Fiscal Policy in Advanced Economies: Fiscal Adjustment, Efficiency and Growth

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Public Debt to GDP Ratio, percent

- World War II
- The Great Recession
- Advanced economies
Interactions Between Fiscal Policy and Growth

The Short Term
- Fiscal policy affects growth
  - Through fiscal crisis
  - Through demand effects
- Growth affects fiscal tightening
  - Automatic stabilizers
  - Debt ratio effects
  - Market reaction to low growth

Policy Implications

The Long Term
- Fiscal policy affects potential growth
  - Macro channels
  - Micro channels
    - Revenue side
    - Spending Side
  - Potential Growth affects fiscal sustainability
    - Effects on D/Y
    - Effects on primary balance

Policy Implications
The Short Term

- Fiscal policy affects growth
  - Through fiscal crisis
  - Through demand effects

Interactions Between Fiscal Policy and Growth

- Not enough fiscal tightening is bad for growth
- Too much fiscal tightening is bad for growth
Interactions Between Fiscal Policy and Growth

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Policy Implications

Policy Implications
Impact on the Deficit Ratio of a 1 percent of GDP Discretionary Fiscal Tightening in the First Year

(Relative to Baseline)
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Policy Implications
Impact on the Debt Ratio of a 1 Percent of GDP Discretionary Fiscal Tightening in the First Year

(Relative to Baseline)

![Graph showing the impact of discretionary fiscal tightening on the debt ratio.](image)

- **Increase in debt ratio**
- **Decrease in debt ratio**

Note: We use a range of spending multipliers, following the literature.
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Policy Implications
Sovereign Bond Yield Spreads and Projected Real GDP Growth

Projected real GDP growth (percent), 2011-12

Bond yields spreads (basis points), August 2011
Sovereign Bond Yield Spreads and Real GDP Growth

Bond yields spreads (basis points), August 2011

Real GDP growth (percent), 1997-2007
## Determinants of Spreads, Cross Section Analysis, 2011

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross debt to GDP 2011</td>
<td>0.0159**</td>
<td>0.0137**</td>
<td>0.0149***</td>
<td>0.0149***</td>
<td>0.0150***</td>
</tr>
<tr>
<td></td>
<td>(2.697)</td>
<td>(2.643)</td>
<td>(3.957)</td>
<td>(4.063)</td>
<td>(4.122)</td>
</tr>
<tr>
<td>Primary balance to GDP 2011 for Euro Area</td>
<td>-0.206***</td>
<td>-0.202***</td>
<td>-0.188***</td>
<td>-0.186***</td>
<td>-0.191***</td>
</tr>
<tr>
<td></td>
<td>(-3.708)</td>
<td>(-3.325)</td>
<td>(-3.288)</td>
<td>(-3.661)</td>
<td>(-3.821)</td>
</tr>
<tr>
<td>Real GDP Growth 2011</td>
<td>-0.212***</td>
<td>-0.190**</td>
<td>-0.207***</td>
<td>-0.209***</td>
<td>-0.200***</td>
</tr>
<tr>
<td></td>
<td>(-3.260)</td>
<td>(-2.711)</td>
<td>(-3.361)</td>
<td>(-3.501)</td>
<td>(-3.684)</td>
</tr>
<tr>
<td>Real GDP Growth Squared 2011</td>
<td>0.00843</td>
<td>0.0176</td>
<td>0.0192*</td>
<td>0.0198*</td>
<td>0.0198*</td>
</tr>
<tr>
<td></td>
<td>(0.493)</td>
<td>(1.617)</td>
<td>(1.727)</td>
<td>(1.934)</td>
<td>(1.897)</td>
</tr>
<tr>
<td>Debt held by a country’s central bank or by foreign central banks to GDP</td>
<td>-0.0262</td>
<td>-0.0244</td>
<td>-0.0285*</td>
<td>-0.0279*</td>
<td>-0.0321***</td>
</tr>
<tr>
<td></td>
<td>(-1.473)</td>
<td>(-1.430)</td>
<td>(-2.020)</td>
<td>(-1.986)</td>
<td>(-2.800)</td>
</tr>
<tr>
<td>Inflation Rate 2011</td>
<td>0.294**</td>
<td>0.311***</td>
<td>0.324***</td>
<td>0.322***</td>
<td>0.304***</td>
</tr>
<tr>
<td></td>
<td>(2.593)</td>
<td>(2.939)</td>
<td>(3.610)</td>
<td>(3.731)</td>
<td>(3.835)</td>
</tr>
<tr>
<td>NPV of health spending in percent of GDP 2010</td>
<td>-0.00244</td>
<td>-0.00149</td>
<td>-0.00157</td>
<td>-0.00168</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-0.883)</td>
<td>(-0.579)</td>
<td>(-0.614)</td>
<td>(-0.658)</td>
<td></td>
</tr>
<tr>
<td>NPV of pension spending in percent of GDP 2010</td>
<td>-0.000412</td>
<td>2.68e-05</td>
<td>-0.000390</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-0.0985)</td>
<td>(0.00651)</td>
<td>(-0.104)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary balance to GDP 2014 for Euro Area</td>
<td>0.0721</td>
<td>0.0516</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>(0.706)</td>
<td>(0.488)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Potential output growth, average 2011-2016</td>
<td>0.247</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.171)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>2.704***</td>
<td>3.089***</td>
<td>3.061***</td>
<td>3.054***</td>
<td>2.984***</td>
</tr>
<tr>
<td></td>
<td>(4.075)</td>
<td>(5.514)</td>
<td>(5.866)</td>
<td>(5.968)</td>
<td>(6.301)</td>
</tr>
<tr>
<td>Observations</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.784</td>
<td>0.767</td>
<td>0.765</td>
<td>0.765</td>
<td>0.763</td>
</tr>
</tbody>
</table>

Robust t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1
Fiscal Adjustment and Bond Yields with Alternative Fiscal Multipliers

<table>
<thead>
<tr>
<th>Reduction in government deficit (percent of GDP)</th>
<th>Change in government bond yield spreads (basis points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-150</td>
</tr>
<tr>
<td>2</td>
<td>-100</td>
</tr>
<tr>
<td>3</td>
<td>-50</td>
</tr>
</tbody>
</table>

Note: Intial debt level = 100 percent of GDP
Fiscal policy must be tightened but, if you do not have to, avoid tightening too much.

- Clearly defined medium term adjustment plans.

- Even for countries that are under pressure, tightening of fiscal policy cannot be the only adjustment tool.
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**Policy Implications**

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High Public Debt is Bad for Growth

Rogoff and Reinhart: “This Time is Different: Eight Centuries of Financial Folly” (2009)

Kumar and Woo: “Public Debt and Growth” (2010)

Steven Cecchetti: “The Real Effects of Debt” (2011)
Effect on Growth of Higher Debt to GDP Ratio

![Graph showing the effect of higher debt to GDP ratio on growth of real per capita GDP. The graph depicts a downward trend, indicating a negative effect as debt to GDP ratio increases.]
Advanced Economies: Debt Above 80 percent of GDP

2011

81%

AUS AUT BEL CAN CZE DEN DEU ESP FIN FRA GBR GRC ICE IRE ISR ITA JPN NED NZL PRT SLK SLV USA

0 50 100 150 200 250
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Policy Implications
Revenue Side

- Overall tax pressure
- Composition of revenues
- Broadening the tax base by reducing tax expenditures
- Externality correcting taxes
- Property taxes
- Fight in tax evasion
Potential Revenue Increases in Advanced G-7 Countries
PPP weighted averages

Total Increase in Revenue: 2.8 percent of GDP

- Reduce VAT policy gap by half, 1.1
- Full auctioning/taxation of carbon emissions, 0.6
- Tobacco and alcohol excises, 0.3
- Fuel excises, 0.4
- Property taxes, 0.4

Less Distortionary Tax Measures
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Policy Implications
Spending Side

- Spending reviews
- Subsidies
- Military Spending
- Spending for public sector wages
- Non-means tested social welfare programs
- Spending for pensions
Public Sector Wages in Selected G-7 Countries (As share of potential GDP)
Pension Spending Increase, 2010-30

(percentage points)
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Effect of a 1% Drop in Growth on Debt Stabilizing Primary Surplus
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Policy Implications

The Short Term

The Long Term

Policy Implications
Average Primary Balance and Real Growth during 10 years

\[ y = 0.7146x - 1.5076 \]

\[ R^2 = 0.09 \]
Effect of a 1% Drop in Growth on Debt Stabilizing Primary Surplus

The graph illustrates the relationship between the change in primary surplus (percent of GDP) and debt (percent of GDP). There are two lines on the graph:

- **Direct effect**: A straight line that represents the direct impact of a 1% drop in growth on the primary surplus, which is a constant value.
- **Total effect**: A line with a positive slope that shows the combined direct and indirect effects, increasing with higher levels of debt as a percent of GDP.
The Role of Growth Lowering Debt Ratios

- Initial debt ratio at 100%
- Increase the growth rate for 10 years by 1 p.p.
- Spending constant in per capita terms, assuming a 40% tax ratio
- Would lower public debt by 29% of GDP
Policy Implications in the Long Term

- Need to lower public debt over time

- Medium term growth is critical for successful adjustment

- Not all structural fiscal reforms are equally good

- Link between potential growth and fiscal policy should initiate a ‘virtuous cycle’, facilitating fiscal adjustment
Thank you!