How should fiscal policy be set over the business cycle?

Emerging economies need to ensure that liquidity is effectively managed and that fiscal surpluses generated during booms are saved for bad times.

Several generations of economists have analyzed the relationship between fiscal policy and the business cycle. Standard Keynesian models imply that fiscal policy should be countercyclical to smooth economic fluctuations: when bad times hit, the government should increase spending and lower taxes to help the economy "spend" its way out of the recession. Conversely, during expansions fiscal policy should be contractionary to prevent the economy from overheating. At the other extreme, tax-smoothing models inspired by Barro (1979) imply that fiscal policy should remain essentially neutral over the business cycle and respond only to unanticipated changes—that is, innovations—that affect the government’s intertemporal budget constraint.

Evidence on fiscal policy and the business cycle

How is fiscal policy actually conducted over the business cycle? Using a common methodology, Talvi and Végh (1998) review the most salient features of the business cycle properties of fiscal variables for 56 countries—20 industrial and 36 developing. The authors focus on volatility, as measured by the standard deviation, and comovement, as measured by correlations, for a set of common macroeconomic and fiscal variables to compare the experiences of developing and industrial countries.

On average, output is twice as volatile in developing countries as in industrial countries, while private consumption is about three times as volatile (table 1). Furthermore, private consumption is 70 percent more volatile than output in developing countries. Such variability in consumption is important because tax systems in developing countries are often based on consumption taxes rather than income taxes (unlike in industrial countries). Thus the evidence suggests that tax bases are considerably more volatile in developing than in industrial countries.

G-7 and developing countries take very different approaches to managing fiscal policy

Table 1 also presents evidence on the comovement between (the cyclical components of) output and the most relevant fiscal variables. The table shows that government consumption is not correlated with output over the business cycle in G-7 countries. The evidence thus suggests that fiscal policy in G-7 countries is consistent with Barro’s smoothing prescriptions. But in every other group of countries this correlation is positive and statistically different from zero. In non-G-7 industrial countries, government consumption is procyclical. In developing countries government consumption is highly procyclical.

Not surprisingly, fiscal revenues are procyclical—that is, the correlation between output and revenues is positive—in both developing and industrial countries.

Although reliable time series on the complete set of tax rates are difficult to obtain for individual developing countries, table 1 offers indirect evidence on the business cycle behavior of tax rates. The inflation tax rate, defined as $B/1 + B$ (and hence bounded between 0 and 1 like any other tax), where $B$ is the inflation rate, is coun-
Table 1  Business cycle properties of fiscal variables, 1970–94

<table>
<thead>
<tr>
<th>Group of countries/region</th>
<th>Number of countries</th>
<th>Standard deviation</th>
<th>Correlations with output</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Real output</td>
<td>Real private consumption</td>
</tr>
<tr>
<td>Industrial countries</td>
<td>20</td>
<td>2.18 2.85</td>
<td>0.79 0.17*** 0.38*** 0.23***</td>
</tr>
<tr>
<td>G-7</td>
<td>6</td>
<td>2.05 2.26</td>
<td>0.87 -0.02 0.31** 0.25***</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>2.24 3.10</td>
<td>0.75 0.25** 0.30*** 0.22***</td>
</tr>
<tr>
<td>Developing countries</td>
<td>36</td>
<td>4.47 7.62</td>
<td>0.60 0.53*** 0.55*** -0.09*</td>
</tr>
<tr>
<td>Latin America</td>
<td>17</td>
<td>4.54 7.41</td>
<td>0.64 0.53*** 0.49*** -0.19**</td>
</tr>
<tr>
<td>Africa</td>
<td>11</td>
<td>4.00 8.46</td>
<td>0.48 0.54*** 0.55*** -0.10</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>4.96 6.91</td>
<td>0.69 0.52*** 0.62*** 0.10</td>
</tr>
<tr>
<td>Full sample</td>
<td>56</td>
<td>3.65 5.92</td>
<td>0.69 0.40*** 0.47*** 0.02</td>
</tr>
</tbody>
</table>

* Significant at the 10 percent level.
** Significant at the 5 percent level.
*** Significant at the 1 percent level.

Note: Statistics are based on Hodrick-Prescott filtered data. Data are from the International Monetary Fund and the Inter-American Development Bank. Numbers in parentheses are t-statistics.

tercyclical in industrial countries (that is, the inflation tax increases during expansions and falls during recessions). For industrial countries the correlation coefficient between the inflation tax and output is positive. The opposite is true for developing countries.

Episodic and country-specific evidence also suggests that tax rates, like government consumption, are procyclical. During the "tequila" crisis of late 1994, when Argentina and Mexico were hit by major shocks to their capital accounts and fell into deep recessions, both countries reacted by tightening fiscal policy. Spending cuts as well as tax hikes—labor taxes in Argentina and value added taxes in Mexico—were part of the fiscal adjustment package.

These results indicate that the procyclical behavior of government consumption is a widespread phenomenon—suggesting that procyclical fiscal policy is so pervasive that it should be viewed as the rule rather than the exception. The behavior of fiscal policy in developing countries, and even in some industrial countries, is thus puzzling both in terms of the existing body of theory and when compared to G-7 countries.

Why is fiscal policy procyclical in emerging economies?

Recent research has tried to account for the procyclical nature of fiscal policy in developing countries. Here we focus on two types of explanations: those based on imperfections in international credit markets and those based on political economy arguments.

Imperfect international credit markets

Arguments based on imperfections in international credit markets—which in a way constitute the prevailing orthodoxy—rely on the idea that emerging economies lose access to international credit markets in bad times, forcing governments to cut spending and raise taxes in a procyclical manner.

Trying to account for procyclical fiscal policy in Latin America, Gavin and Perotti (1997) argue that "fiscal policymakers in Latin America have typically faced a loss of confidence and thus intensified borrowing constraints during bad macroeco-
nomic times... This idea provides an explanation why fiscal policy is particularly procyclical in 'bad times': authorities might like to implement more countercyclical fiscal policies but they are prevented from doing so by their inability to finance the implied fiscal deficits.”

Gavin and Perotti provide evidence that they interpret as supportive of this explanation. In particular, they find that when emerging economies enter a recession in a relatively good fiscal position—that is, with a low fiscal deficit—the fiscal policy response is moderately countercyclical. When emerging economies enter a recession with a high fiscal deficit—more than 3 percent of GDP—the fiscal policy response is procyclical. In industrial economies, by contrast, the authors find no evidence that the initial fiscal position matters for the fiscal policy response, suggesting that borrowing constraints have not been a factor in industrial countries.

Political economy

Political economy arguments are based on the idea that fiscal decisions are not made by a single individual, such as the president or the minister of finance, but collectively through the political process. Thus collective fiscal decisionmaking may result in fiscal policy that over the business cycle is inefficient from a social welfare point of view. That is, during booms temporary increases in revenues are spent (through increases in government spending or reductions in taxes) rather than saved, forcing the government to cut spending and raise taxes during recessions to deal with the intertemporal budget constraints. In the context of such political distortions, a highly volatile tax base—which leads to recurrent phases in which incipient fiscal surpluses are large due to increases in revenues—will lead to political pressure for higher spending during boom times (Talvi and Végh 1998).

Empirical evidence supports the idea that political systems are prone to higher procyclicality when power is diffused among a number of agents interacting in an environment with a volatile tax base. Lane (1999) finds that OECD countries with highly volatile output (and an associated volatile tax base) and dispersed political power are the most likely to use procyclical fiscal policies. Stein, Talvi, and Grisanti (1998), analyzing 26 Latin American countries, find that a volatile tax base and higher political fragmentation (measured by the average number of representatives elected per district) lead to more procyclical government spending.

As Lane argues, "it is unlikely that government debt constraints have seriously restricted fiscal policy among the rich OECD countries such that any evidence on procyclicality cannot be rationalized by externally-imposed fiscal corrections during downturns.”

Toward efficient fiscal policy over the cycle

It is important to disentangle the two explanations of procyclicality.

Explanations based on imperfections in international credit markets emphasize the inability to access international credit markets in bad times as the root cause of procyclical fiscal policy in emerging economies. By contrast, political economy arguments stress that the inability to run budget surpluses in good times forces governments to inefficiently adjust spending and taxes in bad times.

From a public policy point of view, the interpretation based on credit market imperfections calls for ensuring that developing countries—particularly countries with sound fundamentals—retain access to international credit markets in bad times. In the aftermath of the global financial turmoil that followed the Russian crisis in the summer of 1998, several mechanisms have been proposed to achieve this objective, including coordinated action between multilateral financial organizations and the private sector and contingent credit lines to be activated in bad times.

At the domestic level, effective liquidity management (for example, an appropriate profile of public debt maturities) and intertemporal solvency of fiscal accounts have been emphasized for countries to avoid...
being cut off from international credit markets in bad times and to avoid inefficient procyclical adjustments if credit markets are temporarily closed. (On liquidity management, see PREMnotes 16 and 17. On contingent liabilities, see PREMNote 9.)

In the political economy interpretation, government’s inability to generate large enough surpluses during expansions forces it to borrow less during recessions. The policy implications of this interpretation differ dramatically from those outlined above, shifting the emphasis from external financial constraints to domestic fiscal institutions. More specifically, public policy should focus on designing fiscal arrangements aimed at ensuring that fiscal surpluses generated in good times are saved for a rainy day. Examples of such fiscal arrangements include:

- Stabilization funds that can cover total fiscal revenues—such as the copper stabilization fund run by the Chilean government.
- New institutional arrangements for intergovernmental relations, especially in federal countries—such as current efforts by the Argentine government to implement a fiscal revenue stabilization fund through which the central government would transfer to provinces an amount of resources that is independent of the business cycle. (On stabilizing fiscal revenue, see PREMNotes 13 and 18.)

Fiscal arrangements should aim at ensuring that fiscal surpluses are saved for a rainy day.

Further reading


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