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Economic growth and its components in south America: Performance in the period 1950-2019*

Villalobos Valencia, Angelo Diomar**
Molero Oliva, Leobaldo Enrique***
Castellano Montiel, Alberto Gregorio****

Abstract

The objective of this research was to describe the performance of economic growth and its components in the South American region during the period 1950-2019. The research was descriptive in nature under a quantitative approach, with data from secondary sources covering the period in question. The behavior of the main variables associated with growth, such as Gross Domestic Product and the productive inputs capital and labor adjusted for human capital, were described for the period under study. The results obtained show that economic growth has been relatively modest since the early 1970s. However, in recent years, several countries in the region have made considerable progress in terms of growth of Gross Domestic Product per capita.

Keywords: Production; Real Gross Domestic Product; economic growth; Gross Domestic Product per capita; comparative analysis.

Crecimiento económico y sus componentes en América del sur: Desempeño en el período 1950-2019

Resumen

El objetivo de la presente investigación consistió en describir el desempeño del crecimiento económico y sus componentes en la región de América del Sur durante el período 1950-2019. La investigación fue de carácter descriptivo bajo un enfoque cuantitativo, con datos de fuentes secundarias que cubren el período señalado. Se describió el comportamiento de las principales variables asociadas al crecimiento, como el Producto Interno Bruto y los insumos productivos capital y trabajo ajustado por capital humano, en el período de estudio. En los resultados obtenidos se evidencia que el crecimiento económico ha sido relativamente modesto desde principios de la década de los 1970s. No obstante, en los últimos años varios países de la región han logrado un progreso considerable en lo que respecta al nivel de crecimiento del Producto Interno Bruto per cápita.

Palabras clave: Producción; Producto Interno Bruto real; crecimiento económico; Producto Interno Bruto per cápita; análisis comparativo.

Introduction

A country's economic growth is the sustained increase in the economy's real Gross Domestic Product (GDP) above population growth over the long term. This is equivalent to an increase in the average level of GDP per person (per capita), an indicator that in turn serves as a reliable proxy for long-term *per capita* income and, therefore, economic development. This topic is important because the rate of growth exhibited by a country has relevant implications for the physical and material well-being of the population and of entire societies (Romer, 2012; Singh, 2021), giving people greater control over their lives and a set of opportunities they would not previously have had (Acemoglu, 2009; Rodrik, 2011; Blanchard, Amighini & Giavazzi, 2012).

According to some authors (Pozo & Ocando, 2016; Bejarano et al., 2018), long-term economic growth is closely related to the increase in the aggregate productivity of the economy, i.e., achieving more output with the minimum amount of labor and capital factors, including human capital, available in a period of time (Kalkavan, Yüksel & Dinçer, 2021). Furthermore, in literature, there seems to be a certain consensus that slight differences in economic growth rates lead to large gaps in income, economic development and social welfare of countries' populations in the long term (Pozo, 2021; Sala-i-Martin, 2000; Barro & Sala-i-Martin, 2009; Acemoglu, 2009; Romer, 2012).

Currently, countries such as the United States or Japan are considerably richer than most of the economies located in regions such as Sub-Saharan Africa or Latin America and the Caribbean, as a direct consequence of the historical growth shown by these countries and regions.

In that sense, according to data on global economic growth in the Penn World Tables (PWT) 10.0 database (Feenstra, Inklaar & Timmer, 2015), by 2019 the fifth quintile of the global per capita income distribution (the twenty percent of countries with the highest per capita income) presented an average income of 48,983.2 USD, as shown in Graphic I. This level represents 22 times the average income (2.224,2 USD) of the group of countries that make up the first

quintile (the poorest twenty percent) in that year's ranking, a trend of global divergence in the level of economic development that has been maintained for decades[1] (Acemoglu, 2009; Barro & Sala-i-Martin, 2009; Romer, 2012; Molero, 2014; Pozo & Ocando, 2016).
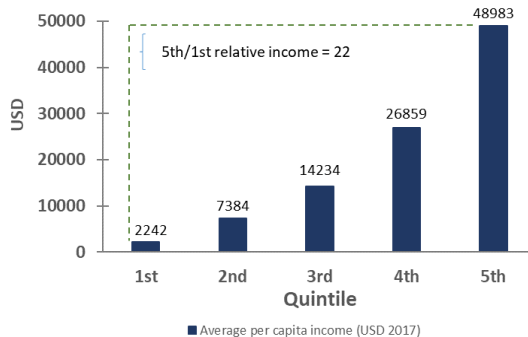
Source: Own elaboration, 2022 based on information from PWT 10.0 (Feenstra et al., 2015).
***Graphic I:* Average *per capita* income (in 2017 US$) year 2019 by income groups**

According to the empirical evidence of the last seventy years, it should be noted that world economic growth has been heterogeneous between countries and regions and over time; some countries have indeed experienced a period of rapid growth after years of stagnation; others have collapsed after a phase of high growth. Similarly, others have not enjoyed positive and stable growth for a long time; finally, a small group of countries has been able to experience sustained economic growth over the long term (Barro & Sala-i-Martin, 2009; Romer, 2012).

Differences in performance and growth experiences among countries and regions have been diverse. In many cases, they have only been relatively small differences, such as two percentage points, but over time they have translated into wide income gaps. For example, in recent times, the Inter-American Development Bank (IDB, 2018) estimated that the world economy would grow 3.9% in 2018, but in the case of the Latin American and Caribbean region, the projected results in that year were disappointing, with a growth estimate of only 1.9%, that is, two percentage points less than the world average.

However, when comparing the expected growth of Latin America and the Caribbean with the rest of the world, the regions of Sub-Saharan Africa, the emerging and developing countries within Europe, and the group of emerging Asian countries were expected to grow considerably faster in the short and long term, so the expected results for Latin America and the Caribbean remain disappointing, even though the region has recovered from the negative rates and slow growth of previous years.

In any case, the real GDP growth rate in the typical LAC country would be roughly equal to the region's average growth rate since 1960. Such a growth rate is insufficient to help these countries catch up with the advanced economies or with the fastest growing developing countries. Similarly, it would lead to a downward trend in the share of world GDP, due to the probability that the region will have moderate growth rates in the coming years (IDB, 2018).

The low growth rate is compounded by the volatility experienced by growth rates, which has also been an element present in some form in recent years among the countries

of the region, so Latin America and the Caribbean faces the challenge of increasing its economic growth and designing policies to ensure the stability of that growth over time. Along those lines, this would require a more stable macroeconomic environment, so the region's policies should be directed towards those objectives (IDB, 2018).

This paper focuses on South America, which is part of the Latin America and the Caribbean region, specifically on 10 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay and Venezuela). The objective is to describe the performance of economic growth and its components in the region during the period 1950-2019, in order to provide a response to the stylized fact of slower economic growth in the region compared to the rest of the world and to make a contribution in that sense.

1. Performance of economic growth and its components in the South American region[2]

South America has been characterized by unstable and volatile economic behavior in recent history. Mainly, the foregoing has manifested itself in the rate of economic growth, as a consequence of substantial changes in approaches and policies, economic reforms, applied economic models, exogenous shocks of different nature and intensity, as well as institutional and sociopolitical factors, raised in the countries that make up this region (Acemoglu & Robinson, 2012). As a result, the study period brings together cycles of prosperity, stagnation, negative growth and a series of internal and external shocks and conflicts with different outcomes in each of the experiences of national growth and development.

In this context, it is not surprising to find that behind the levels of economic growth between 1950-2019 there are precedents of significant economic shocks. In particular, if one takes into account the effects of events that occurred during the last third of the 20th century and the first part of the 21st century, characterized by irregular patterns of capital flows, increases in international interest rates, recurrent shocks in trade relations, substantial economic reforms, and a rapidly changing global economy. As a whole, this causes a trend towards economic instability in the region (Solimano & Soto, 2005; Soto & Zurita, 2011; Villalobos, Molero & Castellano, 2021).

In order to describe the performance of economic growth and its components in the main countries that make up South America during the period 1950-2014, the following graph is used as a starting point (see Graphic II).
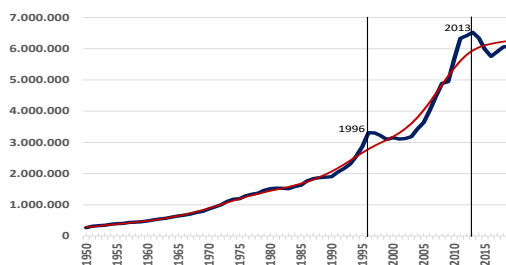
Note: The total GDP of the region, in this case, is the sum of the real GDP of each country in a year. The red line is the trend of the GDP series, extracted with the Hodrick-Prescott filter.
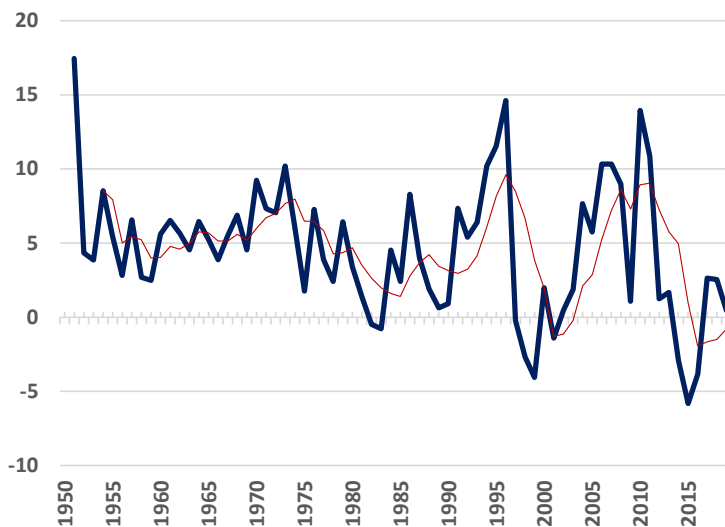
Source: Own elaboration, 2022 based on information from PWT 10.0 (Feenstra et al., 2015).

***Graphic II:* South America: Total PPP-adjusted GDP in millions of 2011 US$, 1950-2019**

The Graphic II illustrates the evolution in the level of real aggregate output (GDP) of the ten countries of the region during the study period. A relatively stable behavior with an increasing trend can be observed, with certain drops or breaks (some more evident than others) which correspond to the most notable economic shocks of the 20th century (1996) and in the second decade of the 21st century (2013). However, the figure does not show the unstable and slow growth previously mentioned, because it is expressed in aggregate terms and, therefore, the contractions or drops in growth levels are not so evident at first sight. Similarly, the red line shows the trend, extracted with a statistical filter (Hodrick-Prescott), of the observed series. In this case, the trend series confirms an increasing behavior; however, in recent decades, the slope has become less steep, which is an indication

of a slowdown in growth.

The Graphic III shows the performance of the combined real GDP growth rate of the ten countries. An unstable performance can be observed, especially when observing the abrupt drops in output levels that correspond to the major economic shocks of the mid and late 1970s, the crises of the 1980s, followed by periods of instability and stagnation in the 1990s and the first part of the 21st century. During the entire period, the average growth rate of the aggregate GDP was 4.54%, ranging from a maximum of 17.45% in 1951 to a minimum rate of -5.82% in 2015. Thus, one can understand the wide variability exhibited by the region's aggregate production. The red line in the graphic reflects the five-year moving average of the GDP growth rate, which also shows variability, with emphasis starting in the mid-1980s.

Note: The growth rate is the first difference of the natural logarithm of the region's total GDP multiplied by one hundred. The red line is the five-year moving average.

Source: Own elaboration, 2022 based on information from PWT 10.0 (Feenstra et al., 2015).
Graphic III: **Total GDP growth rate of South America, 1951-2019**

Starting in the middle of the first decade of the 21st century, South America experienced a period of relative stability interrupted by the 2008 global financial crisis. However, compared to other shocks, on this occasion the region almost immediately resumed the positive growth cycle. This situation lasted until the abrupt fall in world oil prices towards the end of 2014, which has generated effects that the region has not yet been able to leave behind (IDB, 2018). Therefore, in order to understand the reason why these economic shocks have affected the behavior of economic growth in the region, it is necessary to review the economic context of the region in those periods:

1.1. Postwar period: Latin American structuralism and economic shocks 1950-1970s

After World War II, a development model was implemented in the countries of Latin America and the Caribbean, promoted by the Economic Commission for Latin America and the Caribbean (ECLAC) to progressively replace imports and promote domestic industrialization, boost employment and increase economic growth. This model was called Import Substitution Industrialization (ISI) or state-led industrialization, as an attempt to modernize the region's productive apparatus in order to break the dependence on the export of traditional and primary products and the effects derived from the deterioration of the terms of trade (Hopenhayn & Neumeyer, 2004).

This development strategy presupposed the application of protectionist policies for the budding domestic industrial activity, reserving scarce foreign exchange for the acquisition of equipment, raw materials and basic inputs required by the industrial process, otherwise competition from industrial countries would sweep it away. For its part, ECLAC argued that in order to have any chance of making the industrial process feasible, a strong state intervention in the orientation and regulation of the economy would be needed, which could not be entrusted solely to market forces (Hopenhayn & Neumeyer, 2004).

In this sense, the ISI model contributed to the diversification of the region's industrial capacity, allowing it to satisfy the needs for consumer goods and part of the requirements for intermediate and capital goods in its internal markets. In addition, it was accompanied by a significant level of growth that, as a whole, reached an average annual expansion rate of over 5.4% during this period (Reyes, 2000).

For some authors, the ISI model, focused on industrial development, meant a great step forward in promoting economic and social progress in Latin American countries, occupying an important place in their economic history (Reyes, 2000). However, it is clarified that, during this period, South America also presented some macroeconomic tensions, due to the events surrounding the socio-political context of various countries (Acemoglu & Robinson, 2012). Similarly, the inefficiency of state-led industrialization cannot be overlooked, as well as a series of fatal structural flaws within the ISI model (Taylor, 1999).

In this context, the main implication of the ISI model was that it required the execution of a massive investment plan aimed at promoting the development of national industry, which was a problem given that most countries in the region had low income levels and, consequently, low savings rates. This was a constraint on the ability to accumulate the capital necessary to finance such investments. This situation led the countries of the region to turn to foreign capital markets through long-term debt in the expectation that the surplus created by their new industrial structure would be greater than the external debt (Taylor, 1999; Reyes, 2000).

However, this expectation could not be fulfilled since the policies of isolation and non-participation in international markets for goods and services were unfavorable. The measures implemented to reduce dependence on imports of manufactured goods caused the external debt to increase over time (Taylor, 1999; Reyes, 2000).

On the other hand, the model involved the creation of a national entrepreneurial class and an important transformation infrastructure, a large part of which would pass into the hands of large foreign companies, leading to the repatriation of profits in their various forms, the denationalization of the economies and the weakening of the national entrepreneurial class formed in the process.

In this context, the penetration of foreign companies accentuated the unequal nature of the countries' development because it entailed a partial process of modernization and expansion of capital-intensive economic activities. At the same time, it originated a process of rupture, contraction and disorganization in traditional labor-intensive activities. Ultimately, the above implied a rise in unemployment in its various disguised or open versions and, therefore, of the marginalization of the population in general (Taylor, 1999; Reyes, 2000; Hopenhayn & Neumeyer, 2004).

All this, together with the fact that the model pursued the formation and strengthening of an urban middle class, had as an immediate result that the differences in income levels within urban centers widened due to the concentration of high incomes in the hands of the upper-middle classes. As a result, industrialization did not free underdeveloped countries from external dependence; on the contrary, it gave new and stronger elements to external control and influence, and contributed to the persistence of the traditional inequality of the development process (Taylor, 1999; Reyes, 2000; Hopenhayn & Neumeyer, 2004).

However, a turning point in the context of economic growth in the region would occur between the mid-1960s and early 1970s. During this period, the economic authorities in the countries of the region were torn between maintaining the model state-guided industrialization, which has shown some wear, or adopt a free market model. In the latter case, a crucial element came from the boom in private external financing that some countries already exhibited, in some form, by the mid-1960s, and that would spread throughout the region in the early 1970s (Taylor, 1999; Hoffman, 2000).

The financial boom was the result of an attempt to rebuild international capital markets, determined by competition between a growing numbers of former national banks that began to provide financing in international markets. To do this, they offered loans with variable interest rates fixed to an interbank market system. This would facilitate the entry of smaller private banks with little experience in international operations, because they were based on the credit risk assessments of the large banks that were leading the process and received large commissions.

In this sense, by fixing interest rates to the interbank markets that served as a source of funding for banks actively involved in international markets, the risks to which the lenders were subject (associated with variations in those changing interest rates) were reduced by fixing or shifting those risks to the lenders. This became evident from the latter part of 1979, and would ultimately prove to have disastrous results for the region (Taylor, 1999; Hofman, 2000).

This added to the effects generated by the first of the economic shocks of the 1970s, after the collapse of exchange parities with respect to the gold standard set by the Bretton Woods system (Solimano & Soto, 2005). This event brought about a generalized cheapening of the US dollar, triggering a massive inflow of foreign currency to Latin America during that period (Hofman, 2000).

This is why the region was able to "solve" the effects of the two oil shocks of 1973 and 1979 that followed the collapse of Bretton Woods and the rise in commodity prices such as oil, by means of abundant low-cost international financing and loans that proved to be temporary (Taylor, 1999; Hofman, 2000). This, together with the pre-established lending system in the region during the period, was a recipe for disaster, as we will see below.

1.2. External debt crisis: The decade of loss 1980-1990

The main triggers of the external debt crisis that dominated the 1980s were the

macroeconomic and structural problems of the ISI model and the boom in external financing under the credit scheme. In general terms, this crisis was made up of unpayable external debts, high fiscal deficits, inflationary and exchange rate volatility, which in most of the countries of the region was fixed by the legacy of the ISI model (Ocampo, 2014).

The external debt crisis had as its immediate genesis the fact that the counterpart of the financial boom was constituted by the growing fiscal and trade deficits that the region accumulated in the process of financing the ISI model (Ocampo, 2014). In this context the domestic financial institutions that served as intermediaries for transactions involving external funds also began to see themselves taking higher and higher levels of credit and risk rate swaps (Taylor, 1999).

This was soon to become a nightmare for the region as a banking crisis in the United States led to continuous rescheduling of payments on existing debts and large increases in interest rates in the industrialized countries of the region under strong international pressure. This, together with the decline in commodity prices, had an immediate negative effect in the form of capital flight, which in turn led to a massive depreciation of exchange rates, increasing the real interest rate on debt. This situation was aggravated by the presence of excessively large bureaucracies and the industrial collapse caused by their inability to compete with imported products (Taylor, 1999; Ocampo, 2014).

As a result, a complicated period of imbalances was unleashed in Latin America, in which most of the region's nations were forced to abandon their import substitution industrialization economic models and adopt structural reforms or reforms towards export markets. This strategy continued as one of the attempts to reverse the effects of the crisis, with the aim of configuring stable and integrated economies in the face of the changing international environment in order to achieve significant and sustained growth (Golub, 1991; Taylor, 1999; Ocampo, 2014).

However, it is important to note that the implementation of these market-oriented reforms was extremely difficult in the 1980s and 1990s, which may well be part of the legacy of the ISI model that developed an economic structure that required protectionist policies and recurrent subsidies from governments (Hopenhayn & Neumeyer, 2004).

Nevertheless, evidence shows that the different sizes of the external and fiscal deficits of various countries, together with the different degrees of fragility of their financial systems to shocks or externalities, played a crucial role in determining the relative impact of the debt crisis of the 1980s (Bertola & Ocampo, 2012; Ocampo, 2014). This indicates that the decisive factor that determined the scale on which the consequences of the crisis manifested themselves during the decade was the macroeconomic dynamics of the countries rather than the structural problems created by the ISI model (Taylor, 1999; Bertola & Ocampo, 2012; Ocampo, 2014).

In this sense, the result of everything discussed so far, was that the period 1980-1990 was marked by relative stagnation and slow growth for most of Latin America with results in the real GDP growth rate for the region during the decade only 2.3% (Bertola & Ocampo, 2012; Ocampo, 2014). This is why this era is known as the lost decade, although for some countries in the region the crisis did not end in this period and they continued to experience the effects of the crisis well into the 1990s (Hopenhayn & Neumeyer, 2004).

1.3. From recovery to instability and stagnation 1990-2004

In the early 1990s, Latin America showed signs of recovering from the adverse effects caused by the debt crisis. In essence, the crisis ended up reshaping the economic panorama of the region, since those countries with excellent historical performance in economic matters, such as Argentina and Venezuela, mainly, ended up with consequences that until recently have not been overcome (Comisión Económica para América Latina y el Caribe [CEPAL], 1996).

During the beginning of this period, two significant events took place. First, inflation

was reduced to levels not reached in 50 years and, second, positive growth rates were achieved, replacing the prolonged stagnation of the previous decade (Naím & Lozada, 2001). Although it is important to note that, while the levels of economic growth at the beginning of the decade were much better than those obtained during the lost decade, this alone was not enough to represent a significant impact on the overall welfare of the region (CEPAL, 1996; Naím & Lozada, 2001).

On the other hand, a number of important aspects, such as dependence on international funds to boost growth and maintain macroeconomic stability in the region, were still embedded in the region and remained unchanged, something that would later again affect the region's growth performance (Naím & Lozada, 2001; Solimano & Soto, 2005).

It should be noted that international competitiveness, although showing some improvement, remained insufficient to reduce dependence on exports from the primary sectors. Market-oriented policies, together with the new cycle of external credits, the cyclical recovery of the region and the efficiency that it built, were great steps in the search for economic growth and development. However, once again sustained growth has been an elusive issue (Naím & Lozada, 2001; Solimano & Soto, 2005).

By the end of the decade, two new major shocks hit the region. The first was the Asian crisis of 1997-1998, which disrupted the region's trade and financial flows and placed the economies under severe market stress as foreign investors became more aware of the region's large fiscal problems and external imbalances as potential trouble spots. The second shock was Russia's debt default in August 1998, which further aggravated the collapse that was already underway (CEPAL, 1996; Naím & Lozada, 2001).

On the other hand, the low economic growth, different from the goals stipulated by the reforms established and the growing uncertainty of the events that would take place in the future, threw the region into a new cycle of slow economic growth that would

last more than half a decade (Naím & Lozada, 2001; Solimano & Soto, 2005). Something that would finally be left behind thanks to the favorable context brought about by the period from the end of 2003 to the end of 2007.

1.4. Relative stability and favorable conditions followed by new external shocks 2004-2019

The period from late 2003 to 2007 was favorable for the region due to a combination of several elements such as: an unusual financial boom, a commodity price bonanza, a high level of remittances from abroad by migrant workers and the oil boom that started in 2004 (Ocampo, 2009). Thanks to this, the region finally managed to leave behind the cycle of slow growth and instability, and replaced it with one of economic boom with great benefits and the much elusive economic growth that it had failed to achieve in previous periods (Ocampo, 2009; Soto & Zurita, 2011). However, this situation would soon come to an end partly due to the change in the external context, due to a new economic shock derived from the 2008 financial crisis.

In this sense, the financial crisis of that year was expressed immediately due to the collapse of the real estate bubble in the United States in 2006, which resulted in the so-called *subprime* mortgage crisis (Villegas, Acosta & Cayaffa, 2010). The repercussions of the mortgage crisis began to manifest themselves in a delicate manner at the beginning of 2008, first affecting the U.S. financial system and then the international financial system. The first effect of this situation was a deep liquidity crisis, which in turn led to the appearance of other economic phenomena in the global context, such as a food crisis, various stock market collapses and an economic crisis on an international scale (Ocampo 2009; Soto & Zurita, 2011).

This international crisis had adverse effects on the region's economic boom. The factors and conditions that initially made it possible would be reversed and end up in a decrease in remittances, with repercussions in the commercial sectors due to contractions in the real volume of exchange.

Meanwhile for the economies that export mining-energy products, there was a sharp deterioration in the terms of trade, derived from a severe drop in the prices of energy materials (Ocampo, 2009).

However, the prospects for the subsequent recovery were positive. The macroeconomic context quickly began to stabilize, so the region recovered the phase of uninterrupted growth until the last of the shocks of the current decade, represented by the drop in oil prices in 2014 or, as some call it, the end of the oil boom (Arroyo & Cossío, 2015).

The effects of the drop in oil prices caused major problems for oil producing and exporting countries, not only in their growth levels but also in the fiscal area. For some countries the impacts were significantly greater than for others (as the experience acquired in the case of the Venezuelan economy has shown) due to the different configurations and compositions of their economies. This is why it is important to highlight that the problems were not limited to the countries' fiscal revenues, but also brought about disparate results in trade balances and an increase in fiscal deficits.

In this context, between 2014 and 2019, the region was immersed in a cycle of slowdown and relative instability with very disappointing results and projections for the near future in terms of economic growth. Above all, when compared to the growth rates obtained by regions such as sub-Saharan Africa, emerging and developing Europe, and emerging Asia. By the end of the decade, the economies of South America, with certain differences, continue to show consequences that have not been corrected since the 2014 oil price crash (IDB, 2018).

Now, the above facts are illustrated by means of the average growth rates for aggregate output, capital stock and labor (adjusted by a human capital index), for each of the countries that make up the region by decades in the period 1951-2019. Table 1 contains information on average real GDP growth by country for the full period and for each of the decades since 1950. The average percentage change in real GDP is estimated as a simple average of the year-on-year growth observed in the time range that includes each subperiod.

Table 1
Real GDP growth rates, 1951-2019

Periods	Real GDP (average % change)									
	Countries									
	ARG	BOL	BRA	CHL	COL	ECU	PER	PRY	URY	VEN
1951-1959	2.33	0.08	5.98	3.35[a]	3.85	5.15	4.21	2.35[a]	2.42	7.66
1960-1969	4.24	4.29	7.02	5.92	4.97	4.55	6.53	4.43	1.84	3.49
1970-1979	2.62	4.49	8.12	1.10	7.50	7.46	3.97	6.84	2.39	5.04
1980-1989	3.95	2.05	3.15	2.63	2.01	-0.04	0.97	4.97	0.85	0.43
1990-1999	10.75	5.77	5.02	5.02	1.99	1.15	5.19	3.28	3.17	-0.17
2000-2009	2.58	5.82	4.41	5.38	4.88	6.91	6.61	6.70	2.34	8.94
2010-2019	3.60	7.15	2.05	3.84	3.67	3.80	4.30	4.65	3.24	-40.23
1951-2019	4.32	4.30	5.09	3.91	4.13	4.13	4.54	4.81	2.32	-2.26

Note: The average percentage change in each subperiod is the simple average of the real GDP growth series in those periods for each country. [a] The value for Chile and Paraguay in the first row corresponds to the average for the period 1952-1959.

Source: Own elaboration, 2022 based on PWT 10.0 (Feenstra et al., 2015).

The experience of economic growth in South American countries is heterogeneous. In the period 1951-1959, every country showed positive average growth, perhaps with the exception of Bolivia, which barely obtained a rate of 0.08%. The countries with the highest growth were Venezuela, Brazil and Ecuador, in that order. In the following decade (1960-1969), again, each country grew at positive rates on average; however, the average growth rate was lower than in the previous period in Ecuador, Uruguay and Venezuela.

The favorable growth dynamics in these countries continued between 1970 and 1979. During this period, average growth ranged from a minimum of 1.10% in Chile to a maximum year-on-year rate of 8.12% in Brazil. Similarly, average growth was high in countries such as Colombia, Ecuador and Paraguay.

Venezuela is a case apart in the last decade of the analyzed period. The real GDP of this economy presented an average growth rate of -40.2%, due to a series of economic imbalances caused by microeconomic and macroeconomic policies carried out in the first decade of the 21st century, which led to a collapse of the economy once the boom in worldwide oil prices collapsed in 2014. Added to the above is the substantial drop in oil production, the main export sector of the Venezuelan economy and source of foreign currency for imports of final and capital goods, in consequence of an unfavorable institutional framework for private investment in that sector.

The combination of a fall in production and price of the main source of financial resources of this economy (mainly in the form of oil tax revenues for the public sector) resulted in a joint aggregate supply and demand shock that led to a collapse in the real production of the economy.

In this sense, through the growth rates contained in Tables 2 and 3, it can be observed that there is a trend or behavior of non-sustained growth throughout the entire study period in the three variables. These present variations with a different degree of significance in each of them. One of them, both in the specific cases and in the absolute total of the region, especially when analyzing the growth rates obtained in the decade 1970-1979 compared to the subsequent decade of losses 1980-1989, where the South American economies (except Argentina and Colombia) experienced falls of varying importance. This was followed by periods of recovery and instability as mentioned in the previous sections.

Table 2
Capital growth rates, 1951-2019

Periods	Capital stock (% average change)									
	Countries									
	ARG	BOL	BRA	CHL	COL	ECU	PER	PRY	URY	VEN
1951-1959	5.82	5.33	5.61	2.41[a]	5.14	6.47	6.60	4.98[a]	15.23	7.16
1960-1969	4.98	4.16	5.66	5.74	4.78	5.03	3.90	4.85	3.24	3.43
1970-1979	4.70	3.06	8.33	4.14	1.60	5.30	4.14	9.09	5.93	8.76
1980-1989	8.07	0.57	6.84	3.93	3.75	3.18	7.64	8.84	2.52	1.80
1990-1999	12.15	4.93	5.51	7.25	3.55	3.76	9.45	6.96	2.81	1.49
2000-2009	2.68	7.13	7.38	5.05	3.60	8.04	3.78	7.37	4.48	8.46
2010-2019	2.55	6.63	2.19	6.62	1.93	5.46	6.49	2.15	3.97	-22.58
1951-2019	5.85	4.53	5.94	5.10	3.53	5.30	5.99	6.36	5.31	1.13

Note: The average percentage change in each subperiod is the simple average of the capital growth series in those periods for each country. [a] The value for Chile and Paraguay in the first row corresponds to the average for the period 1952-1959.
Source: Own elaboration, 2022 based on PWT 10.0 (Feenstra et al., 2015).

Table 3
Human capital-adjusted growth rates of labor, 1951-2019

Periods	Human capital-adjusted labor (% average change)									
	Countries									
	ARG	BOL	BRA	CHL	COL	ECU	PER	PRY	URY	VEN
1951-1959	2.21	-0.03	3.53	1.46[a]	2.90	2.87	2.65	2.42[a]	1.75	3.86
1960-1969	1.85	2.24	3.37	2.37	3.52	2.98	2.77	3.29	1.56	3.41
1970-1979	2.18	3.24	4.21	2.24	4.17	4.52	4.88	3.95	1.36	5.54
1980-1989	2.74	3.81	4.56	4.44	3.64	4.26	4.90	3.87	2.54	4.39
1990-1999	2.13	4.21	2.58	3.02	3.85	4.10	5.37	2.88	2.02	5.10
2000-2009	3.29	2.89	4.23	2.95	4.19	5.21	2.94	4.40	1.41	4.98
2010-2019	2.55	3.34	3.64	2.44	2.35	2.66	2.47	3.49	1.05	1.07
1951-2019	2.42	2.85	3.73	2.74	3.53	3.82	3.73	3.50	1.67	4.05

Note: The average percentage change in each subperiod is the simple average of the adjusted labor growth series in those periods for each country. [a] The value for Chile and Paraguay in the first row corresponds to the average for the period 1952-1959.
Source: Own elaboration, 2022 based on PWT 10.0 (Feenstra et al., 2015).

The capital stock showed average growth rates ranging from a low of 4.01% for Bolivia to a high of 6.27% for Brazil, followed closely by rates of 6.20% and 6.05% for Paraguay and Colombia, respectively, while the rest of the countries showed similar results within the 5% range.

The labor factor (adjusted by a human capital index) performed with a higher range in growth experiences. Certainly, performances were presented that ranged from 4.42% growth for Venezuela, followed closely by Paraguay with 4.22%, to 1.84% in its lowest rate corresponding to Uruguay. The rest of the countries showed growth rates in the range of 2 and 3%.

Meanwhile, the absolute total for the region shows that real GDP grew at an average rate of 4.98%, the capital stock at 5.82%, while the labor factor adjusted for human capital grew at a slower rate (3.93%). Thus, GDP has grown at a slower rate than the accumulation of productive factors. Even in the case of Venezuela, factor accumulation has grown at a positive average rate in the period, in contrast to the fall in real GDP as a result of the negative growth rate experienced by production between 1950 and 2019.

Conclusions

As a result of this and all the aspects discussed so far, it can be concluded that economic growth in the region has been relatively modest since the early 1970s in agreement with all the authors cited up to this point. This statement is supported by means of the results shown in Tables 1, 2 and 3 corresponding to the decades 1970-1979, 1980-1989, 1990-1999, 2000-2009 and the subperiod1 200-2019, which show the effects of all the factors and events of the 20th century and the first part of the 21st century on the average growth rates obtained during the period 1951-2014.

Nevertheless, it is worth noting that in recent years several countries in the region have made considerable progress in terms of economic growth in terms of GDP *per capita*, in their levels of development, as evidenced by

improvements in human development indexes, competitiveness and foreign investment, among other categories.

Notes

[1] Graphic I and the description are based on PWT 10.0 data for 175 countries. The database contains information for 183 countries, but the first eight economies with incomes above USD 70,000 were excluded, as they were considered *outliers* in this example.

[2] A preliminary version of this section was presented and discussed in Villalobos (2018).

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