity is:

$$\frac{\partial Y_F}{\partial \bar{L}} = \alpha A \left(\frac{p_X X}{\bar{L}}\right)^{1-\alpha} > v \;\; if \; A > \frac{v}{\alpha} \left(\frac{\bar{L}}{p_X X}\right)^{1-\alpha} = A_{ISI}^{min} \qquad (12)$$

Hence, ISI brings about a rise in GDP, the real wage, and productivity. By raising the price of consumer goods, the boost in demand for locally produced goods allows workers to migrate to a sector with a better technology. However, because commodity exporters are clearly worse off, the new equilibrium is not Pareto superior.[44] Moreover, once the economy has reached an equilibrium within the ISI productivity range, further growth becomes again entirely dependent on the same conditions as under the commodity trap. The ISI growth remains dependent on *X*, the volume of commodity exports, and p_X, the commodity terms of trade. As long as *A* remains much below A_{ODI}, exiting the trap by raising productivity and lowering the price of goods towards the world level (or raising product quality) will be as difficult under ISI as under ICT. In fact, to the extent that ISI restricts competition, it will trigger a rise in mark-ups, hence raise the threshold level of productivity (A_{ODI}) needed for exiting the ISI trap. As shown in the next section, this can be readily inferred from the form taken by the equations determining the consumer price level (p_C) when the model is expanded to incorporate downward-elastic demands.

Before doing so, however, note that the above results (the jump in labor productivity and resulting labor shift from the informal to the formal sector) would continue to hold if protection were also applied to the intermediate good and not only to the final good. To check this, suppose a tariff t is applied to the import of the intermediate good. In this case, (6) becomes:

$$\frac{1}{p_C} = \frac{1-\alpha}{1+t} A \left(\frac{L_F}{M}\right)^{\alpha} \qquad (13)$$

Hence, (10) can now be rewritten as:

$$p_{ISI}^{C} = \frac{\alpha(1+t)}{1-\alpha} \frac{p_X X}{v\bar{L}} \qquad (14)$$

As the price of the final good would therefore rise with the tariff, the more protected the economy (the higher the tariff), the worse would the world competitiveness of the final good

[44] While commodity exporters are worse off because they lose purchasing power by consuming higher priced goods, workers are better off. The ISI income distribution should therefore improve relative to the ICT.

become. However, as condition (12) would remain unchanged, the TFP's lower threshold for labor productivity to rise and ISI to promote industrialization would remain unaffected. [45]

3. Trade liberalization

To exit the ISI trap, opening the economy to international competition (trade liberalization) is therefore unavoidable. However, it is bound to be problematic: absent changes in *A* during ISI, trade liberalization will lead straight back to the ICT equilibrium, at least initially. The fall in P_C back to P_C^* , will therefore result in an immediate de-industrialization, a decline in real wages, a migration of workers back to the informal sector, and a collapse in labor productivity.

However, once exposed to world competition, some local firms will over time manage to find the market niches and develop the productivity required to exceed the ODI threshold. Thus, informality should eventually decline as these successful (high productivity) firms absorb more labor. Consistent with the evolution of trade towards more specialized, quality-sensitive goods, let us now assume that manufacturing goods are no longer homogeneous but are instead specialty goods, so that the representative firm now faces an iso-elastic downwards sloping demand curve:

$$p_C = \left(\frac{Y_F}{B}\right)^{-\frac{1}{\eta}} \tag{15}$$

where p_C is now the consumer good price relative to the price of the consumer basket (which contains a large number of other specialty goods), η is the price elasticity of demand for the specialty goods produced by the representative firm, and *B* is a scale factor that depends both on world demand and the quality of the good being produced relative to the competition.

Suppose also that, reflecting distortions in the labor market, a tax τ is imposed on formal labor (but not on informal wages). The first order profit maximizing conditions can now be re-written as:

$$\omega = \alpha \frac{\eta-1}{\eta(1+\tau)} \left(\frac{M}{L_F}\right)^{1-\alpha} A p_C \tag{16}$$

$$p_M = (1-\alpha) \frac{\eta-1}{\eta} \left(\frac{L_F}{M}\right)^{\alpha} A p_C \tag{17}$$

[45] Our results are at variance with those of Martins and Thompson Araujo (2018), who find that targeted import substitution can reduce the overall productivity of labor if it creates a distortion in the use of resources, between a local protected industry and the rest of the economy. In our model there is no distortion in production, just a welfare loss inflicted on commodity exporters.

where Ap_C is the revenue-based measure of total factor productivity of the representative firm, and both ω and p_M are expressed in real terms relative to the price of the consumption basket. From (16) and (17) it immediately follows that:

$$Ap_C = \frac{\eta}{\eta-1}\left[\frac{\omega(1+\tau)}{\alpha}\right]^{\alpha}\left(\frac{p_M}{1-\alpha}\right)^{1-\alpha} \qquad (18)$$

Hence, revenue based TFP is fully determined by factor prices and is uncorrelated with *A*, output or physical TFP. Therefore, *in the absence of product quality differences across firms leading to firm-specific η's (hence different mark-ups)* and barring technological differences leading to different factor shares (hence different $\alpha's$), variations across firms in revenue productivity can only occur due to variations of the labor wedge τ, i.e., due to market distortions that lead to inefficient resource allocations. This reflects the fact that a firm that raises its physical productivity will obtain the same marginal revenue, as the lowering of its sales price (reflecting the higher productivity) will be offset by the increase in the quantity sold. However, as shown by Haltiwanger et al. (2018), this knife-edge property vanishes as soon as the demand curve faced by the firm ceases to be iso-elastic, as assumed in (15). And because physical and revenue TFPs are in fact highly correlated, the assumption of iso-elasticity does not hold in practice.

It also follows from (18) that a higher η should result in a higher p_C. If, on the one hand, the higher η is a reflection of a less competitive local market (i.e., under ISI conditions), it will raise the threshold level of productivity improvement needed to bring the local price down to the international price. This will make it even more difficult for firms to exit the ISI trap.

If, on the other hand, the higher η reflects a more innovative local manufacturing sector that produces more differentiated and attractive products, as should be the case after trade liberalization if firms can reach the innovation frontier, it should help promote outward-driven industrialization and reduce informality. Indeed, with (16)-(18) the labor demand curve for the representative firm can now be expressed as:

$$L_F = B\left[\frac{\eta-1}{\eta}A\right]^{\eta}\left[\frac{\alpha}{\omega(1+\tau)}\right]^{\alpha\eta}\left[\frac{1-\alpha}{p_M}\right]^{(1-\alpha)\eta} \qquad (19)$$

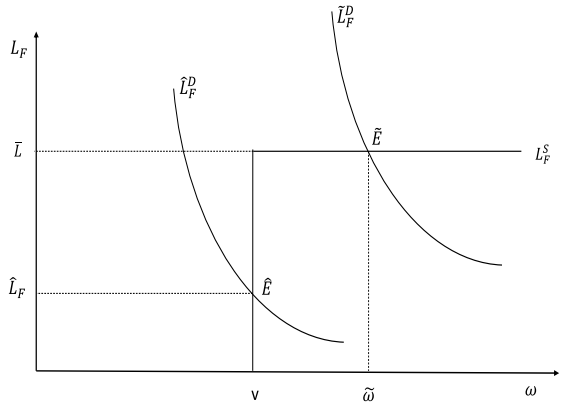
Thus, the aggregate labor demand curve is the sum over N firms of the individual demand curves given by (19):

$$L_F = \sum_{i=1}^{N} L_F^i = \sum_{i=1}^{N} B_i\left[\frac{\eta_i-1}{\eta_i}A_i\right]^{\eta_i}\left[\frac{\alpha_i}{\omega(1+\tau)}\right]^{\alpha_i\eta_i}\left[\frac{1-\alpha_i}{p_M}\right]^{(1-\alpha_i)\eta_i} \qquad (20)$$

As shown in Figure 2, two types of labor market equilibria are therefore possible. For low productivities (small As), limited scales (small Bs), relatively elastic demands (small ηs) and a limited number of formal firms (*N*), the economy reaches an equilibrium $\widehat{E}$, such that the demand for formal labor, $\hat{L}_F$, falls short of full employment; hence the formal wage remains equal to the

informal wage, v, and the residual labor remains informal. Instead, for sufficiently high As, Bs, ηs or N, the economy reaches an equilibrium $\widetilde{E}$, such that all labor migrates to the formal sector and the formal wage rises to $\widetilde{\omega} > v$.

Figure 2. Industrialization Equilibria: Imperfect Competition



Thus, reducing the market distortion, τ , shifts the formal labor demand rightward in Figure 2. As long as the economy is dual, this raises formal employment, reduces informality and raises aggregate productivity by shifting resources from the less productive informal sector to the more productive formal sector (if the economy is fully formal, it would raise the real wage). Raising productivity (higher As), boosting entrepreneurship (a higher N), and raising product attractiveness (higher Bs or higher ηs) will similarly contribute to reducing informality. *Thus, the fight against informality calls for gains in efficiency as well as attractiveness and entrepreneurship.*

Appendix II

A macro and trade-based growth decomposition

1. The setting

Consider the simple following accounting identity:

$$G_Y = G_X + (G_Y - G_M) + (G_M - G_X) \qquad (1)$$

where the *G*s are (the logs of) the backward-looking ten-year moving averages of growth rates of a country's GDP (*Y*), exports (*X*), and imports (*M*) of goods and nonfactor services, all relative to the rates of growth of the same variables for the world as a whole.[46] The first term in equation (1), which we label "export pull" (*EP*), can be interpreted as the traction that export expansion exerts on a country's growth. The second term, which we label "domestic response" (*DR*), can be interpreted as the country's capacity to lift GDP growth above import growth (the country's efficiency in using its imports to grow). The third term, which we label "external leverage" (*EL*), can be interpreted as the impulse or drag on growth linked to changes in the country's trade deficit or, alternatively, to changes in the availability of external finance. Equation (1) can thus be rewritten as:

$$G = EP + DR + EL \qquad (2)$$

This identity is expressed in constant dollars, which captures better the underlying economic drivers of growth (although it could also be expressed in current dollars).[47] Therefore, an increase in the export price that raises the country's terms of trade and the value of its exports (but not their volume) leaves the *EP* term unchanged. Instead, by allowing imports volumes to increase, the terms-of-trade windfall shows up as an increase in *EL*, i.e., as an additional external financing item. Hence, to differentiate changes in *EL* resulting from valuation gains from those associated with capital flows, we will systematically calculate a terms of trade term (*ToT*) as the difference between the *EL* terms expressed in constant and current dollars and report it together with the other terms of the growth decomposition. We will thus define a country's "growth spectrum" for any given year or period based on a vector of five variables {*G*, *EP*, *DR*, *EL, ToT*}.

[46] This growth decomposition identity is inspired by Thirlwall (2011). Expressing the identity in logs and relative to the world linearizes and promotes standardization and comparability, both across time and between countries (see De la Torre and Ize, 2020b).

[47] Constant dollars match the export and import elasticities of Thirlwall's model and better reflect the changes in the underlying economic drivers of growth, including by isolating price from quantity effects.

2. The identification grid

The growth spectrum provides a simple identification tool to separate supply from demand shocks. Table II.1—where *u* accounts for the size of the original shock affecting the driving component of the growth decomposition and *v* and *w* the induced responses of other terms of the decomposition—summarizes the identification grid.

Consider first the case of a pure domestic demand shock. Because, by stimulating imports, a domestic demand shock should raise *EL,* the external leverage provides a simple indicator of domestic demand pressures. Changes in *EL* may reflect a terms of trade windfall that is "spent", or some other macro disturbance, including those induced by monetary or fiscal policies. Note also that in an economy with substantial underutilized capacity (the Keynesian case of a horizontal supply curve) the increase in *EL* should be matched one-for-one by an increase in *G.* Instead, in an economy at full employment, the counterpart of the increase in *EL* should be a reduction in *DR*, as imports will rise but GDP will not. In practice, economies should lie generally somewhere in between. Hence, *the trademark of a demand shock should be co-movements of G and EL, with partial opposite fluctuations in DR*.[48]

Table II.1. Response Patterns to Macro and Trade Shocks

	Supply			Demand		Trade	
	Uniform	External Oriented	Domestic Oriented	External	Domestic	Liberalization	ToT windfall
EP	u	u		u		u	
EL					u		v
DR		- v	v	- v	- v	-v	- w
G	u	u – v > 0	v	u – v > 0	u – v	u - v	v – w > 0
TOT							u

Consider next the case of a pure, uniform supply shock (a Solow-type shock) that raises the economy's output of tradable and non-tradable goods, whether as a result of a build-up in factors of production or a boost in productivity. Because the shock affects all goods, exports (hence

[48] While a rise in EL always signals a rise in domestic demand today, it could also signal an increase in supply tomorrow (an eventual increase in *G*, alongside a rise in *EP* or *DR*) if it mostly reflected a boost in investment, rather than consumption. Such intertemporal interactions between the different components of the growth decomposition can be identified based on additional information on the composition of demand. Figure 20b provides an illustration for the case of Mexico.

EP) and GDP (hence *G*) should rise equally. But absent changes in domestic demand (i.e., a pure supply shock), *EL* should not budge. Hence, the rise in imports should match one-for-one the rise in exports and output. As a result, *DR* should also remain unchanged. *The trademark of a uniform supply (Solow-type) shock should therefore be a co-movement of G and EP, with no changes in either DR or EL.*

Consider now instead the case of an asymmetric supply shock that boosts the supply of non-tradable goods but not that of tradable goods. In this case, *G* should rise but not *EP*. At the same time, *as long as domestic demand remains unchanged*, *EL* and hence imports should remain unaffected (i.e., the imported inputs required to produce nontradables would simply replace other imports). The counterpart of the rise in *G* should therefore be a rise in *DR*, with no changes in *EP* or *EL*. The same pattern should materialize if a tightening of import restrictions boosts the supply of domestically produced importable goods without affecting the supply of exports. As we will see below, this is precisely the pattern that was observed in LA during the ISI period.

Consider next the case of an asymmetric supply shock that boosts the supply of tradable goods, but not that of non-tradable goods, or alternatively an external shock that raises the demand for the country's exports. In either case, both *G* and *EP* should rise but *G* less than *EP,* as the supply of non-tradable goods should not change. Since imports will rise as much as exports (again, assuming no change in demand), *DR* will decline to offset the difference between changes in *G* and *EP*.

Finally, Table II.1 adds two columns describing the responses to trade liberalization and term-of-trade shocks. Trade liberalization should boost exports and imports but can affect GDP favorably or adversely in the shorter run, depending on the relevance of its initial impact on the local production of importables. However, trade liberalization is likely to have positive effect on growth in the medium run, as exports rise. Thus, *G* may rise or fall in the shorter run depending on whether the rise in *EP* exceeds or falls short of the decline in *DR*. In the case of a positive terms-of-trade shock, to the extent it is spent, its impact on growth should be the same as that of an expansionary domestic demand shock. But the macro response to a positive terms of trade shock will be pro-cyclical or countercyclical depending upon whether the windfall is "over-spent" (i.e., the rise in *EL* exceeds the rise in *ToT*) or "under-spent". *As we will see below, LA's responses to ToT shocks (both positive and negative) have typically been heavily pro-cyclical*.

Importantly, notice that an economy in macro equilibrium (i.e., with $EL = 0$) can grow faster than the world ($G > 0$) only if its trade grows faster than the world's ($EP > 0$) and/or its economy grows faster than its trade ($DR > 0$). Thus, an *EP*-based growth is outward-oriented, a *DR*-based growth is inward-oriented.

3. The database

The growth decomposition database used in this paper imports the GDP data in constant dollars and the trade (exports and imports of goods and nonfactor services) data in both current and constant dollars from the World Bank's WDI database, which starts in 1960. The ten-year moving average version of the growth decomposition database starts in 1965, with the years 1965-1969 calculated as five-year averages so as to go back a little further in time for the countries for which information is available since 1960. The data for the years where the moving averages of growth rates turn negative (hence preventing the calculation of logs) is approximated through a linear intrapolation. This version of the growth decomposition database can be found at the Development Data Hub.

Appendix III

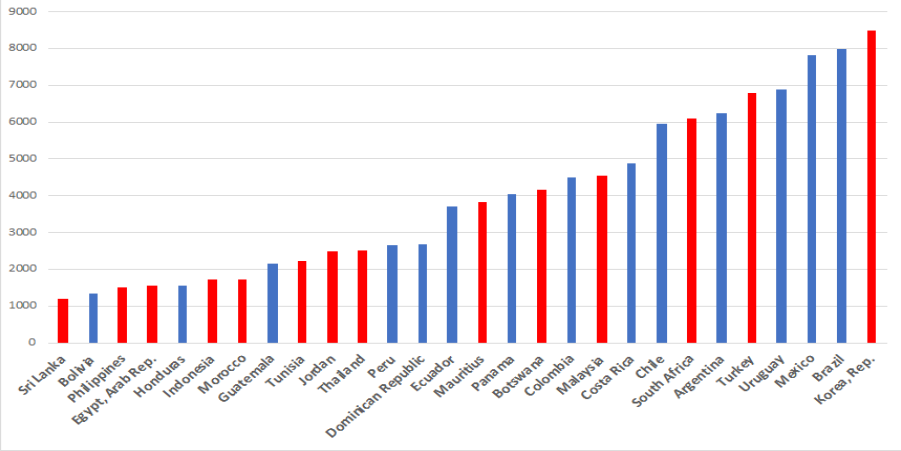
Country composition of the LA and CG groups

Expressing country-specific rates of growth relative to those of the world neutralizes worldwide shocks and facilitates comparisons across countries. Yet, because growth dynamics are influenced by economic development, our analysis also relies on a comparison of LA growth with that of a peer group of countries. For this comparator group (CG) we select countries whose per capita incomes cover the same range as that of LA's for the mid-point of our study period (1990).

We choose for CG the same number of countries as for our LA sample (14) and exclude from both groups countries that are either too small or for which the available data are too volatile or incomplete. As a result, most of the small Caribbean islands, oil exporting República Bolivariana de Venezuela, nations that have undergone prolonged civil conflicts (El Salvador and Nicaragua), and countries with insufficient data (Paraguay, Belize, Surinam) are excluded. However, we include the República Bolivariana de Venezuela or El Salvador in some charts when, data permitting, their inclusion helps complete the argument.

Figure III.1 displays the 1990 per capita income for the resulting 28 intermingled countries. Per capita income levels range from slightly above US$1,000 (Sri Lanka and Bolivia) to above US$8,000 (Mexico, Brazil, and the Republic of Korea). LA includes 8 South American countries (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, and Uruguay), 4 Central American or Caribbean countries (Costa Rica, Dominican Republic, Guatemala, and Honduras), and Mexico. The control group, CG, includes 5 South East Asian countries (Korea, Malaysia, Thailand, Indonesia, and Philippines), 5 countries of the Middle East and North Africa (Türkiye, Jordan, Tunisia, Morocco and the Arab Republic of Egypt), 3 African countries (South Africa, Botswana and Mauritius), and one South Asian country (Sri Lanka).

Figure III.1. LA and CG Countries: Per Capita GDP, 1990



Note: Per capita GDPs are expressed in constant 2010 US$. *Source*: WDI, World Bank.

Appendix IV

A macro and trade benchmarking model

The world population of countries with complete growth spectra during the period 2003-2020 is used as the sample to estimate a set of independent regressions (reported in Table IV.1) where the dependent variables are all five components of a country's spectrum and the regressors include the country's key structural characteristics (GDP per capita, population and trade openness), the composition of their trade, and dummies (fixed effects) for each of LA's five subregions, as identified in Figure 16. All variables are averages for the period 2003-2020. Because the three components of trade composition (manufactures, commodities, and services) sum to one, only two of these components are included in the regressions (the regressions coefficients for the missing component may be inferred from the first two). Note also that because of the accounting identity, the regression coefficients of all the terms in the *G* regression are the sum of those obtained for the *EP*, *DR* and *EL* regressions.

Table IV.1. Growth Spectra Regressions

	G	EP	DR	EL	ToT
Intercept	0.45**	1.1***	0.03	-0.72	-0.52
	(0.22)	(0.40)	(0.23)	(0.33)	(0.25)
Commodities	0.0014**	-0.002*	0.00026	0.0032***	0.0038***
	(0.0006)	(0.0010)	(0.0006)	(0.0009)	(0.0007)
Services	0.0016+	-0.0015	0.002*	0.0011	0.0016+
	(0.0010)	(0.002)	(0.001)	(0.001)	(0.001)
Mexico	-0.15	-0.03	0.004	-0.12	-0.055
	(0.13)	(0.24)	(0.14)	(0.20)	(0.16)
South America BCEs	0.025	-0.094	0.11+	0.0091	0.024
	(0.07)	(0.12)	(0.06)	(0.08)	(0.065)
South America DCEs	0.07	0.05	-0.007	0.10	0.065
	(0.08)	(0.13)	(0.08)	(0.08)	(0.065)
Central America SEs	0.19**	0.005	0.26***	-0.067	-0.08
	(0.08)	(0.14)	(0.08)	(0.08)	(0.09)
Central America SMEs	-0.094	-0.29**	0.27***	-0.067	-0.11
	(0.08)	(0.04)	(0.08)	(0.08)	(0.09)
Log(GDPxCap)	-0.24***	-0.28***	-0.064***	0.10***	0.091***
	(0.022)	(0.004)	(0.02)	(0.034)	(0.026)
Log(Population)	0.085***	0.032	0.017	0.035	0.015
	(0.026)	(0.05)	(0.03)	(0.04)	(0.03)
Log(Openess)	0.37***	0.28**	0.09	-0.009	0.091
	(0.074)	(0.13)	(0.07)	(0.11)	(0.08)
R Sq.	0.61	0.33	0.52	0.23	0.35
Adj. R Sq.	0.57	0.28	0.20	0.16	0.29
Observations	114	114	114	114	114

Appendix V

Trade Surge Episodes

Reflecting the fact that trade liberalizations took place gradually over a number of years, countries were selected based on the observed footprints of trade liberalizations (i.e., "trade surges"), rather than on a specific initial date. The footprints had to meet the following patterns:

a) Rising *EP* over several years
b) Simultaneously falling *DR* (at least in initial years)
c) Initially stable *EL*

As indicated in Table II.1, patterns a) and b) are the key identifying characteristic of trade liberalizations. But pattern c) is also required to differentiate trade liberalizations from pure export surges (i.e., rising *EPs*) mixed with domestic demand boosts, which could cause an unrelated decline in *DR* as the counterpart of a rising *EL*.

Thirty-one trade surges were thereby identified, with initial dates ranging from the mid-1970s to the late-1990s (Table V.1). A world index was constructed by aligning all countries on the same starting date (year zero) and taking the simple average of all countries in the sample, except Mexico (the country against which to compare the world index).

Table V.1. Country Breakdown and Starting Dates

Latin America	Eastern Europe	Southern Europe	Northern Europe	Other High Income	East Asia	Other
Argentina 89	Hungary 94	Italy 82	Austria 78	Canada 83	China 81	India 77
Chile 75	Poland 94	Portugal 84	Denmark 80	New Zealand 88	Hong Kong 79	India 91
Costa Rica 88	Rumania 00	Spain 78	France 74	USA 83	Indonesia 72	Tunisia 74
Mexico 89	Slovenia 03		Germany 79		Malaysia 72	
	The Czech Republic 95		Ireland 77		The Philippines 77	
	The Slovak Republic 99				Singapore 78	
					Thailand 81	

Appendix VI

Informality estimate

The informality dependent variable is the percent of firms competing against unregistered or informal firms" from the latest World Bank's Enterprise Survey. Countries' 2000 GDP per capita, GDP growth during the period 2003-20 and the average yearly rate of population growth during 2000-2018 are used as independent regressors. Table VI.1 shows the regression results.

Table VI.1. Informality Regression

Regression Statistics								
Multiple R	0.57							
R Square	0.32							
Adjusted R Square	0.31							
Standard Error	16.67							
Observations	132							
ANOVA								
	df	*SS*	*MS*	*F*	*Significance F*			
Regression	3	17092.42	5697.47	20.50	6.51088E-11			
Residual	128	35569.20	277.88					
Total	131	52661.62						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	61.86	4.52	13.69	0.00	52.92	70.81	52.92	70.81
GDP X Cap	0.00	0.00	-3.43	0.00	0.00	0.00	0.00	0.00
GDP Growth	-394.04	85.18	-4.63	0.00	-562.58	-225.49	-562.58	-225.49
Population Growth	784.07	128.43	6.11	0.00	529.95	1038.18	529.95	1038.18

Appendix VII

Crime Estimate

The crime indicator variable is the "*crime is effectively controlled*" index of the World Justice Project database for 2018 (a higher indicator corresponds to a better outcome). The regressors are the 2010 GDP per capita (level and squared) and population (level and growth rate), the average yearly real GDP growth rate during 2000-2018, and regional dummies. The results of the regression are reported in Table VII.1.

Table VII.1. Crime Regression

Regression Statistics								
Multiple R	0.86							
R Square	0.75							
Adjusted R Square	0.72							
Standard Error	0.07							
Observations	124							
ANOVA								
	df	*SS*	*MS*	*F*	*Significance F*			
Regression	10	1.84	0.18	33.23	3.5957E-29			
Residual	113	0.62	0.01					
Total	123	2.46						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.99	0.06	15.26	0.00	0.86	1.12	0.86	1.12
GDP x Capita Square	0.00	0.00	-2.52	0.01	0.00	0.00	0.00	0.00
GDP x Capita	0.00	0.00	5.14	0.00	0.00	0.00	0.00	0.00
GDP Growth	2.36	0.48	4.97	0.00	1.42	3.30	1.42	3.30
L(Population)	-0.05	0.01	-4.75	0.00	-0.07	-0.03	-0.07	-0.03
Population Growth	-3.30	0.94	-3.52	0.00	-5.16	-1.44	-5.16	-1.44
LAC	-0.16	0.03	-5.85	0.00	-0.22	-0.11	-0.22	-0.11
EAP	0.05	0.04	1.39	0.17	-0.02	0.12	-0.02	0.12
SSA	-0.03	0.04	-0.81	0.42	-0.10	0.04	-0.10	0.04
FSU	0.04	0.03	1.25	0.21	-0.02	0.10	-0.02	0.10
MENA	0.05	0.04	1.43	0.16	-0.02	0.13	-0.02	0.13