

FISCAL POLICY IN OIL-EXPORTING COUNTRIES, COST OF ADJUSTING EXPENDITURES, AND FINANCIAL CONSTRAINTS

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Overview

For commodity exporters who face large terms-of-trade shocks, fiscal policy should prevent variations of commodity revenue from passing through to the business cycle. This prescription is not followed in practice. Countries have a tendency to spend windfall commodity revenue and to cut spendings in times of commodity market downturns.

Understanding the fiscal procyclicality of oil-exporting countries is important for numerous reasons. First, it helps assess the quality of the macroeconomic policies and the factors that improve it. Second, it can explain what makes oil-exporting economies more vulnerable to price shocks. Third, it provides insights on the short-term and long-term gains from improved fiscal policy.

The commodity exporters and the oil-exporting countries in particular tend to be procyclical (Kaminsky, 2010; Coutinho et al., 2021). In periods of oil price downturn, investment expenditures are cut more than current expenditures (Arezki and Ismail, 2013). However, some studies showed that their procyclicality has decreased over time (Villafuerte and Lopez-Murphy, 2010; Céspedes and Velasco, 2014).

The literature is less conclusive about what explains procyclicality in commodity-exporting or other countries. Studies have invoked the role of financial constraints. Terms of trade improvements bring foreign exchange to the economy, ease the financial condition and give governments incentives to spend more. In times of commodity-market downturn, the financial constraints tighten and prompt an abrupt fiscal contraction. However, the financial constraint by itself is not a sufficient explanation for why governments are procyclical (Ilzetki, 2011). On the contrary, they should even encourage governments' precautionary savings thus to be countercyclical. Political economy models featuring market failures (Alesina and Tabellini, 2008) or adjustment costs (Arezki and Ismail, 2013) have been somewhat successful in explaining procyclical behaviors.

In this paper, we examine how expenditure adjustment costs and financial constraints make expenditure procyclical, in particular public investments, in times of commodity market downturn. We also investigate asymmetric responses of fiscal policies to changes in oil rents depending on whether the oil market is up or down.

Methods

We use annual 1999-2019 data for 31 oil-exporting emerging and developing economies. Government expenditure, GDP and oil rents are taken from World Bank's (2021) World Development Indicators. Our non-oil and gas GDP is given by GDP minus the non-oil and gas rents. We consider separately government consumption and government investment (gross fixed capital formation). Both data are sourced from the IMF. For other variables of interest, including fiscal rules, access to finance, occurrence of IMF programs, sovereign wealth fund, we use various publicly available sources.

As a preliminary analysis, we assess the procyclicality of total government expenditure by investigating the sign of the response of the governments' expenditure to changes in oil revenues. A series of cross-sectional regressions are run to measure the extent to which public expenditure responds to variations in oil revenues.

We estimate the cyclicity of government expenditure using panel data methods (pooled OLS and fixed effects). In our baseline specification, governments' total, current and investment expenditure are explained by variations of oil rent and a set of covariates.

We then introduce specifications that allow for asymmetry in fiscal responses. First, we consider that the response may depend on the *position* of oil rents: above (good times) or below (bad times) a trend that is computed with a Hamilton (1999) filter. Second, we let the response depend on the *variation* of oil rents: on whether the rents increase (improvement) or decrease (deterioration), whatever we are in a good or bad time. To the best of our knowledge, all the studies that investigated asymmetric responses of fiscal policies considered oil price variations only.

In order to assess how the duration of good or bad times influences the response of policies to variations in oil prices, we use a third type of specification, where we interact the number of years in good or bad times with the increase or the decrease of oil revenues.

Results

First, in our preliminary analysis, we show that fiscal policies have been procyclical or neutral since 2000, and we find no reduction in procyclicality over time. Procyclicality during periods of large changes in oil prices may have increased the pass-through of the commodity cycle to the business cycle. Fiscal policies were procyclical during the period of low oil prices in 2015 and 2016, with a tendency for budget consolidation, that has generated more contraction in economic activity.

Second, we find, in line with the literature, that investment expenditure is more procyclical than current expenditure. However, IMF programs tend to reduce the procyclicality of public investment. Third, we find that there is an asymmetric response of consumption and investment expenditures when the oil revenues improve or deteriorate. More specifically, in times of deterioration, government investment is severely cut because there is a high political cost of reducing current expenditure. On the opposite, improvements in oil rent are used as opportunities to increase current expenditure. We also find that the duration of the good or bad times matters. When a price increase happens after a longer good time period, the total expenditure increases less and policies are less procyclical.

Conclusions

This paper stresses that the depletion of financial buffers increases the likelihood of being procyclical and, in particular, of cutting investments during a downturn of oil revenues. It concludes with a discussion on possible implications for oil-exporting countries, of a post-Covid19 transition toward a low-carbon scenario.

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