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Four decades of terms-of-trade booms: A metric of income windfall

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We study Latin America's history of terms-of-trade booms during the period 1970–2012 through the prisms of a metric that quantifies the associated exogenous income shock ('*income windfall*'). We also document saving patterns during these episodes and propose a measure of how much of the income windfall was saved (i.e., the marginal saving rate). We find that Latin America's terms-of-trade shock of the last decade has not differed much in magnitude from that observed during the 1970s, but the associated income windfall has been substantially larger. While aggregate saving increased more than in past episodes, the share of the windfall saved has been lower, suggesting that greater aggregate savings reflect mainly the sheer size of the exogenous income shock rather than a greater effort to save it.

1. Introduction

Commodity exporting countries across the world have benefited largely from the commodity price boom of the last decade, which has allowed them to strengthen their economic fundamentals markedly in many dimensions. Latin America—being an important commodity producing region—has witnessed a particularly stark transformation, in sharp contrast to its previous history of poor macroeconomic management.[1] But, does the latter reflect a different and more prudent macroeconomic

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[1] For a detailed discussion on Latin America's marked improvement of economic fundamentals over the last decade, see Adler and Sosa (2013), IMF (2012 and 2013), IADB (2008), and Izquierdo et al. (2008). It is worth clarifying that, throughout the paper, we refer to *key* macroeconomic fundamentals, such as primary fiscal balance, public and external debt, and the external current account, all of which have shown remarkable strength over the last decade. The actual nature of the change in these variables is likely a combination of better policies and the direct effects of the terms of trade shocks. While shading light on the issue, the paper does not attempt to disentangle the contributions of these two contributions.

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response to terms-of-trade shocks than in the past? Or is it simply that this time the (*positive*) shock was much larger?

In this paper, we shed some light on this issue by analyzing the recent episode from a historical perspective. In particular, we study the income shock associated to the improving terms of trade (what we dub *income windfall)* and the extent to which this income was saved. Although we focus on Latin America, we draw inter-regional comparisons when relevant.[2]

Other recent studies (Izquierdo et al., 2008; Osterholm and Zettelmeyer, 2008; Cespedes and Velasco, 2011; etc.) have looked into the role of external factors—including terms-of-trade shocks—in driving economic growth in Latin America. However, their focus has been primarily on the effects of these shocks on real *output*.[3] As such, they have overlooked an important dimension of terms-of-trade booms, as the impact of these shocks on domestic income tends to be larger than on output. This aspect is key to understand the overall economic effect of terms-of-trade variations.[4]

We offer several innovations *vis-à-vis* the existing studies. *First*, we develop a simple, but very informative, metric of the 'extraordinary' income arising from the terms-of trade shock (that we dub '*income windfall*'). This metric allows us to grasp the macroeconomic importance of the recent boom in absolute as well as in relative (historical and inter-regional) terms. With this measure at hand, we also compute marginal savings rates to shed light on the extent of the 'effort' to save the extraordinary income now and in previous episodes. Finally, we conduct a simple econometric analysis to assess whether Latin America's saving patterns over the recent boom have differed from previous booms, and from those observed in other economies, once we control for key external factors that may have played a role, like the degree of persistence of the terms-of-trade shock, world interest rates, and income levels.

We find that Latin America's recent terms-of-trade shock has not been larger than the one experienced during the 1970s. However, the associated income windfall has been considerably larger than in the past, and quite large in absolute terms—reaching 100 percent of domestic income on a cumulative basis (or 15 percent per year on average) for the region as a whole. In some countries, the income windfall has been several times this magnitude. Region-wise, such income shocks are only comparable to those experienced by Middle-East and North Africa (MENA) oil exporting countries. We also find that, while aggregate (average) savings increased more than in past episodes in response to the terms-of-trade shock, the proportion of the income windfall saved (i.e., the marginal saving rate) has been smaller. While part of this changing pattern can be explained by the persistence of the shock and the lower global interest rates, there is still no evidence of a greater saving effort during the recent boom, even after controlling for these key factors. And while we find some evidence of greater fiscal effort, our macro-level findings challenge the growing perception that the macroeconomic response to the terms-of-trade boom was different this time. They suggest, in fact, that Latin America's solid macroeconomic performance and improving fundamentals during the last boom largely reflect the sheer size of the associated income shock, rather than a greater effort to save it.

The rest of the paper is organized as follows: Section 2 describes our metric of income windfall and compares Latin America's current episode with those of other regions, as well as its own past episodes. Section 3 studies the extent to which windfalls were saved, and Section 4 assesses these results econometrically. Section 5 concludes.

2. The terms-of-trade windfall in historical perspective

We study the history of large terms-of-trade shocks, focusing on a sample of 180 countries during the period 1970–2012. The data source is the IMF *International Financial Statistics (World Economic Outlook).* Our main exercise entails identifying episodes of terms-of-trade booms over the collected sample using the traditional measure of terms of trade, as follows:

[2] The discussion focuses on Latin America following the aim of this special issue. As presented in the paper, however, the data set contains also a wealth of information encompassing other regions.

[3] An exception is Kohli (2004), who points to the importance of income shocks associated with terms-of-trade variations, although focusing on a set of advanced economies. See also Feenstra et al. (2009).

[4] Other related studies have analyzed recent changes in the conduct of fiscal policies in EMEs, either through the cycle or during commodity price booms. See, for example, Frankel et al. (2013), and Céspedes and Velasco (2011).