

Project document

**Macroeconomic policies
in times of crisis:
options and perspectives**

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Foreword

The global economic crisis has put an end to a period of six consecutive years of growth in Latin America and the Caribbean, growth on a scale that had not been seen for decades. This crisis is different from those which had been seen in the past, not only because its origin is different but also because, as the Economic Commission for Latin America and the Caribbean (ECLAC) has reported on several occasions, the region is much better prepared to deal with it. The favourable international environment which had been enjoyed by most of the countries of the region in recent years went hand in hand with clear progress in the design and management of macroeconomic policy, so that the countries were able to go through the boom period with twin surpluses on the public and external accounts. This made possible a generalized reduction in levels of debt and, at the same time, a build-up in international reserves.

Nonetheless, in no way can the region be considered immune to this crisis; among other things, it is affected by falling external demand and export prices, difficult access to the financial system, capital outflows and high levels of uncertainty. In such situations, public policies have a dual responsibility: to stabilize the countries' economic growth by means of countercyclical measures, and to design instruments to protect the most vulnerable sectors of the population from negative distributive impacts.

It should be borne in mind that one of the major lessons of the previous crises is that recovering from the resulting levels of poverty takes much longer, practically twice as long, as the recovery of economic indicators. Analysis of the region's per capita GDP trend in the major recessionary cycle of the 1980s shows that it took some 14 years to return to the pre-crisis level. However, the region took 25 years to fall to the pre-crisis poverty level, of about 40% of the population.

The challenge for fiscal policy is dual, considering that the greatest demand for spending occurs at a time when fiscal resources are expected to decrease as a result of falling commodity prices and levels of activity, at a time when access to credit is reduced. This demonstrates the vital importance of the discussion of public policy contained in this document.

Chapter I, *Crisis and public policies in Latin America*, examines the impact of the international crisis on the economies of Latin America, focusing mainly on how the crisis spread throughout the region. As highlighted in the chapter, the period characterized by the region's fastest economic growth in four decades was interrupted by a global crisis which reached practically all economies in the developed and developing world alike, and suddenly put the brakes on an extraordinarily intense and widespread economic expansion.

This crisis, which found the region much better prepared than it had been in the past, clearly originated in the developed countries and from there spread to the periphery, in particular to Latin America and the Caribbean. Around two years after the onset of the financial turmoil, the nature of the impact on the countries of the region and their capacity to respond have clearly been very different from what was observed during the recurring episodes from the 1980s debt crisis to the early 2000s.

The first chapter highlights a changing macroeconomic trend in the region from 2002 to 2008. Unlike previous booms, it encouraged savings, which in turn translated into reduced dependence on external financial resources and, in many cases, decreases in the absolute value of debt obligations with the rest of the world.

Despite the clear differences between this crisis and others, the region will not escape unscathed. GDP is expected to decrease and unemployment will rise, probably accompanied by increasing informality. Unlike the situation in 2003-2008, this combination of events will likely lead to increased poverty and the emergence of new impediments to achieving the Millennium Development Goals.

In the area of public finances, increased solvency was expressed as a decrease in total non-financial public sector debt as a percentage of GDP. In many cases this was thanks to increases in fiscal revenue and economic growth as well as public debt reduction. In addition, improvements were seen in public debt management in terms of currency, rates and terms. One cause for concern, however, is the significant narrowing of macroeconomic and fiscal space caused by weakening average fiscal balances in the region.

The chapter entitled *Crisis, volatility and fiscal policy in Latin America* looks at the relationship between macroeconomic fluctuations and fiscal policy in order to identify structural and behavioural trends relevant to the design of fiscal stabilization policies.

As the authors state, there was initial speculation that the region might be able to remain detached from the downturn in the United States and Europe. Today, however, no one doubts that the governments of the region will face serious macroeconomic challenges. This applies both to fiscal policy in general and to its stabilizing role in particular. It is only natural, therefore, that many in Latin America are anxious to identify effective initiatives to lessen the macroeconomic effects of the crisis, which are referred to in the document as exogenous trade shocks and sudden stops in capital flows. Although for the moment the situation seems better than in other episodes of contagion, there is no room for optimism because the contraction which has occurred has been sufficient to induce strong recessionary forces.

The final chapter, *The role of tax policy in the context of the global crisis: limits and possibilities*, discusses how the effects of the international crisis on tax revenues in the region will differ from one country to another, explaining that the extent of the fiscal impact on each one will depend not only on its economic characteristics, but also on its tax system, in particular its tax structure, level of collection and sources of financing.

To that end, the authors analyze taxation issues and their interaction with the current economic situation. First, they present an analysis of the main stylized facts which arise out of the evolution of fiscal and tax policy in recent years. Second, they consider the possible repercussions of the crisis in this situation and the level of exposure of each country in the region. They then examine the main fiscal and taxation measures adopted by governments, and the political-economy issues which may influence the implementation of reforms in response to the crisis. Lastly, they put forward some ideas on the paths the countries should follow in the coming years.

In sum, this publication draws attention to the fact that the fiscal space achieved in recent years may continue to contract if the worldwide situation fails to improve. This would make it harder for public-policy decision-makers to choose between preserving the sustainability of public debt and alleviating the financial and social effects of the crisis; between protecting liquidity in the payment system and maintaining international reserves and controlling inflation; between shoring up

macroeconomic stability and supporting specific sectors to prevent politically sensitive sectoral and social conflicts; and between subsidizing at-risk sectors and resorting to protectionism.

Beyond the current situation, as this document points out, the crisis offers an opportunity to analyze the characteristics of macroeconomic policies which could bring about a sustained growth trend and limit the vulnerability of the region's economies to disturbances, whether of internal or external origin. The region has made progress in this respect, but much remains to be done, and the need to take advantage of favourable situations to accumulate resources with a view to financing countercyclical policies is clearly an important lesson of the current crisis.

Alicia Bárcena
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Chapter I. Crisis and public policies in Latin America and the Caribbean

Oswaldo Kacef¹

1. Introduction²

The global economic crisis marked the end of the longest, most intense phase of economic growth in the region in more than 40 years. The growth took place against a backdrop of global economic expansion, which was particularly strong from 2003 to mid-2007, when problems in the subprime mortgage market in the United States spread to other markets and regions. The crisis impacted the financial systems worldwide and had important effects on markets for goods and labor, especially since September 2008. The ensuing global upheaval has been so severe that it has been compared to the Great Depression of the 1930s.

In Latin America, this crisis is unquestionably different from previous downturns: in part, because its origin was different, in that it first broke out in developed countries and from there spread to emerging economies; but especially because this crisis finds the region much better prepared than it once was. Today, about two years after the financial turmoil began, it is clear that the impact on the region's countries and their capacity to react is not the same as they were in the recurring episodes between the debt crisis of the 1980s and the beginning of this decade. Thus far, the region has not been shaken by runs on its currencies or debt crises; indeed, the countries of the region enjoy a degree of manoeuvring room that has made it possible —albeit to substantially different extents— to implement policies to counter the impact of the crisis.

Nevertheless, despite the clear differences from previous ones, this crisis will not leave the region unscathed. GDP and employment are expected to decline, probably accompanied by growing informality. The combination of these factors makes it likely that, unlike from 2003 to 2008, poverty will increase and new obstacles will hamper the fulfilment of the Millennium Development Goals.

¹ Director of the Economic Development Division of the Economic Commission for Latin America and the Caribbean (ECLAC).

² The author is grateful to José María Fanelli, Daniel Heymann and José Luis Machinea for their comments on previous versions of this article. I would also like to thank my colleagues at the Economic Development Division of ECLAC for their assistance with and comments on the *Economic Survey 2008-2009*, on which this article is based.

The next section of this chapter briefly reviews some recent trends in the global economy. The third section analyzes how the crisis has manifested itself in the region. The fourth section considers the macroeconomic context in which anti-crisis policies have been adopted and assesses the measures announced by the countries of the region. The final section examines the short-term prospects and broaches issues whose importance transcends the current situation.

2. The global economy

The region is facing a crisis whose depth and scope are comparable solely to that of the 1930s. Moreover, both episodes have several points in common: both crises began in the United States financial system and from there spread outward to other countries and sectors; both started when a bubble of asset prices burst; and both led to insolvency problems in the financial system. However, this time the financial system is much larger, the financial entities are far more closely interconnected at the international level, and the opacity of the financial system had reached unprecedented levels.

Also, however, the economic policy response came more quickly and was more accurately targeted. The crisis of the 1930s had shown the need to contain financial crises as soon as possible and to implement expansionary monetary and fiscal policies in order to prevent a possible depression. This is what the countries have been doing in general since 2008, notwithstanding the great differences resulting from their varying capacities and the particularities in each case.

Another major difference from the events of the 1930s is that there are now a number of international coordinating institutions on the regional and multilateral levels, many of them set up following the Great Depression and the Second World War, and others more recently, like the Group of Twenty (G20).³ Despite their limitations, these institutions have some capacity to strengthen the policies that countries implement individually to prevent, or at least restrict, the predatory trade or exchange-rate policies that can harm international trade—which has already been quite badly hit by the crisis.

Although it is hard to forecast the depth and duration of the current global recession, it might turn out to be merely an economic contraction that, however abrupt and severe, will not be as damaging for the world economy overall as was the Great Depression in terms of unemployment, breaches of contract and the destruction or prolonged underutilization of productive resources⁴.

The financial crisis rapidly impacted real variables and its effects spread around the world, owing mainly to four factors⁵:

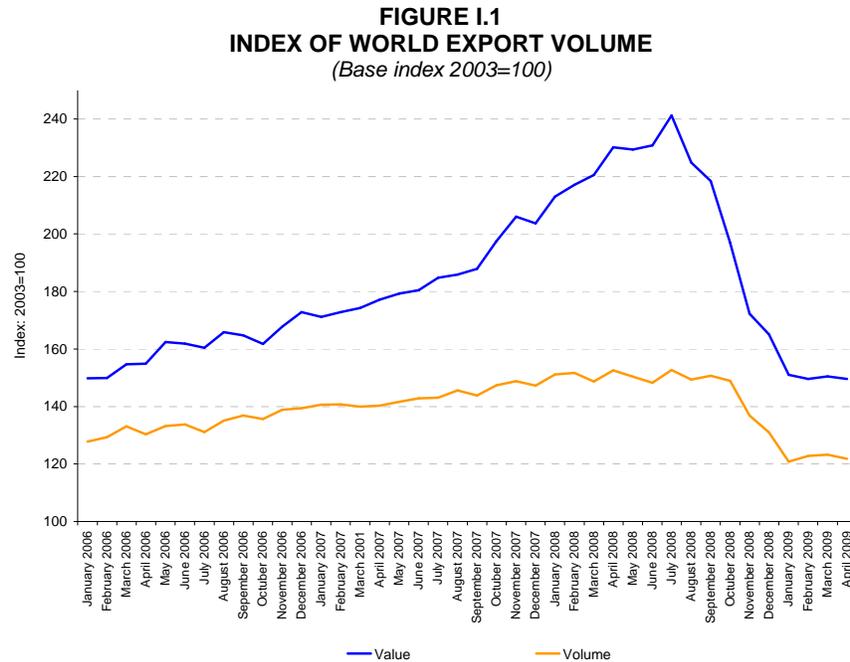
- The credit squeeze caused by the fragility of the financial system, which led banks to demand more liquidity, given their uncertainty over the renewal of their liabilities and their need to rebuild their capital as well as doubts on the solvency of potential borrowers;
- The destruction of wealth, both financial and non-financial, caused by losses of value in real-estate property and in equity and other assets;
- Worsening expectations regarding economic activity, affecting households' consumption decisions and businesses' investment decisions; and

³ The author thanks José María Fanelli for drawing his attention to this point.

⁴ Krugman (2009) compares the seasonally adjusted monthly evolution of industrial GDP in the United States in the 1930s with that in the current crisis, which he shows to be lower. By contrast, Eichengreen and O'Rourke (2009) argue that the similarity between the current situation and the early stages of the Great Depression is greater for economies that have contracted even more sharply than has that of the United States. Indeed, the trend seen in industrial GDP is very similar in the early months of both crises. However, if the contraction is coming to an end—as appears may be case—the cumulative decline this time around would be much smaller than in the 1930s.

⁵ For an analysis of the global crisis from a Latin American perspective, see Machinea (2009) and Lopes (2008).

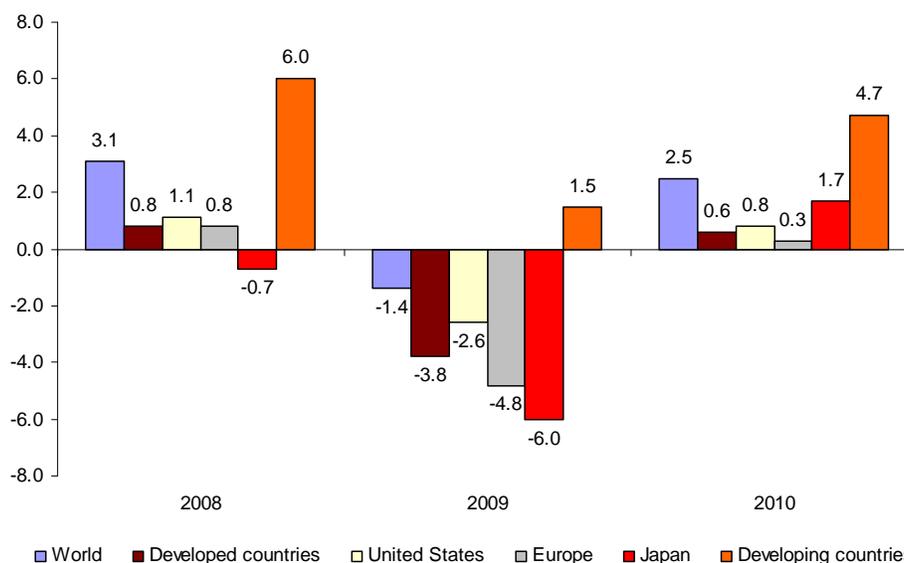
- The decline in global trade, which stood at a cumulative 21% in volume and 38% in value between July 2008 and January 2009, although it seems to have eased up in recent months (see figure I.1).



Source: CPB Netherlands Bureau for Economic Policy Analysis.

Projections agree that as a result of this combination of factors global GDP will shrink, basically owing to declining GDP in the developed economies (see figure I.2). In the United States, GDP is expected to fall by close to 3% in 2009, while in Europe and, especially, Japan, it is expected to fall even more sharply. In emerging and developing countries overall, GDP variation is expected to be positive, although much less so than in recent years. Expectations for continued growth in this group are largely based on the outlook for the Chinese economy. Other economies in Asia and Africa are also expected to expand, but they are all expected to do so at much lower rates than in recent years. In every case, substantial improvements are expected in 2010—a topic that will be further examined below.

FIGURE I.2
WORLD GROWTH RATES, 2008-2010
(Percentages)



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

3. Channels of transmission of the crisis

One feature that sets this crisis apart from previous episodes concerns the channels through which it has been transmitted to the economies of Latin America and the Caribbean. Unlike in similar, previous episodes, the strongest impacts have come through the real economy. As discussed below, export volume and prices, remittances and other elements directly related to economic activity, combined with the deterioration in consumer and producer expectations, have been the factors behind the abrupt cessation of growth in the region in the fourth quarter of 2008.

An analysis of the recent turbulence in the region shows that in only three of the 14 countries in question (Brazil, Chile and Peru) is there evidence of a sudden stop in capital flows associated with the crisis⁶. As shown in figure I.3, these are the three countries of the region with the largest relative net debtor positions⁷. In seven cases (Argentina, the Bolivarian Republic of Venezuela, Brazil, Chile, Ecuador, Mexico and Peru), the data appear to point to a trade shock caused by a much greater fall in exports than would have occurred in the usual movement. However, these shocks are to a certain

⁶ Two methodologies were employed to estimate these effects. The first focused on the reversals that the Latin American countries' exports have experienced as a consequence of changes in global demand. This exercise looked at the deviation of the detrended export series from its long-term trend, calculated using the Hodrick-Prescott filter. A reversal of trade was defined as any reduction in exports of more than one and a half standard deviations.

The second method was employed for episodes in which capital flows dropped sharply. This series comprises the detrended investment flows obtained from the difference between accumulated reserves and the basic balance. A drop in capital flows is defined as an episode in which these flows fall more than one and a half standard deviations below the average for the period.

⁷ The statement that these countries have a net debtor position with the rest of the world does not imply a negative value judgement on their financial systems. Indeed, this debtor position may be due to their having more developed markets and requiring larger scale operations, which makes it necessary for entities within them to resort to the global financial markets. In addition, it should be noted that Chile shows a reversal of capital flows when public sector flows are discounted from the analysis. In the case of the Bolivarian Republic of Venezuela, a reversal in the balance-of-payments capital account is apparent in the first quarter of 2009, but this cannot be associated with the crisis since there were also reversals at times in 2008 before the crisis deepened.

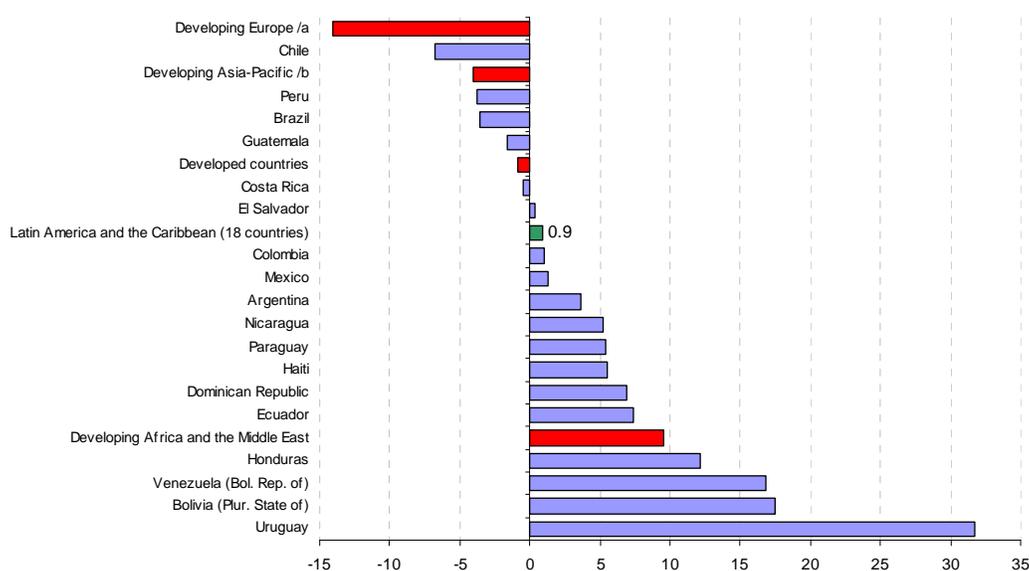
extent linked to changes in the prices of commodities and hence cannot be completely dissociated—in terms of either their origin or their impact—from a financial-type shock.

3.a. The financial channel

The fact that Latin American countries in recent years have reduced their levels of indebtedness, in some cases renegotiating loans with improved maturities or interest rates, while simultaneously building up their international reserves, helps to explain why the region has not, unlike on other occasions, faced a financial crisis.

Because the region's financial systems have relatively low external exposure, the domestic credit supply is not as sensitive as it might be to external conditions, especially in comparison with the credit supply in the emerging economies of Asia and Eastern Europe (see figure I.3)⁸.

FIGURE I.3
NET EXTERNAL POSITION OF THE FINANCIAL SYSTEM, DECEMBER 2008
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009* (LC/G.2410-P), Santiago, July 2009.

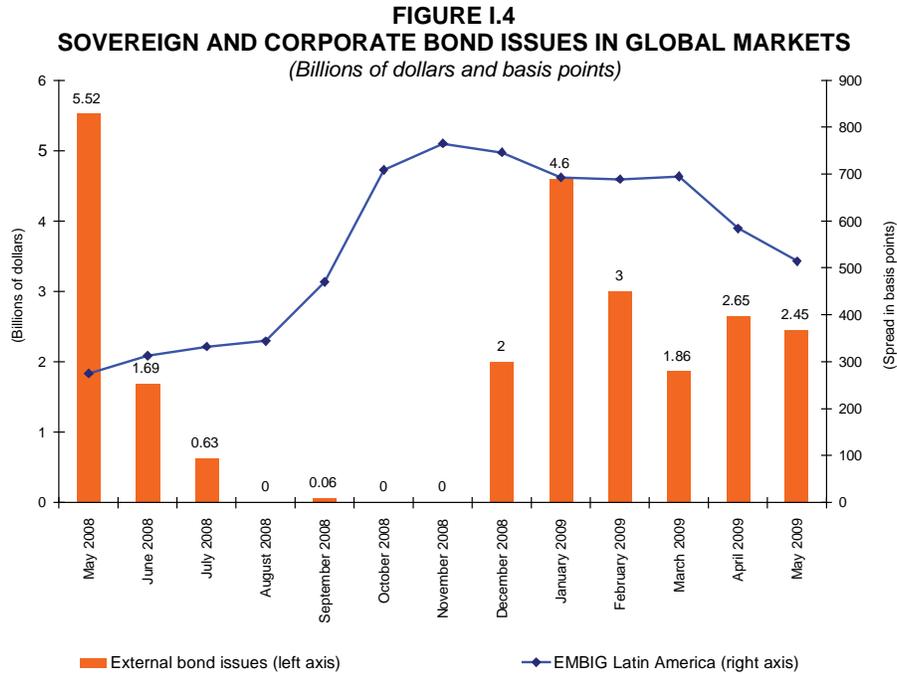
^a Does not include the Russian Federation

^b Does not include China

It was in the last quarter of 2008 that countries encountered the greatest difficulties in obtaining external bank credit. In response, as discussed in the next section, the central banks of several countries of the region took steps to guarantee the availability of liquidity in both local currency and foreign exchange in order to support their banks. To the same end, the United States Federal Reserve entered into agreements with the central banks of Brazil and Mexico⁹. Placements of sovereign and corporate bonds in global markets completely dried up in the countries of the region during the phase in which risk premiums rose (as shown in figure I.4).

⁸ This figure shows the net external positions (assets minus liabilities) of banks located in the country and that report to the Bank for International Settlements.

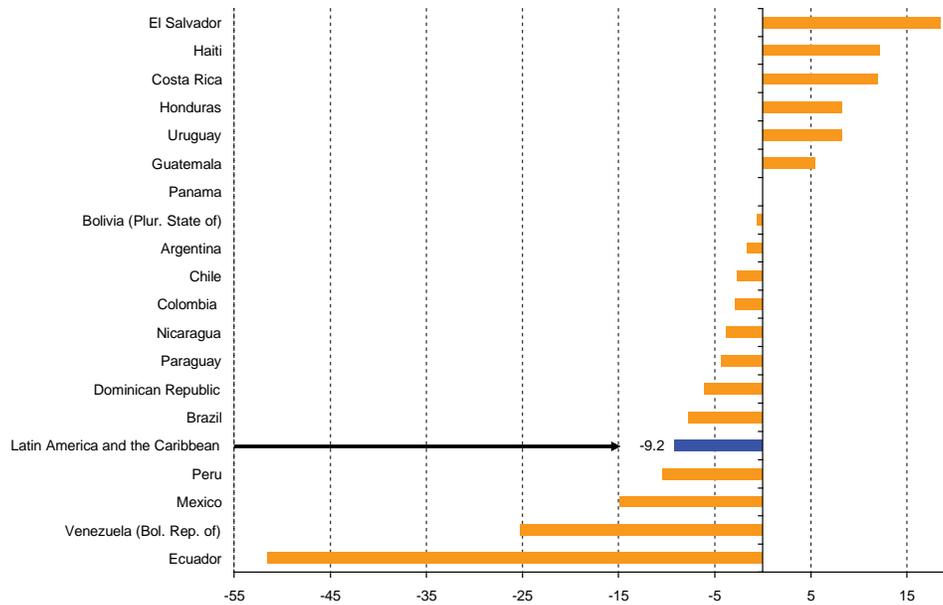
⁹ See ECLAC (2009b).



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009* (LC/G.2410-P), Santiago, July 2009.

This set of factors has had a strong impact on international reserves, which fell back after reaching a historic record of some US\$ 500 billion in September 2008. Subsequently and in the first four months of 2009, reserves in the region declined by approximately 9%, or US\$ 48 billion (see figure I.5).

FIGURE I.5
LATIN AMERICA: INTERNATIONAL RESERVES VARIATION, SEPTEMBER 2008 TO APRIL 2009
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009* (LC/G.2410-P), Santiago, July 2009.

In the first few months of 2009, the conditions under which the financial markets operate began to gradually change. The programmes implemented in the United States and, to a lesser extent, in Europe bolstered the expectation that, apart from isolated bankruptcies, all possible steps would be taken to prevent the failure of institutions which were of systemic importance. At the same time, monetary policy in several developed countries sought to restore liquidity by cutting interest rates to close to zero, as well as to restore the flow of credit by offering certain guarantees on interbank lending.

In the first quarter of the year, the perception of risk surrounding emerging countries began to wane, although it remained higher than in the preceding three years¹⁰. The region once again gained access to international capital markets, and issuance of sovereign and corporate bonds resumed (see figure I.4). Pressure on the foreign-currency markets eased, resulting in a certain appreciation. In turn, share prices began to recover, and in several countries of Latin America, the stock-market gains largely reversed the losses seen at the height of the crisis.

3.b. The real economy

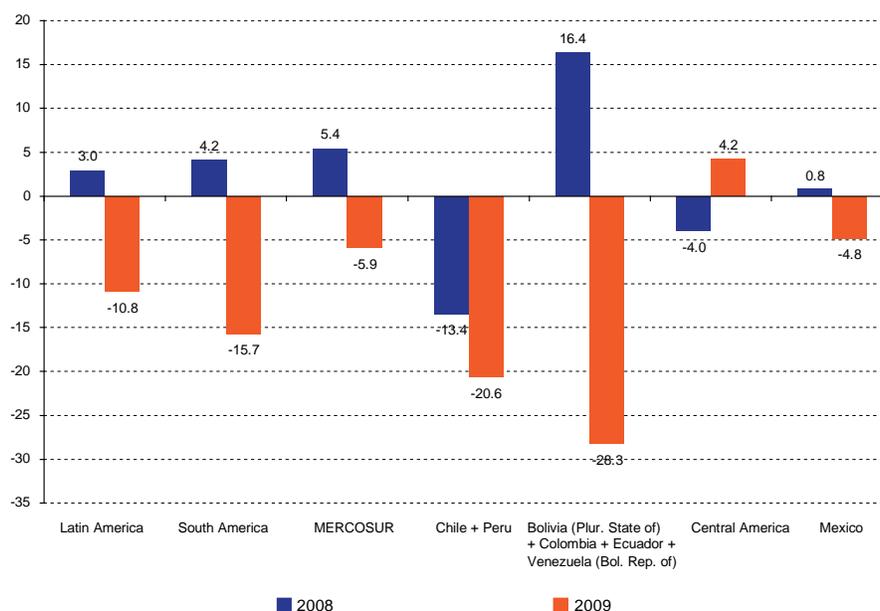
The impact has been felt more strongly through the channel of trade. Volumes of goods and services exports fell sharply in real terms: by nearly 15% year-on-year in the first semester of 2009 (see figure I.7). The global recession and the drop in global trade hurt commodity prices, which plummeted from the highs reached in the first half of 2008. The partial reversal of this pattern in recent months has not made up for the falls experienced in late 2008 and early 2009¹¹.

According to estimates, the terms of trade could worsen by as much as 11% for Latin America in 2009, after having improved by 37% between the mid-1990s and 2008. For South America and the countries of the Common Market of the South (MERCOSUR), the terms of trade are expected to decline by 15.7% and 5.9%, respectively, compared with an improvement of 58% and 19% during the boom period. The countries most affected will be exporters of metals and of petroleum and energy, whose terms of trade will fall by 20.6% and 28.3%, respectively, having posted cumulative gains between the mid-1990s and 2008 of 67% and 160%. The terms of trade of Mexico are expected to worsen by 5% in 2009, compared with a 23% improvement in the previous period. By contrast, the terms of trade for Central America are expected to improve by 4%, only partially offsetting the cumulative 18% decline in the previous period.

¹⁰ Even at the worst point of the crisis (September-October 2008), the jump in risk premiums implicit in sovereign debt yields was smaller than during other crises.

¹¹ Nor is there any certainty on the duration of these price hikes.

FIGURE I.6
LATIN AMERICA: ESTIMATED YEAR-ON-YEAR VARIATION IN TERMS OF TRADE, 2008-2009
 (Percentages)

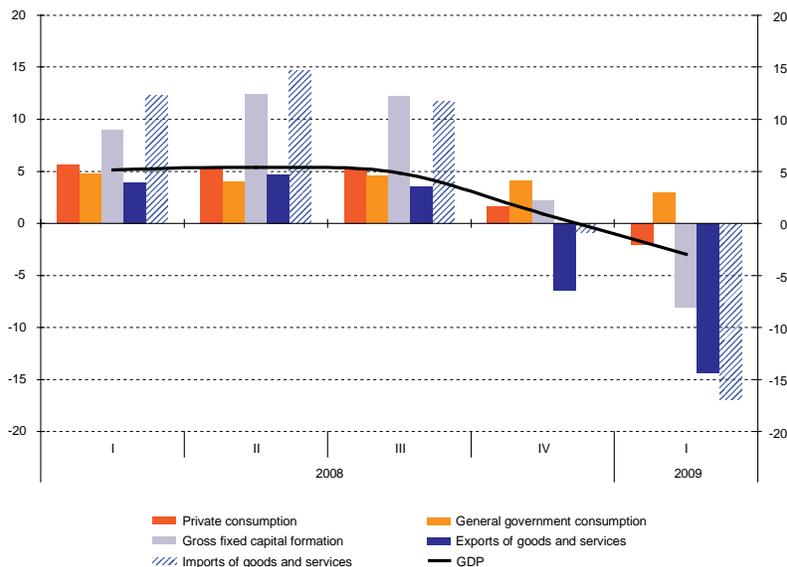


Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009* (LC/G.2410-P), Santiago, July 2009.

Some countries, especially Mexico and the countries of Central America, will feel the additional impact of lower services exports due to falling tourism revenues, which in many cases have been further eroded by the outbreak of the A(H1N1) virus.

In addition to the international repercussions that the crisis in the United States has had across financial markets and on external trade, other factors, albeit harder to quantify, have also come into play, such as the destruction of wealth resulting from falling asset values (in finance and real estate) and the impact of worsening household and business expectations on the demand for goods and services. These factors are particularly significant in countries with larger domestic markets that influence economic activity more heavily and they have translated into lower investment and sharp drop in private consumption. Growth in public consumption, on the other hand, has picked up, which may be attributed to the active fiscal policies that have been put into place and are discussed below.

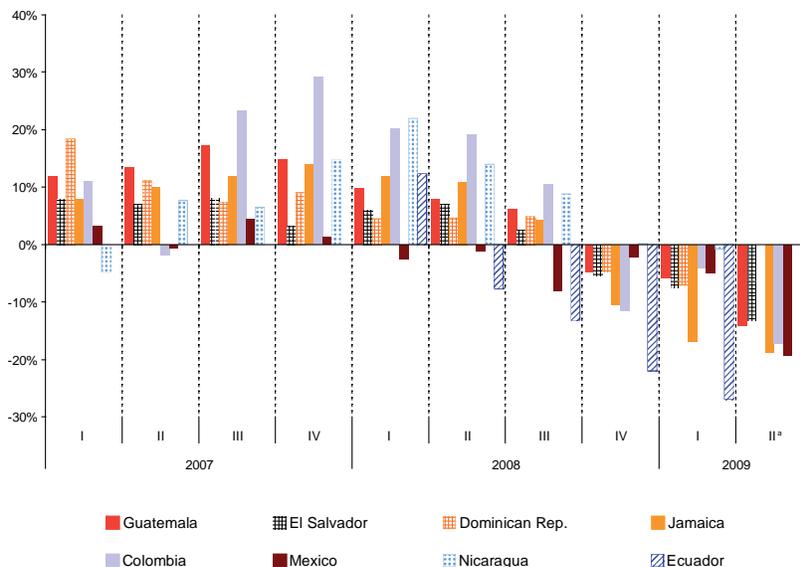
FIGURE I.7
LATIN AMERICA: YEAR-ON-YEAR VARIATION IN AGGREGATE DEMAND, 2008-2009
 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009* (LC/G.2410-P), Chile, July 2009.

In some countries, private consumption has also been eroded by a dip in migrants’ remittances, which began in the third quarter of 2008 and became more severe in the first quarter of 2009. Partial data available for the second quarter of 2009 show an even sharper contraction, of between 13% and 19%, in Colombia, El Salvador, Guatemala, Jamaica and Mexico.

FIGURE I.8
LATIN AMERICA AND THE CARIBBEAN (8 COUNTRIES) YEAR-ON-YEAR VARIATIONS IN REMITTANCES, BY QUARTER, 2007-EARLY 2009
 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009* (LC/G.2410-P), Santiago, July 2009.

^a Includes April and May, and the respective variation.

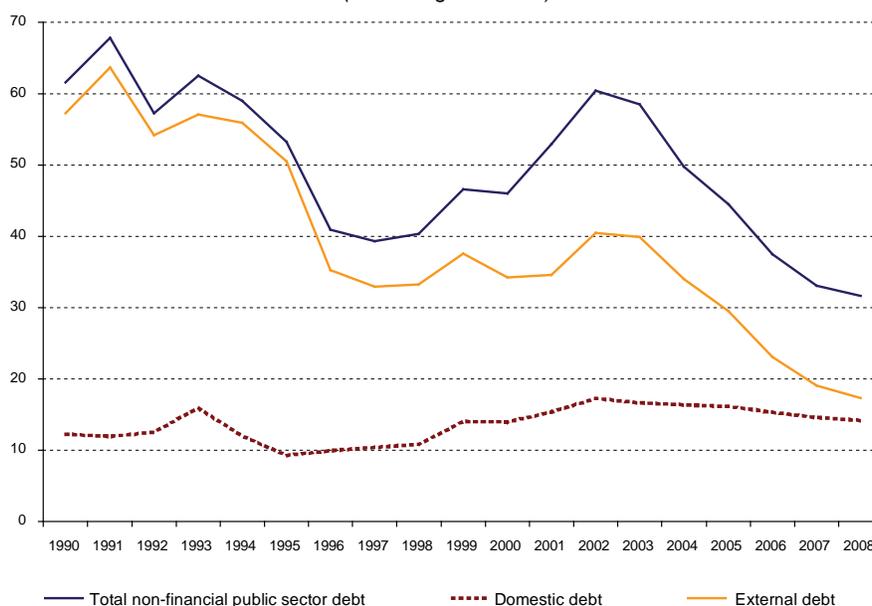
The fall in investment, meanwhile, is partially explained by smaller inflows of FDI, estimated at between 35% and 45% for 2009¹². This effect has been particularly apparent in Central American countries in which FDI flows represent a high proportion of GDP, even though they are not among the largest recipient countries.

4. Macroeconomic space and policies to deal with the crisis

Macroeconomic behaviour has changed in the region in recent years, although in different ways from one country to the next. Unlike in previous booms, countries encouraged higher savings rates in the most recent growth period. This has reduced their dependence on external financial resources and, in many cases, translated into a reduction in governments' external liabilities that has more than offset the private sector's greater reliance on international credit.

The decline seen in recent years in total non-financial public sector debt—expressed as a percentage of GDP—was produced by higher public revenue and economic growth, as well as changes in some relative prices¹³. In several countries the composition of public debt changed considerably, with a higher prevalence of longer-term and fixed-interest debt and a larger share of debt held by residents and denominated in local currency. These changes reduced the vulnerability to exchange rate fluctuations of governments that depend mainly on domestic economic activity for their revenue.

FIGURE I.9
LATIN AMERICA: NON-FINANCIAL PUBLIC SECTOR DEBT
(Percentages of GDP)



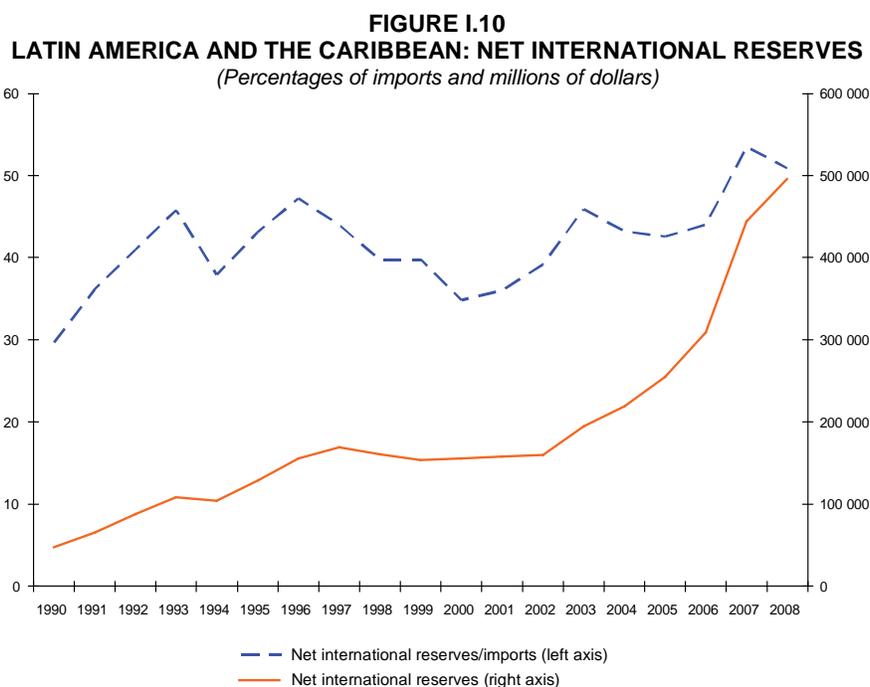
Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009* (LC/G.2410-P), Santiago, July 2009.

The region's external position was also bolstered by the accumulation of significant international reserves. In the wake of episodes such as the Asian crisis, various developing countries

¹² See ECLAC (2009c).

¹³ Public sector finances in Honduras, Nicaragua and the Plurinational State of Bolivia were also strengthened by the Heavily Indebted Poor Countries (HIPC) Debt Initiative. In other cases, debt reduction resulted from renegotiations after crisis episodes.

had decided to build up their external assets, which reduced their need to borrow in the event of liquidity constraints. This type of self-insurance reflected the decision to pay a price—equivalent to the opportunity cost of the external resources accumulated—in recognition of the procyclical nature of the international credit supply and out of a desire to avoid the conditionalities associated with multilateral agency financing. The countries of Latin America were no exception to this global trend and they raised their international reserves significantly, especially when export prices began to climb. From 2002 onwards, the accumulation of net reserves accelerated, and in late 2008, when the crisis became more acute, those reserves were at historic highs and far above the levels seen during previous crises, both in absolute terms and in proportion to import volumes (see figure I.10)¹⁴.

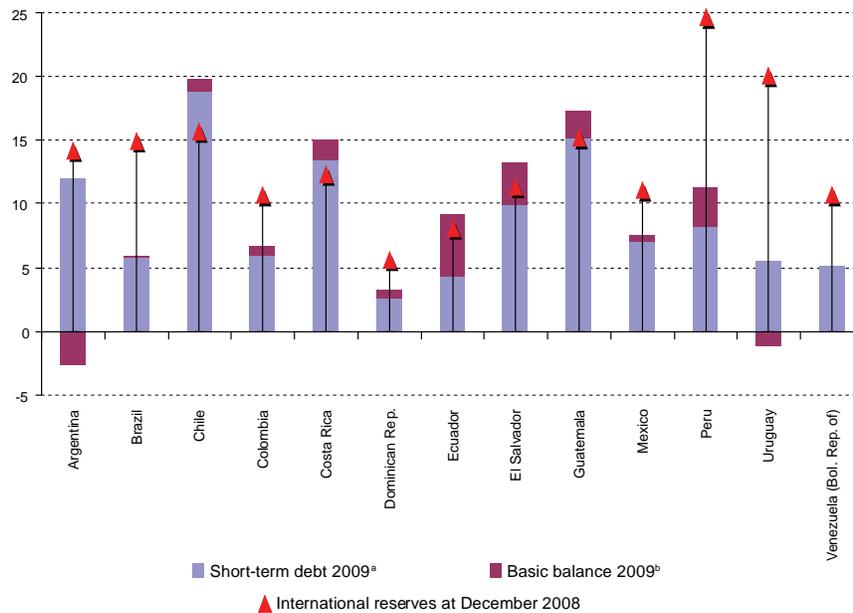


Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009* (LC/G.2410-P), Santiago, July 2009.

Despite projections of smaller inflows of hard currency in both the current account and the capital account of the balance-of-payments, the countries of Latin America are not expected to face difficulties in meeting their external obligations in 2009. The sum of the foreign currency required to cover the projected basic balance (balance of the current account plus the balance of direct investments) and estimated external obligations that fall due in 2009 is fully in line with the available external assets of the countries of the region, even if only a very small portion of the external obligations can be refinanced (see figure I.11).

¹⁴ The efforts of the countries of the region would appear even larger if calculations of international reserves included the sums saved by a number of countries in sovereign funds, fed by fiscal surpluses. This has, naturally, implied a substantial sacrifice in terms of the opportunity cost of resources that the countries of the region and emerging economies in general have had to incur to offset the flaws of the international financial markets against which they had little defence during other crises.

FIGURE I.11
LATIN AMERICA AND THE CARIBBEAN (13 COUNTRIES): ESTIMATES OF BASIC BALANCE,
INTERNATIONAL RESERVES AND EXTERNAL DEBT OBLIGATIONS FOR 2009
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009* (LC/G.2410-P), Santiago, July 2009.

^a Preliminary estimate; includes short- and long-term debt payments

^b Positive values indicate a basic-balance deficit

The stronger footing of the countries of the region not only distinguishes the current financial difficulties from those they have faced in previous, similar episodes of crisis, but it also has created additional space to implement public policies. Nevertheless, the recent repercussions of the crisis have narrowed the macroeconomic space for implementing policies to spur domestic demand, and have underscored that choices must be made regarding instruments and resources available to governments for fulfilling competing objectives¹⁵.

Figure I.12 shows the parallel trends of two elements that, from the perspective of capital flows, are fundamental for delineating the boundaries of economic policy: the current account balance and the public sector's financial balance. The bonanza period, from mid-2003 to at least 2007, witnessed a parallel improvement in both balances. This allowed Latin America, on average, to post twin surpluses for the first time, in 2006 and 2007.

Nevertheless, given that much of the improvement in the fiscal situation in recent years was due to steadily rising commodity prices from 2002 until the first half of 2008, a deterioration in those prices, although somewhat mitigated recently, places significant constraints on the fiscal space gained. According to projections made by ECLAC, fiscal resources in 2009 will fall by the equivalent of 5.6 percentage points of GDP in countries with a high degree of specialization in producing and exporting commodities, and in which revenue stemming from such activities account for more than 30% of all tax receipts. By contrast, revenue is expected to fall by some 1.7 percentage points of GDP in countries with an average degree of specialization in commodities. For other countries, revenue is expected to fall by 0.5% of GDP, owing to slumping economic activity.

The total effect for Latin America and the Caribbean is a dip in receipts equivalent to 1.8% of GDP (simple average), which means the region would shift from an average overall surplus of 0.3% of

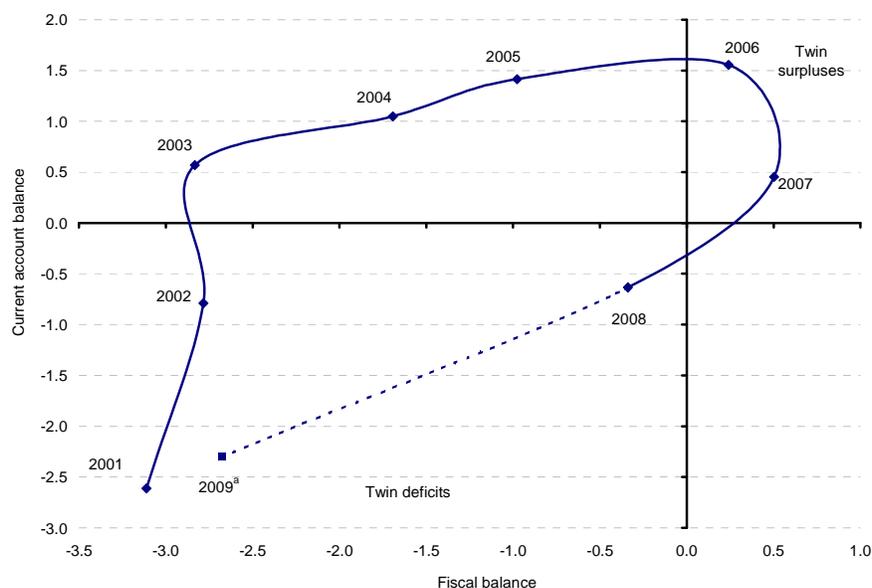
¹⁵ This point is analyzed in chapter II.

GDP to a overall deficit of around 2.7% of GDP in 2009¹⁶. This outcome will depend heavily on the extent to which the countries implement the spending increases announced to mitigate the effects of the crisis.

Something similar occurred with the balance-of-payments current account, which posted increasingly large surpluses between 2003 and 2006, as a result both of improved terms of trade and higher export volumes and remittance income. In 2007, the positive balance contracted, primarily because of slower export growth, and in 2008 the region finished the year with a current account deficit equivalent to 0.6% of GDP, marking the end of five consecutive years of surpluses.

The balance-of-payments current account in Latin America is expected to deteriorate further in 2009. A deficit of 2.3% of GDP is projected, mostly because the likely deterioration of the region's terms of trade is expected to sharply worsen the trade balance and cause it to go into deficit. The projected decrease in remittances is also expected to contribute to the worsening situation, although to a lesser extent. Still, this will be partially offset by a narrowing of the deficit in real services trade and, in particular, the smaller deficit in the income balance in keeping with expectations of reduced profit remittances by foreign companies operating in the region.

FIGURE I.12
LATIN AMERICA: CURRENT ACCOUNT AND FISCAL BALANCE, 2000-2009
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009* (LC/G.2410-P), Santiago, July 2009.

In addition to the constraints that changes in public accounts and external accounts may impose on the amount of resources available for countercyclical interventions, the characteristics of the economies of the region may place other limits on the efficacy of macroeconomic policy. Specifically, irrespective of the importance of maintaining liquidity levels that allow financial systems to operate smoothly, the effectiveness of monetary policies in countries with low levels of monetization and financial depth may prove to be limited. Highly uncertain situations may hamper the mechanisms by which expansionary monetary measures increase the credit supply and those by which an increase in the credit supply leads to an effective use of available financing to boost the demand for goods.

¹⁶ This is analyzed in greater detail in chapter III.

In crisis situations, when credit markets tend to become segmented, fiscal policy may play a key role in maintaining aggregate spending levels¹⁷. Nevertheless, the countries of the region often face institutional constraints and limitations on the public sector's capacity to implement policy. This restricts the manoeuvring room for using fiscal policy flexibly for macroeconomic stabilization. In particular, although tax cuts can easily be implemented, their impact may be limited in countries in which taxation is low to begin with. Furthermore, in conditions of uncertainty, increases in disposable income do not necessarily spur demand, especially if the beneficiaries of tax cuts belong to the upper income groups¹⁸. In addition, increases in public spending place greater burdens on institutions and public administrations. Increasing public investment requires time, especially because countries do not normally have projects that have been evaluated and are ready to be implemented. Targeted subsidies can be highly effective, but not all countries have developed mechanisms to identify and reach the potential beneficiaries of social programmes.

4.a. Monetary and financial policy

Faced with the changing international outlook in the last four months of 2008, in which credit in the developed countries tightened and the inflationary pressures that had prevailed for much of the year eased, the region's central banks took steps to ensure that there was sufficient liquidity for domestic financial markets to function¹⁹. To this end, the legal reserve was reduced, terms were shortened or liquidity absorption operations were reversed and special mechanisms for rediscount or repurchase operations were established or broadened. At the same time, central banks held monetary-policy interest rates almost unchanged, with the expectation that lower raw-materials prices would lessen inflationary pressure. Since the final months of 2008, inflation has tended to decline in most of the economies of the region and has remained within the target ranges set by the monetary authorities, at least those that set explicit inflation targets. Inflation is expected to continue downward in 2009.

In early 2009, the central banks of most countries in the region lowered their monetary-policy rates, in coordination with their fiscal measures, to spur economic recovery. Still, in some countries, rates can be expected to continue to fall, given that they remain high in real terms. The easing of inflationary pressure and expectations of a lower rate of increase in prices have made it possible to change the orientation of monetary policy²⁰.

Nevertheless, expansionary monetary policy proved unable to prevent the credit market from slackening, especially once the international crisis worsened. Growth in total lending, in real terms, continued to slow down in the first quarter of 2009 in Argentina, the Bolivarian Republic of Venezuela, Brazil, Colombia, Mexico and Peru.

Starting in the third quarter of 2008, financial and trade shocks led to significant depreciations in the currencies of several countries of the region, despite the drawdown of reserves by those

¹⁷ On the effectiveness of fiscal policy for dealing with a financial crisis, see Baldacci, Gupta, and Mulas-Granados (2009).

¹⁸ Chapter 3 lists the tax measures that could be applied in the countries of the region and analyzes the advantages and disadvantages of each one.

¹⁹ The spike in inflation in 2007 and the first half of 2008 complicated the management of monetary policy and hindered the achievement of inflation targets set by the central banks. Inflation remained over-target during this period in Chile, Colombia, Mexico, Paraguay and Peru. Only in Brazil did the inflation rate remain within the target range (which is broader than that of the other countries), but there too inflation rose and hovered above the middle of the band. Although the main reason for higher inflation was supply shocks associated with food and energy prices, most central banks raised their monetary policy rates in order to anchor inflationary expectations. As inflationary pressure eased in the second half of 2008, real interest rates in many cases remained very high at the end of the year.

²⁰ Examples include the steps taken by the central bank of Brazil, which lowered the basic interest rate of the Special System of Clearance and Custody on four occasions between December 2008 and April 2009, with a total reduction from 13.66% to 11.66%, and similar measures taken in the same period by the central banks of Colombia, Guatemala, Mexico and Peru. The central bank of Chile slashed its interest rate by seven percentage points, from 8.25% in December 2008 to 1.25% in May 2009, and the central bank of Honduras also sharply cut its rate, from 9% to 4.5%, between November 2008 and March 2009. Argentina constitutes an exception to this trend, as developments in the currency markets there have limited the central bank's scope for lowering interest rates.

countries' central banks. The types of interventions varied and included spot-market operations as well as currency futures transactions²¹.

Although central banks across the region cut interest rates between December 2008 and May 2009, currencies tended to rise in value in nominal terms, reflecting improving conditions in international financial markets. This appreciation was not sufficient to compensate for the depreciations of the previous months, however. During this period, auctions of foreign exchange gradually declined before ceasing altogether²².

4.b. Fiscal policy

The challenge of fiscal policy in the current economic climate lies in applying countercyclical measures in a context of lower tax revenues while simultaneously protecting certain expenditures — on education, social protection and infrastructure— that are vital for avoiding increased poverty and for laying the foundations for future growth. Although the governments of the region still have some capacity to shore up their economies through fiscal interventions, in practice, the manoeuvring room for fiscal policy varies greatly from one country to the next and depends on the savings built up in good times, spending rigidities, the duration of the crisis and the scope for prudent borrowing.

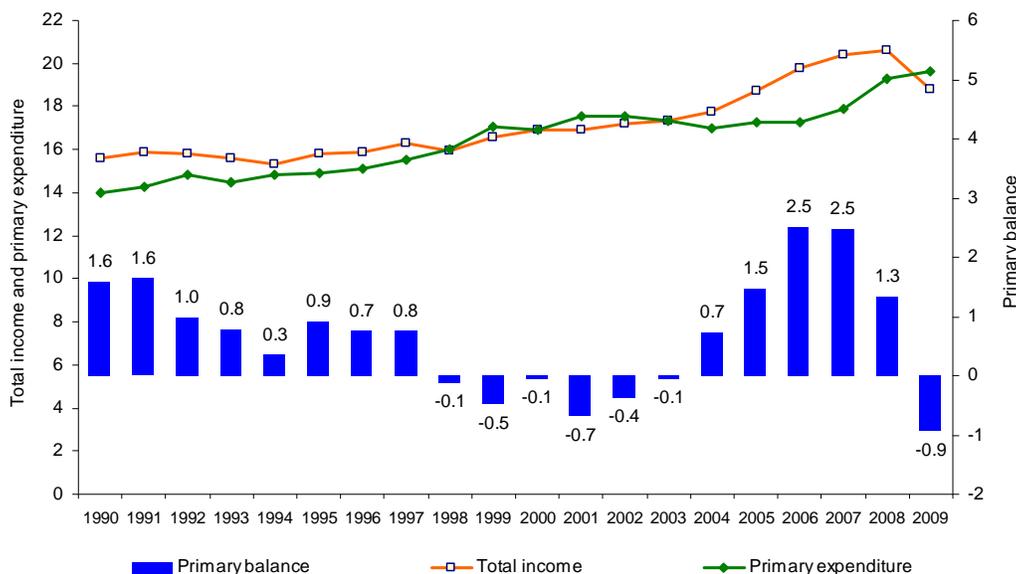
The crisis has placed the public finances of the Latin American economies in a complicated situation. On the one hand, fiscal revenues have been substantially curtailed, owing to lower levels of activity and falling commodity prices. On the other, the fiscal stimuli countries have implemented and the measures they have taken to offset the distributive costs of the crisis will further erode their fiscal balances. In addition, the fiscal downturn is taking place, in many cases, amid severely constrained external borrowing conditions, and this affects the countries' ability to apply countercyclical fiscal policies.

In terms of public finances and fiscal policy, although the region is unquestionably better positioned than it was in past crises, some matters related to the public sector's capacity to weather this crisis warrant concern. The dramatic increase in fiscal revenues witnessed in 2002-2008 is closely linked to income from natural-resource extraction, which is more volatile than revenue from other sources. Indeed, income from exports of natural-resource-intensive products is expected to fall, while economic activity is expected to generally decline, within a context of increasing demands to raise public spending. The primary balance is thus expected to be virtually negative for the first time in six years and to be virtually the largest negative balance in the last two decades (see figure I.13).

²¹ See Jara, Moreno and Tovar (2009).

²² The exception is Argentina, whose currency has gradually depreciated since mid-2008.

FIGURE I.13
LATIN AMERICA: CENTRAL GOVERNMENT INCOME, EXPENDITURES AND PRIMARY BALANCE
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009* (LC/G.2410-P), Santiago, July 2009.

The effects of the international crisis on fiscal income vary from country to country depending upon their tax structure, level of tax collection and other sources of current financing²³. The countries most exposed to the effects of the crisis will be those with low tax burdens, high percentages of non-tax revenue or revenue derived from natural resources and very open markets (particularly if they export mainly to developed countries). By contrast, countries with higher tax burdens, larger percentages of revenues from income tax and higher value-added-tax productivity should be less exposed.

The fiscal policy measures taken by the governments in the region are summarized in table I.1. On the spending side, 15 countries have announced measures to support their production sectors, generally targeting small and medium-sized enterprises or the agriculture sector. The same number of countries has plans for infrastructure investment and spending on housing and 14 have included housing spending programmes. As regards taxes, eight countries have announced cuts in personal income tax, through changes in deductions, lower tax rates or increased exemptions (in two cases the cuts are temporary). In addition, nine have cut corporate taxes, through new exemptions, deductions or accelerated depreciation schemes (announced as temporary in four cases). An analysis of this type of measures, whether from the perspective of spending or income, must take into account the temporary or permanent nature of the measures as well as their impact on the sustainability of public finance.

²³ The degree of exposure of each country's fiscal revenue to different variables is calculated in chapter III, and the countries are divided into three groups: high, medium and low exposure.

TABLE I.1
LATIN AMERICA (18 COUNTRIES): MAIN FISCAL MEASURES TAKEN IN RESPONSE TO THE CRISIS

	Argentina	Bolivia (Plur. State of)	Brazil	Chile	Colombia	Costa Rica	Ecuador	El Salvador	Guatemala	Honduras	Mexico	Nicaragua	Panama	Paraguay	Peru	Dominican Rep.	Uruguay	Venezuela (Bol. Rep. of)
Tax system																		
Corporate income tax, reductions/depreciation				T	X	T	X		X		T				X			T
Personal income tax cuts	X		X	T	X				X	X	T		X					
Taxes on external trade	X		T				X				X	T						
Taxes on goods and services			T															
Social contributions	X										T							
Other			X	X	X		T								T		X	
Public spending																		
Infrastructure investment	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	
Housing		X		T	X	X			X		X	X		X	X			X
Support for SMEs and agricultural producers			X	X	X	X		X	X	X	X		X	X	X			X
Support for strategic sectors		X	X	X					X						X			
Direct transfers to households	T			T		X								X				
Other	T		X		X			X		X	X	X						

Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009* (LC/G.2410-P), Santiago, July 2009.

Note: T: Temporary measures.

With regard to the impact of the measures announced, apart from the differences to be expected between initiatives based on tax cuts and those based on public-spending hikes, in Latin America and the Caribbean tax incentives and deductions, often referred to as “tax spending”, are notoriously difficult to quantify and their impacts difficult to estimate²⁴.

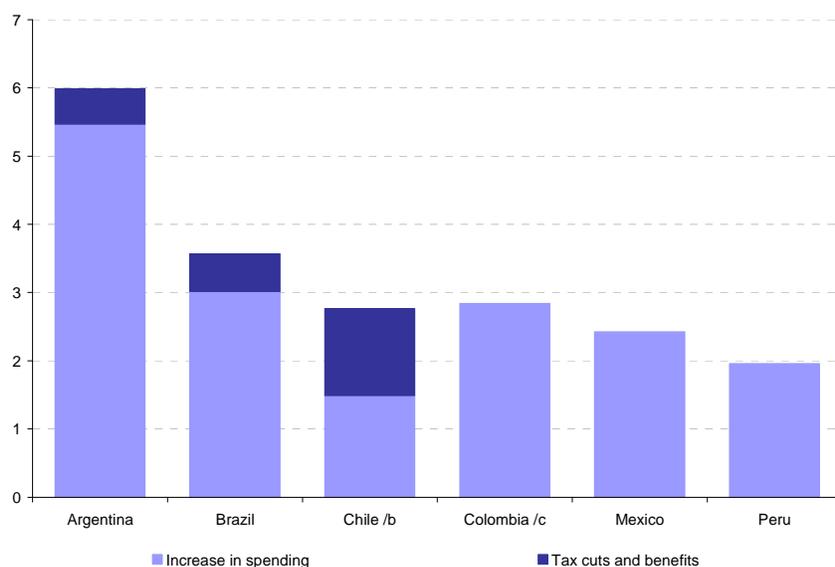
An assessment of the fiscal cost of anti-crisis measures planned up to 2009 in six of the region’s largest countries shows that the results vary considerably from one country to another, as shown in figure I.14²⁵. Argentina has intervened the most actively, with measures that entail a cost of

²⁴ Although the methodologies used to calculate these effects are difficult to compare, the countries of the region draw substantially on “tax spending”, which ranges from around 2% of GDP in Argentina, Brazil and Peru to over 5% of GDP in Chile, Guatemala and Mexico. This level of tax expenditure has diminished the countries’ tax bases. For a more detailed account of tax spending in the region, see Jiménez and Podestá (2009).

²⁵ The evaluation included all measures that have been announced and have a fiscal cost. Therefore, cost estimates are not limited to a particular stimulus plan but also comprise additional expenditure items. The calculation of costs is based on announcements and not on actual spending, which can only be assessed subsequently, when information becomes available on the degree of

around 6.0% of GDP, of which over 90% is to be allocated to boost spending under public works programs. The cost of the package of measures in Brazil is approximately 3.6% of GDP, of which 85% has been allocated to increase spending and 15% for tax cuts or increased tax benefits. The cost of interventions by the governments of Chile, Colombia, Mexico and Peru is estimated at some 2.0%-2.8% of GDP. In Chile 46% of the overall amount is being channelled into tax cuts and benefits, while in Colombia, Mexico and Peru all measures are geared towards increased spending.

FIGURE I.14
LATIN AMERICA (SELECTED COUNTRIES) FISCAL COST OF ANTI-CRISIS MEASURES
PLANNED FOR 2009^a
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2008-2009a* (LC/G.2410-P), Santiago, July 2009.

^a GDP 2008

^b The measures are to be implemented in 2009, except for the reduction in stamp duty, which continues into 2010.

^c Includes a measure for a period after 2009.

The steep drop in fiscal revenue, together with credit constraints derived from the slow return to normalcy in financial markets, considerably restricts the manoeuvring room to finance public policies, which raises valid doubts as to some governments' capacity to finance and carry out the spending required by these measures.

Although a large proportion of the measures were adopted by central governments, many have required—or will require—human or financial resources from subnational governments as well as coordinated actions among various levels of government. This increases the need for intergovernmental coordination and constitutes an additional source of vulnerability in fiscal policy during the crisis since, although the finances of subnational governments have improved in recent years, this improvement has been attributable not to better tax collection by local and intermediate governments, but in large measure to growing transfers from national governments. Total transfers grew by two GDP points between 1997 and 2007, while tax receipts for subnational governments rose

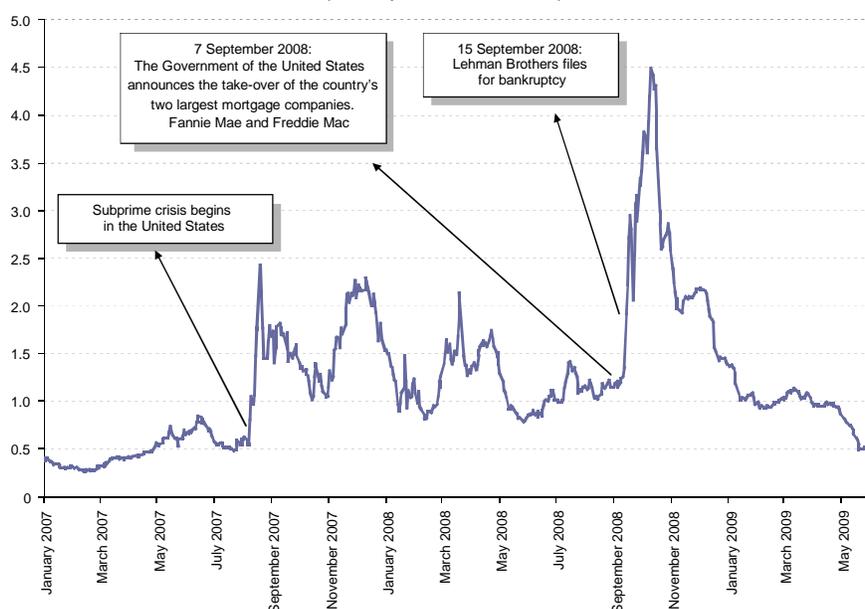
implementation. Furthermore, as the cost estimates are for 2009, in the case of multi-year plans, an estimate of the portion of costs corresponding to 2009 had to be used.

from 2.1% of GDP to 2.7% in the same period. In some cases, subnational public debt remains high and accounts for a significant portion of total public debt.

5. Final considerations

In mid-2009, there are signs of a slowdown or even a turnaround in the economic slump, with an incipient improvement in some economic and financial indicators, even though it remains to be seen whether this trend will eventually firm up. The banks' situation has improved, as indicated by changes in the level of risk perceived by the financial market for interbank lending, which, after spiking sharply, has gradually returned to pre-crisis levels.

FIGURE I.15
INTERBANK MARKET INTEREST RATE
(TED spread: 2007-2008)



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

Note: The TED spread is a measure of the risk that a bank will default and corresponds to the difference between short-term rate on interbank loans and the risk-free rate (three-month Treasury bills).

As to the possibility of rebuilding sources of wealth, there has been a widespread, albeit partial, recovery of stock markets in both developed countries and emerging markets, and housing prices have stopped falling in the United States. In keeping with these indicators, economic agents' perception of where the crisis is heading appears to be beginning to change. Indicators of consumer and business confidence suggest a gradual reversal in the pessimism that has pervaded the most recent period, especially since late 2008. This positive development could herald the start of a gradual recovery in the second half of 2009, although it will be slow and not without risks.

Financial markets will take time to return to business as usual and the availability of funds on the international markets will remain tight for some time. Deleveraging and slow credit growth will continue until banks have addressed their capitalization needs and solved the problems posed by their holdings of financial assets of dubious value and non-performing loans. Moreover, the erosion of wealth (particularly non-financial wealth) has ceased but has yet to go into reverse, and this is placing a further constraint on the recovery of demand.

The slow recovery may well encounter some bumps along the road which could further delay an emergence from the crisis. Close attention must be paid to the emerging economies of Eastern Europe and the Baltic nations, in which significant disequilibria comparable to, or even worse than, those seen in Latin America and the Caribbean in past crises have arisen. Some European banks in these countries are exposed enough to warrant concern that a worsening of the situation in Eastern Europe and the Baltic nations could set off contagion in Western European economies. In addition, a prolonged period of sluggish demand and economic activity at the global level could damage the asset positions of large groups of agents badly enough to deal a blow to financial systems.

It is thus difficult to predict when the crisis will end and what the path to recovery will look like. One possibility, provided that the events described in the preceding paragraph do not occur, is that domestic demand will slowly recover in the developed countries on the back of a gradual return to normalcy in financial markets, an incipient process of recovery in the value of assets that make up the wealth of the private sector, particularly in the developed countries, and a change in the expectations of economic agents. The decline across the array of available indicators in the financial and real sectors alike is already slowing up and even showing some signs of reversing itself as uncertainty about the global economy abates, thanks to strong commitments from economic authorities (particularly in developed countries but also in the developing world) to implement measures to mitigate the effects that the crisis is having on domestic demand.

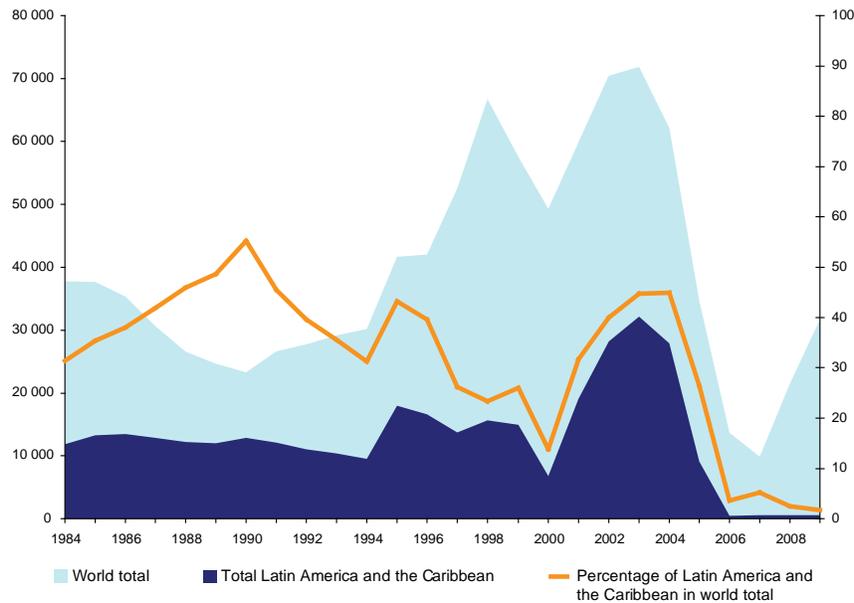
External demand fell, and domestic demand slowed, as reflected in both private consumption and investment, was expected to drop in Latin America in late 2008 and the first part of 2009, owing to declining national income (caused, in turn, by falling raw materials prices), rising unemployment and tighter credit, all exacerbated by lower expectations.

In mid-2009, however, the slowdown in international trade appeared to abate, commodity prices began to recover, access to credit improved and indicators began to point to rising expectations. In line with these developments economic activity in the region is expected to begin to recover in the second half of the year, and, in fact, the downtrend is already showing signs of easing up in several countries. Given the extremely low starting point, this partial upturn will not be sufficient to make up for the contractions—or slowdowns—posted in the fourth quarter of 2008 and in the first quarter of 2009. As a result, annual GDP growth will be negative (-1.9%) for the first time in seven years. The slump in economic activity will take a toll on the labour market: unemployment and the rate of informal employment may be expected to rise, leading to higher poverty.

As noted above, a gradual recovery is expected to begin in the second half of 2009 and to consolidate in 2010, when the region could return to positive growth, though at rates well below those posted in recent years and insufficient to reverse the declining social indicators resulting from the economic contraction in 2009. To speed up the economic recovery and raise employment and thus help the region to return to the poverty-reduction track it veered away from in 2009, the governments will need to increase their counteract the impacts of the crisis through public policy. Increased government capacity will depend, however, among other things, on the amount of available resources.

Given that the macroeconomic space for public policymaking has narrowed, the international financial institutions now need to assume an active role in providing resources to finance countercyclical policies and measures to offset the impact of the crisis. Thanks to the debt reduction and behaviour displayed in recent years, the region is in a position to borrow sustainably, particularly from these financial institutions.

FIGURE I.16
LOANS EXTENDED BY THE INTERNATIONAL MONETARY FUND
(Millions of special drawing rights and percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of figures from the International Monetary Fund.

International financial institutions will be called on to play an even more active role if the recovery of the international financial system is delayed and if access to external financing remains precarious. In such a situation, a number of countries could have difficulty in meeting their external obligations.

The manner in which countries are granted financing from international financial institutions is also important. At the very least, conditionalities must not be procyclical, as they often were in the past. And, importantly, the costs and terms of financing must fit the needs of developing countries. Much would also be gained if the institutions were to work together in a coordinated, consistent and complementary fashion in order to reinforce the effects of their policies²⁶.

The resources to augment the lending capacity of the international financial institutions must be raised very quickly in order to provide the liquidity necessary to broaden the policy space for hastening the recovery of the region's economies. This will help to prevent, or at least lessen, residual economic, social and political impacts that would be very difficult to remedy down the line.

Beyond the current economic context, the crisis provides an opportunity to reflect upon the kinds of macroeconomic policies that would best facilitate a sustained growth trend in the wake of the turmoil and would limit the vulnerability of the region's economies to both external and domestic shocks. Much has been achieved in this regard in the region, but much more remains to be done. The importance of saving resources in favourable times with a view to financing countercyclical policies at some future point is perhaps one of the most important lessons to emerge from this crisis²⁷.

²⁶ Some of these issues are examined in a recent interesting publication of the Inter-American Development Bank (2009).

²⁷ For a detailed examination of these topics, see ECLAC (2008).

Chapter II. Crisis, volatility and fiscal policy in Latin America

José María Fanelli²⁸ and Juan Pablo Jiménez²⁹

1. Introduction³⁰

This paper analyzes the relation between macroeconomic fluctuations and fiscal policy in Latin America, in order to identify structural and behavioural factors relevant to formulating fiscal stabilization policies (countercyclical and macroeconomic adjustment policies). Empirically, the study draws on the experience of the region during the second period of globalization, which began in the late 1970s. Analytically, the main point of reference is the literature on countercyclical fiscal policy and macroeconomic volatility in Latin America³¹. Although the present focus goes beyond specific situations and circumstances, particular attention will be devoted to evaluating the new demands and constraints that are likely to affect fiscal policy as a consequence of the macroeconomic imbalances associated with the crisis.

The negative forces associated with the financial crisis that originated in the developed world are being transmitted through all of the channels that connect Latin America with the global economy: capital flows, foreign direct investment (FDI) and remittances. At the same time, the price and volume of exports are declining, risk premiums are rising, access to capital markets is either nonexistent or limited, and flows of FDI and remittances are decreasing. As is inevitable in such circumstances, the simultaneous effect of these factors, as they move through the various channels, creates substantial macroeconomic imbalances. The decline in exports directly depresses aggregate demand and the tightening of financial constraints and the decline in FDI affect investment demand and the demand for durable consumer goods, while limiting government's capacity to adopt countercyclical measures.

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³⁰ A preliminary version of this chapter was presented at the European Union-Latin America and the Caribbean forum entitled "Fiscal policies in times of crisis: volatility, social cohesion and the political economy of the reforms". The authors are grateful to Ramiro Albrieu and Andrea Podestá for their assistance and to Osvaldo Kacef, Rafael López Monti, Leandro Cabello and the participants in the forum for their comments.

³¹ On volatility in the region, see *Economic Survey of Latin America and the Caribbean, 2007-2008* and the accompanying annotated bibliography. On countercyclical fiscal policy, see Bello and Jiménez (2008) and Perry and others (2008).

Although remittances vary in importance from one country to another, they represent, for some countries, a substantial portion of disposable income, and thus a reduction in their flow can cause a drop in domestic demand and weakness in the current account balance.

Initially there was speculation that the region might be able to remain detached from the turbulent events affecting the United States and Europe. Today, however, no one doubts that the governments of the region will face serious macroeconomic challenges. This applies to both overall fiscal policy and stabilization policy. Although, at the start, the central banks made strenuous efforts to inject liquidity into the financial systems to try to ensure the normal functioning of local credit markets, the sharp drop in confidence, as well as significant differences in the degree of monetization and in the depth of financial markets, have made it necessary to adopt other types of measures. Liquidity must be ensured and interest rates kept as low as possible, but liquidity itself does not necessarily guarantee greater access to credit, nor does a greater supply of credit guarantee increased demand for goods. Although monetary and exchange-rate policies must be part of an orderly and coherent set of measures, fiscal policy is the strongest tool in cases such as the present one. In crafting solutions, authorities will likely confront additional pressures due to tensions between the different policy-making segments of government, as well as between government and specific social and productive sectors. In the fiscal realm, the most critical tensions are likely to involve: (i) ensuring the sustainability of public debt vs. mitigating the social and financial effects of the global crisis; (ii) protecting the liquidity of the financial and payment system through monetary or fiscal supports vs. maintaining international reserves and controlling inflation; (iii) ensuring macroeconomic stability vs. providing subsidies to specific sectors in order to prevent sectoral and social conflicts with major political consequences; and (iv) subsidizing sectors with high exposure to the international crisis vs. resorting to protectionism.

Not surprisingly, intense efforts are underway throughout Latin America to identify effective measures to protect the region's economies from the macroeconomic effects of the crisis. If these are successful, imbalances will be minimized and potential conflicts will be averted. Given these concerns, it seems useful to consider the experience of the region with regard to countercyclical fiscal policy and crisis management. A deeper understanding of the relation between volatility and fiscal policy may provide useful guidance in designing policies that take optimal advantage of the existing policy space, which is rather limited under the current circumstances.

The following section will briefly examine the available evidence regarding the regional effects of the crisis, so as to assess the magnitude of the present turbulences and determine the types of demands and challenges that may be expected to arise concerning countercyclical fiscal and macroeconomic adjustment policies. It will be argued that the shocks associated with the international crisis are primarily taking the form of trade collapses and sudden stops in capital flows³². It will also be argued that the form and intensity of the impacts in each of the region's economies depend on structural factors such as the size of the economy, the volume of capital flows and the country's trade specialization. Section II discusses a number of stylized facts regarding volatility in Latin America, in an attempt to understand their implications for fiscal stabilization policy. We will call attention to the fact that the meaning of "stabilization" can be ambiguous. One of the functions of fiscal policy, in addition to its role in allocation and distribution, is to stabilize the cycle. But the meaning of the word can vary greatly depending on whether the situation being described is normal or exceptional. In the former case, as we shall see, stabilization involves implementing countercyclical policy, while in the latter case it refers to macroeconomic adjustment. This ambiguity has led to failures in both designing and coordinating policy. We therefore propose the notion of "policy space" as a means of avoiding ambiguities in the characterization of the stabilizing function of fiscal policy (section III). Section IV examines the anatomy of two different types of exogenous international shocks: trade collapses and sudden stops of capital inflows. We also analyze how these two types of shocks interact with countercyclical fiscal policies. The two types of shocks were selected because of their importance

³² On sudden stops and their effects on macroeconomic dynamics, see Calvo and others (2006).

during the second globalization period, and because the available evidence indicates that the effects of the current crisis are similar in nature to those that accompany such shocks. The paper focuses on the challenges confronting countercyclical fiscal policy, as well as on the problems of policy coordination that are associated with these shocks in Latin America. The final section of the paper discusses the specific elements of fiscal stabilization policy that should be included in attempting to curb volatility in the region and, in the context of the current crisis, delineates the factors that constrain and place demands upon fiscal policy with regard to its stabilization function.

2. Transmission of the crisis to Latin America and the associated fiscal policy challenges

In the five years preceding the current crisis, growth rates in Latin America—as well as in the global economy—were high. Growth was particularly strong in countries that export natural resources, as their positions were enhanced by major improvements in the terms of trade. Economies that depended on energy imports, on the other hand, felt the effects of rising oil prices, although for many countries the problem was balanced by increased remittances resulting from the high level of economic activity in the United States. Moreover, the growth rate in South America (which is a major exporter of natural resources) was greater than in the rest of Latin America. In the five-year period from 2004 to 2008, the region’s median annual growth rate was 5.7%. This contrasts significantly with the preceding five years (1999-2003), when there were episodes of financial instability and the average growth rate barely exceeded 1%. The current crisis puts an end to this positive scenario, and projections for this year are for negative growth.

Initially, the financial channel played a central role in transmitting the crisis to the region, as reflected in the quantity of capital inflows, as well as in risk premiums. The margin between the risk-free rate and the average rates for the region has increased noticeably (approximately 500 basis points, as measured by the EMBI) between the trough of early 2007 and the first quarter of 2009. Nevertheless, the current level remains far below the peaks reached during the Russian and Argentine crises (1,100 basis points and 1,400 basis points, respectively).

This more moderate risk-premium response is consistent with the fact that Latin America’s macroeconomic fundamentals are sounder than they were at other times of international turbulence. In early 2008, a number of the region’s largest countries—Argentina, Chile, Ecuador, the Plurinational State of Bolivia, Paraguay, Peru and the Bolivarian Republic of Venezuela, among others—had twin central-government and current-account fiscal surpluses.

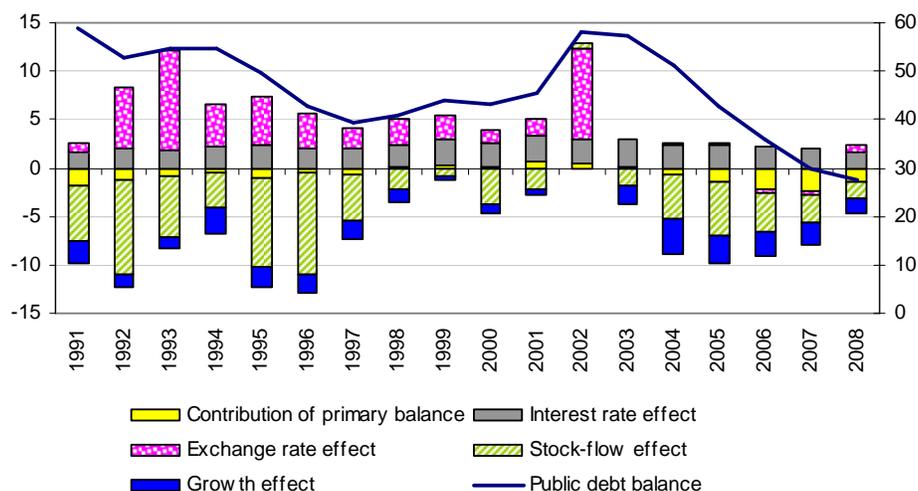
In this context, it is not surprising that the importance of the public debt as a risk factor has declined. A number of factors account for this fact: changes in macro variables (the exchange rate and the level of economic activity), debt restructuring initiatives, and the recognition of contingent liabilities (see figure II.1)³³.

³³ Figure II.1 shows the variation in public indebtedness on the basis of the five components that appear in the equation below. The first term on the right side of the equation represents the contribution of the primary fiscal balance; the second represents the effect of the interest rate; the third represents the contribution of economic growth; the fourth represents the effect of the exchange rate on that portion of the debt denominated in foreign currency; and the final term is a residual.

$$d_t - d_{t-1} = -rp_t + d_{t-1} \cdot \frac{i_t}{1+n_t} - d_{t-1} \cdot \frac{n_t}{1+n_t} + d_{t-1}^s \cdot (s_t - s_{t-1}) + sf_t$$

For further details on the variation of the debt, and the calculation method used, see Aliaga, Jiménez and Tromben (2009).

FIGURE II.1
LATIN AMERICA AND THE CARIBBEAN: VARIATION IN NON-FINANCIAL PUBLIC SECTOR DEBT
(Percentages of GDP)



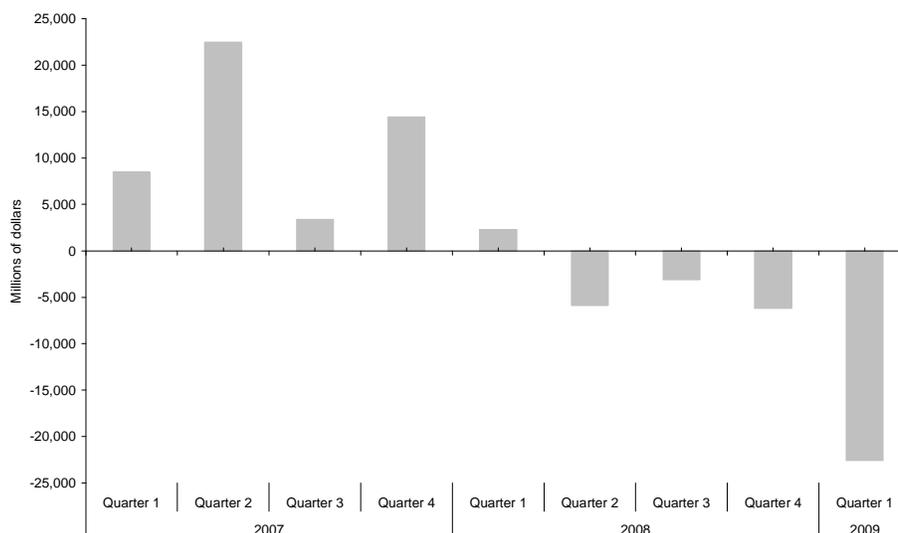
Source: Prepared by the authors, on the basis of data provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Although the generation of fiscal and current account surpluses was the result of country-specific fiscal and monetary policy decisions, there is no doubt that the sudden stop episodes that occurred between 1998 and 2002 were followed by a tendency to accumulate international reserves as insurance against these types of shocks.

Figure II.2, showing net capital flows for Latin America's seven largest economies, indicates that the reversal in net flows occurred before the growth rate dropped³⁴. This suggests that financial constraints have played a leading role in the economic slowdown. With the increased uncertainty created by the crisis, investors' emphasis shifted toward high-quality assets, to the detriment of riskier ones, including real estate. Thus, the fact that the capital flow reversal coincides with key financial events in the United States and Europe, and that the reversal occurred in a context of high growth and greater macroeconomic stability in the region, suggests that the event is exogenous to Latin America and has the characteristics typical of a contagion-induced sudden stop. The main way in which the contagion was transmitted was through a flight to quality and the decisions of investors in developed countries, who liquidated their positions in emerging countries.

³⁴ Net capital income is defined as gross capital income minus interest payments.

FIGURE II.2
LATIN AMERICA (7 COUNTRIES): NET CAPITAL FLOWS
(Millions of dollars)

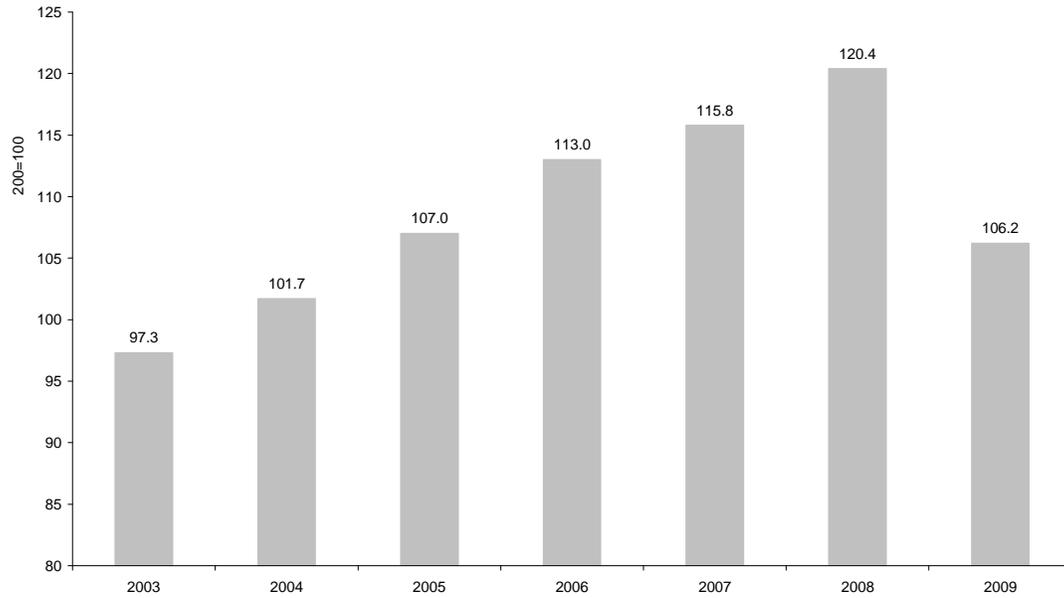


Source: Prepared by the authors, on the basis of data provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Trade has also been a very active channel of transmission of the crisis, with the negative trade shock being reflected in both price and volume. Figures II.3A and II.3B show the recent changes in export volumes and terms of trade. The shock seems to have been somewhat stronger for the region's small countries than for the large ones. The exports of the seven largest countries declined less than those of the other countries. The terms of trade plummeted from their peaks of 2007 and 2008, and are now at the same level as at the beginning of the above-referenced five-year period—a level that, in any case, could be considered relatively satisfactory. Indeed, some products seem to have found a floor, possibly due to the increased structural presence of China and India in the international market (Lederman and others, 2006).

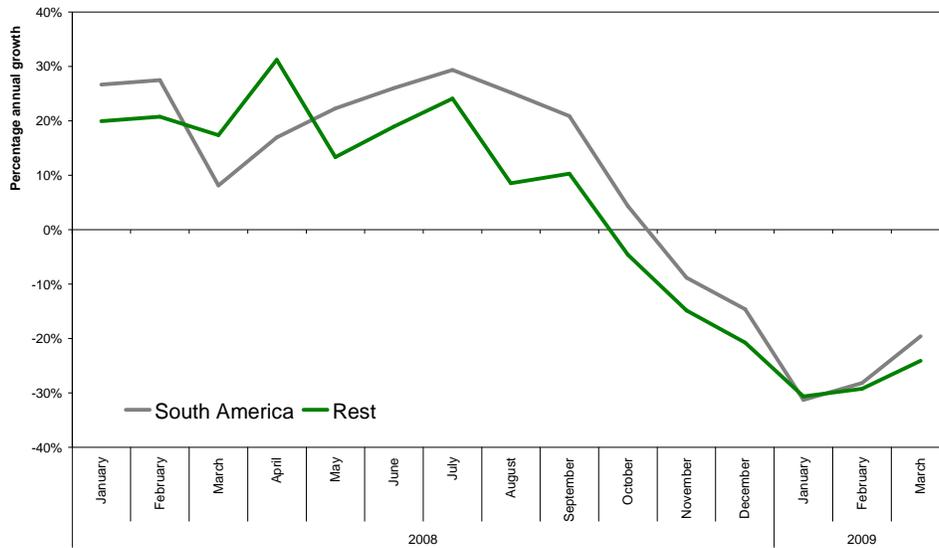
As figure II.3B shows, the growth rate of Latin American export volumes is negative, reflecting the sharp downturn in world trade. There is also a danger that protectionism will increase, and that the countries most affected by the sudden stop will implement aggressive real depreciations of their currencies in order to shore up their foreign trade positions. In fact, as a result of increased uncertainty, a number of the region's large countries have implemented nominal depreciations in response to the financial crisis (see table II.1).

FIGURE II.3A
LATIN AMERICA (7 COUNTRIES): TERMS OF TRADE



Source: Prepared by the authors, on the basis of data provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

FIGURE II.3B
RECENT CHANGES IN EXPORTS



Source: Prepared by the authors, on the basis of data provided by the International Monetary Fund (IMF).

TABLE II.1
LATIN AMERICA (7 COUNTRIES): RECENT CHANGES IN NOMINAL EXCHANGE RATES

	January 2008	March 2009	Devaluation (%)
Argentina	3.16	3.66	15.81
Brazil	1.78	2.33	30.69
Chile	481.56	603.28	25.28
Colombia	2,012.42	2,498.02	24.13
Mexico	10.93	14.71	34.67
Peru	3.00	3.22	7.43
Venezuela (Bol. Rep. of)	2,148.80	2,152.03	0.15

Source: Prepared by the authors, on the basis of information provided by the Centre of International Studies of the Ministry of Foreign Affairs, International Trade and Worship of Argentina.

An intensification of the trade shock would have major fiscal consequences, on top of those already present, for countries in which government revenues are tied to natural resources.

As noted in chapter I, remittances, tourism and FDI have also been affected by the crisis, but the importance of these factors varies significantly from one country to another, with the effect of the crisis (as a proportion of GDP) being inversely related to the size of a country's economy. For example, while FDI in 2008 moved within a band of 1% to 3% in the largest countries, it reached 6% in Costa Rica, and twice that figure in the Dominican Republic. In the case of tourism, the situation is similar, though the differences are less pronounced. In terms of remittances, Mexico is the largest recipient in absolute terms, but even as a proportion of income, remittance income in the seven largest economies does not, in any instance, come close to what is typical for the Central American and Caribbean economies. Therefore, the impact of reduced remittances, in terms of foreign trade balance and the level of economic activity, will be much more severe in these latter economies, and will have the strongest effect on the purchasing power of low and middle economic strata. In cases where governments depreciate their currencies, this effect will be mitigated, but a similar effect will not be possible in dollarized economies. Moreover, the impact on the external sectors of small energy-importing countries has been buffered to some extent by the reduction in oil prices.

In short, although the shocks act through different channels, the effects of the international crisis on national economies are likely to take forms similar to those seen in the case of sudden stops and negative trade shocks. Thus, although the effects of the crisis differ from what has been seen in past exogenous trade and financial shocks, the resulting imbalances may share a number of features typical of such shocks. In particular, there will be distributive tensions and this will most likely affect the space available for fiscal policy.

The demand for fiscal policies to stimulate economic activity is increasing. Governments are expected to buffer recessive forces by increasing spending or reducing taxes. Counter-cyclical policies, nonetheless, will be difficult to implement in a context of falling revenues. This is why easier access to compensatory financing from multilateral and regional institutions would be highly beneficial under the current circumstances. The projected sudden downturn in regional growth will have a negative impact on employment, poverty, income distribution and financial constraints. ECLAC projects an increase in unemployment from 7.5% in 2008 to around 8% in 2009, as well as increased informality. The increase in unemployment will have a greater impact on lower income households, while the increase in informal employment will reduce the median incomes of informal workers. At the same time, the reduction in remittances will affect low- and medium-low income households—this in an environment in which poor households have been most severely affected by increased inflation (food prices) during 2008. Moreover, the pressures associated with these factors are not yet being fully felt, given the fact that the region had enjoyed a period of growth that featured increased employment, declining unemployment, and somewhat improved income distribution.

The authorities' initial reaction to the crisis has been to institute countercyclical programmes to mitigate the effects of the recession. As ECLAC (2009) shows, the initiatives have favoured spending over tax cuts, and social spending over jobs programmes. In the fiscal realm, governments have increased spending (investment projects) while lowering taxes or increasing subsidies. Thus, governments have been using the space they had gained previously on the basis of a more orderly macroeconomy.

Nevertheless, the space for fiscal policy might shrink rapidly if the international situation does not improve. In crisis situations, where revenues are falling and new priorities emerge, previously available policy instruments tend to disappear. During difficult financial periods, ensuring the sustainability of the public debt generally takes on special importance, thus competing with the goal of stabilizing the economic cycle. The trade-off between stabilizing the debt and stabilizing the cycle was very apparent during the most recent period of sudden stops in the region. As may be seen in table 2, the ratio between public debt and GDP increased significantly between 1998 and 2002; thus, it is not surprising that the most highly indebted countries have opted to generate fiscal and current account surpluses; a strategy that proved effective in achieving stabilization and reducing debt levels. It is clear that having a lower debt-output ratio helps create manoeuvring room for countercyclical policy.

While it is certainly true that countries that took advantage of good times to lower their debt and strengthen their fiscal position will have greater room for implementing counter-cyclical policies, the reality is that the current crisis is deep and global in scope, which, *ceteris paribus*, increases the size of the fiscal stimulus needed. In today's circumstances, the region's countries cannot rely on the expansionary effect of increased export volumes or on an improvement in the terms of trade, which played a major role in overcoming the consequences of the period of sudden stops between 1998 and 2002.

The current situation highlights the importance of redesigning the international financial architecture to improve access to financing, thus providing increased room for fiscal policy to operate without jeopardising debt sustainability. The agreement among the Group of 20 (G-20) to increase availability of funds for the International Monetary Fund (IMF) is a positive sign. To be effective, however, the effort must be specifically directed to increase the space for implementing countercyclical fiscal measures. Otherwise, there is a risk that compensatory credits will be used to finance capital flight during periods of financial instability, rather than to stabilize economic activity. Viewing the problem from this perspective, it becomes clear that it is essential to coordinate the use of fiscal instruments with monetary, exchange rate and financial policy.

TABLE II.2
LATIN AMERICA AND THE CARIBBEAN: GROSS PUBLIC DEBT BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR
(Percentages of GDP)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Argentina	41.5	39.4	42.6	49.3	53.1	64.8	184.4	156.9	143.3	87.6	76.3	66.7	64.3
Bolivia (Plur. State of)	65.8	61.0	60.4	64.3	65.8	76.7	80.2	89.5	83.9	78.3	52.6	40.0	35.9
Brazil	31.9	32.9	39.4	48.5	47.7	50.8	59.6	53.7	49.3	46.7	46.0	46.1	38.7
Chile	18.3	16.8	17.4	19.0	18.6	20.2	22.1	19.5	16.8	13.0	10.6	9.1	12.1
Colombia	20.4	23.9	26.1	34.5	39.5	42.9	49.5	46.7	42.4	38.9	36.5	32.6	31.5
Costa Rica	...	...	...	...	41.8	43.2	45.1	45.6	46.9	43.0	38.4	31.9	29.8
Ecuador	64.4	56.6	62.5	94.0	81.7	62.7	54.3	49.2	43.7	38.6	32.3	30.0	26.1
El Salvador	...	...	...	28.3	30.0	33.6	38.6	40.3	40.5	39.7	39.7	36.6	35.2
Guatemala	18.3	18.5	19.4	22.7	21.2	21.7	19.6	22.0	22.4	21.5	21.9	21.9	20.3
Haiti	43.3	45.3	41.1	42.7	49.1	50.7	66.5	63.5	51.1	47.5	38.1	34.4	35.2
Honduras	75.7	67.8	62.8	66.0	55.4	53.5	55.1	59.9	59.4	44.8	30.2	18.3	18.8
Mexico	35.6	29.3	31.2	28.3	25.3	24.1	25.7	26.1	24.2	23.0	22.7	23.0	27.6
Nicaragua	129.4	122.4	125.4	120.2	114.7	111.3	134.1	138.0	100.7	92.8	69.1	43.0	37.4
Panama	73.5	67.1	64.8	67.2	66.5	71.1	69.4	67.0	70.4	66.2	61.0	53.7	45.4
Paraguay	16.5	23.2	23.5	33.5	35.3	44.0	63.0	46.9	41.7	32.8	24.8	20.3	18.2
Peru	47.8	32.6	43.0	48.1	45.2	44.2	45.7	47.4	41.7	38.2	31.2	27.2	23.8
Dominican Republic	...	...	...	...	...	...	...	...	...	...	...	19.0	20.7
Uruguay	27.9	27.8	28.6	30.9	35.9	46.7	106.0	100.4	78.9	70.4	62.7	54.0	52.7
Venezuela (Bol. Rep. of)	47.4	30.8	29.4	29.3	26.8	30.4	42.4	46.3	38.1	32.8	23.9	19.3	14.2
Latin America and the Caribbean	47.3	43.5	44.8	48.6	47.4	49.6	64.5	62.2	55.3	47.5	39.9	33.0	30.9

Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on official information.

In short, the region's experience with trade shocks and sudden stops suggests that the authorities may be compelled to:

- Make adjustments in the policy targets, in order to deal with the fact that funds that were previously available have evaporated. The need to lower targets because of reductions in tax and financial revenues will produce conflicts. For example, if less money is available, the following questions arise: To what extent should subsidies to productive sectors be adjusted during a recessive period? What poverty reduction goals are realistic? In attempts to promote growth, at what pace should infrastructure projects be pursued? One key challenge will be finding ways to make these adjustments so that the conflicts they engender will have a minimal impact on macroeconomic balance and the business climate.

- Make difficult choices among alternative fiscal objectives, reallocating available resources towards macroeconomic objectives. Countercyclical policy and anti-crisis adjustments require money, thus creating dilemmas such as the following: Should adjustments be made in public investment, in social spending, or in both areas in order to preserve a balanced budget and protect debt sustainability, even at the cost of a decline in economic activity and jobs? How can transfers to subnational governments be adjusted to maintain the solvency of the federal government?
- Strengthen coordination between fiscal, monetary, financial and public debt management policies. For example: Should the emphasis be on inflation objectives or on achieving exchange rate stability through intervention in the exchange market? Should short-term fiscal financing be emphasized in order to minimize the cost of the debt, or should longer-term and more expensive financing be favoured? Should greater priority be placed on price stability or on currency depreciation aimed at compensating for depreciations in neighbouring countries and for protectionism on the part of other countries?

Depending on the particular country, the relevance and importance of these imperatives will vary. Two key factors are the fiscal behaviour during the previous period of bonanza and the availability of financing and the actions of international lending institutions. Below, we analyze the relation between macroeconomic volatility and the stabilization function of fiscal policy in Latin America. If these looming policy challenges are to be successfully met, there must be an understanding of how these two elements interact in the context of the region.

3. Volatility and fiscal stabilization policy

The policy space that a government has to carry out its stabilizing function is determined by three key variables: the amount of resources available to finance countercyclical and adjustment initiatives; the number of independent instruments available to meet the proposed objectives; and the degree of competition between countercyclical fiscal policy and other policies placing claims on the use of funds and instruments. One distinctive characteristic of the region's policy space is that it can shrink or expand rapidly when shocks occur. Shocks alter the policy space not only because they affect the amount of resources available, but also because they determine the intensity with which other policies compete with stabilization policy. For example, in cases of negative shocks such as the present one, sectoral demands increase, intensifying competition for the use of both funds and policy instruments, which are structurally scarce in the region.

These facts create a two-way relationship between the fiscal stabilization function and macroeconomic shocks. While fiscal policy seeks to remedy the imbalances created by the shocks, the very same shocks and imbalances, by changing the amount of manoeuvring room available, restrict the policy-making ability of authorities. This is evident in the case of fiscal policy, where decreased output is accompanied by decreased tax collections and lower ability to borrow because of the procyclical nature of access to capital markets³⁵.

We will use later the notion of fiscal space to clarify this issue. It may be helpful to mention two central points of the argument being presented here. First, the way in which the two-way relationship between shocks and policy space operates depends on the particular characteristics of the shock. Exceptional shocks, whether trade-related or due to sudden stops of capital inflows, can have effects on the policy space that are qualitatively different from those associated with a normal shock. Second, very similar shocks can give rise to different interactions between policy and macroeconomic spaces when the economies in question differ in their degree of vulnerability. Case studies provide

³⁵ Some econometric work on countercyclical fiscal policy, given the reciprocal causality between the variables, places special emphasis on controlling for endogeneity. The treatment of failures of the financial market, on the other hand, has received less attention. See, for example, Jaimovich and Panizza (2007), Fatás and Mihov (2007) and Kaminsky and others (2004).

evidence that both the degree and form of the imbalances, and the ability to implement policy responses, depend on the degree of vulnerability to the specific shock occurring. The fact that vulnerability depends on a number of risk factors that may or may not be present, and that combine in different ways, introduces an idiosyncratic element that must be taken into account in the analysis.

It follows that the degrees of freedom available for decisions on fiscal policies varies according to the specific shocks and imbalances involved. From this perspective, it may be a mistake to assume that the number of policy instruments and their degree of independence are invariant throughout the economic cycle. Case studies indicate that authorities usually have less space to manoeuvre in the trough of the cycle, and that the space can be minimal when production slumps in the wake of a sudden stop. Indeed, it is precisely the lack of instruments and funds to deal with a slump in output that tends to lead to a crisis which, in turn, might have irreversible effects on the economy (ECLAC, 2008a).

Given the problems of identification and exchangeability associated with econometric studies (see Durlauf and others, 2006), many researchers choose an approach more akin to the case study methodology (see ECLAC, 2008a; Spilimbergo and others, 2008). The idea is to identify stylized facts that complement econometric studies, making it possible to develop richer guidelines for policy design and implementation. While not neglecting econometric findings, this method more closely resembles an episodic approach. It uses stylized facts to analyze the interaction of shocks, macroeconomic imbalances and changes in the fiscal policy space, in an attempt to understand the meaning of the stabilizing function of fiscal policy in a volatile context such as that of Latin America. The word “stabilizing” is used in more than one meaning, which is a source of confusion. There is a need to reformulate the vision of countercyclical fiscal policy to have a broader concept that takes into account all the dimensions of the stabilization fiscal role in the region. In order to detail these ideas more fully, the remainder of this section will present a set of stylized facts relating to volatility, showing their connection with the stabilizing function of fiscal policy.

3.a. Volatility in Latin America

In recent years, knowledge of the region’s aggregate fluctuations has improved. Among the most important findings regarding the relation between fiscal policy and volatility are the following:

- Shocks with permanent effects on the economy are frequent in Latin America. Shocks that lead to lasting changes are associated with crisis episodes, changes in the economic structure (external and institutional shocks), and random disturbances that influence long-term trends (ECLAC, 2008a; Aguiar and Gopinath, 2004).
- Macroeconomic volatility in the region is high, and far greater than is usual in developed countries. Measured as a function of the variance of the growth rate between 1951 and 2008, volatility in Latin America is 50% greater than in Europe and the United States. In addition, there is evidence that the greater volatility itself has an effect on the performance of the economy in terms of growth, consumption smoothing, and the vulnerability of specific groups. Thus, researchers have emphasized that reducing excessive volatility should be an integral objective of growth policy (ECLAC, 2008a; Catão, 2007; Loayza and Hnatkovska, 2005).
- Crisis episodes are very frequent, and are usually accompanied by a collapse in production or, at least, by an interruption in the growth process (ECLAC, 2008a; Goyal and Sahay, 2006).
- External shocks—changes in access to external funding, and changes in the terms of trade—are closely associated with national macroeconomic fluctuations, both normal ones and those related with exceptional or crisis episodes (ECLAC, 2008a, Edwards, 2007; Catão, 2007).

- The sudden reversals of capital flows associated with contagion phenomena tend to create periods of turbulence that affect many of the region’s countries simultaneously (a phenomenon seen a number of times during the second globalization period, which began in the late 1970s). This suggests that the current global crisis will be a crucial determinant of the macroeconomic dynamic of the region overall—and it should be borne in mind that certain consequences may prove to be irreversible (Calvo and others, 2006; Catão, 2007; Fanelli, 2008).
- Aggregate fluctuations are often accompanied by pronounced changes in the sustainability of public and foreign debt, and by changes in the fragility of the financial system. Evidence indicates that the stock-flow balances, the interrelationships among the balance sheets of key aggregate agents, and capital losses and gains, are central determinants of financial stability, and hence of macroeconomic fluctuations (Fanelli, 2008; Easterly, 2000; Heymann, 2007).
- The reformulation of governance structures (contracts, property rights and regulations) usually plays an important role in the adjustment process that follows a shock, especially if the shock has caused a crisis or collapse in production. Modifications in governance structures range from changes in the composition of public spending and redesign of labour contracts and rules governing distributions among central and subnational governments, to refinancing, and reform of banking regulations, capital movements, the pension system and tariff structures (ECLAC, 2008a; Fanelli, 2007).

This list of stylized facts shows that macroeconomic volatility involves a variety of stochastic processes that can affect the economy in both the short and long term. Therefore, “fiscal mechanisms for filtering macroeconomic shocks” may be a more apt description of the mechanisms associated with the stabilization function of the government than “countercyclical fiscal mechanisms”. This phrasing highlights the fact that the disturbances that require policy responses are not necessarily stationary or cyclical, and do not necessarily represent deviations within a corridor of stability around a trend. The treatment of phenomena such as shocks that affect the trend, structural changes, and non-convergent trajectories requires a more complex battery of fiscal responses. Notably, macroeconomic imbalances may be associated with trend shocks and structural changes that serve to accelerate growth. If the nature of the perturbation causing the fluctuation is not precisely identified, it is difficult to judge whether the increased volatility is good or bad. Attempting to artificially reduce volatility may have undesired consequences, reducing growth by eroding incentives to take risks, or aborting a process of structural change. It should be emphasized that the objective of fiscal policy is to filter out the negative effects of the perturbations, without affecting the positive ones associated with structural changes that result from the disappearance of obsolete sectors, increasing sectoral differences in productivity, or the reform of inefficient governance structures. One consequence of this analytical approach is that it promotes stronger efforts to identify the characteristics of shocks and the responses that follow, in varying contexts—a largely unexplored field of analysis.

It is worth mentioning one important difference between the approach that emerging economies take to the fiscal stabilization function and the narrower, more short-term approach taken by developed countries. In emerging economies, reducing excessive volatility (both cyclical and trend volatility) is regarded as an independent objective that is valuable, for two reasons, both of which concern long-term goals³⁶. First, this type of volatility is detrimental to growth (Easterly and others, 2000; Ramey and Ramey, 1995). Second, the risk associated with excessive income volatility disproportionately affects the vulnerable segments of the population that lack the means to protect themselves from such risks; thus, repeated recessions ultimately generate social exclusion, low accumulation of human capital, structural duality and poverty traps (Fatás, 2002; Barlevy, 2004).

³⁶ For a definition of excessive volatility, see Fanelli (2008) and ECLAC (2008a).

Based on these facts, it is understandable that the intention of fiscal stabilization policy is rarely limited to smoothing out temporary fluctuations from the trend. In supporting policy, arguments are frequently put forth invoking the need to ensure the solvency of the public sector, stabilize the economy in order to promote growth, achieve investment levels that ensure access to foreign credit, or eliminate regressive inflationary taxes that stand in the way of financial deepening. These fiscal policy objectives seem directed more at the factors affecting the economic trend, or at correcting an explosive path, than at correcting temporary deviations with regard to potential output. It would therefore seem wrong to group, under the countercyclical rubric, policies that have quite different contents and objectives, and that thus demand different instruments and types of coordination.

Much can be learned in Latin America about the diversity of the tasks involved in the stabilizing function of fiscal policy, precisely because, unlike the developed world, where excessive volatility and macroeconomic crises are rare, such events, although exceptional, have been more frequent in Latin America. This is reflected, for example, in the far more complex form in which fiscal stabilization policy is conceived and practiced. Except in special cases, stabilization in the industrialized countries involves adopting countercyclical policies, with the objective of smoothing out fluctuations around a trend (see, for example, Auerbach, 2002). In addition, it is implicitly assumed that, with or without stabilization policy, the economy will always move within a narrow corridor around potential output (which is always difficult to define) and will by itself tend to return to the trend³⁷. Not surprisingly, given this view, automatic stabilizers are relied upon as the predominant tool for making countercyclical policy³⁸. In Latin America, automatic mechanisms are much less relevant, and discretionary initiatives are therefore more common. The components normally defined as automatic stabilizers are income tax (on the revenue side) and unemployment insurance (on the spending side). Both, however, play a less relevant role in Latin American budgets.

In Latin America, stabilization—in the sense of smoothing out the cycle—is only applied in normal times, when the economy is moving within the corridor. When a sufficiently large shock occurs, or when the mechanisms that propagate the shock automatically destabilize the economy, threatening to put it on a non-convergent path, the “stabilization” that typifies normal periods is, not surprisingly, replaced by an alternative meaning of the term. This usually occurs when the public debt becomes unsustainable, or when the financial system’s net worth becomes negative. If the economy violates the condition of transversality and, without prior indication, adopts an explosive path, “stabilization policy” comes to mean macroeconomic adjustment policy, making it necessary to reform some economic parameter (tax burden, elimination of public spending programmes, or financial or other property rights) in order to deactivate the mechanisms that are causing the stability problem. Because the current situation in the developed world is exceptional, there is greater interest in understanding the policy challenges associated with “stabilization” in this second sense of the term (see, for example, Spilimbergo and others, 2008). Thus, a mandatory first step should be to more precisely define the use of the word “stabilization” in the context of countercyclical policy, since the interpretation of the term changes the policy content in an essential way.

4. Countercyclical fiscal policy

The stylized facts regarding volatility indicate that crises and shocks with permanent effects are frequent in the region. Thus, in designing fiscal stabilization policies in Latin America, one must differentiate normal shocks, which induce stationary fluctuations around a trend, from exceptional shocks, which may have irreversible effects.

³⁷ Here, the notion of “corridor” is used in Leijonhufvud’s sense (1981). According to that author, when the economy is outside the corridor that exists in the neighbourhood of full employment, economic agents have difficulty coordinating their plans, because of effective demand failures. This is due to the fact that when the economy is far from full employment, there are no mutually consistent rules or expectations to bring the economy quickly back to full employment.

³⁸ In the literature, automatic stabilizers are defined as those mechanisms in the budget that act countercyclically, independent of any government intervention, reducing variations in output (Suescún, 2007; Auerbach and Feedberg, 2000).

One well-known obstacle to designing fiscal measures for exceptional events is that measures for dealing with non-stationary shocks must have a significant degree of discretionality. In the case of a non-stationary event, it is impossible to know precisely, *ex ante*, how the trend will evolve—much less how the structure of the economy and its forms of governance may change as a result of the shock. Thus, it is very difficult, *ex ante* to answer with a reasonable degree of precision questions fundamental to the success of fiscal policy in its stabilising function. These include questions such as: How will the size and distribution of fiscal revenues and the tax base change? What sectors will merit assistance once the consequences of the shock are known, in terms of relative effects on sectoral productivity, international competitiveness and income distribution? What type of spending, and what sectoral distribution of spending, will most effectively address the shock? Which agents will be impacted most in terms of liquidity and solvency? How should regulations be changed to reflect the new situation? What new forms of private sector contractual arrangements will emerge, with the potential to expand or shrink the policy space—e.g., when term reductions for contracts deprive the public sector of long-term financing instruments?

Since the region has greater exposure to exceptional and non-stationary shocks, discretionary fiscal responses are frequent. Moreover, given the weakness of institutions and the major constraints in terms of political economy, it should be no surprise that these discretionary responses have not been of high calibre, and that, therefore, the question of discretionality has remained at the centre of the debate on fiscal stabilization policy.

One proposal put forth repeatedly in recent years to address this issue has been to limit discretionality, to the extent possible, in making decisions on policy responses. The proposed method for accomplishing this was to impose predetermined rules on fiscal policy (Perry, 2003). In practice, this means renouncing the use of special measures to manage the consequences of exceptional events, unless one simply assumes that such events will not occur in the future—an assumption not justified by available evidence concerning volatility. The empirical evidence on fiscal policy in the case of both Latin America and the European Union, suggests that authorities find the cost of inaction in the face of exceptional events to be greater than the benefit of avoiding discretionary responses. When macro circumstances are deemed exceptional, the rules are modified³⁹. Indeed, this has been explicitly recognized by including escape clauses in fiscal regulations. Beyond a recognition of these facts, there must be a better understanding of the relation between normal and exceptional conditions. Specifically, there needs to be greater clarity on how this relationship operates in different stochastic and institutional contexts, along with a determination of what the proper fiscal responses would be to the occurrence of different types of stationary and non-stationary shocks.

Governments, as well as the overwhelming majority of analysts, agree that the current crisis in the United States and Europe is an exceptional event. Thus, analysis of the fiscal stimulus policies being implemented to prevent a depression will produce valuable lessons on the relationship between rules, automatic stabilizers and discretionary fiscal responses. From an analytical perspective, one advantage is that this exceptional event has occurred in a context in which moderation of the cycle and the operation of automatic stabilizers were the norm rather than the exception. In this sense, the crisis resembles a natural experiment. Taking these factors into account, we shall use some of the events that are presently occurring to identify five points considered central to understanding the macroeconomic challenges facing fiscal policy in Latin America.

First, when shocks of exceptional size and nature occur, uncertainty about the effects of fiscal stabilization policies increases. As is clear from Spilimbergo and others (2008), policy makers today face serious difficulties in assessing one element that is essential in calculating the necessary fiscal stimulus, namely, the value of the associated multiplier. Existing estimates of the value of the multiplier under normal conditions differ significantly. Moreover, it remains unclear whether the value of the multiplier calculated under normal conditions applies to shocks and fiscal responses of the magnitude of the present circumstances (Spilimbergo and others, 2008).

³⁹ On the question of fiscal rules and discretionality, see, for example, Dos Reis and others (2007), Perry (2003) and Perotti (2007).

Second, during a crisis situation, the demand for coordinated policy increases exponentially, due largely to increased competition from other policies for the use of funds and instruments. This applies particularly to the coordination of countercyclical fiscal policies with monetary, public debt and financial crisis management policies (Togo, 2007). Governments are allocating enormous fiscal resources to stabilize the banking system and stimulate the economy, and as a consequence, the fiscal deficit and the debt-GDP ratio will rise above the goals established prior to the shock. Thus, anti-crisis policies may supersede the objective of maintaining debt sustainability, thereby placing rigid limitations on the fiscal policy space available to future governments. These countercyclical fiscal actions may also dominate monetary policy objectives. Many analysts suggest that the significant increase in the money supply and in public spending will lead to a sharp upturn in inflation further downstream. The shift from inflation objectives to quantitative easing merely describes the dominance of countercyclical policy over inflation objectives. Obviously, short-term measures to prevent the economy from falling prey to high unemployment seems well-advised, but it will undeniably make it more difficult in the future to coordinate fiscal policy with monetary and public debt policy.

Third, debt sustainability takes on a major role when there is a shock of unusual magnitude. The quantitative effects of the fiscal stimuli being implemented are highly dependent on the course of the financial markets and on the uncertainty factor. This is reflected, above all, in the discussion concerning sustainable levels of public debt. Many analysts believe that a large fiscal stimulus, added to the enormous resources being demanded to stabilize the banking system, could move the public debt-to-GDP ratio toward a less sustainable level⁴⁰. This produces a rather paradoxical situation that, in itself, constitutes a source of uncertainty. Given a particular fiscal policy, the task of calculating the sustainable debt level requires knowing what long-term interest rates and growth rates will be, yet these variables will only be known once the economy stabilizes around a new equilibrium, following the shock⁴¹. Thus, short-term attempts to stabilize the economy and revitalize private spending require that economic agents assume that the increase in the public debt is sustainable. For agents to invest and commit themselves for the long term, it must be clear that the economy will converge toward a new stable equilibrium. However, it is precisely the difficulty that economic agents confront in ascertaining which way the economy is heading that provokes uncertainty, puts a brake on spending, and threatens to coordinate expectations on a bad equilibrium similar to the liquidity trap. Evidence from the developed world indicates that the difficulty in using fiscal stimuli is a function of the indebtedness of the public sector, and an inverse function of the ability of monetary authorities to resist a massive outflow of capital.

Fourth, fiscal stabilization measures are being accompanied by initiatives that, in addition to being countercyclical, encompass major reforms of governance structures (contracts, regulations). A prerequisite to coordinating expectations on an equilibrium outside the trap of high unemployment is ensuring that there will not be a collapse in the financial system or in production. To achieve this, governments have committed themselves rather explicitly to a policy of rescuing entities that are too large to fail, an approach that entails the ex post reformulation of regulations and contracts. A side effect of such reformulation of governance mechanisms is that it increases moral hazard and the perception that the rules of the game are unstable. In these situations, the need to stabilize the economy takes precedence over the need to have stable economic institutions—a situation that affects incentives to invest. It is not clear that fiscal and other stimuli will have the same effects on private spending in such an environment as would be true under normal circumstances. This is particularly the case in smaller countries that are more deeply affected by the crisis.

The fifth and final point relates to how the political economy of the crisis can affect fiscal stabilization policy. As has been noted, gearing expectations toward equilibrium—achieving full

⁴⁰ For a view that emphasizes the question of the debt, and the need to coordinate it with other policies or regimes, see, for example Cochrane (2003), who has persistently focused on the issue of whether fiscal policies are effective in the current situation. The alternative view is represented by the International Monetary Fund. See, for example, IMF Fiscal Affairs Department (2009) and Freedman and others (2009). Also relevant is the discussion of debt sustainability in Buitier (2009).

⁴¹ This is especially the case if one considers that some consequences of the crisis will be irreversible and will therefore affect growth and yields in the long term.

employment and avoiding the trap of high unemployment—requires that the government give clear signals that the public debt is sustainable, particularly in the case of small countries. The strongest way of signaling this is to make it clear that future taxes will be raised to service the debt. This creates a problem of political economy: if a private investor today has a profitable project and the liquidity to carry it out, why should he invest and demonstrate to the government his ability to generate profits, when he knows that political economy constraints will very likely cause the government to ultimately increase taxes on those who have profited, rather than lost, in the crisis? This expectation of future appropriation of private gains depresses investment and makes it difficult to coordinate expectations on the best equilibrium. A problem similar to that of potential appropriation applies to the uncertainty regarding the rules of the game and the moral hazard associated with financial rescue operations. This does not mean that the economy will be unable to coordinate on an equilibrium outside the trap; it does, however, mean that businesspeople will demand a higher profit margin for investing (given the greater risk in a tense institutional environment)—a situation that might delay the recovery process.

The purpose of this brief discussion of the problems of countercyclical policy in the industrialized countries is to illustrate how crises and major shocks transform and increase the problems that countercyclical policy inevitably faces. This transformation is no surprise, of course, to those familiar with fiscal problems in Latin America, where, because of the frequency of crises, problems of public debt sustainability are common, as is uncertainty about the effects of fiscal stimuli, lack of coordination among different policies, changes in the rules of the game, as well as changes in allocating the tax burden as a result of macroeconomic adjustment and pressure from distributive conflicts.

Whether in relation to Latin America or to the crisis in the developed world, these five points highlight the need for a comprehensive and consistent view of the set of fiscal tools for dealing with macroeconomic fluctuations, in order to use them in a coordinated fashion and be able to assess the constraints that limit the space for policy making. The fact that policies with very different objectives are often termed countercyclical creates confusion. It seems reasonable, at a minimum, to distinguish between fiscal policies for normal situations and fiscal policies for exceptional circumstances—e.g., between policies that seek to coordinate expectations in situations where there are two equilibria, and policies that seek to smooth out fluctuations around an equilibrium; or between discretionary adjustment policies designed to redirect the economy from an explosive path, and marginal discretionary policies that seek only to complement the normal function of automatic countercyclical stabilizers. The evolution of fiscal policy regulations in the European Union suggests that introducing the distinction between normal and extraordinary situations and studying the effects of discretionary responses to unusual shocks can be highly useful (Fatás and Mihov, 2009).

Notably, general interest in countercyclical fiscal policy was driven in the 1930s by the search for discretionary fiscal tools to bring the economy out of the high unemployment trap created by exceptionally intense shocks. Equally notable is the fact that confidence in discretionary fiscal policies gradually weakened in tandem with the changes that occurred in the economic structure of the developed world. For as the public sector grew in size (while income taxes and unemployment programmes also grew), automatic stabilizers became more important; as financial markets deepened, greater space for monetary policy developed; and, finally, the absence of a slump in production led to a period of very moderate cycles in which fiscal activism seemed an anachronism. The corollary of this evolution was the formation of a new consensus: the notion that discretionary fiscal policy should not be used for countercyclical purposes, since this function was covered by the automatic stabilizers (Auerbach, 2002), and that monetary policy should focus on ensuring that any temporary disturbance does not jeopardize price stability. Indeed, many writers attributed the apparent stability of the economy to the quality of monetary policy, dismissing the argument that it could be simply the result of good luck, i.e., a long period of time without extraordinary shocks (Stock and Watson, 2003; Blanchard and Simon, 2001). A paradoxical side of this evolution in fiscal thinking is that the consensus reached its peak just at the moment when authorities were forced to act with great discretionary force to address an exceptional shock, in a context of relatively ineffective monetary policy in the industrialized countries.

Although this reference to the industrialized countries is intended to highlight the need for an approach to countercyclical fiscal policy that emphasizes both the specific characteristics of particular perturbations and the automatic-discretionary relationship, any analogy between the emerging world and the developed world has limited applicability, due to the inherent structural differences.

A number of differences are particularly noteworthy. First, as will be seen below, there was no significant moderation of the cycle in Latin America. Second, access to capital markets is distinctly procyclical and, at least until the current crisis, sudden stops of capital flows did not occur in the wealthy countries. The fact that capital markets remain open even in recessionary times is clearly beneficial to the developed countries, since it prevents a shrinking of the space available for countercyclical fiscal policy precisely when it is most needed. It should be borne in mind that fiscal deficits must be financed regardless of whether they are generated by automatic or discretionary mechanisms. Third, automatic fiscal mechanisms to stabilize the economic cycle play a much larger role in economies with a sizeable public sector. Fourth, problems regarding the sustainability of the public debt are not comparable, although debt-to-GDP ratios are not necessarily higher. In particular, changes in risk tolerance on the part of investors in Latin America, and variations in the real exchange rate, have very pronounced effects (Blanchard, 2004). Finally, as is well known, the problem of unstable governance structures and potential appropriation of investments places much tighter constraints on the effectiveness of fiscal stimulus in Latin America. This means that the increase in expected profits required to bring the economy out of a low growth trap is much greater.

In light of these differences, it is not surprising that the “Great Moderation” consensus that originated in the developed countries has always proven somewhat abstract for Latin American policy makers. Regional authorities operate in an environment in which a slump in production is an ever-present threat, monetary policy autonomy is limited or nonexistent, and automatic stabilizers are weak. Thus, it is hardly surprising that, for Latin American authorities, discretionary fiscal measures have always occupied centre stage. This means that there are probably important lessons to learn from Latin America’s experience, in terms of the relation between discretionary policies and cyclical fluctuations.

In summary, from the perspective of the present analysis, the more traditional conception of countercyclical fiscal policy has two weaknesses. The first is that, while countercyclical policy essentially involves initiatives designed to smooth out temporary deviations from long-term trends, much of the volatility in Latin America, as noted here, derives from trend shocks, not from cyclical deviations around a trend. Thus, structural changes are often associated with reforms and with international or political events that put the economy on an explosive path, outside the corridor of normalcy. It therefore seems inappropriate to focus solely on stationary phenomena. Indeed, such a focus would be inappropriate today, even for the developed countries, given that the crisis may have irreversible effects (for example, on the banking system and the level and distribution of wealth among families) and that it threatens to ultimately put public indebtedness on an unstable path that will require an adjustment of governance structures. Thus, it would seem more appropriate to include, under the rubric of fiscal stabilization policy, the entire set of initiatives designed to address the aggregate fluctuations, and reserve the concept of countercyclical fiscal policy to situations in which only stationary phenomena are involved. Under this scenario, the stabilization function of fiscal policy would involve the following elements:

- Countercyclical policies, that are designed to deal with the economic cycle, i.e., temporary deviations from an existing trend.
- Macroeconomic adjustment policies to manage the consequences of permanent shocks by changing a number of rules. Here, the objective may be to structurally reduce excessive volatility, or (in the case of multiple equilibria) to coordinate decisions in order to put the economy in a particular equilibrium deemed to be superior to another.
- Anti-crisis policies, whose objective may be to correct the direction of an economy that is on—or is in danger of embarking on—an unstable path or to correct situations in which no equilibrium exists.

Strictly speaking, anti-crisis policy is a type of adjustment policy, but because of its importance it has been classified as its own type of policy. This distinction is apt, inasmuch as it shows how policies with differing content and objectives, and requiring different instruments, appear together under the umbrella of stabilization policy.

If anti-volatility policy is conceived as risk management policy, with the policy designer playing the role of risk manager, the three types of policy can imply actions in three different dimensions: risk prevention and mitigation –which are measures to moderate the consequences of shocks by taking precautions before they occur– and rescue or assistance measures implemented once the shock has occurred.

Finally, three further points: First, each of these types of policy, because of the very nature of the problems it must address, requires not only fiscal spaces of differing size, but a consideration of the specific context, which will affect the size of the space, since structural and political constraints vary according to the characteristics of the situations involved. Second, in addition to the three types of policy already cited, there are other anti-volatility structural reform policies that are much longer-term in scope, and that may be designed to alter the structure of the economy in order to reduce volatility directly or increase policy space. Examples of such reforms are: adopting measures to increase the diversification of trade so as to reduce exposure to terms of trade shocks; increasing trade openness as a means of aligning the economy with international inflation; promoting financial development to create greater independence between fiscal and monetary policy; and reforming economic institutions to reduce macroeconomic volatility by extending the duration of contracts. Lastly, like any classification that attempts to identify the elements of a complex phenomenon such as anti-volatility policy, this classification merely attempts to impose a degree of analytical order, not to draw arbitrarily strict lines between different types of policy. For example, it is difficult to separate adjustment policies from structural reform or anti-crisis policies. This is especially true in view of the fact that governments often take advantage of the room that a crisis provides for autonomy, in terms of political economy, making it possible at times to temper the demands of special interest groups and successfully launch reforms that would meet resistance in more normal periods.

The following section shows how fiscal authorities in the region, in attempting to bring about stabilization, use the three policies: anti-cyclical policy, adjustment policy and anti-crisis policy. Given the hypotheses that trade shocks and sudden stops of capital flows have accounted for the most important exogenous perturbations and play a central role in crisis situations, the following section is devoted to these shocks.

5. External disruptions and fiscal policy: the anatomy of two shocks

Next is an examination of how sudden stops of capital flows and exogenous trade shocks relate to the space available for fiscal stabilization policy. The analysis follows three lines. First is a discussion of an argument outlined in the foregoing section: that the fiscal policy space must not be conceived statically, since shocks affect its central components, i.e., the resources and instruments available to authorities, as well as pressure from competing policies. Second, the analysis focuses on vulnerability to trade shocks and sudden stops, underlining the fact that an economy's starting point at the time a shock occurs affects its subsequent course, and thereby affects the components of the policy space. It will be seen that lack of space for fiscal stabilization policy when a shock occurs is an element of vulnerability⁴². Third, it will be shown how difficult it can be to solve the problems of policy coordination that arise from exceptional trade or financial shocks—problems that can lead to situations in which one policy predominates over another, or directly dominates the response to crisis situations.

⁴² On the fiscal situation in the context of the present crisis in Latin America, and the policy space, see Bárcena and others (2009).

To illustrate the importance in Latin America of the types of shocks being analyzed here, table 3 shows past periods of trade shocks and sudden stops in the largest countries⁴³. This draws on information from Calvo and others (2006) for these countries. A similar methodology was used to identify trade shocks.

TABLE II.3
LATIN AMERICA (7 COUNTRIES): TRADE SHOCKS AND SUDDEN STOPS

	Trade shocks	Sudden stops
Argentina	1986-1987; 1993; 2002-2003	1980-1984; 1994-1996; 1998-2004
Brazil	1986; 1999-2003	1981-1985
Chile	1985-1986; 2002-2003	1981-1986; 1998-2000
Mexico	1986; 1992-1994; 2003	1982-1985; 1994-1997
Colombia	1983; 1985; 2002-2004	1998-2002
Peru	2001-2004	1981-1986; 1997-1999
Bolivarian Republic of Venezuela	1986-1988; 1998; 2002-2003	1980-1986

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

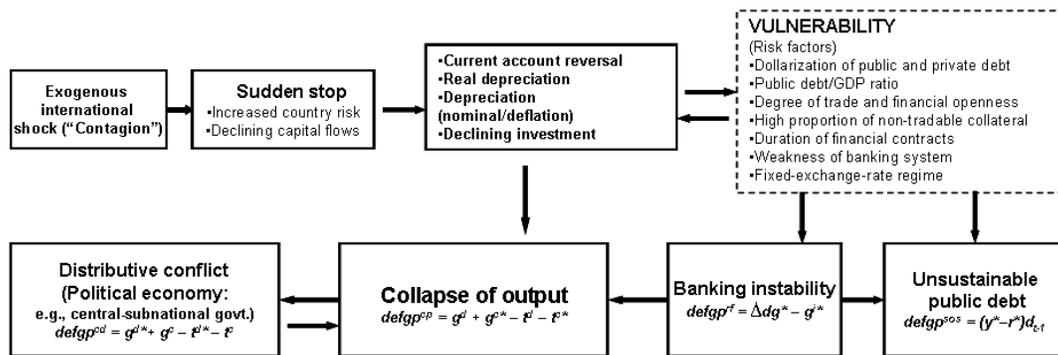
5.a. Sudden stops, trade shocks and their effects on the primary deficit

First, as a general indicator of the changing fiscal space, an overview of the features of sudden stops and trade shocks is presented, in order to show how they relate to vulnerability and provide a description of the channels through which they affect the public deficit. The main objective here is to illustrate the way in which these factors create conflicts between different fiscal policy objectives. The following subsection discusses the problems of policy coordination and dominance that arise in the case of exceptional shocks, as well as the dilemmas they create for the fiscal stabilization function, particularly as regards countercyclical policy vs. adjustment policy.

Sudden stops or reversals of capital flows will be discussed first. To stylize this type of shock, we shall draw on facts that appear repeatedly in the literature (for example, in Calvo and others, 2006; Kaminsky and others, 2004; Ortiz and others, 2007; and Bordo, 2006). Diagram II.1 provides an overview of this type of shock, the imbalances it causes, the risk factors that determine vulnerability, and the channels through which the shock affects the fiscal position, as represented by the primary fiscal deficit (defgp).

⁴³ For a recent discussion of the observed effects of the trade and financial shocks in the region, as compared with previous shocks, see Pineda and others (2009).

DIAGRAM II.1
SUDDEN STOPS AND FISCAL POLICY



Source: Prepared by the authors.

The first box on the left shows an important feature of this type of shock: its exogenous nature, associated with contagion or portfolio decisions that are correlated because of the illiquidity of international investors. This type of shock is systemic, inasmuch as it affects all components of the banking system and of the capital markets. According to Calvo and others (2006), two of its distinctive features are the increased risk premium that must be paid by the country affected, and a decline in capital flows. As was seen in section I, both of these phenomena were present in the periods following crises in a number of the region's countries, although the rise in the risk premium was less intense than the decline in capital flows. The effect on capital flows was greater in the larger countries, which have more access to capital markets. In the smaller countries, the reduced supply of foreign funds took the form primarily of a drop in FDI, which was closely linked to increased financial uncertainty, as well as being a reaction to the trade shock.

The box in the upper centre of the diagram lists the principal effects that the literature associates with sudden stops: a reversal in the current account, declining investment and real depreciation. Nominal depreciation is an important instrument for achieving real depreciation in countries that have a degree of monetary autonomy. In dollarized countries such as Ecuador and El Salvador, on the other hand, the change in relative prices can only take the form of price deflation, which itself can provoke new macroeconomic imbalances, as (evidence suggests) occurred in Argentina during the convertibility period (Fanelli, 2008). Beyond this, sudden stops regularly lead to marked declines in the demand for domestic financial assets. To soften these pressures, authorities are generally forced to intervene in currency markets, though this usually entails conflicts with established monetary rules. Such is the case currently in countries like Chile and Mexico that were following an inflation target regime and found themselves compelled to alter their strategy of intervention in the foreign-exchange market in order to alleviate some of the pressure and prevent excessive depreciation.

As the dotted box on the right shows, the severity of the imbalances depends largely on how vulnerable an economy is, which in turn depends on the status of the risk factors generally cited in the literature, which are listed in the box. Their importance varies, of course, according to the structural features of both the economy and the particular situation.

The first of these factors is the degree of both public and private debt dollarization. This has played an important role in Latin America since the debt crisis of 1982. The most recent traumatic episodes occurred between the Russian crisis of 1998 and the Argentine crisis of 2002. Since sudden stop episodes provoke major changes in the real exchange rate, debtors with dollar-denominated liabilities usually experience a sharp rise in their debt/assets ratio. As this produces a general increase in financial leverage, systemic financial fragility rises as well. Thus, the greater the depreciation-induced upward correction in the value of the debt, as a percentage of assets, the steeper is the rise in

leverage and fragility. It also follows that firms operating in the tradables sector will be least affected, since, in that case, the value of assets will tend to rise with the depreciation.

The second factor in the list is the ratio of public debt to output. This is important because the greater this ratio is, the more pronounced the effects under examination here will be. Note that even if the public debt is not dollarized, a reversal of capital flows will increase interest rates, and correspondingly increases the funds required to meet interest expenses. This effect was very pronounced in Brazil in the first half of the 2000 decade, as Blanchard (2004) demonstrates.

A third risk factor is associated with the level of economic openness. The more open the economy, the greater the size of its tradables sector, and hence the smaller the effect of the increased leverage produced by the real depreciation. This is true for both the public and private sectors. If a major portion of public sector revenues derives from the tradables sector—either because this is the tax base or because the revenue includes dividends from public enterprises that export—there will be less vulnerability associated with the dollar-denominated public debt. Thus, in assessing the fiscal effects of a sudden stop, one must consider the characteristics of the assets that serve as collateral for dollar debts (Caballero, 2000). Evidence on the decline of fiscal resources, estimated by ECLAC (2009) to be on the order of two percentage points of GDP in 2009, suggests that the financial position of a number of the region's governments is being impacted. In this connection, note that the conjunction of a trade shock with a financial shock intensifies the effects of both. In the context of a sudden stop alone, the tradables sector (which may include the State) remains capable of driving an export-led recovery, since it is less affected financially. This is not the case, however, when a trade shock accompanies the sudden stop.

An additional reason for the relation between the openness of an economy and its vulnerability is that, *ceteris paribus*, the smaller the tradables sector is as a percentage of the economy, the greater is the proportion of domestic absorption that must be sacrificed to gain an extra dollar through reduced imports—this being the typical form of short-term external adjustment (Fanelli, 2008). Thus, a lack of openness may ultimately exacerbate the economic slowdown if authorities compensate for the sudden stop of financial flows by reducing imports. Case studies suggest that, to achieve a slowdown of imports, authorities must implement a greater real exchange rate correction (Fanelli, 2008). A major correction of relative prices and the level of economic activity aggravates the problem—for both government and business—of excessive financial leverage. However, the greater the amount of dollarized revenue that the State has, due to either import taxes or natural resources, the smaller this effect will be (Jiménez and Tromben, 2006; Sabaini and Jiménez, 2009).

An economy's financial openness also has an effect on vulnerability: the greater the financial openness, the greater the capital flows, and hence the more risks the economy faces if flows are reversed (Ocampo and Griffith-Jones, 2008). Note that this argument assumes that capital flows are procyclical—as is normally the case in the region (Fanelli, 2008). If there were fewer failures of capital markets, access to foreign capital markets could be used to smooth out the cycle, since domestic agents (both public and private) could borrow at the trough of the cycle, and generate surpluses to repay the loans at the peak. The procyclical behaviour of flows is facilitated when financial contracts are short-term. When bad times loom, it is easy to jettison instruments with domestic risk and flee to higher-quality assets. It is a stylized fact that contracts tend to become shorter in direct relation to inflation and volatility of quantities, from which it follows that this risk factor is particularly important in the most unstable countries (Fanelli, 2008). This factor tends to influence fiscal authorities to the extent that, as liquidity is abruptly reduced, the private sector postpones meeting its tax obligations, or resorts to evasion, to finance short-term working capital. This effect can be significant, and in fact acts as quite a powerful automatic stabilizer, since, when rising interest rates affect working capital in emerging countries with short contracts (Cavallo, 1977), the normal effect that increased interest rates have on aggregate demand is aggravated by the negative effect on the supply of goods, due to the greater difficulty of financing working capital. Delayed tax payments soften this effect—at the expense, of course, of aggravating the public sector's problems in obtaining credit in the context of a sudden stop.

Other vulnerability factors that were identified in the analysis of sudden stop events are: a poorly regulated and supervised banking system, excessive short-term bank deposits and loans, and fixed exchange rate regimes. Moreover, these factors may interact perversely, since, if financial assets are short-term, it is easier for investors to flee to higher quality at signs of weakness in the banking system. This generates a process of deleveraging that makes banks illiquid and leaves businesses without credit for investment or working capital. This latter factor tends to add supply problems to aggregate demand problems. Also, capital flight increases the likelihood that authorities will be forced to devalue the currency to protect constantly falling reserves. In a number of countries, this pattern of vulnerability factors ultimately provoked twin crises: exchange-rate and financial (Kaminsky and Reinhardt, 1999). This type of crisis usually threatens the sustainability of public debt, since along with any effects that the real depreciation has on the real weight of the public debt—and in addition to the slump in economic activity, which reduces the denominator of the debt-GDP ratio—the public sector faces the problem of finding funds to shore up the financial system, at the same time as its revenue is reduced by the working capital effect mentioned above.

Since, in general, the public sector acts not only as a lender, but also as an insurer of last resort (see Fanelli, 2008), it follows that the combination of factors most threatening to the sustainability of the public debt is a highly dollar-indebted non-tradables sector combined with a closed economy, a weak banking system, short contracts, a fixed exchange rate and a public sector whose revenue is highly dependent on the non-tradables sector— precisely the factors that were so notably present when Argentina experienced the sudden stop of its recent crisis, and found itself in default. To a greater or lesser extent, these factors were also present in other recent crises: in the Dominican Republic, where financial crisis led to a sharp increase in public debt (Fanelli and Guzmán, 2008); in Brazil, where increased interest rates, in an environment of political uncertainty as Lula Da Silva took office, led to a very significant increase in the public debt (Blanchard, 2004); and in Chile in the 1980s, where it took several years to escape from a course of low debt sustainability, although this was eventually achieved with great success (Magendzo and Titelman, 2008).

The four lower boxes of diagram II.1 show the imbalances induced by sudden stops. The slump in output, the lack of sustainability of the public debt, and financial crisis are the three most visible and important imbalances, but the distributive conflicts that inevitably accompany these phenomena and express themselves in the area of political economy must also be taken into account.

The sudden stop is an exceptional situation, and hence a good way of illustrating how imbalances create demands and constraints that change the fiscal space, and how their nature makes it essential to distinguish between countercyclical policies and adjustment policies associated with the two meanings of “stabilization” discussed above. To underline this fact, each of the four boxes representing the imbalances includes the primary fiscal deficit equation ($defgp^i$) with the superscript i added ($i = cd; cp; rf; sos$) to indicate that this is the deficit associated with the imbalance represented in the box. Asterisks have been added to some of the variables in the $defgp^i$ equation to indicate that the imbalance represented in the box affects this variable directly, apart from any measures by fiscal authorities. This may reflect new demands (pressures for subsidies in the context of the imbalance), automatic responses (e.g., VAT, or postponed payment of taxes to finance working capital) or loss of an instrument because of the exceptional situation (rationing of credit).

The collapse of output box has an asterisk for the cyclical component of spending (g^c) and the tax collections component (t^c), which are affected by the terms of trade (ToT) and changes in the gap between actual and potential output (gap). On the other hand, the discretionary components of spending (g^d) and taxation (t^d) are not necessarily affected by the shock. The evolution of these variables determines the size of the deficit under a production collapse ($defgp^{pp}$). If public debt is available as an instrument, the placement of new debt will provide sufficient fiscal space to finance this deficit. If the government has been following a constant structural deficit rule ($t^d - g^d = \text{constant}$) because it considered such a level of discretionality optimal, it presumably was not experiencing problems in obtaining financing to cover occasional increases in the cyclical deficit. This additional cyclical deficit is equal to

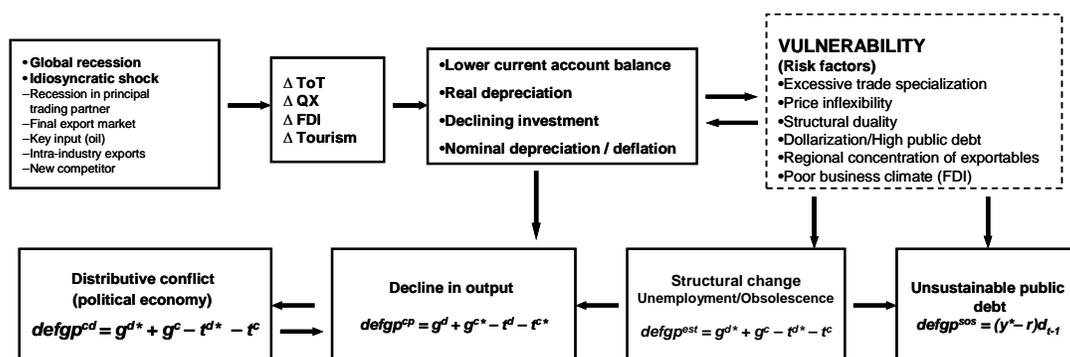
($g^c - t^c$). A sudden stop is not a stationary cyclical movement, but an exceptional event that produces a collapse, therefore the cyclical deficit to be financed will likely be very great.

The political economy pressures associated with the collapse will be significant (as the box at the left indicates) and will depend in great measure on the political environment. Nevertheless, there is one that is highly relevant when a sudden stop occurs: the relation between central and subnational governments. When the economy is subjected to a financial shock, subnational governments have more difficulty obtaining credit (if they are permitted to borrow) in a context of declining collections. Thus, they lobby for more transfers, and this affects the discretionary component of central government spending (g^d), or the tax component (t^d) if there are demands to increase taxes in order to finance the transfers. Accordingly, asterisks have been placed on those variables. The political economy pressures determine a distributive-conflict deficit ($defgp^{cd}$).

We now turn to imbalances of a financial nature. The two boxes at the lower right indicate that sudden stops produce instability in the banking system and can jeopardize the sustainability of the public debt. As a result, two objectives of stabilization policy will compete with countercyclical objectives: maintaining financial stability and ensuring the sustainability of the public debt. If financial imbalances destabilize the banks, a probable market reaction will be to ration credit for the public and private sectors. Thus, when there is instability in the banking system, the government can, at most, generate a deficit of $defgp^{rf}$. The maximum financing that the government can obtain will be determined by the amount of rationing imposed by the market, which will be equal to the difference between the net placements of public debt (Δdg) and interest payments on that debt (g^i), an amount that may even be negative. Since the loss of public debt placement as an instrument is a direct result of financial instability, these two latter variables appear with an asterisk in the banking instability box. Experience in the region indicates that the level of deficit $defgp^{rf}$ allowed by the financial restriction under a sudden stop tends to be negative. In this way, an exceptional shock can endogenously and markedly reduce policy space.

In situations of financial instability, the public sector is forced to provide subsidies that are not necessarily budgeted, such as central bank rescue operations that will appear on the central bank's balance sheet, not on the government's. However, since investors assess the government's ability to pay as a whole, risk premiums may rise even if the government adjusts the deficit to the availability of funds, and the cost of servicing the debt (r) will simultaneously rise, because of doubts regarding the sustainability of the debt once the central bank cost of the rescue is taken into account. Similarly, a collapse of output may lead to a reassessment of the capacity for long-term growth (y), which also affects sustainability. To reflect this fact, the last box at the right presents $defgp^{sos}$ as the maximum primary deficit permitted by the fact that the public debt-GDP ratio cannot be greater than it was in the previous period (d_{t-1}). Since the sudden stop affects growth and interest rates independently, asterisks have been placed on the variables r and y . Revised market expectations regarding long-term growth and interest rates may ultimately put the debt in an unsustainable position regardless of governmental decisions. If the debt becomes unsustainable for these reasons, the objective of reversing the situation by increasing the primary surplus to the level required by $defgp^{sos}$ will compete with the countercyclical objective. Fiscal adjustment policy to stabilize the debt will compete with countercyclical fiscal policy designed to stabilize the level of economic activity.

DIAGRAM II.2
EXOGENOUS TRADE SHOCKS AND FISCAL POLICY



Source: Prepared by the authors.

Diagram II.2 provides an overview of the imbalances and vulnerability factors associated with a trade shock⁴⁴. As may be seen in the upper left box, a variety of events can trigger a trade shock, and all have occurred in Latin America. In the current situation, however, global recession is clearly the cause. According to a recent IMF study (Terrones and others, 2009) on the developed countries, it is the consequences of this type of shock that tend to be most lasting and hardest to reverse. Diagram 2 also shows that the global recession can be felt in different ways: worsening terms of trade, declining export volumes, decreased remittances, a drop in tourism and declining foreign investment, especially in countries where free zone exports play an important role. All of these effects are present today. The terms of trade effect is particularly important in South America. In other subregions, such as Central America and the Caribbean, the falling price of oil is having a positive effect on the smallest countries, which are net importers.

In terms of macroeconomic imbalances, the effects are similar to those of a sudden stop. However, this observational equivalence hides differences that are significant for our present purpose, mainly because the relevant vulnerability factors are not necessarily the same, and because the effects on the fiscal variables, and hence on the policy space, are different.

The upper right box in diagram II.2 shows the risk factors that determine vulnerability. Although some of the macroeconomic vulnerability factors are shared by the two types of shock—e.g., dollarization and high public debt—the real factors are more important in the case of a trade shock. Economies that specialize excessively in a few products, as is the case of most of Latin America's economies, are particularly vulnerable macroeconomically, both to terms of trade shocks and to external demand in general. In a shock of this type, macroeconomic adjustment tends to require significant changes in relative prices. Thus, price inflexibility is a second risk factor, particularly important in economies with fixed or dollarized exchange rates. Structural duality is also a vulnerability factor that impedes rapid adjustment in response to a shock. For example, if there is a very large difference in productivity between export sectors and traditional sectors, it will be difficult for an exchange rate correction alone to increase the production of tradable goods. Adjustment is also difficult when the production of exportable goods is regionally very concentrated, and when there are strong political economy pressures to avoid the adjustment.

As for the case of sudden stop, the four lower boxes of diagram II.2 show the most important macroeconomic imbalances associated with trade shocks, and each box shows the $defgp^i$ corresponding to the particular imbalance involved. Variables that tend to move independently are marked with asterisks. Note, however, that although the effects on the primary surplus may operate through the same variables as they do in sudden stops (the asterisk appears on the same variable), the

⁴⁴ On trade shocks, see Terrones and others (2009), Funke and others (2008), ECLAC (2008a) and Pineda and others (2009).

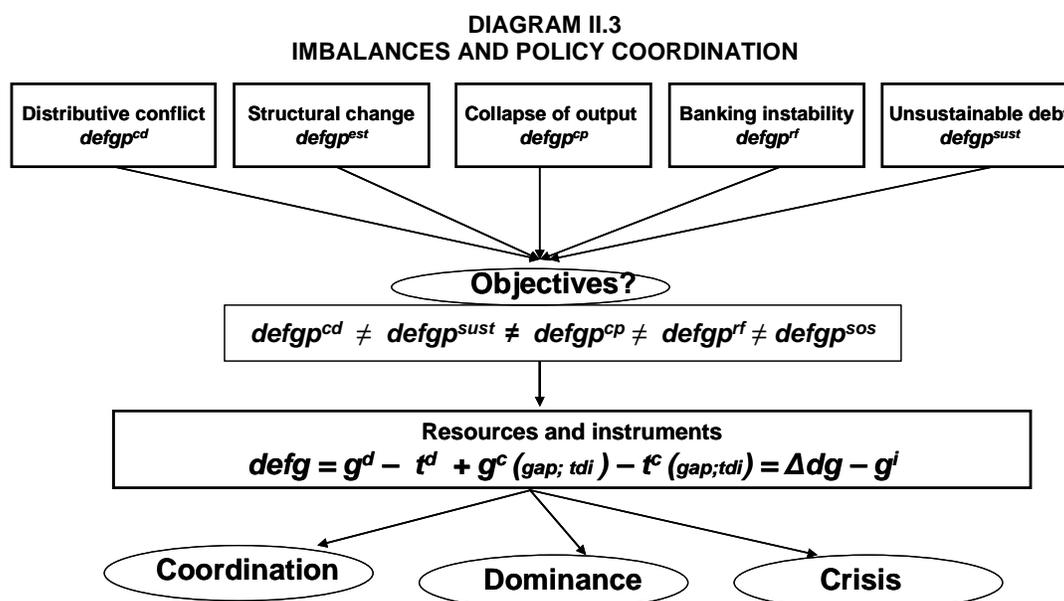
form in which this occurs may be very different, and thus the stabilization policies required may differ. As diagram II.2 shows, three imbalances of major importance that are also present in the sudden stop scenario are declining output, debt sustainability problems and the imbalances associated with distributive conflicts. A fourth important source of imbalances, characteristic of high-intensity trade shocks, is the structural change normally provoked by shocks with these features.

The structural change box has asterisks for spending and discretionary taxes, since such change tends to create specific demands for subsidies and tax exemptions on the part of the sectors affected by the trade shock. From a more positive perspective, public investment in infrastructure and human capital also tends to be necessary as part of the effort to adapt the country's trade specialization profile to the new circumstances. This is most applicable if the effects are highly concentrated regionally or sectorally. These pressures determine a level of deficit $defgp^{est}$. In their effects relating to pressure for discretionary policies, structural changes are similar to the demands that arise in distributive conflicts in general. Thus, after a severe trade shock, there will be a deficit associated with the distributive conflict ($defg^{cd}$), and it may be very sizable. The features of the current crisis suggest that the demand for policies to mitigate its social effects will be in the spotlight in the near future.

In the financial area, two realities that differ from those of the sudden stop scenario have important consequences for the fiscal policy space. The first is that a trade shock does not destabilize the banking system, for this occurs only in cases where the banking system is in a vulnerable situation that is further aggravated by the illiquidity created by the shock. Therefore, the box for banking instability does not appear in this diagram. A benign financial scenario can be a very positive factor in increasing policy space to stabilize the economy after a trade shock. In principle, a country with a good credit history can obtain financing to maintain its level of economic activity and thus prevent a collapse in the growth rate. This means that, depending on the circumstances, the net financing variable ($\Delta dg - g^i$) may or may not have an asterisk. In any case, access to credit today is very limited due to the sudden stop, and credit can only be relied upon from the multilateral institutions. Even in a less adverse financial situation, a large trade shock may affect the sustainability of the public debt. In particular, if the shock is very strong and judged to be of lasting effect, sustainability will be affected by the expected decline in the economy's growth rate. As a result, the y variable in the equation for the maximum primary deficit compatible with a constant debt appears with an asterisk here. Whether the r variable will have an asterisk or not depends on the course of the financial factors already cited.

5.b. Exogenous shocks, policy space and coordination

The stylized facts analyzed here show that a great diversity of elements independently affect the government's primary deficit in situations of trade shocks and sudden stops. The facts also indicate that only by chance will the primary deficit levels compatible with the state of the cycle ($defg^{cp}$), the distributive conflicts ($defg^{cd}$), the sustainability of the public debt ($defg^{sos}$), the structural change ($defg^{est}$) and financial stability ($defg^{rf}$) be equal. The scarcity of funds and instruments usually force a choice of priorities regarding objectives (and, accordingly, as to the amount of the primary deficit). The process of establishing priorities among objectives and allocating the use of scarce instruments among different policies requires a significant degree of coordination. Moreover, to be successful, policy coordination requires that incentives for the agents be responsible for implementing the policies in a decentralized fashion are in line with the objectives. This is difficult to achieve when decentralized agents have very different amounts of political power, and are able to act for their own interests and objectives, or can make use of instruments that were reserved for other policies. When this occurs, some policies prevail over others, leading to failures in the coordination sought by the central government. Worse yet, when power is highly dispersed, lack of coordination can lead to a fiscal crisis that prevents the government from taking initiatives to stabilize the economy, thus aggravating the effects of the shock. Diagram II.3 presents a stylized view of the relation among shocks, imbalances and coordination.



Source: Prepared by the authors.

Diagram II.3 underlines three points. The first is the fact, already cited, that each type of imbalance affects the government budget differently, and creates a need to define objectives and assign instruments so as to define a unique value for the primary fiscal surplus, which appears in the central box. The second point is that rules established beforehand for the use of funds and instruments will not necessarily be enforced during the actual event. This will depend on the government's capacity to coordinate policy. The lower part of the diagram shows that, based on that capacity, the three possible results are coordination, policy dominance and crisis. In principle, the coordinated result should be the best, although it is not difficult to conceive of situations in which dominance could work effectively. The problem with the dominance scenario is that it is never clear whether it is, in fact, the objectives of the executive branch that ultimately prevail, rather than those of society at large. The crisis case is worse yet, because in such cases the situation is over-determined, and the final result of inconsistently applied measures will be indeterminate.

Naturally, the greater the existing policy space, the greater will be the ability to coordinate policy. As has been pointed out, however, the policy space is not invariable with respect to the type and size of the shock and the economy's vulnerability to it. It is to be expected, therefore, that the greater the shock, the more competition there will be among policies, both in terms of appropriation of available resources and in terms of the use of scarce instruments. Below, it will be discussed how the fiscal space changes, and the types of coordination problems that appear in the context of the two types of shocks being examined.

As noted, during a sudden stop episode, the authorities have less resources they can allocate to stabilize the economy. In particular, the combination of a collapse in output with a reversal of capital flows is extremely difficult to manage. In these cases, external financing disappears precisely when tax revenues are diminishing. Resources must be allocated to sustain the banking system, and the amount of interest that must be paid on the public debt tends to increase. The latter is particularly true when short-term debt constitutes a high proportion of total public debt and the debt must be rolled over in a context of increasing risk premiums, as occurred in Brazil at the beginning of the 2000s (Blanchard, 2004) and in Argentina in the period that began in 1999 (Fanelli, 2008).

As to the amount of competition between different objectives, sudden stops tend to create significant dilemmas: the goal of softening the collapse of output is pitted against other objectives, such as stabilising the banking system to revitalize credit, ensuring a minimum of liquidity to protect

the settlements system, ensuring the sustainability of the public debt, providing incentives for the competitiveness of the tradables sector, and cushioning the effects of the crisis on the poorest segments of the population. Case studies and episode studies provide evidence of how, in practice, the authorities resolve these conflicts between countercyclical policy and adjustment policy, designed to prevent the economy from embarking on a explosive path. Specifically, given the need to increase the deficit in order to stabilize aggregate demand and bring it to the $defgp^{cp}$ level, while at the same time ensuring the sustainability of the debt by generating a deficit equal to $defgp^{sos}$, the second objective tends to prevail. When funds are needed to sustain the banking system, resources to stimulate the economy are pulled back. Thus, financial stabilization and public debt policy tend to prevail over the stabilization of aggregate demand. This dominance effect is not necessarily present in cases where the intensification of the financial constraints does not reach the level of a sudden stop, when neither financial stability nor debt sustainability is jeopardized, and when the government can therefore finance a countercyclical deficit. If the shock does not eliminate financing as an instrument, the government can allow a level of deficit equal to $defgp^{cp}$, thus regaining its ability to adopt countercyclical policy. This level of deficit does not necessarily entail discretionary measures, and might be compatible with a constant structural surplus rule.

In the case of financial shocks, the ambiguity of the term stabilization is apparent. If the financial shock takes the form of a sudden stop, debt markets close down, production collapses and interest rates increase significantly. If, as a consequence, the public debt is likely to become unsustainable, stabilization will mean implementing anti-crisis policies to keep the public debt, and hence the economy, from taking an explosive path, even at the expense of deepening the collapse in production. If, on the other hand, the financial shock does not become a sudden stop, and only takes the form of increased cost for short-term financing in public debt markets, then to “stabilize” will involve acting countercyclically to soften the decline in production, even at the cost of increasing the deficit and the public debt. This distinction between adjustment policy and countercyclical policy is useful as an illustration of the fact that the size of the available fiscal space is not independent of the type of shock occurring. In the case of fiscal measures to stabilize the economy after a sudden stop, it is by no means correct to state that the discretionary decisions of the authorities were procyclical. Rather, one must recognize that the policy of stabilizing the banks or the public debt, or both, takes precedence over the objective of stabilising production, notwithstanding pressure from other parts of the public sector for coordinated action to mitigate the effects of the shock on the productive structure and on vulnerable sectors of the society.

This only reconfirms the point made by Tobin (1999) and Togo (2007), namely, that lack of policy instruments is associated with market failures. Here, we put forward a corollary to that argument: if the sudden stop aggravates the failures of the market, eliminating the public debt market through rationing, it is logical that this should intensify the scarcity of instruments. And if this is the case, it is also logical to suppose that the size of the policy space is not invariable with respect to the shocks. From this perspective, it is not appropriate to assess the procyclicality of fiscal policy econometrically, assuming that the space, and hence the degree of freedom to make discretionary decisions, remains constant over time and is independent of the type of shock affecting the economy.

In reality, a sudden stop can significantly change the size of the fiscal space by reducing the number of policy instruments. Due to market failures, different policies tend to compete to use the same channels to influence objectives. This effect, which Tobin (1999) has dubbed the “common funnel”, produces correlations among the instruments, and this reduces the possibility of having a sufficient number of instruments to meet the policy objectives. For example, central banks are generally expected to use the domestic short-term bond market to carry out monetary policy, and in the absence of a domestic long-term bond market treasuries are expected to finance the fiscal deficit in external foreign markets, so as to prevent fiscal policy from interacting with monetary policy. When a sudden stop closes the markets, however, the treasury is forced to resort to domestic short-term markets. This leads to the common funnel effect: while the central bank intervenes in the market to meet inflation objectives, the treasury seeks to finance the deficit that arises from the countercyclical or adjustment objectives. Another common case of competition for use of instruments occurs when

balancing the budget requires a marked nominal depreciation, but the central bank is fearful of floating the exchange rate because of the need to maintain banking stability, and postpones the depreciation by sterilization operations. (On this type of problem, see Kaminsky and others, 2004). In this case, the exchange-rate instrument cannot meet two objectives simultaneously, and the result tends to be procyclical reductions in spending to prevent greater depreciation. If the central bank is hesitant to float the exchange rate and the treasury hesitates to implement adjustments, the result will be a failure of coordination that will lead, first, to a rapid loss of reserves, and then to a disorderly depreciation and problems of public debt sustainability. This is aggravated when the exchange rate is unavailable as an instrument, as is the case with fixed exchange-rate regimes.

The stylized facts relating to exogenous trade shocks suggest that the effect of these shocks on the size of the fiscal space can be as great as that of sudden stops. However, because of the differences in the macroeconomic adjustment dynamics and the vulnerability factors mentioned above, the problems of stabilization and competition between policies for use of the fiscal space also differ. One important point is that the effect of sudden stops on the fiscal space takes the form, above all, of financial constraints, while trade shocks primarily affect fiscal resources for conducting fiscal stabilization policies. In addition, the specific form in which this occurs is highly dependent on the structure of the economy.

One paradigmatic case is variations in resources induced by terms of trade shocks. There are three possible scenarios: (a) countries where the public sector owns a significant proportion of the natural resources (e.g., copper in Chile, or oil in Mexico and in the Bolivarian Republic of Venezuela); (b) countries that tax exports, such as Argentina; and (c) economies that subsidize energy consumption, such as the Dominican Republic. While negative shocks from natural resources prices reduce resources in the former two cases, they increase them in the third. This differential effect is important for the policy space. In the case of governments whose revenues are positively correlated with natural resources prices, the policy space moves procyclically in relation to the global cycle. When the global economy slows down, the funds available for countercyclical policy also diminish, and it becomes more difficult to obtain external credit since, as Caballero (2000) points out, when international prices fall, the value of debt collateral follows suit. These facts have two implications. First, in defining the relationship between the cyclical and structural deficits it is essential to take into account not only the gap in output but the terms of trade. Second, even when a government is sufficiently solvent to make debt payments, a trade shock can create serious short-term liquidity problems as the value of collateral drops.

When there is a trade shock without a sudden stop, the government's resources diminish, but the option of borrowing does not. If the trade shock is transitory, the government has more possibility of implementing countercyclical policy and financing a larger fiscal deficit. It is also probable that the increased demands for assistance by sectors suffering from the shock will be addressed to a greater degree, and that pressure from distributive conflicts will be correspondingly reduced. This possibility shrinks considerably when the sustainability of the debt is in doubt. In fact, if sustainability is not a problem, the groups affected by a shock may exert very strong pressure—not only because they enjoy political representation, but because if they perceive that the government has some room for countercyclical policy they will exert pressure for discretionary initiatives to soften the external shock. In reality, when there is room for countercyclical policy and sectoral pressures are strong, such that the deficit required to satisfy these demands ($defg^{cd}$) is high, the central issue is preventing the realization of such a deficit from ultimately jeopardising the sustainability of the debt. In such situations, a structural deficit rule can be a great help, because it is a functional instrument for rationalising discretionary spending. The government may argue that although it is capable of making and funding countercyclical policy, the primary deficit should not be far from the amount of the cyclical deficit ($defgp^{cp}$). Obviously, it can also invoke the argument that an excessive increase of the deficit in a context where the value of collateral has fallen as a consequence of the shock could worsen government's liquidity position. This second argument, however, will probably carry less weight in the political arena. Since structural deficit and liquidity management policy is invoked to ensure the sustainability of the debt and satisfy the demands for discretionary spending coming from the most vulnerable sectors and from domestic

producers, it is not surprising that the technical need to better coordinate adjustment and countercyclical policy becomes, in the political arena, a struggle between “national interests” and producers on one hand, and domestic “rent-seekers and global financial capitalism” on the other. Nevertheless, political economy issues are beyond the scope of this article. The point being put forth here is that distributive conflicts have a role in determining how problems of policy dominance are resolved, and also, therefore, in determining the size of the policy space.

Trade shocks are not always negative, and thus in good times, government resources increase significantly, especially in countries where the State receives some of the profit from natural resources. Jiménez and Tromben (2006) analyze this issue in Latin America and show that the magnitude of the increase can be very significant. In these cases, the best option seems to be to accumulate a sovereign fund in good times, which can be used to finance initiatives that soften the effects of adverse shocks. Accordingly, the analytical approach to the fiscal space should have a significant intertemporal dimension. The example of Chile, which is the country in the region that has advanced furthest on this path, suggests that better intertemporal distribution of resources could contribute to structurally increasing the fiscal stabilization space. A fund accumulated on the basis of good-times surpluses would be a contribution to mitigating the impact of financial constraints in bad times, and thus preventing adjustment policies from prevailing over countercyclical ones. At the same time, we have seen that one stylized fact of Latin American macroeconomy is that consumption is highly volatile, and this is particularly detrimental to the most vulnerable sectors. It follows that more stable consumption levels could significantly improve wellbeing of the poor (ECLAC, 2008a).

However, it should be emphasized that creating a fund of this sort does not obviate the need for policy coordination, since such funds could have negative side effects in countries exposed to sudden stops and procyclical capital flows. The existence of such a fund could ultimately create incentives to take financial risks in good times, if market participants perceive that it will always be possible to flee to quality in bad times. Thus, the creation of a stabilization fund must be accompanied by appropriate financial regulations to prevent this. Appropriate economic policy must also complement the existence of the fund. New governments will always be tempted to draw on accumulated resources to increase discretionary spending. However, Latin America has progressed in its macroeconomic management during the good times that ended with the high-risk mortgage crisis, which suggests that it may in the future be in a position to address the complex tasks involved in structural enlargement of the fiscal space.

6. Final remarks

Viewing the region’s situation from the perspective of the analysis set forth here, an abnormally sharp recession induced by trade shocks or sudden stops, or both, is a very concrete threat. As regards financial imbalances and public debt sustainability, the situation for the time being appears better than it was during other episodes of contagion, such as those of 1998-2002 (Bárcena and others, 2009). There is little room for optimism, however, since the constraints already operating have been sufficient to create major recessive forces, and financial balances seem to be occurring in a razor’s-edge context. In reality, the fact that the financial toll has been less severe in the current crisis than in the last episode of contagion could have to do with the reasons put forward at the beginning of the crisis regarding Latin America’s decoupling. The hope at that time was that progress in controlling the risk factors that determine vulnerability—accumulation of international reserves, reduction of public debt levels and de-dollarization of liabilities—had driven an effective decoupling process. Some progress had also been made in controlling the weaknesses of the financial system—though to certain countries these were not a problem, simply because their lack of financial development prevented over-leveraging. Despite these advances, however, the decoupling did not materialize. As we have seen, capital flows flagged, a number of countries were obliged to use their reserves, and the level of economic activity has been falling.

It emerges from this analysis that fiscal policy spaces are not invariant, and, more importantly, that they are sensitive to pre-shock behaviour and tend to undergo significant changes with large shocks. There is no doubt that the current shocks have reduced fiscal policy space and will create challenging dilemmas by increasing competition between policies for existing resources and instruments. Thus, the ability of the governments to coordinate policy will depend critically on factors such as the organization of the public sector and the effectiveness of the bureaucracy and institutions in managing conflicts when policy spaces are reduced. For example, it will be more difficult to coordinate policy in decentralized countries where subnational governments have a great deal of political weight, or where there is more demand for job or social assistance policies. Moreover, as is well-known, the proper use of resources and policy instruments depends on the quality of the bureaucracy and the credibility of institutions.

One point to underline is that, above all, the sudden stop puts forces in motion that tend to restrict the fiscal space precisely when the authorities most need it. In this sense, the fiscal space behaves procyclically: it shrinks with negative shocks, and increases once capital movements recover and the sudden stop episode is past. Therefore, it is crucial to create incentives to increase the fiscal space in boom times. One question confronting fiscal stabilization policy is: what factors can reverse the conditions that come together to create a sudden stop? This is a key element in deciding where to focus fiscal efforts in a situation of very limited policy spaces and exceptional shocks. Although it is beyond the scope of the present paper to explore this question, the authors believe that the distinction made here between the different meanings of “stabilization” in relation to fiscal policy is central, as are the distinctions between adjustment policy, countercyclical policy and anti-crisis policy. One example will suffice to illustrate the complexity of the dilemmas involved.

The stylized facts discussed here underline the importance of the changes in governance (regulations, ownership, contracts) that crises usually induce, and the way in which this creates a need for higher private-sector profitability to compensate for institutional risk (i.e., a poor business climate). Escaping exceptional recession traps requires exceptional increases in profitability. In Latin America, such exceptional profits typically appear after sharp currency depreciations in the wake of shocks. Depreciation works to reduce real wages and the cost of non-tradable inputs for the tradable sector. Although the decline in non-tradable sector wages and income can intensify the recession in the short term, the generation of exceptional profit opportunities in the tradable sector is crucial for reversing the negative expectations of some key investors when a productive collapse has occurred. As a general rule, the reversal of profit expectations in the short term tends to be more important in the export sector than in the import substitution sector, due to the presence of low domestic demand. In Latin America, traps are overcome when the tradable sector succeeds in regaining its profitability. When this recovery is insufficient, as it was in the lost decade of the 1980s, where the international situation provided no help via exports, recessions are prolonged and economies remain caught in the trap.

Since governments in Latin America represent a good portion of the tradable sector, and tradables are a key factor in recession/expansion dynamics, it is surprising that the literature on the cyclical behaviour of the public sector devotes so little attention to this point. For example, governments whose revenues are linked to natural resources typically confront the dilemma of whether to depreciate the currency to re-establish debt sustainability and obtain resources in a situation of rationed credit, or avoid depreciation in order to protect wages and the level of economic activity in the short term. Thus, for example, a sudden stop poses the dilemma of whether to re-route what is a probably an unstable path in terms of debt, by generating a primary surplus, or to implement countercyclical policies in the traditional sense. In light of these facts, it is hardly surprising that one should often see recovery of the fiscal surplus precede an economy’s escape from productive collapse in Latin America. By ensuring the sustainability of the debt through depreciation, the public sector simultaneously restores the profitability of the tradable sector, and reduces the likelihood that property rights will be violated as a result of the public sector finding itself without funds. Thus, under such circumstances, acting countercyclically in the short term might be the only way to stabilise the economy. Once the private sector’s perception that the State is likely to appropriate profits subsides, investment increases sharply and begins, along with exports, to help pull the economy out of the trap.

In the new environment, fiscal policy space expands, and the government is likely to be pressured into compensating those who were losers in the crisis. One must, of course, take account of the fact that the perceptions of private interest groups, as to the latitude that the public sector has available to meet their demands, also changes with the cycle, and may vary procyclically.

If the current situation is viewed from this perspective, the most serious problem is the fact that a sudden stop is coinciding with a trade collapse generated by the global recession. Under these conditions, it appears unlikely that exports will provide the effective demand that the economy needs. Thus, although the tradable sector must not be neglected, all available credit margin must be used to prevent a deepening of the cycle. If the recession worsens, international trade cannot be relied upon to avert the recession trap. In such a situation, countercyclical financing from international institutions is essential.

The analysis here shows that the diagnosis and cure in situations where procyclical fiscal decisions are discretionary and politically autonomous must differ from what is called for in situations where procyclical discretionary initiatives are designed to adjust the needs to the funds available, or to serve the imperative of protecting the sustainability of the public debt. When the decisions are autonomous, the problem is one of political economy, but when financial constraints compel decisions, the problem becomes the lack of instruments, in conditions that intensify failures of the financial markets. It is in the latter case that the assistance of international institutions is most important. Greater access to credit, with funds and instruments being provided at a critical moment, can temper the financial constraints and expand the countercyclical fiscal policy space, reducing the need for excessively severe adjustment policies. If the problem is one of political economy, and the need for adjustment derives from excessive spending, it becomes more likely that the new resources will be used ineffectively. However, since it is clear that the sudden stop we are seeing today is exogenous and originated in the developed world, the increased availability of multilateral funding will be of great assistance. External support makes even more sense considering that the combination of sudden stop and trade shock aggravates market failures, generating an endogenous and procyclical contraction of the policy space.

Currently, major efforts are being made to adapt the international financial architecture to the needs of the moment. In this context, the recapitalization of the IMF, the greater role of the emerging countries via the G-20, and the reformed Financial Stability Forum are auspicious signs. Nevertheless, a long road remains to be travelled. For example, little progress has been made in articulating multilateral initiatives with regional ones along the lines suggested by Ocampo (2008) and Park (2008). From a Latin American perspective, it seems obvious that the region should make use of institutional structures and draw on successful experiences of collaboration (e.g., the Latin American Reserve Fund) to design regional responses to global problems.

From the perspective of the analysis presented here, one of the central issues requiring further thought is the relationship between international efforts and the national policies that accompany them. What should the content of these policies be, and how can they best be coordinated with international efforts? It is in the interest of the global economy to prevent the recession in Latin America from deepening to a point that the decline in the region's exports aggravates a similar decline in the rest of the world. One key challenge for fiscal policy in Latin America is to update the content of policies to take into account findings on volatility and on the current exceptional trade and international finance situation. However, examining the content of anti-volatility policies only makes sense if governments have sufficient space (funds and instruments) to formulate macroeconomic policy and coordinate it with other policy areas.

Chapter III. The role of tax policy in the context of the crisis: possibilities and limitations

Juan Carlos Gómez Sabaini⁴⁵ and Juan Pablo Jiménez⁴⁶

1. Introduction⁴⁷

The financial crisis has had a significant impact in Latin America and the Caribbean, moving through all of the various channels that connect Latin America with the rest of the world: trade, capital flows, remittances and foreign direct investment. This has resulted in a series of simultaneous negative effects on the region's economies: declining exports (in terms of both volume and price), severe limitations on access to capital markets, a decrease in remittances and a reduction in the flow of foreign direct investment.

These factors affect public finances, while at the same time limiting governments' ability to respond. Tax revenues are declining significantly as a result of the economic slowdown/recession and the drop in commodity prices. Moreover, the fiscal stimulus packages implemented by the countries will cause a further decline in their fiscal balances. To compensate for the distributive costs of the crisis, the countries have adopted contingency measures. Finally, in tandem with shrinking fiscal balances, the flow of external financing has slowed significantly. This worsening in fiscal performance comes on the heels of several years of improved performance in the region's public accounts, which had allowed for a lowering of the debt-to-GDP ratio.

The seriousness of the worsening fiscal situation, along with the possibility that it could lead to solvency problems, is closely linked to the pre-crisis fiscal position, and will be affected by how long the crisis lasts. The crisis and its impacts vary from country to country, demanding different responses, due both to differences in the causes and effects, and to countries' differing capacities and resources.

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⁴⁷ A preliminary version of this chapter was presented at the Forum "European Union, Latin America and the Caribbean – Fiscal policies in times of crisis: volatility, social cohesion and the political economics of the reforms". The authors wish to thank Juan O'Farrell and Andrea Podestá for their assistance as well as Oscar Cetrángolo, Osvaldo Kacef, Teresa Ter-Minassian and the participants at the forum for the comments and suggestions.

This document focuses in particular on the impact of the crisis on tax revenues, and on the countries' policy responses to the crisis. It also examines potential lines of action that countries could undertake.

The present report approaches this situation by analysing tax issues and examining how they interact with the current economic situation. It begins by presenting an assessment of the principal stylised features of the changing fiscal and tax policy of the last several years. It then looks at the possible impact of the crisis on this situation, and the level of risk to which each country is exposed. Following this, it examines the main fiscal and tax measures adopted, as well as issues of political economy that could hinder the implementation of reforms to address the crisis. Finally, it presents some thoughts on which paths would be most advantageous over the coming years.

2. What has occurred in Latin American and the Caribbean over the last decade with regard to fiscal and tax policy?

The past decade has been marked by various fiscal-policy reforms. On the revenue side, the decade continued previous years' pattern of declining revenue from foreign trade, with import substitution leading to the rapid expansion and strengthening of value added taxes across the region⁴⁸.

The downsizing of the public sector's role as a provider of various public goods and services was consolidated. This included attracting private capital to the development of public services infrastructure⁴⁹.

During the 1990s, many of the region's countries reassigned powers and authorities among the different levels of government, a process commonly known as "decentralisation", although the actual measures deviated from the concept⁵⁰. As a result of this process, subnational governments now play a more important role in public administration, with greater participation in execution of the public budget.

Also during this period, a number of the region's countries reformed their pension systems, introducing components of individual capitalisation⁵¹, a trail that Chile blazed for the region in 1981. As will be seen in more detail below, these reforms have had a major impact on the public finances of the region's countries.

As regards the performance of public accounts, two periods of change in the last decade can be clearly distinguished, the first running from 1998 to 2001, the second from 2002 to 2008.

During the earlier of these two periods, fiscal policy unfolded against a challenging macroeconomic backdrop, both domestically and internationally. In some cases, aggravating factors, such as the weakening of the United States and a decline in the terms of trade among petroleum-dependent economies, also played a role.

In the more highly indebted countries, the volatility of capital markets, deteriorating international financial conditions, and the constraints this imposed on the ability of public sectors to access financing had a major impact.

Given this situation, the region's economies had less freedom in their fiscal policies. One manifestation of this was that most of the governments in those years were executing or negotiating programmes with the IMF involving restrictive economic policies —policies that, in some cases, unwittingly intensified the effects of the economic cycle.

Moreover, the unfavourable macroeconomic circumstances affected, directly or indirectly, the tax revenues of nearly all countries in the region.

⁴⁸ For more detail, see Cetrángolo and Gómez Sabaini (2007).

⁴⁹ For more detail, see Lucioni (2009).

⁵⁰ For an overview of fiscal decentralisation processes in the region, see ECLAC (2003).

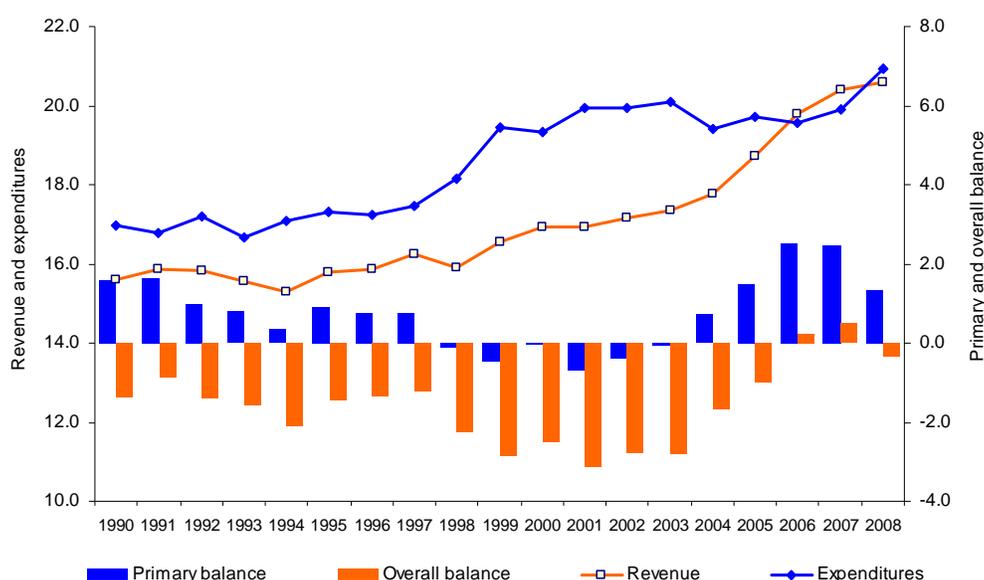
⁵¹ According to ECLAC (2006), the reforms introduced may be classified in three broad categories: substitutive, those that include parallel regimes, and those based on instituting mixed models.

While more expansive fiscal policy tools may have been called for during the recession years, few countries adopted a fiscal management approach during those years that would have provided greater political space to establish effective fiscal policies.

Furthermore, the various structural reforms carried out during the 1990s did not bring greater solvency to governments or solve the problems associated with high levels of debt. On the contrary, many of these policies postponed necessary reforms by creating temporary solvency, paving the way for major capital inflows (some involving privatisations), thus aggravating fiscal imbalances (lack of equitable reforms to social programmes in some countries), reducing government resources (through economic liberalisation and reduced tariffs) and intensifying pressures that led to increased spending (decentralisation).

This period was one of major deterioration in the fiscal accounts of the region's countries, which, on average, did not show a primary surplus, making it clear that, even apart from the debt problem, governments were experiencing serious financial problems. In 1998, while the simple average primary balance for the central governments in the region was close to equilibrium, 2001 marked the highest primary deficit (0.7% of GDP) of the last ten years. If one takes into account the overall deficit (including interest on the public debt), the average deficit rose from 1.2% of GDP in 1997 to 3.3% in 2001 (see figure III.1).

FIGURE III.1
LATIN AMERICA AND THE CARIBBEAN: REVENUE, EXPENDITURES, AND PRIMARY AND OVERALL BALANCE OF CENTRAL GOVERNMENTS, 1990-2008
(Simple averages, as percentages of GDP)



Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Thus, the fragile condition of the region's public sector left little room for using fiscal policy to foster macroeconomic stability. While uncertainty regarding resources forced governments to pare spending as much as possible, efforts to limit the deficit were hindered by negative effects from external factors. The attempt to achieve greater fiscal solvency conflicted with recommendations for a countercyclical fiscal policy. This, along with the difficulty of financing higher temporary fiscal deficits in the domestic and international credit markets during a crisis, skewed fiscal policy toward a distinctly procyclical bias.

At the same time, the emphasis during this period on rebuilding the credibility of macroeconomic authorities and on establishing budget deficit goals that would remain constant throughout the economic cycle partially weakened the effect of the automatic stabilisers, thus further increasing the procyclical nature of fiscal policy.

Capital expenditures proved to be the variable in budgetary spending adjustments, reaching, in 2000, their lowest level for the period. Capital investment and transfers, given their more flexible nature, were the areas of adjustment most frequently relied upon to meet fiscal goals. In much of the region, the norm was to cut infrastructure investment, as well as capital transfers to key productive sectors, while postponing public enterprise projects.

Finally, the slowdown in economic activity in 2001 directly affected the changing debt ratios of the region's countries. The macroeconomic reality and the budget deficits, added to currency depreciation in many of the countries, led, in many cases, to an increase in public debt. Thus, the end of this period saw a large increase in debt, adding even greater inflexibility to fiscal policy. The region's public debt as a percentage of GDP in the non-financial public sector rose from 43% in 1997 to a peak of 65% in 2002.

This situation illustrates a special characteristic of public finances in Latin America and the Caribbean: when capital flows fall drastically, the public sector's financing needs rise, both because of the slowdown in economic activity and because the cost of the external public debt, in national currency, increases.

In contrast, the 2002-2008 period saw a sharp improvement in the budgetary balance for the region's countries. Of the 19 countries commonly cited, only five still had a primary central government deficit as of 2008, a significant contrast with 2002, when 11 countries had such deficits.

The vulnerability of the region's countries to external factors decreased during this period, due to the improved public accounts balance and the decline in public debt as a percentage of GDP.

On the basis of changes in fiscal variables, this period can be subdivided into two parts, the first running from 2002 to 2004, the second from 2005 to 2008. While the fiscal improvement of 2002-2004 was based on greater tax revenue and the fact that spending, on average, grew less than GDP in the region⁵², the growth of the primary surpluses between 2004 and 2008 was due to a sharp increase in revenue that more than compensated for the increased public spending.

The marked increase in fiscal revenues of recent years has brought public resources, on average, to unprecedented levels in the region. While tax collections averaged 15.6% of GDP during 1990-1995, they rose to 17.4% in 2001-2005, and to 20% for the last three years of the period.

A number of factors converged in the latter years to produce the high levels of tax revenue. The significant increase in economic activity had a strong impact on tax collections. Indeed, the higher level of activity produced a rise in tax revenue not only because of the changing composition of GDP, but also because of improved tax enforcement⁵³. At the same time, increasing prices for some countries' primary products have contributed to higher tax revenues^{54 55}.

⁵² This situation is largely a result of the change in relative prices caused by the devaluation of some of the region's currencies (Argentina, Brazil, Uruguay) at the end of the last decade and the beginning of the current one. While public spending is, for the most part, denominated in local currency, the income generated from the tradables sectors of the economy changes in tandem with the dollar. To see this effect at work in the end of convertibility in Argentina, see Cetrángolo and Jiménez (2003), and for more detail regarding the effect of exchange rate shocks on fiscal sustainability, see Levy-Yeyati and Sturzenegger (2007).

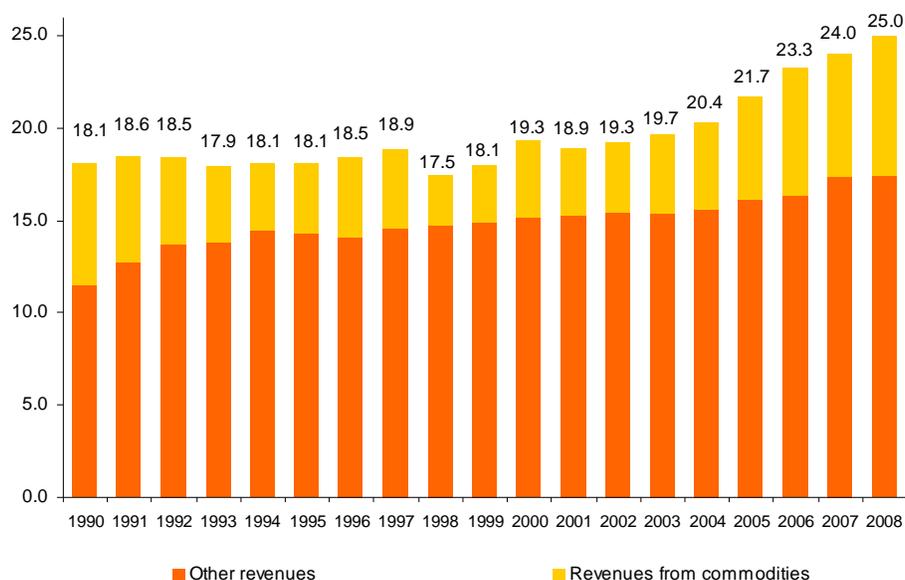
⁵³ In general, the elasticity of tax collections is greater than one. In the expansion phases of the cycle, they increase more than proportionally, due to the fact that growth produces an increase of the formal economy and generates more than proportional growth in imports and the associated taxes. In recessive phases, on the other hand, collections fall more than proportionally due to the fact that the same mechanisms operate in reverse, as well as from increased tax evasion.

⁵⁴ An additional explanation of this increase is the large rise in tax rates over of the last few years. As regards the value added tax (the main source of tax revenues in the region), its average rate as of May 2007 was 14.7%, whereas it was 11.7% in 1994.

⁵⁵ In addition, it should be noted that a number of the region's countries have fully implemented taxes that are normally considered emergency measures, including the financial transactions tax currently in place in Argentina, the Plurinational State of Bolivia, Brazil, Colombia and Peru.

This increase in prices of the region's commodities exerted a significant upward pressure on tax revenues. The governments of the region have developed different ways of taking fiscal advantage of these resources. In the case of agricultural products, Argentina has financed a substantial portion of its spending with funds generated by export duties. The governments of countries with major non-renewable resources have various mechanisms for using this circumstance to fiscal advantage, and the Plurinational State of Bolivia, Chile and the Bolivarian Republic of Venezuela created new taxes to increase revenue from their non-renewable resources⁵⁶. Taken together, income from these sources led to average growth in total fiscal revenue in the Plurinational State of Bolivia, Chile, Colombia and Mexico of 27.9%, 7.7%, 8.3% and 29.4%, respectively, during the 1990s, and of 34.3%, 17.8%, 13.6% and 37.1% in 2006-2008, thus exerting a major effect on total revenues (see figure III.2).

FIGURE III.2
LATIN AMERICA (8 COUNTRIES)^a: FISCAL REVENUES OF COUNTRIES
SPECIALIZING IN PRIMARY PRODUCTS
(Percentages of GDP)



Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

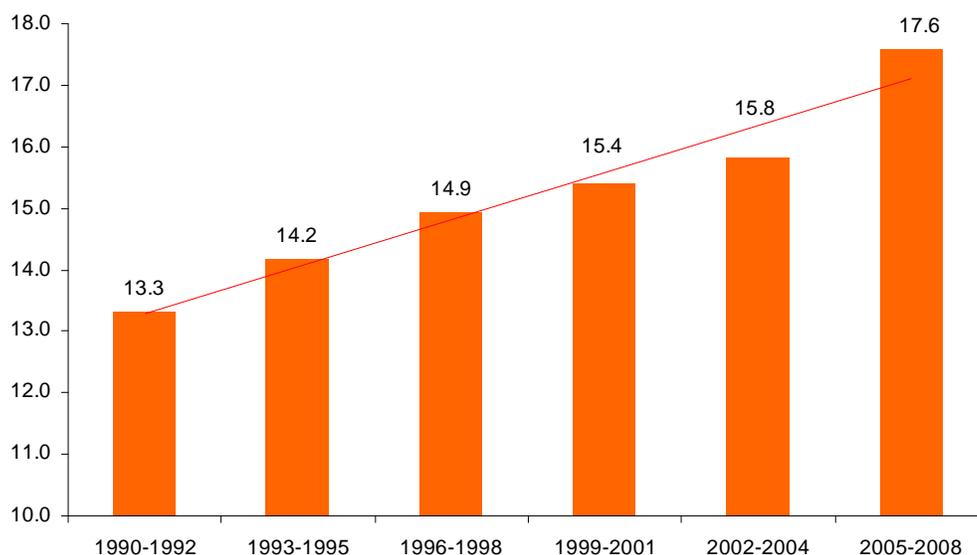
^a Includes Argentina, the Bolivarian Republic of Venezuela, Chile, Colombia, Ecuador, Mexico, Peru and the Plurinational State of Bolivia.

Two aspects of tax policy are noteworthy. The first is the increase in the tax burden between 1990 and 2008. From an average level of 13.3% of GDP in 1990-92, it rose (if one includes social security) to 17.6% in 2005-2008 (see figure III.3). In absolute terms, it rose by 4.3% of GDP, or 32%.

Despite the positive trend, it should be noted that the revenue of the region's countries is low, both in relation to their needs and with respect to their level of development. Figure III.4 shows the revenue levels of each country for 2008 as a percentage of GDP.

⁵⁶ For more detail, see Jiménez and Tromben (2006).

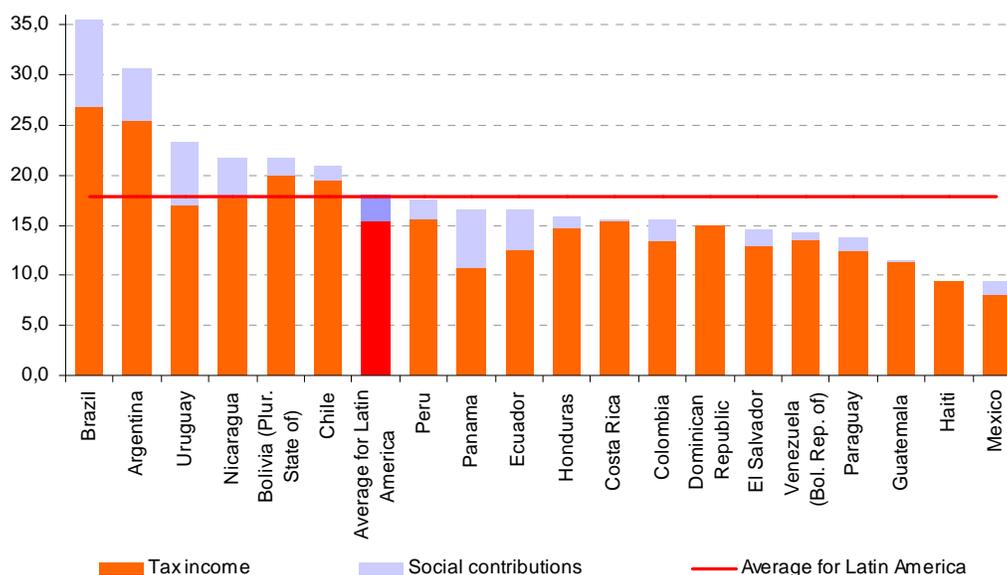
FIGURE III.3
LATIN AMERICA AND THE CARIBBEAN: CHANGING TAX BURDEN IN LATIN AMERICA
(Averages by period, as percentages of GDP)



Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Note: The figures correspond to central government, except in the cases of Argentina, Brazil, Chile and the Plurinational State of Bolivia, where they refer to the general government.

FIGURE III.4
LATIN AMERICA AND THE CARIBBEAN (19 COUNTRIES): TAX BURDEN BY COUNTRY, 2008
(Percentages of GDP)

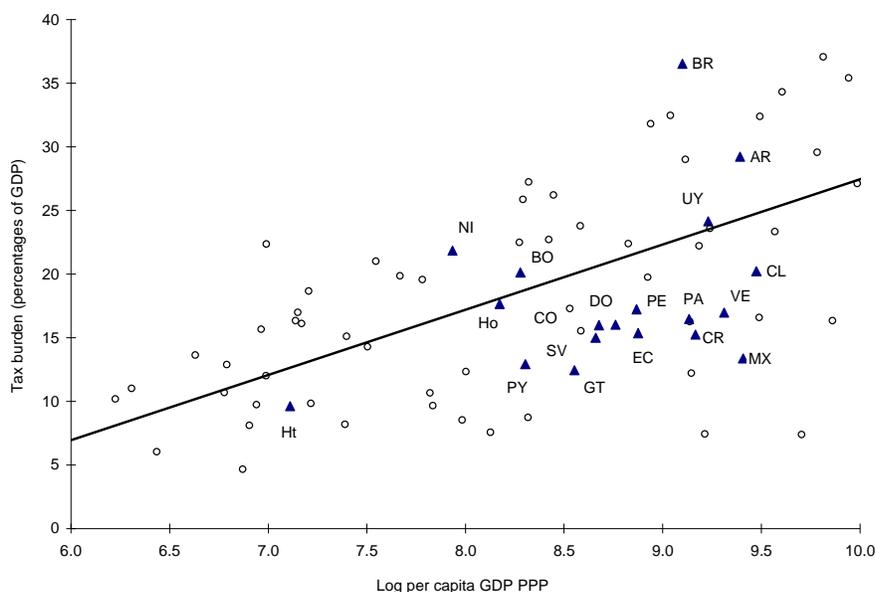


Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Note: The figures correspond to central government, except in the cases of Argentina, Brazil, Chile and the Plurinational State of Bolivia, where they refer to the general government.

In terms of the relation between tax burden and level of development, Figure III.5 shows that only five Latin American countries have tax burdens that are high or appropriate for their level of development, while the tax burden in the remaining 14 countries is below what these countries should have, based on their per capita GDP.

FIGURE III.5
LATIN AMERICA AND THE CARIBBEAN: WORLDWIDE COMPARISON OF TAX BURDEN VS. PER CAPITA GDP IN PPP
(Percentages of GDP and logarithms)

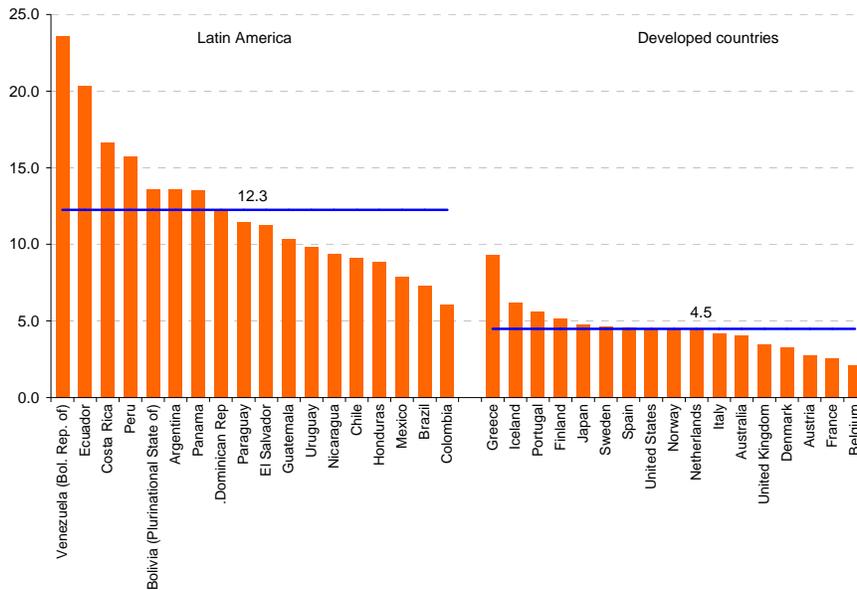


Source: Jiménez J.P. and A. Podestá (2008), "Tributación y equidad: desafíos para América Latina", Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), unpublished.

Another important factor to bear in mind is the high volatility of tax revenues in Latin America. The average volatility in the region, as measured by its standard deviation, is nearly three times greater than in the developed countries. This has important consequences in terms of the ability of the public sector to play a stabilising role. In addition, excessive tax revenue volatility has a major impact on the most vulnerable segments of the population, since it leads to fluctuations in social spending by the government.

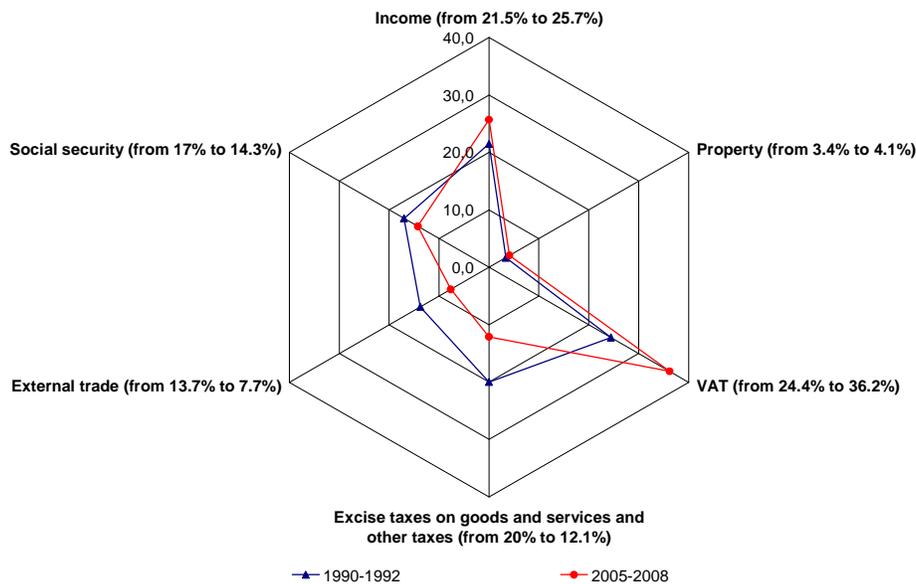
Structurally, another important factor has been the growth in the value added tax (VAT), both in absolute terms and proportionally. While the VAT represented an average of 3.3% of GDP and 24.4% of tax revenues at the beginning of the 1990-1992 period, the figures for 2005-2008 were 6.4% of GDP and 36.2% of tax revenues (see figure III.7).

FIGURE III.6
LATIN AMERICA AND DEVELOPED COUNTRIES: VOLATILITY OF TAX REVENUES
(Standard deviation)



Source: R. López Monti, "Real volatility and cyclical fiscal policy in Latin America and developed countries", Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), 2009, unpublished.

FIGURE III.7
LATIN AMERICA AND THE CARIBBEAN: COMPARISON OF TAX STRUCTURES
1990-1992 AND 2005-2007



Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

The rising VAT in all of the countries has clearly been one of the most significant phenomena in tax policy in the last 15 years, accounting, by itself, for over 70% of the rising tax revenues, with

income tax responsible for 38.8% and wealth taxes a mere 6.4%, while taxes on foreign trade pushed in the opposite direction, accounting for -11.2% of the total change (see table III.1).

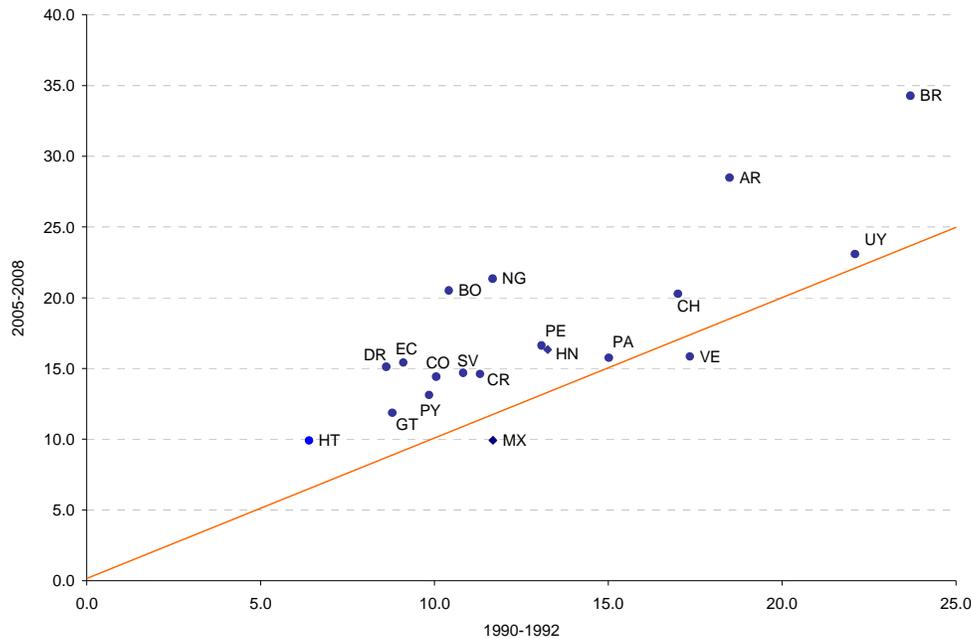
TABLE III.1
LATIN AMERICA AND THE CARIBBEAN: APPROXIMATE PROPORTIONAL WEIGHT OF FACTORS
ACCOUNTING FOR CHANGE IN OVERALL TAX BURDEN,
1990-1992 AND 2005-2008
(Percentages of GDP)

Category	1990-1992	2005-2008	Absolute change	Percentage change
Income	2.9	4.5	1.7	38.8%
Property	0.4	0.7	0.3	6.4%
VAT (general, on goods and services)	3.3	6.4	3.1	72.9%
Excise tax on goods and services	1.9	1.7	-0.2	-4.4%
Foreign trade	1.8	1.4	-0.5	-11.2%
Other taxes	0.7	0.4	-0.3	-8.1%
Social security	2.3	2.5	0.2	5.7%
Total tax revenues	13.3	17.6	4.3	100.0%

Source: Economic Commission for Latin America and the Caribbean (ECLAC).

These tax averages for the region certainly have their extremes: at one end, with the highest levels, the countries that led the rise in the regional tax burden, such as Brazil and Argentina; at the other extreme, countries like Mexico and Guatemala, where there has been the least amount of change in tax burdens (see figure III.8).

FIGURE III.8
LATIN AMERICA AND THE CARIBBEAN: DISPERSION OF TAX BURDEN, BY COUNTRY
1990-1992 AND 2005-2008
(Percentages of GDP)



Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Note: The figures correspond to central government, except in the cases of Argentina, Brazil, Chile and the Plurinational State of Bolivia, where they refer to the general government.

An overview of the regional situation, which has been analyzed in various studies on the issue, reveals some facts that are pertinent to the current situation. These (not listed in order of importance) are as follows⁵⁷:

- The personal income tax, which is focused on wages and salaries, may require compensatory measures to avoid both erosion of family incomes and increased tax inequity vis-à-vis exempt sources of income such as capital gains.
- Not only has the increase in income tax been concentrated principally on corporate profits, but there are also some features that contribute to lower tax revenues, such as the absence of transfer fees, the use of imperfect standards on the future treatment of business losses, and the lack of controls on movements relating to tax havens, as well as treatment of corporate financing that is more favourable to third party funds than to reinvestment of profits within a business. In crisis situations, these elements erode the tax base and have a negative effect on countries' income tax collections.
- The favourable change in the tax burden has been sustained, given the increases in both private and public consumption, since the latter is also subject to value added tax for goods and services acquired.
- The process of concentrating taxation on a few, essentially selective, taxes, has pros and cons in terms of rapidly capturing new resources, since a strong dependency on the VAT makes revenue extraordinarily dependent on consumption, the area most sensitive to crisis situations.
- This feature is intensified by the high proportion of VAT revenues that derive from importation of goods, since these imports change in crisis situations even more markedly than final consumption, especially in the present circumstances, in which the erosion of international trade has been so rapid.
- Selective taxes on consumption have focused, in the last few years, on alcohol and tobacco and on other consumer goods, as well as on fuels and crude oil as intermediate goods. In the former case, the reduction in private sector income affects revenue, while in the latter, revenues are hurt by the lower level of economic activity. In neither case are the taxes countercyclical.
- The area in which the crisis has an immediate effect on revenue is that of imports. The effects on the VAT have already been noted, but no less important, or even more important for small countries, are the effects of declining import duties in many countries, where customs revenues are falling steadily from one day to the next.
- Although there are no clear and precise indicators showing that tax administration improved substantially in the region's countries during the high-growth period, there is a general sense that it is better than it was. If true, the region is better equipped than in previous crises to deal with increasing tax delinquency (whether due to evasion or late payment), a phenomenon that can be expected to occur.
- Measuring greater administrative efficiency by increases in collections can lead to serious errors, since it is strongly affected by changes in exogenous variables. Unfortunately, few studies have attempted to quantify progress in administrative efficiency, and those that exist are inconclusive.
- One favourable indicator would seem to be the increased productivity of the VAT and reductions in the level of VAT evasion in countries where that tax is levied. The former factor, however, is due principally to increasing the tax base by eliminating exemptions

⁵⁷ Álvarez (2008), Arias (2008), Cabrera (2008), Cetrángolo and Gómez Sabaini (2008), Jorrot (2008) and Roca (2008).

for goods that were previously exempt, and by incorporating formerly exempt services in the tax base.

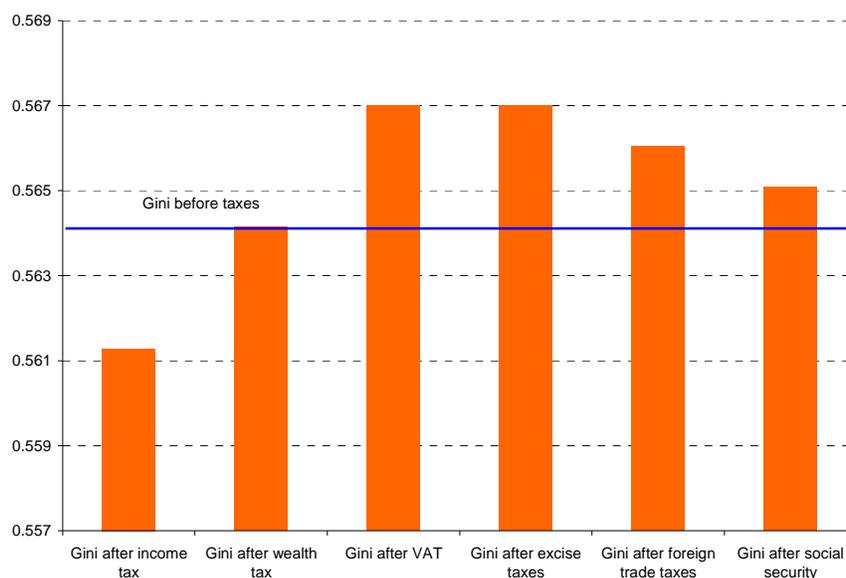
- Meanwhile, although absolute levels of VAT evasion remain high, the decline in the rates may be considered a favourable factor in the context of improving tax administration. However, the asymmetry between VAT evasion and the high levels of failure to pay income tax shows that considerable overall improvement in the region's tax systems is still needed.

In short, a brief analysis of past changes indicates that there has indeed been progress in the area of taxation in Latin America and the Caribbean, in term of both public revenues and changes in tax structures. These advances, however, are focused on the VAT and the concentration of taxes, which have put more emphasis on solvency and economic efficiency than on distributive issues and compensatory policies.

The current tax structure within the region has serious problems in terms of its capacity to improve income distribution. Moreover, the reforms of the last two decades demonstrate that improving the distributive effect has not been a policy priority, and that any actual improvements in income distribution (e.g., as a consequence of replacing inflationary financing by taxation in the public sector) have occurred only as an indirect result, rather than as an explicit aspect, of the reform policies (Cetrángolo and Gómez Sabaini, 2007).

Following this line of analysis, it is instructive to refer to a simulation study on the tax reforms needed to improve income distribution (Gómez Sabaini, 2006). As figure 9 shows, all of the tax categories in the Latin American tax systems, except for income tax, are regressive, with after-tax Gini coefficients (Gpost) higher than pre-tax coefficients (Gpre).

FIGURE III.9
LATIN AMERICA: REGIONAL AVERAGE INCOME CONCENTRATION INDICES
(Household deciles on the basis of equivalent family income)



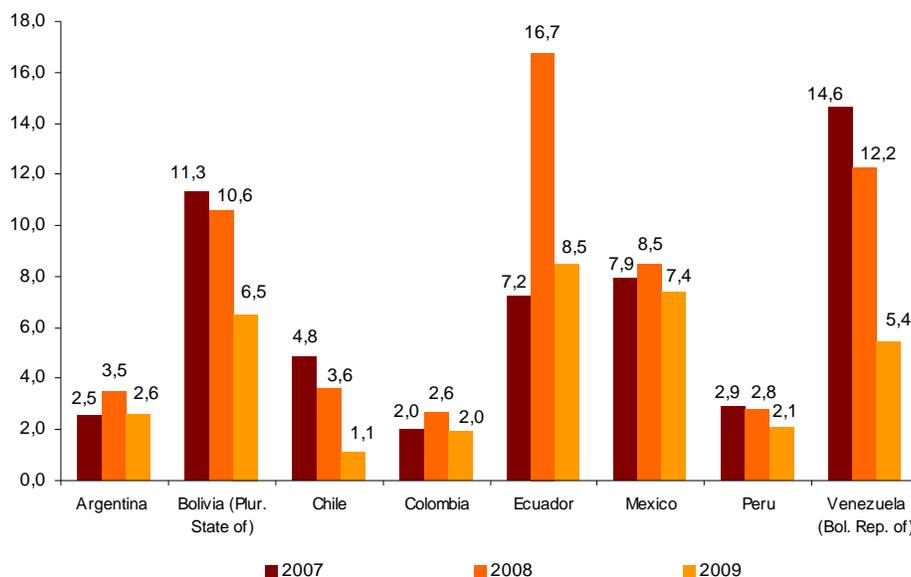
Source: C. Gómez Sabaini, "Evolución y situación tributaria actual en América Latina: una serie de temas para la discusión", *Tributación en América Latina. En busca de una nueva agenda de reformas*, ECLAC books No. 93 (LC/G.2324-P), O. Cetrángolo and J.C. Gómez Sabaini (comps.), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC). United Nations publication, Sales No. S.07.II.G.

3. How is the international crisis likely to impact tax systems?

Although it is still difficult to determine the magnitude of the impact of the crisis on tax revenues in the countries of the region, criteria can be established to differentiate between those with exportable primary products that represent potential large tax bases (such as oil, copper, natural gas and commodities) and those that lack such natural resources and whose tax revenues depend on income levels and domestic economic activity.

As ECLAC (2008c) points out in relation to the first group, a number of the region's countries garner major tax revenues from the exploitation of basic resources, that is, the Bolivarian Republic of Venezuela, Mexico, Ecuador and Colombia (petroleum), the Plurinational State of Bolivia (gas), Chile and Peru (mining), and Argentina (agricultural goods) (see figure III.10).

FIGURE III.10
LATIN AMERICA (8 COUNTRIES): REVENUES OF COUNTRIES WITH ECONOMIES
BASED ON PRIMARY PRODUCTS
(Percentages of GDP)



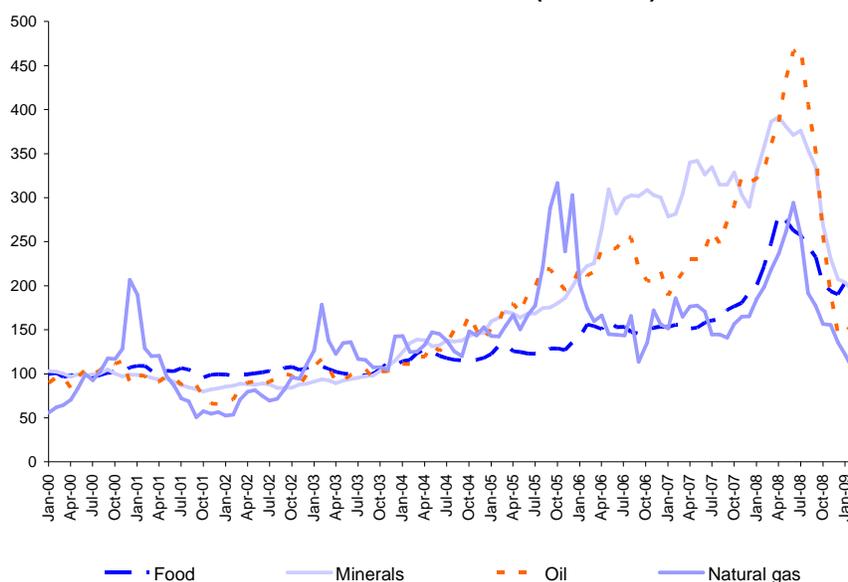
Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

The second group includes mega-economies in the region, such as Brazil, which has achieved a sustained increase in its tax revenues during the past decade, as well as other economies where the tax burden has risen only slightly, or has even fallen somewhat, as in Central America.

In the case of the first group of countries, fiscal resources are highly volatile, given the pronounced price instability of the goods in question, especially during times when consumption in the developed countries is declining sharply due to the economic crisis.

In the current crisis, a number of different factors strongly impact tax revenues from these goods, affecting either their prices or the volumes sold. There has been a notable drop in the prices of commodities, which, after reaching near-historical levels, have begun to fall significantly, as shown in figure III.11. This primarily affects the South American countries.

FIGURE III.11
COMMODITY PRICE INDEX (2000=100)



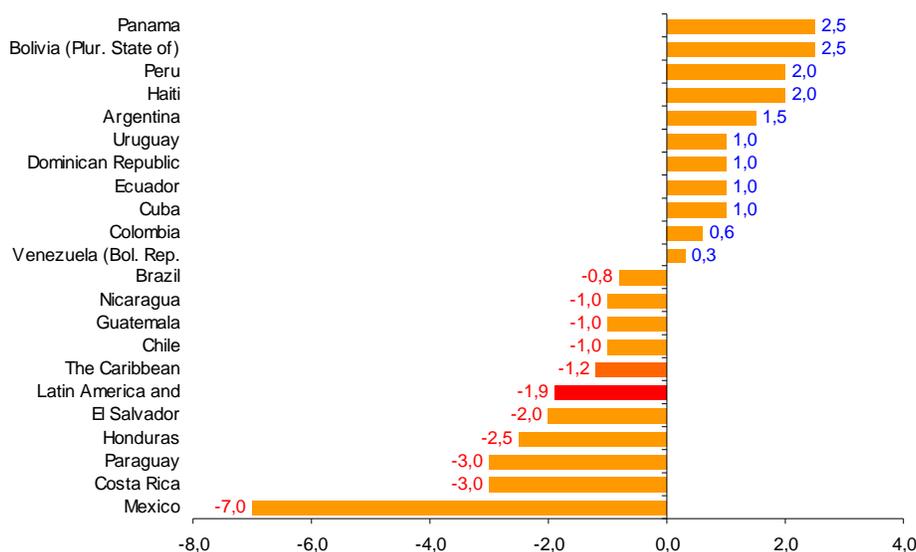
Source: Prepared by the authors, on the basis of information provided by the United Nations Conference on Trade and Development (UNCTAD).

At the same time, the recession in the developed economies and the significant slowdown in the developing countries will have a negative impact on trade flows, since there will be a decline in demand for Latin American goods and services. Figure I.2 of chapter 1 charts the abrupt slowdown in world and regional growth.

As regards the slowdown in Latin America and the Caribbean in particular, ECLAC estimates that, on average, the economy will contract by 1.9% in 2009; that the countries most affected will be Mexico (-7.0% growth), Costa Rica (-3.0%) and Paraguay (-3.0%), while Haiti, Panama, Peru, and the Plurinational State of Bolivia will maintain positive growth of 2.0% or higher (see figure III.12).

As mentioned above, this recession/slowdown reduces international trade flows, negatively affecting the tax revenues of both groups of countries. However, the effect on exports will not be the same across all of the region's countries, but rather will depend on the export destinations and types of products and services involved.

FIGURE III.12
LATIN AMERICA AND THE CARIBBEAN: ESTIMATED GROWTH IN 2009
 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC).

A fourth element affecting the level of economic activity and tax revenues is the downturn in private consumption, both by residents and by the tourist industry, which has become quite significant in many countries. The reduction in domestic consumption is also affected by the lower levels of remittances sent by citizens living abroad, as shown in figure 8 of chapter I. Naturally, the importance of remittances varies widely from country to country, being most significant in the Caribbean and Central America and, within South America, in the Plurinational State of Bolivia and in Ecuador. Thus, a 20%-30% decline in remittances means a corresponding decline of between US\$ 10 billion and US\$ 20 billion in resources.

Fifth, tightened credit in the production and consumption sectors, along with growing uncertainty, is delaying investment decisions in a wide range of activities, leading to a loss of work income and employee benefits. This has an immediate impact on tax revenues from payroll and wage withholding and, in a less immediate way, leads to less money in the form of advance payments on worker benefits. The loss of income tax revenue on business profits will be recovered only in the long term, since nearly all of the countries have provisions allowing losses to be charged against future profits.

Sixth, although the slowdown in traditional and non-traditional exports—including maquila activity in countries where such activity is important— does not have an immediate impact, since these activities are not taxed, the slowdown nevertheless has a highly significant impact on taxes from wages, salaries and benefits.

Seventh, these economic and financial conditions are clearly producing some shrinkage, along with a decrease in tax compliance. Although the countries have adjusted the interest rates they charge for late payments, the financial constraints of the last few months can be expected to increase late payment of taxes.

Finally, the rapidity of the onset of the crisis during 2008, which took a number of countries by surprise—despite the fact that it had been evident in the United States since the second half of 2007—created distortions in budget estimates for 2009. It must be borne in mind that the budget process generally begins six months before the start of the fiscal year, and at the time in question many countries did not yet have estimates projecting the end-2008 situation. Moreover, budgets are normally submitted to legislatures around September—a point at which the crisis was still in its initial

stage. Thus, revenues were calculated based on higher commodity prices than projected later for 2009, and the explicit purpose of the actual or projected measures was in many cases to weaken the effects of what at the time was accelerating inflation. These circumstances led to an underestimation of tax revenues, with significant differences between amounts budgeted and subsequent realities.

A comprehensive analysis of tax revenues reveals a series of common facts, and confirms the impact of the elements cited above. On the one hand, there has been an immediate initial impact on import taxes, with reductions of around 20% over the previous year. Although the reduction in imports has an immediate effect on revenues during slowdowns, these revenues also recover quickly when economic conditions change.

On the other hand, the decline in imports not only impacted revenue from import tariffs/duties, but also had an effect on the value added tax charged at customs. This is especially worrisome in terms of the inflow of public funds, given the importance of customs-generated VAT, which in many countries is between 40% and 50% of total VAT revenues.

Given the diversity of circumstances affecting the countries, it is difficult to determine the quantitative impact of the loss of tax revenue. As mentioned above, however, one can, for the purposes of analysis, differentiate between the situation in countries that have received significant revenue from natural resources in the last few years and those that lack such sources of revenue.

Although the current status of public accounts and fiscal policy in the region is undeniably better than in previous crises, some warning signs can be detected with regard to the capacity of public sectors to successfully deal with the crisis. Much of the improvement in the fiscal situation during the last several years is the result of the steady increase in commodity prices between 2002 and 2008. Thus, a sharp decline in these prices could seriously jeopardise the fiscal achievements. As shown in detail in ECLAC (2008b), the structural fiscal balance of the region's countries is, on average, less favourable than the observed fiscal balance⁵⁸. This is true for the region overall, but is particularly notable in countries that produce exportable commodities, for which the gap between structural fiscal balance and observed balance widened considerably in 2007 and in the first half of 2008. Although it is difficult to project, the estimated fiscal position for 2009 indicates that a significant portion of the 2007-2009 revenues was composed of extraordinary revenue, and hence will be difficult to sustain.

The increase in fiscal revenue between 2002 and 2008 is strongly linked to tax revenues from the exploitation of natural resources. In countries like the Bolivarian Republic of Venezuela, Ecuador, Mexico and the Plurinational State of Bolivia, these revenues are responsible for over 30% of fiscal resources, and they are also important in Argentina, Chile, Colombia and Peru, where they have on average represented between 14% and 18% of the total. According to Jiménez and Tromben (2006), the changing revenue from these sources is substantially more volatile than revenue from other sources—a point confirmed dramatically by the most recent quarters.

Estimates made by ECLAC (2009a) project a drop in tax revenue of about 5.6 percentage points of GDP in 2009 in the countries that specialize heavily in primary products and in which taxes from natural-resource-based activities account for over 30% of tax income. In countries somewhat specialized in commodities, the projection is a drop of 1.7 points, and in the remaining countries, a drop of 0.5% of GDP as a result of the decline in economic activity. Thus, the overall impact on public revenues from contracting demand and declining prices in the countries of Latin America and the Caribbean is expected to be around 1.8 percentage points of GDP (see table III.2).

⁵⁸ For more details on measurements of cyclically adjusted performance, see ECLAC (2008b).

TABLE III.2
LATIN AMERICA AND THE CARIBBEAN: ESTIMATED DECLINE IN FISCAL RESOURCES
FROM 2008 TO 2009
(Percentages of GDP)

	Variation 2008-2009	Share in average variation
Countries highly specialized in commodities	-5.6	-1.2
Countries somewhat specialized in commodities	-1.7	-0.3
Countries not specialized in commodities	-0.5	-0.3
Total		-1.8

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

The region is expected to shift from posting an average primary surplus of 1.3% of GDP to recording a primary deficit in the order of 0.9% of GDP in 2009. This will depend largely on the extent to which the increases that have been announced in public spending to counteract the effects of the crisis actually occur.

As a result of these various factors, the abrupt slowdown of the regional economy in 2009 may be expected to have a negative impact on income distribution and poverty levels, since unemployment and informal employment are expected to increase, median incomes of workers are expected to fall (especially in the informal market), and less income is expected to be available due to the decline in remittances. Notably, poor households were most affected by the increase of inflation in 2008, which was due primarily to rising food prices.

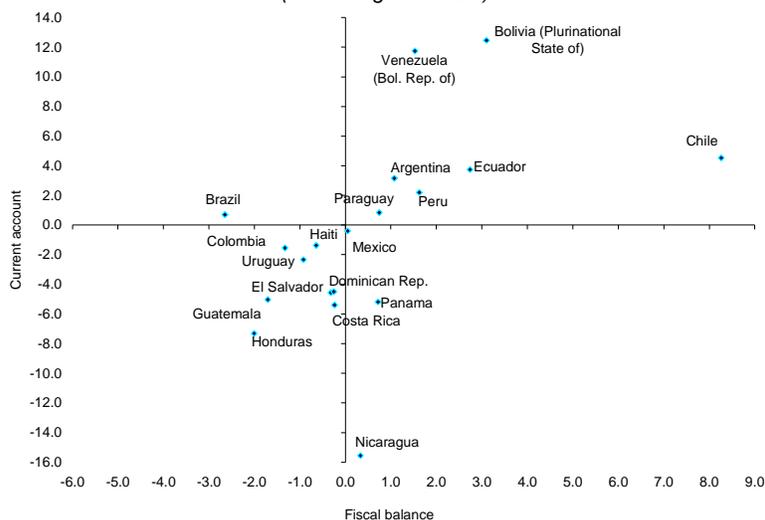
Fiscal and tax policies intended to confront the economic and financial crisis must take account of these circumstances and be designed accordingly.

In view of this situation, how much macroeconomic latitude do the countries have in addressing the crisis and implementing countercyclical policies?

The region has grown in unprecedented fashion for over five years and has maintained a current account surplus. In addition, fiscal accounts have improved as a consequence of an increase in public revenue and responsible management of spending, which led to a significant decline in debt as a percentage of GDP in the non-financial public sector (from an average of 65% in 2002 to approximately 30% in 2008). At the same time, the region experienced an improvement in debt management through a variety of debt issuances and restructurings that made it possible to improve both the maturity profile and the interest rates. At the same time, the region's capital inflows, the current account surplus, and FDI led to a significant accumulation of foreign currency, reaching an average of approximately 15% of GDP.

All of these factors have made it possible to reduce the region's vulnerability. Thus, the countries of Latin America find themselves in a better macroeconomic position than was the case during past crises, as shown by the following chart.

FIGURE III.13
LATIN AMERICA AND THE CARIBBEAN (19 COUNTRIES): CURRENT ACCOUNT BALANCE AND FISCAL BALANCE, 2006-2007
(Percentages of GDP)

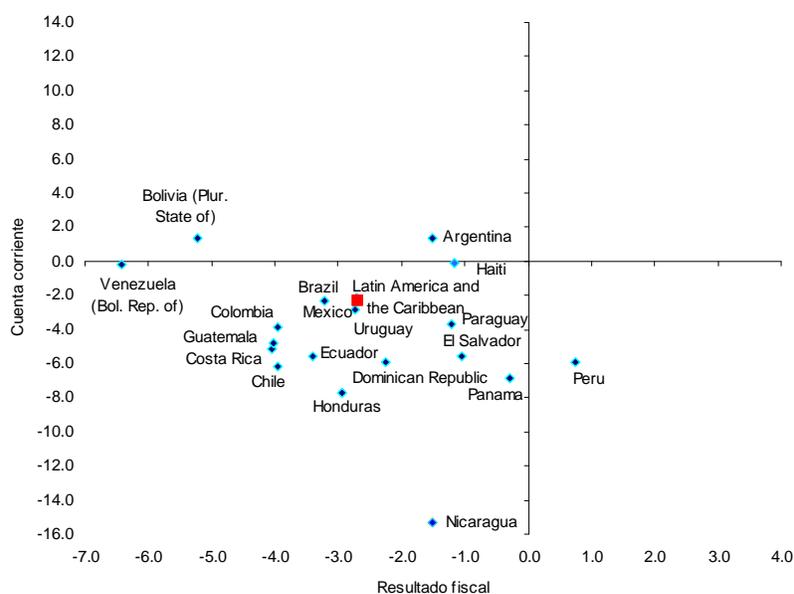


Source: Economic Commission for Latin America and the Caribbean (ECLAC).

Note: The data refer to the central government except in the cases of Argentina, Brazil, Colombia, Ecuador, Mexico and the Plurinational State of Bolivia, where the data refer to the non-financial public sector.

In 2006-2007, a number of the region's countries had twin surpluses (in their current accounts and fiscal accounts), but in 2008 this situation began to change, and most of the countries now have twin deficits, which are expected to become more pronounced in 2009 (see figure III.14).

FIGURE III.14
LATIN AMERICA AND THE CARIBBEAN (17 COUNTRIES): CURRENT ACCOUNT BALANCE AND FISCAL BALANCE, 2009
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC).

Note: The data refer to the central government except in the cases of Ecuador and Mexico where the data refer to the non-financial public sector, and the Plurinational State of Bolivia, where the data refer to general government.

In short, the challenge of fiscal policy will be to manage the inevitable drop in revenue (associated with the economic slowdown and the decline in commodity prices) while protecting expenditures in certain categories (education, social protections, infrastructure) that are vital in preventing increased poverty—a prerequisite to future growth. Fortunately, the region's governments are not exacerbating the crisis; thus, stimulating the economy with fiscal interventions remains an option. In practice, the room for fiscal manoeuvre varies widely from country to country, and will depend on the presence of savings accumulated during good times, the rigidity of expenditures, the duration of the crisis and the capacity for prudent borrowing.

4. The level of exposure of fiscal income in the international crisis

4.a. Preliminary considerations

The uncertainty generated by the international crisis and the limited predictability of its effects calls for the detailed analysis of its evolution and its impact on the economy. The goal of this exercise as carried out here is to analyze the channels by which the crisis is affecting fiscal income in the countries of the region and to clarify each country's situation in this regard.

The effect of the international crisis on fiscal income in the region will differ from one country to another, and the scope of the impact on tax collection in each will depend not only on the characteristics of the crisis itself, but also on the country's tax system—specifically, on its structure, level of collections and specific sources of revenue.

The following analysis has two objectives:

1. To describe the channels via which the current crisis is affecting tax collection in the region.
2. To provide an indication of each country's risk exposure vis-à-vis tax revenues in relation to the rest of the region.

First, we will present the attributes that have been selected as relevant to the analysis of the exposure of a country's tax system and describe each country's position regarding each variable, on the basis of an analysis of collection data.

Next, the level of exposure of each country with respect to each variable will be calculated, and the countries will be grouped into three categories according to whether their exposure is high, medium or low.

4.b. Explanation of the variables used in developing the exposure ratio

In defining the ways in which the current crisis will impact revenues, it should be noted that this is an external crisis transmitted through the channels that link Latin American and Caribbean economies to the rest of the world.

Because of this, the main effects in the region are: a decline in foreign trade (in both imports and exports and a worsening of the terms of trade), stringent limitations on access to capital markets, a drop in remittances, and a reduction in foreign direct investment. This, in turn, indirectly reduces domestic economic activity, consumption and corporate profits. How do these effects relate to tax collections? What are the most sensitive sources of revenue in this context? These are the questions that have guided the selection of variables used to assess the risk exposure that the crisis produces vis-à-vis tax revenues.

Before going through them, it is important to clarify some points about the conceptual framework and the reasoning behind their selection.

First, the choice of variables has also been affected by the information that was available, thus limiting to some extent the precision of the indicators. One clear example of this can be seen if one attempts to compare the efficiency of different tax administrations. Given the premise that the most efficient are best positioned to confront the crisis and minimize their loss of revenue by virtue of their more rigorous enforcement of tax regulations, we have, in the absence of a better indicator, used the productivity of VAT as a reflection of a country's tax administration capacity.

Second, the level of exposure gauged in this analysis refers solely and exclusively to the risk each country faces of losing tax revenue and not to its fiscal strength in terms of anti-cyclical funds to offset the shortage of resources, reserves accumulated prior to the crisis that can be used to tackle it now or the country's borrowing capacity.

Third, if a certain attribute is highlighted as increasing the vulnerability of the country's tax revenues in the current crisis, this does not imply that this feature should be viewed as a problem and tackled as such. The analysis presented here does not recommend reforms, it merely identifies through which channels the crisis is affecting tax revenue.

Finally, the list of variables is by no means exhaustive and only includes attributes that directly affect tax revenues.

The features of the tax system, then, considered in our analysis are:

1. Natural-resource-based revenue as a proportion of total income
2. The tax burden
3. Import taxes as a proportion of total revenue
4. VAT as a proportion of total revenue
5. Productivity of VAT
6. Remittances from abroad as a proportion of GDP
7. Social security contributions as a proportion of total revenue
8. Income tax collected from business as a proportion of total revenue

On the basis of the analysis of these eight variables, the countries are grouped into three categories of exposure (high, medium or low). The criterion used for this breakdown was whether countries were, insofar this indicator showed them to be, below, within or above 20% of the simple regional average according to data for 2007⁵⁹.

4.b.1. Natural-resource-based revenue as a source of financing

As indicated above, dependence on taxes from natural resources exploitation is one of the greatest risk factors at times when international crises trigger declines in commodity prices.

Although this price instability strengthened current income and fiscal balance for many of the region's countries between 2003 and 2008, providing greater fiscal space for dealing with the crisis, it also increased vulnerability to sharp reductions in revenue. At the same time, having a large amount of revenue based on natural resources exploitation acts in many countries as a barrier to establishing traditional and more stable taxes such as the income tax. This is true for Ecuador and the Plurinational State of Bolivia, for example, and results in a lower tax burden in some countries, such as Mexico.

Among the most exposed countries in this respect are the Bolivarian Republic of Venezuela (over 50% of whose total revenues derive from oil), Mexico and the Plurinational State of Bolivia (with approximately 35% of revenues from oil and natural gas, respectively), Ecuador (25% from oil),

⁵⁹ For methodological reasons, it was considered appropriate to modify this criterion in the case of natural-resource-based revenue and income from remittances, as explained in the footnotes to the corresponding tables.

Panama (22% related to the Canal) and Chile (18% from copper). Countries with similar but less dependent situations are Peru and Colombia (16% from mining, and 13% from oil, respectively) and Argentina (9% from exportation of agricultural goods)⁶⁰.

TABLE III.3
LATIN AMERICA AND THE CARIBBEAN (17 COUNTRIES): FISCAL REVENUES DERIVED FROM NATURAL RESOURCES, AS A PERCENTAGE OF TOTAL REVENUE, 2007

Greater than 24.7%			Between 24.7% and 1%							Less than 1%						
VEN	MEX	BOL	ECU	PAN	CHL	PER	COL	ARG	BRA	CRI	GTM	NIC	PRY	DOM	SLV	URY
50.6	35.4	34.5	24.7	21.8	17.6	15.7	13.4	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Note: Countries were grouped into: those whose fiscal revenue from natural resources as a percentage of total revenue is above the average (24.7%); those whose revenue from natural resources is below average but more than 1% of total revenue; and those whose fiscal income from natural resources is less than 1% of total revenue.

4.b.2. The tax burden

One major factor when trying to mitigate the effects of the crisis is the State's ability to reform tax systems, modify the tax burden or create new sources of funds. In this sense, the institutional rigidity of some of the region's countries, and the constraints that this places on their tax systems, constitutes one of the principal causes of the low tax burden. Moreover, during crises there is a need for institutions that are capable of bringing about needed reforms and that do not block necessary changes.

Those countries that have had low tax revenues for long periods tend to have greater funding problems during crises, generally because of the fact that institutional and political constraints make it difficult to increase tax income.

By way of regional comparison, the countries with the highest tax burdens, such as Argentina, Brazil, Chile and Uruguay, with levels of over 20% of GDP, have historically shown greater ability to collect taxes than countries with low tax burdens, such as Mexico, Guatemala and Paraguay, where tax revenues represent barely 10% of GDP, and where structural problems with tax collections are aggravated during crises.

This argument is supported by the fact that the tax burden in the countries of the region with lower burdens varied far less during the period in question than in those with high burdens. When countries are grouped according to their tax burden, it becomes apparent that the group with the highest (Argentina, Brazil and Uruguay) increased, on average, their income by 7% of GDP, while those with the lowest (Ecuador, El Salvador, Guatemala, Mexico and Paraguay) increased theirs by only 2.6%. The differences are even greater when comparing, for example, Brazil with Mexico: the former posted an increase of 10.7% of GDP, the latter a drop of 1.3% in terms of GDP.

⁶⁰ Argentina is a special case, since the export duties were imposed in 2002 for various reasons, particularly due to the severe devaluation of the peso that year, with the sharp increase in international prices playing a role starting in 2004. Since exportable goods are part of the basic basket of consumer goods, export duties were raised to prevent the increasing international prices and changes in the exchange rate on the basic basket from affecting consumer goods.

TABLE III.4
LATIN AMERICA AND THE CARIBBEAN (17 COUNTRIES): TAX BURDEN 1990-1992 AND 2005-2007
(Percentages of GDP)

Country	1990-1992	2005-2007	Variation
Group 1: Low tax burden	10.3	12.9	2.6
Mexico	11.8	10.5	-1.3
Guatemala	8.8	12.0	3.2
Paraguay	9.9	13.0	3.2
Ecuador	10.3	14.4	4.2
El Salvador	10.8	14.7	3.9
Group 2: Medium tax burden	13.4	18.1	4.7
Dominican Republic	8.6	15.2	6.6
Panama	14.1	15.5	1.3
Peru	13.1	16.3	3.3
Venezuela (Bolivarian Republic of)	17.3	16.4	-1.0
Colombia	10.9	18.2	7.3
Chile	17.0	20.1	3.1
Bolivia (Plurinational State of)	10.4	20.1	9.7
Nicaragua	11.7	21.2	9.5
Costa Rica	17.2	21.4	4.2
Group 3: High tax burden	21.7	28.7	7.0
Uruguay	23.0	23.9	0.9
Argentina	18.5	27.8	9.3
Brazil	23.7	34.4	10.7

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Note: The figures correspond to central government, except in the cases of Argentina, Brazil, Chile, Costa Rica and the Plurinational State of Bolivia, where they refer to the general government.

For these reasons, we have taken tax burden as a key indicator of the impact of the crisis on revenue, placing the countries with lower burdens in the group of countries more exposed to risk from the crisis.

TABLE III.5
LATIN AMERICA AND THE CARIBBEAN (17 COUNTRIES): TAX BURDEN, 2007
(Percentages of GDP)

Less than 15.5%					Between 15.5% and 23%									Greater than 23%		
MEX	GTM	PRY	ECU	SLV	COL	DOM	PAN	VEN	PER	BOL	CHL	NIC	CRI	URY	ARG	BRA
11.7	12.5	12.9	14.4	15.0	15.8	16.0	16.6	17.0	17.2	20.1	21.3	21.9	22.5	24.1	29.1	36.2

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Notes: 1. Includes social security contributions and the figures correspond to central government, except in the cases of Argentina, Brazil, Chile, Costa Rica and the Plurinational State of Bolivia, where they refer to the general government.

2. The ranges were determined by taking the average +/- 20%.

4.b.3. Import taxes as a proportion of total tax revenue

One of the major consequences of the financial crisis has been a significant reduction in international trade, which, for the region, entails not only a problem for exports, but also a reduced capacity to import, and hence a decline in import tax collections.

The problems associated with a taxation system that depends on foreign trade have been amply discussed in the literature, and the experience of the Latin American countries since the beginning of the twentieth century abounds in funding problems associated with drops in the volume of foreign trade. The commercial opening undertaken in previous periods reduced the importance of import taxes to its current level, which averages 6.8% of total tax revenue for the countries as a whole. However, for some countries, the weight of these taxes continues to be considerable, and it has therefore been considered appropriate to include this criterion as a risk factor in the face of the crisis.

The countries in which import taxes have the greatest weight are Panama, Paraguay, the Dominican Republic and Ecuador, with levels near 10% of total tax revenue. At the other extreme (under 3%) are Mexico, Chile and Brazil.

TABLE III.6
LATIN AMERICA AND THE CARIBBEAN (17 COUNTRIES): IMPORT TAXES
AS A PERCENTAGE OF ALL TAX REVENUES, 2007

Greater than 7.5%						Between 7.5% and 5.1%					Less than 5%					
PRY	PAN	DOM	ECU	VEN	GTM	SLV	COL	URY	CRI	BOL	NIC	PER	ARG	MEX	CHL	BRA
10.8	10.7	10.7	10.3	9.1	9.0	6.7	6.3	5.8	5.6	5.4	4.7	3.8	3.1	2.5	1.6	1.3

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Note: The ranges were determined by taking the average +/- 20%.

4.b.4. VAT as a proportion of total tax revenue

The rising tax burden of the last two decades in the region's countries was based on the expansion of the value added tax, making it the most important source of tax revenue.

The high and growing dependence on VAT has increased dependence on domestic private and public consumption as a source of fiscal income—a source that shrinks quickly in response to crisis. This problem is intensified by the large role of import-VAT revenues, which change even more quickly than does final consumption during crises, especially in circumstances such as the present one, where the decimation of international trade has been so rapid. Although VAT paid at the time of import is later credited against domestic sales, its capture at the moment of entry into the country improves fiscal cash flow. The lack of solid statistics on this matter, however, precludes it from this analysis.

The countries in which VAT plays the largest roles are Guatemala (48% of total tax revenue) and—each with 45%—the Plurinational State of Bolivia, El Salvador and Paraguay. At the other extreme are Costa Rica (27%) and Panama (13%). VAT in the remaining Latin American countries accounts for between 30% and 40% of total tax revenue.

TABLE III.7
LATIN AMERICA AND THE CARIBBEAN (17 COUNTRIES): VAT
AS A PERCENTAGE OF TOTAL TAX REVENUE, 2007

Greater than 43.2%				Between 43.2% and 28.8%										Less than 28%		
GTM	BOL	SLV	PRY	ECU	URY	CHL	BRA	ARG	NIC	COL	VEN	PER	MEX	DOM	CRI	PAN
48.1	45.8	45.5	45.3	39.0	38.0	37.8	37.2	36.9	34.8	34.6	33.6	33.5	31.3	30.7	27.5	13.0

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Note: The ranges were determined taking the average +/- 20%.

As mentioned above, the reduction in the VAT has been intensified (i) by the decline in imports; (ii) by the inefficiency of tax administration and high evasion rates; (iii) by the decline in remittances, which are of great importance in some countries and strongly affect consumption levels; and (iv) by the decline in tourism, which principally affects the Central American and Caribbean countries.

4.b.5. The productivity of VAT

As indicated above, there have been no regional studies to provide clear indicators of the quality of tax administration. As a result, evasion rates, the productivity of the VAT, the degree of automation of the collecting agency, and the costs of collection are commonly assumed to reflect administrative efficiency.

However, comparable information for the 17 countries is not available for all these indicators. In the case of evasion, only a minority of countries have reliable, methodologically equivalent data on the topic, making comparison inappropriate.

Therefore, we have used VAT productivity (collections obtained in relation to the rate applied) as an indicator. The productivity ratio of the tax provides an idea of the tax structure, as well as the efficiency with which it is administered, and we may therefore consider it to be a variable that reflects the administrative capacity of the institutions involved.

VAT productivity increased in the last 20 years, as a result of efforts made to strengthen collections, improve tax administration and reduce evasion—but, above all, owing to a broadening of tax bases as a result of eliminating exemptions for some goods and by incorporating services, which had been excluded from the tax base.

TABLE III.8
LATIN AMERICA AND THE CARIBBEAN (12 COUNTRIES): PRODUCTIVITY OF VAT, 2007

	PAN	MEX	DOM	PER	COL	URY	CHL	ECU	CRI	ARG	VEN	BOL
VAT collections as percentage of GDP	3.7	4.9	5.8	5.5	9.1	7.9	5.6	6.2	10.4	6.1	5.7	9.2
VAT rate (as of 2007)	15.0	16.0	17.0	16.0	23.0	19.0	12.0	13.0	21.0	12.0	11.0	13.0
VAT productivity	20.8	24.4	30.7	33.9	34.6	39.7	41.7	47.0	47.7	49.6	51.8	71.0

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC) and KPMG (KPMG's Corporate and Indirect Tax Rate Survey, 2007).

Note: 1. Countries for which no information was available were attributed with average exposure.
 2. The ranges were determined taking the average +/- 20%.

Believing that greater productivity in VAT collection implies more efficient tax administration and a better state of preparedness for crisis, the present exercise considers countries with more productive VATs to be better equipped for the crisis. These include the Plurinational State of Bolivia, the Bolivarian Republic of Venezuela, Argentina, Costa Rica, Ecuador and Chile.

4.b.6. Income from remittances from abroad

Before assessing each country's situation regarding remittances, we will explain the reasoning behind the inclusion of this "non-tax" variable.

Remittance levels have risen significantly in the last five years: by ECLAC estimates, they reached US\$ 69 billion in 2007, and in some countries, such as El Salvador and Nicaragua, they accounted for 20% of GDP. Given that the sharp rise in unemployment in the developed countries is affecting immigrant workers in particular, remittance flows from those countries to Latin America are plummeting. The incomes of sizeable segments of society have therefore dropped, which is resulting in lower consumption levels and tax revenues. Furthermore, families that receive remittances from abroad spend most of their income on consumer items, making this effect even more intense.

To appreciate the magnitude of the remittances received by some of the region's countries and their impact on consumption, the remittance inflows of three countries were correlated with private consumption (see table III.9). The remittance/private consumption ratio was particularly high in the three countries under study (11.7% in Ecuador, 19.6% in El Salvador and 17.1% in Guatemala), which suggests that remittances account for a significant portion of consumption in those countries and that any decline in remittance levels severely depresses consumer tax revenues.

TABLE III.9
LATIN AMERICA (SELECTED COUNTRIES): PRIVATE CONSUMPTION AND REMITTANCES
(Millions of 2007 dollars)

	Private consumption	Remittances	Remittances / Private consumption
Ecuador	29 138.0	3 394.8	11.7%
El Salvador	19 562.0	3 835.3	19.6%
Guatemala ^a	28 453.0	4 873.8	17.1%

Source: For remittances: Economic Commission for Latin America and the Caribbean (ECLAC); for private consumption: central banks of the respective countries.

^a The data on private consumption for Guatemala is for 2005, the ratio for 2007 should therefore be lower.

Of the countries included in this study, those with the highest levels of remittances are El Salvador and Nicaragua, where these represent approximately 19% of GDP, and Guatemala, where they represent approximately 15% of GDP (2007 figures). For present purposes, we consider remittance levels above 5% of GDP to be "high". In addition to the countries mentioned above, this group includes the Plurinational State of Bolivia, the Dominican Republic and Ecuador (see table III.10).

TABLE III.10
LATIN AMERICA AND THE CARIBBEAN (17 COUNTRIES):
REMITTANCES AS A PERCENTAGE OF GDP, 2007

More than 5%						Between 5% and 1%						Less than 1%				
SLV	NIC	GTM	BOL	DOM	ECU	PRY	CRI	COL	MEX	PER	CHL	PAN	URY	ARG	BRA	VEN
18.8	18.8	14.5	8.9	8.6	7.4	3.1	2.8	2.7	2.4	2.3	2.2	2.1	0.7	0.6	0.4	0.1

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

4.b.7. Social security contributions as a percentage of total tax revenue

Following VAT in the weighting order, is revenue from social security. Since it can be assumed that contributions to the social benefits system decline more, proportionally, during crises than does GDP, there will be a major loss of revenue associated with social security contributions during times of crisis.

The contraction of credit in productive and consumption sectors, as well as increasing uncertainty, is delaying investment decisions in a wide range of activities, while also decreasing formal employment and increasing informality. This has an immediate impact on public revenue from payroll and wage-based taxes. Thus, countries that have a large flow of tax revenues from social security contributions will see their revenue diminish significantly. These countries include Brazil, Costa Rica, Ecuador, México, Panama and Uruguay —where social security represents over 20% of tax revenue.

TABLE III.11
LATIN AMERICA AND THE CARIBBEAN (17 COUNTRIES): SOCIAL SECURITY CONTRIBUTIONS AS A PERCENTAGE OF TOTAL TAX REVENUE, 2007

Greater than 19%						Between 12.5% and 19%			Less than 12.5%							
PAN	CRI	ECU	URY	BRA	MEX	NIC	ARG	COL	SLV	PRY	BOL	PER	CHL	VEN	GTM	DOM
34.1	29.3	28.1	25.6	24.7	23.3	17.8	16.9	14.4	10.8	9.7	9.1	9.0	6.3	5.1	1.3	0.4

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Note: The ranges were determined taking the average +/- 20%.

4.b.8. Income tax collected from business as a proportion of total tax revenue

Another factor taken into account was income tax, and income tax collected from businesses in particular. Although a decline in revenue from personal income tax has a more immediate impact on tax revenue, the small proportion of total tax income that it represents and the minimal amount of resources it generates in terms of GDP (between 1% and 2% on average) mean that a drop in personal income tax collection is not that significant. Furthermore, it should be borne in mind that personal income tax is generally levied on the highest salaries, and wage-earners in this income bracket can be expected to be the least affected by the crisis.

Income tax collected from business, on the other hand, represents on average 18.4% of total tax income and should therefore be considered a factor when determining the exposure risk of a country's fiscal income within the context of declining economic activity and corporate profits.

On this premise, the greater the weight of income tax collected from business, the greater the country's exposure should be. The countries with the highest proportion of corporate income tax in their total tax revenue (34%) are Chile and Peru, where this tax is levied on the profits of natural-resource-based companies. Next come the Bolivarian Republic of Venezuela and Guatemala, with 24%, and at the other extreme are Argentina, Costa Rica, Dominican Republic and Uruguay, where income tax collected from business accounts for less than 13% of total tax receipts.

TABLE III.12
LATIN AMERICA AND THE CARIBBEAN (17 COUNTRIES): INCOME TAX
AS A PERCENTAGE OF GDP, 2007

Concept	CHL	BRA	PER	ARG	NIC	PAN	MEX	SLV	DOM	CRI	URY	GTM	BOL	ECU	PRY
Income tax	8.4	7.7	7.2	5.4	5.4	4.8	4.7	4.6	4.0	3.9	3.6	3.4	3.3	2.8	2.0
Corporations	7.3	5.1	5.9	3.8	3.3	2.9	2.5	2.7	1.7	2.9	2.6	3.0	3.0	2.1	2.0
Physical persons	1.2	2.6	1.4	1.7	2.1	2.0	2.3	1.9	2.4	1.0	1.0	0.4	0.2	0.7	0.0

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

TABLE III.13
LATIN AMERICA AND THE CARIBBEAN (17 COUNTRIES): INCOME TAX FROM BUSINESS
AS A PERCENTAGE OF TOTAL TAX REVENUE, 2007

More than 22.1%				Between 22.1% and 14.7%						Less than 14.7%					
PER	CHL	VEN	GTM	MEX	SLV	PAN	PRY	NIC	BOL	ECU	BRA	ARG	CRI	URY	DOM
34.1	34.1	24.1	24.0	21.0	17.9	17.2	15.5	15.2	15.1	14.6	14.2	12.9	12.9	10.8	10.5

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

Note: The ranges were determined taking the average +/- 20%.

4.c. Quantifying the analysis and determining the ratio

In the tables presented for each of the variables, the countries are grouped into three categories according to their level of exposure to the crisis. To quantify the relative position of each country with regard to the different variables, high exposure was weighted by 2 (two), medium exposure by 1 (one) and low exposure by 0 (zero). Thus, in the analysis, the countries that are more vulnerable to revenue losses during the crisis will accumulate more points.

TABLE III.14
WEIGHTING OF THE EXPOSURE LEVELS

Exposure	High	Medium	Low
Range	More than 20% above the average value	Between 20% below and 20% above the average	More than 20% below the average
Weighting	2	1	0

Source: Prepared by the authors.

Notes: 1. For tax burden and VAT productivity, the quantification process is inverted, as an increase in these variables implies lower exposure.
 2. For income from taxes on natural-resource-based activities: a 2 was awarded to countries that were above the average for the countries that have such resources; a 0 was awarded to those that do not have such income or in which such income is less than 1% of total tax revenue; and a 1 was awarded to those between these two extremes.

It is important to note that this classification reflects a country's situation in comparison with the other countries in the region. A low exposure rating therefore only refers to the country's level of exposure in relation to the other countries in the analysis and in no way reflects a judgment regarding the level or composition of its fiscal income.

TABLE III.15
LATIN AMERICA AND THE CARIBBEAN (17 COUNTRIES): EXPOSURE LEVELS
(In percentages)

Country	Fiscal income from natural-resource-based activities (Percentages of total income)		Tax burden (Percentages of GDP)		Import taxes ^a		VAT ^a		VAT productivity (Percentages)		Remittances (Percentages of GDP)		Social Security contributions ^a		Corporate Income tax ^a		Total score according to weighting scheme
Group 1: High exposure																	
Ecuador	24.7	1	14.4	2	10.3	2	39.0	1	47.0	1	7.4	2	28.1	2	14.6	0	11
Guatemala	0.0	0	12.5	2	9.0	2	48.1	2	na	1	14.5	2	1.3	0	24.0	2	11
Mexico	35.4	2	11.7	2	2.5	0	31.3	1	24.4	2	2.4	1	23.3	2	21.0	1	11
Panama	21.8	1	16.6	1	10.7	2	13.0	0	20.8	2	2.1	1	34.1	2	17.2	1	10
Group 2: Medium exposure																	
Bolivia (Plurinational State of)	34.5	2	20.1	1	5.4	1	45.8	2	71.0	0	8.9	2	9.1	0	15.1	1	9
Paraguay	0.0	0	12.9	2	10.8	2	45.3	2	na	1	3.1	1	9.7	0	15.5	1	9
El Salvador	0.0	0	15.0	2	6.7	1	45.5	2	na	1	18.8	2	10.8	0	17.9	1	9
Colombia	13.4	1	15.8	1	6.3	1	34.6	1	34.6	1	2.7	1	14.4	1	na	1	8
Venezuela (Bolivarian Republic of)	50.6	2	17.0	1	9.1	2	33.6	1	51.8	0	0.1	0	5.1	0	24.1	2	8
Dominican Republic	0.0	0	16.0	1	10.7	2	30.7	1	30.7	2	8.6	2	0.4	0	10.5	0	8
Chile	17.6	1	21.3	1	1.6	0	37.8	1	41.7	1	2.2	1	6.3	0	34.1	2	7
Nicaragua	0.0	0	21.9	1	4.7	0	34.8	1	na	1	18.8	2	17.8	1	15.2	1	7
Peru	15.7	1	17.2	1	3.8	0	33.5	1	33.9	1	2.3	1	9.0	0	34.1	2	7
Group 3: Low exposure																	
Costa Rica	0.0	0	22.5	1	5.6	1	27.5	0	47.7	1	2.8	1	29.3	2	12.9	0	6
Uruguay	0.0	0	24.1	0	5.8	1	38.0	1	39.7	1	0.7	0	25.6	2	10.8	0	5
Brazil	0.0	0	36.2	0	1.3	0	37.2	1	na	1	0.4	0	24.7	2	14.2	0	4
Argentina	8.6	1	29.1	0	3.1	0	36.9	1	49.6	0	0.6	0	16.9	1	12.9	0	3
Average			19.1		6.3		36.0		41.1				15.6		18.4		7.8
Average + 20%			22.9		7.6		43.2		49.3				18.8		22.1		9.4
Average - 20%			15.3		5.1		28.8		32.9				12.5		14.7		6.3

Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

^a As percentages of total tax revenue.

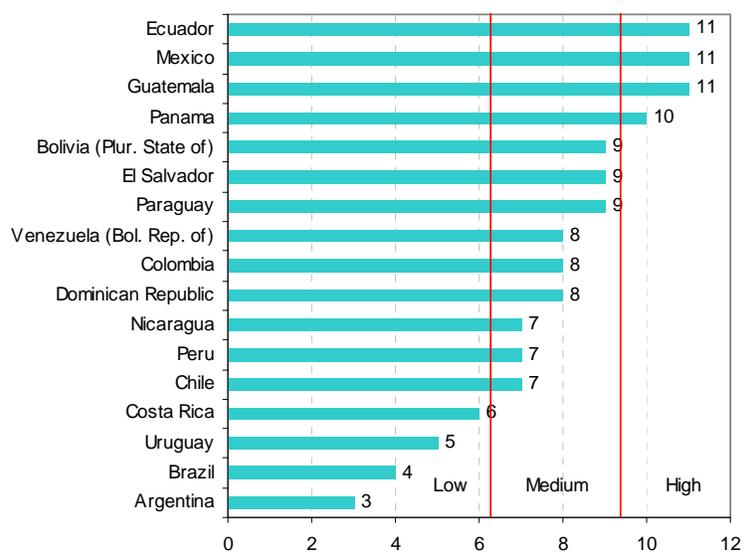
Table III.15 shows the situation of each country with regard to each variable, as well as the corresponding weighting and the total score thus obtained. The countries are listed in descending order according to this score and divided into three groups: those with high, medium or low levels of exposure.

This table therefore not only presents the exposure level of each country but also why it is more or less vulnerable than the others. The results position Ecuador, Guatemala, Mexico and Panama as the most exposed countries (Group 1). The Plurinational State of Bolivia, El Salvador, Paraguay, Bolivarian Republic of Venezuela, Colombia, Dominican Republic, Nicaragua, Peru and Chile follow next as members of the medium-exposure group (Group 2), and the least exposed countries are Costa Rica, Uruguay, Brazil and Argentina (Group 3).

These divisions reflect the fact that while the countries in Group 1 (high exposure) have a medium or high level of exposure in all the variables, the opposite holds for the countries in Group 3, whose exposure level is low in the vast majority of variables and medium in just a few.

Figure III.15 summarizes the results obtained from the analysis and orders countries according to their relative exposure rating within the region.

FIGURE III.15
LATIN AMERICA AND THE CARIBBEAN (17 COUNTRIES): RELATIVE LEVEL OF EXPOSURE OF TAX COLLECTION IN THE FACE OF THE INTERNATIONAL CRISIS



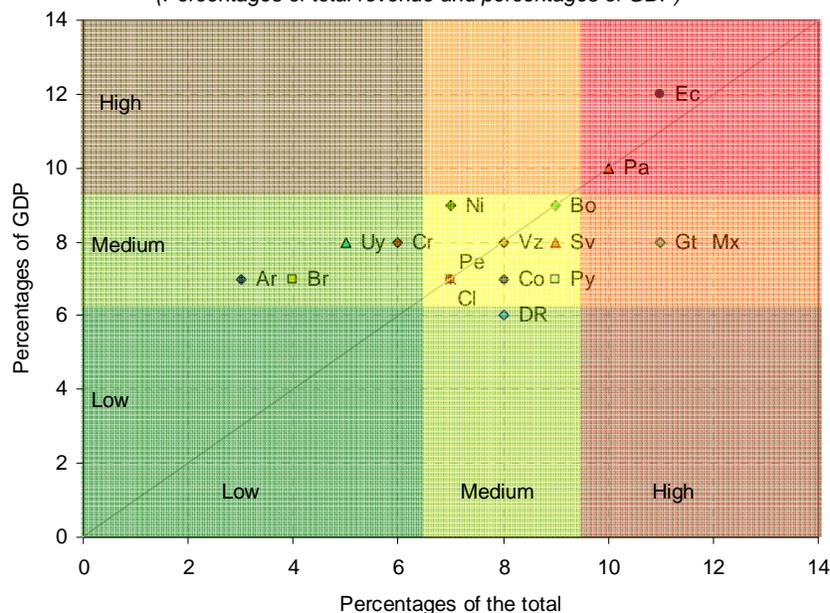
Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

It should be noted that the findings refer to the possible loss of tax revenue as a percentage of total revenue and not in terms of GDP. Some countries may lose more in GDP terms although the drop may not be significant in terms of total tax income; the exposure level determined here is therefore lower. This begged the question as to what the results would be if exposure levels were calculated not in terms of percentages of total tax revenue but as percentages of the tax burden, in other words in terms of GDP.

Using this criterion, the findings were that the gap between the most and least exposed countries narrows and most countries end up in the medium exposure risk category on account of the fact that the level of exposure of countries with high tax burdens (Argentina, Brazil and Uruguay) increases, while those with low tax burdens (Mexico and Guatemala) decreases. This is most clearly shown in figure 18 which shows the results obtained when calculating exposure both in terms of

percentages of total revenue and in terms of percentages of GDP. Only two countries, Ecuador and Panama, fall into the high exposure category in both cases, and no country falls into the low exposure category in both cases.

FIGURE III.16
LATIN AMERICA (17 COUNTRIES): COMPARISON OF EXPOSURE LEVEL FINDINGS USING TWO
DIFFERENT CRITERIA
(Percentages of total revenue and percentages of GDP)



Source: Prepared by the authors, on the basis of figures provided by the Economic Commission for Latin America and the Caribbean (ECLAC).

The findings again show the relative position of the countries of the region to one another. The countries that are presented as in the low exposure group will not be exempt from revenue losses; they are just in a better position than the other countries in the region.

One final observation of this exercise is that, in addition to the indicator developed, it enhances understanding of the channels through which the current crisis is affecting tax collection in Latin America and the Caribbean.

5. What tax changes have been observed, to date, in the region?

5.a. Anti-crisis measures, fiscal policy options and the timing of implementation

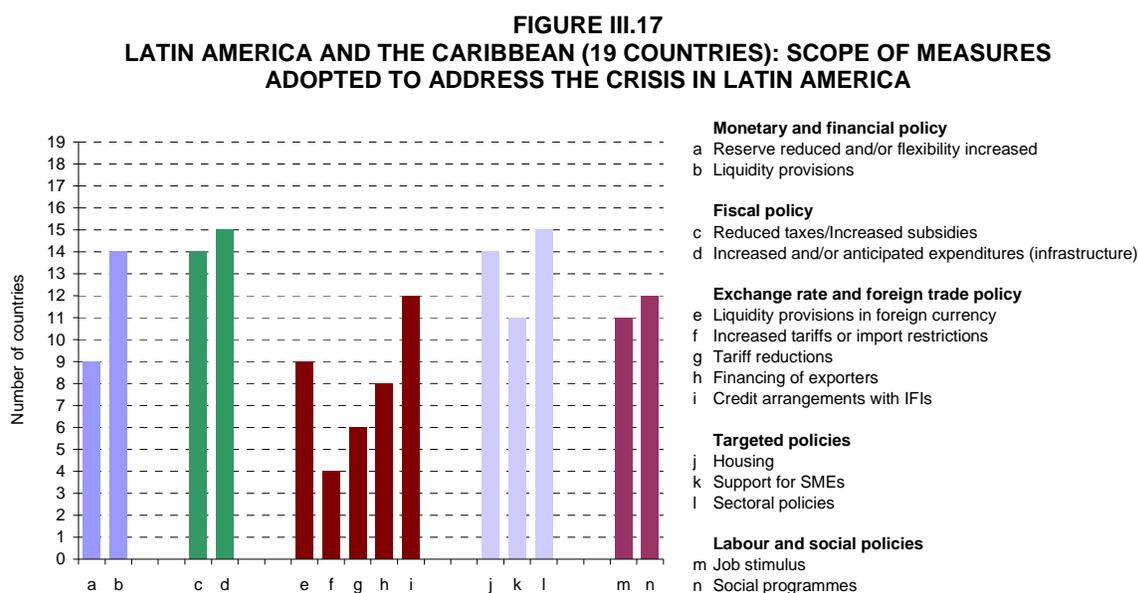
It would appear that from mid-2007 to mid-2008 relatively few tax changes occurred, and it seemed that Latin American and Caribbean countries had managed to uncouple from the effects of the international crisis. Shortly thereafter, this theory proved incorrect, since the crisis found a channel to enter the region through commodity prices and trade and financial flows. This could explain the initial delay in adopting compensatory measures that would have provided greater preparedness to address the new international conditions.

As analyzed in detail in chapter I, in general terms, the region's governments have taken two types of measures in the last several months: (i) countercyclical measures to activate domestic demand

and production of tradables, while moderating domestic factors that could aggravate the foreign trade imbalance; and (ii) domestic policies to reduce the regressive social effects of the crisis, as well as of possible future adjustment measures.

Naturally, the measures implemented by the different countries will depend on the effects that they face, as well as their capacities and resources. Therefore, their ability to react to the crisis varies, based primarily on their respective fiscal contexts, their international currency reserves, access to foreign financing and other factors such as the degree of monetisation, the depth of the financial market and the state of the current account.

Figures III.17 summarises the measures implemented or announced by the Latin American and Caribbean countries. These have been grouped in five categories: monetary and financial policy, fiscal policy, exchange rate and foreign trade policy, sectorial policy, and labour and social policy.



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *The reactions of the Governments of the Americas to the international crisis: an overview of policy measures up to 31 March* (LC/L.3025), Santiago, Chile, 31 March 2009.

As may be seen, most of the countries have adopted policies to ensure adequate liquidity.

In the fiscal area, governments have increased spending (investment projects) while lowering taxes or increasing subsidies. Notably, only some of the countries have implemented import restrictions or raised tariffs.

In terms of foreign trade, the governments have attempted to sustain their exports primarily by financing exporters.

With regard to targeted measures, housing programmes have in many cases been used (given their importance for employment and their high social value), as have sectoral policies (principally in the agricultural, tourism and industrial sectors).

A number of countries have also adopted measures to help SMEs, and the majority have opted to maintain or adopt social programmes rather than promote job creation.

Different fiscal policies generate different effects, since, in the first place, measures to increase spending have greater potential than do those based on reducing taxes. The former imply a direct increase in demand, whereas the latter generate an increase in disposable income in the private

sector that, in an uncertain context such as the current one, is very likely to translate primarily into more saving. Moreover, as is well known, it is difficult in the region to quantify and measure the impact of tax deductions and incentives, usually referred to as “tax expenditures”⁶¹. The implementation of these deductions adds another level to the analysis, namely, the duration of the measures, which may be temporary or permanent.

However, very significant differences may still be evident if the analysis limits itself to spending increases. If this takes the form of direct transfers, the more it is possible to target sectors with a higher propensity to consume, the greater will be the impact. Nevertheless, this type of transfer is more difficult to implement in the short term, and more demanding institutionally than non-targeted transfers.

Similarly, when spending increases take the form of programmes to increase infrastructure investment, it must be borne in mind that not all projects have the same impact on employment and on demand for locally produced inputs. Given the importance of rapid implementation in these cases, there is not always a ready portfolio of needed projects.

As a result, despite the lesser potential impact of tax cuts (or non-targeted subsidies) vs. spending increases, governments often prefer the former, at least in the short term. Insofar as feasible, it is preferable to develop spending plans and implement properly evaluated investment projects, to promote more efficient use of public resources.

5.b. Tax measures adopted by the region’s countries

According to a survey by ECLAC (2009b) on the policies announced by countries in response to the crisis, it is possible to identify a series of measures that, in one way or another, are related to the crisis, although some may actually be responses to other circumstances. These are:

Argentina

- Tax and pension fund moratorium. Covers all tax and social security liabilities payable as of 31 December 2007.
- Reduction in employer contributions: all firms creating or regularising jobs pay 50% of contributions for the first year and 75% for the second.
- Reduction in tax on exports of wheat and maize: rates of export duty on wheat will fall from 28% to 23%, and on maize from 25% to 20%. Reduction by an additional point for every million tons of production above the recent average.
- Fifty percent reduction in tax on exports of all fresh fruit and vegetables.
- Elimination of the scheme of income tax deductions applicable to wage-earners since 2000. This measure benefits some 800,000 middle- or high-income workers.
- One-year extension of the system of incentives for the purchase of capital goods, which lowers tariffs on imported goods and provides a 14% rebate for local manufacturers in the form of vouchers that can be used to pay taxes.

Bolivarian Republic of Venezuela

- Increase in the VAT from 9% to 12%.

Brazil

- Federal government and some states have extended the time allowed for monthly tax payments, thus easing pressure on corporate cash flows.

⁶¹ For more detail on the problem of using tax deductions and differences in calculating “tax expenditures” in Latin America, see Jiménez and Podestá (2009).

- A series of tax cuts have been announced, totalling approximately US\$ 3.7 billion, in order to boost consumption.
- The tax on financial operations will be cut from 3% to 1.5% for direct consumer credit operations and for the overdraft credit line.
- The processed products tax applicable to vehicles was temporarily cut (originally until March 2009, then for three more months up to June 2009). For the purchase of motor vehicles with displacements of up to 1,000 cc., the tax will be cut from 7% to 0%, and for those up to 2,000 cc., from 13% to 6.5%.
- Income tax tables for physical persons were revised, introducing lower rates (7.55% and 22.5%), which favour the middle class, i.e., those who earn up to US\$ 900 per month.

Chile

- Stamp duty will be eliminated for all credit transactions in 2009, and the rate of this duty will be halved for the first half of 2010.
- Increase in benefits under Decree Law 701 on incentives for the forestry industry.
- Temporary reduction of monthly provisional payments of category-1 taxes (corporate income tax).
- Income tax rebates will be brought forward for natural persons in respect of the 2010 fiscal year.
- Readjustment of the maximum amount subsidised by the SENCE tax exemption, and a discount on monthly training expenditures, through the exemption of the monthly provisional payments for businesses.

Colombia

- Taxpayers will benefit from cuts totalling US\$ 1 billion under the tax reform of 2006, which introduced changes that will come into effect in 2009.
- The nominal income tax rate drops from 34% in 2008 to 33% in 2009.
- Stamp duty reduction, from 1.0% to 0.5%.
- The number of wealth tax payments is reduced from three to two in 2009.

Costa Rica

- In March 2009, a decree was signed to permit accelerated depreciation of assets during 2009, with a possible extension to 2010.

Ecuador

- Moratorium on advance income tax payment up to December 2009 for exporters in the sectors most affected by the crisis.
- Reduction in the withholding tax on interest paid abroad, to 0% for the banking sector and to 5% for private firms until December 2009 (except for capital from tax havens).
- Bank provisions above the required minimum are deductible.
- Taxes on private banks are to be temporarily reduced, and financial institutions are required to capitalise their profits in exchange for issuing of credit to the productive sectors.
- Banks' stocks of external assets are taxed to encourage national saving, with the levy on capital outflows to be raised from 0.5% to 1%.

- Tariffs will be eliminated for inputs and capital goods not produced domestically.
- A tax reform bill has been drafted.

Guatemala

- Income tax reform bill.

Honduras

- Income tax exemptions for employees earning under US\$ 8,000 per year.

Mexico

- Low tariff.
- Programme to Support the Economy (3/3/2008), with the following tax measures: 3% discount on provisional payments of the corporate income tax and the single rate business tax (IETU) (February-June 2008); stimulus of 1,000 Mexican pesos for individuals with business activity who file their 2007 tax returns electronically; 5% discount on social security contributions.

Nicaragua

- Import tariffs were reduced or temporarily eliminated.

Peru

- Temporary increase in drawback rate on non-traditional exports (from 5% to 8%).
- Accelerated depreciation bill.

Uruguay

- Charging advances on taxes on income from business activities (IRAE) involving importation of consumer goods, as is already done with the VAT.
- Regulation of IRAE for transfer fees.
- Increase in domestic excise tax (IMESI) on cigarettes.
- Bonus in the form of 120% exemption from IRAE for investments made in 2009, in the framework of the law on investment and the new weighting that rewards projects that create more jobs.
- System for reimbursing tourists for taxes.

5.c. What tax policy measures are advisable during the crisis?

The variety of circumstances affecting the region's countries makes it impossible to recommend policies that will be broadly applicable. The design of the "package of measures" should reflect the specifics of each country, taking account of their economic and social structures, as well as institutional factors. As has been emphasised above, no single model is right for all cases.

If there is one generally applicable point, it is that the stimulus packages or measures adopted by the countries should be consistent with certain basic premises: temporariness, sustainability and institutional strengthening.

The impact of the current crisis has been rapid and strong, though its future course is not yet clear. Observations and analyzes to date, vary as to the future and end point of the crisis.

The following table presents a quick compilation of feasible measures, with the caveat that their timing and depth must be carefully scrutinised in view of each country's socioeconomic and institutional realities.

TABLE III.16
FISCAL POLICY FOR THE CRISIS. MEASURES RELATING TO FISCAL RESOURCES

	Measure	Advantages	Disadvantages
1.	Temporary reduction in consumption tax rates	Increase in the purchasing power of families. By lowering the price of goods, such measures stimulate current consumption, vs. future consumption. Provides relatively more benefit for the lower income quintiles	Not a targeted benefit, as some other policy options provide for Benefits may not always reach the consumer. In a context of uncertainty and a crisis of confidence, such measures may not be a sufficient stimulus to increase consumption
2.	Fixed tax rebates for certain sectors, and temporary increases in either the rates or maximum amounts of income tax credits	Can be properly designed to target low-income sectors or consumer sectors subject to credit constraints. Can be implemented rapidly. Effects are temporary	May not be effective if motivations for savings predominate. May not be effective for highly indebted families, since they will prefer to increase savings rather than consumption, in anticipation of an economic contraction
3.	Temporary reduction in unemployment insurance contributions	Designed to increase employment by reducing costs for employers Can be implemented rapidly	May not be effective if the economic outlook is considered weak There is little evidence that the measure actually impacts employers' decisions While some advocate reducing social security contributions temporarily, there are risks that the reduction will not be reversed later, and will weaken social security financing
4.	More flexible rules for determining tax losses for banks and businesses	Generates incentives for merger and acquisition of companies with problems, by firms with more solid positions Permits more symmetrical treatment of profits and losses Is designed to restore confidence in the banking sector and in businesses with problems Is a means of ensuring better management of businesses with low profitability	The merged firms may be liquidated or discontinued after this process has taken place While this situation might be prevented through strict rules, the rules could prove difficult to implement
5.	Adjusting rules governing advance payments in order to take account of future income, as well as rules on carrying over losses	Facilitates better cash flow management for firms, as well as more symmetrical treatment of profits and losses	Firms may under-declare future income It is unclear whether, in the current context, these measures can actually help maintain aggregate demand

(continuing)

TABLE III.16 (conclusion)

	Measure	Advantages	Disadvantages
6.	Reduction in corporate taxes on income, dividends and capital gains, or application of special stimulus rules such as accelerated depreciation	No observed advantages Not advisable	Not effective, since firms' profits are low, and many firms may have tax losses Reductions in rates, and stimuli, may be difficult to reverse subsequently
7.	Amnesties, moratoriums or temporary exemptions for firms with problems	No observed advantages Not advisable	Highly distorting Highly unequal in treatment of different economic activities Affects moral behaviour of taxpayers Leads to a race for subsidies Inefficient in a system that is well-structured in its treatment of advance payments and future losses
8.	Compensatory rules vis-à-vis past tax liabilities	No observed advantages Not advisable	The possibility of compensating for current losses with profits from previous tax periods, or of receiving rebates of taxes already paid, is not only inefficient in terms of future performance, but highly distorting
9.	Changes in taxation that increase existing distortions	No observed advantages Not advisable	Increased tariffs, for example, are distorting, and may be highly inefficient
10.	Measures to strengthen financial markets and prices	No observed advantages Not advisable	Measures such as tax cuts for capital gains are distorting, and may provoke fraud as taxpayers attempt to lower their tax burden by making regular income appear to be capital gains

Source: Prepared by the authors, on the basis of A. Spilimbergo and others, Fiscal Policy for the Crisis, IMF Staff Position Note (SPN/08/01), Washington, D.C., International Monetary Fund (IMF), December 2008, Appendix I.

Any measures adopted should be capable of creating an immediate “shock” impact, rather than an impact that is diluted over time. By the same token, they should include a time limit. This is especially important for investment-demand-stimulus policies with no end date, which leave the economic actor free to determine when to make use of the benefit.

A second factor to consider when choosing measures is that they should not compromise fiscal solvency in the medium and long term, since, if they do, they will raise doubts not only about their effectiveness, but also about the future of the economy. This means making short- and medium-term decisions that are consistent, although often these two types of measures are not considered in tandem. Thus, it is advisable that the measures adopted be susceptible to rapid reversal once there is a clear change in the course of the crisis.

In this context, it is important to consider both the feasibility of application/implementation and the lag between time of adoption and impact on the economy.

6. The political economy of reform during the crisis, and the changes required for a paradigm shift

In the context of the international crisis, the countries' tax measures will be subject to circumstances that are not only economic, but also political, social and institutional, which tend to make a forceful appearance in times of crisis. Ultimately these circumstances play a significant role in the countries' ability to emerge from their fiscal crises, which strongly affect economic stability, political legitimacy and the level of social welfare.

Analysis of the political economy studies of taxation in Latin America shows that the great majority agree that there is a vicious circle, which largely explains the difficulties that the region's countries have in implementing reforms. The components of the vicious circle are (Gómez Sabaini and O'Farrell, 2009):

- i. A socioeconomic structure marked by high levels of inequality, capital concentration and informality;
- ii. Political institutions that are delegitimised, and are heavily influenced by power groups;
- iii. A fiscal system characterised by insufficient funds, regressiveness and limited capacity for reform.

In terms of Latin America's socioeconomic structure and level of development, the strong weight of the economies' primary sectors, the size of the informal economies, the high concentration of capital, the high levels of income inequality and low per capita income produce harmful effects on politics and institutions, as well as in the area of taxation.

With regard to effects on taxation, the following factors constitute important limitations: very small potential income tax bases, dependancy on non-tax revenues, limited capacity of tax administrations, low level of tax awareness and morality, high evasion levels, and incentives for corruption and rent seeking.

At the same time, the socioeconomic features cited above strongly affect the capacity of political institutions, making them, among other things, highly susceptible to influence. They may even be run by lobbies. These realities produce policies that benefit a small group, generally an elite, while at the same time leading to the blocking of reforms that are undesirable to those most involved with government.

As a result of this, the region's governmental institutions and policies suffer from pronounced delegitimation, and are considerably weaker than those of the more developed countries. Delegitimation and institutional weakness have direct implications for tax policy. According to data from the Latinobarometer, 79% of Latin Americans are not confident that tax monies will be well spent. Furthermore, 50% believe that the State is capable of solving few or no problems. These perceptions and beliefs on the part of citizens create systematic resistance to tax collections and to actions designed to change collections procedures.

Many writers point to the consequences of the institutional and political features that affect the State's capacity to effectively implement tax policy. One study on Brazil, by Marcus Melo (1998), underlines how political fragmentation can put reforms "in neutral". He analyzes different features of democratic institutions that contribute to this, including the fact that "political parties have become collections of factions with minimal coherence".

Along a similar line, Lledo, Schneider and Moore (2004) note the differences in direct taxation levels between the Caribbean countries and the Latin American countries. One of the explanations offered is that the Caribbean countries inherited stronger parliamentary institutions than those present in the presidentialist regimes of South America. Thus, in polarised situations, the

legislators in the former countries can negotiate, making concessions and compromises on taxes, while presidents in the latter group still govern with a legislature dominated by the opposition (in the worst cases, a fragmented opposition), with the attendant difficulties in moving a progressive tax package forward (Murga Pinillos, 2005).

These writers agree, in a sense, with one of the most influential works on this subject (Steinmo, 1993), which centres on the relationships among institutions, and the ability of different actors to negotiate. According to Steinmo, the differences in tax systems may be found in the design of democratic institutions, since these depend on the ability of actors interested in the results of tax policy to negotiate, as well as on the information available to them and the incentives they have for seeking particular policies.

Finally, we note that recent trends in the literature underline the importance of the quality of institutions in the processes of creating and implementing public policy. Stine and Tommasi (2006) conclude that effective political processes and public policies are feasible when political parties are institutionalised and programme based, when legislatures have substantial capacity to formulate policy, when an independent judiciary is in place and bureaucracies are solid. They believe, at the same time, that in institutionalised party systems, when political organisations are programme based (in the sense that they compete and gain support based on differences in their policies and achievements), it is more probable that they will promote greater coherency in policy over time, and that there will be greater potential for establishing lasting agreements.

In this sense, the institutional deficiencies common to the great majority of countries in Latin America are highly relevant to understanding conflicts regarding tax systems, as well as the constraints on implementing reforms.

The factors to which tax reform is subject, cited so far, create very limited room for possible change in tax policy (Prats and others, 2007), and are directly associated with two of the most notable taxation problems in Latin America: insufficient revenue and regressiveness. These two factors, and a very limited ability to change them, mean that tax policy not only cannot reverse socioeconomic inequalities and combat poverty, but also that in many cases it increases them.

These factors must be borne in mind in the present crisis, since they will to a great extent determine the ability of each country to respond to the conflicts that arise —a situation that calls for pro-active policies.

Thus, the conditions created by the crisis not only require reforms, but may also help to make them possible. In this respect, Mahon (1997) lists four determinants of tax reform in Latin American countries, along with empirical findings on their relevance: economic crisis, electoral cycles, type of regime and international pressure.

Mahon observes that basic changes in tax structure and administration are generally possible in times of crisis. Citing Bird (1992), the author points to evidence that, during crises, it becomes possible to overcome the coalitions of political opposition and administrative inertia that ordinarily block important reforms. One example of this is the economic emergency laws passed in Argentina in 2002. In that situation, it became possible to approve tax measures that had been rejected by the legislature only a few years earlier. It is clear that this proposition is particularly important in attempting to effect tax changes that have serious redistributive implications, and that would be rejected out of hand in non-crisis circumstances.

Again, in the case of Argentina, various reforms contained in the 1999 tax laws, particularly regarding taxes on persons, found support during the crisis. Moreover, in the recent economic expansion, characterised by unprecedented growth of fiscal revenues, reforms were quite limited, except in the case of Mexico. In the other countries, it appears that as revenue goals are met or surpassed, incentives to change tax systems have fallen sharply.

Indeed, discussion of the inequality of the systems becomes limited to academic circles, and does not translate into legislative bills to address these problems, though they are widely known (Cetrángolo and Gómez Sabaini, 2007; Gómez Sabaini and Martner, 2008).

The introduction of the income tax in the region between 1920 and 1930 can be seen in the same way. In practically all of the countries, this occurred in a context of scarce resources due to declining world trade, the economic crisis following World War I and the Great Depression.

Another factor facilitating the implementation of reforms, according to Mahon, is international pressure. Referring in particular to international influence on reforms in Latin America during the 1980s and 1990s, the author asserts that international pressure is often decisive in the implementation of reforms. This pressure may appear as a result of economic programmes subject to economic policy conditionalities, or based on pressure from external trends. In the area of taxation, as is perhaps true in a limited number of other economic areas, there is ample room for an “imitate your neighbour” effect, which explains why the region’s tax systems have been strongly influenced by different trends, with implementation of the VAT being one of the most important and widespread examples (Gómez Sabaini and Martner, 2008).

In line with the arguments set forth by Mahon (1997), Di John (2006) argues that threats, both internal and external, generate windows of opportunity for tax reform. As indicated above, many historians hold that these threats—in the form of wars or invasions—were determining factors in the creation of the Western nation states, opening the way for citizens to be less resistant to increased taxes.

Di John (2006) argues that threats today could take forms other than imminent war, including action by domestic social movements, fiscal crises or global economic conditions. It is clear, then, that, as in the case of other determinants of tax policy, contextual conditions can serve to legitimise changes in both the level and structure of public revenues by creating increased societal consensus on the need for them.

Finally, we must not ignore ideological changes, and what many writers see as a paradigm shift in the structure of the economy, the role of the State, and the State’s relation to society. This shift involves a major change in the countries’ fiscal policies, moving toward higher levels of spending, and hence more tax revenues. The current situation may aid many of the region’s countries in reaching greater consensus for measures that reduce the system’s regressiveness and increase the tax burden, thus strengthening the State’s ability to act, particularly with regard to combating poverty and reducing economic inequality.

7. Final remarks

A number of thoughts emerge from this analysis, concerning the impact that the crisis may have on the countries of the region. These are of interest when considering concrete tax policy measures that may be advisable for the various countries. One of the lessons for the region, emerging from the analysis, is the importance of countering the volatility of fiscal revenues and addressing the effect this has on public spending. To accomplish this, it is essential that the solvency of public accounts be based on revenue sources that are less vulnerable to business cycles, since the sustainability of public finances over time is a necessary condition in creating the fiscal context in which countercyclical fiscal policy can be brought to bear⁶². Thus, it is important to strengthen the tax systems, an achievement that involves efforts in both the policy area and in tax administration.

First, it is evident that not all of the countries will be affected by the international crisis to the same extent or via the same channels. The asymmetrical nature of the crisis suggests that a “one size fits all” model will be of little use, with specific actions having to be tailored to each individual situation.

⁶² For more detail on the relation between macroeconomic fluctuations and fiscal policy in Latin America, see Fanelli and Jiménez (2009).

Second, it is clear that, although a price will have to be paid for adopting tax measures that inevitably fall short of garnering the normal political consensus, this price will be less than the cost of inaction or hesitation. The external, international nature of the crisis means that the determinants of the countries' tax revenues are now exogenous variables that cannot be changed by any individual country. Therefore, the greater the adaptability or flexibility of the policy in the face of change, the less negative the effects of such change are likely to be.

Third, although the "eye" of the storm may be narrow and quickly exhausted, its secondary and collateral effects may be long term. Therefore, measures to address the crisis should not be postponed, and should, at the same time, be consistent with what is expected in the medium and long term. Distorting measures that create rapid short-term gains but have negative effects on the pace of future growth should be avoided.

Fourth, a positive element is that the tax burden in the region's countries has grown over the last decade, nearing maximum potential capacity. Moreover, in most cases the tax structure has also undergone positive changes, bringing it more closely in line with international norms. The measures adopted must not reverse the achievements made to date, and should be susceptible to reversal once the effects of the crisis are attenuated over time. Measures with effects that cannot be reversed, or that introduce distortions in the tax structure, should therefore be avoided.

Fifth, in order to contribute to an initial assessment of the crisis impact on each country's tax circumstances, an index reflecting exposure to the crisis has been developed. This takes account of a series of variables in order to assess the impact of the crisis. It is evident that the tax revenues of countries with a high percentage of non-tax revenues or a high percentage of revenues from taxes on natural resources activities, with low tax burdens and economies highly open to trade, have a higher exposure index than do the revenues of systems with high tax burdens, those where income tax plays a greater role in revenue, and those where the VAT has a high productivity ratio.

The final factor is the countries' institutional and political capacity to implement their policies. This points directly to the political economy of taxation, a complex field where analysis highlights a number of features and arguments to consider, none of which is conclusive. If any assertion can confidently be made here, it is that crises also represent opportunities for change and, as Di John states, may open a "window of opportunity" for reforms to Latin American tax systems that are needed not only to deal with the crisis, but also for the purpose of economic and social development.

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