Austerity vs. Stimulus: Fiscal Procyclicality

Part I: US fiscal policy

Part II: Fiscal failures in other countries

Harvard Kennedy School
Dec. 1, 2014
Definitions

• Fiscal austerity ("contraction"):  
  – Cut government spending / raise taxes,  
    • to avoid economic overheating  
    • & strengthen long-run debt sustainability.

• Fiscal stimulus ("expansion"):  
  – Raise government spending / cut taxes  
  – to provide short-term economic stimulus,  
    • for growth & employment.
“What is the best fiscal policy, Austerity or Stimulus?”

The question is as foolish as to ask, “Should a driver turn left or right?”

It depends where he is in the road.
  – Sometimes left is the answer, sometimes right.
Cyclicality of Fiscal Policy

• Keynes favored counter-cyclical policy:
  – fiscal stimulus when under conditions like the 1930s
    -- depressed income, high unemployment, low inflation, low interest rates – to moderate the downturn,
  – but fiscal *contraction* during boom periods, to prevent over-heating.

• *The boom, not the slump, is the right time for austerity at the Treasury.*” - John Maynard Keynes (1937) *Collected Writings*
“Keynesian” policy fell into disfavor

• in part because it was seen as justifying chronic over-expansion

• & in part because it is hard to get the timing right (“fine-tuning”):
  • By the time fiscal stimulus became law, sometimes the recession would be over,
  • e.g., the Kennedy tax cut, passed in 1964.

• But that is no excuse for pro-cyclical fiscal policy.

• Definition of pro-cyclical fiscal policy: Governments raise spending (or cut taxes) in booms; and are then forced to retrench in downturns, thereby exacerbating upswings & downswings.
During the decade after 2000,

- some Emerging Market governments learned how to do counter-cyclical fiscal policy,
- while many Advanced Country politicians forgot,
  - turning pro-cyclical instead,
  - acting to exacerbate the business cycle.
Cyclicality of Fiscal Policy, continued

• Conspicuously, Greece & other euro members failed to reduce budget deficits during years of growth, 2002-08 – and were then forced to cut spending & raise taxes during the euro debt crisis of 2010-12,
  • exacerbating the recession,
  – & even raising Debt/GDP.

• But the United Kingdom did the same, – despite no euro-constraint forcing austerity in 2010-13.

• And so did the United States!
Why do leaders fail to take advantage of booms to strengthen the budget?

- People don’t see the need to “fix the hole in the roof when the sun is shining.”
  - They do see the mistake when the storm hits,
    - but then it is too late.

- Official forecasts are over-optimistic in boom periods, rationalizing the failure to act.
  - according to data from 33 countries.
Three distinct US fiscal problems

• The long-term problem -- *debt unsustainability* -- warrants a path back to fiscal discipline.

• The medium-term *economic* problem -- slow recovery in aftermath of the 2008 financial crisis, warranted demand *stimulus*, not contraction, which held back growth.

• The short-term problem is *political*: A succession of artificial deadlines, each threatened disaster.
The US does have a long-term debt problem. 

Fiscal policy

Source: Concord Coalition, spring 2013  http://www.concordcoalition.org/issues/indicators/projected-debt
The long-term US debt problem, continued

• “Long-term” in the sense that debt/GDP will rise alarmingly in future decades
  – until entitlements are put on a sound footing:
    • Social Security & Medicare are due to run big deficits
      – as the baby-boomers retire (predictably)
      – and the cost of health care rises rapidly (less predictably).

• Definition of debt sustainability:
  – regardless the level of the debt, it is sustainable if the future debt/GDP ratio is forecast to fall indefinitely.
• There is *not* a short-term problem:
  – Far from tiring of absorbing ever-greater levels of US treasury securities, global investors continue happily to lend at record-low interest rates (2008-13):
    • The US enjoys safe-haven status; the $ enjoys “exorbitant privilege.”
  – **There is no fiscal crisis.** The US is not Greece,
    • though we want to be sure *not to become* Greece in 30 years.

• Indeed the federal budget deficit has come down
  • from 9 % of GDP in FY 2009 to 3 % in FY 2014.

• Debt/GDP has been falling.
The federal budget deficit is down to 2.8% of GDP. That is down more than 2/3 from 2009 to 2014, and below the average deficit since 1980 (3.2%).
Debt / GDP is declining for now

Center on Budget and Policy Priorities, Jan. 9, 2013
http://www.cbpp.org/cms/index.cfm?fa=view&id=3885

CBPP recommends a further $1.2 trillion in spending cuts & tax rises to stabilize debt out to 2022. But there is no need for it to hit this year. That would send us back into recession.
The debt problem is also “long-term” in the sense that we have known about it a long time.

E.g., when Ronald Reagan, took office:

“For decades we have piled deficit upon deficit, mortgaging our future and our children’s future for the temporary convenience of the present… We must act today in order to preserve tomorrow. And let there be no misunderstanding: We are going to begin to act, beginning today.”

– Inaugural address, Jan. 20, 1981
Brief US fiscal history: The 1980s

- The newly elected Reagan complained of the inherited debt:
  - “Our national debt is approaching $1 trillion. …
    A trillion dollars would be a stack of 1,000-$ bills 67 miles high.”
  - address to Congress, Feb. 18, 1981.

- Reagan’s actions: sharp tax cuts & rise in defense spending.

- The claim: budget surpluses would result.

- The reality: record deficits that added to the national debt
  - a 2nd trillion in his 1st term
  - a 3rd trillion in his 2nd term
  - a 4th trillion when G.H.W. Bush initially continued the policies.
    (“Read my lips, no new taxes.”)
US fiscal history, continued: The 1990s

• The deficits were gradually cut, and then converted to surpluses by the end of the 1990s.

• How was this accomplished?
  – Regime of “Shared Sacrifice” -- 3 key policy events.
    • 1990: GHW Bush bravely agreed spending caps, taxes & PAYGO
    • 1993: Clinton extended the policy.
  – Strong growth in late 1990s.
Fiscal history, continued: The 2000s

• The Shared Sacrifice regime ended on the day G.W. Bush took office in Jan. 2001.

• He returned to the Reagan policies:
  – Large tax cuts
  – together with rapid increase in spending (triple Clinton’s)
    • not just in military spending (esp. Iraq & Afghanistan),
    • but also domestic spending: discretionary + Medicare drugs benefit.

• Just like Reagan, he claimed budget surpluses would result.

• Just like Reagan, the result was record deficits:
  – The national debt doubled.
    • I.e., GWB incurred more debt than his father + Reagan + 39 predecessors
Through 3 cycles, the efforts at austerity came during recessions, followed by fiscal expansion when the economy was already expanding.
The US has its own version of biased forecasts

- Four tricks to justify tax cuts, dating from the 1980s:
  - The Magic Asterisk
  - Rosy Scenario
  - Laffer Hypothesis
  - Starve the Beast Hypothesis
European Debt/GDP ratios have been rising sharply, as high interest rates & negative growth overpower progress on reduction of primary budget deficits.

Figure 7. Net Public Debt to GDP

Source: IMF and World Economic Outlook Database.

Via: World Bank, PREM, 2012
Budget balance rules are in fashion.

- Fiscal rules have been adopted by many countries.
- Do they help?
- Europe’s rules have failed (BD < 3% GDP; Debt < 60% GDP)
  - Maastricht Criteria & Stability & Growth Pact
    - Angela Merkel’s Fiscal Compact may be no better.
- Such rules do not work in the US either:
  - Gramm-Rudman-Hollings in late 1980s
  - Debt ceiling legislation
- Why?
• “Tough” rules like the SGP or BBA are too rigid.
  • requiring fiscal contraction when the economy is weak.
  • They also lack enforceability:
    • Every Euro country violated the SGP.

• They worsen the problem of over-optimistic forecasts.
  – E.g., when euro members go above the 3% deficit ceiling,
    • they adjust their forecasts, not their policies.

• Better would be “structural” budget targets (Swiss)
  with forecasts from independent experts (Chile).
Fiscal Failures

– Political economy explanations for destabilizing fiscal policy

– An historic reversal:
  • After 2000, some EM countries achieved greater fiscal responsibility than Advanced Countries.

– The importance of institutions for fiscal policy
  • Do rules work?
  • The Chile model.
Political economy explanations for destabilizing fiscal policy

- **#1: Political Budget Cycles**
  - Politicians expand just before elections, so that rapid growth will buy votes; the cost comes later (debt, inflation, reserve loss, devaluation)
  - Example: The Mexican sexenio (until 2000)
  - Do politicians really fool voters this way?

- **#2: Procyclical government spending**
  - Due, e.g., to commodity cycle
    - Dutch Disease in commodity booms,
    - and the need to retrench in downturns.
  - Optimism bias in official forecasts
Drazen & Brender (2005, *JME*)
"Political Budget Cycles in New versus Established Democracies,"

Political budget cycles were once thought a phenomenon of less developed economies.

• But they turn out to have been a phenomenon of “new democracies” *per se* [e.g., Central Europe],

• where fiscal manipulation may be effective because of lack of experience with electoral politics or lack of the sort of information that voters in more established democracies use.

• It appears that politicians can and do on average fool voters roughly in the first 4 elections held.
Can you get a political budget cycle even if voters & politicians are fully rationale? Yes.

Rogoff (1990): officials seek to signal to voters that they are competent economic managers, by keeping taxes low before the election.


The procyclicality of fiscal policy

A historic reversal --

some developing countries were able to break the historic pattern after 2000:

– taking advantage of the boom of 2002-2008
  • to run budget surpluses & build reserves,

– thereby earning the ability to expand fiscally in the 2008-09 crisis.

– Chile, Botswana, Malaysia, Indonesia, Korea...

– How were they able to achieve counter-cyclicality?
In the last decade, about 1/3 developing countries switched to *countercyclical* fiscal policy: Negative correlation of G & GDP.

Frankel, Vegh & Vuletin (2013)
Developing countries spent the expansion years 2003-2007 bringing down their debt/GDP ratios.

Figure 2. General Government Debt, All Developing Countries, 2002–11

Source: World Economic Outlook Database, International Monetary Fund.


www.worldbank.org/economicpremise
Who achieves counter-cyclical fiscal policy?

Countries with “good institutions”

The quality of institutions varies, not just across countries, but also across time.

Figure 6. Graduation examples. Country correlations between the cyclical components of real government expenditure and real GDP (20-year rolling windows) vs. institutional quality

1984-2009

Panel A. Australia (established graduate)  
Panel B. Venezuela (still in school)  
Panel C. Chile (recent graduate)

Good institutions; Countercyclical spending

Worsened institutions; More-cyclical spending.

Improved institutions; Less-cyclical spending.

Frankel, Végh & Vuletin, 2013.
The countries that graduated to counter-cyclical fiscal policy after 2000, statistically, are those where institutional quality improved.

How can countries avoid pro-cyclical fiscal policy?

• What *are* “good institutions,” exactly?

• Rules? (By analogy with time-consistent monetary policy)
  – Budget deficit ceilings (SGP) or debt brakes?
    • Have been tried many times. Usually fail.
  – Rules for *cyclically adjusted* budgets?
    • Countries are more likely to be able to stick with them. But...

• An under-explored problem:
  – Over-optimism in official forecasts
    • of GDP growth rates & budgets.
The Rise of Fiscal Rules

Based on fiscal rules in effect by March 2012.

Data source: national authorities; and IMF staff assessment.

Fiscal Rules in Response to the Crisis—Toward the “Next-Generation” Rules. A New Dataset
Andrea Schaechter, Tidiane Kinda, Nina Budina, and Anke Weber
IMF, July 2012
Types of Fiscal Rules in Use, 2012
(Number of countries with at least one fiscal rule)

(a) Total Rules 1/

(b) National Rules

Source: National authorities; and IMF staff assessment.
1/ Includes national and supranational rules.

Fiscal Rules in Response to the Crisis—Toward the “Next-Generation” Rules. A New Dataset

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IMF, July 2012
Regional Differences Regarding the Type of National Fiscal Rules
(Share of countries with specific type of rule)

- Budget balance rule
- Debt rule
- Expenditure rule
- Revenue rule
- Budget balance rule accounting for the cycle

Source: IMF staff assessment.
Note: Includes countries with at least one national fiscal rule.

Fiscal Rules in Response to the Crisis—Toward the “Next-Generation” Rules. A New Dataset
Andrea Schaechter, Tidiane Kinda, Nina Budina, and Anke Weber
IMF, July 2012
Statutory Basis of National Fiscal Rules by Type of Rule and Economy, 2012

Advanced Economies

Emerging and Low-Income Economies

Constitutional  Statutory  Coalition Agreement  Political Commitment

Sources: National authorities; and IMF staff assessment and calculations.
Note: Based on fiscal rules in effect by end-March 2012.

Fiscal Rules in Response to the Crisis—Toward the “Next-Generation” Rules. A New Dataset

Andrea Schaechter, Tidiane Kinda, Nina Budina,
and Anke Weber
Countries with Balanced Budget Rules frequently violate them.
To expect countries to comply with the rules during recessions is particularly unrealistic (and not even necessarily desirable).

Bad times: years when output gap < 0
Over-optimism in official forecasts

• Statistically significant findings among 33 countries

  Official forecasts on average are overly optimistic, for:
  (1) budgets &
  (2) GDP.

  The bias toward optimism is:
  (3) stronger the longer the forecast horizon;
  (4) greater in booms.
Implication of forecast bias for actual budgets

• Can lead to pro-cyclical fiscal policy:
  – If the boom is forecast to last indefinitely, there is no apparent need to retrench.

• BD rules don’t help.
  – The SGP *worsens* forecast bias for euro countries.
    – Frankel & Schreger (2013)
US official projections were over-optimistic on average.
Greek official forecasts were *always* over-optimistic.

Data from Greece’s Stability and Convergence Programs.
German forecasts were also usually too optimistic.
Most European official forecasts have been over-optimistic.

Figure 1 (F&S, 2013):
Mean 1-year ahead budget forecast errors, European Countries, Full Sample Period

For 17 Europeans, the bias is even higher than others, averaging:
- 0.5% at the 1-year horizon,
- 1.3% at the 2-year horizon,
- 2.4% at the 3-year horizon
Figure 2 (F&S, 2013):
Mean 2-year ahead budget forecast errors, European Countries, Full Sample Period
### Table 2: Frankel (2011)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1 year ahead</th>
<th>2 years ahead</th>
<th>3 years ahead</th>
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<tbody>
<tr>
<td>GDP gap</td>
<td>0.093***</td>
<td>0.258***</td>
<td>0.289***</td>
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<tr>
<td></td>
<td>(0.019)</td>
<td>(0.040)</td>
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<td>Constant</td>
<td>0.201</td>
<td>0.649***</td>
<td>1.364***</td>
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<td>(0.197)</td>
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<td>Observations</td>
<td>398</td>
<td>300</td>
<td>179</td>
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<tr>
<td>$R^2$</td>
<td>0.033</td>
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<tr>
<td>RMSE</td>
<td>2.25</td>
<td>2.73</td>
<td>3.10</td>
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</table>

*** p<0.01, ** p<0.05, * p<0.1.

(Robust standard errors in parentheses, clustered by country.

Note: GDP gap is lagged so that it lines up with the year in which the forecast was made, not the year being forecast.)
Econometric findings regarding bias among EU countries in particular.

- Euro countries, subject to the SGP,
  - show even more optimism bias than others
  - in growth forecasts, significant at 1 and 2-year horizons
  - particularly when GDP is currently high.
- Forecasts of budget balance among euro countries also show extra bias when GDP is currently high.
<table>
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<th>3 years ahead</th>
<th>1 year ahead</th>
<th>2 years ahead</th>
<th>3 years ahead</th>
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<tr>
<td>SGP dummy</td>
<td>0.379*</td>
<td>0.780**</td>
<td>−0.555</td>
<td>0.192</td>
<td>0.221</td>
<td>−1.067*</td>
</tr>
<tr>
<td></td>
<td>(0.199)</td>
<td>(0.352)</td>
<td>(0.529)</td>
<td>(0.215)</td>
<td>(0.410)</td>
<td>(0.549)</td>
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<tr>
<td>SGP*GDP gap</td>
<td>0.148**</td>
<td>0.516***</td>
<td>0.522***</td>
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<tr>
<td></td>
<td>(0.068)</td>
<td>(0.141)</td>
<td>(0.161)</td>
<td></td>
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<tr>
<td>Constant</td>
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<td>0.887***</td>
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<td>(0.168)</td>
<td>(0.318)</td>
<td>(0.643)</td>
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<td>R²</td>
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<td>RMSE</td>
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<td>3.44</td>
<td>3.81</td>
<td>2.38</td>
<td>3.36</td>
<td>3.73</td>
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</tbody>
</table>

***p<0.01, **p<0.05, *p<0.1. (Robust standard errors in parentheses.) Random effects.

SGP ≡ dummy for countries subject to the SGP.
GDP gap ≡ GDP as deviation from trend.
All variables are lagged so that they line up with the year in which the forecast was made.
Table 3(c): Frankel (2011)
Budget balance forecast error, full dataset

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<th>3 years ahead</th>
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<th>2 years ahead</th>
<th>3 years ahead</th>
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<tr>
<td>SGP dummy</td>
<td>0.368</td>
<td>0.922***</td>
<td>0.625</td>
<td>0.182</td>
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<td>(0.342)</td>
<td>(0.329)</td>
<td>(0.415)</td>
<td>(0.335)</td>
<td>(0.355)</td>
<td>(0.449)</td>
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<td>SGP * GDPgap</td>
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<td></td>
<td></td>
<td>0.161**</td>
<td>0.509***</td>
<td>0.544***</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>(0.065)</td>
<td>(0.147)</td>
<td>(0.148)</td>
</tr>
<tr>
<td>Constant</td>
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<td>0.530**</td>
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<tr>
<td>( R^2 )</td>
<td>0.018</td>
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The example of Chile since 2000

• 1\textsuperscript{st} rule – Governments must set a budget target,
  • set = 0 in 2008 under Pres. Bachelet.

• 2\textsuperscript{nd} rule – The target is structural:
  Deficits allowed only to the extent that
  – (1) output falls short of trend, in a recession, or
  – (2) the price of copper is below its trend.

• 3\textsuperscript{rd} rule – The trends are projected by 2 panels
  of independent experts, outside the political process.
  – Result: Chile avoids the pattern of 32 other governments,
    • where forecasts in booms are biased toward over-optimism.
  – Chile ran surpluses in the 2003-07 boom,
    • while the U.S. & Europe failed to do so.
How to make fiscal policy less procyclical – emulate Chile,

• set structural targets
  – but avoid forecast bias
    • via independent fiscal forecasts
Chilean fiscal policy

• In 2000 Chile instituted its structural budget rule.
• The institution was formalized in law in 2006.
• The structural budget deficit must be zero,
  – originally BS > 1% of GDP, then cut to ½ %, then 0 --
  – where structural is defined by output & copper price equal to their long-run trend values.
• I.e., in a boom the government can only spend increased revenues that are deemed permanent; any temporary copper bonanzas must be saved.
The crucial institutional innovation in Chile

• How has Chile avoided over-optimistic official forecasts?
  – especially the historic pattern of over-exuberance in commodity booms?

• The estimation of the long-term path for GDP & the copper price is made by two panels of independent experts,
  – & thus is insulated from political pressure & wishful thinking.

• Other countries might usefully emulate Chile’s innovation
  – or in other ways delegate to independent agencies estimation of structural budget deficit paths.
The Pay-off

• Chile’s fiscal position strengthened immediately:
  – Public saving rose from 2.5% of GDP in 2000 to 7.9% in 2005
  – allowing national saving to rise from 21% to 24%.

• Government debt fell sharply as a share of GDP and the sovereign spread gradually declined.

• By 2006, Chile achieved a sovereign debt rating of A,
  • several notches ahead of Latin American peers.

• By 2007 it had become a net creditor.

• By 2010, Chile’s sovereign rating had climbed to A+,
  • ahead of some advanced countries.

• => It was able to respond to the 2008-09 recession
  – via fiscal expansion.
• In 2008, with copper prices spiking up, the government of President Bachelet had been under intense pressure to spend the revenue.
  – She & Fin.Min.Velasco held to the rule, saving most of it.
  – Their popularity ratings fell sharply.

• When the recession hit and the copper price fell, the government increased spending, mitigating the downturn.
  – Bachelet & Velasco’s popularity reached historic highs in 2009.
Evolution of approval and disapproval of four Chilean presidents

Presidents Patricio Aylwin, Eduardo Frei, Ricardo Lagos and Michelle Bachelet


In sum, institutions recommended to make fiscal policy less procyclical:

- Official growth & budget forecasts tend toward wishful thinking:
  - unrealistic extrapolation of booms 3 years into the future.

- The bias is worse among the European countries supposedly subject to the budget rules of the SGP,
  - presumably because government forecasters feel pressured to announce they are on track to meet budget targets even if not.

- Chile is not subject to the same bias toward over-optimism in forecasts of the budget, growth, or the key copper price.

- The key innovation that has allowed Chile to achieve countercyclical fiscal policy:
  - not just a structural budget rule in itself,
  - but rather the regime that entrusts to two panels of experts estimation of the long-run trends of copper prices & GDP.