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## Toward an understanding of crises episodes in Latin America: A post-Keynesian approach

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## Working Paper No. 728

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### **Toward an Understanding of Crises Episodes in Latin America: A Post-Keynesian Approach\***

by

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\* The opinions here expressed are those of the authors and may not coincide with those of the institutions with which they are affiliated. The authors wish to thank Ramón Pineda for useful discussions on some of the main ideas presented in this paper.

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## **ABSTRACT**

Conventional wisdom about the business cycle in Latin America assumes that monetary shocks cause deviations from the optimal path, and that the triggering factor in the cycle is excess credit and liquidity. Further, in this view the origin of the contraction is ultimately related to the excesses during the expansion. For that reason, it follows that avoiding the worst conditions during the bust entails applying restrictive economic policies during the expansion, including restrictive fiscal and monetary policies. In this paper we develop an alternative approach that suggests that fiscal restraint may not have a significant impact in reducing the risks of a crisis, and that excessive fiscal conservatism might actually exacerbate problems. In the case of Central America, the efforts to reduce fiscal imbalances, in conjunction with the persistent current account deficits, implied that financial inflows, with remittances being particularly important in some cases, allowed for an expansion of a private spending boom that proved unsustainable once the Great Recession led to a sharp fall in external funds. In the case of South America, the commodity boom created conditions for growth without hitting the external constraint. Fiscal restraint in the South American context has resulted, in some cases, in lower rates of growth than what otherwise would have been possible as a result of the absence of an external constraint. Yet the lower reliance on external funds made South American countries less vulnerable to the external shock waves of the Great Recession than Central American economies.

**Keywords:** Business Fluctuations; Great Recession; Latin America

**JEL Classifications:** E32, E65, O54

## INTRODUCTION

The analysis of Latin American business cycles and, in particular, that of crises episodes tends to follow, perhaps inadvertently, the boom/bust approach developed by the Austrian School of economics and associated in particular with the work and ideas of F.A. Hayek, which assumes that monetary shocks cause deviations from the optimal path, a methodology that was revived in more recent years by the New Classical and Real Business Cycles schools.<sup>1</sup>

According to this approach, the triggering factor in the cycle is excess credit and liquidity. In the case of Latin American countries, the origin of the cycle is often traced to a surge in financial inflows. Central to this view is the belief that the origin and nature of the bust (contraction) is to be found in the boom (expansion). As such, the more pronounced the upswing (boom), the harsher the following and inevitable contraction. From here, it follows that avoiding boom conditions entails applying restrictive economic policies during the expansion in the business cycle, including reigning in government expenditures and fostering public savings.

Building on the structuralist and post-Keynesian tradition, we argue that the boom and bust view is inherently contradictory because its policy recommendations tend to produce exactly the type of drastic and unwarranted fluctuations that it seeks to avoid. In fact, we show that once the binding character of the external sector is understood and introduced into the analysis, a restrictive fiscal policy aimed at avoiding a “bust” may simply cause a process of debt accumulation in the private sector. Moreover and more importantly, we sustain at a more general level that the key to understanding business cycles, crises, and their impact lies in the analysis of the composition and structure of aggregate demand. We illustrate these points by focusing on one of the most systemic crisis that has affected Latin American economies in the past half a century, namely the Global Crisis (2007–2009), and by analyzing its differentiated impact on Central and South America.<sup>2</sup>

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<sup>1</sup> In the original New Classical models, derived from the work of Robert Lucas, shocks were always monetary in nature. Lucas (1977) is pretty clear about his views on the Austrian nature of his work on business cycles, or more explicitly on its direct affiliation with Hayek, even if he suggests that “I once thought of myself as a kind of Austrian, but Kevin Hoover’s book persuaded me that this was just a result of my misreading of Hayek and others” (Lucas 1994, p. 222). In our view, Lucas’ initial instincts were actually correct.

<sup>2</sup> The period 2007–2009 of the Global crisis encompasses the year it began in the United States (2007) to the year in which the bulk of the effects were felt in Latin America (2009). In 2007, most Latin American economies were still experiencing a period of high growth.

We argue that the brunt of the effects of the crisis were felt in Central America mainly due to the rising current account deficit whose mirror image was the accumulation of private debt once the fiscal accounts were kept in (or near) balance. The impact of the crisis forced a private sector deleveraging process that had devastating consequences on investment, output, and the financial sector. In contrast to the boom-bust view the chain of causation of our analysis runs from deleveraging to the real economy and then to liquidity and finance, while also suggesting that the external constraint imposed by the current account does not, in general, allow for rates of growth compatible with catching up with advanced economies. On the other hand, South America was not, for the most part, as affected mainly due to the favorable performance of its external sector, which allowed the private sector balance to register a surplus. This is not to say that growth has resulted exclusively from the external conditions in South America, but that over the last boom, the external constraint was not binding.

We attribute this differentiated impact to the fact that under a contractionary fiscal stance, the type of growth regime followed by Central America, based on private debt accumulation, was much more vulnerable to this particular type of crisis than that followed by South American countries based on a large commodity export-led growth, which provided space for domestic demand and increasing social transfers.

The paper is divided into six sections. The first discusses the boom-bust view of the business cycles and crises and its policy implications. The second section describes the impact of the Global Crisis on Latin America and its sub regions (South and Central America). The third section develops a macroeconomic model based on Kaleckian and Minskyian insights for the analysis of the business cycle and crises. The fourth and fifth sections provide empirical evidence in the case of the Global Crisis for Central and South America that exemplify some of the key features of the model. These sections also show that contrary to the boom/bust view of the cycle, credit is endogenous to demand conditions. The final reflections are found in the conclusion.

## **THE BOOM AND BUST VIEW OF BUSINESS CYCLES AND CRISES**

The great majority of Latin American economists, independently of their political view point, see the business cycle as a succession of booms and busts around an exogenously determined and optimal trend. The origins of the boom and bust view can be traced to the Austrian Business

Cycle theory and, more precisely, to Clément Juglar (Wicksell 1898, Schumpeter 1939, and Hayek 1933), and has been revived in the works of New Classical authors like Lucas (1981) and by Kydland and Prescott (1982).<sup>3</sup> In a nutshell, it sustains that the intensity of the recession/contraction in an economic cycle is directly proportionate to the previous expansionary phase. The more pronounced the expansion, the sharper the recession will be. The recession is thus a product of the expansion.<sup>4</sup>

From here follows the most important conclusion of this view, which says that contractions are inevitable and necessary. Furthermore, contractions can even be conceived as being desirable, as illustrated by the introduction of liquidation as a sub-phase within the economic cycle associated with this approach.<sup>5</sup> Economic policy cannot suppress contractions, but it can prevent their development into busts. Since contractions and also crises are incubated during expansion periods, crisis management is tantamount to expansion management, and cooling the economy during the booms to avoid the excesses of the cycle is seen as part of good macroeconomic policy.

The literature on the subject does not provide any numerical or quantitative threshold for defining an expansion or a boom. Nonetheless, this phase of the cycle is generally identified, as in Austrian business cycle theory, with greater overall liquidity conditions. This is characterized mainly by credit growth above trend (“excess credit”) for both developed and developing countries. In addition, in the case of developing countries, booms are also associated with increased and large financial inflows.<sup>6</sup> In fact, the chain of causation in a boom period proceeds

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<sup>3</sup> Some of the authors emphasize monetary shocks, while others stress real disturbances to the optimal trend. The Keynesian Revolution was, to some extent, developed as a reaction to this tradition, and led to a view of the cycle in which trend and fluctuations result endogenously from the interactions of autonomous demand decisions and the adjustment of productive capacity. It is important to note that the trend itself, that is, potential output, is endogenous and demand driven. See for example, McCombie and Thirlwall (1994) and Bortis (1996).

<sup>4</sup> Or as put by Juglar: “the only cause of depression is prosperity” (*apud* Schumpeter 1927, p.29).

<sup>5</sup> Liquidation was one the phases of the cycle identified by Juglar and became associated with the Austrian theory of the business cycle (e.g. Schumpeter 1939; Hayek 1933) and with passive policies adopted by governments before the Great Depression and the Keynesian Revolution. Eichengreen (1999, pp. 8-12) defines it as: “... liquidationism, according to which business cycle downturns served the Darwinian function of weeding out the weak enterprises least well adapted to a dynamic economy.”

<sup>6</sup> Mendoza and Terrones (2008, p. 26) argue that large financial inflows precede “credit booms” in developing economies, whereas in developed economies, these are preceded by productivity gains or domestic financial reforms. Within the boom-bust tradition, placing the focus on financial inflows as the cause of the boom has led to emphasize “sudden stops” as the triggering mechanism of the bust. In the literature, sudden stops occur concurrently with balance of payments or currency crises. Sudden stops generally involve a reduction in the current account deficit in the year of occurrence of the sudden stop or one year after. As will become clearer in the text, we agree that a sharp decline in financial inflows can be part and, indeed, is an important part of the explanation of the business cycle and crises; however, sudden stops are not necessarily related to a balance of payments crisis.

from increased financial flows to greater credit, liquidity, and spending. In the transmission mechanism, the proponents of this view highlight the fact that the pro-cyclical behavior of government expenditure is a key contributor to the generation of booms and, hence, by the logic of the approach to the occurrence and the intensity of the following and necessary contraction. Thus, the often quoted aphorism: “contractions are not managed in the downward phase of the cycle but in the upward phase of the economic cycle.”<sup>7</sup>

Note, furthermore, that within this approach, pro-cyclicality in the upswing has a clear cost not only because the intensity of the upturn determines that of the downturn, but also because a pro-cyclical stance in the upturn prevents undertaking a counter cyclical stance in the downturn. Hence, counter cyclicity in the downward phase of the cycle is predated on counter cyclicity in the upturn. Or, to put it in a more straightforward manner, what in mainstream constitutes a counter cyclical approach to business is, thus, ultimately reduced to counter cyclicity in the upswing.

According to a minority opinion within this boom-bust view, counter cyclicity amounts to the implementation of capital management techniques to tame and administer financial inflows. But, by far, the consensus opinion is centered on exercising restriction on government expenditures or increasing fiscal savings in the upswing of the cycle.<sup>8</sup> In practice, this has amounted to place an increasing focus on balanced budgets across the Latina American region, and in some countries the adoption of fiscal rules, such as the structural balance rule in the case of Chile (2000) or fiscal responsibility laws in Argentina (1999 and 2004), Brazil (2000), Colombia (2003), Ecuador (2002 y 2005), Panamá (2002 and 2004), Peru (2000 and 2002) and Venezuela (2003).<sup>9</sup>

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Furthermore, its impact will depend on the composition of aggregate demand. For more on the conventional view, see Calvo (1998), Calvo et al. (2004), and Izquierdo et. al. (2008). See Jorda and Aliber (2005) for a recent analysis of the importance of credit in boom and bust. Perez Caldentey and Vernengo (2011) show that the boom and bust view has a long tradition in the understanding of cycles in Latin America.

<sup>7</sup> Evidence presented by Kaminsky *et al.* (2004), for the period 1960–2003 for 104 countries, including developed and developing countries worldwide, shows that the correlation coefficient between the cyclical component of real GDP and real central government expenditure is positive (pro-cyclical) for the majority of countries under study, especially for developing countries. This is often used as an argument in favor of promoting austerity during the booms.

<sup>8</sup> In this regard, the boom-bust view is akin to what Tobin (1974) termed the cyclical mentality to describe economic policy in the Truman and Eisenhower administrations, where the function of the federal government is the moderation of cyclical swings.

<sup>9</sup> The arguments underscoring the adoption of rules are well known. Rules improve the credibility of institutions and the reputation of policy makers. Institutions have clear objectives; namely: a credible policy is one for which agents expect that it will have its intended effects. Reputation is based on known preferences by the public and preferences

From our perspective, the boom-bust view of business cycles contains an inherent contradiction in the sense that its policy recommendations cause exactly the type of drastic fluctuation that its proponents wish to avoid. This becomes visible when the balance-of-payments constrained nature of developing economies is understood and incorporated into an analysis that considers the interaction between the government and external and private sectors in a context in which potential output is demand-driven. In what follows, we illustrate this issue using as an example of the most important systemic crisis for Latin America since the 1980s Debt Crisis—that is, the recent Global Crisis or Great Recession (2007–2009).

### **LATIN AMERICA AND THE GLOBAL CRISIS (2007–2009)**

The Global Crisis (2007–2009) is considered to be the worst and sharpest recession in the post-WWII era. With a few exceptions, the majority of the economies of the world registered a significant reduction of their growth rates.<sup>10</sup> The Latin American region was no exception. The crisis interrupted the most dynamic and longest period of expansion of Latin American economies in over three decades lasting from 2004 to 2007, and in some cases to 2008. During this period, the rate of growth of GDP for the region on average reached 6.1 percent, which was above that recorded for the 1970s, 1980s and 1990s (respectively 4.9 percent, 1.5 percent, and 3.7 percent).<sup>11</sup> In line with the impact of the crisis worldwide, Latin American and Caribbean countries witnessed, on average, a decline in the regional GDP growth rate of -0.5 percent for 2009 (5.2 percent in 2008). At the national level, 10 out of 18 (or 55 percent of the total) Latin American economies experienced output contractions.

From a comparative sub-regional perspective, the effects of the crisis are far from homogeneous and were felt with much greater intensity in Central America than in South America. On average, the rate of growth in 2009 plunged by -1.5 percent, on average, for Central America (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua), and -1 percent if

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that are expected to remain invariant. Note that the majority of countries in Latin America that have adopted fiscal rules also have in place a monetary rule whether it be inflation targeting (Chile, Colombia, Peru) or hard peg rule (Ecuador, Panama).

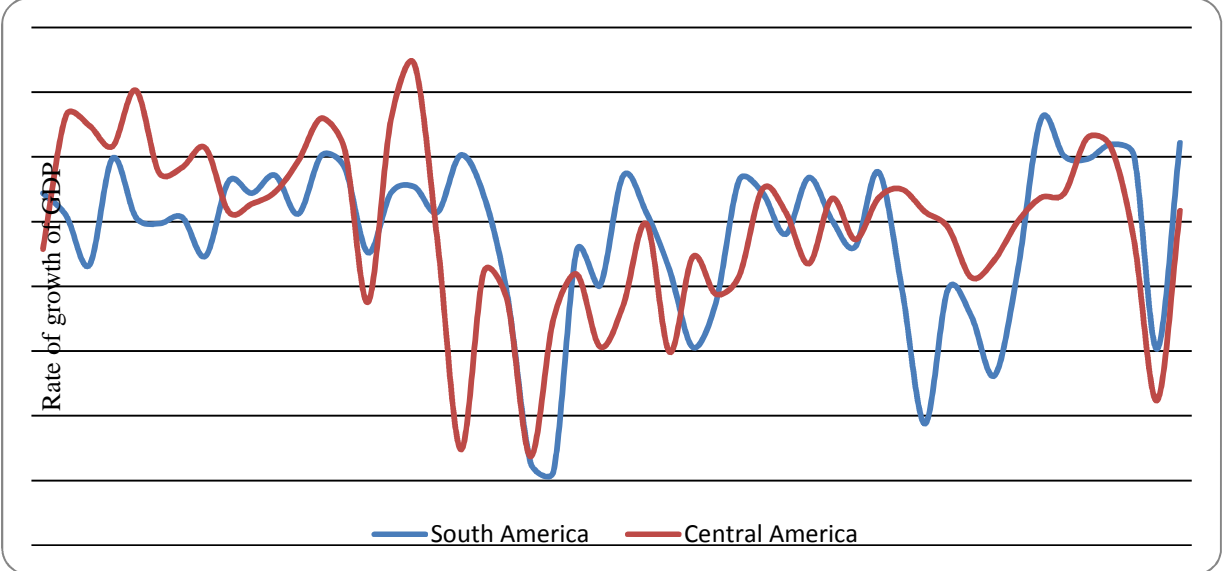
<sup>10</sup> The crisis originated in the developed world and the impact on output was felt with greater force in advanced economies than in emerging and developing economies. The rate of growth in the former group declined from 0.5 percent in 2008 to -4.2 percent in 2009. In the latter case, the rate of growth of output declined from 6.3 percent to 2.8 percent for the same period.

<sup>11</sup> In the period 2000–2010, the average rate of growth of GDP for Latin America was 3.9 percent.



Panama and the Dominican Republic are included. South America did not, on average, register a contraction, and managed to maintain a positive rate growth (0.06 percent), as can be seen in Figures 1 and 2.

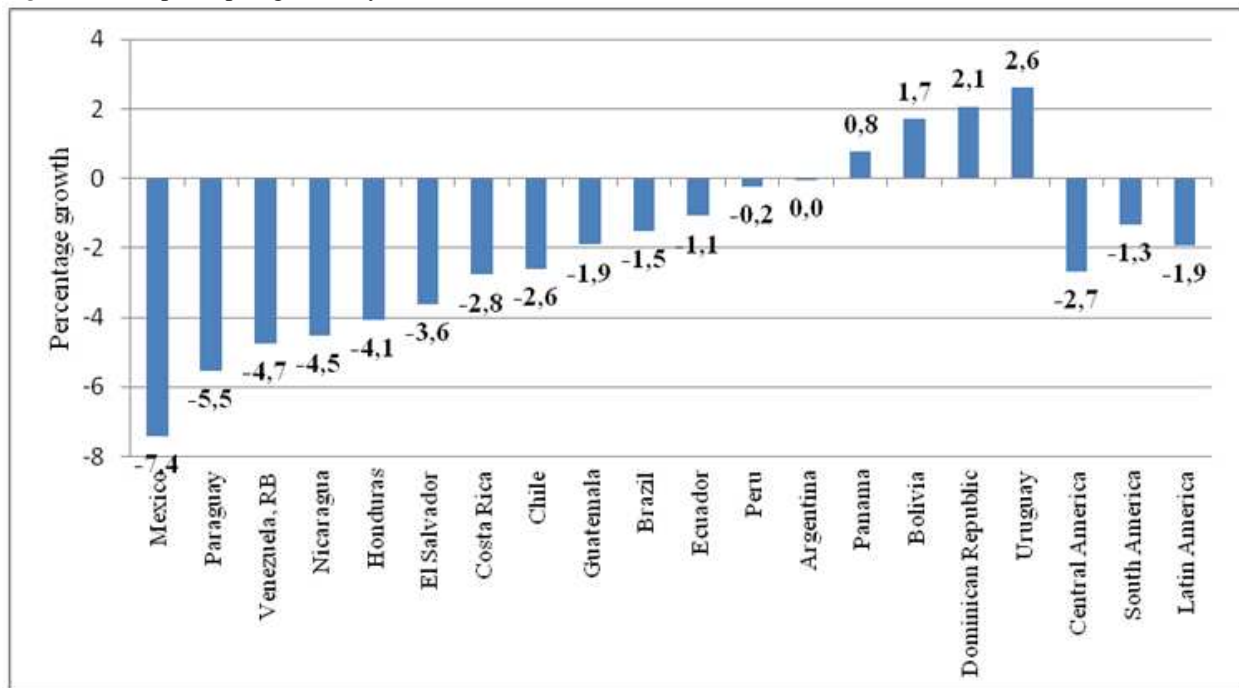
Figure 1 Rates of growth of GDP for South and Central America 1961–2010 (averages)



Source: World Bank. World Development Indicators and Global Finance (2012)

In addition, when seen from a historical perspective, the Global Crisis was for Central American countries one of the sharpest contractions on record since the 1960s, only superseded by that of the 1980s Debt Crisis (-3.0 and -3.3 percent in 1979 and 1982). Contrarily for South America, the Great Recession can hardly be categorized as a major economic event or on par with the crisis episodes that have affected this group of countries since the 1980s, including the Debt (1980s), Tequila (1994–1995), Asian (1997–1998), Brazilian (1999), Russian (1999), and Argentinean (2002) crises. South America, on average, registered negative rates of growth in 1982–1983, 1999, and 2002 (-3.6 percent, -2.4 percent, and -0.7 percent, on average, respectively) reflecting the impact of the Debt, Asian, Brazilian, Russian, and Argentinean crises.

Figure 2 GDP per capita growth by Latin American Countries (2009)



Source: World Bank. World Bank Development Indicators and Global Finance (2012)

The significant effects of the crisis on Central American countries are not difficult to explain. These economies have close economic ties with the United States, which was the epicenter of the Great Recession. The United States is the largest export market for their goods and services. Exports of goods to the United States account for 37 percent, 48 percent, 40 percent, 37 percent, 31 percent, and 29 percent of the total in 2010 for Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama (and 59 percent for the Dominican Republic).<sup>12</sup> The United States is also the main provider of remittances, which averaged 3 percent, 6 percent, and 9 percent of GDP on average for Central America in the 1980s, 1990s, and 2000s, and also of financial flows which are essential to fund their continual current account imbalances.<sup>13</sup>

<sup>12</sup> As a point of reference for the same year, Mexican exports to the United States represented 80 percent of its total exports. Latin America and the Caribbean is the second market of importance representing 29 percent, 43 percent, 42 percent, 29 percent, 44 percent, and 21 percent for the same countries for the same year. In the case of the Dominican Republic, Latin America and the Caribbean is the destination of 23 percent of its exports.

<sup>13</sup> Available evidence for the period running from 1980 to 2010 shows that the current account was in the deficit on average for Central America increasing from US\$ 3 to 18 billion dollars. A closer inspection of the data by country level shows that only El Salvador, Guatemala, and Panama registered surpluses in their current account. Both El Salvador and Guatemala recorded a positive result in a single year throughout the entire period (1980 and 2004, respectively). Panama posited surpluses in the years 1983, 1985, and 1994 and the period 1987–1990.

This is reflected in the fact that the Central American business cycle and its turning points are closely related to that of the United States. This is shown in Table 1, which displays the correlation coefficients of real GDP cycles using a Baxter-King filter between Latin American countries and the United States for the period 1960–2010, 1970–2010, 1980–2010, and 1990–2010. The correlation coefficients for Central American countries (in bold) are, for the majority, statistically significant for the different periods considered.<sup>14</sup>

*Table 1* Correlation coefficients between Latin American countries and United States cycles for 1960–2010 with a Baxter-King filtering procedure

	1960-2010	1970-2010	1980-2010	1990-2010
Argentina	0.10	0.07	0.16	0.25
Bolivia	0.15	0.27*	0.03	-0.09
Brazil	0.19**	0.25*	0.21	0.16
Chile	0.34*	0.36*	0.37*	-0.01
Colombia	0.22*	0.26*	0.07	0.06
<b>Costa Rica</b>	<b>0.66*</b>	<b>0.67*</b>	<b>0.67*</b>	<b>0.62*</b>
Dominican Republic	-0.05	0.11	0.18	0.39*
Ecuador	-0.09	-0.03	-0.06	-0.35*
<b>El Salvador</b>	<b>0.52*</b>	<b>0.53*</b>	<b>0.50*</b>	<b>0.46*</b>
<b>Guatemala</b>	<b>0.38*</b>	<b>0.44*</b>	<b>0.24**</b>	<b>0.41*</b>
<b>Honduras</b>	<b>0.88*</b>	<b>0.64*</b>	<b>0.33*</b>	<b>0.15</b>
Mexico	0.20**	0.19	0.26**	0.54*
<b>Nicaragua</b>	<b>-0.10</b>	<b>-0.11</b>	<b>0.00</b>	<b>0.53*</b>
Panama	-0.06	-0.06	-0.20	0.14
Paraguay	0.08	0.12	0.11	-0.06
Peru	-0.15	-0.17	-0.08	0.06
Uruguay	0.05	0.02	0.18	0.38*
Venezuela, RB	0.11	0.12	0.04	0.15

*Note:* \* and \*\* denote significance at the 95 percent and 90 percent level of confidence. The statistical significance of the correlation coefficient was determined on the basis of the formula:  $\rho = \frac{r(\sqrt{n-2})}{\sqrt{1-r^2}}$  where  $r$  is the simple

correlation coefficient and  $n$  the number of observations.  $\rho$  follows a student-t distribution. The Baxter-King filter was applied on the real GDP series (constant US\$ 2000) in level terms.

Source: Authors' own on the basis of World Development Indicators and Global Finance. World Bank (2012)

This relatively minor effect of the crisis on South America, both in regional and historical comparative terms, requires an explanation, since in fact the nature and transmission mechanisms

<sup>14</sup> The correlation coefficients are statistically significant in all periods for Costa Rica, El Salvador, and Guatemala. In the case of Honduras, the coefficients are significant for all but the last period. In the cases of Nicaragua, the results are more erratic (this also applies to Panama and the Dominican Republic).

of the Great Recession (2008–2009) share many similarities with those of other past major episodes including the Debt (1980s), Tequila (1994–1995), Asian (1997–1998), Russian (1999), Brazilian (1999), and Argentinean (2002) crises.

The Great Recession was a systemic crisis, as was the Debt Crisis episode. In both instances, all Latin American countries witnessed a deceleration or outright contraction of economic activity. The Global Crisis involved, as in all of the above cases, a greater contraction in investment than in the other components of aggregate demand, including consumption, government spending, and exports. In fact, a comparative exercise taking into account the Debt, Tequila, Asian- Brazilian- Russian and Argentina crises shows that the rate of growth of gross capital formation fell on average by 14 percent in real terms, whereas GDP growth contracted by -3.8 percent (see Table 2).

*Table 2* Rate of growth of GDP, gross fixed capital formation, consumption and financial flows as percentage of nominal GDP during pre-crises, crises, and post-crises periods in South America

Past crisis	Pre-Crisis	Crisis	Post Crisis
GDP	3.3	-3.8	2.7
Gross Fixed Capital Formation	11.1	-14.0	10.5
Consumption	5.7	-3.0	4.3
Financial Flows	5.0	-5.7	2.3

*Note:* Includes the Debt, Tequila, Asian-Russian and Argentina crises. The pre-crisis and post-crisis period refers to a five-year average.

*Source:* Authors' own on the basis of IMF (2012) and World Development Indicators and Global Finance (World Bank, 2012)

As in all the other episodes, the countries affected by a crisis witnessed a decline in financial flows. On average, available evidence for the Debt, Tequila, Asian-Brazilian-Russian and Argentina crises show that financial flows declined from 5.0 percent to -5.7 percent of GDP from the pre-crisis to the crisis period (see Table 2). Depending on the particular episode, the decline in flows reflected to a greater or lesser extent the behavior of short-term, portfolio equity or long-term foreign direct investment. The drying up of external finance is mirrored in all cases by a reduction in domestic credit availability. The decline in external finance was also accompanied, as in some episodes, with a decline in the terms of trade.

From our point of view, the differential impact of the Global Crisis on Central American and South American economies can be explained by the differences in the growth strategies in the period preceding the onset of the crisis. We argue, in particular, that during this period both

Central America and South America pursued profit-driven growth strategies that were dependent on the preceding liberalization strategies associated with the integration into external markets. However, there was an important difference in the way the strategy was made operational. Central America's domestic demand was debt-driven, and the external constraint was eased by "exporting people," that is, by remittances from immigrants and exports of "maquilas," in turn, dependent on cheap labor. Contrarily, South America's regime was associated to the expansion of wages and social transfers, with an export-led boom that depended on favorable terms-of-trade to ease the balance of payments constraint (Pérez Caldentey and Vernengo 2010).

We are of the opinion that these development strategies have important vulnerabilities that make them unsustainable over time and prone to eventual break-ups and crises. Nonetheless, in this particular case, given the nature of the Great Recession and of the response of developed countries and of the international community, a private debt-led regime had a higher degree of exposure to the impact of the crisis than one sustained on commodity export-led growth. As it will become clearer in the development of our argument, a debt-led growth accumulation is vulnerable, particularly under a contractionary fiscal policy stance, because it makes an economy highly dependent on the availability of access to foreign finance. A drying up of external finance, as was the case during the Global Crisis, can lead to a process of deleveraging, contraction in investment, output, credit demand, and distress in the financial sector. In this respect, the crisis in Central America looks similar to the crisis in the periphery of Europe (Pérez Caldentey and Vernengo 2012).

For its part, in the case of South America, the decline in the terms-of-trade during the crisis did not offset the gains of the previous years. Moreover, the terms-of-trade maintained over all historical records throughout the 2000 decade. The overall agriculture, metal, and energy commodity price index increased by 19 percent, 12 percent, 35 percent, and 27 percent between January 2004 and December 2007. Between January 2008 and January 2010, the rates of growth of these indices fell to 5.3 percent, 18 percent, -10 percent, and 9 percent, respectively. Thereafter, all indices recovered in V-shape, recording growth rates of 17 percent, 12 percent, 24 percent, and 32 percent, respectively, from January 2010 until July 2011.<sup>15</sup>

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<sup>15</sup> These data are based on UNCTAD Stat and IMF (2012). For a discussion of the possible reasons for the commodity boom see Serrano (2012).

Note that our position implies that crises, their characteristics, and their impact cannot be treated as identical over time. These must be understood and analyzed from a “historical time” perspective. Indeed they are events whose effects and consequences depend as much on the predominant transmission mechanism as on the growth regime prevalent at the time of the crisis.

## A MACROECONOMIC FRAMEWORK FOR THE ANALYSIS OF PROFIT-SEEKING REGIMES

To analyze the differences/similarities between a profit-debt and profit-export regime and its application to the Latin American case, it is useful to start by laying out a simple Macroeconomic Accounting Model (MAM).<sup>16</sup> The MAM starts with the generation of savings by the different agents that comprise an economy: households (hs), businesses (b), government (g), the financial system (fs), and the foreign/external sector (es). Formally:

$$\begin{aligned}
 (1) S_h &= W + TR_B + TR_g + TR_{es} + IP_b - C_h - \Gamma_h - IP_h && \text{Households} \\
 (2) S_b &= \Pi - TR_b - \Gamma_b - IP_b - eIP_b^* && \text{Business} \\
 (3) S_g &= \Gamma_h + \Gamma_b - C_g - TR_g - IP_g - eIP_g^* && \text{Government} \\
 (4) S_{es} &= e[(M + IP_b^* + IP_g^* + \alpha\Pi) - (X + TR_{es})] && \text{External sector} \\
 (5) 0 &= IP_h + IP_b + IP_g - \xi_h - \Pi_{fs} && \text{Financial sector}
 \end{aligned}$$

Where \* denotes foreign and e is the nominal exchange rate.

Savings of households ( $S_h$ ) are equal to wages (W) plus transfers of businesses, government, and the external sector ( $TR_B, TR_g, TR_{es}$ , respectively) minus consumption, the payment of taxes, and interests ( $C_h, \Gamma_h, IP_h, IP_b$ , respectively). Savings of firms ( $S_b$ ) equal to profits ( $\Pi_b$ ) minus transfers ( $TR_b$ ), taxes ( $\Gamma_b$ ), and the payments of interests on internal and external debt ( $IP_b, eIP_b^*$ ). External sector savings equal leakages (imports ( $M$ ), interest payments on external debt, ( $IP_b^* + IP_g^*$ ) and profit repatriation ( $\alpha\Pi_b$ ) minus injections (exports ( $X$ ) and unilateral transfers or remittances ( $TR_{es}$ )). The financial sector has zero savings as it exactly balances its income (interest payments to households, businesses, and government ( $IP_h, IP_b, IP_g$ ) with the issue of liabilities ( $\xi_h$ ).

<sup>16</sup> This follows the model of Taylor (1998).

Combining equations (1) through (5), we obtain the resource balance for the economy.

That is:

$$(6) S = S_h + S_b + S_g + S_f + S_{es} = W + \Pi(1 - \alpha)e - (C_h + C_g) + e(M - X)$$

Postulating the equality between savings and investment (S=I), and assuming that investment is undertaken by households ( $I_h$ ), businesses ( $I_b$ ), and the government ( $I_g$ ), that is:

$$(7) I_h + I_b + I_g = I = S$$

Substituting in (6):

$$(8) I_h + I_b + I_g = W + \Pi(1 - \alpha)e - (C_h + C_g) - e(M - X)$$

From equation (8) we obtain the equation for profits:

$$(9) \Pi = [(I_h + I_b + I_g) - W + (C_h + C_b) - e(M - X)] \frac{1}{(1 - \alpha)}$$

Rearranging terms:

$$(10) \Pi = [(C_h + I_h - W) + (C_g + I_g) - e(M - X) + I_b] \frac{1}{(1 - \alpha)}$$

Deducting taxes ( $\Gamma$ ) on both sides of (11) yields the profit after tax ( $\Pi_{at}$ ) equation:

$$(11) \Pi_{at} = \left[ \underbrace{(C_h + I_h - W)}_{\substack{\downarrow \\ \text{Household flows}}} + \underbrace{(G - \Gamma)}_{\substack{\downarrow \\ \text{Government deficit}}} - \underbrace{e(M - X)}_{\substack{\downarrow \\ \text{External balance}}} + \underbrace{I_b}_{\substack{\downarrow \\ \text{Business investment}}} \right] \frac{1}{(1 - \alpha)}$$

Where  $G = C_g + I_g$ .

Dividing both sides of equation (11) by GDP and summing up the investment terms,<sup>17</sup> we obtain:

<sup>17</sup> The solution to the macro model presented in terms of the profit rate  $\Pi$  follows Kalecki (1954, pp.45-52). According to Kalecki (Ibid., p, 49), gross profits net of taxes are equal to the sum of gross investment plus the export surplus, budget deficit and capitalist consumption minus worker savings. Minsky (1982, pp. 38-44), builds on Kalecki with a similar equation. See, also, Minsky (1986, pp. 141-156). See also Felipe and Vernengo (2002-3).

$$(12)\pi = [(c_h - w) + (g - \tau) - e(m - x) + i] \frac{1}{1 - \alpha}$$

By definition, the current account deficit must be equal to the financial account of the balance of payments plus the variation in international reserves, that is:

$$(12) - e(m - x) = ff + \Delta IR$$

Thus, the profit equation can alternatively be expressed as a function of household consumption out of wages, the government deficit, financial inflows and investment:

$$(13)\pi = [(c_h - w) + (g - \tau) + (ff + \Delta IR) + i] \frac{1}{1 - \alpha}$$

In this formulation, profits ( $\pi$ ) increase as a result of greater household consumption out of wages, the government deficit, financial flows, and investment. Profits are the result of the process of growth, and can be obtained by higher rates of growth resulting from higher consumption associated with a wage-led expansion, a public spending driven boom, and by private debt expansion fueled by external financial inflows. Note that a consumption boom could also take place if domestic private debt increased, but this is less likely in Latin American countries with less developed financial sectors. Further, it is important to note that in Kaleckian fashion, profits are the result of the process of capitalist accumulation, that is, profits are the object of the desire of the system, and for that reason might refer to the economic regime as profit-seeking, but it is not generally true that investment is driven by profits, since investment is derived by demand. In other words, we assume, again following Kalecki, that investment follows some form of the accelerator and is dependent on income expansion.<sup>18</sup>

## **DEBT AND EXPORT-LED GROWTH REGIMES IN CENTRAL AND SOUTH AMERICA**

In the four-year growth period (2004–2007) prior to the onset of the Great Recession, the evidence available for Latin America and its sub-regions concerning the above variables suggest, in the first place, that investment increased for the region as a whole and for both sub-regions. As shown in Table 3 below, gross fixed capital formation as percentage of GDP increased in this

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<sup>18</sup> Kalecki often assumed that investment was dependent on the variation of profits, since profits changed with the level of activity. Higher profits meant an expansion in demand and a need to adjust capacity. A whole series of Keynesian multiplier-accelerator models are consistent with the arguments here discussed. A full model in which the dynamics of the accelerator is incorporated is beyond the needs of our analysis. For a discussion of the role of the accelerator in investment theory see Petri (2010).



period on average from 17.8 percent to 20.7 percent for South America and from 19.7 percent to 22.9 percent for Central America. The case of Mexico is no different (19.7 percent in 2004 and 21.1 percent in 2007).

Available data in the case of Central America and Mexico shows that the performance of gross fixed capital formation was driven to a large extent by the private sector. Indeed, private gross capital formation rose from 17 percent to 21 percent of GDP and from 15.5 percent to 16.5 percent of GDP between 2004 and 2007, respectively, for Central America and Mexico, on average, respectively. A similar result is obtained when measuring gross fixed capital formation in constant US dollars. Between 2004 and 2007, the rise in gross investment expanded by US\$ 8.7, 2.5, and 33.2 billion for South America, Central America, and Mexico, respectively.

The available data show that the expansion of investment during this period was the largest recorded for the case of South and Central America, and that for Mexico, it is larger than that registered in the first and second half of the 1990s. This is expected, since the accelerator suggests that investment responds to higher levels of activity to adjust capacity to demand. Also in both cases, the rise in household consumption, in the case of Central America in part associated with higher levels of private debt, while in South America more dependent on social transfers and higher wages, led to an increase in output in the period 2004–2007 (and in 2008 for some countries), which also provided a further stimulus to the expansion of profits.

Table 3 GDP growth, household final expenditure, government and external balances, and gross formation of fixed capital for South and Central America and Mexico for 1995, 2001, 2004, 2007, and 2008.

Region	Years	GDP Growth	Households	Government	External Sector		Gross Formation of Fixed Capital	
			$C_h$	$\Gamma - G$	$X - M$ (Current account)		$I$	
			In Mill US\$ (Constant)	% of GDP	In US\$ Mill	% of GDP	In Mill. US\$ (Constant)	% of GDP
South America	1995	4.0	76,561	-1.82	1,514	-2.9	16,815	18.7
	2001	1.1	87,166 ( $\Delta=10,605$ )	-3.01	-69 ( $\Delta=1,445$ )	-2.3	19,465 ( $\Delta=2,650$ )	17.8
	<b>2004</b>	4.2	<b>92,417 (<math>\Delta=5,251</math>)</b>	<b>-0.66</b>	<b>7,106 (<math>\Delta=7,175</math>)</b>	<b>1.7</b>	19,156 ( $\Delta=-309$ )	<b>17.8</b>
	<b>2007</b>	6.4	<b>112,622 (<math>\Delta=20,206</math>)</b>	<b>0.88</b>	<b>8,353 (<math>\Delta=1,247</math>)</b>	<b>2.1</b>	<b>27,809 (<math>\Delta=8,653</math>)</b>	<b>20.7</b>
	2008	6.1	120,481 ( $\Delta=7,858$ )	0.78	6,246 ( $\Delta=-2,108$ )	0.1	31,452 ( $\Delta=3,643$ )	21.6
Central America	1995	4.6	8,286	....	-570	-6.4	1,747	19.8
	2001	1.9	10,670 ( $\Delta=2,384$ )	-1.81	-1,155( $\Delta=-585$ )	-6.0	4,353 ( $\Delta=2,605$ )	19.8
	<b>2004</b>	7.2	<b>11,677 (<math>\Delta=1,007</math>)</b>	<b>-2.60</b>	<b>-1,393(<math>\Delta=-238</math>)</b>	<b>-5.5</b>	5,229 ( $\Delta=876$ )	<b>19.7</b>
	<b>2007</b>	7.1	<b>14,296 (<math>\Delta=2,621</math>)</b>	<b>0.01</b>	<b>-2,967(<math>\Delta=-1,574</math>)</b>	<b>-8.6</b>	<b>7,812 (<math>\Delta=2,583</math>)</b>	<b>22.9</b>
	2008	4.4	15,020 ( $\Delta=723$ )	-1.38	-4,040( $\Delta=-1,073$ )	-11.4	8,241 ( $\Delta=428$ )	23.7
Mexico	1995	-6.2	300,839	-4.2	7,153	-0.5	93,871	16.1
	2001	-0.2	399,102( $\Delta=98,263$ )	-3.2	-14,150( $\Delta=-21,303$ )	-2.8	117,190 ( $\Delta=23,319$ )	20.0
	<b>2004</b>	4.1	<b>437,981 (<math>\Delta=38,879</math>)</b>	<b>-1.3</b>	<b>-14,635(<math>\Delta=-485</math>)</b>	<b>-0.7</b>	126,232 ( $\Delta=9,043$ )	<b>19.7</b>
	<b>2007</b>	3.3	<b>504,512 (<math>\Delta=66,531</math>)</b>	<b>-1.2</b>	<b>-16,649(<math>\Delta=-2,014</math>)</b>	<b>-0.9</b>	<b>159,403 (<math>\Delta=33,171</math>)</b>	<b>21.1</b>
	2008	1.2	512,738 ( $\Delta=8,225$ )	-1.1	-24,756( $\Delta=-8,107$ )	-1.5	168,746 ( $\Delta=9,343$ )	22.1

Note: The base year for household consumption, GDP, and the gross formation of fixed capital is 2000.

$\Gamma - G$  refers to the overall fiscal balance. Central America includes the Dominican Republic and Panama.

Source: Authors' own calculations based on IMF WEO Database (2012) and World Bank Economic Development Indicators and Global Finance (2012)

Table 4 GDP growth, household final expenditure, government and external balances, and gross formation of fixed capital for Central America and Mexico for 1995, 2001, 2004, 2007, and 2008.

Region	Years	GDP Growth	Households	Government	External Sector		Gross Formation of Fixed Capital (Private sector)
			$C_h$	$\Gamma - G$	$X - M$ (Current account)		$I$
			In Mill US\$ (Constant)	% of GDP	In US\$ Mill	% of GDP	% of GDP
Central America	1995	4.6	8,286	....	-570	-6.4	15.1
	2001	1.9	10,670 ( $\Delta=2,384$ )	-1.81	-1,155( $\Delta=-585$ )	-6.0	15.8
	<b>2004</b>	7.2	<b>11,677 (<math>\Delta=1,007</math>)</b>	<b>-2.60</b>	<b>-1,393(<math>\Delta=-238</math>)</b>	<b>-5.5</b>	<b>17.0</b>
	<b>2007</b>	7.1	<b>14,296 (<math>\Delta=2,621</math>)</b>	<b>0.01</b>	<b>-2,967(<math>\Delta=-1,574</math>)</b>	<b>-8.6</b>	<b>21.2</b>
	2008	4.4	15,020 ( $\Delta=723$ )	-1.38	-4,040( $\Delta=-1,073$ )	-11.4	21.4
Mexico	1995	-6.2	300,839	-4.2	7,153	-0.5	12.4
	2001	-0.2	399,102( $\Delta=98,263$ )	-3.2	-14,150( $\Delta=-21,303$ )	-2.8	16.4
	<b>2004</b>	4.1	<b>437,981 (<math>\Delta=38,879</math>)</b>	<b>-1.3</b>	<b>-14,635(<math>\Delta=-485</math>)</b>	<b>-0.7</b>	<b>15.4</b>
	<b>2007</b>	3.3	<b>504,512 (<math>\Delta=66,531</math>)</b>	<b>-1.2</b>	<b>-16,649(<math>\Delta=-2,014</math>)</b>	<b>-0.9</b>	<b>16.5</b>
	2008	1.2	512,738 ( $\Delta=8,225$ )	-1.1	-24,756( $\Delta=-8,107$ )	-1.5	16.5

Note: The base year for household consumption, GDP, and the gross formation of fixed capital is 2000.

$\Gamma - G$  refers to the overall fiscal balance. Central America includes the Dominican Republic and Panama.

Source: Authors' own calculations based on IMF WEO Database (2012) and World Bank Economic Development Indicators and Global Finance (2012).

In the case of both South and Central America, the expansion of output and profits was constrained by a policy aimed at reducing the government deficit. This allowed Central America to reach a balanced budget and South America to achieve a surplus in 2007 (0.01 percent and 0.88 percent, on average, respectively).<sup>19</sup>

In the case of Central America, the effects of the contractionary fiscal stance on profits was further compounded by a rising current account deficit (-5.5 percent and -8.6 percent for the sub-region, on average, for 2004 and 2007). Contrarily, South America managed to obtain, due to favorable external conditions and, in particular, a commodity price boom, a positive balance in the external sector from 2004 to 2007. The current account expressed as a percentage of GDP, which was in deficit throughout the 1990s decade, turned positive by the beginning of the 2000s reaching a surplus equivalent to 1.7 percent in 2004 and expanding it to 2.1 percent in 2007. In spite of the drag on profit expansion as a result of fiscal conservatism in the case of both sub-regions and the external imbalance in the case of Central America, the evidence points to a favorable context for profits during the 2004–2007 period. Even with a very simple scenario assuming that wages equal household consumption, a rough calculation shows that profits expanded by 4 percent of GDP between 2004 and 2007. This is consistent with the high rates of growth experienced by both sub-regions during this time, averaging roughly 5 percent and 7 percent, respectively (see Tables 3 and 4).

The debt-led and export-led growth regimes in Central America and South America were underpinned by specific and distinct financing patterns. This can be seen by rearranging equation (13), so that private sector expenditure  $(\pi + w) - (c_h + i)$  is made equal to the government  $(g - \tau)$  and the current account balance  $(e(m - x))$ . We obtain:

$$(14) (\pi + w) - (c_h + i) = (g - \tau) - e(m - x) \frac{1}{1 - \alpha}$$

In the case of Central America during the 2004–2007 period, the current account balance was negative, and in addition, greater in absolute value than the government balance. As a result, the private sector balance was also in deficit. In addition, over this period, both the external and private sector deficits widened. In fact, by 2007, the government's balance was nil on average

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<sup>19</sup> Between 2004 and 2007, all Central American countries including Panama and the Dominican Republic reduced their fiscal imbalances. In 2007, Costa Rica, the Dominican Republic, Nicaragua, and Panama registered fiscal surpluses.

and, thus, the private sector deficit basically equaled the external sector deficit.<sup>20</sup> In other words, what allowed the expansion of private domestic demand were the external financial inflows, in the same way that the expansion of consumption in parts of the European periphery were predicated on financial inflows from the central countries in the eurozone (Pérez Caldentey and Vernengo 2012).

Contrarily in the case of South America, the private sector was, on average, in a surplus position throughout the period. This outcome resulted initially from the combination of a positive result in the external sector ( $e(m - x) > 0$ ) combined with a budget deficit ( $(g - \tau) > 0$ ) and later on from the fact that the surplus in the external sector was greater than that in the government sector. Further, in South America, the expansion of real wages and, in some cases, social transfers allowed for the expansion of domestic demand, which did not lead to external problems, since the commodity cushioned the effects of the expansion on the external accounts.

Both Central and South American cases are summarized below:

$$(15a) e(m - x) < 0 \text{ and } |e(m - x)| > |g - \tau| \Leftrightarrow (\pi + w) - (c_h + i) < 0$$

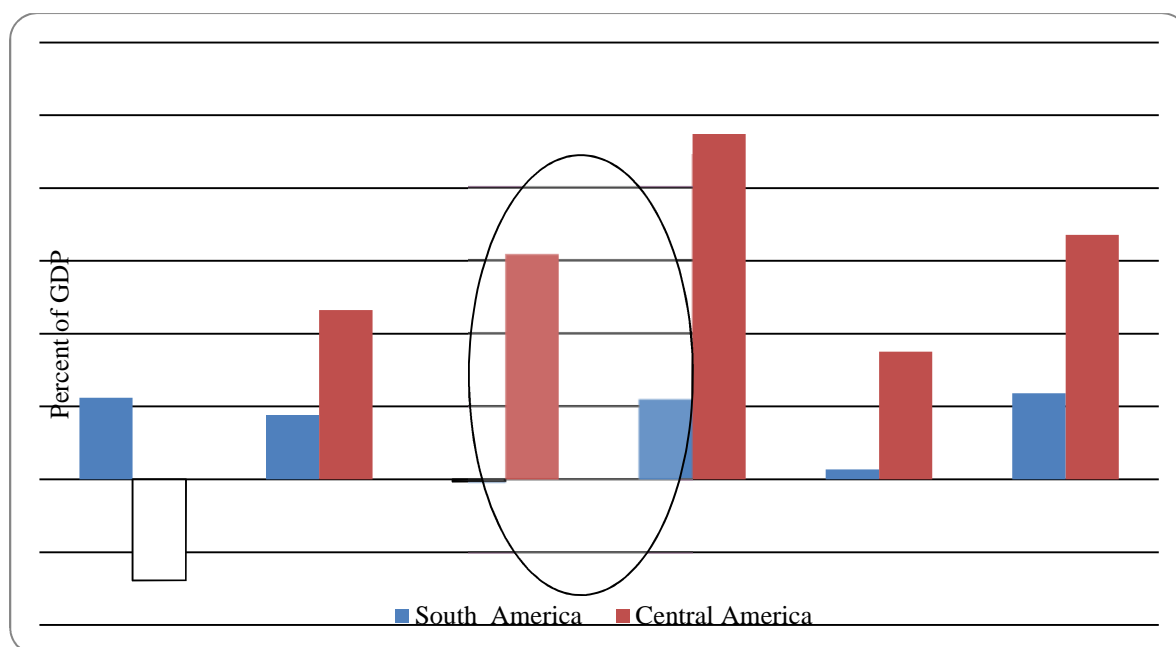
$$(15b) e(m - x) > 0 \text{ and } |e(m - x)| > |g - \tau| \Leftrightarrow (\pi + w) - (c_h + i) > 0$$

Where  $| \quad |$  denotes absolute value. As a result, in the case of Central America, maintaining a given level of profits through consumption expenditures required access to sufficient levels of liquidity to offset the internal and external financing gaps. This made Central America dependent on the one hand on external inflows and, on the other, on the elasticity of the banking system to provide the required levels of credit and finance.

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<sup>20</sup> See Godley (1999) and Terzi (2010) for an analysis and key insights on the relationship between the government and private sector balances. We cannot stress sufficiently the importance of the external sector in determining the final impact of a crisis or the efficiency of a given policy. Godley and Cripps (1983, p. 283) argue that: “in the long run fiscal policy can only be used to sustain growth of real income and output provided that foreign trade performance so permits. This is the most important practical conclusion of our book.” We think that in the context of the crisis, the example of Central America shows that government expenditure can actually prevent the build-up of debt in the private sector and, thus, the whole process of deleveraging that followed. We also think that the analysis here presented complements a more short-run and sectoral perspective of Thirlwall’s balance of payment constrained framework (e.g. McCombie and Thirlwall 1994).

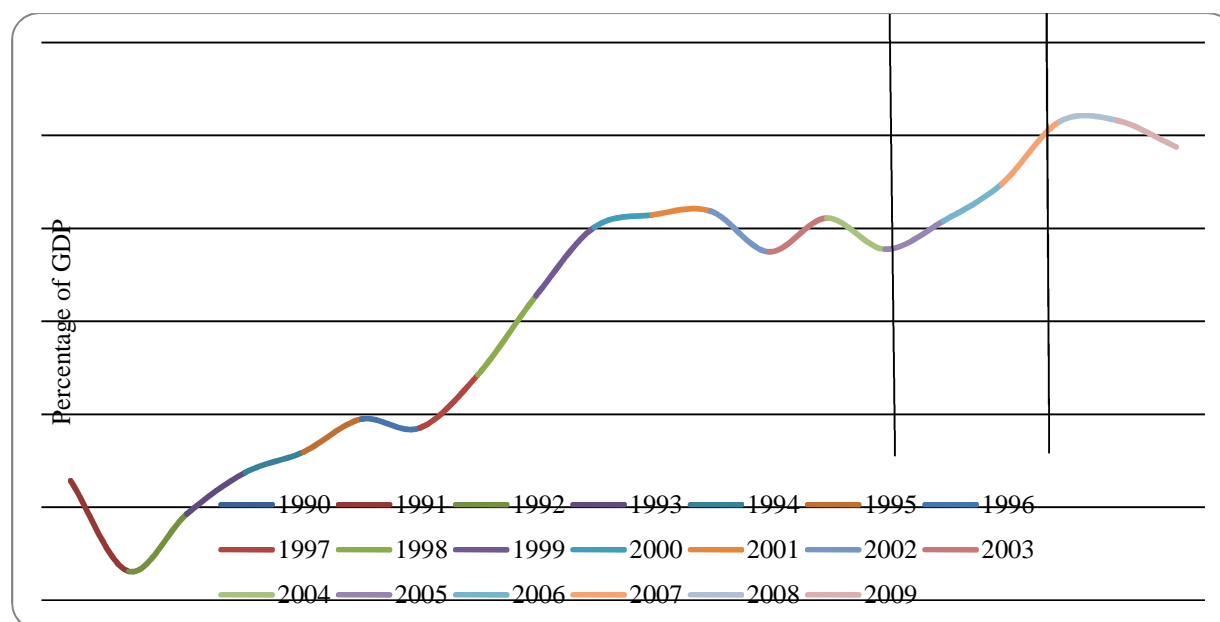
Figure 3 Financial balance as percentage of GDP for South and Central America (1990–2010)



Source: IMF (2012) and World Development Indicators and Global Finance (2012)

The available empirical evidence for the period 1990–2010 for the financial balance of the balance of payments show that Central America received increasing amounts of financial inflows between 1990 and 2008. The highest levels of inflows were registered in the growth period 2004–2007 and in 2008, and were equivalent to 6.2 percent and 9.5 percent of GDP (Figure 3). As well, at the domestic level, credit to the private sector expanded from 36 percent to 49 percent of GDP during this period (Figure 4).

Figure 4 Private sector credit as percentage of GDP for Central America (1990–2010)



Source: World Development Indicators and Global Finance (2012)

Contrarily, in the case of South America, the financial balance of the balance of payments was negative, on average, in the period 2004–2007, indicating that, in fact, that sub-region, rather than receiving resources, was transferring resources to the rest of the world. In 2008, the financial balance of the BOP was positive, but significantly below that of Central America. In this sense, the greater financial dependency of Central America made it considerably more vulnerable to the Great Recession than South America.

## THE IMPACT OF THE CRISIS AND THE STRUCTURE OF AGGREGATE DEMAND

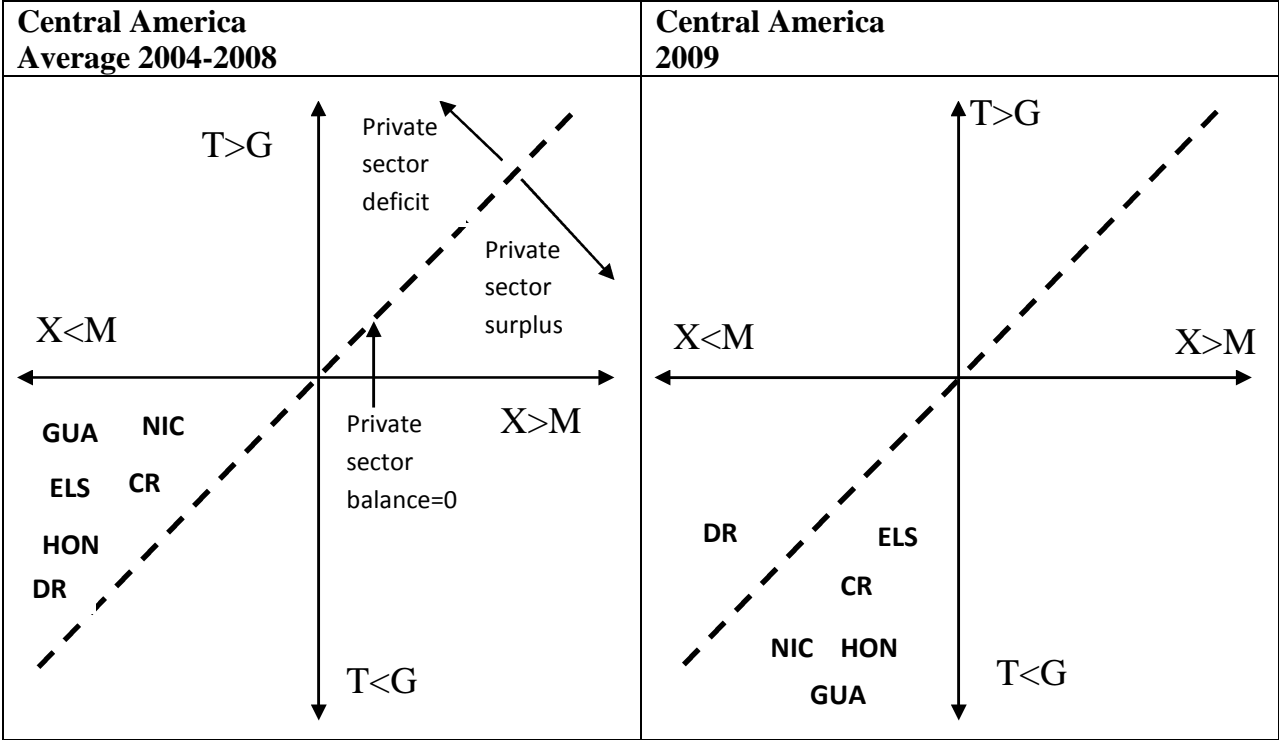
The impact and intensity of the Global Crisis on Latin American economies are directly related to the type of growth regimes and its underlying financing patterns. The crisis was initially felt in the external sector through a significant drop in financial inflows and an increase in profit remittances (outflows). For the region, as a whole, the surplus in the financial account of the balance of payments declined on average from 4.8 percent to 2.0 percent of GDP between 2008 and 2009. A more detailed analysis by sub-region shows that the reduction in the availability of external finance was sharper in Central American than in South American countries.

As shown in Figure 3 above, between 2008 and 2009 the surplus in the financial balance declined, on average, by 6 percentage points of GDP for Central America and only by 2

percentage points in the case of South America. The decomposition by flows shows that, by far, the most resilient component was foreign direct investment in both cases. The decline in external financial inflows, in particular remittances, significantly limited the possibilities of Central American economies and, more specifically, of the private sector to fund its debt positions in order to maintain its prevailing growth regime. A reduction of debt and deleveraging process ensued.

The process of deleveraging occurred in both South and Central America, as this is a normal process that accompanies the recomposition of portfolios that occurs during a crisis and the concomitant adjustment. This is illustrated using the example Global Crisis for Central and South America with a four quadrant figure combining the surplus (deficit) of the government with that of the external sector in Figures 5A and 5B (Kregel 2011).

Figure 5A Changes in the composition of aggregate demand for Central America between the period 2004–2008 and 2009



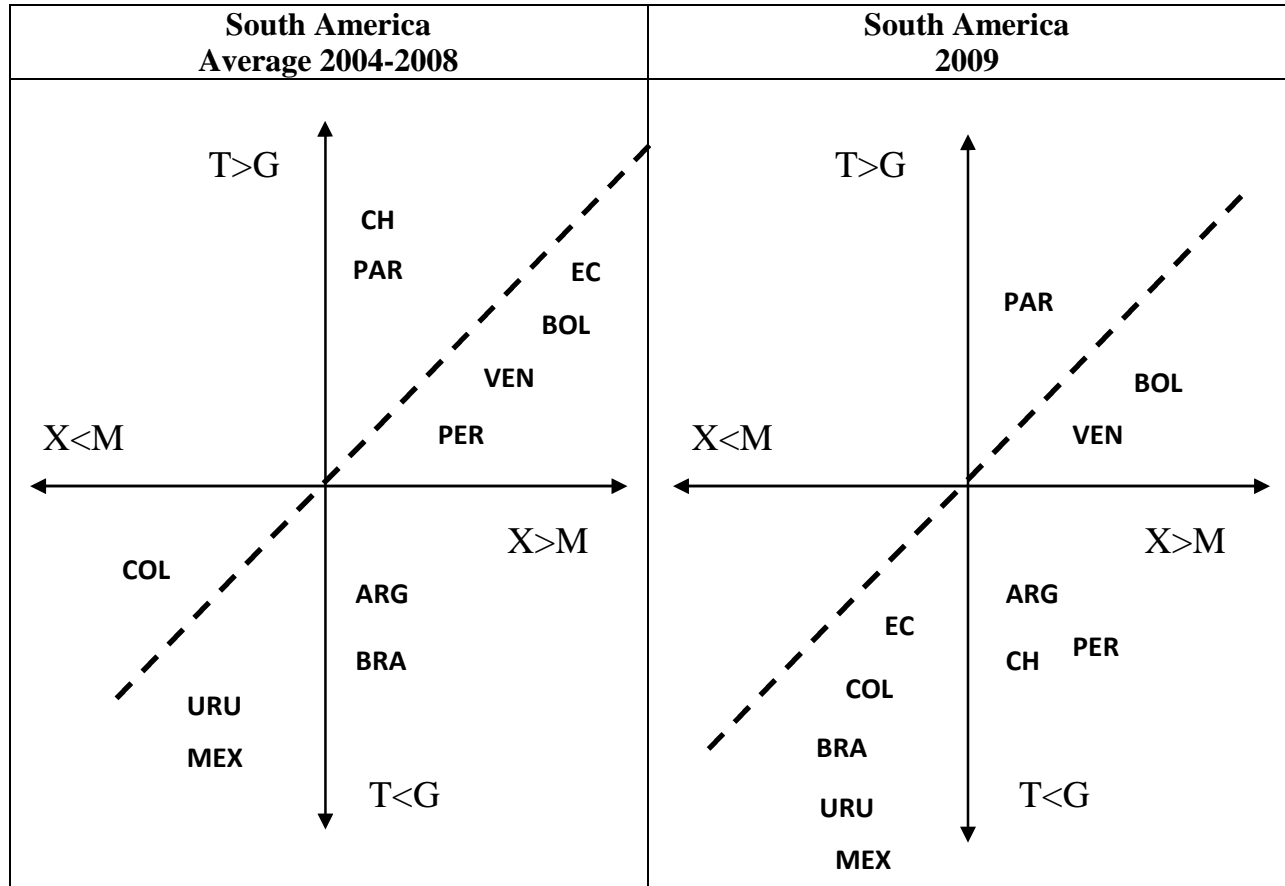
Source: Based on Kregel (2011).

By definition, and following from equation (13) above, when the external sector surplus (deficit) is equal to the surplus (deficit) of the government, the private sector balance is equal to



zero. This is shown by the 45 degree dotted line. The points above the 45 degree dotted line show a private sector deficit, while those below indicate a situation of surplus.

Figure 5B Changes in the composition of aggregate demand for South America between the period 2004–2008 and 2009

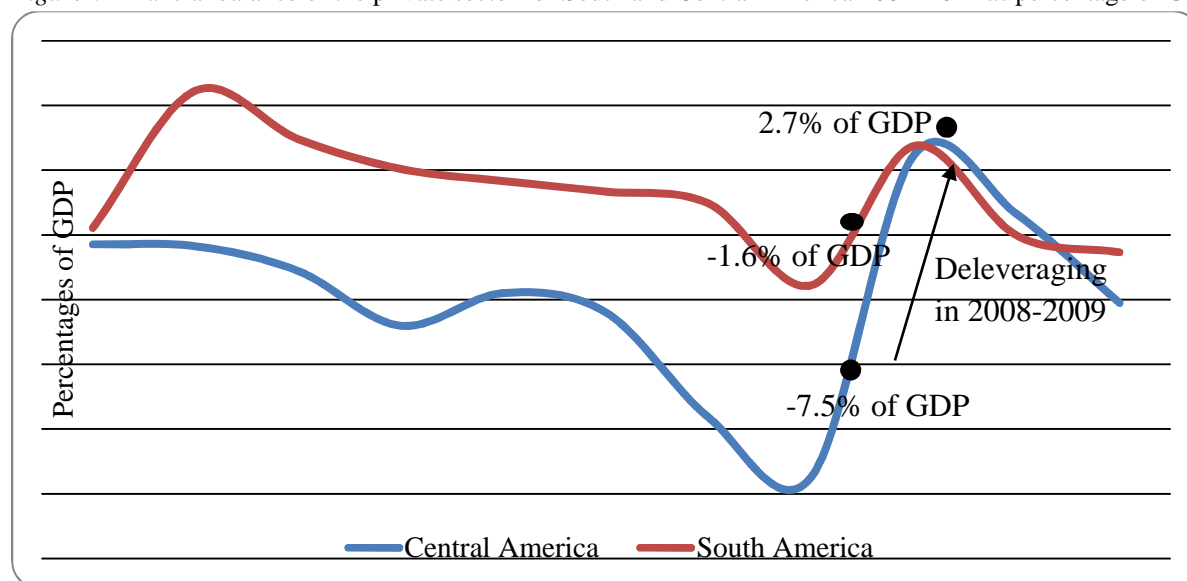


Source: Based on Kregel (2011).

In the five-year period prior to the global crisis (2004–2008), all Central American countries are situated above the 45 degree dotted line (indicating a private sector deficit), while with a few exceptions (Chile, Colombia, and Paraguay), the majority of South American countries are below the line (reflecting a private sector surplus). The year of the crisis, or more precisely the year in which the impact of the Great Recession was felt, South American and Central American countries (with one exception in each bloc, Paraguay and the Dominican Republic) are found to be below the 45 degree dotted line, that is, they all have private sector surpluses.

A more detailed analysis by year shows that, on average, in the case of South America, the financial balance of the private sector was in blue numbers for the period 2004–2007 and became slightly negative only in 2008 (-1.6 percent of GDP). The deleveraging process took the balance to a positive result in 2009 (2.7 percent of GDP). In Central America, given the starting composition of demand, the adjustment was much more drastic. The private sector deficit reduced its 2008 deficit of -7.5 percent and, as in the case of South America, also turned it into a surplus in 2009. The final level of the surplus reached in both regions was similar, but the starting point was different. Overall, the cumulative change in Central America as a result of deleveraging was more than twice that of South America (9.9 percent and 4.3 percent of GDP) (see Figure 6).

Figure 6 Financial balance of the private sector for South and Central America 2001–2011 as percentage of GDP



Source: Authors' own calculations, based on the IMF WEO data base (2012).

The deleveraging process translated itself into a drastic fall in output and a consequent reduction in investment and the demand for credit. Gross capital formation contracted from 10.8 percent in 2004–2007 to -17.5 percent in 2009 in the case of Central America, on average. For its part, credit declined from 6.1 percent in 0.3 percent for the same period and to -1.0 percent in 2010.

It is important to note, in the first place, that South America also recorded an investment and credit downturn, but the intensity was much sharper in the case of Central America (see

Table 5). In the second place, contrarily to the boom and bust view of the cycle, the reduction or outright contraction in credit is a product of the decline in output. In other words the behavior of credit is endogenously determined. Indeed Granger causality tests reject the null hypothesis that GDP growth does not cause credit growth in all cases considered, while the same cannot be said of the opposite chain of causation for the cases of Costa Rica, El Salvador, and Nicaragua (Table 6).

*Table 5* Rate of growth of fixed capital formation and of private credit for South and Central America and Mexico (1990–2010)

	1991-1995	1996-2003	2004-2007	2008	2009	2010
Rate of growth of fixed capital formation (US\$ constant 2000)						
South America	8.5	1.2	15.6	14.6	-6.5	13.3
Central America	11.2	4.4	10.8	5.8	-17.5	7.9
Mexico	2.0	7.6	8.1	5.9	-11.9	2.4
Rate of growth of private credit						
South America	5.2	-0.1	9.6	15.3	6.4	6.1
Central America	3.5	12.3	6.1	8.7	0.3	-1.0
Mexico	0.0	-12.2	12.1	14.3	-0.3	-1.2

*Note:* Private credit data was not available for Guatemala.

*Source:* World Bank World Development Indicators' and Global Finance, World Bank (2012)

*Table 6* Granger causality tests between credit and GDP growth for Central American countries, the Dominican Republic and Panama

	Credit growth does not Granger cause GDP growth	GDP growth does not Granger cause credit growth	Number of observations
Costa Rica	0.78	6.9*	72
Dominican Republic	2.15*	2.4*	62
El Salvador	1.58	2.5*	32
Nicaragua	1.35	4.3*	13
Panama	1.85*	2.2*	24

*Note:* \* denotes significant at the 95% level of confidence.

*Source:* Authors' own, based on official data.

The financial effects of deleveraging, investment, and credit contraction are visible in the behavior of bank profitability. As shown in the table, a comparative analysis between the behavior of the rate of return over equity (ROE) for Central American and Latin American countries shows that the latter experienced at the individual level (and on average) a contraction in bank profitability. ROE declined by 39.6 percent on average between 2008 and 2009 reaching levels of roughly 70 percent for El Salvador and Nicaragua. Contrarily, in the case of South America (with the exception of Argentina), countries bank profitability was not significantly

affected by the crisis. In fact, the South American countries for which data is available either experienced an increase in bank profitability (Brazil, Chile, and Colombia) or a minor decline (Peru).<sup>21</sup>

Table 7 Rate of return over equity for Central America and selected South American countries 2006–2009

ROE	Dec. 2006	Dec. 2007	Dec. 2008	Dec. 2009	Δ% 2008-2009
<b>Central America</b>					
Guatemala	17.1	21.2	20.6	17.8	-13.6
El Salvador	13.0	10.2	7.9	2.6	-67.1
Honduras	19.8	20.5	17.1	11.4	-33.3
Nicaragua	25.3	22.6	18.2	4.9	-73.1
Costa Rica	19.0	13.9	14.9	8.6	-42.3
Panama	14.1	15.9	17.2	12.6	-26.7
<b>Average</b>	<b>18.1</b>	<b>17.4</b>	<b>16.0</b>	<b>9.7</b>	<b>-39.6</b>
<b>South America</b>					
Argentina	13.0	14.1	21.3	17.6	-17.4
Brazil	15.7	19.5	9.7	14.7	51.5
Chile	22.9	25.7	16.6	23.6	42.2
Colombia	12.0	19.3	17.9	18.4	2.8
Peru	33.3	31.0	25.0	24.7	-1.2
<b>Average</b>	<b>19.4</b>	<b>21.9</b>	<b>18.1</b>	<b>19.8</b>	<b>9.4</b>
Mexico	21.8	14.2	25.0	24.7	-1.2

Source: Authors' own, based on Fitch Ratings (2011).

It is important to understand that fiscal restraint during the boom, a trade mark of the boom and bust equilibrium view of cycles, was not instrumental in avoiding the crisis. In fact, in Central America, the efforts to reduce the deficit reflected in the nearly balanced fiscal accounts on average before the crisis forced the private sector into deficits, which are, from a general point of view, less sustainable than public deficits, since public spending, contrary to private spending, has a direct impact on public revenue through the multiplier process, and are incurred in a token

<sup>21</sup> The rate of return over equity (ROE) equals the product of the ratio of earnings to assets (or rate of return over assets, i.e., ROA) and assets to equity (or leverage, i.e., L). That is,

$$(15) ROE = \frac{Earnings}{Equity} = \left( \frac{Earnings}{Assets} \right) * \left( \frac{Assets}{Equity} \right) \Leftrightarrow ROE = ROA * L$$

(i.e., domestic currency) that is often controlled by the State, the exceptions in Latin America being Ecuador, El Salvador, and Panama that are dollarized.

In the case of South America, the maintenance of fiscal surpluses during the boom and before the crisis, which has been described as a precondition for creating fiscal space and allowing for a big fiscal swing during the crisis without threatening fiscal sustainability, in many cases simply led to a lower rate of growth during the boom (Brazil and Chile come to mind as examples) than would have been possible given the extraordinary external conditions associated with the commodity boom. This is, in fact, a recurrent problem for Latin American countries that have a tendency to cool down the economy prematurely during booms.<sup>22</sup> The traditional view about the business cycle, with the idea that managing the booms is necessary to smooth out the cycle, in our view, is part of the problem.

## CONCLUSION

Conventional wisdom about the business cycle in Latin America assumes that monetary shocks cause deviations from the optimal path, and that the triggering factor in the cycle is excess credit and liquidity. Further, in this view, the origin of the contraction is ultimately related to the excesses during the expansion. For that reason, it follows that avoiding the worst conditions during the bust entails applying restrictive economic policies during the expansion in the business cycle, including reigning in government expenditures and reducing liquidity to private agents.

Here we develop an alternative approach that suggests that fiscal restraint does not have a significant impact in reducing the risks of a crisis, and that excessive fiscal conservatism might actually exacerbate problems. In the case of Central America, the contractive fiscal stance, in conjunction with the persistent current account deficits, implied that financial inflows, with remittances being particularly important in some cases, allowed for an expansion of a private

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<sup>22</sup> Pérez Caldentey and Pineda (2010) show that for Latin America and the Caribbean, lack of convergence with advanced economies results mainly from weak expansions. In comparison to other regions, Latin America and the Caribbean have similar recessions, in profundity and duration, and also tend to recover quickly. Contrarily, during expansions, Latin America and the Caribbean tend to perform below the world and other developing regions' averages. Latin America and the Caribbean countries are, from a regional comparative perspective, "good" at withstanding the negative effects of contractions and "bad" at taking advantage of expansions to achieve convergence with the developed world.

spending boom that proved unsustainable once the Great Recession led to a sharp fall in external funds.

In the case of South America, the commodity boom created conditions for growth without hitting the external constraint, a situation that has had no recent parallel, and that has for the most part permitted relatively high levels of growth associated not only with higher exports but also with the expansion of domestic markets, in part as a result of higher wages and higher levels of social transfers. Fiscal restraint in the South American context has resulted, in some cases, in lower rates of growth than what otherwise would have been possible as a result of the absence of an external constraint. Yet, the lower reliance on external funds made the region less vulnerable and more resilient to the external shock waves of the Great Recession than Central American economies. That is not to say that the strategy of development in South America is devoid of risks. Reprimarization of exports and dependence on commodities are still a significant problem, and pose difficult challenges for policy makers in the region.

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