Towards transformation of the growth and development strategy for Latin America and the Caribbean: the role of productive development policies

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Abstract

Latin America and the Caribbean have a structural low-growth problem, which is explained largely by the fact that productivity has not increased, and has even declined, in recent decades. Although productivity growth will require continuous development of a medium- and long-term agenda aimed at improving "fundamentals", this article proposes a new complementary strategy for growth, transformation of the production structure and employment for the region, based on a deepening of its productive development policies and improving their implementation. To this end, six guidelines are proposed that include governance, among other elements; and special emphasis is placed on the "how", in other words how to successfully implement policies of this type.

Keywords

Economic growth, economic development, development policy, ECLAC, development strategies, industrialization, employment, productivity, competitiveness, governance, decentralization in government, regional development, Latin America and the Caribbean

JEL classification

O25, L52, N16

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I. Introduction

Latin America and the Caribbean face challenges in multiple dimensions of development. These include high levels of poverty, informality and inequality (including gender inequality), weak capacity to generate quality jobs, the poor quality of education and other deficits in this area, and shortcomings in social protection and health. These are compounded by the region's vulnerability to the effects of climate change, the need to foster a more sustainable pattern of development, and deficiencies in institutional quality and governance.

In addition to the aforementioned challenges, one of the most important pending tasks for countries in the region is to overcome the low, mediocre and volatile growth syndrome that characterizes them. This article argues that it would be easier and more viable to overcome the other challenges if the countries were to achieve higher, sustained, inclusive and sustainable growth, particularly by increasing their productivity —because, as Paul Krugman (1997, p. 9) stated, "Productivity is not everything, but in the long term, it's almost everything." Unfortunately, in the last 15 years, total factor productivity in Latin America has been declining, and this is what largely explains the mediocre economic growth that the region has recorded over the last 10 years.

The article notes specifically that one of the keys (possibly the main one) to fostering higher, sustained, inclusive and sustainable growth lies in productive development policies, and in their deepening and better implementation.

In addition to this brief introduction, the article is organized in four sections. Section II makes a diagnostic assessment of the low rate of economic growth in Latin America and the Caribbean and its causes. Then, after reviewing some of the contributions made by the Economic Commission for Latin America and the Caribbean (ECLAC) in the areas of structural change, technological development and industrial policy, section III presents a new proposal by the Commission on productive development policies to build a more productive, inclusive and sustainable future in the countries of the region. Section IV contains an analysis of how to achieve this, proposing six guidelines for action in the area of productive development policies. Lastly, section V offers final thoughts.

II. The low-growth syndrome or trap in Latin America and the Caribbean

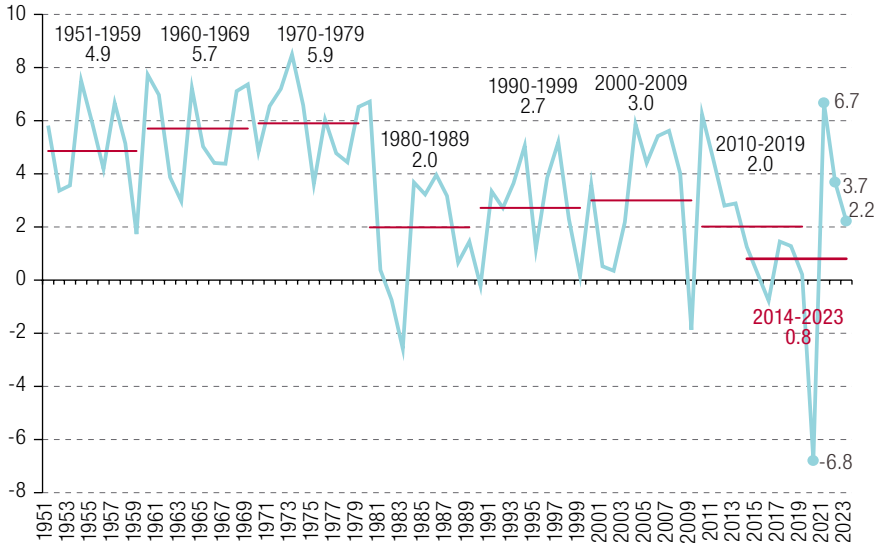
1. The region's growth deficit

For years, the region has maintained low rates of economic growth, both relative to other periods in history and compared to the rest of the world. Beyond the cascade of successive crises that have occurred in recent years, this trend represents the region's true crisis —and its most tragic and far-reaching one.

The figures speak for themselves, and the empirical data can be analysed in two different ways. Firstly, between 2014 and 2023 the region grew by an average of just 0.8% per year (see figure 1). This is even below the 2% rate achieved during the infamous lost decade of the 1980s, and is just one-fifth of the average growth rate recorded in the 30 years spanning 1950 and 1979.

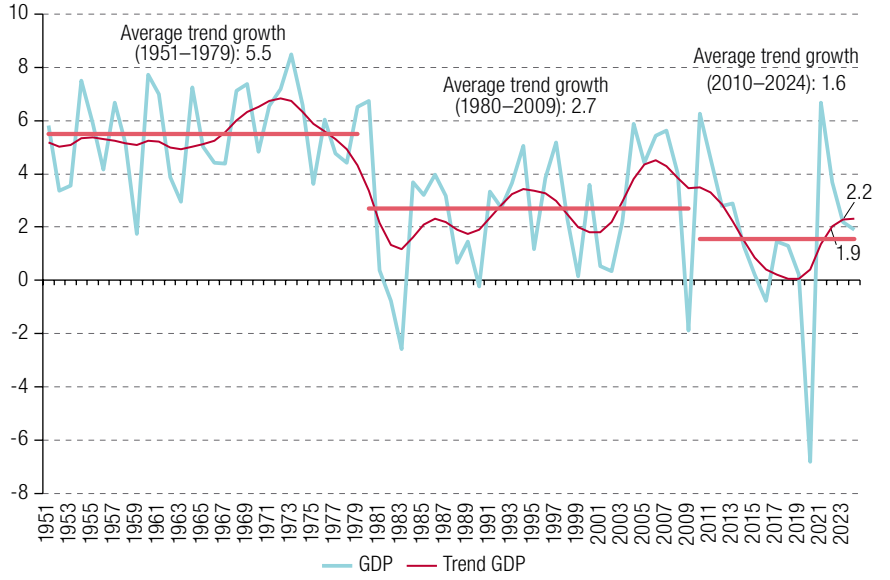
Secondly, estimation of the region's economic growth trend over the same period shows that the average for the almost three decades from 1951 to 1979 was 5.5% per year, while in the following three decades, from 1980 to 2009, the average dropped by half to 2.7% per year (see figure 2). In the 15 years since 2010, the regional growth rate declined further to just 1.6% per year.

Figure 1
Latin America and the Caribbean: GDP growth rate, annual and average per decade, 1951–2023
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Figure 2
Latin America and the Caribbean: growth in GDP and trend GDP, 1951–2024
(Percentages on the basis of constant dollars at 2018 prices)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The Hodrick-Prescott filter was used to calculate trend GDP.

The annual growth rates displayed in the two figures confirm the well-known fact that growth in the region is highly volatile —even at the aggregate level— and more so when each country is analysed separately. The countries of the region clearly have ever less capacity to grow at high and sustained rates.

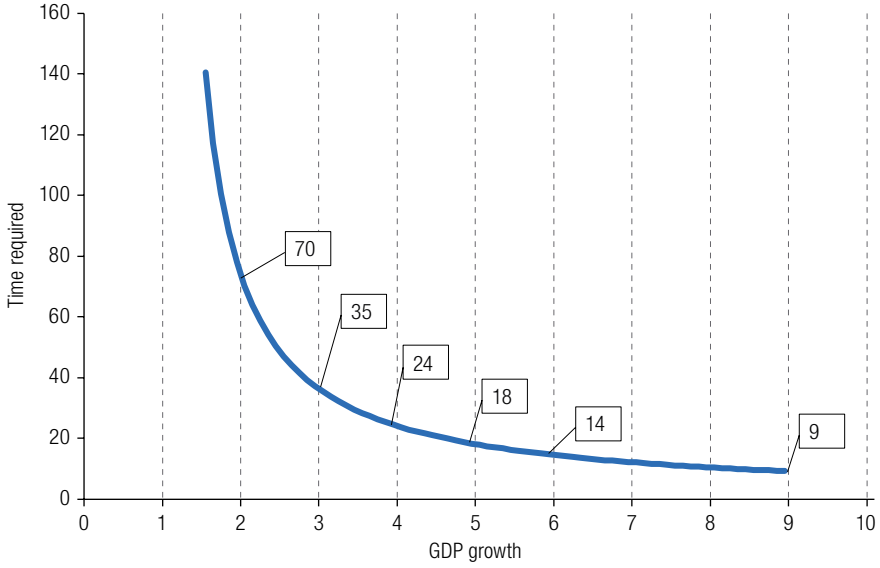
Of course, growth per se is not the ultimate objective. What is needed is inclusive growth, in other words growth that reduces levels of poverty and informality and generates good jobs and an environment that is more conducive to reducing inequality. Growth must also be green and sustainable, respectful of nature and the planet.

An essential condition for the region to adopt a more inclusive and sustainable pattern of development is that it achieves a higher and more sustained growth rate. This is crucial, because the major structural transformations needed to change this pattern of development —the transition to renewable energies, electromobility, the circular economy, the care society and more dynamic growth-driving sectors, among others— require new investments, new and more environmentally friendly technologies, new technological ecosystems, new enterprises (or the growth of existing ones), new workforce skills and new infrastructure. If the region invests sufficiently to have access to all of these elements, the result will necessarily be growth that is not only sustainable and inclusive, but also faster and more sustained, diversified and technologically sophisticated.

The need to attain a high and sustained growth rate to achieve sustainability and inclusion can also be considered from the opposite standpoint: underlying the 0.8% growth rate that the region has recorded over the last decade, from 2014 to 2023, there are no rapid or deep transformation and modernization processes aimed at sustainability and inclusion, aside from exceptions that do not alter the aggregate figures. There are more vicious circles than virtuous ones. The objective of the productive development policies described below in this article is to reverse this equation. The aim is to energize a reality in which transformations occur very slowly —to transform in order to grow and grow in order to change.

Simple arithmetic shows that, assuming a GDP growth rate of 1%, the region would take more than 140 years to double its per capita GDP; with a 2% growth rate it would take 70 years, and with a 4% growth rate its per capita GDP would double every 24 years (see figure 3).

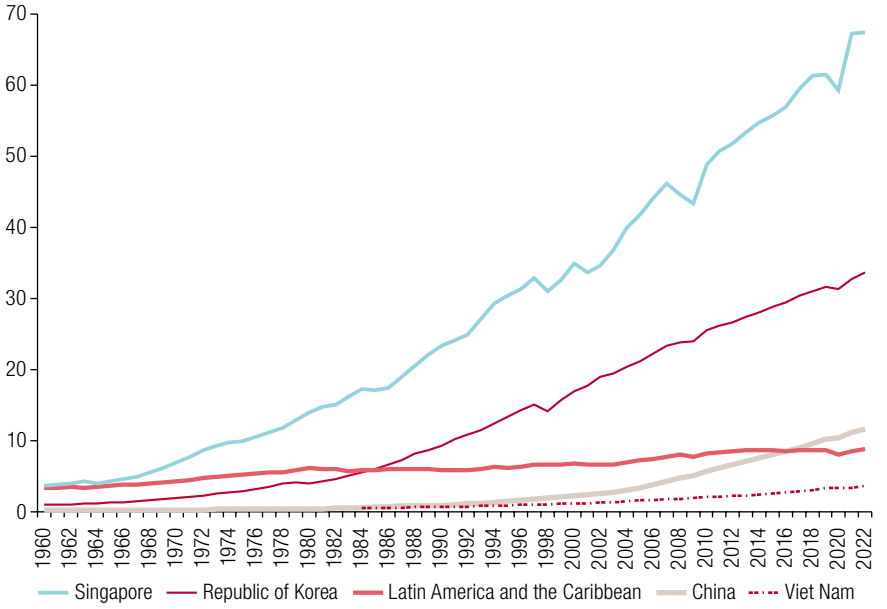
Figure 3
Time required to double per capita gross domestic product as a function of the GDP growth rate
(Years and percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC).
Note: The calculation assumes a population growth rate of 1% per year.

Growing at a rate of 4% or more on a sustained basis is not impossible; other countries have achieved this. For example, the Republic of Korea grew at over 7% per year for 40 years, from 1961 to 2000, increasing its per capita GDP by 17 times, from US$ 1,000 to US$ 17,000. Singapore and Taiwan Province of China report similar figures. China grew at a rate of 8.5% on average in the nearly four decades spanning 1981–2019, and increased its per capita GDP by 22 times, from just US$ 447 to US$ 10,156. More modestly, but equally impressively, Viet Nam grew at a rate of almost 5.0% in those same years, and increased its GDP per capita from US$ 500 to US$ 3,300 (see figure 4).

Figure 4
Latin America and the Caribbean and selected countries: per capita GDP, 1960–2022
(Thousands of constant dollars at 2015 prices)



Source: World Bank, "GDP per capita (constant 2015 US$)" [online] https://data.worldbank.org/indicator/NY.GDP.PCAP.KD.

There is no equivalent of these "Asian tigers" in Latin America and the Caribbean. Although the region's per capita GDP in 1960 was higher than those of the aforementioned countries, by 1990 it had only managed to raise it to US$ 6,000 and, today, 30 years later, it amounts to US$ 8,500.[2] This represents growth of just 1.2% per year; and the reality is that per capita GDP has contracted by 0.1% per year since 2014, reflecting a decade of impoverishment.

2. Reasons for sluggish growth according to economic growth theory

Multiple causes underlie the region's sluggish growth. Although an exhaustive analysis is beyond the scope of this article, it is worth reviewing some of the reasons briefly, starting with the four factors considered by basic growth theory: land, labour, capital and productivity.[3]

Land —particularly its distribution and efficient use— is one of the basic factors driving production and growth. A country's pattern of land use will determine whether its growth rate is sustainable. This first factor was the main driver of growth in the commodity export model. As countries develop, and manufacturing and services grow, the relative importance of land declines; but it remains a key element in a country's development pattern, since it influences the geographical or territorial distribution of economic activities. Moreover, some authors have suggested that reforms related to the ownership and use of land contributed fundamentally to the successful industrialization and development process in some countries.[4]

[2] According to the World Bank, in 1960 per capita GDP in Latin America and the Caribbean was US$3,295 (measured in constant dollars at 2015 prices). This was more than three times the per capita GDP of the Republic of Korea in the same year and about 13 times that of China.

[3] See Solow (1956) and Swan (1956).

[4] See Studwell (2014).

In several of the region's countries, and at different stages of their development, rural populations faced serious problems in gaining access to land, which led to a rapid expulsion of the population from rural areas. Today, many countries have very low productivity in rural zones, except for those that have developed modern commercial export agriculture, such as Argentina and Brazil.[5] Although the agriculture sector only accounted for about 5.6% of total regional GDP in 2021, it still generates more than 14% of total employment in the region. Improving productivity in this sector could therefore have a significant impact on structural change. However, as will be discussed below, increasing productivity goes far beyond improving the distribution of land as a factor of production.

The second factor of production is capital, which represents the accumulated stock of both public and private physical investment. Public investment includes roads, bridges, ports, electricity generation and distribution, drinking and wastewater management and also, in the twenty-first century, broadband Internet connectivity. All of this public-good infrastructure is a key ingredient for economic growth.

By contrast, private investment is the investment made by firms of all sizes in building infrastructure and acquiring machinery and technology for the production process. Maintaining a high level of private investment requires confidence in the country's institutional and legal mechanisms; that the regulatory environment is stable and minimizes bureaucratic procedures related to the incorporation of businesses and investment projects (particularly micro-, small and medium-sized enterprises); that financial capital and human talent are readily available; and that the public system attracts investment and collaborates with investors in the establishment of enterprises, always seeking to uphold the highest labour and environmental standards. The region has ample room for progress on all these issues, and the public sector plays a key role in attracting investment and consolidating dynamic business networks that contribute through innovation and technological development.

It is important to remember that private and public investment are not mutually independent, but complementary. If the level and quality of public investment are insufficient, the level and quality of private investment will not be sufficient either. For example, without logistics facilities, crops cannot be harvested; without good ports, specialized by type of product, it is impossible to import or export efficiently; and without digital connectivity, firms cannot compete in the technological world of the twenty-first century, nor can they export modern services.

For the past 20 years, Latin America and the Caribbean has unfortunately been the region of the world with the lowest rates of investment (see figure 5). This is one of the main reasons for the region's low rates of economic and productivity growth.

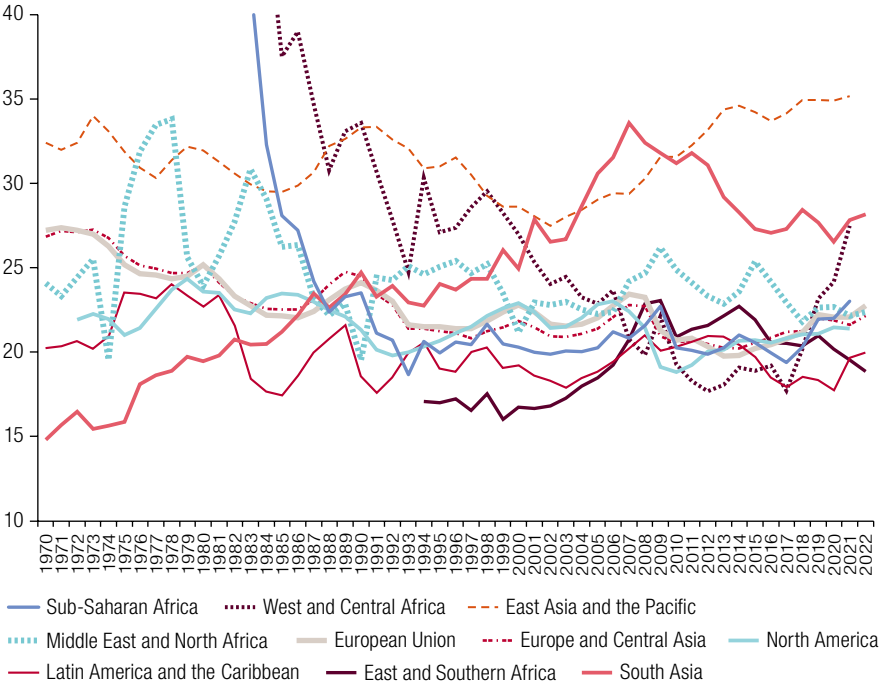
The third factor is labour, or human talent as it tends to be referred to today. In the 1950s, 1960s and 1970s, the accumulation of human talent explained much of the growth achieved by Latin American and Caribbean countries, owing to a high birth rate and a major expansion of primary and secondary education. The quantity and quality of talent increased, resulting in higher levels of economic growth, social mobility and expansion of the middle class.

By the end of the current decade, however, the demographic dividend is expected to end in all countries of the region, which will mean a decreasing flow of young people into the labour market. Rapid population ageing also contributes to slower growth of the labour force (ECLAC, 2022b, pp. 14–15). This is compounded by the deterioration of education systems. In most Latin American and Caribbean countries, the secondary school dropout rate is very high: on average, only 41.4% of the region's labour

[5] Given that agriculture is the main economic activity in rural areas, rural productivity is largely determined by the productivity of the agriculture sector; and, of the nine major sectors of economic activity, it is specifically this sector that has shown the lowest level of labour productivity in Latin America and the Caribbean since 1980. In 2014, the agriculture sector (including fishing, forestry and floriculture) accounted for 31% of the average labour productivity of the region's economy, followed by commerce (54%) and personal social and community services (79%) (Stumpo and Correa, 2017).

force has completed secondary education.[6] Moreover, in the case of those who do complete this level, the quality of learning is usually poor and has been deteriorating in recent years, as indicated by the tests results achieved in the Programme for International Student Assessment (PISA) (OECD, 2023).

Figure 5
Global fixed capital formation in different regions of the world, 1970–2022
(Percentages of GDP)



Source: World Bank, "Gross fixed capital formation (% of GDP)" [online] https://data.worldbank.org/indicator/NE.GDI.FTOT.ZS.

In the case of higher education, the coverage rate is still far below those of more developed countries: in 2018, the gross coverage rate in Latin America and the Caribbean was 52%, compared to 77% in Europe and North America (Valenzuela and Yáñez, 2022).[7] Moreover, relatively fewer professionals in science, technology, engineering and mathematics (STEM) subjects graduate from universities than in other countries. This is a problem, because this is the professional profile that is most needed in the productive paradigms of the twenty-first century. In short, another of the key elements contributing to the low economic growth syndrome in the region is the labour force, which displays ever slower growth rates and problems in the quality of the education received.

The fourth and main ingredient in the region's low-growth recipe is weak productivity growth. Productivity depends on several factors, including the quality of capital and equipment available to workers for production, the technologies used in the production process, and human talent skills. Perhaps most important of all, however, is the fact that productivity reflects the efficiency with which those factors of production are used.

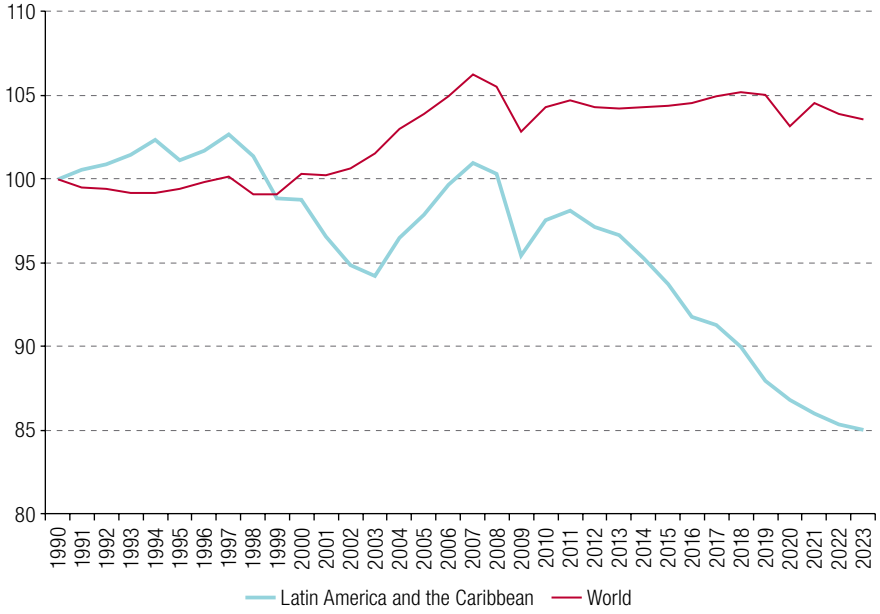
The major problem with development patterns in Latin America and the Caribbean is that there has been virtually no productivity gain in the region over the past 30 years (see figure 6).[8] In fact, since 2011, productivity has done nothing but decline, which has widened the region's productivity gap relative to the rest of the world.

[6] These data refer to 2021 and come from the Household Survey Data Bank (BADEHOG).

[7] The gross coverage rate is measured as total enrolment in higher education relative to the total population between 18 and 24 years of age.

[8] Among other relevant works on regional productivity, see Pagés (2010) and Stumpo and Correa (2017).

Figure 6
Latin America and the Caribbean and the world: cumulative growth of total factor productivity, 1990–2023
(Index: 1990=100)



Source: Prepared by the authors, on the basis of The Conference Board, Total Economy Database [online] https://www.conference-board.org/data/economydatabase.

Underlying the low levels of productivity in the region as a whole, there is great variety between the different sectors of economic activity, between firms in the same sector, and between territories within the same country. In other words, economic sectors coexist with substantial productivity differences, and their productivity is below that of their international peers. A few firms with high levels of productivity coexist with a large mass of firms of low productivity; and regions of high productivity coexist with others where productivity is very inadequate. This situation of the region's economies, in which modern and competitive sectors, firms and territories coexist with backward ones, has traditionally been referred to as "economic dualism" or "structural dualism".[9]

Improving the region's productivity will depend, partly, on reducing this heterogeneity. This can be achieved through three complementary lines of productive development policy: measures to increase the productivity of backward sectors, firms and territories; measures and policies to further improve the productivity of leading sectors, firms and territories; and measures and policies to generate and speed up virtuous structural change through investment and the development of new higher-productivity sectors and activities of that were previously non-existent (Salazar-Xirinachs, Nübler and Kozul-Wright, 2014; Salazar-Xirinachs and Cornick, 2017; Rodrik and Sabel, 2022; Sabel and Ghezzi, 2021; Verhoogen, 2021; OECD, 2022).

In terms of structural change, the countries of the region have been unable to move a sufficient number of workers from low- to high-productivity sectors and firms; and some studies suggest that there has even been a movement in the opposite direction.[10] One of the main tasks of productive development policies is precisely to change this perverse pattern of structural transformation into a virtuous one, in which workers move to higher productivity sectors and firms.

[9] See Furtado (1965, p. 78) and Rodrik and Sabel (2022).

[10] See McMillan and Rodrik (2011).

In short, the countries of the region have been unable to sufficiently foster greater technological sophistication, productive diversification and repositioning of their economies by promoting more productive firms and sectors. This translates into a low degree of sophistication and diversification in their export baskets and a poor performance of the indicators that measure their economic sophistication.[11]

Aside from the factors considered by basic growth theory mentioned above, other elements could help explain the region's low economic growth, which conventional growth theories generally have ignored. Two of these are income inequality and political instability and uncertainty.

In terms of the first of these elements, recent research has made it very clear that a high degree of income inequality and concentration of oligopolistic power hampers productivity and income growth.[12] This is partly because high levels of inequality reduce the potential size of markets, and partly because the concentration of oligopolistic power leads certain influential sectors to be satisfied with living off non-productive rents and extractive institutions, and to oppose reforms and policies that aim to diversify economies, generate new engines of growth and redistribute income. To reverse this situation, in addition to implementing social and other redistributive policies, it is crucial to have a government that disciplines rentier groups and extractive institutions through public policies, including a correct application of competition policy, and one that implements productive development policies that, as discussed below, can generate new sources of wealth and growth.

As regards the second element mentioned, political instability and uncertainty can reduce investment and growth. As Martin Wolf (2023) and Larry Diamond (2019) have argued, and as Raúl Prebisch (1981) himself recognized when speaking of peripheral capitalism, dynamic economic systems capable of creating prosperity are highly complementary with open and stable political systems. When politics become polarized, they generate very high levels of uncertainty, instability and conflict that affect economic growth. Transforming the processes of the production structure is a long-term cumulative endeavour that require State policies that transcend electoral periods and resolve social and economic demands by channelling them through a common development project. In the absence of minimal conditions of continuity in terms of productive development policies and social progress, transitioning towards a more productive, inclusive and sustainable pattern of development becomes more complex and slower, and may even regress, not only owing to lack of investment, but also because of social instability.

III. What should be done? The need for productive development policies and their role

So, what should be done? From the foregoing diagnostic assessment, the answer to this question would seem to be easy, since it provides a list of actions to overcome the obstacles described:

- Improve access to and the use of land.
- Increase investment levels, both public and private.
- Increase the quantity and quality of human talent, through improvements in education and vocational training systems and, in some cases, also through specific migration policies.
- Develop policies that boost productivity growth and, in particular, foster productive development, both in laggard sectors, firms and territories and in leading sectors and, above all, in new sectors and firms that can drive virtuous structural change towards activities of higher productivity.
- Establish redistributive and competition policies.

[11] See, for example, Hausmann, Hwang, and Rodrik (2007); Hausmann and others (2013); Benavente (2016); ECLAC (2022a, chap. II, and 2023c); and Molero Oliva and others (2022).

[12] See Fernández-Arias and Fernández-Arias (2021).

- Strengthen the capacity of the political system and institutions to maintain policy frameworks committed to long-term productive development.

However, while it is easy to list these action fronts, in many of them significant improvements are not that easy to achieve, and could take decades to do so. Nonetheless, developing countries can make progress without having to undertake lengthy structural reform processes or to have an excellent business climate,[13] or strong "fundamentals" in advance, as Rodrik and Stiglitz (2024) argue. Although the countries of the region need to advance on all of these fronts with a long-term vision, the policies aimed at increasing productivity include a subset that would enable progress to be made within a reasonable period of time if implemented on a large scale and with continuity. These are the new-generation productive development policies.

1. What has ECLAC had to say on this subject?

Before describing the new ECLAC vision of productive development policies, it is worth reviewing what the Commission has said on the subject in the past, since productive development and technical progress have been major pillars of the Commission's analysis and thinking.

In stylized terms, the ideas of ECLAC on the subject can be grouped into two major phases. The first "structuralist" stage focused on the accumulation of fixed capital for industrialization, and prioritized "inward" development. The second, the neo-structuralist phase, which began in the 1990s, highlighted international integration founded on "genuine competitiveness", based on the systematic incorporation of technical progress. This would make it possible to foster economic growth and social equity, simultaneously rather than sequentially (Fajnzylber, 1991).

Since then, ECLAC has refined its proposal and adapted it to the new global realities. To sustain long-term growth in an open-economy setting, it was necessary to shift towards sectors that are more dynamic, both technologically and in terms of global demand. In a scenario where trade liberalization was gathering pace, ECLAC harnessed integration mechanisms through "open regionalism" (ECLAC, 1994).

The Commission emphasized the idea that transformation of the production structure policies were an essential complement to social policy on a path to inclusive growth. It argued that, without growth that would increase the demand for skilled labour and create opportunities for micro-, small and medium-sized enterprises, it would be difficult to achieve progress in terms of equity and sustained poverty reduction (ECLAC, 2010). Since market forces tend to deepen prevailing structures, ECLAC defended the importance of productive development policies as a fundamental element of a renewed equation between state, market and society (ECLAC, 2012). Transformation of the production structure, as a complement to the 2030 Agenda for Sustainable Development and its Sustainable Development Goals, should lead to the predominance of productive activities and processes that are intensive in learning and innovation, associated with markets and the provision of rapidly expanding goods and services, which would increase production and employment and encourage environmental protection and the decoupling of economic growth from carbon emissions (ECLAC, 2016).

More recently, in its productive development proposal, the Commission addressed the need to adapt to the changing patterns being generated by technological change and the climate crisis. It proposed a model to make external constraints compatible with environmental sustainability and, at the same time, reduce inequality of opportunities and outcomes (ECLAC, 2022a).

Although this brief review does not do justice to all of the intellectual wealth that ECLAC has produced on these issues, it is clear that industrialization, productive development, productivity and innovation policies are topics that the Commission has prioritized in its analysis.

[13] See Lin and Monga (2017).

2. The new generation of productive development policies

The countries of Latin America and the Caribbean clearly continue to display major deficits in terms of productivity and productive development. However, as shown by various experiences in Asia, Europe and other regions, the gap with the more developed economies can be narrowed by speeding up the transformation of processes in the production structure that generate faster economic growth, boosting learning systems and promoting entry into new industries, markets and value chains. This "catch-up growth" enables developing countries to close the gap on more developed countries, which is precisely the immediate objective of modern productive development policies.

The history of economic development has taught that "No country has made the arduous journey from widespread rural poverty to post-industrial wealth without employing targeted and selective government policies to modify its economic structure and boost its economic dynamism" (Salazar-Xirinachs, Nübler and Kozul-Wright, 2014, p. 1). However, the instruments designed to foster these economic transformation processes have changed as a result of lessons learned from various experiences, the new realities of globalization and the multilateral trading system, supported by theoretical and conceptual advances in the development literature.

The need for modern productive development policies is now widely recognized. The debate now focuses not on whether or not it is necessary to implement such policies, but on how to do so.[14] There is also a broad consensus on the need to develop appropriate forms of public-private and public-public collaboration, with all relevant stakeholders, in other words based on a broad definition of collective action.

The theoretical justification for cooperation between economic actors is based on three fundamental ideas. First, no single actor or agent possesses all information on problems or solutions (neither the public sector, nor academia, nor firms, nor workers), which is why it is necessary to garner all available information by creating working groups involving all relevant actors, including firms of all sizes. Secondly, productive development is more than merely a process of aggregating information. It involves collective search or discovery, characterized by "strategic uncertainty": no single economic agent has all the knowledge about what needs to be done. So it is essential to work collectively, implementing continuous processes of detecting and prioritizing problems, and designing solutions which, in turn, allow new problems to be detected and course corrections to be made when necessary. This is a continuous process of interaction between economic agents, which some authors have called a trial-and-error or "experimentalist governance" process, as will be discussed below.[15] Thirdly, the fact that the benefits and outcomes in terms of transformation of the production structure accumulate over time makes it necessary to develop long-term processes and policies —that is policies that are not tied to a specific government administration. Policy swings and volatility do not contribute to long-term change processes.

Also associated with this vision of productive development policies is the concept of "market governance" (Wade, 1990; (Salazar-Xirinachs, Nübler and Kozul-Wright, 2014), based on the idea that productive development is a social construction, resulting from the coordination and alignment of the efforts of all relevant actors. This new vision supersedes the old, sterile and ideologically fuelled debate on State and market, in which the pro-market position relies on the "magic of the market" and the pro-State position relies on the "magic of the State". By contrast, the new generation of productive development policies relies on the "magic of the process"[16] of public-private, private-private and public-public partnerships, encompassing educational and vocational training institutions and civil society. This set of collaborations,

[14] See Chang (2010), Cimoli, Dosi and Stiglitz (2009), Rodrik (2008), Mazzucato (2013), Crespi, Fernández-Arias and Stein (2014), Salazar-Xirinachs, Nübler and Kozul-Wright (2014), OECD (2022) and Llinás (2021).

[15] See Sabel (2012), Sabel and Zeitlin (2012), Sabel and Jordan (2015), Cornick (2017), Salazar-Xirinachs (2020), and Rodrik and Sabel (2022).

[16] To the best of the authors' knowledge, the "magic of the process" concept was coined by Jon Azúa, the father of cluster policies in the Autonomous Community of the Basque Country (see Monge-González, Salazar-Xirinachs and Espejo-Campos, 2018).

also known as the triple or quadruple helix model, focuses on the practical: solving problems, promoting discovery processes and hastening productive learning and productivity growth.

Neoclassical economic theory is based on the conceptualization of a perfectly competitive market that produces optimal outcomes in terms of resource allocation, with intervention only justified when market failures occur. This conceptualization is what has given rise to the binary and abstract debate between state and market; but, in reality, no market exists in the pure theoretical form. All markets are social constructs affected by the behaviour of specific actors, specific institutional arrangements, regulations of one kind or another, specific public goods and specific economic structures. It is this recognition that has elicited perspectives that are more institutionalist and realistic than the abstract and simplified market concepts found in textbooks. Consistently with this line of thinking, Mariana Mazzucato (2013 and 2018) insists that, rather than correcting market failures it is more useful to conceptualize the role of public policies in creating and shaping such markets, and in driving economic transformation processes based on the concept of "missions," defined as collective efforts to address major challenges.

Nonetheless, the neoclassical view can be useful as a first approximation and as a rationale for analysing the types of intervention that are possible in productive development policies. For example, recent studies have emphasized the existence of two types of failure, for which mitigating interventions would be justified in order to foster transformation of the production structure.[17]

Firstly, there are appropriability failures, which result in suboptimal levels of investment because the investor cannot fully appropriate the corresponding returns. This positive externality problem explains, for example, why there are not more exporters in new economic activities ("pioneer" exporters),[18] why an employer does not invest more in training for its employees, or why there are not higher levels of investment in innovation and entrepreneurship. This situation justifies the deployment of instruments and interventions to raise these investment figures closer to their social optimum level.

Secondly, there are coordination failures that prevent an economic activity from developing or achieving its maximum productivity potential, since another series of parallel investments or actions would be needed for this to happen. For example, a shortage of workers with specific profiles and skills can prevent a given sector from developing; weaknesses in a country's system of sanitary and phytosanitary measures can reduce its capacity to export to certain markets;[19] or the absence of individuals with the knowledge and skills needed to provide technological extension services can hinder the development of a robust extension market. In all of these cases, intervention would be required to shift the productive apparatus out of its existing disequilibrium state, which prevents certain economic activities from developing to the full.

In view of the above, and although precise definitions are not always necessary, a definition of what ECLAC understands by "productive development policies" can be attempted. These are interventions, whether by nature cross-cutting throughout the economy (horizontal policies) or else targeted to specific sectors, clusters or strategic areas (vertical policies). The latter aim to increase degrees of sophistication or diversification, accelerate learning processes and the creation of productive capacities, and foster virtuous structural change in the economies in question. They thus serve as a vehicle for increasing productivity, entering new industries or new markets, strengthening participation in value chains, creating decent jobs and, in general, achieving higher levels of prosperity and more productive, inclusive and sustainable patterns of growth.

Governance and collaboration are important, because these policies can only be implemented effectively through the coordinated joint efforts of key actors in the public sector (at both national and local level), the private sector, academia, research centres and civil society. The aim is to work on strategic agendas to speed up transformation of the production structure processes in their economies.

[17] See Juhász, Lane and Rodrik (2023), Cherif and Hasanov (2019), Rodriguez-Clare (2005) and Hausmann and Rodrik (2002).

[18] See Sabel and others (2012).

[19] See Sabel and Ghezzi (2021).

3. Industrial policies or productive development policies?

Another important aspect of modern productive development policies that needs clarification is their relationship with what has traditionally been referred to as industrial policy, and whether their scope should be confined to the manufacturing sector or could be broader. New technologies have given rise to a new production paradigm and have blurred, if not eliminated, the boundaries between the agriculture, industrial and service sectors. Moreover, this trend has intensified as various technologies have converged in production processes.

Traditionally, development economics has rightly focused on the industrial sector, on the grounds that it has at least four unique characteristics that neither agriculture nor the service sector have to the same extent: (i) economies of scale; (ii) access to international markets; (iii) capacity to enhance labour with capital and technology, in other words innovation capacity; and (iv) strong linkages and spillovers in its relation with other sectors.

However, the technological and digital revolution has changed this reality substantially. The idea that services had little potential for generating economies of scale and accessing international markets was based partly on the observation —correct before the digital revolution— that the production and consumption of services required physical proximity; so production and consumption had to occur simultaneously, thereby making it a non-tradable sector. The advent of the Internet and the digital revolution radically changed this.

There are now categories of services that have huge economies of scale and are highly tradable, especially modern services that use information and communication technologies (ICTs) platforms to sell across borders. This includes subsectors such as call centres, shared services, technology and digital services, back office services, engineering or design and, of course, financial services, where a genuine revolution is unfolding in relation to fintech.

The Internet and the digital revolution also radically changed the idea that technological progress and innovation did not apply to the services sector in the same way as it did to industry. Today, many services are undergoing a revolution in terms of products, modes of delivery and business models. Some of the world's most innovative firms are in the service sector; and the interlinkages between many service subsectors have also grown, increasing the value that services add to final industrial goods. All this helps explain why, since 2000, trade in services has outpaced that of manufactured goods (ECLAC, 2017).

If this new vision of the service sector is set alongside the emergence of China as a manufacturing export power and the automation and robotization generated by the technological revolution, two ideas clearly emerge. Firstly, the viability of relying exclusively on industrialization as a development strategy has diminished; and, even if this were feasible, the potential benefits in terms of job creation would be smaller.[20] The road to industrialization is now much harder than it was in the 1950s, 1960s and 1970s. Secondly, there seems to be much more potential for development and the creation of good jobs in the services sector than traditionally thought.[21] Some countries are starting to derive major success and large profits from the production and export of modern services. The new trends and available data clearly reveal great opportunities in several service subsectors with potential to contribute to a growth and development strategy.

A similar story can be told of modern agribusiness activities. Today, the new Industry 4.0 production paradigm, or the fourth technological revolution, includes not only manufacturing industry itself, but also many segments of the heterogeneous service sector, as well as modern agricultural activities.

[20] See Rodrik (2015).

[21] For example, Rodrik and Sabel (2022) argue correctly that services are a strategic sector for the implementation of productive development initiatives, since they have a great capacity to create good jobs.

For all of these reasons, it is more appropriate to think in terms of productive development policies rather than the more limited term "industrial policies", which is more common in the literature. As explained above, these productive development policies aim to foster sophistication, diversification and virtuous structural change across whole economies, regardless of sector. They could therefore cover agriculture, services and mining, among other sectors, in addition to manufacturing.

Another reason to prefer the term productive development policies instead of industrial policy is the confusion that the latter can cause in the public debate. Industrial policies lost prestige, both worldwide and in the region, owing to criticisms of the import substitution industrialization model in the 1980s and 1990s. This was attributed to problems of exhaustion, rent-seeking and State capture, and led to the adoption of liberalization and hyper-globalization policies. Nonetheless, the recent deployment by some developed economies of industrial policies based largely on subsidies is also starting to generate a heated debate on the risks of falling into a "subsidy war" and potential threats to the multilateral trading system. These are not the kind of policies that ECLAC advocates.

In other words, in addition to being more precise, the term "productive development policies" avoids much of the confusion generated in the public debate by the term "industrial policies".[22] Having clarified why productive development policies should not be confined to the industrial sector, in this context of new technological conditions and production paradigms, their scope of action needs to be defined to provide clearer guidance for their design and implementation.

One way to start defining this scope is to bear in mind that, although the factors included in conventional growth theory (land, labour, capital and productivity) are all important for economic growth, a definition of productive development policies that included investment in infrastructure generally, for example, would be too broad. However, it is appropriate, and even essential, to include specific infrastructure and other public goods specific to the activities prioritized in the context of these policies. Similarly, despite the importance of human talent for growth and productive development, it would be superfluous to include all education challenges, such as those related to early childhood. As in the case of infrastructure, it is more appropriate to include the training of specific human talent for the productive choices that must be made in the framework of productive development policies; for example, training for work and higher education in the STEM fields.[23] In fact, developing the human talent needed by certain driving or energizing sectors is essential for implementing successful productive development policies, and for creating specific infrastructure for these sectors.

Two policy areas have a major influence on productive development: macroeconomics and competition. However, for reasons similar to those discussed above —although it is extremely important to be clear about the respective linkages— it does not seem appropriate to include these areas in the scope of productive development policies.

In view of the need to delineate the scope of productive development policies, as well as the numerous studies that have considered the different issues that should be covered by this type of policy,[24] diagram 1 presents a non-exhaustive overview of the areas that, from a practical perspective, should be included in the framework of such policies. It groups together different types of interventions and initiatives aimed directly at boosting sophistication, diversification and virtuous structural change in the respective economies.[25] These areas are: science, technology and innovation; technological

[22] The Inter-American Development Bank made an early and important attempt to position the term "productive development policies" in its foundational volume titled *Rethinking Productive Development: Sound Policies and Institutions for Economic Transformation* (Crespi, Fernández-Arias and Stein, 2014).

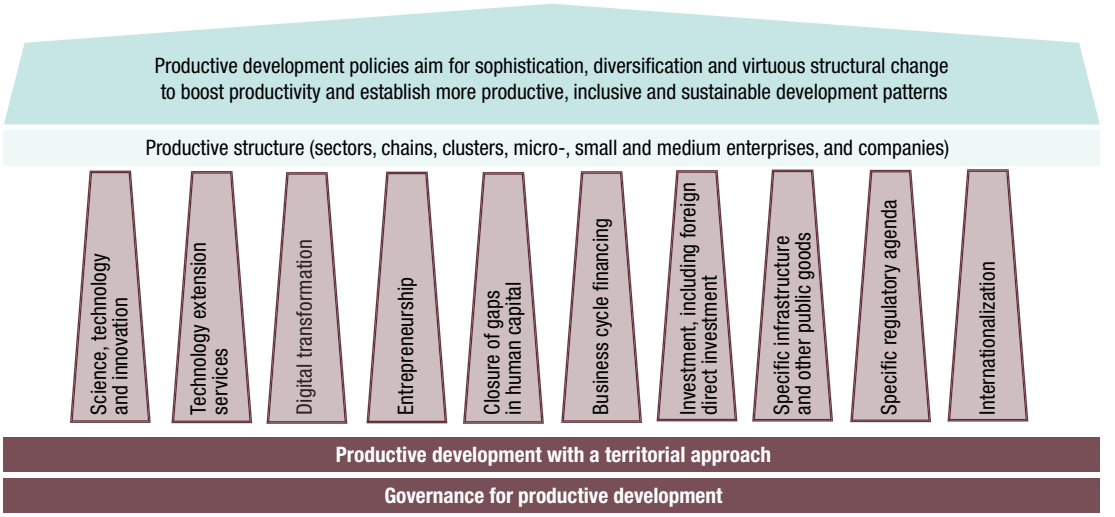
[23] In the two examples given —specific infrastructure and human talent— the absence or weakness of these factors represents a potential coordination failure that could inhibit the emergence of the prioritized economic activities, or improvement of their productivity.

[24] See Crespi, Fernández-Arias and Stein (2014), Cimoli and others (2017), Denzin and Cabrera (2017), ILO (2016) and Salazar-Xirinachs and Cornick (2017).

[25] Many of the interventions and measures to be implemented in the different areas are related to market and government failures that inhibit the productive transformation process.

outreach; digital transformation; entrepreneurship; detection and closing of the human talent gap; financing throughout the enterprise life cycle (including the role of development banks);[26] investment (including foreign direct investment); specific infrastructure; specific policy and regulatory agendas (including quality issues); and internationalization.[27]

Diagram 1
Definition and scope of productive development policies



Source: Prepared by the authors.

However, as when preparing a culinary recipe, more important than the individual ingredients is how they are combined. Applying this metaphor to productive development, more important than each of the areas identified in diagram 1 is the way in which the initiatives, actors and resources associated with the different areas are harnessed around strategic productive development policies and agendas.

For this reason, ECLAC emphasizes two cross-cutting issues related to the way in which these "ingredients" are combined. First, it is important to apply a territorial approach to productive development, since, as explained in detail below, productive development efforts have to be combined in a specific geographical context, in line with the strategies and capacities of each territory, bearing in mind that it is at the local level that much of the action in this area must be carried out. Second, governance is relevant for productive development, since, as noted above, a central aspect of the new generation of productive development policies is collaboration and coordination between multiple actors, including the public and private sectors, the academic sector and civil society. Governance mechanisms and institutional arrangements are therefore needed to facilitate collaboration among key actors in each sector (described above as the "magic of the process"), and to coordinate endeavours and resources at the territorial and national levels, as discussed below.

In short, the current proposal of ECLAC differs from the approaches adopted a few decades ago in two key ways: firstly, it involves applying a new generation of productive development policies, with very different instruments than those of the past; and, secondly, there are compelling reasons to broaden the scope of the production choices beyond the industrial sector.

[26] See Griffith-Jones and Ocampo (2018), Ocampo and Torres (2021) and Fernandez-Arias, Hausmann and Panizza (2019).

[27] A description of the strategies, programmes, instruments and governance challenges in each of these areas is beyond the scope of this article. However, they will be analysed in detail in future ECLAC work.

4. Focus on the "how"

All countries in the world implement productive development policies in one way or another, and the countries of Latin America and the Caribbean are no exception. While the use of such policies may have declined during the heyday of the Washington Consensus, the region never ceased applying a variety of them and still does so today.[28] However, neither the academic nor the public debate has focused sufficiently on the "how" of implementing these policies successfully.

The application of productive development policies in Latin America and the Caribbean has a number of specific characteristics. A variety of approaches coexist and often compete with each other, while the new vision of productive development policies described in the previous section is not yet fully integrated into policies or in analytical and academic work. Thus, it is unsurprising that actions undertaken in this regard are extremely heterogeneous and display major differences in terms of quality and depth both between and within the different countries. There has been insufficient comparison of experiences at the regional level or for peer learning. Moreover, the evaluation of these actions has been marginal, making it difficult to determine which have been fruitful and should therefore be applied on a larger scale, and which have not been useful and should therefore be adjusted or discarded.

Endeavours in this direction thus far have been somewhat tentative and too small-scale, considering the magnitude of the productivity challenge facing the region, and also compared to the amount of resources that other countries are allocating to it.[29] Efforts have also been intermittent and have not become State policies.

A centralized, top-down approach has often prevailed in the region, without sufficient drive and governance from the local level, nor empowerment of local actors (a decentralized or bottom-up approach). There has also been insufficient coordination of endeavours between the different ministries, national agencies and other relevant actors, as well as between actions implemented at the national and subnational levels.

The region has much room for improvement in all of these dimensions for the implementation of productive development policies. There is a variety of opportunities for learning in this domain, given the existence of ample and well-documented international experience on the subject. On clusters alone, for example, the European Observatory for Clusters and Industrial Change has catalogued 2,950 cluster initiatives, accounting for almost one in four jobs (62 million) and half of the employment in export sectors in Europe (Hollanders and Merkelbach, 2020). In Japan, the Government supports numerous clusters, especially in the high-tech area. In Spain, the Autonomous Communities of the Basque Country and Catalonia have both developed highly successful productive development policies, one of the main ingredients of which has been cluster development. The Platform for Cluster and Other Territorial Productive Articulation Initiatives in Latin America and the Caribbean, launched by ECLAC in December 2023, has an initial inventory of 259 initiatives involving more than 40,000 firms from nine countries in the region.[30]

This discussion on the "how" has become more urgent and relevant in view of the new reality described above, in which developed countries have started to implement robust industrial policies, using substantial subsidies as one of their main instruments. This is exemplified by the United States, through the Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Science Act (the CHIPS and Science Act) and the Inflation Reduction Act, and also in the European Union, through the European Green Pact. This new industrial policy activism in developed countries should lead Latin American and Caribbean countries to be much more pragmatic, strategic and effective in terms of their own productive development policies.

[28] See Salazar-Xirinachs, Nübler, and Kozul-Wright (2014).

[29] For example, between 2016 and 2021, Argentina invested about 0.5% of GDP in productive development policies (without considering the Plan for the Promotion of Argentine Natural Gas Production (*Plan Gas*), the emergency funding for the coronavirus disease (COVID-19) pandemic and the capitalization of guarantee funds), which represented about 2% of total public spending (Cassini, 2022). The Government of Colombia, for its part, invested 2.0% and 2.6% of the nation's general budget in 2019 and 2020, respectively (Gómez, 2021). Lastly, in 2019, the Government of Chile invested about 1.88% of total public expenditure in productive development policies, to which was added the investment of 0.12% made by regional governments, amounting to 2.0% of total public spending (Correa, Dini and Letelier, 2022; Yáñez and Fuentes, 2022).

[30] See [online] https://www.cepal.org/es/proyectos/plataforma-iniciativas-cluster-otras-iniciativas-articulacion-productiva-territorial.

IV. How can this be done? Guidelines for applying productive development policies

To achieve higher, sustained, inclusive and sustainable economic growth, the region's countries need to deepen their productive development policies and improve their interconnection and management; give them continuity through a long-term vision; implement them with a greater role for the territories; improve their monitoring and evaluation and, in general, increase their effectiveness and impact. How can all of this be achieved? Six guidelines are proposed below to guide action on productive development policies. These are:

(i) Raise the level of ambition and improve the implementation of new-generation productive development policies.

(ii) Target specific sectors and activities.

(iii) Achieve a better balance between a centralized (top-down) and decentralized (bottom-up) approach, working with stakeholders in the territories.

(iv) Use cluster and other initiatives of territorial productive articulation as a practical and effective way of organizing management and collaboration processes for productive development.

(v) Improve the governance of productive development policies in line with the experimentalist governance approach.

(vi) Conduct continuous evaluations, to be able to correct policy direction in a timely manner under changing conditions of strategic uncertainty.

1. Raise the level of ambition and improve the implementation of new-generation productive development policies

As noted above, the countries of Latin America and the Caribbean have always implemented a productive development policy of some kind. As a result of the change in the economic model from import substitution industrialization to the pursuit of integration into global value chains, efforts focused on policies to promote exports and attract investment.

However, outside of these areas, productive development policy initiatives have been relatively modest, and their impact on productivity and growth has been marginal. For this reason, the first proposal is to urgently raise the level of ambition in productive development policies, and to do so in keeping with the vision of the new generation of policies of this type.

Unlike the huge amounts of subsidies and tax credits deployed by developed countries, the type of productive development policies proposed by ECLAC do not require large sums of money for their implementation. This new generation of productive development policies draws on the work of multiple actors articulated through governance mechanisms —such as those underpinning cluster initiatives— which aim to identify projects and actions to raise the productivity of the prioritized areas. It is these projects and actions that will require a large amount of public and private investment resources to be mobilized.

Many of these projects will aim to provide specific public goods as necessary for growth, and increase the technological sophistication of the sectors targeted by the productive development policies, and also for the training of human talent and innovation. The projects may be financed from multiple sources: the regular State budget; the budget of specific public, private and academic institutions; the budget of local governments, loans from national or international development banks or international cooperation.

In this regard, there are at least two major differences with respect to the subsidy and fiscal incentive policies applied in other parts of the world: first, most of the financing does not come from the national budget, which is highly relevant in an era of tight fiscal space; and, second, the projects requiring financing are closely aligned with the strategic agendas of their respective sectors. In other words, this type of productive development policy makes cost-efficient use of the scarce resources available to implement such policies.

2. Target specific sectors and activities: the role of selectivity

A second fundamental guideline consists of targeting and prioritizing areas or sectors that drive or stimulate growth. This is one of the issues that has generated most controversy among economists in the past, because those who have traditionally opposed a proactive role for public policy in this area have argued that it is not the Government's job to "pick winners". There are several ways to respond to this argument. Firstly, history has shown that, in all cases where rapid and convergent growth has been achieved, the State has played a proactive role —for example, by creating markets, supporting firms, encouraging technological modernization, supporting learning processes, eliminating bottlenecks, helping to provide financing or promoting missions to facilitate change.

Secondly, as noted in Chang (2010), Stiglitz, Lin and Monga (2013), Salazar-Xirinachs, Nübler and Kozul-Wright (2014) and elsewhere, the distinction between "horizontal" measures (which are considered neutral since they affect all sectors) and "vertical" measures (which support specific economic activities or sectors) is a false dilemma, as even supposedly cross-cutting policies favour some sectors more than others. For example, the development of basic infrastructure cannot be neutral: a road or a bridge benefits some regions or communities but not others. Moreover, infrastructures such as these benefit certain sectors more than others. Vocational training programmes focus on resolving bottlenecks and skills mismatches in particular sectors. Even a specific exchange rate policy favours some industries, regions or sectors more than others (for example, exporters over importers). Therefore, as Hausmann and Rodrik (2006) have long argued, governments are "doomed to choose" —even if believe they are advocating neutral policies.

Thirdly, approaches to industrial or productive development policies have undergone changes that have diluted the meaning of "picking winners". As explained above, modern approaches are based more on organizing collective action in specific sectors through cooperation between the public, private and academic sectors, than on adopting protectionist measures or paying outright subsidies to certain sectors. Today, therefore, prioritization in production is less about choosing sectors to subsidize or protect, and more about supporting the self-managed efforts of key actors in sectors or clusters with great potential for momentum and development. This selectivity has shifted from being based on top-down, vertical planning mechanisms and selective tariffs or subsidies, to a more decentralized, bottom-up approach that makes use of a broader range of measures and instruments to support and address the collaborative dynamics and needs of firms in sectors, clusters or strategic areas. Under these conditions, incentive capture and rent seeking cease to be a problem, at least partly; and the allocation of resources becomes an exercise in productive and development choices.

Fourthly, this debate, which was always more theoretical than pragmatic —since it was based on an idealized market model that always gave optimal results except when it failed— was put into perspective by progress in the field of institutional economics and the recognition that no market operates in a vacuum, but in an institutional context, with rules and norms established by society.[31]

Lastly, the idea that the developed economies did not have industrial policies and that this was the model to be followed —an idea that never matched reality[32]— has recently ceased to make sense, since, as explained above, developed countries are implementing industrial policies with a clear focus on sectoral and technological priorities.

[31] See North (1991) and Chang (2011).

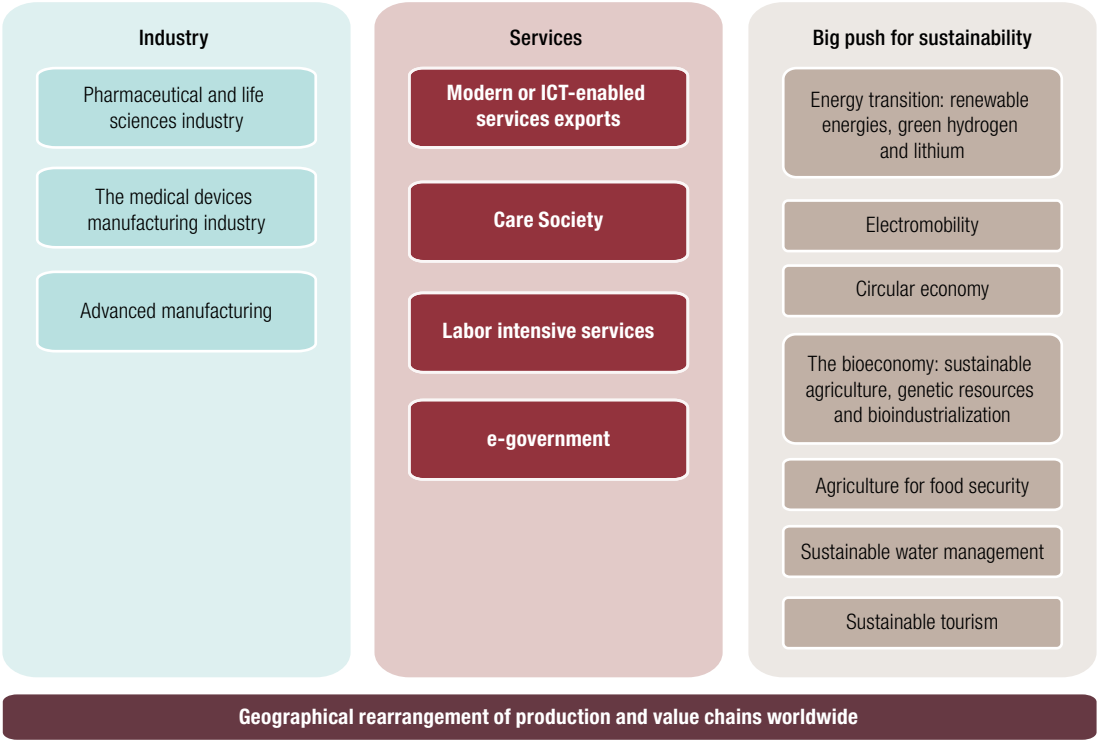
[32] See Cohen and Delong (2016) and Wade (2014).

Despite all of this debate, the fact is that the bottlenecks and challenges are very numerous, while resources, institutional capacities and political capital are limited. As a result, societies are forced to prioritize the areas on which to focus their work, addressing certain challenges first and devoting effort and resources to them, while leaving open the possibility of addressing other challenges at a later date. However, this does not prevent Governments from doing their utmost to broaden their scope of action, in order to meet the needs of as many economic activities as possible.

Since its inception, ECLAC has proposed setting priorities in production. From 1950 to 1980, the Commission advocated a focus on industrialization, given the unique characteristics of manufacturing industry as described in section III.3. However, the approach of import substitution industrialization was very different from what has been called the new generation of productive development policies. Firstly, it was associated with a very specific method or instrument of intervention: tariff protection; and secondly, as also explained in section III.3, it is not advisable to restrict these policies to the industrial sector alone, in the context of new technological conditions and production paradigms.

In keeping with this new approach, an illustrative, though not exhaustive, list is proposed of 15 sectors or areas that are growth drivers and energizers. Given their characteristics, these would have the capacity to foster a transformation of the production structure in the desired direction of greater inclusiveness and environmental sustainability. These sectors or areas could be used as benchmarks by countries and their territories when setting production priorities within their productive development policies. They are also sectors or areas with a great capacity to generate synergies and feedback effects to move towards greater and more sustained growth (see diagram 2).[33]

Diagram 2
Major productive transformation for productivity, inclusion and sustainability: portfolio of driving sectors



Source: Prepared by the authors, on the basis of Economic Commission for Latin America and the Caribbean (ECLAC), *Investment and cooperation opportunities for Latin America and the Caribbean and the European Union* (LC/TS.2023/78), Santiago, 2023.

[33] See ECLAC (2023a) for further details.

The sectors or areas listed in diagram 2 are grouped in three categories. The industry category includes pharmaceuticals and life sciences, medical devices and advanced manufacturing. The services category includes the export of modern or ICT-enabled services, the care society, labour-intensive services and e-government. The big push for sustainability category includes energy transition (solar and wind energy, green hydrogen and lithium), bioeconomy (sustainable agriculture, genetic resources and bio-industrialization), electromobility, the circular economy, agriculture for food security, sustainable water management and sustainable tourism. Cutting across all categories are the opportunities opened up by the geographical relocation of production and global value chains, as this is a key trend present in several of the other sectors listed.

The message is not that all countries should prioritize these 15 sectors, nor that these are the only sectors that should be prioritized. The sectors and priorities must be defined in light of the specific conditions prevailing in each country; other sectors and activities could be added according to the characteristics and priorities of each country or territory. All of them are productive activities that open up new opportunities not only for investment and growth, but also for collaboration and strategic alliances at the international level.[34]

As can be seen in diagram 2 and in section III.3, this is a new strategy for growth, transformation of the production structure and employment that embraces a wider range of sectors, rather than emphasizing industrialization exclusively. It also adopts a very different approach to the "how" mentioned above, which will be considered in greater detail below.

There are several ways to define productive priorities in the framework of productive development policies. For example, for over a decade the European Union has been implementing the research and innovation strategies for smart specialization (RIS3), in which regions prioritize strategic areas or technologies, at the subnational level, based on their productive or research capacities.[35] Mazzucato (2018 and 2019), meanwhile, proposes establishing priorities on the basis of the major challenges or missions to be addressed, and she argues that the sectors to be involved in these efforts will prove self-selecting.

Regardless of the method used to establish priorities, productive choices need to be made from the standpoint of managing a portfolio of risks, on the understanding that some of these choices may fail, for various reasons. Some failures are inevitable, but these should not lead to the rejection of this type of policy. In addition to learning from these experiences, it is important that the successes provide benefits that more than compensate for the losses caused by the failures.[36]

One way to put this selectivity into practice and to develop strategic agendas based on these priorities is through cluster initiatives. As noted above, the operational or running costs of cluster initiatives are not high. They include funding for the cluster manager and his or her team, which in a small cluster may consist of only one or two other people, and the costs of executive committee and working group meetings. One of the great advantages of cluster initiatives is that the working groups and the executive committee quickly produce ideas for infrastructure projects, talent development, and regulatory or other issues, to develop the cluster and increase its competitiveness. It is this portfolio of investment projects that may require a much larger mobilization of financial resources. In other words, while the financial requirements for implementing a cluster-based productive development policy are not high, larger sums are needed to finance the projects generated by these initiatives.

It is important that efforts (including support for cluster initiatives), instruments and any other type of intervention relative to production priorities, in the framework of productive development policies, be conditional on the achievement of results and targets.[37] It was through this "carrot and stick" system —that is, through threats and incentives— that the successful industrial policies that gave rise to the Asian

[34] See ECLAC (2023a).

[35] See Foray, David and Hall (2009) and Aranguren and others (2019).

[36] In fact, according to Rodrik (2004), the absence of failures among these policies means that they are not being implemented correctly.

[37] See Rodrik and Stiglitz (2024) and Mazzucato and Rodrik (2023).

economic miracle were implemented,[38] unlike the border protections granted in several Latin American and Caribbean countries, which were not conditional on achieving higher export or productivity levels. As Rodrik (2004) notes, during the boom period of the import substitution model in the region, the carrot prevailed over the stick when it came to developing industrial policies.

This conditionality should be even stricter when, if there is fiscal space, instruments such as tax credits and subsidies are used. In this case, for example, the instruments in question should be designed with sunset clauses, in order to confine them to a specific period, after which they should expire. This would generate the right incentives and minimize the fiscal cost. As Rodrik (2004) argues, a modern industrial policy does not consist of governments "picking winners", but of ceasing to prop up losers.

It is also essential that the productive choices made in the framework of productive development policies aim at the internationalization of the prioritized sectors, in the sense not only of exporting, but also of producing efficiently to be able to face competition from imports and to tap into international knowledge and technology flows.[39] Achieving this requires work on productive development agendas that focus explicitly on this internationalization, which, in turn, entails addressing the specific bottlenecks affecting this objective.[40]

In short, the new generation of productive development policies gives greater weight to the structuring of collaborative processes among key actors in the prioritized productive activities than to incentive and subsidy mechanisms. The financing requirements of these policies focus mainly on the inventory of projects generated by collaborative work systems, such as cluster initiatives. If it is considered appropriate to offer incentives, the cost of these should be added; but this is not an indispensable element, but optional in some cases. Lastly, according to the comprehensive vision of productive development policies represented in diagram 1, there are other categories that also require financing and investment, mainly in areas such as science, technology and innovation, technological outreach and entrepreneurship.

3. Achieve a better balance between a centralized (top-down) and decentralized (bottom-up) approach by working with stakeholders in the territories

As noted above, the countries of the region initially preferred centralized approaches in which productive development policies emanated from the central or federal government. More recently, the territorial and local approach has been developed to a greater extent in some countries. ECLAC argues that productivity is generated at the local level, with local actors; and this partly explains the heterogeneity of subnational productivity levels and growth rates in the countries. Accordingly, the third proposed guideline entails deepening work on productive development policies at the territorial level.

There are many reasons to support the strategy of adopting a territorial approach to productive development, in other words a bottom-up rather than a top-down approach. To start with, there are technical arguments. Firstly, it is clear that working on productive development agendas from the territories substantially increases efforts and resources that are devoted to productive development compared to those that would be deployed if the work were confined to the national level. In general, in many countries of Latin America and the Caribbean, the territories and local governments and stakeholders have resources and capacities that can be added to those of the national level to work on productive development agendas in greater depth.

[38] See Rodrik (1995).

[39] The export target is important, however. As Hausmann (2023) points out, the few countries that have succeeded in maintaining high growth rates over time have done so because their exports have outpaced GDP and because they have diversified their exports into more complex goods.

[40] For further details on the subject, see Hallak and López (2022).

Secondly, adopting a territorial approach to productive development makes it possible to take account of particular features of the productive structures of the territories in question, and thus find solutions that respond to the specific needs of their entrepreneurs. Territories have comparative advantages in production in certain sectors and economic activities, and also in terms of research capacities, which must be taken into account when developing policies. Moreover, the same sector may have different needs depending on the region of the country in which it is located,[41] making a territorial approach essential.

Thirdly, a bottom-up approach makes it possible to take into account the specifics of the institutional capacities of the different territories. Not all of a country's territories have the same capacities to work on agendas and instruments with the same level of depth and complexity. It is therefore important to strengthen these capacities, particularly in territories where they are less developed.

Fourthly, many of the bottlenecks that hold back the sophistication and diversification of the region's economies can only be detected and addressed at the local level, with local actors (local entrepreneurs, governments or universities). For example, the detection and closing of human talent gaps is, in general, an agenda that should be developed with local entrepreneurs and local education and training institutions, or with the local branches of national institutions. This is particularly necessary when the strategic focus established at the local level for a given productive choice ultimately defines the necessary profiles and skills to be developed.

Then there are political arguments. In general, local territories and actors want to take control of their productive development. Consequently, the territories often do not welcome solutions that come from central governments, as these are often generic and far removed from local realities and priorities. As a result, not only are they ineffective, but the fact that they are imposed generates political tensions between the national and local levels. In addition, a local approach to productive development would make it possible to focus part of the efforts on laggard sectors, to ensure that they are not left behind, and thus avoid tensions and political extremism that can arise in these contexts.[42]

For this reason, working on productive development agendas from the local level is not only good economics, but also good politics. This position has been gaining strength in both the theory and practice of economic development, through the implementation of policies formulated specifically for the place in which they are to be applied (place-based policies).[43]

4. Use cluster initiatives as a concrete and effective way to organize management and collaboration processes for productive development

The fourth guideline involves the development of cluster initiatives, since these constitute one of the most practical and effective ways to materialize, combine and focus the productive development initiatives referred to in diagram 1, at both the national and local levels (depending on the sector in question).

Here it is important to distinguish clearly between the concepts of natural cluster and cluster initiative.[44] A natural cluster or agglomeration of firms is an economic phenomenon whereby firms in the same sector, or in related and supporting sectors, tend to agglomerate geographically. This is a strategy to improve efficiency, by taking advantage of what in economic theory is referred to as "Marshallian agglomeration economies". In this case, agglomeration occurs as a result of "the invisible hand of the market".

[41] See Llinás (2021).

[42] See Rodríguez-Pose (2018).

[43] See Bartik (2019), Rodríguez-Pose and Wilkie (2017) and McCann and Rodríguez-Pose (2011).

[44] In-depth analyses of the concept, economic rationale and practice of cluster initiatives can be found in Salazar-Xirinachs (2020) and Llinás (2021) and the works cited therein.

By contrast, cluster initiatives introduce a dimension of intentionality or "visible hand" to this process, which not only enhances the advantages of natural clusters, but also generates more value, by accelerating learning and innovation and improving productivity through collaboration and coordination processes. In *The Cluster Initiative Greenbook 2.0*, cluster initiatives are defined as "organized efforts to increase the growth and competitiveness of clusters within a region, involving cluster firms, government and/or the research community" (Lindqvist, Ketels and Sölvell, 2013, p. 1).

Cluster initiatives therefore foster the development of strategic agendas through organized participation by multiple actors from the public, private, academic and civil-society sectors, which work together on projects and actions aimed at improving the productivity of the firms in the cluster underlying the initiative. This coordination generally takes place in the framework of relatively simple institutional arrangements —for example, the cluster's general assembly, the executive committee and various working groups— in which all the stakeholders are represented, particularly the firms that form the various links in the value chains of the economic agglomeration.

In general, cluster initiatives define a strategic vision, along with a list of the key projects and actions required to achieve it. Thus, given the need to use resources in the most strategic way possible, cluster initiatives combine productive prioritization, a local approach, interaction among multiple actors and a strategic focus —all of which make them a very powerful instrument to materialize the productive development efforts of Latin American and Caribbean countries. Cluster initiatives have also proven an effective way to coordinate local with national productive development efforts, in other words to ensure that bottom-up initiatives are harmonized and reinforced with top-down initiatives.

Although cluster initiatives are becoming increasingly common in Latin America and the Caribbean,[45] there is significant room for improvement. It is possible to expand their use to all countries in the region, increase the allocation of resources, reduce heterogeneity in terms of the quality and ambition of their agendas, strengthen the professional capacities of the personnel who participate in them and improve the quality of their management, align their work with the concept of experimentalist governance (a topic analysed in the next section), and harmonize them more effectively with the rest of the productive development actions undertaken in the countries and territories.

Accordingly, a broader, more ambitious and articulated use of this approach is seen as a powerful way to strengthen productive development policies in the region. The platform for cluster and other territorial productive articulation initiatives in Latin America and the Caribbean, mentioned above, will facilitate the work of ECLAC in this area.

5. Improve the governance of productive development policies in line with the experimentalist governance approach

Governance for productive development is understood as encompassing all of the rules, arrangements, mechanisms and institutional dynamics for collaboration and collective action that make it possible to organize efforts, actors and resources around strategic agendas for productive development, together with the incentive systems that can be put in place for these purposes. As explained in this section, experimentalist governance is the appropriate approach to productive development policies, so the fifth guideline consists of improving the governance of such policies in accordance with this approach.

[45] See Llinás (2021), Monge-González, Salazar-Xirinachs and Espejo-Campos (2018), O'Neil and García (2015) and Aboal, Perera and Rovira (2020).

Articulation is a particularly important element in productive development policies and agendas.[46] In general, their implementation involves at least four types of interaction. Public-private articulation is essential, since it is the private sector that knows which bottlenecks prevent it from achieving higher levels of productivity, while governments generally have the solution to overcome these obstacles (or can serve as intermediaries to find it).

Public-public articulation, that is coordination between different ministries and government agencies, is necessary because the bottlenecks that could be hampering the productivity of a given economic activity generally fall within the remit of different ministries and agencies. This means that good coordination is needed to avoid duplication of efforts, along with simultaneity and speed in providing solutions.[47]

Private-private articulation, by contrast, occurs among entrepreneurs themselves and also between entrepreneurs, the academic sector and the research community, the latter being very difficult to achieve in practice. Although there is much talk of the triple (or quadruple) helix model for innovation, alluding to the joint efforts of the public, private and academic sectors, few regions in the world actually achieve synergy between these parties.

The fourth type is nation-region articulation, in other words coordination between policies, endeavours and resources at the national and local levels. In an optimal scenario, these two levels act in a synchronized manner; but this is seldom achieved in practice.

Given the need for interaction on multiple levels, it is essential to deepen the discussion on multi-level governance, in other words on the governance mechanisms that can adapt best to the different conditions and initial capacities of each country in the region and its territories. This is not only a matter of covering governance mechanisms —such as commissions, committees or round tables— where the different public, private and civil society actors jointly formulate and coordinate policies, agendas and projects, but also the financing mechanisms that define the practical support that these strategic agendas can receive and serve as an incentive for the work of the governance system.[48]

The theory underpinning the operation and governance of productive articulation mechanisms and, in particular, cluster initiatives, has recently been developed around the concept of "experimentalist governance".[49] Until very recently, the conventional economic theory of clusters had focused on natural clusters or agglomerations and the reasons for their formation, on the type of externalities that supported public policy intervention, and also on the evaluation of empirical data on their benefits. The economic theory of clusters had not progressed much from the initial analyses that originated with Alfred Marshall himself, although it did move forward in terms of empirical measurements of Marshallian externalities. In contrast to this scant conceptual development, productive development policies and practice based on the cluster approach experienced a real boom in the last 20 years, a period in which several handbooks were produced to systemize these experiences.[50]

Although many lessons and good practices have been compiled in the abundant literature on the "how", until very recently these have lacked a supporting theory. This shortcoming has been remedied and the theory on collaboration, articulation and collective action for productive development policies is now known as "experimentalist governance". The term is associated with the work of Charles Sabel

[46] See Llinas (2021).

[47] See Hausmann (2016).

[48] A good example of this is the incentive mechanisms of the research and innovation strategies for smart specialization mentioned above, which aimed to align actions at the supranational (European Union) level with those at the subnational level (certain regions of European countries). This was based on the condition that local actors could only apply for European Union science, technology and innovation structural funds if the projects submitted were aligned with the research and innovation strategies for smart specialization defined by the territories.

[49] For a comprehensive analysis of this concept and how it relates to productive development policies and the cluster approach, see Salazar-Xirinachs (2020), on which the following paragraphs of this section are based.

[50] See Karlsson (2008), Monge-González, Salazar-Xirinachs and Espejo-Campos (2018), Institute for Competitiveness & Prosperity (2019), and Oqubay and Lin (2020).

and his co-authors at Columbia University. However, Andrews, Pritchett and Woolcock (2017), from Harvard University, also developed a similar approach referred to as "problem driven iterative adaptation".

The specific conditions under which the "governance architecture" of experimentalism works and is particularly suitable for productive development policies are as follows: (i) there is a widely shared perception of the problem; (ii) there is a common framework for objectives and metrics, subject to revision, in which "central" and "local" entities participate; (iii) the local units (in this case, the cluster initiatives) have complete freedom to use whatever means they deem suitable for achieving their objectives, within the common framework (in other words they are self-governing); (iv) in exchange for this autonomy, the local units are required to report to the central units on their progress in achieving the objectives, and also to participate regularly in peer review processes to learn about the achievements, progress and lessons of other local units; and (v) the objectives, metrics and decision-making procedures are regularly reviewed based on the results of the peer review process.

This form of governance is particularly suitable in "polyarchic" situations —where effective power is distributed among the various self-governing units— and of strategic uncertainty, that is in rapidly changing environments —such as the competitive environments in which cluster companies find themselves. This means that effective solutions can only be defined on the basis of a collective process undertaken by the key players, and not *a priori*, even if done by experts.

Although there are many more aspects of interest in the concept of experimentalist governance,[51] it is essential to understand policy management as consisting of collaborative and iterative processes. Problems are both detected and resolved through collaboration by multiple actors from the public, private and academic sectors and civil society, and through permanent iterations of implementation and learning. These lead to the collective identification of solutions and, more importantly, to their sustained application over time. In other words, it is a model where recursion reigns: it is implemented, evaluated, adjusted and implemented again, in a continuous iterative process.

Although this is a novel approach to public policies, in Latin America and the Caribbean there are already several examples of this approach being applied to implement productive development policies. Examples include the Querétaro Aerocluster (Mexico) (Moreno-Brid and Dutrénit, 2018), the wind energy cluster in Uruguay (Bértola, 2018), the agricultural machinery cluster in Argentina (Arza and others, 2018), Costa Rica's medical devices cluster (Salazar-Xirinachs, 2020), the high-tech clusters (electronics, biotechnology and automotive industry) of the State of Jalisco (Mexico) (Ferraro and Rojo, 2018), and the cluster initiatives of the Bogotá region (Llinás, 2021). These and other cluster initiatives that have been successfully implemented for years in several of the region's countries have used the experimentalist governance approach in one way or another, in practice although not always explicitly. Another example of the use of this approach outside of cluster initiatives is the executive round-table model implemented in Peru by the then Minister of Production, Piero Ghezzi. This sought to overcome the main obstacles to the growth of certain sectors, based on the development of specific institutional mechanisms and dynamics (Ghezzi, 2019).

6. Conduct continuous evaluations, to be able to correct policy direction in a timely manner under changing conditions of strategic uncertainty

One of the best opportunities for enhancing productive development in the region concerns evaluation, since many of the actions being undertaken at both the national and the subnational levels are not being evaluated.

[51] For further details and related bibliography, see Salazar-Xirinachs (2020).

Evaluating these endeavours is even more important from the standpoint of experimentalist governance —which, as explained above, should govern productive development policies. It is evaluation that determines whether or not a measure yields the expected results; and, therefore, whether or not the collaborative processes and interventions in question need to be adjusted, discarded or expanded in subsequent iterations. Evaluation also indicates whether or not progress is being made in meeting the indicators and targets defined in productive development policies, in order to determine whether the interventions and instruments applied to the prioritized productive activities should be persevered with.

Compounding the lack of evaluation that exists in the region's public sector, universities and research centres have very low research capacity, relative to the productive development actions implemented by the countries and their territories, when they could be a major source of feedback to improve the actions in question.

In addition to evaluation capacities, it is essential to strengthen the knowledge management capacity of the countries and their territories, to ensure the dissemination of what works and what does not, avoid past mistakes and build on what has been achieved in this area. This is essential to avoid abrupt course changes and interruptions in the region's productive development efforts.

V. What should be done in a new context in which other regions are increasingly deploying industrial policy?

In a general context in which many countries are expanding their industrial policy efforts, particularly the developed countries and other powers with vast resources, and where a major reorganization of global supply chains is unfolding, two strategic lines of action are becoming essential: first, to raise the level of ambition and improve the implementation of productive development policies in line with the guidelines set out at the start of this section; and, second, to create links with industrial policies in other countries and take advantage of the opportunities of the ongoing reorganization process. One way to achieve the latter is by attracting investment and collaboration.

The countries of the region should explore ways to ensure that at least part of the incentives that other countries provide to firms in their territories to encourage relocation and investment, can also be applied to the investments that those countries' firms make in Latin America and the Caribbean. The possibility of extending these benefits to firms in the region that participate in value chains that include firms from elsewhere, should also be explored. The region should seek to reach agreements with these countries in order to extend the respective benefits. The European Green Deal or the Inflation Reduction Act and the Science and Creating Helpful Incentives to Produce Semiconductors Act of the United States, along with the agendas set by China in this domain, are a good starting point for exploring this possibility.[52]

It is also important to try to align investment and collaboration opportunities between Latin America and the Caribbean and the rest of the world with the production priorities defined by the region's countries in the framework of their industrial or productive development policies, at both the national and subnational levels. It is essential to generate complementarities between the interests of international investors and the public-private productive development agendas of the region's countries and their territories. Thus, financing through foreign direct investment would be complemented by agendas aimed at resolving other bottlenecks, which would allow investment and collaboration opportunities to become a reality.[53]

[52] For an example of this type of exploration in the case of industrial policies in the United States, see Artecona, Velloso and Vo (2023).

[53] For further details, see ECLAC (2023b).

VI. Other areas of work to improve productivity Latin America and the Caribbean

The productivity of Latin American and Caribbean countries will depend not only on the productive development policies —as defined in this article— that can be implemented, but also on work done in other areas. Examples include public sector productivity in the provision of public goods (for example, health and education), the efficiency problems generated by high transportation costs in cities, infrastructure agendas, institutional strengthening, the deepening of financial markets, regulatory frameworks for the labour market or competition policies. The countries of the region should continue to work on these other fronts, while simultaneously broadening and deepening their actions in the productive development domain.

VII. Concluding remarks

To overcome the challenges they face, the countries of Latin America and the Caribbean need to make substantial changes to their development models. One of these involves breaking out of the trap of sluggish growth and slow transformation of the production structure. This article has made a diagnostic assessment of the situation and proposed a new strategy for growth, transformation of the production structure and employment based on productive development policies. This encompasses a wider range of sectors than earlier models that focused exclusively on industrialization; and it adopts a very different approach to developing these policies effectively in the region.

Six guidelines are proposed to steer action on productive development policies: (i) raise the level of ambition and improve the implementation of these policies; (ii) target specific sectors and activities; (iii) balance the centralized and decentralized or territorial approach; (iv) use the cluster approach as an effective solution, integrating productive prioritization, territorial proximity, strategic focus and experimentalist governance; (v) improve the governance of productive development policies in line with the experimentalist governance approach; and (vi) strengthen capacities for evaluating productive development policies with appropriate metrics and peer review processes. While the scale of productive development policy endeavours is important, the nature of the productive development policies implemented is equally or more so, as argued in this article.

Achieving higher, sustained, inclusive and sustainable growth does not depend on productive development policies alone; it will also require higher levels of investment, better trained human talent, reduced levels of inequality and exclusion, and improved and consolidated political and governance systems. However, the broadening, deepening and improvement of productive development policies, along the lines proposed in this article, is a measure that could boost growth in the short term and on which endeavours should largely be concentrated.

Moving in this direction will require a comprehensive approach to find real solutions to the low growth and productivity trap. To this end, the first step is to recognize that frequent prescriptive soundbites, such as “informality must be reduced”, “the export basket must be made more sophisticated and diversified”, “more must be invested in science and technology” or “the investment climate must be improved” will not elicit higher, sustained, inclusive and sustainable growth. These are all important factors, but they are not enough on their own. It is necessary to examine in greater depth how to fulfil these prescriptions, based on an integrated approach to productive development policies such as that presented in this article.

ECLAC will continue to deepen these lines of work, putting forward a renewed and comprehensive vision of how to meet the challenges involved in achieving higher, sustained, inclusive and sustainable growth and changing the trend of productivity in the region, while also providing platforms and mechanisms to work on these issues and foster mutual learning.

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