

Reply to comments by Eduardo Fernández-Arias

First of all, we would like to thank the reviewer for his very helpful comments. Some of them are definitely beyond the scope of our paper, but we think that the new version of the paper and our replies below contemplate the most important points and concerns raised.

These are the main issues raised, and our response:

Reviewer's comment 1

Primary budget balances in LAC are, on average, half as procyclical than in OECD. I could not find in the text how this conclusion was reached. Maybe the authors refer to the procyclicality of revenues. Either way, it would be interesting to make this comparison separating the two phases of the cycle.

We were referring to the size of automatic stabilisers on the tax revenue side. To avoid confusions, we now changed the text (paragraph preceding Table 3) from “sensitivity (semi elasticity in GDP percentage points) of government budget balances to a 1 percentage point change in the output gap is 0.21 (unweighted average of the six Latin American economies)” to “... the sensitivity (semi elasticity in GDP percentage points) of tax collection to a 1 percentage point change in the output gap is 0.21 (unweighted average of the six Latin American economies)”.

Reviewer's comment 2

The average primary balance in the last decade generally exceeds the balance required for debt sustainability (with the exception of Argentina in the sample). However it should be taken into account that the present value of Argentinean debt is substantially lower than its face value due to below-market debt exchange.

We agree completely with the reviewer's comment and have proceeded to use the net present value of Argentina's debt taking into account that for the current stock (after the debt restructuring) the implicit interest rate is significantly lower than the rate at which the Argentinean government can finance itself on the margin. As shown in the new Table 5, this adjustment reduces the required primary balance to 2.0 percent of GDP, compared to our previous figure of 3.1 percent of GDP. We thank the referee for reminding us of this issue. We have added a footnote (see footnote 22) on this issue.

Reviewer's comment 3

The authors use the OECD approach to estimation of cyclically-adjusted fiscal revenues. Such approach has the advantage of explicitly using the tax code to estimate cyclical variations, thus controlling for changes in it. However, such approach may be inapplicable in the Latin American context and underestimate the cyclical component of revenues:

- a. High and pro-cyclical informality in LAC may render the tax code inapplicable for estimation purposes.*
- b. Related, high and pro-cyclical tax evasion in LAC may render the tax code inapplicable for estimation purposes.*

We agree that the issues raised by the reviewer represent a challenge in the context of LAC countries, but we think that our methodological approach is applicable to their context. First, the OECD methodology to calculate the size of automatic stabilisers uses the tax structure in one particular (base) year. In our case, we used 2006 data, a year which is relatively neutral in terms of the business cycle. This limits the potential biases over the whole analysed period. Second, the methodology to compute the elasticity is composed by

the elasticity of the taxbase to the business cycle and tax revenues to the taxbase, e.g. for the income tax elasticity we take into account the progressivity of the tax code but also the estimation of the elasticity of wage bill to the business cycle. This later elasticity should take into account the effects of informality and some subdeclaration if they follows some regularities with respect to the cycle. We are not aware of any hard evidence regarding the reviewers claim, but these are definitely important issues to explore further in future work. We acknowledge this issue explicitly in the conclusions of the revised draft of the paper.

Reviewer's comment 4

A unit elasticity of the indirect tax base probably underestimates the elasticity in LAC. First, indirect taxation is concentrated in consumption, which is procyclical. Second, consumption taxes are further subject to procyclical evasion in the downturn. Since consumption taxation is a prevalent revenue source in many LAC countries, this inaccuracy may materially affect the estimations.

We performed a robustness exercise, using the estimation of the cyclical response of indirect taxation available for two countries in the sample, Chile (1.06) and Colombia (1.98), both taken from official publications, (Marcel et al., 2010 and Lozano and Toro, 2007). Given the high dependence of tax revenues from indirect taxes, the cyclical response of the budget increases, but our prognosis holds. For instance, for the year 2009, the cyclical revenues are -0.51 p.p. of GDP in Chile (vs. -0.49 in the original version), and -0.14 p.p. in Colombia (vs. -0.09 p.p.). More detailed results and calculus are available upon request.

Reviewer's comment 5

For many countries in LAC, the evolution of commodity prices is of first order importance to estimating structural balances. The authors rightly take into account this dimension but do not integrate it within the OECD approach based on using the tax code and the elasticity of the tax base, which is assumed constant. Perhaps the method of taking the 10-year moving average price as the structural price and assuming no cyclical quantum variation can be improved upon considering the importance of this item.

With respect to the computation of the long-run price, as the reviewer stresses we used in this paper one of the most common methods. Of course, there could be other alternatives, but it is not clear in which direction improvements could be made. We feel that the complexity of this issue is beyond the scope of the paper and that it is worth to explore in more depth. We highlight this point as an area of key further research. We have included a paragraph (following Table 4) on this issue. With respect to the comment regarding the consistency with the OECD approach, this is not applicable in most cases as commodity-linked revenues are not taxes (for example PEMEX revenues in Mexico or from CODELCO in Chile transferred to the central government, or mining royalties in several countries).

Reviewer's comment 6

Why is a neutral or countercyclical fiscal policy better fiscal policy, as the paper presumes? It behooves to the authors to answer this question and explain why their evidence is the relevant one to answer the question. If the reason is efficiency, say more efficient fiscal expenditure, then the authors should look beyond aggregate expenditures adjusted by unemployment benefits (which are assumed away for lack of data). There may be other cyclical expenditures that are not discretionary or are good. In the case of Uruguay for example there are constitutionally mandated indexed pension payments or smoothing of the price impact of oil imports.

We agree with the reviewer that there is an implicit normative aspect in the title. While in general canonical models of consumption smoothing in open economy would predict the optimality of

countercyclical savings, in theory the introduction of financial frictions, commitment problems (two-sided: sovereign and investors) and the precise role of fiscal policy (does it provide a public good without close substitutes or are these expenditure rather unproductive?) could alter these predictions. As for the case of decisions like smoothing the price impact of oil prices through public utilities price regulations, this seems to be a rather discretionary measure. In the case of pensions indexed to wages, it is true that this expenditure is not discretionary – to some extent – as in the example it is mandated by the constitution, although public wages are an important part of the index and they clearly do not vary automatically with the cycle. If these are optimal schemes – given the frictions in the economy – or not is a very difficult question beyond the scope of the present paper. Therefore, we have changed the title of the paper, eliminating the normative content from it to avoid confusions. Furthermore, we recognize in the conclusions that an in-depth analysis of the expenditure side would be an interesting point to include in future analysis at the country level.

Reviewer's comment 7

Alternatively, if the reason is fiscal sustainability, then a focus on cyclicity (a second moment) is not enough. The cyclical behavior is illuminating concerning prudential matters and the authors do a good job analyzing it, but it is key to look at the level of the adjusted balances (first moment). Better fiscal policies would mean that adjusted balances are less procyclical and lower. The authors have all the information needed to analyze the degree to which fiscal policy in LAC is getting better over time in this connection. They should tackle it.

We have included a discussion on the changes in the adjusted balances in the last 10 years in the new version (see Table 5) and a discussion regarding this issue. We also compare the required surplus if the financial and growth conditions were the same in 2000 and 2009. Please see the last section of the text.

Reviewer's comment 8

Finally, concerning debt sustainability, it would be important to analyze whether fiscal policy reacts to the degree of indebtedness, that is to say, whether fiscal policy adjusts to endogenously stabilize debt. The analysis of Table 5 implicitly assumes that it does not. That is an extreme assumption of myopia which can be tested empirically.

The estimation of a fiscal reaction function at the country-level would not be very informative given the small sample we have. We agree with the referee that this would be an interesting to analyse this issue further. We have included two mentions to this issue (last paragraph of the conclusions and second paragraph in the Debt sustainability section). With respect to the myopic behavior, we do not interpret Table 5 exactly in that way. It is just saying what the required surplus would be in steady state, not if that the current position will remain as it is. It does not analyse however if countries are at their steady state debt levels (although the output gap and real exchange rate adjustment go somewhat in this direction) nor if the debt levels are save or optimal. Of course, if not in steady state, the question not only of how but also if fiscal policy converges to the steady state is a very important, but also complex one. This is clearly beyond the scope of the paper, as the reviewer also suggests..

Reviewer's comment 9

The paper lacks a comparison of the proposed methodology to estimate the output gap to existing methods different to the Hodrick-Prescott filter. The authors should compare their method to the array of methods used in Vladoka-Hollar and Zettelmeyer (2008).

In terms of our results, we have now included some robustness analysis in terms of elasticities (as discussed above) and also on computing the output gap using a HP-filter on TFP. In particular, we re-examined the cyclically-adjusted budget balances using the Hodrick-Prescott filter with the usual smoothing parameter of 100. Focusing on the 2009 figures, results do not vary significantly, except in the case of Argentina where the business cycle has been more volatile, and it is still not clear how much of the 2001/2002 crisis had a permanent versus transitory effect. However, even in this case, discretionary fiscal policy remains counter-cyclical in 2009.

	Adjusted primary balance	
	2009, % GDP	
	Original	HP Filter
Argentina	-0,76	0,08
Brazil	2,01	2,26
Colombia	-1,11	-0,99
Costa Rica	-0,24	-0,24
Chile	-3,67	-3,67
Mexico	-0,67	-0,75
Peru	-1,94	-2,00
Uruguay	-0,20	0,03

We have included a footnote on this issue (footnote 20) and have also included an explicit reference to the need of more research on the nature of trend and business cycle characteristics in Latin American economies, as they could have a first-order effect on the cyclically-adjusted balances and should be extremely relevant from a policy viewpoint.

We compare our results (at least qualitatively) to the existing literature at several points now in the new version, but our paper is not aimed to compare systematically and understand the different methodological approaches (e.g. between the IMF, IDB and OECD studies) nor their potential impact on the measured cyclically-adjusted balances. This would be an interesting project per se, but we feel that it goes beyond the scope of our paper, as the reviewer also suggests.

Reviewer's comment 10

Oil prices might also play a role in public finances, especially for Colombia. The authors could implement a commodity prices adjustment for oil in this case.

To classify a country as commodity-revenue intensive we followed Vladoka-Hollar and Zettelmeyer (2008) of considering an average of commodity-linked revenues of at least 2 percent of GDP during 2002 and 2007. Under this criterium, Colombia does not make the cut. However, we recognize that future exploitation of oil fields will change this situation in the next decades to come, as the recent discussion of a structural fiscal rule in Colombia anticipates. Therefore, we have included an explanatory footnote (footnote 17).