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Latin America in the New Millennium: A Region of Macroeconomic Forking Paths

Martín Rapetti*, Emiliano Libman** and Gonzalo Carrera***

Abstract

By the mid-2000s, Latin American countries had achieved macroeconomic stability: inflation was low, fiscal results were balanced, and external accounts were on a sustainable path, far from the frequent threat of currency crises. Although the trajectories that had brought them there had broadly been similar, from that point onwards they began to diverge. Brazil, Chile, Colombia, Mexico, Paraguay, Peru, and Uruguay managed to maintain macroeconomic stability by gradually adopting macroeconomic schemes of “good practices” based on four pillars: 1) monetary policy frameworks based on inflation targeting, managed by independent and largely technocratic Central Banks; 2) exchange rate policies of managed floating and foreign exchange reserves accumulation; 3) institutional fiscal policies that seek to maintain a countercyclical bias and the sustainability of public debt; and 4) full integration with the international capital markets. On the other hand, Argentina, Bolivia, Ecuador, and Venezuela followed a different path, with more erratic macroeconomic policy strategies that favored short-term goals and relegated macroeconomic stability to the background. The evidence presented in this article suggests that countries that did not adopt the “good practices” framework experienced higher macroeconomic instability, lower growth, and less poverty reduction.

Keywords: Latin America, Inflation Targets, Fiscal Rules, Central Bank Independence.

JEL classification: F40, N16, O54.

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1. Introduction

Yá Tsun, the main character of Jorge Luis Borges' famous story, flees from his death sentence to find a brief relief in a garden of forking paths. It may be an exaggeration to compare the history of macroeconomic instability and crisis in Latin America to a Borgesian labyrinth, but it is not to tell a story in which countries, after following a similar path, began to diverge at the beginning of the 21st century.

Indeed, after decades of instability and crisis, Latin American countries had converged by the mid-2000s to a state of macroeconomic stability. Inflation was low, fiscal accounts were balanced, external accounts were on track, and Central Banks had accumulated significant stocks of international reserves, all of which reduced the likelihood of financial and exchange rate crises. Due to the robustness of these macroeconomic conditions and the existing margins for implementing counter-cyclical policies, the countries in the region emerged virtually unscathed from the effects of the 2008-2009 international crisis. However, a divergence process had already begun and would significantly affect subsequent economic performance.

On the one hand, Brazil, Chile, Colombia, Mexico, Paraguay, Peru, and Uruguay were forging from the early 2000s —each with its particularities and timeline— a macroeconomic framework of “good practices” based on four pillars: 1) an inflation targeting monetary policy regime led by independent and largely technocratic Central Banks; 2) a managed floating regime and accumulation of international reserves; 3) an institutional fiscal policy framework aiming to maintain a counter-cyclical bias and public debt sustainability; and 4) full integration with international capital markets.

Argentina, Bolivia, Ecuador, and Venezuela, on the other hand, followed a different path. One with more erratic macroeconomic policies that relegated macroeconomic stability to a secondary goal. In the cases of Argentina and Venezuela, fiscal policies involved increasing levels of public spending, financed through Central Bank assistance, led to inflationary and exchange rate pressures that prompted the adoption of rationing policies in the foreign exchange (FX) markets with harmful effects on macroeconomic stability and growth. In Bolivia and Ecuador, fiscal expansion, in the context of a fixed exchange rate and dollarization, respectively, led to external-sector crises. All four cases ended with high sovereign risk premia and severe credit constraints. In the cases of Argentina and Ecuador, unsustainable fiscal policies resulted in public debt defaults and restructurings in the

early 2020s, and programs with the IMF.

In this paper, we analyze the divergent trajectories of Latin American countries since the mid-2000s, focusing on South America and Mexico. We start with a brief historical narrative of the economic performance over the past eighty years and argue that, after stabilizing inflation and reducing the exposure to external and financial crises, a bifurcation, in terms of macroeconomic policy strategies, began in the mid-2000s. We argue that this bifurcation has not been neutral regarding the macroeconomic performance that followed from the 2010s onward. We find that countries that followed the “good practices” had, on average, better performance: they grew faster, reduced poverty more, experienced less inflation, and maintained smoother access to international capital markets at lower costs.

To develop our argument, we organize the paper as follows. After this introduction, Section 2 provides a brief narrative of Latin America's macroeconomic evolution from the second half of the twentieth century to the early 21st century. Section 3 describes the bifurcation that occurred in the mid-2000s regarding macroeconomic policy decisions. Section 4 analyzes how these decisions influenced the economic performance of these countries. We conclude in Section 5 with some remarks.

2. From the post-WW to the beginning of the 21st century: A similar path

After World War II, Latin America's economic growth was constrained by weak export performance. Although the economies had become more closed (particularly since the 1930s), external dependence intensified. For at least a couple of decades, most countries could not consolidate sustained growth processes due to shortages of FX. In the absence of capital flows and given the limited credit from multilateral and bilateral sources, the supply of FX was limited to exports. Conditioned by an international context of reduced global trade that was also unfavorable to the region's export basket, countries adopted inward-oriented growth strategies in which the state played an active role in the development of import-substitution industrialization strategies (Ocampo and Ros, 2011).

Nevertheless, from the end of World War II until the oil shocks of the early 1970s, the region grew at a good pace (about 2% per capita annually; see Table 1), although lower than advanced countries.

Each trajectory had its particularities. In Argentina, Chile, and Uruguay—which had already developed a relatively solid urban-modern sector— and, to a lesser extent, Colombia, the expansion process was intermittent and characterized by stop-and-go cycles (Braun and Joy, 1968). Within this group, Uruguay experienced the worst performance. In contrast, Brazil and Mexico, whose large populations provided a sufficiently sizeable domestic market but with low income per capita, experienced dynamic and sustained expansions (particularly from the 1960s onwards); often surpassing growth rates in industrialized countries. Venezuela was an exceptional case due to the fluid availability of FX from abundant oil exports, yet economic growth remained mediocre. Peru experienced rapid growth with fewer external sector shortages. Bolivia, Ecuador, and Paraguay also grew steadily between 1.4% and 2% per capita annually.

Table 1: Trend growth rate* by period

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Mexico	Peru	Paraguay	Uruguay	Venezuela	G7	Average LA
1951-73	2.0%	1.4%	3.6%	2.0%	1.7%	1.5%	3.2%	2.5%	2.0%	-0.1%	1.1%	3.6%	1.9%
1974-02	0.2%	-0.2%	0.8%	3.4%	1.4%	0.5%	1.0%	-0.9%	1.8%	1.6%	-0.9%	2.2%	0.8%
2003-23	0.7%	2.4%	0.9%	2.0%	2.4%	1.0%	0.3%	3.2%	2.4%	3.0%	-5.7%	0.8%	1.1%

*Annual average growth rate, least squares method

Source: own elaboration based on Penn World Table, World Bank, and International Monetary Fund

Several countries in the region —such as Argentina, Brazil, Chile, Colombia, and Uruguay— also experienced persistent and relatively high inflation by international standards; it was called “chronic inflation”. This type of inflationary process did not generate unbearable instability —like the one experienced with high inflation or hyperinflation— because the economies adopted formal or informal indexation mechanisms that maintained a rather stable relative price structure. Thus, Latin America became known worldwide due to its persistent inflation (see Table 2). This phenomenon was neither general nor homogeneous. Many countries in the region —such as Ecuador, Mexico, Peru, and Venezuela— maintained low and stable inflation rates until the oil shocks of the 1970s.

Table 2: Inflation rate by period

	1950-1972		1973-1991		1992-2004		2005-2023	
	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
Argentina	28.3%	123.6%	469.1%	3079.5%	5.0%	40.9%	42.8%	211.4%
Bolivia	43.0%	198.0%	701.7%	11750%	5.7%	12.4%	4.6%	14.0%
Brazil*	30.1%	89.5%	544.5%	2947.7%	14.1%	66.0%	5.8%	10.1%
Chile**	31.6%	83.8%	104.7%	606.1%	5.3%	12.2%	4.2%	12.8%
Colombia	9.6%	31.8%	24.5%	33.0%	14.3%	22.8%	4.9%	13.1%
Ecuador	3.6%	11.7%	29.5%	75.6%	33.0%	96.1%	2.8%	8.4%
Mexico	5.8%	18.2%	44.3%	131.8%	14.1%	35.0%	4.5%	7.8%
Paraguay	16.4%	115.5%	19.0%	38.2%	9.2%	14.2%	5.1%	10.2%
Peru	8.6%	19.1%	651.2%	7481.7%	10.5%	48.4%	3.3%	8.5%
Uruguay	31.4%	125.3%	67.3%	112.5%	21.4%	54.1%	7.7%	9.6%
Venezuela	1.7%	10.5%	19.7%	84.5%	39.3%	99.9%	7648%	130060%
Median	16.4%	83.8%	67.3%	131.8%	14.1%	40.9%	4.9%	10.2%

Source: own elaboration based on International Monetary Fund and various sources

*For Brazil, the second period covers the interval 1972-1994 to capture the hyperinflation. The third period covers 1995-2004.

**For Chile, the first period covers the interval 1950-1971 and the second period covers 1972-1992.

During the 1960s, countries with chronic inflation adopted exchange rate strategies indexing the rate of change of the exchange rate to past inflation to avoid real exchange rate (RER) misalignments. Thanks to a combination of *passive crawling pegs* and a more trade-friendly international context, Argentina, Brazil, Chile, and Colombia significantly improved their export performance. Growth accelerated and turned more sustained. For a little more than a decade, the countries of the region grew without external bottlenecks. It was a golden period.

With the first oil shock in 1973, inflation had accelerated worldwide. While oil-exporting countries began to accumulate significant amounts of FX reserves, oil-importing countries faced growing current account deficits, which managed to be financed through the recycling of “petrodollars”. European and North American banks intermediated funds between Arab countries with external surpluses and deficit countries in Latin America, Eastern Europe, and, to a lesser extent, Southeast Asia. The global financial markets were opening for the countries that two decades later would be called “emerging markets”.¹ Latin American banks and governments were among the main borrowers from international banks, which “recycled” the excess liquidity of oil-exporting economies.

¹ Even Latin American countries that produced oil (Bolivia, Ecuador, Mexico, and Venezuela) and benefited from high prices increased their spending levels and ran current account deficits and increased their public and external debt.

Some countries took advantage of the availability of external financing to curb inflation, which — due to oil shocks and “populist” domestic policies (Dornbusch and Edwards 1990)— had mutated from double to triple-digit inflation rates. The most illustrative cases within the region are the “Southern Cone” experiments: Argentina, Chile, and Uruguay. The availability of external financing made it possible to implement stabilization programs using the exchange rate as a nominal anchor. These were pre-fixed downward devaluation schemes that became popular as the “Tablitas”. In 1978 within months, these three countries adopted such exchange rate schemes in the context of trade and financial openness. As a result of inertia, inflation fell at a significantly slower pace than the pre-announced devaluation rate, leading to RER overvaluation that fed, together with the expansion of activity, important current account deficits and the accumulation of large foreign debts.²

Countries in the region that did not suffer from such high inflation avoided drastic strategies to deal with inflation. Nevertheless, they also experienced RER overvaluation due to large capital inflows. They also experienced economic expansion, current account deficits, and the accumulation of external debt. For example, in Mexico, the discovery of oil generated over-optimism about the economy's possibilities, which translated into an over-expansion of public and private spending. Brazil adopted a debt strategy in which external financing was used to underpin the import substitution process, particularly the expansion of energy production. Colombia was the only country that maintained a more cautious approach to external borrowing and thus avoided the severe consequences of the crisis that other countries did.

At the beginning of the 1980s, the direction of capital flows reversed because of the contractionary monetary policy that began in the Northern Hemisphere. The change in the global financial cycle took Latin American countries exposed to external fragility: with large current account deficits and heavily indebted. The region entered an exchange rate, financial, and sovereign debt crisis. As a result, inflation accelerated throughout the region without exception. Most countries had to deal with three-digit annual inflation rates (only Chile, Colombia, and Paraguay did not exceed 40% year-on-year), and some of them —such as Argentina, Bolivia, Brazil, and Peru— ended up in hyperinflation crises. Economic growth came to an almost complete halt, giving rise to the Latin American “lost decade”. Only Chile, Colombia, and Paraguay achieved some economic expansion, especially in the

² For a description of the processes leading to crises, see for example, Dornbusch (1982) and Frenkel (1983, 2003).

second half of the decade.

The economic failure of the 1980s favored the view that the import substitution model was exhausted and that it was necessary to initiate a process of more pro-market reforms with greater trade and, to a lesser extent, financial openness. This was the consensus that had emerged in Washington during the second half of the 1980s (Williamson, 1990). A more recent revisionist reading of the history has moderated this view (Ocampo and Ros, 2011), emphasizing that until the oil shocks, economic performance had been quite favorable, that some of the obstacles linked to the import-substitution model had begun to be solved and that exports had turned more dynamic.

A new stage can be traced between the end of the 1980s and the beginning of the 2000s—which, *alla* Eric Hobsbawm could be labeled the “long decade” of the 1990s— during which the region underwent a process of reforms that, not without productive and social costs, was quite successful in terms of macroeconomic stabilization. The countries adopted adjustment programs and structural reforms aimed at making public and external debt sustainable, controlling inflation, and restoring growth. Public sector adjustments (including, in many cases, privatization of public enterprises), in an international financial context of larger liquidity, facilitated macroeconomic stabilization.

With nuances and differences, each economy managed throughout this “long decade” to defeat inflation and converge to low inflation rates. It is possible to distinguish four groups (or cases). On the one hand, Bolivia, Chile, Colombia, and Paraguay, began this stage with lower inflation rates— lower than 35% per year— and gradually converged to price stability throughout the 1990s.

Another group is Argentina, Brazil, Mexico, and Uruguay, which adopted stabilization programs based on fixed or semi-fixed exchange rates to halt inflationary processes that were about to get out of control. Mexico stabilized through the “Solidarity Pact” of 1987, which coordinated the key prices of the economy (exchange rate, wages, and public utility rates), adopting a quasi-fixed exchange rate regime. Argentina implemented the “Convertibility Plan” in 1991, transforming the Central Bank into a modern currency board, i.e., it only issued local currency by buying dollars at a fixed rate of one peso per dollar. Brazil adopted the “Real Plan” in 1994, introducing an indexed unit of account and then converting contracts into that unit, which a year later became the official currency, the Real. Uruguay adopted a more eclectic and gradualist scheme in which the exchange rate ended up operating as the main nominal anchor. In all these cases, inflation dropped from three-digit peaks—in the cases

of Argentina and Brazil, having even gone through hyperinflationary episodes— to single-digit rates.

Ecuador could be considered part of this group because it also had a sharp decline in inflation from three to single digits per year using an exchange rate anchor. The Ecuadorian case, however, deserves two qualifications. The first one is that it implemented the most extreme form of peg, adopting the U.S. dollar as legal tender; that is, dollarizing its economy. The second is that it had to wait until the 2000s, i.e., it achieved stabilization much later than the other cases.

Peru and Venezuela can be considered special cases on their own. In Peru, the hyperinflation of the late 1980s left a legacy of a high degree of dollarization of the private sector portfolio. The stabilization program of August 1990 included exchange rate unification, liberalization of repressed prices, a strong fiscal adjustment, and a drastic contraction of monetary aggregates in real terms. The shock —later popularized as the “Fujishock”— resulted in a sharp contraction of liquidity, a rise in interest rates, a de-dollarization of the private sector portfolios, and a real appreciation of the currency (Dancourt, 1997). The distinctive feature of the Peruvian program is that the stabilization plan lacked an explicit exchange rate anchor, something atypical in contexts of hyperinflation. Arguably, Peru was the only case in the region that stabilized prices without some degree of explicit commitment to the level or the evolution of the exchange rate. Finally, Venezuela is also a particular case because stabilization —launched in 1996 with the plan known as “Agenda Venezuela”— was only partially successful. It managed to bring inflation down sharply from three digits, but without ever reaching a one-digit rate, as did the rest of the countries in the region.

Despite the success in controlling inflation, economic performance during this period had highs and lows. Certainly, during the “long decade” of the 1990s, growth was higher than during the “lost decade” of the 1980s but lower than during the import substitution period. Indicators of social conditions barely recovered to pre-debt crisis levels. Perhaps more importantly in terms of macroeconomic stability, most countries suffered the consequences of being “unprepared” for the volatility of external capital flows. Many countries in the region suffered from crises again towards the end of this period: Mexico in 1994 (currency and banking crises), Ecuador in 1998- 99 (currency, banking, and sovereign debt crises), Bolivia in 1999 (banking crisis), Brazil in 1999 (currency crisis), Colombia in 1999 (banking crisis), Argentina in 2001-2002 (currency, banking, and sovereign debt crises), Uruguay in 2002 (currency, banking, and sovereign debt crises), Venezuela in 2002 (currency crisis), and Paraguay in 2002-2003 (banking, and sovereign debt crises)

3. The Forking Paths

By the mid-2000s, Latin American countries had managed to defeat a source of macroeconomic instability that had plagued the region for decades: inflation. All South American countries and Mexico had single-digit annual inflation rates, except for Venezuela, which during the first half of the 2000s hovered around 20% per year, but it fell to a record low of 13.7% in 2006.

The degree of macroeconomic stability in the region went beyond low inflation rates. Let us pause our narrative in this historical moment to characterize the situation in greater detail. Table 3 shows a set of economic variables and gives a sense of the unprecedented macroeconomic stability in the history we have been describing so far. In addition to historically low inflation rates, countries ran primary fiscal surpluses, relatively sound current account balances, significant stocks of international reserves, and high growth rates.

Table 3: Macroeconomic Stability in the mid-2000s (year 2005)

	Primary Fiscal Balance (% of GDP)	Current Account Balance (% of GDP)	International Reserves (% of GDP)	GDP per capita (var. % annual geometric average 2003-05)	Annual Inflation
Argentina	5.2%	2.7%	13.6%	7.8%	9.6%
Bolivia	0.8%	6.5%	13.9%	2.0%	5.4%
Brazil	3.6%	1.3%	6.0%	2.2%	6.9%
Chile	5.0%	1.5%	13.8%	4.7%	3.1%
Colombia	2.1%	-1.3%	10.2%	3.2%	5.0%
Ecuador	2.6%	1.1%	4.1%	3.6%	2.1%
Mexico	1.3%	-0.6%	8.1%	0.8%	4.0%
Paraguay	2.1%	-0.6%	12.1%	2.3%	8.1%
Peru	1.6%	1.5%	18.3%	4.1%	1.6%
Uruguay	3.8%	0.2%	16.2%	4.3%	4.7%
Venezuela	7.1%	17.5%	16.7%	4.6%	16.0%
Median	2.6%	1.3%	13.6%	3.6%	5.0%

Source: Own elaboration based on data from the World Bank, World Economic Outlook and International Financial Statistics (IMF).

From this moment onwards, a new story begins. One in which the path of the countries of the region bifurcates. As of the new millennium, most of the countries in the region began to develop—with their nuances— macroeconomic policy regimes that sought to solidify the macroeconomic stability achieved after several decades of instability and crises. These regimes were based on four pillars: 1) inflation targeting monetary policy frameworks conducted by independent and largely technocratic

Central Banks; 2) managed floating regimes in which Central Banks seek to accumulate international reserves as a macroprudential strategy; 3) institutional fiscal policy frameworks that seek to maintain a countercyclical bias and the sustainability of public debt; and 4) integration with international capital markets. This kind of framework seems to be what is currently considered the standard of “good practices” for macroeconomic policy by international organizations and academia.³ This scheme has been adopted —again, with their nuances and timing— by Brazil, Chile, Colombia, Mexico, Paraguay, Peru, and Uruguay. To refer to this group of countries we will use the label “good practices”. Argentina, Bolivia, Ecuador, and Venezuela, on the other hand, followed a different path, with more erratic macroeconomic policy strategies that favored short-term objectives and relegated the macroeconomic stability achieved in the mid-2000s to the background.⁴

In theory, the “good practices” framework implied, at least in the early 2000s, the adoption of inflation targeting combined with “pure” floating exchange rates. The trendy view at the time, as Latin American countries began to migrate towards more flexible schemes, was that the only two options in a world with high capital mobility were pure floating or hard pegs, like dollarization. This is the “bipolar view” (Fischer, 2001). This view essentially reflected the trilemma of open economies, according to which policymakers can choose only two of three options: a) fixed exchange rate; b) autonomy to conduct monetary policy; and c) financial integration with international markets. Since financial globalization was taken as an unavoidable fact, the options were the first two. The crises of the 1990s and early 2000s, which occurred in countries with some form of fixed exchange rate regime (soft pegs), gave credentials to the second option.

Soon after moving to floating schemes, however, countries began to realize that —given the small size of their FX markets relative to capital flows— exchange rate behavior could be very volatile and pollute macroeconomic stability. Central Banks in the region began to intervene in exchange markets to avoid sharp depreciations during the first part of the 2000s —what was called “fear of floating” (Calvo and Reinhart, 2000)— and then in the second half to avoid sharp appreciations —what was

³ In international organizations such as the IMF, for example, the adoption of an inflation targeting scheme (which assumes to some extent the other elements of the regime) is a basic assumption of the macroeconomic models produced by the research department (see Berg et. al., 2023).

⁴ A detailed discussion of the trajectories and policies adopted in each of the countries during this period is beyond the scope of this article. For a discussion of the cases, see Damill et. al. (2015, Argentina); Barbosa (2015, Brazil); Kehoe et. al. (2017, Bolivia), Ffrench-Davis (2015, Chile), Ocampo and Malagón (2015, Colombia), Cuevas and Díaz (2017, Ecuador), Ros (2015, Mexico), Charotti et. al. (2017, Paraguay), Dancourt (2015, Peru), Oddone and Marandino (2017, Uruguay) and Vera (2015, Venezuela).

called “fear of appreciating” (Levy-Yeyati et. al., 2013). Thus, what began as an ideal of a “pure” floating scheme became a “managed floating” in practice, and over time gained acceptance and grounding in the academic world.⁵

The initial floaters in the region were Chile and Colombia. Both went through the 1990s consolidating a long process of disinflation combined with a flexible crawling bands scheme that started in the 1980s, bringing inflation down from 20-30% yearly to single-digit rates in the mid-1990s. The two countries began the process by adopting a sui generis monetary policy scheme: Chile, by announcing inflation targets in 1990, and Colombia by guaranteeing the independence of the Central Bank by law in 1991. The process of formal adoption of floating cum inflation targeting was consolidated in both cases by 1999, when inflation had fallen to levels like those of advanced countries, around 2-3% per year.

In 1994 in Mexico, and 1999 in Brazil, the fixed exchange rate systems that had been in place until then were abandoned. After a devaluation of the domestic currency, they moved towards more flexible schemes. Brazil began to float and formally adopted inflation targeting in 1999. Mexico began to float in 1995 and adopted inflation targeting formally in 1999.

Despite having a high degree of financial dollarization, Paraguay, Peru, and Uruguay managed — through the adoption of macroprudential policies— to coexist with higher degrees of exchange rate flexibility. At the same time, Peru (like Bolivia, although in this case with a fixed exchange rate system) gradually underwent a process of de-dollarization. Paraguay and Uruguay, on the other hand, experienced a lower degree of financial de-dollarization.

In 2011, Paraguay, which had already been experimenting with floating exchange rates, adopted an inflation targeting scheme, like that of the other countries in the region. Uruguay formally did the same in 2013, although inflation was not as low on average as in the neighbors. In Peru, inflation targeting was adopted in 2002. Unlike other cases in the region, where the degree of exchange rate flexibility is greater, the Central Bank of Peru intervenes more frequently in the FX market, to maintain an adequate level of international reserves, avoid bank runs, and minimize “balance sheet”

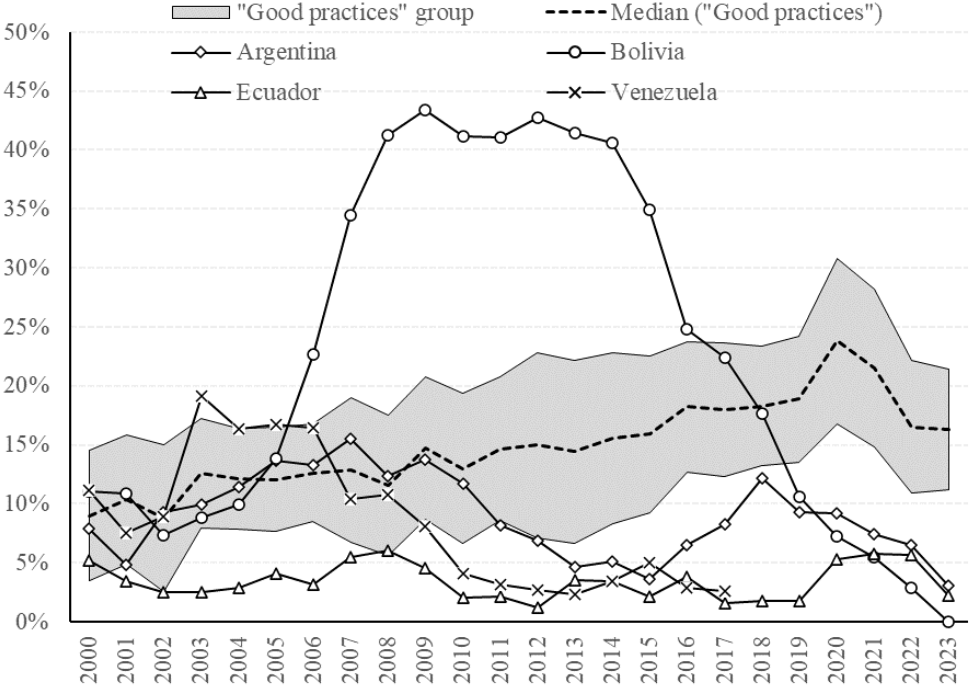
⁵ Economic and empirical analysis has been warning that “managed” floating can coexist with a Central Bank with the capacity to determine domestic interest rates, even if there are no relevant restrictions on capital mobility (see, Bofinger and Wollmershäuser, 2003, Frenkel, 2007 and Frankel 2019, among others).

effects from large exchange movements (Dancourt, 2015).

Peru is not an exceptional case within the group of “good practices”. The inflation targeting and floating scheme adopted in Latin America was combined with Central Banks that pursued international reserves accumulation in their balance sheets to have the firepower to intervene when there were downward pressures in FX markets. This firepower proved useful in containing the capital outflows caused by the 2008-09 global financial crisis (Ocampo, 2010).

Figure 1 shows the bifurcation between the two groups in terms of international reserves accumulation. Nowadays, all the countries that followed the “good practices” have a higher ratio of international reserves to GDP than in the mid-2000s, while those of the other group have fallen below. The case of Bolivia is unique. After starting the decade like the rest of the region, it reached an exceptionally high stock of international reserves in 2014 (approximately 50% of GDP). Then it began a process of deaccumulation that exhausted the stock of international reserves. Within the first group, Chile is the only one that has not accumulated a significant stock of reserves, but it has increased the size of its fiscal stabilization funds instead.

Figure 1. International reserves (% of GDP)



The upper and lower limits correspond to a standard deviation about the median. Source: Prepared by the authors based on data from the World Economic Outlook and International Financial Statistics, IMF.

Countries that did not adopt the “good practices” conducted exchange rate policies with significantly lower degrees of flexibility and even adopted strong FX controls. In Bolivia and Ecuador, this has been evident. In the first case, because authorities maintained a fixed exchange rate; in the second, because of dollarization. Both strategies helped prevent inflationary pressures. If the fixed exchange rate or dollarization is not abandoned, prices are expected to remain stable. Greater price stability, however, has as a side back greater real instability: fixed exchange rate regimes increase the exposure of the domestic economy to, for example, changes in commodity prices and global financial moods, which increases the volatility of activity and employment.

Argentina and Venezuela maintained *multiple* exchange rate systems due to the implementation of restrictions on access to the FX market. In Argentina between 2011 and 2015 and then from 2019 onwards; in Venezuela since 2010.⁶ In the face of inflationary and FX pressures, which were signals about the unsustainability of the macroeconomic schemes, the authorities chose to impose restrictions on access to the official exchange market, opening the gate for parallel FX markets that were opaque and difficult to control.⁷ Instead of seeking to achieve external sustainability and growth, FX regulations were aimed at avoiding the devaluation of the official exchange rate at all costs. In both cases, the authorities tried unsuccessfully to avoid depreciation in the parallel markets, whose influence on the price of tradable goods —and to some extent on non-tradable goods— grew over time.

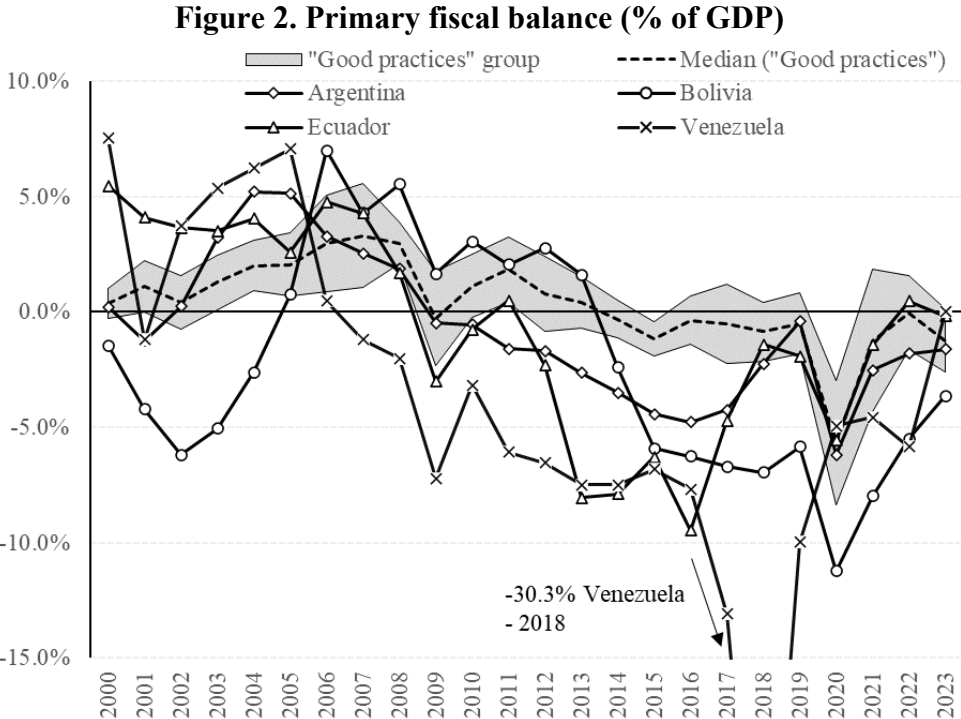
Exchange restrictions applied by these countries did not achieve the objective for which they were implemented, i.e. to avoid currency depreciation and the loss of international reserves. It is a well-documented result that when exchange restrictions are adopted in a sustained and generalized manner to avoid the correction of macroeconomic imbalances, they initially reduce the loss of international reserves, but eventually lead to a “trickle-down” effect, by stimulating practices such as over-invoicing or the advanced payments of imports and under-invoicing or delayed surrender of exports, all of which leads to growing expectations of depreciation. For these reasons, a rise in the parallel

⁶ Recently (April 2023), Bolivia began to move in the same direction. Due to the sharp drop in its stock of international reserves and, faced with pressures on bank deposits and the exchange market, the authorities have chosen to ration the supply of FX at the official exchange rate; an incipient parallel market emerged.

⁷ Following a period of easing restrictions between December 2015 and August 2019, Argentina once again severely restricted access to FX and capital movements in a context of credit rationing from international markets, a new restructuring of public debt (in August 2020), and two programs with the IMF for around US\$44 billion, a record figure for the organization (in 2018, revised and then redefined in 2022).

exchange rate usually leads to depreciation in the official FX market in the long run. History has shown that the adoption of FX restrictions in Latin America has not been an effective mechanism to avoid devaluation (Libman, 2018a).

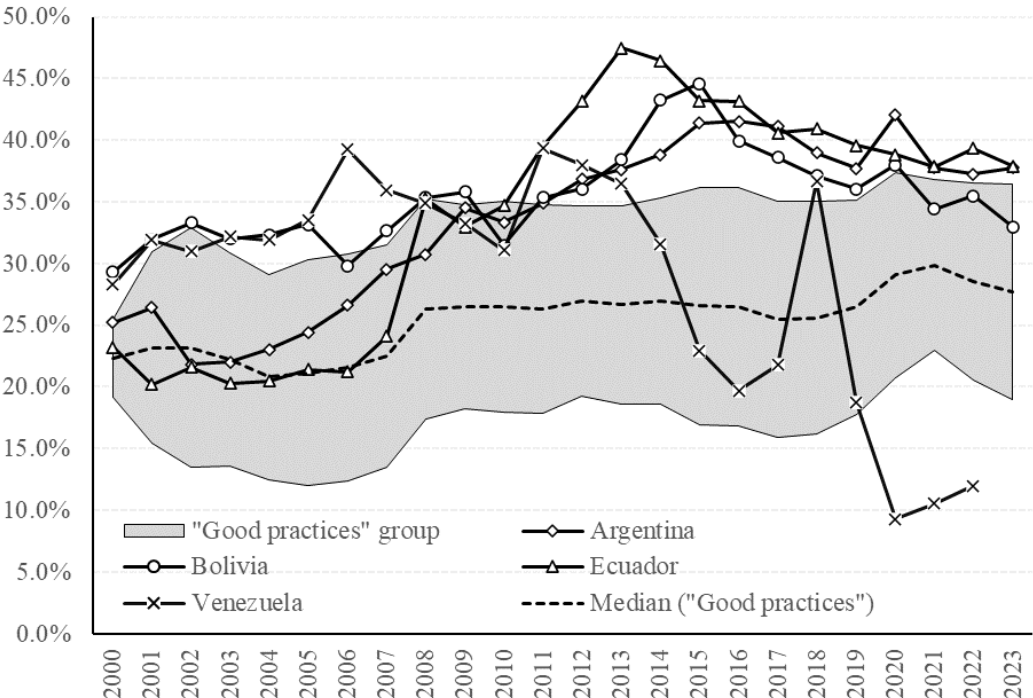
Another issue that has differentiated the macroeconomic performance between countries during the new millennium has been fiscal policy and public sector indebtedness. Countries that adopted the “good practices” have generally maintained fiscal surpluses or balanced, or in a few cases, deficits that have not exceeded 1-2% of GDP (except for what happened during the COVID-19 pandemic). In contrast, Argentina, Bolivia, Ecuador, and Venezuela have exhibited growing fiscal deficits, associated with the expansion of social coverage and subsidies that contributed to contain inflationary pressures, largely linked to the price of electricity, fuel, and public transportation. Figure 2 shows that the general trend in the region has been a move from surpluses to primary fiscal deficits. This phenomenon became more pronounced during the COVID-19 pandemic when fiscal rules were suspended to allow some flexibility. Notice, however, that economies that did not follow the “good practices” accentuated the imbalance of their public positions earlier. Some efforts to balance the budget have been made in Argentina and Ecuador, and, to a lesser extent, in Bolivia and Venezuela.



The upper and lower limits correspond to a standard deviation about the median. Source: Prepared by the authors based on data from the World Economic Outlook and International Financial Statistics, IMF.

One of the elements responsible for the changes in fiscal performance has been the evolution of public spending (Figure 4). Economies that have followed the “good practices” maintained relatively more moderated public spending levels. The other group, on the other hand, has continued to spend and eventually it led to forced adjustments. In the cases of Argentina and Venezuela, the adjustment of the public spending occurred “indirectly”, through the reduction in real terms of budget items due to accelerating inflation, while in Bolivia and Ecuador, the process was driven by “direct” item cuts.

Figure 3. Public Expenditure (% of GDP)



The upper and lower limits correspond to a standard deviation about the median. Source: Prepared by the authors based on data from the World Economic Outlook, IMF.

Another difference in the fiscal dimension is that the economies that adopted the “good practices” built up a series of fiscal institutions during this period, designed to sustain and strengthen macroeconomic stability. Fiscal rules are an example. As of 2021, 105 countries in the world had some type of fiscal rule at least at some government level (Davoodi et. al., 2022a). The most common combination is to run simultaneous rules on output, debt, and public spending (33% of countries, see Davoodi et. al., 2022b). The most common cases are those in which the national/federal public sector is restricted by stipulating some limit on the fiscal deficit (Ardanaz et. al., 2019; see Appendix 1 for a more comprehensive description of the fiscal institutions of the Latin American cases).

Chile is the pioneer in the region at implementing fiscal rules. During the 1980s and 1990s, Chile maintained a fiscal surplus of around 1-2% of GDP and since 1985 there has been a stabilization fund created to reduce the exposure of the economy to fluctuations in the price of copper.⁸ Currently, there is a fiscal rule that seeks to ensure that in the long term, the fiscal deficit is consistent with the sustainability of the public debt. Fiscal surpluses, associated with favorable commodity prices, are accumulated in the Economic and Social Stabilization Fund. In turn, the Pension Reserve Fund is responsible for managing savings for retirement and pensions.

Colombia, like Chile, has a fiscal rule whose objective is structural balance. This type of rule is more complex and requires a better institutional framework. They have an advantage over the rest of the type of rules since they allow some flexibility to adopt countercyclical policies. Unlike, for example, a rule that sets a ceiling on spending or debt, which is useful to ensure fiscal sustainability but can become restrictive in certain circumstances—for example under an unexpected recessionary shock—, structural balance rules give some room for flexibility. But the more complex the rule is, the less clear is to communicate to the public.

The other countries that adhere to “good practices” also run fiscal rules, although they do not operate exclusively (or necessarily) on the fiscal balance. In Brazil, for example, the budget must follow a “golden rule” whereby central government credit operations cannot exceed capital expenditures. In Mexico, the fiscal result must be consistent with the stability of the debt of the entire non-financial public sector. Paraguay has a ceiling for the fiscal deficit of 1.5% of GDP and in Peru, it cannot exceed 1% of GDP. Brazil, Mexico, Paraguay, and Peru also have rules constraining spending growth, based on inflation and the economy's potential output growth. Uruguay has a limit on the level of public debt, which is also the case in Brazil and Peru.

Countries conducting the “good practices” also have a Fiscal Council. This institution is responsible for advising the authorities, preparing reports, monitoring compliance with the fiscal rules, and other issues.⁹ Its authorities are elected for several years, have access to information to carry out their tasks,

⁸ The current rule formally dates to 2006 (Law No. 20,128) and is based on the concept of “Structural Balance”, which results from estimating the fiscal balance that would be obtained in a particular year if the price of copper were at its medium-term level and economic activity (measured through GDP) were at its trend level (see for example, Ffrench-Davis, 2016).

⁹ In Chile there are two committees of experts that provide an estimate of the level of potential product and the long-term price of copper, two key data for estimating the construction of the fiscal rule (Ffrench-Davis, 2016). Uruguay has the

and generally —although not always— have adequate support staff. The Fiscal Councils in these countries are institutions dependent on the government or some legislative branch and cannot decide or veto fiscal policy.

In countries that do not follow institutional schemes, rules and funds are either non-existent (Bolivia and Venezuela) or exist but their design and implementation are too lax. In the case of Argentina, there is a fiscal rule and a Federal Council of Fiscal Responsibility that brings together the Provincial and National Ministers of Economy and limits spending growth and provincial indebtedness. However, the design of the rule is too lax; in the case of the provincial debt ceilings, they are not binding, and their application was suspended or modified on several occasions, limiting the effectiveness of the institutional mechanisms to control spending. Additionally, participation in the Fiscal Council, which according to the legislation should apply sanctions for non-compliance with the fiscal rule, is not mandatory.

Ecuador has a complex fiscal rule, which limits both spending and debt levels; it even had a stabilization fund to accumulate surpluses from oil revenues. But between 2008 and 2016 all these initiatives, adopted in the early 2000s to make an economy that had just adopted dollarization more robust, were suspended and the fund's surpluses were consumed.

Certainly, fiscal institutions in the more stable economies are far from perfect. For example, in Brazil the public sector expanded its presence in the economy through BNDES (the National Development Bank) and Petrobras (the state oil company), increasing the sector's deficit without this being reflected in official statistics (Ayres et. al., 2017). Although most fiscal councils are called independent, they are all attached to different government bodies (of the executive or legislative branch), which reduces their autonomy. Additionally, noncompliance with targets is relatively frequent.¹⁰ Despite these problems, there is evidence that the presence of fiscal rules is positive for macroeconomic performance, even when there are deviations regarding what is stipulated in the

Consejo Fiscal Asesor which is formed by highly respected economists from academia and provides independent professional assessment of the fiscal policy.

¹⁰ According to Larch and Santacroe (2020), the average compliance with fiscal rules in European countries during 1998-2019 was just over 50%. Reuter (2019) finds that the average compliance with all fiscal rules in 20 European Union member countries is 51% from 1995 to 2015. Moreover, debt rules are more frequently complied with than balance sheet and expenditure rules (88% compliance, versus 35% for balance sheet rules and 45% for expenditure rules).

rule.¹¹ In all these experiences, the presence of rules seems to have limited the size of fiscal imbalances and contributed to maintaining more stable macroeconomic environments.

Regarding monetary policy institutions, countries following the “good practices” have independent Central Banks. Except for Brazil, which established it only in 2021, Central Bank independence has been legally guaranteed since the 1990s in most of these economies. In general, Central Banks in these countries have been headed by professionals with academic credentials—educated at American or European universities—and who convey to the public a clear aversion to inflation (what is often referred to in the Central Banking jargon as “orthodox”, “conservative”, or “hawkish”).¹² While a Central Banker does not need those to perform his task properly—or he/she may not have them—the presence of authorities with an “orthodox” or “hawkish” profile tends to convey a commitment to price stability on the part of the monetary authorities and contributes to reducing the inflationary bias of monetary policy (Rogoff, 1985).

In the other group of countries, on the other hand, Central Banks are not independent, or at least they have not been during much of the period of the forking paths. In these countries, the Central Banker can and has been usually removed more easily and frequently. For example, since 2000, Argentina's Central Bank had sixteen presidents, Bolivia's had eight, and Venezuela's had ten, compared to Brazil's five, Colombia's four, Chile's six, Mexico's four, and Peru's five.¹³

In Argentina (2012) and Ecuador (2008), the Central Bank charters were reformed reducing the role of monetary policy as an instrument for price stability or to decide monetary policy directly from the executive branch.¹⁴ When inflation began to accelerate, the Argentine authorities, instead of fighting it, chose to hide it by falsifying public statistics. In 2007, the agency that compiles public statistics—the National Institute of Statistics and Censuses (INDEC)—was intervened to prevent the inflation rate official statistic from jumping above a one-digit rate. The manipulation gradually spread to other

¹¹ Eyraud et. al. (2017) studied the Eurozone over the period 1999–2015 and found non-compliances in 80% of observations, with almost two-thirds of countries exceeding the medium-term objective in all years. Despite these deviations, Reuter (2022) documents that discretionary fiscal policy amplifies GDP volatility and that the rules are effective in limiting fiscal volatility. The mere existence of these rules can have positive macroeconomic effects, by acting as a reference for the fiscal authority and the public and promoting the predictability of fiscal policy.

¹² This characterization is generic, and each case has its particularities. See Appendix 2 for more details.

¹³ In Brazil, Colombia, Mexico, and Peru, to find out who the last five Central Bankers were, one must go back at least to the 1990s (and the 1980s in the case of Colombia), which indicates that the duration of the mandates is long.

¹⁴ In the case of Ecuador, a president of the Central Bank (who was a relative of the President of the Nation) presented a fake bachelor's degree in economics and had to resign.

statistics until 2016, when the normal functioning of INDEC was restored. Something similar happened in Venezuela with the National Institute of Statistics (INE), where there exists a statistical blackout until today.

In addition, Central Banks in these countries have contributed to monetized fiscal deficits. Although in theory a Central Bank cannot assist the treasury under a dollarized system, the Bank of Ecuador granted financing of up to 10% of GDP, exchanging international reserves for illiquid public securities (Erraez and Reynaud, 2022). Although there are fewer legal limitations, Argentina's Treasury resorted to a similar practice —exchanging FX reserves for Treasury securities on numerous occasions— to pay foreign debt services.¹⁵

Table 4. Fiscal and Monetary Institutions

	Independent Central Bank	Inflation Targeting	Orthodox Central Banker	Fiscal Rules	Countercyclical Funds	Fiscal Council
Argentina	-	Transitional 2016-2018	Occasionally	Spending and Debt	Yes	2004
Bolivia	-	No	-	-	-	-
Brazil	2021	Since 1999	Yes	Spending, Balance, and	-	2016
Chile	1989	Since 1999	Yes	Balance	Yes	2013
Colombia	1991	Since 1999	Yes	Balance	Yes	2011
Ecuador	2021	No	-	Spending, Balance, and	-	-
Mexico	1994	Since 1999	Yes	Spending and Balance	-	1998
Paraguay	1995	Since 2011	Yes	Spending and Balance	-	2016
Peru	1993	Since 2002	Yes	Spending, Balance, and	-	2015
Uruguay	1995	Since 2013	-	Debt	-	2021
Venezuela	-	No	-	-	-	-

Source: Own elaboration based on Ardanaz et al. (2019), Davoodi et al. (2022a), Cetrángolo et al. (2022), and data from national central banks. See Appendix 1 & 2

Source: own elaboration based on Ardanaz et. al. (2019), Davoodi et. al. (2022a), Cetrángolo et. al. (2022), and data from national Central Banks. See Appendices 1 and 2.

¹⁵ For example, to pay off the debt with the IMF that existed in December 2006, for some 9.8 billion dollars, the Treasury issued international reserves in exchange for these bills, which are illiquid securities denominated in foreign currency. It repeated this practice on several occasions to pay other debts in foreign currency between 2010 and 2024.

Table 4 summarizes in stylized form the adoption of fiscal and monetary policy institutions by country and accounts for the difference between the two groups of countries.

4. Macroeconomic policy and economic performance

It is not possible to attribute macroeconomic performance exclusively to the design and implementation of macroeconomic policy strategies followed since the mid-2000s. However, a first analysis of the evidence seems suggestive.

As shown in Table 5, taking 2006 as the starting point, economic growth has been slower in the cases of Venezuela, Argentina, Mexico, and Ecuador (in that order). If the assessment is made starting in 2014 (when growth in the region slowed down), Argentina, Brazil, Ecuador, and Venezuela are the only countries that experienced negative GDP per capita growth. Bolivia - another economy that has not adopted a “good practices” scheme - is an exception. It is among the best performers in the region for the entire period since the early 2000s.

In addition, the process of poverty reduction in countries that have not followed the “good practices” has been less intense —except in Bolivia— and has even increased in Argentina and Ecuador (and presumably in Venezuela, where there are no official indicators) if the period 2014- 2022 is taken as a point of comparison.¹⁶

¹⁶ The ways of measuring poverty in each country differ because they use different criteria and methodologies, which makes comparisons difficult. For this reason, we use the data on extreme monetary poverty for upper-middle-income countries produced by the World Bank (defined as \$6.85 per day PPP in 2017). These are not very different, at least qualitatively, from what the ECLAC statistics show, since both have a homogeneous criterion for measuring poverty and show similar trends for the countries analyzed.

Table 5. GDP per capita and poverty

	GDP per capita		Poverty change in p.p.*	
	2023 vs 2006	2023 vs 2014	2022 vs 2006**	2022 vs 2014**
Argentina	5.9%	-7.0%	-6.0	1.4
Bolivia	42.9%	9.9%	-42.1	-5.0
Brazil	19.9%	-1.6%	-17.9	-0.8
Chile	33.3%	6.5%	-24.4	-7.8
Colombia	45.4%	11.5%	-18.7	-0.6
Ecuador	11.9%	-9.3%	-15.9	2.3
Mexico	4.7%	3.6%	-17.9	-18.5
Paraguay	41.0%	5.6%	-23.9	-2.7
Peru	65.5%	11.6%	-23.7	-1.2
Uruguay	59.0%	7.5%	-15.9	0.1
Venezuela	-63.8%	-65.5%	-	-
Median	33.3%	5.6%	-18.3	-1.0

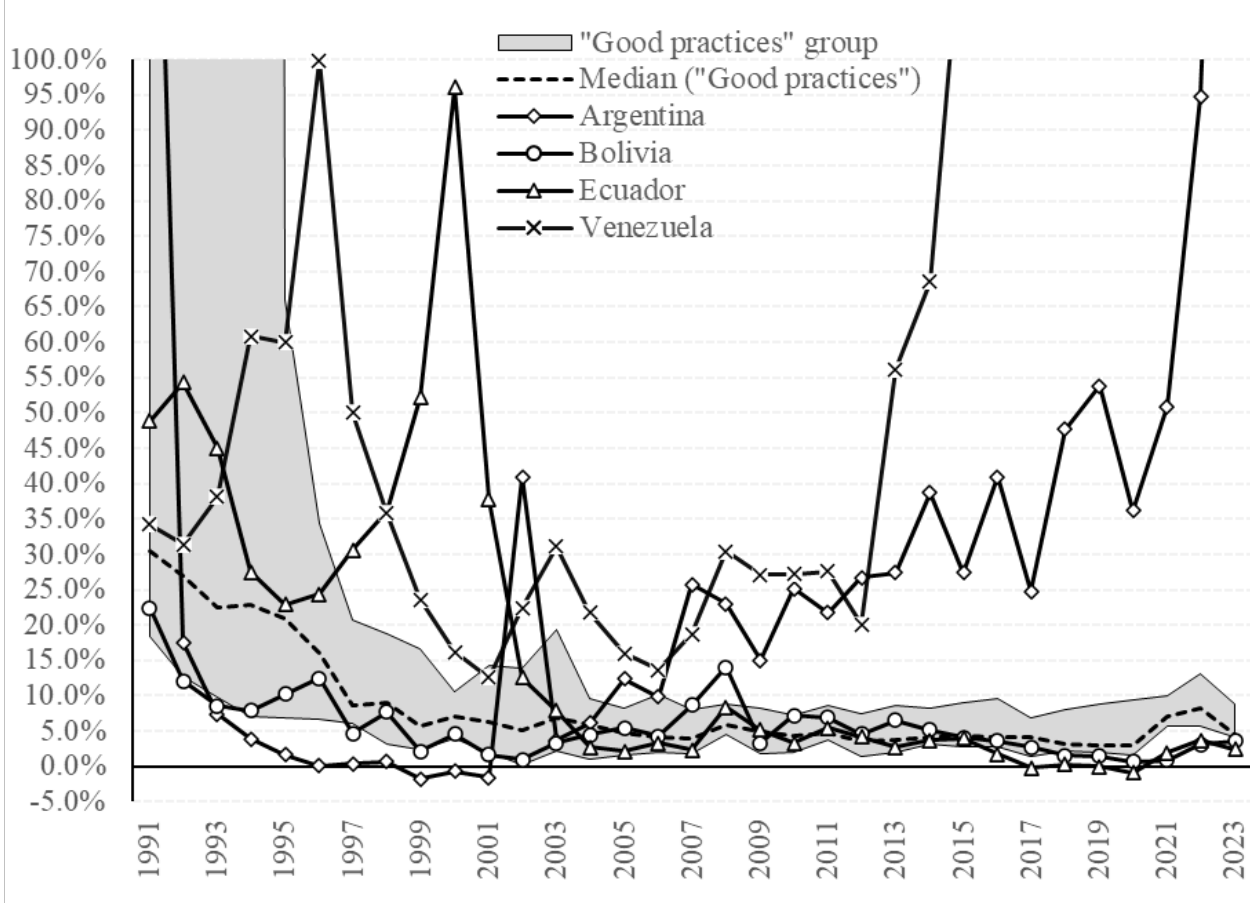
Source: Own elaboration based on World Bank and International Monetary Fund

*Poverty changes are measured in percentage points (p.p.) based on a poverty rate of \$6.85 per day (PPP 2017).

**For Chile and Colombia, comparisons are made between 2022 and 2005. Additionally, for Chile, comparisons are also made between 2022 and 2013. For Bolivia are made between 2021 and 2014, due to data availability.

Figure 4 shows two extreme cases of nominal disequilibrium. After having reduced inflation along with the rest of the region, Argentina and Venezuela experienced a resurgence of inflation since the mid-2000s; in the Venezuelan case, even going so far as to experience hyperinflationary episodes. In contrast, Bolivia and Ecuador maintained even lower inflation rates during the period than the rest of the region. This is not surprising, since the exchange rate schemes of these countries are the least flexible in Latin America.

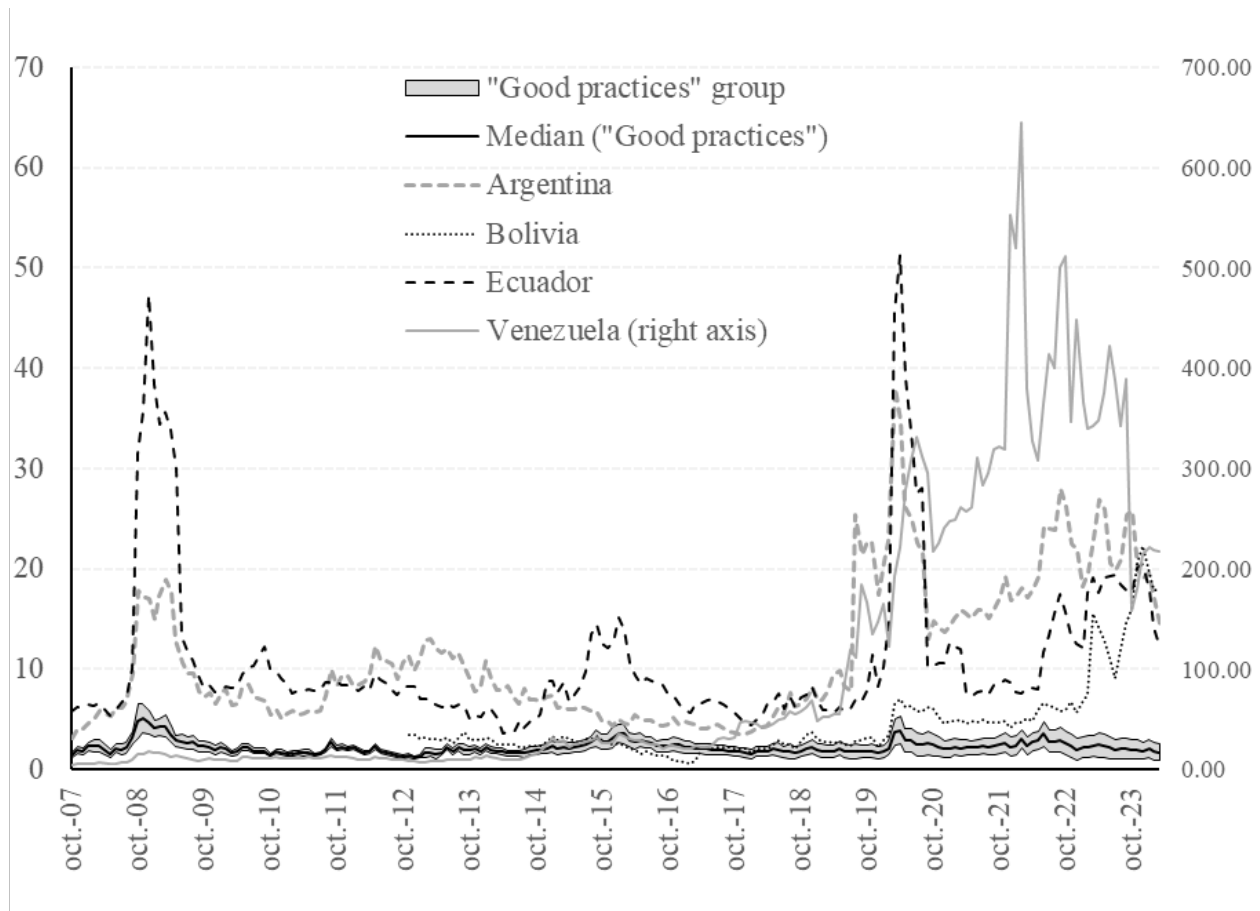
Figure 4: Inflation rate (Consumer price indexes, in year-on-year percentage change)



Source: Prepared by the authors based on data from the World Economic Outlook, IMF, and Carmen Reinhart. Due to the high volatility of inflation in the early 1990s, the lower and upper limits correspond to the minimum and maximum records of the “good practices” countries.

The four economies that have not adhered to the “good practices” scheme have a hard time accessing to the international credit market and generally at a higher cost (see Figure 5). In Argentina and Ecuador, the upward trend in the sovereign risk premium began in 2006-2007, with the intervention of public statistics in Argentina and debt restructuring in Ecuador. Venezuela had difficulty accessing capital markets since the late 2000s and its risk premium began to soar towards the end of the 2010s. In Bolivia, the risk premium remained low until the end of 2022, while the stock of FX was being exhausted.

Figure 5. Country risk premium (measured in interest rate points).



The upper and lower limits correspond to one standard deviation about the median. Source: JPMorgan.

This evidence seems to suggest that macroeconomic policy decisions had some influence on economic performance during the period when the paths diverged. Countries that followed “good practices” schemes performed better on average: they grew faster, reduced poverty more, suffered less inflation, and maintained smoother access to international financial markets and at lower cost.

The mechanisms through which the macroeconomic policy framework influences economic performance are not necessarily obvious. In this case, our view is that the framework of “good practices” tends to reduce uncertainty and volatility in the economy and, in this way, stimulates growth. There is a good number of empirical studies finding solid evidence that countries tend to grow faster when macro volatility is low. Ramey and Ramey (1995) is probably the most cited empirical work in this literature. The authors use a panel of 92 countries and show that the relationship is negative and statistically significant, after using several controls and running multiple

robustness checks. Loayza and Hnatkovska (2004) is another influential paper that finds similar results. Using instrumental variables, the authors find that higher volatility has a negative effect — between 0.5 and 1.3 percentage points— on the rate of long-run growth. To identify a causal effect of volatility on growth, Badinger (2010) collects similar results. He uses volatility induced by policy changes in other countries as an instrument and finds a negative and robust relationship between volatility and economic growth for a broad group of countries between 1960-2003.

Closer to the focus of our work, Dabús and Delbianco (2023) find that, in Latin America, GDP growth is higher the lower its volatility (measured as the five-year standard deviation of the GDP growth rate). The authors analyze a group of 18 countries in the region and perform a clustering process by five-year periods that classifies them into growth regimes based on the median performance they showed in terms of GDP growth between 1980 and 2014. All countries were classified for each period into three groups: high, medium, and low economic growth regimes, using them as the dependent variable in several econometric models (Probit, Ordered Logit, and Generalized Logit).

To assess more systematically the relationship between macroeconomic policy and economic performance we present a series of econometric exercises similar to those of Dabús and Delbianco (2023). We consider a longer period than the authors, to exploit the policy change and its implications at the end of the 2010s. The period considered covers 1980 to 2019 (before COVID-19) and the change in GDP per capita (instead of GDP) is the macroeconomic performance variable. The sample of countries is identical to the one we have analyzed: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, and Venezuela.

Like Dabús and Delbianco (2023), we follow an econometric identification strategy for our set of countries and use panel Probit with random effects and ordered Logit models. We group the sample of countries by five-year periods into three groups: high, medium, and low economic growth regimes. This categorization functions as the dependent variable of the models to be estimated. For the first model, two dichotomous variables were constructed: high (vs. low and medium) and low (vs. medium and high) growth regimes; these are the dependent variables to be explained by the Probit model. For the second model, the ordinal logic of 1 to 3 between low, medium, and high was preserved.

We argue that the macroeconomic policy regime influences economic performance (GDP per capita) because it decreases the volatility of economic growth. We use a set of independent variables common in growth econometric studies, including the Gini coefficient, investment (as a % of GDP), the coefficient of economic openness (measured as exports and imports of goods as a proportion of GDP), average annual inflation, and the volatility of economic growth (measured as the standard deviation of the variation of GDP over the five-year periods). Additionally, in line with the narrative of the “good practices”, we incorporate the fiscal result and the stock of international reserves (both as a fraction of GDP). The hypothesis is that an improvement in these variables is positively associated with economic growth.

Tables 6 and 7 show the results found by both the Panel Probit and Ordered Logit models, which are presented in terms of average marginal effects. In both cases, we present the results estimated following Dabús and Delbianco (2023) but with our sample, and a similar model but with the fiscal balance and the stock of international reserves (as % of GDP) as additional control variables, which we refer to as “our model”.

Table 6. Panel Probit with Random Effects (South America and Mexico, five-year averages 1980-2024, average marginal effects)

Independent Variables	Low Growth Regime		High Growth Regime	
	Dabús & Delbianco Model (2023)	Our model	Dabús & Delbianco Model (2023)	Our model
Gini Coefficient	-0.002	0.002	-0.012**	-0.015***
Investment (% of GDP)	-1.034	-1.250	1.307	1.96
Inflation	0.014	0.004	-0.007	0.003
Economic Openness	-0.124	0.295	0.497*	0.136
Volatility	6.830***	6.354***	-2.028	-1619
Fiscal Result (% of GDP)	-	-2.308	-	3.881**
International Reserves (% of GDP)	-	-2.564***	-	1.137*
N	88	88	88	88

Legend: *** p<0,01 ; **p<0,05 ; *p<0,1; models without constant

Source: Own elaboration

In the Probit model we find, as Dabús and Delbianco, that a marginal increase in volatility increases the chances of transition to low-growth states. Inflation and the rest of the variables in this case are not significant: volatility captures the full effect of the negative impact on economic growth. When we incorporate international reserves and fiscal balance, the size of the effect of volatility on the dependent variable becomes smaller, suggesting that the accumulation of FX and an improved fiscal

balance reduced the impact of volatility; an improvement in international reserves and in the fiscal balance (although not statistically significant) decreases the probability of being in the low-growth group, capturing a portion of the effect that Dabús and Delbianco (2023) considered as part of volatility. The same is true for the probability of remaining in a high growth regime: volatility is not statistically significant, but inequality, reserve accumulation, and fiscal outcome are. Here again, the “good practices” argument seems relevant, as higher reserve accumulation and better fiscal performance increase the probability of being in a high-growth regime, which are both statistically significant.

Table 7. Ordered Logit (South America and Mexico, five-year averages 1980-2024, average marginal effects)

Independent Variables	Growth regime					
	Low		Medium		High	
	Dabús & Delbianco Model (2023)	Our model	Dabús & Delbianco Model (2023)	Our model	Dabús & Delbianco Model (2023)	Our model
Gini Coefficient	0.010	0.011	-0.001	-0.002	-0.009	-0.009
Investment (% of GDP)	-0.953	-1.189	0.113	0.248	0.840	0.941
Inflation	0.013	0.004	-0.001	-0.001	-0.011	-0.003
Economic Openness	-0.187	0.161	0.022	-0.034	0.165	-0.127
Volatility	5.723***	5.372***	-0.681	-1.122	-5.042***	-4.251***
Fiscal Result (% of GDP)	-	-3.991**	-	0.833	-	3.158**
International Reserves (% of GDP)	-	-1.816***	-	0.379	-	1.437***
N	88	88	88	88	88	88

Legend: *** p<0,01 ; **p<0,05 ; *p<0,1; models without constant

Source: Own elaboration

The ordered Logit model reinforces these results. Economic volatility has a direct average marginal effect on the probability of being in a low-growth regime and a negative one on a high one. However, by adding the fiscal outcome and the level of international reserves, the magnitude of the effect of volatility falls because these variables would be capturing part of the effect that was previously only captured by the volatility of GDP per capita. Volatility alone is still relevant, but in smaller proportion, and better fiscal results and higher international reserve ratios increase the chances of entering a high-growth regime, while worse fiscal balances and lower levels of international reserves reduce the probability of being in a low-growth regime.

5. Conclusions

In this paper, we offer a narrative about the evolution of Latin American economies from the post-World War II period to the present. Our narrative suggests that countries followed a trajectory that, with its nuances, was quite similar until the mid-2000s, when the countries in the region first encountered what we might call a state of robust macroeconomic stability: low inflation, low sovereign risk, balanced public and external positions, and relatively large stocks of international reserves. It is around this time that, as in Borges' story, the paths begin to diverge. A majority group of countries adopted a set of policies we term “good practices”: independent and technocratic Central Banks following inflation-targeting regimes, managed floating exchange rates and accumulation of international reserves, and prudent fiscal policies with rules and institutions that limit discretion. Argentina, Bolivia, Ecuador, and Venezuela, on the other hand, opted for a path of more erratic policies. When assessing the last fifteen years, those that followed the “good practices” framework performed better: they grew faster and with greater stability (avoiding crises), reduced poverty more, experienced lower inflation, and had better and more access to external credit. The analysis of Latin American cases during this period leads us to conclude that the “good practices” framework fosters a more stable macroeconomic environment conducive to growth. Alternative macroeconomic policy paths, in contrast, showed undisputable worse outcomes, with greater instability, lower growth, crises, and, in two cases, runaway inflation.

Of course, the story we tell is a broad-brush one. There are many relevant heterogeneities among the trajectories and policies adopted by the countries that have been diluted or omitted in our narrative. Comparative analysis requires a degree of abstraction that may involve omitting significant singularities. The performance and implementation of policies in each group of countries have not been homogeneous. For example, Mexico's economic performance over the last fifteen years, despite achieving macroeconomic stability, has been quite mediocre in terms of growth. The Mexican case reveals that sustained improvements in productivity and social welfare may require much more than an appropriate macroeconomic policy strategy for stability (Ros, 2013). Similarly, we can note that Bolivia, despite not following the “good practices” blueprint, managed to grow and significantly reduce poverty in the context of low inflation. Time will tell if the worsening macroeconomic situation of Bolivia in recent years is more than just an isolated bump in the road.

Our conclusion that the “good practices” framework has been more advantageous than the alternative “*frameworks*” in the region does not imply a blanket recommendation. First, there is no single way to shape and implement “good practices”; rather, they are general guidelines that have been applied in various ways and contexts. We emphasize that the broad-brush analysis to distinguish trajectories between groups forced us to overlook relevant nuances within each group. There is much richness in the specific cases from which important lessons could be drawn for the design and implementation of macroeconomic policy.

A second and more important aspect is that the “good practices” framework comes with some collateral effects, potentially negative for economic development. Several studies show that inflation-targeting schemes with floating exchange rates applied in the region have had a bias toward real currency appreciation (Libman, 2018b; Ros, 2015; Barbosa, 2015, among others). Evidence also suggests that exchange rate overvaluation tends to negatively affect economic growth, particularly the development of tradable activities, which are an important vector of medium- and long-term economic development (Rapetti, 2020; Palazzo and Rapetti, 2023). This last point suggests that, far from being a Nirvana, the “good practices” could be considered a flexible framework that can adapt not only to ensure macroeconomic stability but also to facilitate economic development (Frenkel and Rapetti, 2015).

References

- Ardanaz, M., Barreix, A. & Corrales, L (2019). Las reglas fiscales en América Latina. En *Reglas fiscales resilientes en América Latina*, Banco Interamericano de Desarrollo, Washington, DC.
- Ayres, J., Garcia, M., Guillen, D., & Kehoe, P. (2017). The History of Brazil. En Kehoe, T., & Nicolini, J. (eds), *A Monetary and Fiscal History of Latin America, 1960–2017*, University of Minnesota Press.
- Badinger, H. (2010). Output volatility and economic growth. *Economics Letters*, 106(1), 15-18.
- Barbosa, N. (2010). Latin America: Counter-Cyclical Policy in Brazil: 2008-09. *Journal of Globalization and Development*, 1(1), pp. 1-14.
- Barbosa, N. (2015). Monetary Policy with a Volatile Exchange Rate: The Case of Brazil since 1999. *Comparative Economic Studies*, 57(3), 401-425.
- Berg, A., Hul, Y., Karam, P., Remo, A., & Rodriguez Guzman, D. (2023). FINEX - A New Workhorse Model for Macroeconomic Forecasting and Policy Analysis. IMF Working Paper No. 23/235.
- Bértola, L., & Ocampo, J. (2013). *El desarrollo económico de América Latina desde la Independencia*, Fondo de Cultura Económica.
- Bofinger, P., & Wollmershäuser, T. (2003). Managed Floating as a Monetary Policy Strategy. *Economic Change and Restructuring*, 36(2), 81-109.
- Braun, O., & Joy, L. (1968). A model of economic stagnation—a case study of the Argentine economy. *The Economic Journal*, 78(312), 868-887.
- Calvo, G., & Reinhart, C. (2002). Fear of Floating. *The Quarterly Journal of Economics*, 117(2), 379-408.
- CEPAL (1971). El estrangulamiento externo y la escasez de ahorro en el desarrollo de América Latina: análisis de los problemas y algunas de las soluciones. Naciones Unidas, Comisión Económica para América Latina y el Caribe (CEPAL).
- Charotti, C., Valdovinos, C., & Soley, F. (2017). The History of Paraguay. En Kehoe, T., & Nicolini, J. (eds), *A Monetary and Fiscal History of Latin America, 1960–2017*, University of Minnesota Press.
- Cueva, S., & Díaz, J. (2017). The History of Ecuador. En Kehoe, T., y Nicolini, J. (eds), *A Monetary and Fiscal History of Latin America, 1960–2017*, University of Minnesota Press.
- Dabús, C., & Delbianco, F. (2023). Economic growth regimes: Evidence from Latin America. *Cuadernos de Economía*, 42(89)129-146.
- Damill, M., Frenkel, R., & Rapetti, M. (2015). Macroeconomic Policy in Argentina During 2002–2013. *Comparative Economic Studies*, 57(3), 369-400.
- Dancourt, O. (1997). Reformas estructurales y política macroeconómica en el Perú: 1990-1996. Pontificia Universidad Católica del Perú.

- Dancourt, O. (2015). Inflation Targeting in Peru: The Reasons for the Success. *Comparative Economic Studies*, 57(3), 511-538.
- Dancourt, O. (2017). The lean times in the Peruvian economy. *Journal of Post Keynesian Economics*. 40(1), 112-129.
- Davoodi, H., Elger, P., Fotiou, A., García-Macia, D., Lagerborg, A., Lam, R., & Pillai, S. (2022a). Fiscal Rules Dataset: 1985-2021. FMI, Washington DC.
- Davoodi, H., Elger, P., Fotiou, A., García-Macia, D., Han, X., Lagerborg, A., Lam, R., & Medas, P. (2022b). Recent Trends and Performance during the COVID-19 Pandemic. FMI Documento de Trabajo 22/11.
- Dornbusch, R. (1982). Stabilization policies in developing countries: What have we learned? *World Development*, 10(9), 701-708.
- Dornbusch, R., & Edwards, S. (1990). La macroeconomía del populismo en América Latina. *El Trimestre Económico*, 57, 225(1), 121-162.
- Eyraud, L., Gaspar, V., & Poghosyan, M. (2017). Fiscal politics in the euro area. IMF Working Paper 17-18, IMF.
- Erraez, J., & Reynaud, J. (2022). Central Bank Balance Sheet Expansion in a Dollarized Economy: The Case of Ecuador. IMF Working Paper, IMF.
- Ffrench-Davis, R. (2010). Latin America: The Structural Fiscal Balance Policy in Chile: A Move Toward Counter-Cyclical Macroeconomics, *Journal of Globalization and Development*, 1(1), 1-16.
- Ffrench-Davis, R. (2015). Chile Since 1999: From Counter-Cyclical to Pro-Cyclical Macroeconomics. *Comparative Economic Studies*, 57(3), 426-453.
- Ffrench-Davis, R. (2016). La experiencia de Chile con el balance fiscal estructural. *Cuadernos de Economía*, 67, 149-171.
- Fischer, S. (2001). Exchange Rate Regimes: Is the Bipolar View Correct?, *Journal of Economic Perspectives*, Vol. 15 (Spring), pp. 3–24
- Frankel, J., Vegh, C., & Vulentin, G. (2011). On Graduation from Fiscal Procyclicality. *Journal of Development Economics*, 100(1), 32-47.
- Frankel, J. (2019). Systematic managed floating. *Open Economies Review*, 30, 255-295.
- Frenkel, R. (1983). Mercado financiero, expectativas cambiarias y movimientos de capital. *El Trimestre Económico*, 200, 2041-2076.
- Frenkel, R. (2003). Globalización y crisis financieras en América Latina. *Revista de la CEPAL*, no. 80.
- Frenkel, R. (2007). La sostenibilidad de la política de esterilización monetaria. *Revista CEPAL*, no. 93.
- Frenkel, R., & Rapetti, M. (2012). Exchange Rate Regimes in the Major Latin American Countries since the 1950S: Lessons from History. *Revista de Historia Económica/Journal of Iberian and Latin American Economic History*, 30, 157-188.

- Frenkel, R., & Rapetti, M. (2015). The Real Exchange Rate as a Target of Macroeconomic Policy, in Calcagno, Alfredo, Dullien, Sebastian y Priewe, Jan (eds.): *Development Strategies: Country Studies and International Comparisons*, pp. 81-92, UNCTAD.
- Furtado, C. (1957). *El desarrollo reciente de la economía venezolana*". Preliminary draft, Caracas, 1957, mimeo.
- Gasparini, L., & Lustig, N. (2011). The rise and fall of income inequality in Latin America. En Ocampo, J., & Ros, J. (ed.), *The Oxford Handbook of Latin American Economics*, Oxford University Press.
- Hnatkovska, V., & Loayza, N. (2004). Volatility and growth, Policy Research Working Paper Series 3184, The World Bank.
- Ilzetzki, E., Reinhart, C. & Rogoff, C. (2019). Exchange Arrangements Entering the 21st Century: Which Anchor Will Hold? *Quarterly Journal of Economics*, 134(2), 599-646.
- Kehoe, T., Machicado, C., & Peres-Cajías, J. (2017). The History of Bolivia. En Kehoe, T., & Nicolini, J. (eds), *A Monetary and Fiscal History of Latin America, 1960–2017*, University of Minnesota Press.
- Larch, M., & Santacrose, S. (2020). Numerical compliance with EU fiscal rules: The compliance database of the Secretariat of the European Fiscal Board. Vox EU.
- Levy-Yeyati, E., & Sturzenegger, F. (2002). Dollarization. A primer. En Levy-Yeyati, E., & Sturzenegger, F. (eds.), *Dollarization: Debates and Policy Alternatives*, The MIT Press.
- Levy-Yeyati, E., Sturzenegger, F., & Gluzmann, P. (2013). Fear of appreciation. *Journal of Development Economics*, 101, 233-247.
- Libman, E. (2018a). La relación entre el tipo de cambio oficial y el tipo de cambio negro en América Latina. *Cuadernos de Economía - Spanish Journal of Economics and Finance*, 41(115), 43-55.
- Libman, E. (2018b). Asymmetric monetary and exchange-rate policies in Latin American countries that use inflation targeting. *Revista CEPAL*, Naciones Unidas Comisión Económica para América Latina y el Caribe.
- Ocampo, J. (2010). Symposium: The Return of Counter-cyclical Policy - Editorial Preface, *Journal of Globalization and Development*, 1(1). 1-4.
- Ocampo, J., & Ros, J. (2011). Shifting Paradigms in Latin America's Economic Development. En Ocampo, J., & Ros, J. (ed.), *The Oxford Handbook of Latin American Economics*, Oxford University Press.
- Ocampo, J., & Malagón, J. (2015). Colombian Monetary and Exchange Rate Policy Over the Past Decade. *Comparative Economic Studies*, 57(3), 454-482.
- Ocampo, J., Bastian, E., & Reis, M. (2018). The myth of the 'Latin American decade'. *PSL Quarterly Review, Economia civile*, 71(285), 231-251.
- Oddone, G., & Marandino, J. (2017). The History of Uruguay. En Kehoe, T., & Nicolini, J. (eds), *A Monetary and Fiscal History of Latin America, 1960–2017*, University of Minnesota Press.
- Palazzo, G. & Rapetti, M. (2023). From macro to micro and macro back: macroeconomic trade elasticities in a developing economy, *Structural Change and Economic Dynamics*, 65, pp. 223–252.

- Rapetti, M. (2020). The Real Exchange Rate and Economic Growth: A Survey, *Journal of Globalization and Development*, 11 (2) pp. 1-54, 2020.
- Ramey, G., & Ramey, V. (1995). Cross-Country Evidence on the Link between Volatility and Growth. *American Economic Review*, 85(5), pages 1138-1151.
- Reuter, W. (2019). When and why do countries break their national fiscal rules? *European Journal of Political Economy*, 57, 125-141.
- Reuter, W., Tkačevs, O., & Vilerts, K. (2022). Fiscal rules and volatility: the role of stabilising properties and compliance. *Empirica*, 49(1), 21-52.
- Rogoff, K. (1985). The Optimal Degree of Commitment to an Intermediate Monetary Target. *The Quarterly Journal of Economics*, 100(4), 1169-1189.
- Ros, J. (2015). Central Bank Policies in Mexico: Targets, Instruments, and Performance. *Comparative Economic Studies*, 57(3), 483-510.
- Ros, J. (2013). Algunas tesis equivocadas sobre el estancamiento económico de México. El Colegio de México AC.
- Vera, L. (2015). Venezuela 1999–2014: Macro-Policy, Oil Governance and Economic Performance. *Comparative Economic Studies*, 57(3), 539-568.
- Williamson, J. (1990). What Washington Means by Policy Reform. En Williamson, J. (ed.), *Latin American Adjustment: How Much Has Happened?* Washington, DC: Institute for International Economics.

Appendix 1. Existing Fiscal Rules and Institutions¹⁷

Argentina

Expenditure rule. The increase in net primary current government expenditure cannot exceed the nominal GDP growth rate (jurisdictions without deficit) or inflation (jurisdictions with deficit).

Debt rule. In the Provinces, debt service must not exceed 15% of current resources (excluding transfers to municipalities).

Stabilization funds. There are some small funds in some jurisdictions (for example, in the Autonomous City of Buenos Aires since the end of 2023).

Fiscal Council. The fiscal responsibility council meets regularly. It is not a committee of independent experts but is composed of the Ministry of Economy of the Nation and the Ministers of Economy of the Provinces. Participation is not mandatory and its decisions and recommendations are not binding.

Brazil

Spending rule. The Federal Government's primary spending cannot increase more than the inflation of the previous year. There is a maximum for personnel expenses related to liquid current revenues (50% for the central government and 60% for states and municipalities).

Balance sheet rule. Central government credit operations may not exceed capital expenditures. There are also non-binding indicative three-year primary balance targets, although they are not binding.

Debt rule. There are limits on the level of debt of states and municipalities related to their liquid current revenues.

Fiscal Council. The Independent Fiscal Institution has been in existence since 2016. It can choose its staff, has access to information, is non-partisan, and conducts descriptive analysis. It assists and evaluates projections, provides sustainability and consistency analyses of fiscal policy, measures the cost of measures, and monitors compliance with fiscal rules. It cannot directly influence fiscal policy.

¹⁷ Prepared by the authors based on the IMF Fiscal Council database from Davoodi et. al. (2022a). <https://www.imf.org/en/Data/Fiscal/fiscal-council-dataset>

The Council is elected by the Senate and consists of three directors (with staggered 2-year terms) and has a technical advisory sub-council with five members.

Chile

Balance sheet rule. The main objective is the structural (cyclically adjusted) balance of the central government.

Stabilization funds. There is the Economic and Social Stabilization Fund, which was previously the fund where the surpluses from exceptional copper prices were accumulated, and the Pension Guarantee Fund, which accumulates 0.5% of the GDP every year.

Fiscal Council. The Advisory Fiscal Council was created in 2014; it was replaced by the Autonomous Fiscal Council in 2019. It can choose its staff, has access to information, is non-partisan, and performs descriptive and normative analyses. Its tasks are to assist and evaluate the projections, sustainability, and consistency analysis of fiscal policy, as well as to make recommendations and monitor compliance with fiscal rules. It cannot directly influence fiscal policy. The Council has five members appointed by the Minister of Finance, who also selects the Chairman and Vice-Chairman of the Council, with terms of two to four years.

Colombia

Balance rule. Structural balance for the central National Government until reaching -1% of GDP or exceeding that percentage.

Stabilization funds. There is a Fuel Price Stabilization Fund, whose purpose is to divorce to some extent the evolution of the domestic price of fuels from their international price.

Fiscal Council. The Fiscal Rule Advisory Committee was created in 2012 and replaced by the Autonomous Fiscal Rule Committee in 2021. It has qualified staff and access to information, is non-partisan, and performs descriptive and normative analyses. Its tasks are to assist in the formulation of projections, provide recommendations, and monitor compliance with fiscal rules. It cannot directly influence fiscal policy. It is made up of three deans of economics faculties from different universities

in the country, two members from research centers, two recognized consultants, and two presidents of congressional economic commissions. They are appointed by the Ministry of Finance and the President of Congress for a three-year term.

Ecuador

Expenditure rule. The primary expenditure of the Central Government and other State functions (pre-allocations to sub-national governments and minimum spending floors in health and education provided for in the Constitution) cannot increase more than the long-term growth rate of the economy.

Balance rule. The central government budget cannot have a primary deficit, and the overall result must meet the long-term structural goal.

Debt rule. The public debt of the Non-Financial Public Sector (and the Social Security system) cannot exceed 40% of GDP.

Stabilization funds. Following the dollarization of the economy and the adoption of fiscal rules, a stabilization fund was created to accumulate surpluses from high oil prices, but its resources were fully utilized.

Mexico

Spending rule. Structural current spending cannot grow more than the potential GDP growth rate.

Balance rule. There must be a balanced budget for the non-financial public sector (excluding investments by the state oil company PEMEX), which must be compatible with an orderly evolution of public debt.

Stabilization funds. Previously, there were the Federal Entities Income Stabilization Fund (FEIEF) and the Budgetary Income Stabilization Fund (FEIP). Both funds were consumed during 2019 and 2020.

Fiscal Council. The Center for Public Finance Studies has been in existence since 1998. It is an advisory body to the Chamber of Deputies. It can choose its staff and has access to information, is

non-partisan, and performs descriptive analyses. Its tasks are to make projections and give recommendations. It cannot directly influence fiscal policy. It is structured around a committee formed by the Chamber of Deputies and defines an annual work program. It has five specific areas and a technical coordination area (“Budget and Public Expenditure”, “Macroeconomics and Sectoral”, “Fiscal Studies”, “Collection and Dissemination of Statistical Information”, and “Institutional Linkage and Dissemination”).

Paraguay

Spending rule. The increase in primary current spending must be less than inflation plus 4%. Spending on salaries can only increase proportionally to the minimum wage.

Balance sheet rule. The central government deficit may not exceed 1.5% of GDP.

Fiscal Council. The Fiscal Advisory Council has been in existence since 2016. It reports to the Ministry of Finance. It is an advisory body to the Chamber of Deputies. It can choose its staff, has access to information, is non-partisan, and performs descriptive and normative analyses. Its tasks are to make projections, provide advice, and issue opinions on the fiscal results achieved. It cannot directly influence fiscal policy. The Council has three members with recognized experience in macroeconomic, fiscal, and tax matters and are appointed by Executive Decree, on the recommendation of the Minister of Finance. They have staggered terms of three years.

Peru

Spending rule. The annual real growth rate of general government non-interest spending should not exceed the long-term average real GDP growth by more than one percentage point.

Balance rule. The fiscal deficit of the non-financial public sector should not exceed 1% of GDP.

Debt rule. The total gross debt of the non-financial public sector must not exceed 30% of GDP.

Fiscal Council. The Fiscal Council has been in existence since 2015. It reports to the Ministry of Economy and Finance. It is non-partisan, can choose its staff, and has access to information. It performs descriptive analyses. It evaluates projections, provides recommendations, and monitors

compliance with the fiscal rule. It cannot directly influence fiscal policy. The Council is composed of five members appointed through a Decree of the Executive Branch on the recommendation of the Minister of Finance. The members are elected for four-year terms (staggered). It has a Technical Secretariat, which is managed by the Directorate of Macroeconomic Studies, formed by five members and an administrative area.

Uruguay

Debt rule. The annual increase in the net debt of the consolidated public sector may not exceed certain fixed amounts pre-established in specific legislation.

Fiscal Council. The Fiscal Advisory Council has been in existence since 2021. Performs descriptive analysis. It evaluates projections, performs sustainability analyses, provides recommendations, and monitors compliance with fiscal rules. It is non-partisan, cannot choose its staff, and has access to information. It cannot directly influence fiscal policy. It is composed of three members (one academic and two specialists) for a four-year term.

Appendix 2. The last five central bankers (tenure and highest academic degree in economics, up to 2023)

Argentina	From	To	Highest Academic Degree	Institution
Alejandro Vanoli	2014	2015	Bachelor's Degree	UBA (Argentina)
Federico Sturzenegger	2015	2018	PhD	MIT
Luis A. Caputo	2018	2018	Bachelor's Degree	UBA (Argentina)
Guido Sandleris	2018	2019	PhD	Columbia
Miguel Ángel Pesce	2019	2023	Bachelor's Degree	UBA (Argentina)
Bolivia	From	To	Highest Academic Degree	Institution
Marcelo Zabagala Estrada	2010	2016	Bachelor's Degree	GIID (Suiza)
Pablo Ramón Sánchez	2017	2019	Bachelor's Degree	UMSA (Bolivia)
Guillermo Aponte Reyes Ortiz	2019	2020	Bachelor's Degree	Universidad Católica Boliviana (Bolivia)
Agustín Saavedra Weise	2020	2020	Bachelor's Degree	UBA (Argentina)
Roger Edwin Rojas Ullo	2020		Bachelor's Degree	UTDT (Argentina)
Brazil	From	To	Highest Academic Degree	Institution
Arminio Fraga	1999	2003	PhD	Harvard
Henrique Meirelles	2003	2011	Mg	COPPEAD/UFRJ (Brazil)
Alexandre Tombini	2011	2016	PhD	Universidad de Illinois
Ilan Goldfajn	2016	2019	PhD	MIT
Roberto Campos Neto	2019		Bachelor's Degree	Universidad de California
Chile	From	To	Highest Academic Degree	Institution
Vittorio Corbo Lioi	2003	2007	Postdoct	MIT
José de Gregorio Rebeco	2007	2011	PhD	MIT
Rodrigo Vergara Montes	2011	2016	PhD	Harvard
Mario Marcel Cullell	2016	2022	Mg	Cambridge
Rosanna Costa	2022			PUC (Brazil)
Colombia	From	To	Highest Academic Degree	Institution
Francisco Ortega	1985	1993	Bachelor's Degree	Universidad de los Andes (Colombia)
Miguel Urrutia Montoya	1993	2005	PhD	Berkeley
José Darío Uribe	2005	2017	Bachelor's Degree	Universidad de los Andes (Colombia)
Juan José Echavarría	2017	2021	PhD	Oxford
Leonardo Villar Gómez	2021		Mg	London School of Economics
Ecuador	From	To	Highest Academic Degree	Institution
Carlos Vallejos López	2008	2009	Bachelor's Degree	Universidad Central de Ecuador
Diego Borja	2009	2011	Mg	Catholic University of Louvain (Belgium)
Pedro Delgado de Campaña	2011	2012		
Janette Sanchez	2012	2013	Mg	FLACSO (Ecuador)
Diego Martínez Vinuesa	2013	2013	Mg	ISS (Netherlands)

Mexico	From	To	Highest Academic Degree	Institution
Miguel Mancera Aguayo	1994	1998	Mg	Yale
Guillermo Ortiz Martínez	1998	2010	PhD	Stanford
Agustín Carstens	2010	2017	PhD	Chicago
Alejandro Díaz de León	2017	2022	Mg	Yale
Victoria Rodríguez Ceja	2022		Mg	Colegio de Mexico
Paraguay	From	To	Highest Academic Degree	Institution
Venicio Sánchez Guerreros	2007	2007		Universidad Nacional de Asunción (Paraguay)
Germán Rojas Irigoyen	2007	2008		Universidad Católica de Nuestra Señora de Asunción (Paraguay)
Jorge Corvalán	2008	2013	Bachelor's Degree	Universidad Nacional de Asunción (Paraguay)
Carlos Fernández Valdovinos	2013	2018	PhD	Chicago
José Cantero Sienna	2018		Bachelor's Degree	University of Kansas
Peru	From	To	Highest Academic Degree	Institution
Germán Suárez Chávez	1992	2001		
Richard Webb Duarte	2001	2003	PhD	Harvard
Javier Silva Ruete	2003	2004	Bachelor's Degree	Universidad Nacional Mayor de San Marcos (Peru)
Óscar Dancourt Masías	2005	2006	Mg	Pontificia Universidad Católica (Peru)
Julio Velarde	2006		PhD	Brown
Uruguay	From	To	Highest Academic Degree	Institution
Mario Bergara	2008	2013	Bachelor's Degree	Universidad de la República (Uruguay)
Alberto Graña	2014	2015	Bachelor's Degree	Universidad de la República (Uruguay)
Mario Bergara	2015	2018	Bachelor's Degree	Universidad de la República (Uruguay)
Alberto Graña	2018	2020	Bachelor's Degree	Universidad de la República (Uruguay)
Diego Labat	2020		Bachelor's Degree	Universidad de la República (Uruguay)
Venezuela	From	To	Highest Academic Degree	Institution
Nelson José Merentes Díaz	2009	2013		
Edmée Bentacourt de García	2013	2013		
Eudomar Tovar	2013	2014		
Nelsón José Merentes Díaz	2014	2017		
Calixto Ortega Sánchez	2018			

Source: Own elaboration based on data from national central banks