FINANCING FOR DEVELOPMENT

Macroeconomics for development in Latin America and the Caribbean

Some new considerations
on countercyclicality

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Abstract

The Macroeconomics for development blue print for Latin America and the Caribbean is articulated around two issues: an active strategy of productive development and a counter cyclical policy stance. Macroeconomic counter cyclicality refers to the management of the level of aggregate demand to dampen the fluctuations and volatility of real and nominal variables around their long-term trends. This paper argues that cycle and trend are interdependent and that, as a result, counter cyclical policies (i.e., aggregate demand policies) are not neutral to the long-run behaviour of economies.

The way counter cyclical policies are designed and implemented, including their timing and type of instruments used, shape and determine, along with other factors, the long-run growth trend of economies. The non-neutrality of counter cyclical policies is reflected in three specific features of the Latin American and Caribbean business cycle: (i) expansionary cycles are shorter and less intense in Latin America and the Caribbean in relation to other regions); (ii) short-run fluctuations affect long-run outcomes through real and financial variables; (iii) the financial system tends to act as an amplifier of real fluctuations and real recoveries occur prior to credit recoveries. The analysis implies that counter cyclical policy must not only steer the cycle through variations in the level of aggregate demand. It must also focus on the composition of aggregate demand.

This entails, on the one hand, sustaining the duration and intensity of the expansion and avoiding the use of public investment as the adjustment variable during cycle fluctuations. It also means using macro prudential policy as a counter cyclical tool to manage the composition and level of aggregate demand.

Keywords: Macroeconomics for development, Latin American and Caribbean cycle, trend and cycle, productivity, investment, credit, macroprudential policy. Daniel Titelman and Esteban Pérez Caldentey.[1]

JEL Classifications: E32, O11, O54, F4.

Introduction

Macroeconomics for development in Latin America and the Caribbean is traditionally articulated around two issues: an active strategy of productive development and diversification and a counter cyclical policy stance (Ocampo, 2011; Ffrench-Davis, 2010).

The strategy of productive development seeks, among others, to improve productivity, foster innovation to promote the accumulation of technological capacities and develop the region's capacity to export higher-value added goods and services. For their part, countercyclical policies are required to reduce the pronounced macroeconomic volatility that has characterized the performance of the region in the past three decades.

This paper concentrates on the issue of macroeconomic counter-cyclicality. According to the blue print view of Macroeconomics for development volatility is damaging to long-term growth. It shortens the planning horizon of agents, increases risk, discourages productive investment and distorts macroeconomic prices such as the real exchange rate and interest rates.[2]

The increase in volatility is mainly associated with external shocks in the capital account and, more recently, in the terms-of-trade. This balance of payments dominance has taken place in a context of increased financial openness where the countries of the region are vulnerable to the changes that have taken place in the forms and availability of external financing, movements in interest rates (reductions in risk spreads increases during booms) and externally determined prices.

Reducing volatility is tantamount to narrowing and stabilizing the fluctuations of real and monetary variables around their long term-trends. In turn, this entails managing the level of aggregate demand, through monetary, capital account management and through fiscal policies, reining it in the upward phase of the cycle and expanding it in the downward phase. In the expansionary phase of the cycle counter cyclical policy seeks to avoid situations of excess domestic expenditure and overheating that are manifest in unsustainable debt levels, inflationary pressures or current account disequilibria.

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[2]   Ffrench-Davis (2010), argues that volatility affects long-run economic growth through its effect on fixed capital investment.

Contrarily, in the contraction, the expansion of aggregate demand lessens the costs associated with higher unemployment levels and social vulnerability.

We argue that high volatility not only responds to balance of payments dominance but also to specific characteristics of the business cycle in the region. In particular we show that Latin America and the Caribbean register weaker expansions, in terms of durations and expansions, than those of other regions, and as a result have in comparison, a higher frequency cycle.

Another key feature of the cycle on which we place emphasis, is that short-term fluctuations have a bearing on long-term outcomes and that the relationship between the short and more long-run is mediated by real and financial variables. On the one hand, the cyclical behaviour of real (productivity and investment) variables which are linked to long-run growth performance mimic the weak expansionary phase of the general business cycle. On the other hand, the behaviour of credit cycles shows that the financial system acts as an amplifier of GDP fluctuations during expansions and especially during contractions.

A further singularity of the Latin American business cycle is the observation that credit contractions last longer than those of GDP. For here it follows that GDP recovers prior to credit and that movements in credit tend to follow those of GDP. The credit-less recoveries, jointly with the behaviour of real variables such as productivity and investment, analyzed in the previous section, can account for the tenuous nature of the expansionary phase of the cycle in Latin America.

Pulling these cycle stylized facts together, we argue, that the received wisdom of Macroeconomics for development, must develop to a greater extent and make explicit the interdependence between cycle and trend and between counter cyclicality and the productive structure.[3] More precisely an effective counter cyclicality must place its focus on the behavior of the real and financial variables that link short-run fluctuations to long-run outcomes.

Our analysis has two important policy implications. First a full-fledged Macroeconomics for development should not dichotomize between counter cyclical and productive development policies. Second counter cyclical policies should not only center primarily on the management of the level of aggregate demand, they must also focus on its composition.

This paper is divided into eight sections. Sections one and two provide corroborating empirical evidence on two main propositions of the macroeconomics for development as applied to Latin America and the Caribbean. These are that the region has been characterized by high levels of volatility in relation to its own past history and to other developing regions and that volatility is explained by balance of payments dominance.

Section three sustains that the high levels of volatility and the meager growth performance can also be explained by the specific features of the Latin American and Caribbean business cycle. Sections five and six are focused on the real and financial transmission mechanism between cycle and trend. Section seven discusses counter cyclicality within the blue print paradigm and suggests ways to modify it. The final reflections are found in the last section.

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[3] The interdependence between cycle and trend was highlighted early on by Kalecki (1968). See also, Davidson (2011) and Arestis and Sawyer (2009). Ocampo and Ffrench-Davis have also analyzed the relationship between macroeconomic conditions and productive structure centering on the behavior of macro-prices, including in particular the real exchange rate which is considered to be a key 'transmission variable' for emerging market economies such as those of Latin America and the Caribbean. Another transmission channel is the size of the gap between actual demand and the productive frontier (Ffrench-Davis, 2010). A higher utilization of capacity (a smaller gap) can lead to an increase in average productivity which can stimulate the creation of new capacity. Conversely, a recessive gap may entail lower investment which can depress the productive capacity of an economy.

I.　The long-run performance of Latin America: high volatility and low growth

Over the past three decades the performance of Latin America and the Caribbean, have been characterized by an increasing degree of volatility in terms of output and investment behaviour. As shown in table 1 below, the volatility of output measured by the coefficient of variation of GDP which was below one for the 1960's and 1970's decade has consistently exceeded that threshold since the 1980's. Moreover, not only has volatility increased over time, but also Latin America and the Caribbean have experienced over time higher levels of volatility relative to other regions in the developing world (Titelman, Pérez Caldentey & Mincer, 2008; ECLAC, 2002 and 2012).

TABLE 1
COEFFICIENT OF VARIATION OF THE RATE OF GROWTH OF GDP PER CAPITA,
SELECTED REGIONS OF THE WORLD

Region	1960-1970	1970-1980	1980-1990	1990-2000	2000-2007	2000-2011
East Asia and the Pacific	2.92	0.53	0.27	0.40	0.23	0.20
Europe and Central Asia				-3.17	0.33	0.83
Latin America and the Caribbean	0.71	0.39	-6.77	1.39	1.17	1.22
Middle East and North Africa	0.65	1.77	-15.76	0.88	0.54	0.47
South Asia	1.25	3.72	0.43	0.50	0.45	0.43
Subsaharan Africa	0.84	1.81	-1.98	-3.81	0.58	0.62
World	0.34	0.95	0.96	0.64	0.50	1.26
High income (OCDE)	0.32	0.81	0.60	0.46	0.44	1.90
North America	0.70	1.30	1.27	0.78	0.58	2.27

Source: Author's own on the basis of World Development Indicators and Global Finance. World Bank 2013.

Note: The coefficient of variation is equal to the ratio of the standard deviation (σ) of the rate of growth of GDP per-capita and it mean (χ) denotes not available.

The behaviour of volatility of Latin America and the Caribbean is in stark contrast to that of other regions of the world that have registered a decline in volatility during the entire period under consideration. An emblematic case is provided by East Asia and the Pacific which registered a coefficient of variation of 2.9 between 1960 and 1970 and of 0.22 in the 2000s. Similarly, Africa and the Middle East recorded a coefficient above 1 between 1970 and 1980 and below 1 for the 1990's and 2000's. South Asia also shows a similar trend.

The increase in real volatility has been detrimental to both short and long run growth. Available evidence for the period 1971-2008 shows that the volatility of the rate of growth of GDP and that of investment are inversely related. The respective correlation coefficients are negative and significant at the 95% level of confidence (-0.70 and -0.73).

FIGURE 1
LATIN AMERICA (20 COUNTRIES): RELATIONSHIP BETWEEN THE VOLATILITY OF INVESTMENT/RATE OF GROWTH OF GDP, 1971-2008
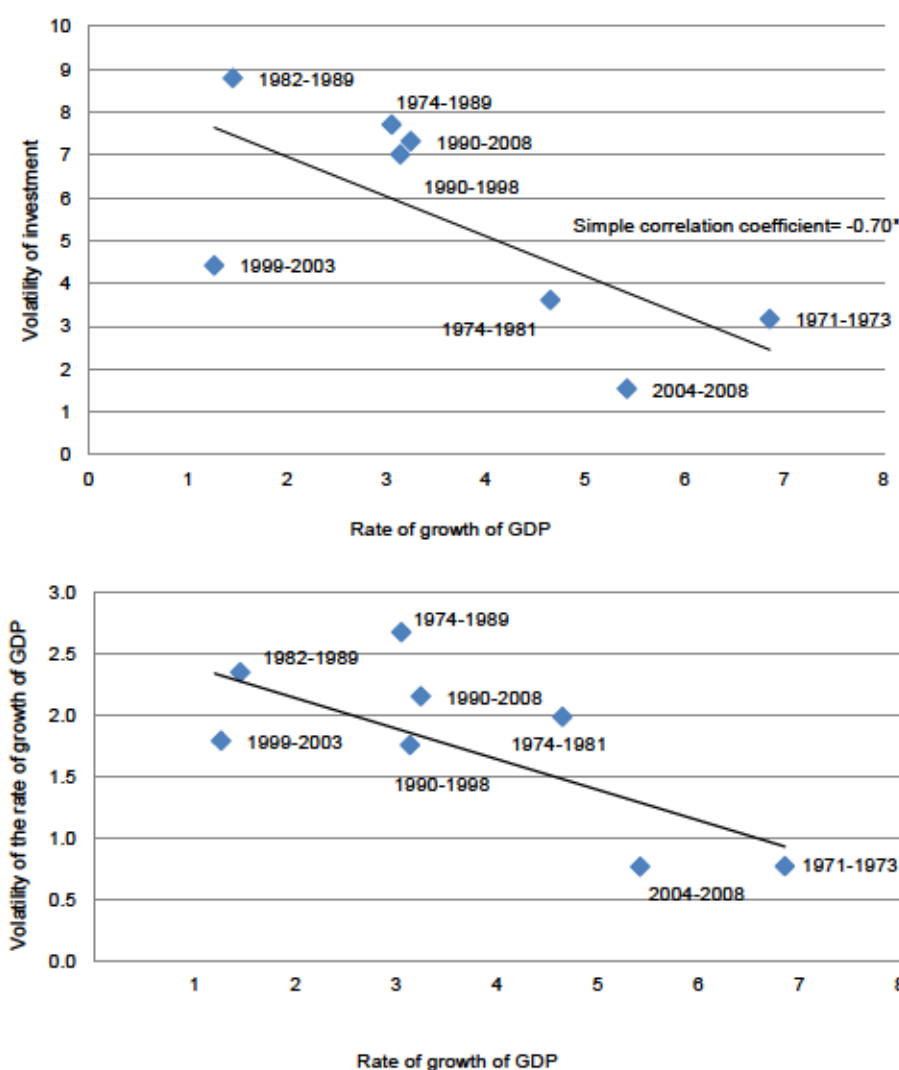
Source: Financing for Development Division (ECLAC, 2012).

Note: The volatility of GDP and investment are represented by the standard deviation.
* denotes significant at the 95% level of confidence.

It is thus not surprising that partly as a result of increased real volatility over time and its detrimental effects on growth, Latin America and the Caribbean have experienced not only mediocre growth on average but also lower long-run growth in relation to other regions. Table 1 shows the evolution of GDP per capita growth for Latin America and the Caribbean, the Member States of the OCDE (high income economies) and selected developing regions of the world for the period 1970-2011.

The evidence indicates that Latin America and the Caribbean had the highest levels of GDP per capita growth in the 1970's decade in relation to other regions, with the exception of East Asia and the Pacific. Thereafter, the region has registered one of the lowest rates of growth of GDP per capita in relation to other developing regions for most of the periods under consideration (1981-1990; 1991-2000; 2001-2009, 2001-2011). Moreover the growth differential between Latin America and the Caribbean and other regions such as the case of East Asia and the Pacific has widened over time (see table 2).

The most recent period of expansion (2003-2007) does not constitute an exception to this observed trend. During this time Latin America and the Caribbean experienced the highest average rate of growth in over three decades. The regional average per capita growth rate reached 3.7% surpassing not only that of the 1980's lost decade and that registered during the free market structural reform era (1991-2000) (1.4%) but also that of the 1970's (3.2%).

However, on a comparative basis, Latin America and the Caribbean's performance was by no means an exceptional one. In fact the regional rate of growth remained significantly below those of East Asia and Pacific (9.3%), Europe and Central Asia (7.4%) and South Asia (6.6%).

TABLE 2
GDP PER CAPITA GROWTH BY REGION/INCOME GROUPING, 1971-2011

	East Asia & Pacific	Europe & Central Asia	High income: OECD	Latin America & the Caribbean	Middle East & North Africa	South Asia	Subsaharan Africa
1971-1980	4.5	…	2.7	3.2	2.7	0.7	0.9
1981-1990	5.7	-1.7	2.7	-0.8	0.2	3.0	-0.9
1991-2000	7.1	-1.7	1.9	1.6	1.8	3.2	-0.3
2003-2007	9.3	7.4	1.9	3.7	3.3	6.6	3.0
2001-2011	8.2	4.7	0.9	2.2	2.6	5.3	2.1

Source: Author's own on the basis of World Development Indicators and Global Finance, World Bank (2013).

II. The balance-of-payments dominance

Latin America and the Caribbean's high levels of real volatility are associated to a second characteristic displayed by the economies of the region, namely, balance of payments dominance in a context of financial openness. Balance of payments dominance is defined as a macroeconomic regime in which the short-term macroeconomic dynamics is essentially determined by external shocks financial and terms-of-trade shocks, positive or negative (Ocampo, 2012).

Balance of payments dominance has been traditionally associated with capital account shocks and cycles. This reflects the fact that the major pro-cyclical shocks that have affected the region including the Debt Crisis (1981-1984), the Mexican Crisis (1995), the Asian Crisis (1997), the Argentine Crisis (2001-2002) and the more recent Global Financial Crisis (2008-2009) are rooted in abrupt changes in the availability of external financing. This is illustrated in figure 2 which shows the evolution of the rolling correlation coefficients between the cycle of GDP and financial flows and between the GDP cycle and that of the terms-of-trade between 1993 and 2011. As shown in figure 2, the correlation coefficient between the GDP and financial flows cycle is statistically significant throughout most of the period (i.e., above the dotted line which indicates the statistically significant threshold).

In addition, in more recent times, and more particularly since the 2000's, the fluctuations in economic activity not only depend on the availability of external finance; they also tightly linked to commodity price movements and thus to the terms of trade. The correlation coefficient between the cycle of GDP and that of the terms-of-trade is not significant (at the 95% confidence level) for the period 1993-2001 and becomes significant thereafter reflecting the influence of the commodity price boom and the terms-of-trade on the domestic economies of the region.

As a result the balance of payments dominance has thus come to reflect not only the dependence of regional and domestic fluctuations on external financial cycles but also on real (terms-of-trade) cycles.

FIGURE 2
**EVOLUTION OF ROLLING CORRELATION COEFFICIENTS BETWEEN THE CYCLES
OF GDP AND FINANCIAL FLOWS AND BETWEEN THE CYCLES OF GDP AND
THE TERMS-OF-TRADE FOR 1993-2011 WITH A FIVE YEAR WINDOW**
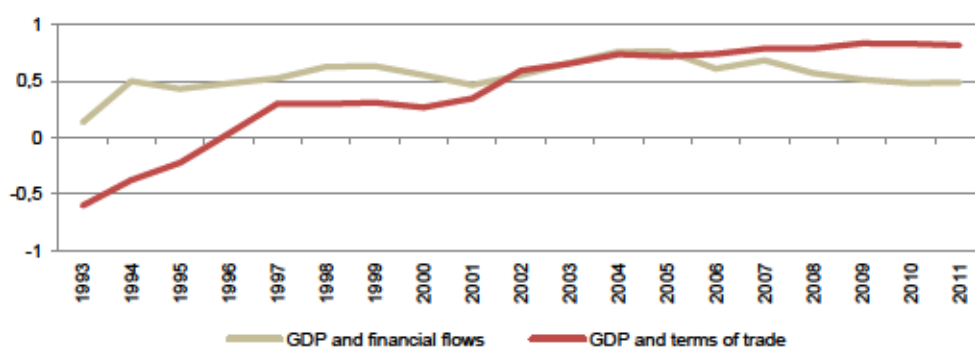
Source: Author's own on the basis World Development Indicators and Global Finance, World Bank (2013).

Note: The statistical significant refers to a 95% level of confidence.

Further evidence for the balance-of-payments dominance is provided in table 3 which computes a synchronicity coefficient between the Latin American cycle and of its sub regions and that of the United States, Europe and China. Synchronicity between one country/region (say region i) and a reference region (say United States, Europe and/or China) (region r) is computed as (Mink, Jacobs, Jakob de Hahn, 2012).

$$(1)\varphi(t) = \frac{1}{n}\sum_{i=1}^{n}\frac{g_i(t)g_r(t)}{|g_i(t)g_r(t)|}$$

Where, $g_i(t)$ and $g_r(t)$ represent the rates of growth of country/region i and that of the reference country/region r. The synchronicity indicator ($\varphi(t)$) measures the fraction of the time during a given period that country/region i is in the same cycle phase as country/region r.

The available data for the period 1990-2012 show that Latin America and the Caribbean, and all of its sub regions, exhibit, for the most part, a high degree of synchronicity with all reference regions considered (United States, Euro Zone and China). More precisely, on average, LAC's cycle is synchronous with that of the reference regions/countries 75% of the time (that is, 75% of the time LAC is in the same phase of the cycle as that of the reference regions/countries).

At one extreme the highest degree of synchronicity occurs in the four year period (2003-2007) that preceded the Global Financial Crisis (2008-2009) which reflects the fact that during this period most countries in the world experienced a period of expansion. At the other end, the lowest degree of synchronicity occurred during the Global Financial Crisis (2008-2009) highlighting the differential impact of the Global Crisis across regions and countries (see table 3).

Overall the available evidence thus shows that far from decoupling from the business cycle of developed countries, Latin America and the Caribbean remains very much coupled to their fluctuations of economic activity. Moreover, the high and increasing degree of synchronicity between Latin America and the Caribbean and China underscores the fact that region's cycle has also become dependent on that of other developing countries. In the case of China this is explained by its influence in the determination of the commodity terms-of-trade. China is a major commodity consumer of non-renewable energy resources, agricultural crops and base metals (20%, 23% and 40% of global production).[4]

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[4]   Roache, 2012.

TABLE 3
SYNCHRONICITY BETWEEN THE BUSINESS CYCLE OF LATIN AMERICA AND THE CARIBBEAN
AND ITS SUBREGIONS (AND MEXICO) WITH THAT OF THE UNITED STATES,
THE EURO ZONE AND CHINA, 1990-2012

	Latin America and the Caribbean	South America	Central America	Mexico
United States				
1990-1994	74	68	85	80
1995-2002	73	72	78	75
2003-2007	89	99	80	100
2008-2009	57	45	73	75
2010-2012	83	92	80	100
Average	75	75	79	86
Euro Zone				
1990-1994	...	...	...	...
1995-2002	73	72	78	75
2003-2007	89	99	80	100
2008-2009	64	58	80	88
2010-2012	68	74	67	70
Average	74	76	76	83
China				
1990-1994	...	...	...	...
1995-2002	69	64	77	77
2003-2007	87	87	86	90
2008-2009	64	68	60	50
2010-2012	75	76	71	78
Average	74	74	74	74

Source: Financing for Development Division (2013).

A. Volatility also reflect the specific features of the Latin American and Caribbean business cycle

The higher levels of volatility of Latin America and the Caribbean are explained not only by the region's dependence on its external performance as argued by the Macroeconomics for development blue Print but also by the particular features of its business cycle.

The Latin American and Caribbean cycle displays two distinct features. On the one hand, and most importantly, the Latin American and Caribbean region has weaker expansions relative to other regions of the world. On the other hand, Latin America and the Caribbean have contractions whose duration and amplitude tend, for the most part, to converge to those of other developing countries. As a result the full cycle of expansions and contractions, exhibits, a higher frequency among all regions.

The particular features of the business cycle were obtained using the Classical Cycle approach.[5] According to this methodology the business cycle can be characterized in terms of duration and intensity.

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[5]   The Classical Cycle views the cycle as a set of turning points of a time series representing the level of aggregate economic activity without consideration to a trend (Harding and Pagan, 2002 & 2005; Pagan, 2005). The inflection points of the series are then used as a basis to analyze the cycle in terms of a series of indicators such as the duration, intensity of an expansion (trough-to-peak) and a contraction (peak-to-trough) and the degree of coincidence between two given time series. Central to this approach is the identification of the turning points of a series. The turning points of a series are usually identified using the Bry-Boschan algorithm (1971) developed originally for monthly data and adapted to deal with quarterly observation by Harding and Pagan (2002). The algorithm consists in identifying local maxima and minima for a given series following a logarithmic transformation using specific censoring rules (Bry-Boschan, 1971).These include the specification of two quarters for a minimum duration for a single phase, and a minimum duration of five quarters for a complete cycle (Harding and Pagan, 2002). The peak for a series y_t is found when, y_t is

The duration (D) of an expansion is defined as the ratio the total number of quarters of expansion to the total number of peaks. That is,

$$(3) D = \frac{\sum_{t=1}^{T} S_t}{\sum_{t=1}^{T-1}(1 - S_{t+1})S_t}$$

Where, S is a binary variable which takes a 1 during an expansion and 0 during a contraction.[6] The numerator in (1) $(\sum_{t=1}^{T} S_t)$ denotes the total duration of expansions and the denominator $(\sum_{t=1}^{T-1}(1 - S_{t+1})S_t)$ measures the number of peaks in the series.

For its part the intensity or amplitude (A) of the expansion is measured as the ratio of the total change in aggregate economic activity to the total number of peaks. That is,

$$(4) A = \frac{\sum_{t=1}^{T} S_t \Delta Y_t}{\sum_{t=1}^{T-1}(1 - S_{t+1})S_t}$$

Where, Y is a measure of economic activity (GDP in our cases) and the numerator in (4) $(\sum_{t=1}^{T} S_t \Delta Y_t)$ is the total change in economic activity.

Applying the above methodology to a comprehensive sample of 83 countries, including 44 emerging market economies and 39c developed economies (i.e. high income economies) for the period 1989 to 2012 using quarterly data yields the following results.[7]

In comparison to other developed and developing regions of the world, the business cycle of expansions and contractions of Latin America and the Caribbean displays two distinctive features. First the region, as a general rule, has weaker expansions than other developing regions and in particular than East Asia and the Pacific. Second, Latin America and the Caribbean have, on average, contractions in terms of duration and amplitude which tend to converge to those of other countries, both developed and developing countries.

Weaker expansions and convergent contractions imply, as a result, that the complete cycle of expansions and contractions tends to be shorter and with smaller amplitude, for Latin America and the Caribbean relative to other regions of the world. In other words, Latin America and the Caribbean's cycle has a higher frequency than that of other regions.

In terms of the duration of the expansion, the evidence shows that Latin America and the Caribbean expansionary periods span, on average, a period of 14 quarters (three and half years).[8]

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[6] Similarly the duration and amplitude for contractions are computed using $c_{i,t} = 1 - s_{i,t}$.

greater than $y_{t\mp k}$ for $k = 1,2$. Similarly, the trough for a series y_t is found when, y_t is less than $y_{t\mp k}$ for $k = 1,2$. The algorithm excludes the occurrence of two successive peaks or troughs.

[7] The sample of emerging market economies comprise 21 countries belonging to Latin America and the Caribbean, 5 to East Asia and the Pacific, 11 to Europe and Central Asia, 3 to the Middle East and North Africa, 1 to South Asia and 3 to Sub Saharan Africa. The subsample of high income economies, include European (23), Asian (4), North American (2), Caribbean (2) and other countries. The other countries include Cyprus, Israel, Macao and Malta. The Caribbean countries include: Barbados, Belize, the Dominican Republic, Grenada, Jamaica, St. Lucia, and Trinidad and Tobago. In comparison to other analyses on the subject, the dataset used in this paper is one of the largest and most representative, at the regional and also at the Latin American and Caribbean sub regional level. In contrast to other studies on the subject it includes most countries of South and Central America as well as Caribbean economies thus avoiding introducing a sub-regional bias in the results obtained Data for the period 1989 to 2012 was not available for all countries. Quarterly GDP was used for all countries in the sample with the only exception of Barbados. In the case of Barbados, due to data limitations, quarterly GDP was proxied by tourist arrivals. In Barbados, the data available on a yearly basis for tourist arrivals and GDP show that both variables exhibit a high degree of coincidence (including turning points) and association (very high and significant correlation coefficient).

[8] The Bry Boschan algorithm was computed using Mat Lab with the help of computer codes provided by Professors John Rand and Finn Tarp (University of Copenhagen). Stata was used for the identification of turning points using the Okun and Calculus algorithms and to compute the cycle indicators.

With the exception of the Middle East and North Africa (one year), Latin America and the Caribbean's expansion performance is shorter than that of the rest of the regions considered, and in particular than that of East Asia and the Pacific. In the case of this region expansions last nearly eight years, that is almost five years longer than in the case of Latin America and the Caribbean. For the high income countries the duration of the expansion is also longer (6 years or roughly two more years than in the case of Latin America and the Caribbean) (see table 4).

TABLE 4
MEDIAN DURATION (IN QUARTERS) AND AMPLITUDE (IN PERCENTAGES) OF THE
EXPANSIONARY AND CONTRACTIONARY PHASES OF THE BUSINESS CYCLE
FOR SELECTED REGIONS OF THE WORLD, 1990-2012

	Contraction		Expansion	
	Duration (quarters)	Amplitude (in percentages)	Duration (quarters)	Amplitude (in percentages)
East Asia and the Pacific	3.3	-10.6	32.5	39.0
Europe and Central Asia	3.8	-11.6	25.0	43.8
Latin America and the Caribbean	3.8	-4.6	13.6	26.3
Middle East and North Africa	7.3	-7.0	3.5	15.6
South Asia	…	…	…	…
Subsaharan Africa	2.7	-7.1	37.5	40.9
High income	4.0	-4.9	23.0	26.3

Source: Pérez Caldentey, Titelman y Carvallo (2013).

Note: "…" denotes not available.

The cycle analysis of the most recent expansion does not alter our conclusions. For the majority of Latin American and the Caribbean, the most recent expansion began in the early 2000 and ended with the Global Financial Crisis (2009). It was one of the longest and most intense expansions in over three decades. However, this expansion episode falls short both in terms of duration and amplitude when compared to the last expansion episode of other regions and in particular to that of East Asia and the Pacific (26.5 quarters and 29.8% for Latin America and the Caribbean and 40 quarters and 53.9% for East Asia and the Pacific respectively).[9]

In line with the above results, terms Latin America and Caribbean also exhibits one of the weakest output gains in the expansionary phase of the cycle. On average, Latin America and the Caribbean register a 26.3% and 13.2% increase in output respectively. This contrasts with the experience of our benchmark region, East Asia and the Pacific, which records a 39% output gain (48% above that of Latin America and the Caribbean) (see table 5).

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[9] These numbers refer to the duration and amplitude of a single episode. They refer to the numerator of the duration and amplitude formulas (Eqs. 3 and 4 above) and in this sense are not strictly comparable to the rest of the cycle indicators provided in the paper. In the case of the Europe and Central Asia, the duration and amplitude of the last expansion episode are also greater than those of Latin America and the Caribbean (36.5 quarters and 63.2%).

TABLE 5
MEAN DURATION (IN QUARTERS) AND AMPLITUDE (IN PERCENTAGES) OF THE EXPANSIONARY
AND CONTRACTIONARY PHASES OF THE BUSINESS CYCLE FOR LATIN AMERICA AND THE
CARIBBEAN AND ITS SUBREGIONS, 1990-2012

	Contraction		Expansion	
	Duration (quarters)	Amplitude (in percentages)	Duration (quarters)	Amplitude (in percentages)
Latin America and the Caribbean	13.6	26.3	3.8	-4.6
South America	15.3	27.9	3.6	-7.1
Central America	25.0	27.0	3.5	-3.8
Mexico	23.0	25.6	3.7	-7.9

Source: Pérez Caldentey, Titelman y Carvallo (2013).

The weak performance of Latin American and Caribbean economies relative to other regions in the expansionary phase of the cycle is underscored when viewed in terms of the cumulative gain in output. Figure 1, shows the gain in cumulative output of East Asia and the Pacific and high income countries relative to that of Latin America. East Asia and the Pacific have a gain in output that is according to most criteria used almost thrice that of Latin America and the Caribbean. For its part, the gain in output of the high income economies grouping is 10% higher relative to that of Latin America and the Caribbean (see figure 3).

FIGURE 3
AVERAGE CUMULATIVE OUTPUT GAIN OF EAST ASIA AND THE PACIFIC AND THE HIGH INCOME
COUNTRY GROUPING RELATIVE TO LATIN AMERICA AND THE CARIBBEAN, 1990-2012
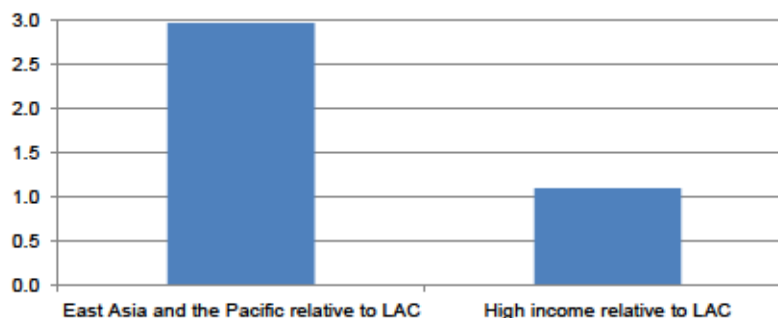
Source: Pérez Caldentey, E.; Titelman, D. & Carvallo, P. (2013).

Note: Refers to the average of the Bry-Boschan, Calculus, Okun and Cycle Deviation for the period 1990-2012. The cumulative output gain is computed as the product of the amplitude and duration of the expansion phase of East Asia and High Income economies relative to that of Latin America and the Caribbean.

In contrast to the results obtained for the expansions, the duration and intensity of the contraction for Latin American and Caribbean countries tend to conform to those found for other regions. With the exception of the Middle East and North Africa, the duration of contractions lasts less than a year. These range between 2.7 to 3.8 quarters (that is, between 8 and 11 months). The duration of contractions for Latin America and the Caribbean, Europe and Central Asia, and East Asia and the Pacific are very similar, lasting between 3.3 and 3.8 quarters, or between 10 to 11 months.

In line with these results contractions do not prove to be more intense in the case of Latin America and the Caribbean in relation to other regions. Latin America and the Caribbean have the smallest amplitude of contractions among all developing and developed regions. The average amplitude of the contractions equals 4.6% for Latin America and the Caribbean. This nears that of the high income country grouping (4.9%) and falls below that of East Asian and Pacific (10.6%), Europe and Central Asia (11.6%), Middle East and North Africa (7.0%) and Sub Saharan Africa (7.1%).

Both of the stylized facts analyses above (weaker expansions and convergent contractions) imply that the complete Latin America and the Caribbean cycle, exhibits for the most part, the shortest duration and smallest amplitude in relation to other regions. In other words, the Latin American and Caribbean cycle has the highest frequency among all other regions.

The length of the duration of an entire cycle using the Classical Cycle methodology (and as a reference the Bry-Boschan criterion) is roughly 17 quarters for Latin America and the Caribbean. This is below that found for high income countries (27 quarters) and also for the majority of developing regions. In the particular case of East Asia and the Pacific, our benchmark, the cycle lasts 36 quarters, that is, almost five years longer than that of Latin America and the Caribbean).

At the same that Latin America exhibits the shortest duration of cycles, it also displays, in the majority of the cases using both the Classical and Deviation Cycle methodologies, the smallest amplitude, that is the shortest distance between the intensity of the contraction and that of the expansion. Taking East Asia and the Pacific as a reference point, the amplitude of its cycle is 60% and greater than that of Latin American and the Caribbean.

B.   The relationship between the cycle and long-run growth: the real channel (productivity and investment)

The dynamics and particular features of the Latin American and Caribbean business cycle are not only relevant for the short-run. These have an impact on long-run performance. For our analysis this implies that the traditional view of Macroeconomics for development needs to incorporate another dimension to its analysis, namely the relationship between short-term fluctuations and long run growth, or between cycle and trend.

Weaker expansions in terms of duration and strength for Latin America and the Caribbean relative to other regions in the world imply also the accumulation period is also shorter and less intense. Also shorter cycle durations implies that the cycle in Latin America and the Caribbean exhibits a higher frequency relative to that of other regions. A higher frequency cycle is possibly one of the explanatory causes of a higher volatility in the region. Moreover, the specific features of the cycle link short-run fluctuations to long-term performance also because these features are reflected in structural (real) variables such as productivity and investment which are considered to be fundamental determinants of the long-run growth path of any economy.

Table 6 shows the duration and amplitude of the expansion for labor productivity for Latin America and the Caribbean countries in comparison to the rest of the countries included in our sample. Independently of the cycle methodology used, and in line with our previous results, Latin America and the Caribbean have, for the most part, one of the shortest expansions in productivity growth.

TABLE 6
DURATION AND AMPLITUDE OF THE EXPANSIONARY PHASE OF THE
LABOUR PRODUCTIVITY CYCLE FOR SELECTED REGIONS OF THE WORLD
USING THE CLASSICAL CYCLE METHODOLOGY, 1990-2012
(Yearly data)

	Duration *(in years)*
East Asia and the Pacific	4.3
Europe and Central Asia	5.5
Latin America and the Caribbean	3.8
Middle East and North Africa	3.3
South Asia	4.8
Subsaharan Africa	2.6
High income	6.3

Table 6 (concluded)

|	Amplitude (in percentages)
East Asia and the Pacific	23.4
Europe and Central Asia	33.7
Latin America and the Caribbean	13.6
Middle East and North Africa	17.2
South Asia	16.0
Subsaharan Africa	8.5
High income	17.7

Source: Pérez Caldentey, E.; Titelman, D. & Carvallo, P. (2013).

Note: Labor productivity refers to labor productivity per person employed in 2011 US$ (converted to 2011 price level with updated 2005 EKS PPPs).

In this regard, the differences between the cumulative gain (the product of the amplitude and the duration) in productivity between Latin America and the Caribbean and East Asia and the Pacific are worth highlighting. The cumulative gain in labor productivity during the expansionary phase of the cycle is 25% for Latin America and the Caribbean and twice this figure (50%) in the case of East Asia and the Pacific.

Jointly with the fact that Latin America and the Caribbean experience weaker expansions than other regions and, in particular, than East Asia and the Pacific, this type of evidence may help to explain the reason why the countries of East Asia and the Pacific have been able to sustain over time a high GDP growth path relative to the case of Latin America and the Caribbean. This is shown in figure 4, which plots the trend of GDP for the period 1960-2010 for both regions. Whereas the East Asia and Pacific region has been able to maintain a rising trajectory throughout the period, Latin America and the Caribbean experience a structural break in the 1980's, due most likely to the effects of the debt crisis, from which the region has not been able to recover in the following two decades. At a more detailed level of analysis, figure 4 shows that the GDP trend between 1960 and the early 1980's (period I) of Latin America and the Caribbean is similar to that in East Asia and the Pacific. Then, starting with the lost decade of the 1980's, it tends to decline and does not recover in the 1990's or the first decade of the 2000's, meaning that in this sub-period growth rates are lower than before the debt crisis (period II).

FIGURE 4
**GDP TREND FOR LATIN AMERICA AND THE CARIBBEAN
AND EAST ASIA AND THE PACIFIC, 1960-2010**
(Logarithmic scale, annual data)
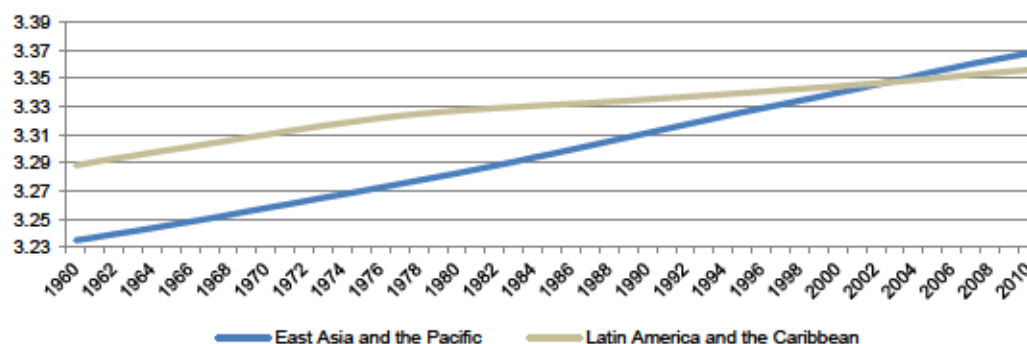
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, "World Development Indicators" and "Global Finance" [online] http://www.gfmag.com/.

Note: The computations were undertaken using the deviation cycle methodology.

The long-term effects of the crisis are seen in the structural break in the region's GDP trend. At the same time, the weak nature of recoveries is underscored by the fact that the economic policies implemented in the two decades after the crisis did not reverse those effects. Even in the period of fastest growth witnessed by Latin America and the Caribbean over the past 30 years (2003-2008), the countries of the region, with few exceptions, did not succeed in reversing the structural break or improving the trend. This is unlike what happened in Asia: the 1997 crisis, one of the severest to hit the countries of East Asia, did not change the path of trend GDP.

An additional piece of evidence linking the fluctuations of the cycle to long-run growth is provided by the behaviour of public investment, which is also clearly asymmetric, with drops during recessions being much sharper than increases during upswings. As shown in Table 8 considering data for six countries in the region, public investment in infrastructure fell by an average of 36% in the downswing of the business cycle.[10]

Declines in public infrastructure investment tend to be sharper than any increase during the recovery phase. In the sectors considered, the contraction is, on average, 40% greater than the subsequent expansion. In the power and telecommunications sectors, the difference between the decline in investment during a contraction and the increase during the expansion is even greater (35% increase and -52% decline for the energy sector and 28% and -58% for the telecommunications sector, respectively). Such a pattern has negative impacts on capital accumulation over time.

TABLE 7
LATIN AMERICA (SELECTED COUNTRIES): DURATION AND AMPLITUDE OF EXPANSIONS AND CONTRACTIONS OF THE CYCLE OF PUBLIC INVESTMENT IN INFRASTRUCTURE, 1980-2010
(yearly data)

	Expansion		Contraction	
	Duration	Amplitude	Duration	Amplitude
Total	2.7	25.6	2.2	-35.6
Energy sector	1.9	34.7	2.0	-51.5
Roads and railways	2.1	32.3	1.7	-33.1
Telecommunications	1.8	28.1	1.9	-58.0
Water and sanitation	1.6	24.2	1.7	-23.8

Source: Economic Commission for Latin America and the Caribbean (ECLAC, 2012).

Note: The Bry-Boschan algorithm was used for identifying the turning points.

The contraction in investment can have short-run effects on aggregate demand, but it also has an impact on the long-run trajectory of the economy. This is due not only to the fact that public investment contributes to the growth of the economy, but also to the fact that investment in decisions, in general, are often irreversible ("once installed, capital has little or no value unless used in production") and this characteristic provides a link between the decisions taken in the short run with medium and long-run outcomes.

Irreversibility can often become an important factor in the decision not to invest in the downward phase of the cycle due, for example, to the growing risks associated with the current and future macroeconomic context. In this sense, a downward phase of the business cycle can be associated with a low capital accumulation, which, in turn, results in furthering the decline in investment, undermining not only the job creating capacity of the economy, but also its recovery potential.

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[10]   Argentina, Brazil, Chile, Colombia, Mexico, and Peru, which account for 85.5% of the region's GDP between them.

C. The relationship between the cycle and long-run growth: the financial channel

Long-run growth dynamics are not only related to the behaviour of real variables such as productivity and investment but they also depend on the behaviour of credit and financial stability.[11] In this sense alongside the real channel, the financial channel is another mechanism through which cycle fluctuations affect the long run growth path of an economy.

The importance of the financial channel is underscored by the asymmetric behaviour of credit to the private sector in the cycle. Table 8 below characterizes the credit cycle in relation to that of GDP in terms of duration, amplitude and their accumulated effect for selected Latin American countries (including, Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Mexico, Paraguay, Peru, and Venezuela) for the period 1990-2012 on a quarterly data basis.

The evidence indicates on the one hand, that credit expansions tend on average to have, roughly, a similar duration but a greater intensity in comparison to GDP. On average the credit expansions last one quarter more than that of GDP. However, credit expansions display, on average, an amplitude that is 50% above that registered for GDP.

On the other hand, credit contractions are, at the same time, more protracted and more intense than those of GDP. Credit contractions lasts 60% more than those of GDP. For its part the intensity of credit contractions surpass those of GDP by five times on average (4 times if, instead of the average, the median is used) (see table 8).

As a result, while credit tends to overshoot GDP in terms of intensity the expansionary phase and contractionary phase of the cycle, the effect is much sharper in the latter phase. This overreaction of credit in the downturn is compounded by the fact that the credit contraction lasts longer.[12]

This asymmetry in credit behaviour (or similarly the fact that credit contractions are not necessarily commensurate to credit expansions) has important implications for the understanding of the GDP cycle and the relationship between fluctuations and longer-term trends.

One implication follows from the fact that contractions in credit tend to be much sharper than that those of output. A way to interpret this result, in light of the above evidence, is that the financial system acts as an amplifier of fluctuations in real variables such as GDP.[13] This finding corroborates the blueprint Macroeconomics for development view that credit aggravates real fluctuations (ECLAC, 2002, 2005, 2012).

A new and second implication not considered in the blue print view is that, by the mere fact that credit contractions last longer than those of GDP, GDP recoveries and expansions occur prior to those of

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[11] Traditionally in mainstream economics financial factors do not affect long-run growth. The Modigiani-Miller (1958) theorem exemplifies this point as it completely dichotomizes between the market value of a firm and its liability structure. As put by Modigliani (1980) p. viii: "…with well-functioning markets (and neutral taxes) and rational investors, who can 'undo' the corporate financial structure by holding positive or negative amounts of debt, the market value of the firm —debt plus equity— depends only on the income stream generated by its assets. It follows, in particular, that the value of the firm should not be affected by the share of debt in its financial structure or by what will be done with the returns-paid out as dividends or reinvested (profitably)." More recently, international organizations such as the IMF, the OCDE and also the EU have recognized that recessions that are generated by financial factors may affect potential GDP. This has led some economists (Borio, 2013 at al.) to attempt to introduce financial factors in the determination of potential GDP. Contrarily, a fundamental tenet of non-mainstream economics is that financial factors and the behavior of real variables are indissoluble (Keynes 1936, Minsky 1982, 1986). Both are joined at the hip.
[12] See Borio (2012) and Drehman et al. (2012) on the relationship between credit and financial cycles and GDP trend growth.
[13] Our results bear some resemblance to the notion of financial accelerator (Bernanke et al., 1999). The financial accelerator is based on the idea of an ex post information asymmetry giving rise to an external finance premium reflecting the difference between the costs of external and external finance. In the upward phase of the cycle, higher creditworthiness, net worth and in general improved payment capacity translates into a lower external finance premium. The opposite phenomenon occurs during contractions. Thus the external premium behaves counter cyclically, decreasing in expansions and increasing in contractions. In this sense the external finance premium can amplify in the financial sphere a shock to real variables.

credit. GDP recovers and expands and eventually credit follows suite.[14] In other words, credit is endogenous to GDP.

TABLE 8
DURATION (IN QUARTERS) AND AMPLITUDE (IN PERCENTAGES) OF THE EXPANSIONARY AND
CONTRACTIONARY PHASES OF THE REAL CREDIT CYCLE IN RELATION TO REAL GDP FOR
SELECTED LATIN AMERICAN COUNTRIES, 1990-2012

	Duration		Amplitude		Accumulated effect	
	Expansion	Contraction	Expansion	Contraction	Expansion	Contraction
Argentina	1.0	2.5	1.5	6.3	0.8	7.9
Brazil	0.6	2.4	0.9	3.0	0.3	3.5
Chile	1.0	0.7	1.6	0.8	0.8	0.3
Colombia	…	1.7	…	3.2	…	2.8
Costa Rica	1.1	1.5	2.7	3.9	1.5	2.9
Dominican Republic	2.8	1.3	8.1	12.1	11.1	8.1
Mexico	0.5	1.2	1.4	0.8	0.3	0.4
Paraguay	0.8	1.4	0.9	11.6	0.3	8.3
Peru	0.9	1.8	1.5	3.0	0.7	2.6
Venezuela (Bolivarian Republic of)	1.1	1.6	3.4	4.6	1.9	3.7
Median	1.0	1.6	1.5	3.6	0.8	2.8
Average	1.1	1.6	2.4	4.9	1.3	4.0

Source: Authors 'own on the basis of official information and IDB Latin America and the Caribbean Macro Watch Data Tool. http://www.iadb.org/research/latinmacrowatch/lmw.cfm.

This is reflected, at least in part, in the fact that in the case of Latin America the available empirical evidence shows that the behaviour of GDP leads in time that of credit (i.e., GDP is endogenous to credit). Figure 5 shows the percentage of countries within Latin America for which GDP Granger causes credit for the periods 1995-2003, 1999-2007, 2001-2009 and 2003-2011. In the first period considered (1995-2003) in 20% of the countries in the sample, GDP Granger causes GDP. In the last period (2003-2011), the percentage of countries which exhibit credit endogeneity increases to 70%.

Finally, a third novel features, is the fact that credit contracts by a multiple of GDP and that it continues to contract while GDP is expands, which implies that credit acts as a brake factor at least during part of the upward phase of the GDP cycle. This, jointly with the behaviour of real variables such as productivity and investment, analyzed in the previous section, can account for the tenuous nature of the expansionary phase of the cycle in Latin America.[15]

The significance of the financial channel as a transmission mechanism between the cycle and trend provides a solid argument to regulate the financial system in the aggregate, that is, from a macro-prudential perspective, in order to promote long-term growth.

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[14] These results are coherent with Calvo's phoenix miracles, i.e., credit less recoveries (Calvo et. Al., 2006).

[15] These results are in line with our previous finding that if the expansionary phase of the cycle is disaggregated into its two sub-phases, acceleration and deceleration (acceleration is defined by a GDP growing at an increasing rate or in other words by a first and second positive derivative of the GDP level series. Deceleration refers to a GDP growing at decreasing rates or in other words the first derivative of the GDP series in levels is positive while the second derivative is negative) Latin America and the Caribbean show one the weakest rates of growth for both the acceleration and deceleration sub phases in comparison to other developing and developed regions. The average rate of growth in the acceleration phase reaches 6.1% for Latin America and the Caribbean while for other regions such as East Asia and the Pacific it reaches roughly 7%. In a similar way, Latin America also experiences a slower deceleration phase than other regions with the exception of Middle East and North Africa and Sub Saharan Africa. See, Pérez-Caldentey, Titelman and Carvallo (2013).

FIGURE 5
**PERCENTAGE OF LATIN AMERICAN COUNTRIES FOR WHICH THE CREDIT CYCLE IS
ENDOGENOUS TO THE GDP CYCLE, ESTIMATED ON THE BASIS
OF ROLLING GRANGER CAUSALITY TEST, 1995-2011**
(Quarterly data)
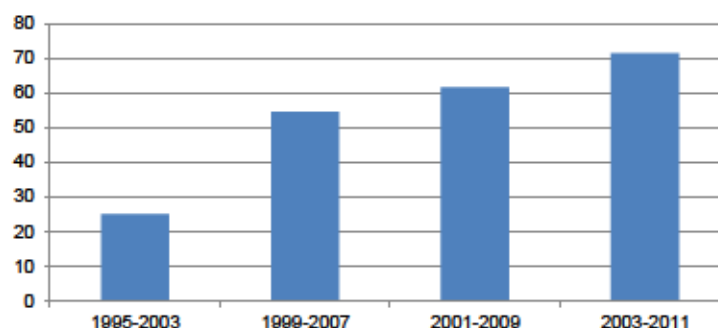
Source: Author's own on the basis of official country information and IDB Latin America and the Caribbean Macro Watch Data Tool. http://www.iadb.org/research/latinmacrowatch/lmw.cfm.

Note: The countries in the sample include Argentina, Bolivia (Estado Plurinacional de), Brazil, Colombia, Costa Rica, Chile, Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Paraguay, Peru, and Uruguay.

The main purpose of macro-prudential regulation is to maintain the stability of the financial system at the aggregate level through the minimization of systemic risk. This implies actively seeking to limit the accumulation of financial risks and the build-up of fragile financial structures including the prevention of asset and credit bubbles.[16]

More relevant to our own analysis it also means monitoring credit expansions and controlling the economic and social costs associated with credit restrictions that result from excessive contractions in the balance sheet of financial institutions that confront a common shock (Hanson, Kashyap, and Stein, 2011), or from rising interconnectivity (Shin, 2010).[17]

Monitoring the behaviour of credit in the cycle implies identifying the type of linkages between the real and financial sectors, and also within these that give rise to the excessive reaction of the financial system in the upward and downward phase of the cycle.

In this regard macro-prudential policy can be viewed as a countercyclical tool to manage aggregate demand not only in terms of its level but also in terms of its composition, that is, in terms of the sectorial sources which expand and contract aggregate demand.

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[16] Minsky (1982 - 1986).

[17] Macroprudential regulation must be seen as a complement of micro prudential regulation whose scope of regulation is limited to the individual financial institution. The norms that guide international financial regulation are dictated by the Basle Committee on Financial Supervision (CBSB). The CBSB approach to regulation focuses on capital requirements for individual financial institutions. These were established initially in the Basle I agreement (1988). Basle I was revised in 2004 giving rise to Basle II. Most recently, following the Global Financial Crisis, a new agreement on capital requirements, Basle III, was established. According to the CBSB, the implementation of Basle III is expected to start in 2016 and be fully operational by 2019. In contrast to Basel I and II, Basel III has introduced some macro prudential elements including a counter cyclical capital buffer which is supposed to be activated when credit expands beyond a certain threshold above its long term trend. Note however, that the guiding logic to the counter cyclical buffer is that of the boom and busts, whereby the credit busts is a direct consequence of the credit boom.

III. Completing the Macroeconomics for development blue-print's view of countercyclicality

The recognition that volatility is a major stumbling block to the pursuit of stable and sustained growth implies that an appropriate counter-cyclical policy should be the foundation of a sound and development oriented macroeconomic policy.

According to the traditional view of Macroeconomics for development, the essence of counter cyclical policy amounts to managing the level of aggregate demand through monetary, exchange rate and fiscal policies to smooth out business cycles fluctuations of nominal and real variables around long-term trends (ECLAC, 2002, 2004).

The view recognizes the limitations of the role of monetary policy as a counter cyclical instrument in a context of balance-of-payments dominance and financial openness. Also greater nominal stability, which is generally the objective of monetary policy, does not necessarily imply improved real and financial stability.

Given the limitations of monetary policy, the importance of fiscal policy as a countercyclical tool in emphasized.[18] Countercyclical fiscal policy is understood as a strategy focused on increasing the fiscal space in the upward phase of the cycle, during expansions, through increased fiscal savings and lower external indebtedness, in order to 'ease financial constraints and reduce the need for belt tightening' (ECLAC, 2005).

Thus, governments need to pay particular attention to the management of expansions in order to increase the savings capacity of economies and thus expand the amount of leeway available for

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[18] This view stands in sharp contrast to mainstream economics, according to which monetary policy is the main stabilization tool. Fiscal policy has at most a subsidiary role to play although it is recognized, in some circles of the mainstream, that it is useful either in a sharp recession or when monetary policy ceases to be operative (as is the case when monetary policy rates near the zero bound. See, Blinder, 2006.

countercyclical management in the downward phase of the cycle. To this end, fiscal laws and rules are proposed based on long-term or structural variables (such the growth trend) rather than short-term targets.[19]

To widen the space for counter cyclical policy and improve its effectiveness financial (capital) inflows need to be regulated. The main objective is to reduce volatile capital inflows in the upward phase of the cycle and reduce their expansionary impact on aggregate demand. The management of capital inflows also mitigates nominal and real exchange rate appreciations that occur in the upward phase of the cycle. Finally, it also improves the manoeuvre margin of monetary and fiscal policy in the business cycle.

Given the relationship between short-term fluctuations and long-term growth and productive development, the analyses and empirical results presented in this paper add another dimension to the design and implementations of countercyclical macroeconomic policy.

As shown in this paper counter cyclical policies (i.e., aggregate demand policies) are not neutral to the long-run behaviour of economies. The way counter cyclical policies are designed and implemented, including their timing and type of instruments used, shape and determine, along with other factors, the growth trend of economies.

Thus economies not only manage to grow sustainably over time due to the right type of innovation, productive and diversification policies but also due to an adequate and growth friendly counter cyclical policy.

In the case of Latin America and the Caribbean the interrelation between cycle and trend is reflected in the specific features of the cycle which are not conducive to accumulation and high growth. In this regard the most important one is that Latin America and the Caribbean register weaker expansions than those of other regions and, in particular, than those of the East Asian and Pacific region.

The specificities of the Latin American and Caribbean cycle are reflected in the behaviour of variables such as productivity and investment, which are linked to long-run growth performance. In the particular case of Latin America and the Caribbean, the behaviour of both productivity and investment reflect the weak nature of the region's expansions.

In fact, the study of the particularities of the cycle, including weak expansions in output and productivity, may be central to explain, at least in part, the reason why the region has not been able to sustain growth concomitantly to other regions and, in particular, to East Asia and the Pacific.

In addition, to real variables, financial factors and in particular the behaviour of credit also plays an important role in explaining the tenuous nature of expansions and their impact on long-run growth. In particular the evidence shows that credit is endogenous to GDP and that the financial system tends to amplify contractions putting sands in the wheel of the recovery and acting as a brake to the expansion.

The interrelation between cycle and trend has three important implications that should be taken into account in order to build a coherent and full-fledged Macroeconomics for development.

A first important implication derived from the analysis is that a Macroeconomics for development cannot dichotomize between cycle and trend or between 'short' and 'long' run. Short-term fluctuations do affect long-run outcomes.

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[19] Finally, the use of structural variables as anchors for the design of fiscal policy, give automatic stabilizers more space to function. The adoption of fiscal responsibility laws and rules adopted by some Latin American countries between 1990 and 2005 such as Argentina (1999 y 2004), Brazil (2000), Chile (2000), Colombia (2003), Ecuador (2002 y 2005), Panama (2002 y 2004), Peru (2000 y 2002) y Venezuela (2003). (The dates included in parenthesis refer to approval of the fiscal responsibility laws or fiscal rules.) in seen a positive step in the right direction to achieve 'dynamic consistency in fiscal policy' (ECLAC, 2004). The responsibility laws include in all cases numerical targets for the fiscal balance and the establishment of transparency norms (Brazil, Colombia, Chile, Ecuador, Panama and Peru) and the creation of stabilization funds to avoid pro cyclicality of public finances and the permit the mitigation of business cycle fluctuations (Argentina, Chile, Ecuador, Paraguay, and Peru).

A second implication is that counter cyclical policy should not only focus on reducing cycle fluctuations. Counter cyclical policy must also confront the challenge of changing the specific features of the cycle that affect negatively growth and the productive structure of the countries of the region.

This implies that counter cyclical policy must not only steer the cycle through variation in the level of aggregate demand. It must also focus on the composition of aggregate demand. This implies on the one hand, sustaining the duration and intensity of the expansion and avoiding the use of public investment as the adjustment variable during cycle fluctuations.

On the other hand, this means that countries should open the toolkit of macro prudential regulation, beyond the use of the management of the capital of the balance of payments and counter cyclical financial regulation to monitor the level and composition of aggregate demand.

In fact, monitoring the level and composition of demand requires a variety of instruments. Instruments should be seen as context and state-contingent specific. This demands identifying and thinking about the type of instruments that are adequate in different contexts and scenarios.

IV. Conclusion

The Latin American and Caribbean region is characterized by high levels of volatility with respect to its own past history and in relation to other regions of the world. High levels of volatility are associated to short-term macroeconomic dynamics determined by external by real and financial shocks (i.e., balance of payments dominance).

Volatility is a major obstacle to long-term and stable growth. It shortens the planning horizon of agents, increases risk, discourages productive investment and distorts key macroeconomic prices. In this sense, an appropriate counter-cyclical policy should be the foundation of a sound and development oriented macroeconomic policy.

According to the traditional view underpinning Macroeconomics for development countercyclical policy refers to the management of the level of aggregate demand to smooth out fluctuations of real and monetary variables around their long-term trends.

This paper argues that Macroeconomics for development should give a wider scope, reach and depth to macroeconomic counter cyclicality and that this requires not only moving beyond "volatility", but also make explicit the relationship between the cycle and long-term growth and productive structure.

Our argument is based on three stylized features of the Latin American and Caribbean business cycle. First, expansionary cycles are shorter and less intense in Latin America and the Caribbean in relation to other regions). Second, short-run fluctuations affect long-run outcomes through real and financial variables. And third, the financial system tends to act as an amplifier of real fluctuations and real recoveries occur prior to credit recoveries.

Our analysis has two important implications for the design of counter-cyclical policy. First Macroeconomics for development should not dichotomize between short and long run.

Second, counter cyclical policy should not only center on the management of the level of aggregate demand, it must also focus on its composition. This implies sustaining expansion in the real sector through investment and avoiding the latter's used as an adjustment lever.

It also means using macro prudential policy as a countercyclical tool to manage the level and composition of aggregate demand.

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