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Output gaps and stabilisation policies in Latin America: The effect of commodity and capital flow cycles☆

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ABSTRACT

We provide a measure of the output gap that filters out the impact of the commodity and net capital inflows booms for Latin American countries. These two factors temporarily boost output and so are likely to push up estimates of potential growth in the region to unrealistic levels, thereby resulting in an underestimation of the output gaps during the upswing of the commodity cycle. We also shed light on the interaction between the two components. The results show that commodity prices have been the dominant factor explaining deviation of activity from sustainable levels. A timely consideration of these factors could prevent a procyclical fiscal policy bias in the region.

Brechas de producto y políticas de estabilización en América Latina. El efecto de las materias primas y los flujos de capital

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RESUMEN

Se proporciona una medida de la brecha de producción que filtra el impacto del auge de materias primas y flujos de capitales en los países latinoamericanos. Estos dos factores potencian temporalmente la producción y por tanto tienden a inflar las estimaciones de crecimiento potencial hasta niveles excesivos, lo que resulta en una subestimación de las brechas de producción durante la fase ascendente del ciclo de las materias primas. También se arroja luz acerca de la interacción entre ambos componentes. Los resultados muestran que los precios de las materias primas constituyen el factor dominante para explicar la desviación de la actividad económica con respecto a niveles sostenibles. La consideración de estos factores podría evitar un sesgo fiscal procíclico en la región.

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1. Introduction

In the last decade Latin America has experienced a long period of sustained growth and unprecedented economic and financial stability. The parenthesis represented by the global financial crisis was short-lived and did not spawn trouble in the domestic financial sector. Moreover, the swift recovery of the region fed the perception that countries had turned the page and they could sustain higher rates of growth than in the past.

A much improved macroeconomic framework, a reduction in financial vulnerability and a broadening of the domestic demand base were seen as key factors of that change. The benign external environment was also given some credit: the loose global financing conditions before and after the crisis, which fostered large capital inflows and the sustained increase of commodity demand and prices helped. Resource-rich Latin American countries with low saving rates – and thus heavy dependence in external financing – were especially favoured by this set of circumstances.

To illustrate this point, Fig. 1 displays the evolution of GDP growth, net capital inflows as a percentage of GDP and the (country-specific) growth rate of commodity prices since the nineties for a set of Latin American countries. The upward trend in commodity prices since the beginning of last decade was briefly interrupted during the global recession but resumed its two-digit growth shortly afterwards. However, after mid-2011 commodity prices plummeted. The evolution of net capital inflows has certain similarities: they increased strongly in the early 2000s, recovered rapidly after the global financial crisis and moderated towards the end of the sample. A certain co-movement is visible among the three variables, in particular during the last decade.

The sharp slowdown in growth in most countries of the sample has come as a surprise to many. The co-movement between the variables in Fig. 1 suggests that not only the current disappointing growth but also the robust recovery from the crisis is closely linked to the reversal in the external conditions. The fall in commodity prices, which was not anticipated, has severely affected growth prospects: it is remarkable to see in Fig. 2 how growth forecasts have been systematically revised downwards in the region, coinciding with the reversal in commodity prices.

Let us take for instance Brazil, a country whose share of commodity exports has averaged more than 60% in the last decade. Fig. 3 shows the strong positive correlation between changes in commodity prices and growth rates in Brazil. The correlation is even stronger with the changes in the growth forecasts, suggesting that economic performance is perceived to be closely associated with the evolution of commodity prices.

As a matter of fact, expectations of long-term growth in Latin America, boosted by the boom in commodity prices, have been scaled back. The IMF's five-year ahead forecasts, which can be seen as a proxy for the long-term expectations of potential growth, have been revised down from 4% to 3%.

There is a growing acknowledgement that long-term growth expectations in Latin America have been boosted by those extraordinary conditions is settling. This implies that the sustainable rate of growth in normal circumstances is perceived as lower than in the post-crisis recovery, and that the output gaps during the bonanza were underestimated.

This paper explores how to convey the extraordinary factors which have boosted growth in Latin America in the estimation of potential output and, hence, the output gaps.

The concept of potential output is an elusive one, relating to the rate of growth that a certain economy can attain without the insurgence of adverse side effects that may compromise future economic performance. The output gap – namely the difference between actual and potential output – is therefore a measure of the amount of slack or overheating at a certain point in time. As such, the notion of potential output is intertwined with that of sustainable growth. The sense in which sustainability should be interpreted varies depending on the specific approach taken.

One strand of approaches is based on production functions: potential output is expressed as a function of the input factors in the production process (capital, labour and technology). Accordingly, output above potential indicates that production factors are being overused, which could compromise future economic growth. The most widespread approach however relates sustainability to inflation: rising prices are interpreted as a sign of unsustainable growth. However, the structural changes in the relationship between inflation and unemployment in recent decades and the difficulties to estimate 'sustainable' – or equilibrium – employment rates has eroded the reliability of this approach.

Other approaches are entirely data-driven. For instance, the Hodrick–Prescott filter and other univariate time series filters (Baxter & King, 1999; Christiano & Fitzgerald, 2003). In recent times, there have been several attempts, through this filtering approach, to correct the contamination of the estimated output gaps from the factors that may presage unsustainable growth other than inflation (see Alberola, Estrada, & Santabarbara, 2014 and Benes et al., 2010 among others). A particularly relevant addition to the literature is the incorporation of financial cycles into the estimation of the output gaps. The focus on the relationship between financial cycles and business cycles has a long tradition in the literature, but it has mushroomed after the crisis (see Borio, 2012; Claessens, Kose, & Terrones, 2011; Rabanal and Taheri, 2015). Borio, Disyatat, and Juselius (2013, 2014) propose to include financial cycle considerations in the estimation of the output gap by correcting the HP filter with variables associated to the financial cycle, such as the credit growth and the house prices.

The approach by Borio et al. (2013) has been applied to Latin American countries by Amador, Gomez, Ojeda, Jaulin, and Tenjo (2016) and to EMEs in general by Grintzalis, Lodge, and Manu (2016). In this paper, we apply a similar approach, but focus on alternative gauges of unsustainable growth that may be more relevant for Latin American economies. A first alternative is net capital flows: a bonanza of foreign investment is likely to boost demand and growth in the recipient country, but when financial conditions in source countries tighten the flows may reverse, thereby dragging on growth. There is a very large literature linking the sharp economic cycles in the region to the boom and busts of capital flows, the so-called "sudden stops": Edwards (2004), Kaminsky, Reinhart, and Vegh (2005), Calvo and Talvi (2005).

Another common feature of the Latin American economies under study is the importance of commodities (see for instance, Céspedes & Velasco, 2012). Booms in commodity prices tend to raise real GDP in the short term by increasing the value and production of a key production factor in the economy (natural resources) and lifting the demand for ancillary goods and services. But it is an open question how far such booms raise potential growth in the longer term. By attracting capital and increasing investment in the resource sector, booms may raise potential output. And this may provide financial resources which could be in turn used to increase investment in other sectors of the economy. However, the so-called Dutch disease (Corden, 1984) operates in the opposite direction. The positive terms of trade (with the corresponding real exchange rate appreciation) and income shock associated with commodity booms shift production out of non-commodity tradables and into the non-tradable service sectors, with lower relative productivity. If the manufacturing base of the economy – the main non-commodity tradable – is reduced in a permanent way, potential growth can be reduced, too, as the tradable sector usually enjoys higher productivity levels and growth. Furthermore, commodity booms can catalyse waves of capital inflows and high demand of credit, on the basis of