

## How To Measure The Fiscal Deficit Analytical And Methodological Issues

How to Measure the Fiscal Deficit International Monetary Fund

The recent relatively high levels of global oil prices have led to a significant improvement in the public finances of several hydrocarbon-exporting countries. However, despite the increase in fiscal buffers, medium-term risks remain high. Fiscal vulnerabilities have increased as a consequence of the substantial spending packages that have been implemented in recent years. This has raised break-even prices—that is, the price levels that ensure that fiscal accounts are in balance at a given level of spending—in these countries. This study analyses such risks and develops measures of fiscal risk stemming from oil price fluctuations. An empirical application to hydrocarbon-exporting countries from the Middle East and North Africa region is included. Additionally, it is noted that countries with large net assets and proven oil reserves are much less vulnerable to fiscal risk than is indicated by standard measures based on break-even prices.

The recent recession has brought fiscal policy back to the forefront, with economists and policy makers struggling to reach a consensus on highly political issues like tax rates and government spending. At the heart of the debate are fiscal multipliers, whose size and sensitivity determine the power of such policies to influence economic growth. *Fiscal Policy after the Financial Crisis* focuses on the effects of fiscal stimuli and increased government spending, with contributions that consider the measurement of the multiplier effect and its size. In the face of uncertainty over the sustainability of recent economic policies, further contributions to this volume discuss the merits of alternate means of debt reduction through decreased government spending or increased taxes. A final section examines how the short-term political forces driving fiscal policy might be balanced with aspects of the long-term planning governing monetary policy. A direct intervention in timely debates, *Fiscal Policy after the Financial Crisis* offers invaluable insights about various responses to the recent financial crisis.

This paper examines the macroeconomic effects of tax changes during fiscal consolidations. We build a new narrative dataset of tax changes during fiscal consolidation years, containing detailed information on the expected revenue impact, motivation, and announcement and implementation dates of nearly 2,500 tax measures across 10 OECD countries. We analyze the macroeconomic impact of tax changes, distinguishing between tax rate and tax base changes, and further separating between changes in personal income, corporate income, and value added tax. Our results suggest that base broadening during fiscal consolidations leads to smaller output and employment declines compared to rate hikes, even when distinguishing between tax types.

We examine how the cost of corporate credit varies around fiscal consolidations aimed at reducing government debt. Using a new dataset on fiscal consolidations and syndicated corporate loan data, we find that loan spreads increase with fiscal consolidations, especially for small firms, domestic firms, and for firms with limited alternative financing sources. These adverse effects are mitigated substantially if consolidations are large, and can be avoided if consolidations are also accompanied with more adaptable macroeconomic policies and implemented by a stable government. These findings suggest that lenders price the short-term recessionary effects in loans but large consolidations can reduce or undo the increase in spreads, especially under favorable country conditions, by signaling credibility and creating expansionary expectations.

This book explores new avenues of international research in comparative federal studies. It re-examines the conceptual tools and methodologies for understanding federal systems, and the role of comparative federalism in the dissemination

and implementation of federal concepts. It highlights the influence of comparative federalism on constitution-making as well as constitutional reforms. The volume provides innovative and pragmatic perspectives from both the Global North and the Global South, with case studies drawn from established federations such as India, Canada, Australia, and Austria, and emerging federal systems such as Italy and South Africa. Advocating a combined approach that integrates modern and traditional theoretical routes with practical insights and contemporary analyses, it discusses the issues of multilevel elections and federal governance; coalition governments and multiparty democracy in parliamentary federal systems, such as India; minority empowerment; gender budgeting; self-governance; multinational federalism; unitary states; the nation-state; and degenerating federalism. It also breaks new ground by looking at federalism from a gender perspective and deals with tools for measuring fiscal responsibility, and a social and cultural index. A tribute to the intellectual legacy of Ronald L. Watts, this volume will be useful to scholars and researchers of political science, federalism, comparative federal studies, political studies, comparative politics, governance, public administration and law, development studies, South Asian studies, and Global South and North studies as well policymakers, international government bodies, research institutes, development experts, and other organisations working in the area.

This book deals with two issues. The first concerns the various measurement of fiscal decentralization in general and their usefulness for policy analysis. The second and more specific issue concerns the taxonomy of intergovernmental grants and the limits of the current classifications.

Stock-flow adjustments are typically measured as the difference between changes in gross debt and deficits. These are interpreted as a proxy for unexplained fiscal discrepancies, and often associated with a lack of fiscal transparency. However, such measures fail to capture the role of financial assets and valuation changes and therefore do not correctly predict fiscal transparency. The purpose of this paper is to provide a more detailed exposition of stock-flow residuals and the relationship with fiscal transparency, highlighting government acquisition of equities and investment fund shares and their performance in secondary markets. The results suggest that the performance of government equity portfolios correlates with fiscal transparency to the extent that fully transparent governments are expected to generate between 6 and 8 percent higher returns on their equity portfolios than others. These findings suggest that the performance of government assets may be a promising area for future research of fiscal transparency and stock-flow residuals.

Much of the school finance literature has focused on the distribution or equality of resources across school districts. Such literature compares levels of spending between school districts or states. But it has ignored the variability and unpredictability of those revenues within school districts over time. Meanwhile, public finance literature has focused on states or counties, and disregarded school districts as a unit of analysis for responses to fiscal stress. This dissertation

addresses these gaps. First, drawing from techniques both within and outside of public finance, I contribute a new measure of fiscal stress based on unpredictability of state revenues. Second, I explicitly assess policy and tax mechanisms that may aggravate revenue instability for school districts and to what extent instability changes over time. Finally, I examine school districts response to chronic unpredictability in state revenues. Despite states' increasing reliance on more volatile sales and income taxes to fund public education, I find that unpredictability in state revenues to districts has declined by one-fourth of a standard deviation over time. In states that shifted to the more volatile sales and income tax base while also centralizing school finance as part of efforts to equalize school funding, unpredictability in state revenues to districts declined by a full standard deviation. In effect, centralization and more equal distribution of funding appears to trump the effects of a volatile tax base, as states have a greater ability to buffer against shocks than local education agencies do. Yet districts still face uncertain and unstable revenues from the states, aggravated by economic downturns. With primary and secondary data, I study the case of California where districts face uncertain cuts to their allocations during the year and between years. I use three key fiscal health measures: average revenue instability over time, whether revenues declined in the prior period, and the experience of the budget officer. I find that highly unstable districts are more likely to raise local revenues, but that cost-cutting is more prevalent than revenue-raising. Experienced budget officers use a greater variety of policy instruments to cope with instability, pointing to the under-explored role of management in the fiscal health of a district. These findings as a whole suggest that revenue instability merits further attention in the school finance literature in particular and public management in general. Unpredictability in states revenues is a phenomenon that concerns school districts, one that changes over time, but one to which they may adapt.

Fiscal policy seeks to equilibrate the public sector's financing needs with the private sector's demand for investment and a sustainable balance of payments. Correct measurement of the public sector's net use of resources is therefore an important prerequisite for managing the macroeconomy. This volume, edited by Mario I. Blejer and Adrienne Cheasty, is organized around four issues: the adequacy of summary measures of the fiscal deficit, conventional and adjusted deficits, coverage (size) of the public sector, and the public sector's intertemporal budget constraint.

This paper evaluates the performance of fiscal policy in Russia since the 1998 crisis along several dimensions, using a variety of indicators. Russia has progressed tremendously in recent years on public debt sustainability, largely thanks to the fact that the real interest rates on public debt have been negative and growth has been high. However, the constant oil-price balance shows a progressive worsening starting in 2001, with a modest reversal in 2004. The analysis of the non-oil fiscal balance shows that Russian fiscal policy has had a mixed record. Part of the windfalls were spent before the introduction of the oil stabilization fund, but most of the oil revenues have been saved during the last two year. This poses an important challenge for future years when the automatic saving mechanism provided by the oil stabilization fund will

be weakened by the approved increase in the reference oil price. The standard fiscal impulse shows that budget policy has not contributed to the increase in aggregate demand since 2003. However, the fiscal position was not tight enough to contain the inflationary effects of the exceptional oil windfalls on the economy as a whole.

Conventional wisdom postulates that there are benefits from decentralizing government finances but there is little empirical evidence about actual country practices. This paper presents data on fiscal decentralization for about 80 countries over a period of about 20 years (1990-2008) from the IMF's Government Finance Statistics Yearbook (GFSY), the only global database with fiscal data for several levels of government. The data show that in many countries, revenue collection remains relatively more centralized than expenditures and that employment tends to be concentrated in lower levels of government. Except for transition economies, the levels of decentralization are relatively stable over the time period. The findings are shown by degree of economic development, constitutional power arrangements, and geographic area, broadly confirming key factors identified in the literature as determining the extent of fiscal decentralization.

The concept of fiscal impulse is defined, discussed, and differentiated from measures that attempt to summarize the macroeconomic effects of fiscal policy. Two methodologies are briefly discussed and their corresponding measures presented for the G-7 countries over the ten-year period ending in 1989. Controversies about the measure are highlighted and potential improvements are also discussed.

This essential Handbook makes underground, hidden, grey economies intelligible and consistently quantifiable. An invaluable tool for statistics producers and users and researchers, the book explains how the non-observed economy can be measured and ...

In many countries, the activities of public enterprises have an important fiscal impact. While the precise nature of this impact is often obscured, it is important that it be reflected in measures of overall fiscal activity. The paper is intended to raise and clarify some of the issues involved in this task.

Notwithstanding its widespread use as a measure of fiscal policy, the government deficit is not a well-defined concept from the perspective of neoclassical macro economics. From the neoclassical perspective the deficit is an arbitrary accounting construct whose value depends on how the government chooses to label its receipts and payments. This paper demonstrates the arbitrary nature of government deficits. The argument that the deficit is not well-defined is first framed in a simple certainty model with nondistortionary policies, and then in settings with uncertain policy, distortionary policy, and liquidity constraints. As an alternative to economically arbitrary deficits, the paper indicates that the "Fiscal Balance Rule" is one norm for measuring whether current policy will place a larger or smaller burden on future generations than it does on current generations. The Fiscal Balance Rule is based on the economy's intertemporal budget constraint and appears to underlie actual attempts to run tight fiscal policy. It says take in net present value from each new young generation an amount equal to the flow of government consumption less interest on the difference between a) the value of the economy's capital stock and b) the present value difference between the future consumption and future labor earnings of existing older generations. While the rule is a mouth-full, one can use existing data to check whether it is being obeyed and, therefore, whether future generations are likely to be treated better or worse than current generations

Although the deficit is a useful construct for Keynesian analyses of fiscal policy, the deficit appears to be a less useful measure of fiscal policy within all but a restricted class of intertemporal neoclassical models. This paper suggests that the nature of deficits in a simple certainty model with nondistortionary policies, and the in settings with uncertain policy, distortionary policy, and liquidity constraints is, to a large extent, arbitrary. It then posits a more appropriate description of fiscal policy for the class of models in question, and proposes the economically

meaningful “fiscal balance rule” as an alternative to the economically arbitrary “balanced budget rule” as a means of assessing whether fiscal policy is intergenerationally tight or loose.

Fiscal impulse measures are used in the WEO and elsewhere to indicate the changing impact of the budget on the economy. Such measures are intended to provide more accurate indications of whether the budget is becoming more or less expansionary than would just observing moments in the actual budget balance. However, they have been criticized for lacking an analytical rationale. This paper uses a simple framework to show that the fiscal impulse measure can be analytically derived. While this removes one source of criticism, the measure, nevertheless, should be used carefully when making inferences of fiscal impact.

How is real capital measured by government statistical agencies? How could this measure be improved to correspond more closely to an economist's ideal measure of capital in economic analysis and prediction? It is possible to construct a single, reliable time series for all capital goods, regardless of differences in vintage, technological complexity, and rates of depreciation? These questions represent the common themes of this collection of papers, originally presented at a 1976 meeting of the Conference on Income and Wealth.

Fiscal stress is an important and recurring problem that states face. Research to date on state fiscal stress involves, predominantly, cross-sectional and case study analyses and does not address the effectiveness of state responses. Many of these studies use different definitions and measures of fiscal stress compounding the difficulty of comparing fiscal stress findings. The present research effort adds to the fiscal stress literature by (1) clarifying the meaning of fiscal stress in the state context, (2) developing a measure of fiscal stress that operationalizes this meaning and is comparable across units, and 3) using this measure analyzes patterns in and the effectiveness of state responses. Fiscal stress is measured using four indexes: budget, cash, long-run, service-level. Eleven financial indicators, calculated using data from state Comprehensive Annual Financial Reports (CAFRs), are used to create these indexes for all fifty states for the years 2002-2009. Descriptive analysis compares state fiscal stress levels (grouped into low, moderate, and high fiscal stress by cluster analysis) to state economic growth rates, state responses, and institutional factors yielding several findings. First, states do not use an incremental or punctuated equilibrium strategy in responding to fiscal stress; nor do their responses follow the pattern predicted by Cutback Management theory. Second, institutional factors affect both the levels of fiscal stress and state responses to fiscal stress. Regression analysis supports and extends these findings. First, short-term responses of expenditure cuts, tax increases, and rainy day fund use do not affect state fiscal stress levels. Second, these responses have long-term effects on fiscal stress levels. A major implication of this research is that there is very little states can do in the short-term to reduce fiscal stress. However, by balancing expenditures and revenues states can set themselves up to weather the next economic downturn with lower levels of fiscal stress.

This paper describes methodological issues pertaining to measurement of fiscal impact. The fiscal deficit is, under any circumstances, a crude tool for assessing the impact of fiscal policy on the economy. This paper also analyzes various ways in which the conventional definition of the fiscal deficit is affected by high rates of inflation. It has shown that, as the rate of inflation rises, the picture emerging from the conventional measure may, under certain circumstances, become somewhat blurred since the conventional measure may magnify the size of the fiscal adjustment that a country need. In fact, the size of the debt service that compensates bondholders for the reduction in the real value of their assets arising from inflation should be made explicit so as to indicate that part of the deficit whose impact depends mainly on portfolio decisions regarding the public's demand for government



bonds, and on the potential effects of these bonds on the monetary and liquidity conditions of the economy.

This paper proposes a set of fiscal indicators to assess rollover risks using the conceptual framework developed by Cottarelli (2011). These indicators provide early warning signals about the manifestation of these risks, giving policymakers the opportunity to adjust policies before extreme fiscal stress events. Two aggregate indices are calculated: an index of fiscal vulnerability and an index of fiscal stress. Results show that both indices are elevated for advanced economies, reflecting unfavorable medium-term debt dynamics and aging-related spending pressures. In emerging economies, solvency risks are lower, but the composition of public debt remains a source of risk and the fiscal position is weaker than before the crisis.

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