



## HOW MUCH ROOM DOES LATIN AMERICA AND THE CARIBBEAN HAVE FOR IMPLEMENTING COUNTER-CYCLICAL FISCAL POLICIES?\*

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### Abstract

*Latin America's government debt has exhibited a clear downward trend since 2003. While this has been partly due to rapidly increasing commodity prices, more sustainable fiscal policies have also been a contributing factor. In effect, in a significant break with the past, cyclically adjusted government balances have risen (fallen) in response to increases (reductions) in debt levels. However, Latin governments have continued to under-save in good times and therefore fiscal policy has remained pro-cyclical, thus weakening the ability to protect the poor and maintain infrastructure investments during bad times. Financing and institutional constraints to more counter-cyclical fiscal policies still remain in most countries. They are lowest in Chile, followed by Brazil and Colombia, and highest in Ecuador and Venezuela. Looking forward, long-term sustainability considerations cannot be ignored as decisions are made regarding the size, composition and targeting of fiscal stimulus packages.*

### **Financing and institutional barriers to counter-cyclical fiscal policies remain**

Counter-cyclical fiscal policies have recently been the focus of increasing attention by Latin American policy-makers. As suggested by the stimulus packages recently announced by various G20 countries (Figure 1), such policies are being considered a potentially important tool for mitigating the negative impacts of the current global economic slowdown. In the case of LAC, both the size and the composition of the fiscal stimulus packages that have been announced vary considerably across countries. While some countries have focused predominantly on tax cuts (Brazil), others have planned to raise infrastructure spending (Mexico, Chile and Peru). Moreover, some countries are reinforcing their social protection networks (Argentina and Chile) whereas others are focusing on providing incentives to non-traditional exports (Peru). As for the size of the packages that have been announced, it ranges from 0.6 percent of GDP in Brazil to 2.2 percent for Chile. Overall, the stimulus measures that have been announced by Argentina, Brazil, Chile, Mexico and Peru are equivalent to 1 percent of their combined GDP. Still, it is difficult to ascertain the extent to which the announced fiscal stimulus measures add to already existing plans or reallocate expenditures that had already been budgeted.

One important concern, in this context, is that Governments may be placing excessively high expectations on their ability to implement discretionary counter-cyclical fiscal policies in an effective manner. After all, as documented in an extensive empirical literature, few developing countries have been able to implement such fiscal programs in the past.<sup>1</sup> The great majority of emerging market economies have systematically cut taxes and raised expenditures during booms, while being forced to adopt contractionary policies during busts, when domestic and external credit constraints become

\*The views in this note are entirely those of the authors and do not necessarily represent the views of the World Bank, its executive directors and the countries they represent.

<sup>1</sup> See Lane (2003), Kaminsky et al. (2005), Talvi and Végh (2005) and, Ilzetzki and Végh (2008).

binding.<sup>2</sup> True, access to domestic and international financial markets has increased considerably for many Latin American governments during the present decade. This, in principle, could have reduced the financing constraints which in the past limited their ability to implement counter-cyclical fiscal policies. However, as is well known, this situation has changed drastically with the drying of private credit markets after the onset of the current global financial crisis. Many LAC countries are now facing considerable challenges just to roll-over their current stock of private and public debt. As a result, in order to finance possible fiscal expansions, or at least to avoid a fiscal contraction, most governments would probably have to rely solely on their own resources, complemented by multilateral financing. The risk is that many of the countries in the region could not have the necessary resources to finance substantial stimulus packages without compromising their hard-gained macroeconomic stability.

A related concern is that some of the political incentives and weaknesses in budgetary institutions which in the past have contributed to the pro-cyclicality of the region's fiscal policies may be hard to alter in the short run. This could limit the scope for shifting, at least in a sustainable manner, to a more counter-cyclical approach. In particular, governments have been traditionally unable to deal effectively with political pressures during expansions, which have limited their ability to generate significant surpluses during good times.<sup>3</sup> To the extent that these political and institutional constraints remain unchanged, it could be difficult to scale back expansionary programs once the region's economies start their cyclical recovery. This could in turn negatively affect their future creditworthiness and further limit the potential for shifting, in the medium term and on a sustainable basis, from pro-cyclical to counter-cyclical fiscal policies.

#### ***Although LAC has traditionally had a poor fiscal policy track record ...***

Latin America's pro-cyclical approach to fiscal policy has negatively affected its long term growth through at least two channels. First, pro-cyclicality has helped amplify economic fluctuations.<sup>4</sup> Second, governments have tended to penalize public investment in the fiscal adjustment programs implemented during downturns.<sup>5</sup> Besides hurting growth, this anti-investment bias has arguably also had unintended negative consequences on long term government solvency.<sup>6</sup> This effect has been reinforced by the fact that most Latin American countries have failed to systematically adjust their fiscal policies to the requirements of long term debt sustainability, at least until the 1990s.<sup>7</sup> In particular, during this period, countries experiencing increasing ratios of debt to GDP were not able to systematically tighten their discretionary revenue and expenditure policies. Finally, the pro-cyclicality of the region's fiscal policies has made it difficult to expand social safety nets. In this sense, the behavior of fiscal policies has been especially harmful for the poor, given their fewer assets, limited access to credit and lower ability to smooth consumption during downturns.<sup>8</sup>

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<sup>2</sup> See Gavin, Hausmann, Perotti and Talvi (1996) and Caballero and Krishnamurthy (2004).

<sup>3</sup> See Tornell and Lane (1999), Braun (2001), Talvi and Végh (2005), Perry (2007), Alesina, Campante and Tabellini (2008), Ilzetzky (2008).

<sup>4</sup> See Fatás and Milhov (2007) and Perry (2007). On the pro-cyclicality of the region's fiscal policies, see Gavin and Perotti (1997), Suescún (2005), Perry (2007), Perry, Servén, Suescún and Irwin (2007) and the references therein.

<sup>5</sup> The "perversity" of fiscal adjustments biased against public investments is related to the fact that the latter have the potential to increase future government revenues, for instance through tolls, tariffs and growth-related increases in general tax collection. See Easterly and Servén (2003) and Calderón and Servén (2004).

<sup>6</sup> See Servén (2007).

<sup>7</sup> See Suescún (2005) and Perry, Servén, Suescún and Irwin (2007).

<sup>8</sup> See Perry (2007).

### ***...this record has improved during the present decade***

Have these stylized facts been altered during recent years? Increasing concerns with debt sustainability, for example, have been apparent in many LAC countries during the last decade. In fact, the region has reduced its net dependency on external capital inflows. As shown in Figure 2, Latin America's general government debt as a share of GDP has exhibited a clear downward trend after 2003. This has been the result of sound macroeconomic and financial policy frameworks as well as better debt management practices involving improvements in currency and term composition. Moreover, countries have adopted more flexible and credible monetary policy frameworks; they have increased substantially their level of reserves, shifted to current account surpluses (or lower deficits) and deepened their local currency debt markets.

Figure 2 also presents the region's actual and cyclically-adjusted structural primary balances, both measured as shares of GDP.<sup>9</sup> During most of the past two decades differences between these two variables have been very small, which is consistent with previous evidence on the relative weakness of Latin American automatic stabilizers – which can be approximated as the difference between actual fiscal outcomes and their structural counterparts.<sup>10</sup> The main exceptions are the years 2000 and 2003, in which automatic stabilizers appear to have contributed to reducing the volatility of the region's fiscal policy: operating in an expansionary fashion when cyclically-adjusted balances were being increased (in 2000) and in a contractionary way when structural balances were being reduced (in 2003).

In addition, Figure 2 shows that after a decline during the second half of the 1990s, structural primary balances rose by about 3 percentage points between 1998 and 2008. This fiscal improvement was not driven, however, by an increased ability of governments to resist political pressures to increase primary expenditures. Instead, it can be attributed largely to improvements in debt management and the fact that rising fiscal revenues, associated to a large extent to rapidly increasing commodity prices, were able to outgrow primary expenditures (Figure 3). Still, higher structural balances allowed governments to increase their emphasis on social spending, including on education, health and targeted transfers.

### ***And fiscal policies have become more sustainable, even while remaining pro-cyclical***

In order to assess the extent to which the above policy changes altered the cyclical properties of the region's fiscal policies, we use data for 17 LAC countries for the period 1990-2008. We summarize the behavior of fiscal policy by estimating a fiscal policy rule in which primary balances – or alternatively government revenues or expenditures – depend on a measure of the state of the cycle, measured through the output gap, and the lagged value of the economy's total debt as a share of GDP.<sup>11</sup> We allow for the cyclical behavior and the responsiveness of fiscal policies to debt levels to vary from the 1990-2002 to the 2003-2008 period. As dependent variables we first use cyclically adjusted fiscal outcomes, so as to capture the behavior of the discretionary component of fiscal policy which responds endogenously to the economic cycle. Alternatively, we use the component of fiscal policy that is linked to automatic stabilizers. Moreover, to capture the joint effect of endogenous discretionary policies and automatic stabilizers, we repeat our analysis with actual values of fiscal outcomes as dependent variables.

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<sup>9</sup> The construction of the structural balance follows the OECD methodology as outlined by Fatas and Mihov (2009).

<sup>10</sup> See Suescun (2007) for evidence on the weakness of the region's automatic tax stabilizers, in comparison with industrial countries, which the author attributes to the relatively smaller size of LAC governments and the smaller share of income taxes found in this region.

<sup>11</sup> We closely follow the methodology proposed by Fatas and Mihov (2009) and correct for the possibility of reverse causality from fiscal policy to the level of economic activity using instrumental variables. We instrument for the lagged dependent variable and the output gap with actual and lagged values of the foreign output gap, lagged domestic output gap, actual and lagged values of international oil prices.

Our main findings are, first, that after 2002 fiscal policies have become sensitive to long term sustainability considerations, even when controlling for the effect of increasing commodity prices. Thus, observed fiscal balances and their discretionary component have tended to significantly rise (fall) in response to increases (reductions) in the level of Government debt (Table 1).<sup>12</sup> Our second main finding is that during the present decade Latin America's fiscal policies have continued to behave in a pro-cyclical way, being expansionary in countries experiencing booms and contractionary in those going through downturns.<sup>13</sup> Policy reactions to the state of the business cycle, however, are statistically significant only for observed government expenditures – not for primary balances or for government revenues.

Third, looking in more detail at the region's endogenous discretionary policies, we find that the *cyclically-adjusted* component of government revenues tends to behave in a counter-cyclical manner, while that of government expenditures is significantly pro-cyclical. Not surprisingly, the behavior of the structural primary balance is a-cyclical. Fourth, with regard to the automatic stabilizer component of fiscal policies, we find that it is significantly pro-cyclical for government revenues and the primary balance but counter-cyclical in the case of government expenditures. Fifth, the behavior of government expenditures is dominated by their pro-cyclical discretionary component, which more than compensates for their counter-cyclical automatic stabilizer element. And sixth, government revenues appear to be dominated by their pro-cyclical automatic component, which more than compensates for counter-cyclical discretionary policy changes.

There are, however, some notable differences between the behavior of fiscal policies across the group of 7 largest LAC countries and the rest of the region.<sup>14</sup> As illustrated in Figure 4, the discretionary component of government expenditures is relatively more pro-cyclical in LAC7, while that of government revenues and primary balances is relatively more counter-cyclical in this group of countries. In contrast, LAC 7 countries exhibit weaker counter-cyclical automatic stabilizers in the area of government expenditures, but stronger and more pro-cyclical automatic revenue and primary balance stabilizers. Overall, considering both discretionary and automatic changes in primary balances (jointly), LAC7 countries exhibit a less pro-cyclical behavior.

### ***Fiscal space for financing stimulus packages varies considerably across LAC9 countries***

We assess the extent to which LAC countries are in a position to implement fiscal stimulus packages without jeopardizing their fiscal sustainability and macroeconomic stability.<sup>15</sup> To that end, we construct a composite index of "lack of space for fiscal stimulus" which depends on the following six factors: levels of public debt, primary deficits, commodity dependence, expenditure rigidity, access to finance and borrowing costs.<sup>16</sup> We combine these six dimensions into an aggregate index.<sup>17</sup> Higher scores indicate higher constraints for the financing of fiscal stimulus packages. As shown in Figure 5, Ecuador and

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<sup>12</sup> The results in Table 1 do not change significantly when we also control for changes in export-weighted commodity prices.

<sup>13</sup> In our framework, booms (downturns) are defined as periods in which the growth of observed output is above (below) that of its cyclically-adjusted structural component.

<sup>14</sup> LAC 7 countries include Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. Rest of LAC includes Bolivia, Costa Rica, Ecuador, Guatemala, Honduras, El Salvador, Nicaragua Panama, Paraguay, and Uruguay.

<sup>15</sup> We focus on a group of nine countries comprising Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Venezuela.

<sup>16</sup> Appendix 1 describes the motivations for focusing on these factors, as well as the specific indicators used to measure them, and country rankings for each of them.

<sup>17</sup> We normalize the six components of the index to scores in the unit interval [0,1]. We do not cover Bolivia because of lack of data on borrowing costs.

Venezuela display the largest constraints for financing fiscal stimulus packages, while Chile displays by far the lowest constraints. Among the rest of the countries in our sample, Brazil and Colombia appear to be slightly better positioned than Peru, Mexico and Argentina. In most countries, the most important barrier to countries' ability to implement stimulus packages is related to their limited access to domestic and external financing. The main exceptions are Chile, for which commodity dependence is the main factor, Brazil, for which the existing debt burden is the dominant factor, and Mexico, where high primary deficits are the main constraint, at least relative to other countries in the region.

### ***Some desirable traits of counter-cyclical stimulus packages***

As shown above, the room for implementing counter-cyclical fiscal policies varies considerably across the region. However, some key characteristics of fiscal stimulus measures are likely to be considered desirable by all countries.<sup>18</sup> First, given the hard-gained achievements of the region in the area of debt-management, most countries are likely to place a large value on sustainability considerations. In practice, given the various constraints described above, this calls for exercising caution in terms of the size of potential stimulus packages. In terms of their composition, it calls for an emphasis on measures that could easily be scaled down once countries start recovering, or which could generate future increases in fiscal revenues – e.g. as in the case of growth-enhancing investments in infrastructure. Second, when designing their fiscal responses to the crisis, most countries are likely to give a large weight to targeting issues, so as to try and protect the region's achievements in the social front and help the most vulnerable cope with the downturn. In this respect, social safety nets based on means-tested transfers and workfare programs may be preferable to general increases in public sector wages. Finally, all countries are likely to seriously consider the possible trade-off between the timeliness of fiscal interventions and their potential effectiveness and efficiency. This may imply, for example, giving priority to avoiding the suspension of ongoing or pre-appraised projects instead of starting new and un-tested public investment projects.

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<sup>18</sup> See Spilimbergo, Symansky, Blanchard and Cotarelli (2008) and Kraay and Serven (2008).

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## Annex 1: Index Components

*Public Debt.* Lower levels of public debt may signal successful efforts of fiscal consolidation as well as better debt management practices. As an indicator of debt levels we use the general government debt as a percentage of GDP over 2005-2008. As shown in Figure 6, Chile is by far the best positioned country in this respect, while Brazil exhibits the largest level of public debt in our sample, and is followed by Argentina, Bolivia and Mexico.

*Primary deficits.* During periods of liquidity constraints —either in domestic or international capital markets— governments may need to rely on liquidity buffers to finance stimulus programs. We focus on the average primary balances between 2005 and 2008. Figure 7 shows that between 2005 and 2008 Chile had the largest primary surplus whereas Venezuela had the lowest – despite the sharp increase in this country’s fiscal revenues thanks to rising oil prices.

*Commodity dependence.* Our indicator of choice is the response of central government revenues (as a percentage of GDP) to a 10% increase in the Reuters/Jefferies CRB index of commodity prices. Figure 8 shows that the LAC countries that are exporters of oil and natural gas (Bolivia, Ecuador, Mexico and Venezuela) appear to be the most vulnerable, in terms of reductions in fiscal revenues, to the ongoing declines in commodity prices. At least in the LAC9 group, the countries with the lowest sensitivity of fiscal revenues to fluctuations in commodity prices are Brazil and Colombia.

*Expenditure rigidity.* Countries with a higher share of earmarked spending arguably have a smaller room to undertake discretionary fiscal policies.<sup>19</sup> We measure this through the share of mandatory spending in total spending, where mandatory spending is the sum of public wages, interest payments, social security payments and transfers to regions (or provinces). Figure 9 shows that mandatory spending was lowest in Colombia and largest in Brazil, Mexico and Venezuela. In Argentina and Venezuela, about three quarters of mandatory spending come from social security and transfers. Ecuador and Bolivia display the largest contribution of public wages while Colombia shows the largest contribution of interest payments.

*Access to finance.* Countries with deeper local currency debt markets and those with less restrictive access to world capital markets are expected to face lower financing constraints. Our composite index uses the following variables to measure this factor: (a) capital raisings by the private sector in the domestic market (as % of GDP) as a measure of depth of local currency debt markets, (b) gross capital inflows (i.e. FDI, portfolio equity, portfolio debt, and other investment) as % of GDP as a measure of access to funds abroad, and (c) an indicator variable that accounts for the fact that some countries have swap lines with foreign central banks and some LAC governments pre-qualify for the flexible credit line (FCL) with the IMF. Figures 10 and 11 show the size of capital raisings by LAC9 countries and the gross capital inflows to those countries during 2005-2008. Overall, Chile and Brazil appear to be the least constrained in terms of access to domestic and external financing.

*Borrowing costs.* The financial burden of financing stimulus packages would be lower for countries with lower sovereign spreads. We focus on the average EMBI sovereign spread of LAC countries between

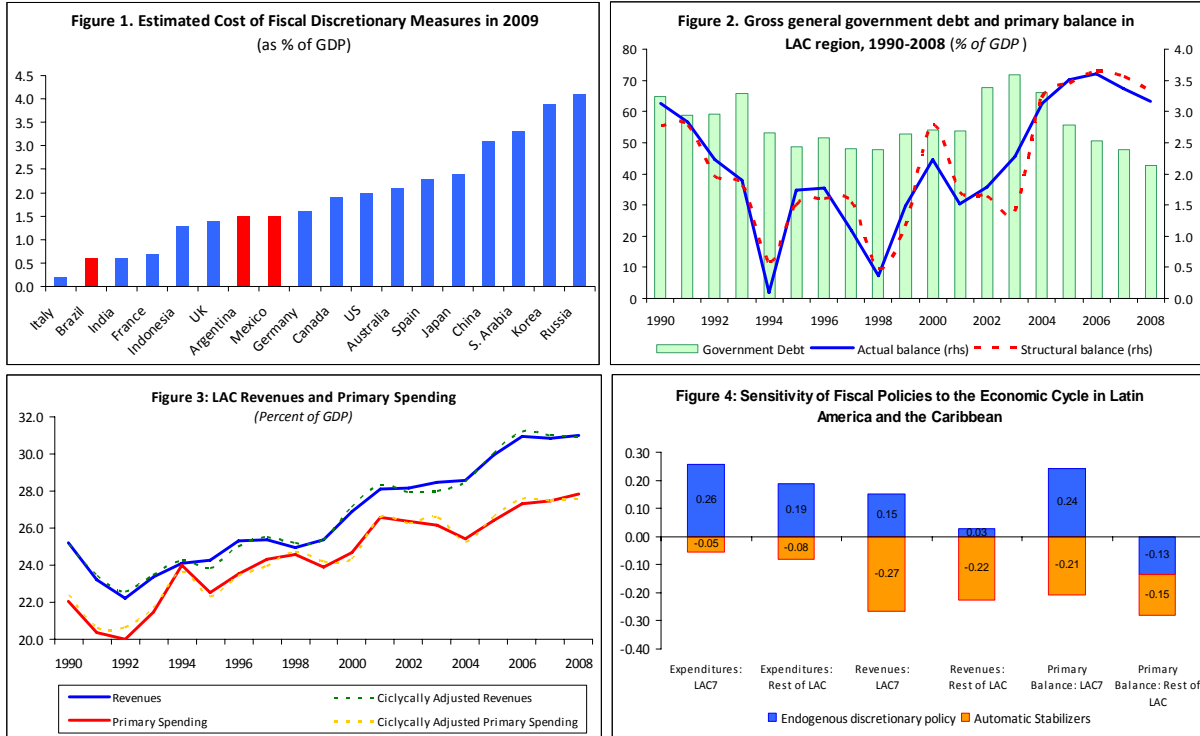
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<sup>19</sup> Fatas and Mihov (2003).



2007 and 2008. Figure 12 shows that Argentina, Venezuela and Ecuador display the largest sovereign spreads while investment grade countries such as Chile, Brazil and Mexico have smaller spreads.<sup>20</sup>

## Annex 2: Figures and Tables



<sup>20</sup> We do not include measures of local borrowing costs as the papers issued by different countries vary considerably in terms of their maturity. However, thanks to extensive arbitrage between local and external bond markets, cross-country differences in local borrowing costs are likely to be similar to those in external borrowing costs.

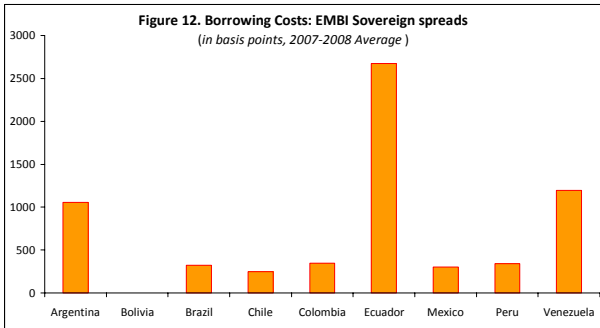
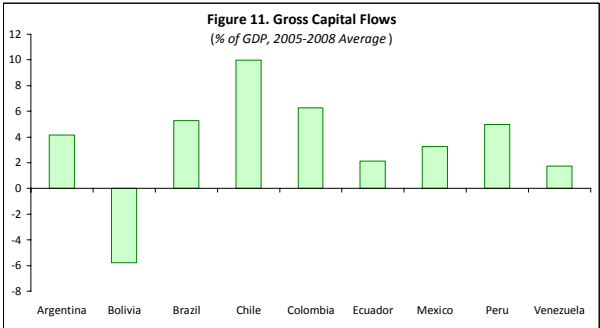
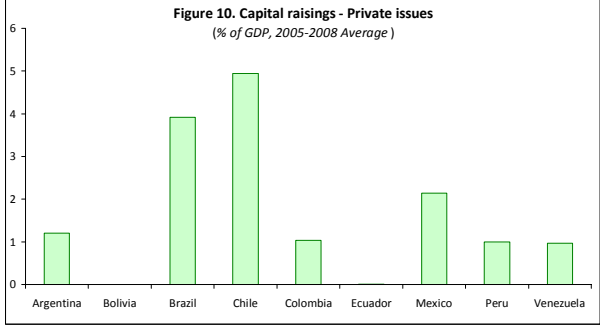
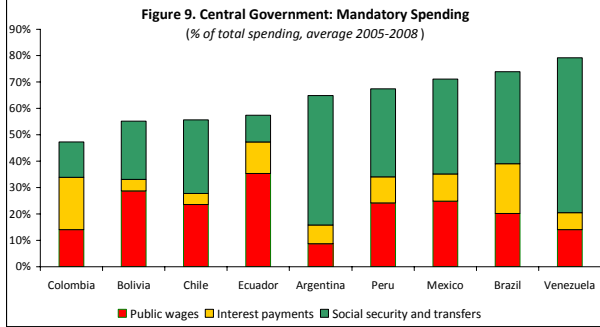
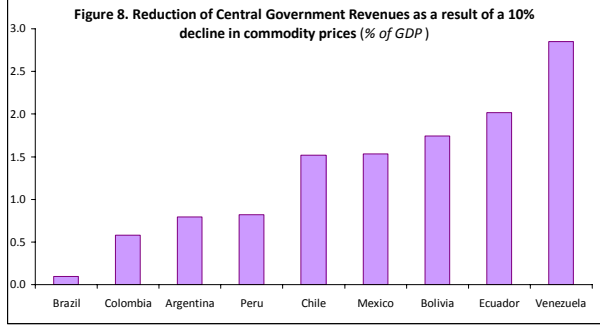
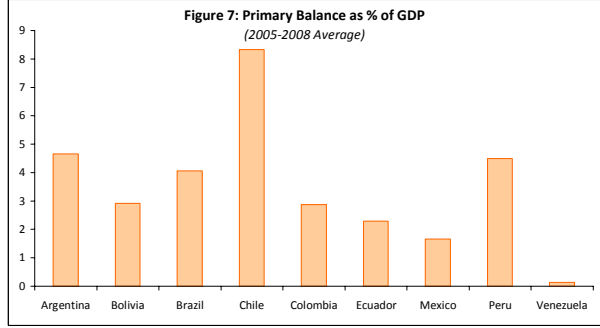
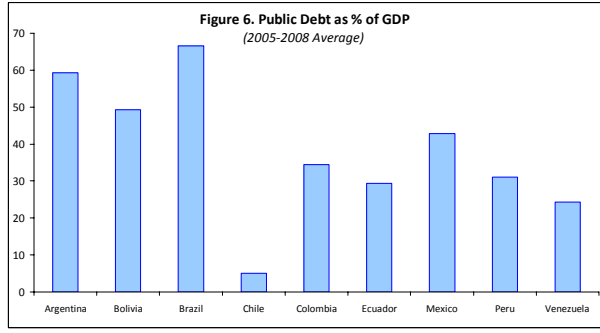
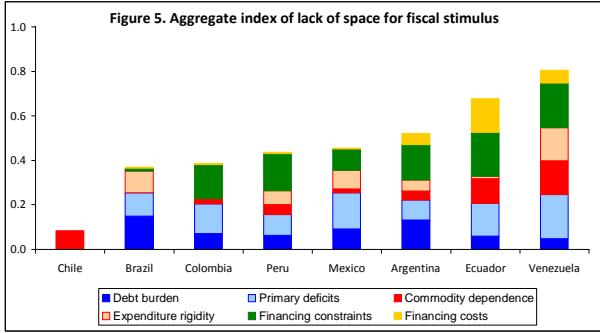


Table 1

## Fiscal Policy Reaction Function: Model with 2003 break in output gap and government debt

Dependent variable: Fiscal indicator as % of GDP (Fi)

Method: Instrumental Variables

	Actual			Cyclically-adjusted			Automatic stabilizers		
	Primary Balance	Government Revenues	Primary Expenditure	Primary Balance	Government Revenues	Primary Expenditure	Primary Balance	Government Revenues	Primary Expenditure
<b>I. All LAC Countries</b>									
Output gap, 1990-2002	-0.109486 [0.100086]	-0.066482 [0.103084]	0.209820** [0.106947]	0.001678 [0.104136]	0.081457 [0.101633]	0.249023** [0.104293]	-0.181486*** [0.016243]	-0.246536*** [0.016112]	-0.060828*** [0.009430]
Output gap, 2003-2008	-0.10535 [0.101527]	-0.060685 [0.104511]	0.211770* [0.108066]	0.004452 [0.105610]	0.088687 [0.103208]	0.251989** [0.105446]	-0.180441*** [0.016472]	-0.246137*** [0.016332]	-0.061561*** [0.009560]
Govt Debt, 1990-2002	0.006994 [0.004982]	-0.005468 [0.005668]	-0.009512* [0.005663]	0.007275 [0.004824]	-0.005738 [0.005672]	-0.008646 [0.005607]	0.00038 [0.001364]	0.000447 [0.001351]	-0.0004 [0.000771]
Govt Debt, 2003-2008	0.020370*** [0.007432]	0.002222 [0.008076]	-0.012584 [0.008248]	0.024904*** [0.007043]	0.006603 [0.007985]	-0.012623 [0.008156]	-0.002169 [0.002142]	-0.000937 [0.002115]	0.000735 [0.001222]
Lagged fiscal indicator	0.444984*** [0.106828]	0.682914*** [0.092082]	0.845723*** [0.082748]	0.437704*** [0.107885]	0.565476*** [0.084132]	0.844531*** [0.079674]	0.161839*** [0.048194]	0.113259*** [0.043339]	0.244445*** [0.052917]
No. Countries	17	17	17	17	17	17	17	17	17
No. Observations	272	272	272	272	272	272	306	306	306
<b>II. LAC 7 Countries (a)</b>									
Output gap, 1990-2002	-0.037676 [0.164666]	-0.041078 [0.121295]	0.196103 [0.164085]	0.2348 [0.192193]	0.142881 [0.126647]	0.254821 [0.158613]	-0.208988*** [0.025564]	-0.267301*** [0.024641]	-0.053806*** [0.016643]
Output gap, 2003-2008	-0.023594 [0.168506]	-0.029414 [0.123204]	0.200864 [0.166281]	0.250227 [0.196760]	0.156735 [0.128824]	0.261228 [0.160861]	-0.207845*** [0.026051]	-0.267365*** [0.025102]	-0.055178*** [0.016962]
Govt Debt, 1990-2002	-0.000763 [0.014259]	-0.00989 [0.013865]	-0.001902 [0.018588]	0.001669 [0.014380]	-0.014657 [0.014638]	0.002041 [0.018524]	-0.004023 [0.003888]	-0.005303 [0.003745]	-0.001944 [0.002521]
Govt Debt, 2003-2008	0.008195 [0.014810]	-0.002954 [0.012530]	-0.005339 [0.016004]	0.012009 [0.014901]	0.000133 [0.013349]	-0.00554 [0.016018]	-0.005435 [0.004300]	-0.003938 [0.004132]	0.001002 [0.002783]
Lagged fiscal indicator	0.134514 [0.198628]	0.630896*** [0.106361]	0.749189*** [0.165117]	0.006668 [0.235915]	0.502029*** [0.103950]	0.788488*** [0.160556]	0.138092* [0.071242]	0.084851 [0.063592]	0.282845*** [0.084087]
No. Countries	7	7	7	7	7	7	7	7	7
No. Observations	112	112	112	112	112	112	126	126	126
<b>III. Rest of LAC (b)</b>									
Output gap, 1990-2002	-0.144559 [0.129731]	-0.069438 [0.161922]	0.145708 [0.135007]	-0.133101 [0.128318]	0.027987 [0.155761]	0.188266 [0.132233]	-0.145566*** [0.021507]	-0.224928*** [0.022241]	-0.079714*** [0.009787]
Output gap, 2003-2008	-0.144969 [0.131105]	-0.068222 [0.163918]	0.144432 [0.136214]	-0.135258 [0.129618]	0.029068 [0.158015]	0.187705 [0.133485]	-0.144717*** [0.021755]	-0.224477*** [0.022488]	-0.080097*** [0.009890]
Govt Debt, 1990-2002	0.008552* [0.005088]	-0.005486 [0.006830]	-0.013607** [0.005454]	0.009440* [0.004989]	-0.004229 [0.006899]	-0.012773** [0.005393]	0.001114 [0.001291]	0.001126 [0.001329]	-0.000046 [0.000548]
Govt Debt, 2003-2008	0.026800*** [0.008710]	0.005217 [0.011281]	-0.013895 [0.009458]	0.031569*** [0.008181]	0.011017 [0.011159]	-0.013397 [0.009359]	-0.001317 [0.002264]	-0.00063 [0.002324]	0.000448 [0.000985]
Lagged fiscal indicator	0.547577*** [0.120285]	0.731633*** [0.175971]	0.894010*** [0.097688]	0.608808*** [0.114474]	0.665810*** [0.166286]	0.880947*** [0.094710]	0.207247*** [0.069091]	0.168877*** [0.062152]	0.126472* [0.065995]
No. Countries	10	10	10	10	10	10	10	10	10
No. Observations	160	160	160	160	160	160	180	180	180

Standard errors in brackets \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

(a) LAC 7 countries include Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela.

(b) Rest of LAC includes Bolivia, Costa Rica, Ecuador, Guatemala, Honduras, El Salvador, Nicaragua Panama, Paraguay, and Uruguay.