

THE EFFECTS OF FISCAL CONSOLIDATIONS

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Debate over fiscal stimulus / fiscal consolidation in U.S., Europe.

Traditional view:

(a) Consolidation is necessary for long-run fiscal sustainability.... but

(b) Consolidation is contractionary in short run.

In recent years, some economists and policymakers dispute point (b)

-- Alesina and Ardagna (2010)

-- David Cameron (2011): "Those who argue that dealing with our deficit and promoting growth are somehow alternatives are wrong. You cannot put off the first in order to promote the second.

In my view, recent research supports (b)... the questionable part of the mainstream view is (a).

Plan of talk:

- Key research by IMF on short-run effects of consolidation.
- Evidence for hysteresis -> contractionary effects of consolidation are persistent
- With hysteresis, fiscal expansions can be self-financing and consolidation can be self-defeating (DeLong and Summers, 2012).

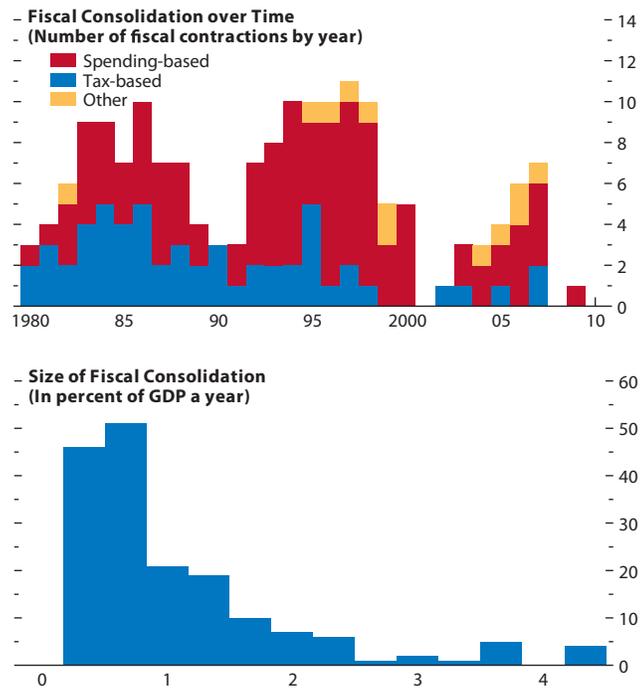
KEY RESEARCH ON CONSOLIDATION:

IMF, World Economic Outlook, 2011 (also Ball, Leigh, and Loungani, 2011)

- Historical approach to identifying fiscal consolidations: Examine 15 advanced countries over 1980-2009, find 173 years with budgetary measures aimed at fiscal consolidation.
- This approach avoids endogeneity problems when fiscal policy is measured with budget deficits. (Inspired by Romer-Romer studies of monetary policy.)
- C_{it} = size of consolidation as percent of GDP in country i and year t ($C_{it}=0$ if no consolidation).
- Regress output growth on lags of growth and current and lagged values of C_{it} --> impulse response functions. Also use unemployment in place of output growth.

Figure 3.1. Action-Based Fiscal Consolidation

There were about 170 cases of action-based fiscal consolidation over the past 30 years in advanced economies. Consolidation has often relied primarily on spending cuts. On average, action-based fiscal consolidation amounted to 1 percent of GDP a year, but the range was wide.

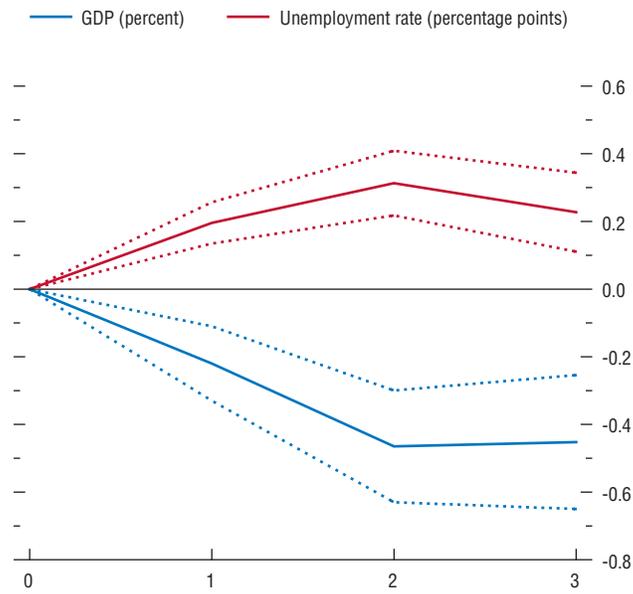


Source: IMF staff calculations.

Note: The 15 advanced economies in the sample are Australia, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Portugal, Spain, Sweden, United Kingdom, and United States. "Spending-based" consolidation relied primarily on spending cuts. "Tax-based" consolidation relied primarily on tax hikes. The "other" category denotes contractions for which composition details were either not available or for which no category accounted for the majority of the adjustment.

Figure 3.2. Impact of a 1 Percent of GDP Fiscal Consolidation on GDP and Unemployment

Fiscal consolidation is normally contractionary. A fiscal consolidation equal to 1 percent of GDP typically reduces real GDP by about 0.5 percent and raises the unemployment rate by about 0.3 percentage point.



Source: IMF staff calculations.
Note: $t=1$ denotes the year of consolidation. Dotted lines equal one standard error bands.

- Usually, contractionary effects of consolidation are dampened by decreases in interest rates and by depreciation.
- If interest rates and exchange rates are held fixed, effects of consolidation are roughly double: after two years, a consolidation of 1% of GDP reduces GDP by about 1% and raises unemployment by 0.6 percentage points.

The most prominent study finding that consolidations are expansionary is Alesina and Ardagna (2010).

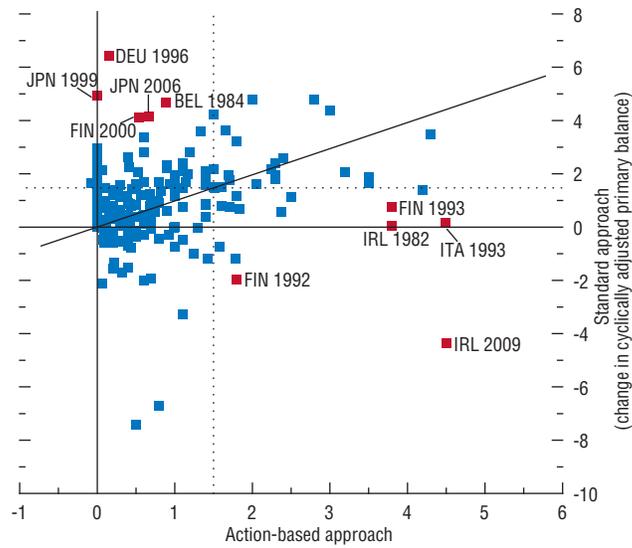
A-A define a consolidation as a large decrease in the cyclically-adjusted budget deficit. This variable is a poor measure of the stance of fiscal policy.

The IMF examines episodes when there is a large consolidation by their measure but not by A-A's, or vice versa... for example,

- Germany 1996: A-A find spurious consolidation because of accounting change in 1995.
- Ireland 1982: Historical record shows large consolidation: an increase in VAT. A-A measure fails to capture this policy because of unusual behavior of consumption.

**Figure 3.15. Size of Fiscal Consolidation:
Action-Based Approach versus Standard Approach¹**
(Percent of GDP)

There are numerous cases in which the standard approach and our action-based approach differ regarding the presence and size of fiscal consolidation. After analyzing in detail the 10 largest discrepancies between the two approaches, we conclude that our action-based approach more accurately identifies the size of fiscal consolidation.



Sources: Alesina and Ardagna (2010); and IMF staff calculations.
Note: The diagonal line reports the 45-degree line, where the action-based approach and standard approach agree. Dotted lines indicate episodes of consolidation equal to 1.5 percent of GDP. Highlighted observations indicate years for which the two approaches differ by more than 3 percent of GDP.

¹BEL: Belgium; DEU: Germany; FIN: Finland; IRL: Ireland; ITA: Italy; JPN: Japan.

•HYSTERESIS (long-run effects of demand shifts on unemployment and output)

- In IMF results, little evidence that effects of consolidation are dying out after five years.
- More generally, lots of evidence that shifts in aggregate demand have highly persistent effects on unemployment, unless monetary policy is strongly countercyclical. For example...
 - European disinflations of 1980s (Ball 1999, 2009)
 - Episodes of capital flight with hard exchange-rate pegs (Ball 2010, 2011)
 - Current U.S. recession, with interest rates at zero bound.
- DeLong and Summers (2012): Output losses over 2008-2012 lead CBO to reduce long-run forecasts of output.

ARE FISCAL EXPANSIONS SELF-FINANCING?

DeLong and Summers (2012): Yes, for the United States, if interest rates are near zero and there is a small amount of hysteresis.

Their argument:

- Let the multiplier for fiscal expansion be μ .
- A unit of fiscal expansion raises tax revenue by $\mu\tau$, where τ is the marginal tax rate. Therefore, net cost of expansion is $1-\mu\tau$.

- To maintain a constant debt-income ratio, need a permanent increase in annual revenue of $(r-g)(1-\mu\tau)$, where r is interest rate on government debt and g is growth rate of output.
- Suppose a unit increase in current output raises output permanently by η . This parameter is the "degree of hysteresis." A unit of fiscal expansion raises output permanently by $\mu\eta$, and raises tax revenue permanently by $\mu\eta\tau$.
- Fiscal expansion is self-financing, and consolidation is self-defeating, if

$$\mu\eta\tau > (r-g)(1-\mu\tau)$$

$$r < g + \mu\eta\tau/(1-\mu\tau)$$

- Suppose $\mu=1.0$, $g=2.5\%$, $\tau=0.33$, and $\eta=0.1$. Then the condition holds for $r<7.5\%$. If $\eta=0.05$, the condition holds if $r<5.0\%$.

In U.S., $r \ll 5.0\%$.

Is the result relevant for Europe?

- Yes if fiscal expansion for entire Euro area, and ECB doesn't tighten policy in response.
- Yes for individual countries if r is not too high. Note that raising τ to 0.5 raises the upper bound on r from 7.5% to 12.5%.

CONCLUSION

- In both Europe and U.S., long-term reforms are needed to make fiscal policy sustainable (in U.S., key is reform of Social Security and Medicare).
- However, rapid consolidation raises unemployment and may be counterproductive for controlling debt. Optimal policy is a combination of long-term reforms and short-run stimulus.