

Ch 13: Fiscal Policy

Goals

Talk about fiscal policy:

- ▶ Scale
- ▶ Theoretical effect
- ▶ Critique
- ▶ Implementation difficulties

Where are we in the business cycle

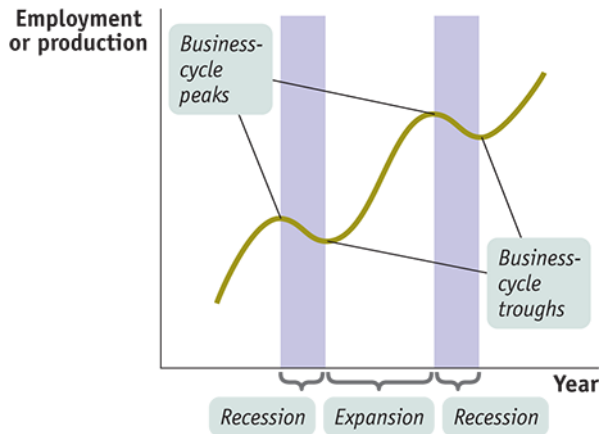


FIGURE 6-3 Krugman/Wells, *Macroeconomics*, 5e,
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Figure 1:

Probably A Little Overheated

- ▶ Unemployment is below
- ▶ Most models of recessions are ticking up in the next year.
 - ▶ https://www.newyorkfed.org/medialibrary/media/research/capital_markets/Prob_Rec.pdf
 - ▶ <https://www.clevelandfed.org/our-research/indicators-and-data/yield-curve-and-gdp-growth.aspx>

Remember What We are Trying to Do

We don't want to get overheated

- ▶ Negative cyclical unemployment
- ▶ Inflation pressure (Remember the Phillips Curve Relationship)

We don't want to be in recession

- ▶ Positive cyclical unemployment
- ▶ Other labor market harm (Remember that you can be underemployed in the U-6 sense)

Each Has Different Prescriptions

- ▶ If recessionary gap, increase aggregate demand
- ▶ If inflationary gap, decrease aggregate demand.

We are trying to get back to potential GDP faster than the long-run response.

Close Recessionary Gap By Increasing AD

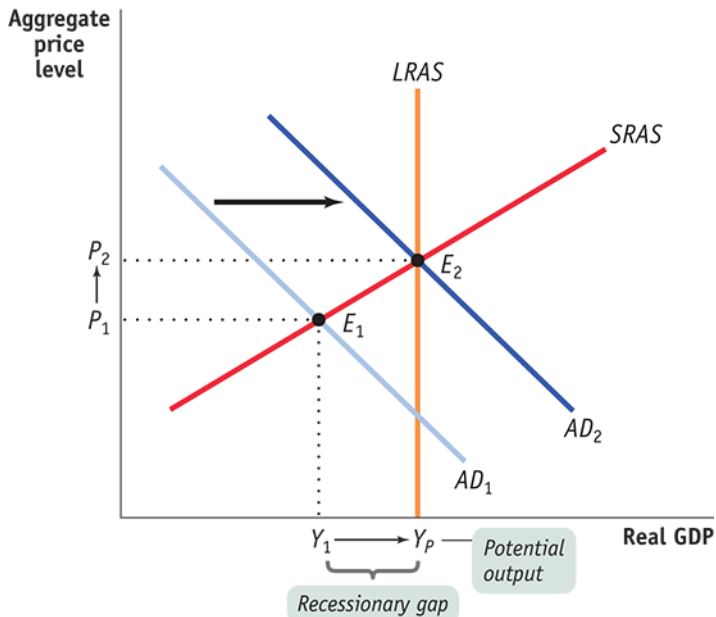


FIGURE 13-4 Krugman/Wells, *Macroeconomics*, 5e. © 2018 Worth Publishers

Close Inflationary Gap By Decreasing AD

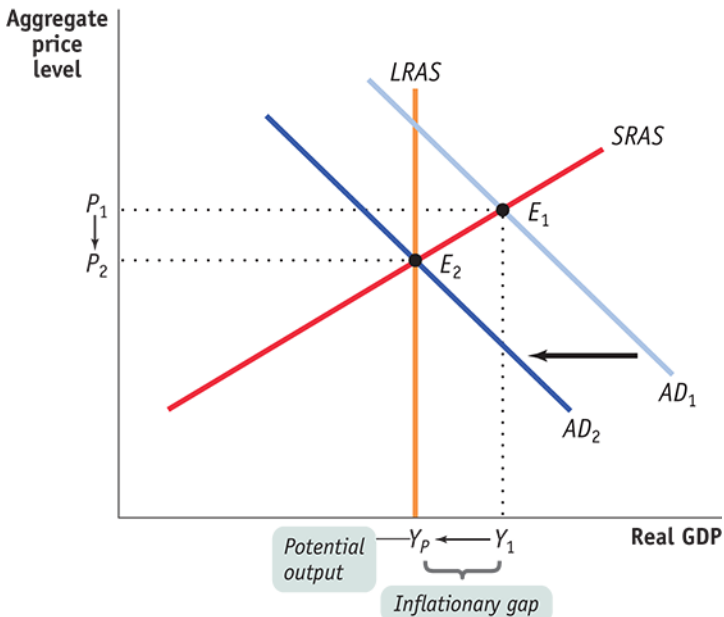


FIGURE 13-5 Krugman/Wells, *Macroeconomics*, 5e. © 2018 Worth Publishers

How?

The high level story?

- ▶ Recessionary gap: Cut taxes, increase spending, increase transfers
- ▶ Inflationary gap: Increase taxes, decrease spending, decrease transfers.

Fundamental Problem

Not all the effort that we count helps. In most economics this is what is called *the program effect*

- ▶ What would have happened without the program
- ▶ What happened with the program
- ▶ The difference is the program effect.

The problem is that it is hard to observe something that didn't happen.

Example with Unemployment

Suppose we have a country with three workers: Alice, Bob and Charlie.

- ▶ Recessionary Gap

- ▶ Alice is employed in private sector, but not Bob or Charlie.
- ▶ The Government hires someone.
- ▶ Alice and Bob are employed.
- ▶ Net effect - One fewer unemployed.

- ▶ Inflationary Gap

- ▶ Alice, Bob and Charlie are all employed by private sector.
- ▶ The Government hires someone.
- ▶ Alice and Bob are employed by private sector
- ▶ Charlie is employed by the government.
- ▶ Private sector is now looking for someone - Dee?
- ▶ Net effect - no change in employment.

The Net Effect is Different

It really depends on where you are in the business cycle.

Claim 1

Government spending always crowds out private spending.

- ▶ If in an inflationary gap – sure.
 - ▶ Could be for every person hired because of government spending, .9 people leave their current job.
- ▶ If in a recessionary gap?
 - ▶ If you see unemployed and they are hired when they otherwise would not, then no crowding out.

Claim 2

Government Borrowing Always Crowds Out Private Investment Spending.

- ▶ Government borrowing represents an increase in the demand for loanable funds.
- ▶ An increase in demand for loanable funds results in more funds loaned and higher interest rates.
- ▶ Higher interest rates decreases investment.

But, what if interest rates don't go up?

Claim 2 A Picture with Two Stories

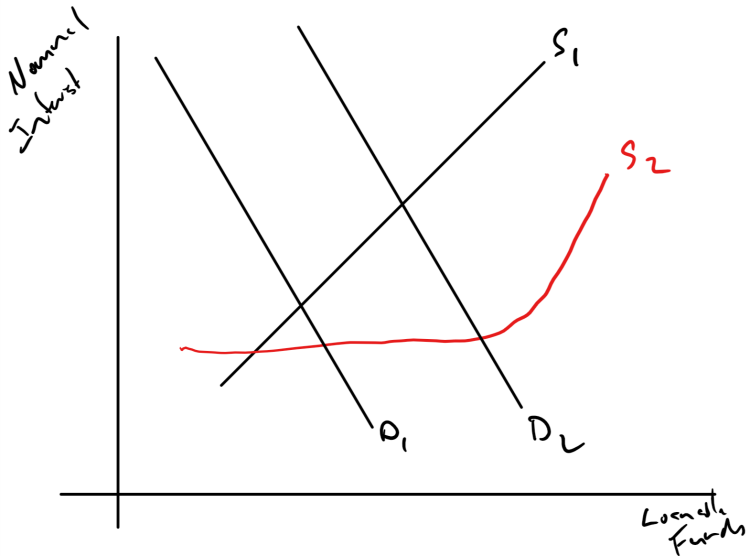


Figure 4:

Claim 3

Government Budget Deficits Lead to Reduced Private Spending.

- ▶ Called the Ricardian Equivalence argument.
- ▶ People are smart and can forecast the effects of government policy.
- ▶ Government deficits must eventually be paid for by taxes.
- ▶ When people see the government running a deficit, spending more than taxes, they immediately save enough to pay for the future tax bill.

This one has *some* meat but it is not a full adaptation.

What Does Cause the Problems?

Lag

https://www.youtube.com/watch?v=_fNp37zFn9Q

What Lags for Macro

- ▶ All our statistics have noise
 - ▶ Remember uncertainty about unemployment
 - ▶ GDP revisions
 - ▶ Price level uncertainty
- ▶ We don't know when we are in a recession till after it started.
 - ▶ The last recession started in December 2007, but was announced in December 2008.
 - ▶ It ended in June 2009, but was announced in December 2010.

More Lags

- ▶ Planning to spend money should take time.
 - ▶ Even in a recession, blowing \$1B on Vodka and Doughnuts is a bad idea.
 - ▶ Are you really sure something new is happening.
- ▶ Fast often means nothing new
 - ▶ American Recovery and Reinvestment Act of 2009 (ARRA) was looking for shovel ready projects.
 - ▶ Things you were just about to do.
 - ▶ Things you decided you were not going to do.
 - ▶ It takes a while to get a project shovel ready.
- ▶ Spending money takes time
 - ▶ Federal ARRA spending didn't really hit till 2011, i.e., after the recession was over and after it was announced over (December 2010).

How to Deal with Lag?

- ▶ Just like in games, no sudden moves.
- ▶ Increase the number of things that automatically do the right thing.

Automatic Stabilizers

- ▶ With recessionary gap
 - ▶ Automatically increase expenditures
 - ▶ Automatically decrease taxes
 - ▶ Automatically increase transfers
- ▶ With inflationary gap
 - ▶ Automatically decrease expenditures
 - ▶ Automatically increase taxes
 - ▶ Automatically decrease transfers

Tax Collections as Stabilizer

- ▶ Plan a balanced budget 100M with 10% tax on 1,000M national income
- ▶ National income is only 800M
 - ▶ Expenditures don't change, still 100M
 - ▶ Tax collection falls to 10% of 800M – 80M
 - ▶ 20M deficit stimulates
- ▶ National income is 120M
 - ▶ Expenditures don't change, still 100M
 - ▶ Tax collection increases to 10% of 1200M – 120M
 - ▶ 20M surplus is contractionary

Other Stabilizers

- ▶ Unemployment insurance compensation increases in recession.
- ▶ Medicaid (Healthcare for poor) and food stamps increase in recession

Balanced Budgets?

- ▶ Not if you want year-to-year balanced budgets.
- ▶ You need the right time-frame.
- ▶ Thought experiment. Balance your budget day-to-day and not month-to-month.
 - ▶ Payday: Go to Costco, fill all freezers, pay every bill you can.
 - ▶ No income in a day, no expenditures.
 - ▶ Day off? Can't spend anything
 - ▶ Workday? Now you can buy lunch if you want
- ▶ The correct time unit is probably a business cycle not a year.

Doesn't Mean We Don't try

- ▶ State and local governments are often prohibited from running deficits.
- ▶ Not to say they can't borrow
 - ▶ They borrow for cash flow reasons during the year, e.g., tax anticipation bonds
 - ▶ They borrow for large capital improvements with tied funding to pay back, e.g., school construction bonds.
- ▶ In the 2008 recession, federal spending expanded but state funding contracted.
 - ▶ One might say that federal spending crowded out state/local spending, but that is torturing the concept.

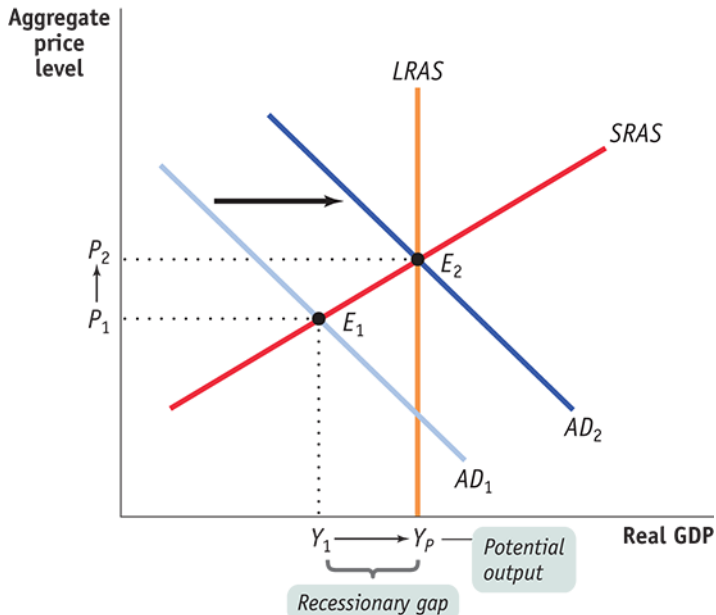


FIGURE 13-4 Krugman/Wells, *Macroeconomics*, 5e, © 2018 Worth Publishers

Figure 5:

We can estimate ...

- ▶ There is an idea of a cyclically adjust budget deficit.
 - ▶ Use current law and estimate what tax collection and expenditure would be under the law.
 - ▶ Current estimates for the world by the **IMF**
 - ▶ Note that those are for the national governments.

There are also total estimates of the effects of fiscal policy

You can also find the net effect [**here**](<https://www.brookings.edu/interactives/hutchins-center-fiscal-impact-measure/>)

- ▶ Yes, you are reading that right, we were contractionary from 2011 till 2015.
- ▶ Neutral until recently.
- ▶ Yes, we had tax cuts and are running large deficits, but it takes a while to kick in

We Know Direction

What about scale of contractionary and expansionary fiscal policy?

- ▶ The classic response is to look at the expenditure multiplier for extra spending.
- ▶ The tax multiplier for tax cuts and transfers

We will look at theoretical and empirical multipliers.

You know the expenditure multiplier

$$\frac{1}{(1 - MPC)}$$

\$1B increase in government expenditures, when the MPS was .05, i.e., MPS of .95, would mean an increase of:

$$\$1B \frac{1}{(1 - .95)} = \$20B$$

The tax multiplier

The tax multiplier is a little smaller

$$\frac{MPC}{(1 - MPC)}$$

The logic is:

- ▶ If the government spends the money directly it spends all of it.
- ▶ If they give it to you, you only spend part of it, MPC times what you.
- ▶ The book gives a longer infinite series argument.

The Multiplier IRL

- ▶ We don't see expenditure multipliers on the scale of 20 or 5.
- ▶ More likely between 1 and 3.
 - ▶ That would mean that the MPS was between 1, save all additional income, to $1/3$.
 - ▶ The concept is right but more happens in the real world.

Multiplier of 1.8

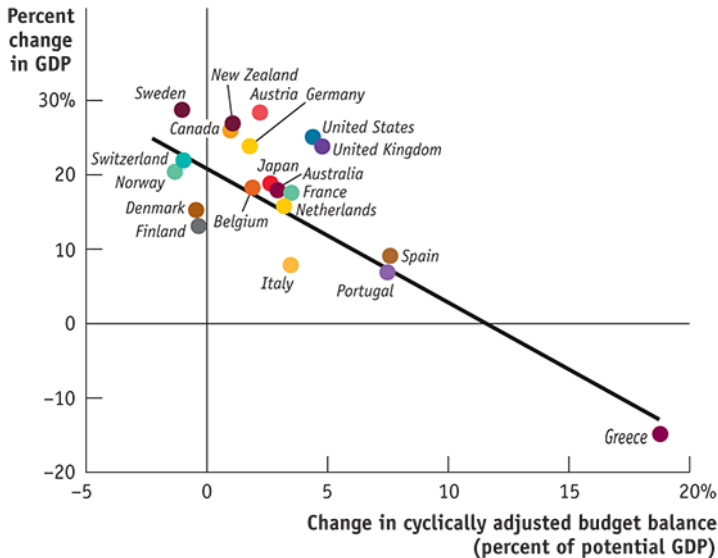


FIGURE 13-7 Krugman/Wells, *Macroeconomics*, 5e, © 2018 Worth Publishers
Data from: International Monetary Fund.

The Multiplier Depends on

- ▶ Who you give tax cuts and transfers to
 - ▶ Rich save more, smaller multiplier
 - ▶ Poor save less, larger.
- ▶ Local Firms
- ▶ Expenditures for services vs things

If anyone ever asks, say the multiplier is 2 ± 1 .

Also, tell them that the tax multiplier can be less than 1.

But the Long-run

There is a good chance that lowering taxes has long-run supply side effects.

- ▶ A tax cut now may shrink current GDP, because the empirical tax multiplier could be less than 1.
- ▶ But, result in more investment, increasing AS, which increases future GDP.

Your mileage may vary depending on a lot of details.

Deficits and Debt

- ▶ Deficit: The difference between revenue and expenditures.
 - ▶ Collect \$1B in taxes and spend \$1.2B, you have a deficit of \$200M.
 - ▶ Deficits are a flow measure
- ▶ Debt: The sum of deficits and surpluses
 - ▶ Run a deficit of \$200M a year for 10 years.
 - ▶ Your debt goes up by \$2B.

Our Debt and Deficits

Talking about billions and billions is not always helpful. You need to think about it in the right scale.

- ▶ Scale is not always obvious.
 - ▶ We use vehicle miles traveled for travel safety.
 - ▶ Makes sense for cars, planes, etc.
 - ▶ But until 1974 the Saturn 5 rocket, which made trips to the moon was the safest on a per mile basis.
- ▶ We generally talk about deficits and debt on the scale of GDP.

Deficits and Debt

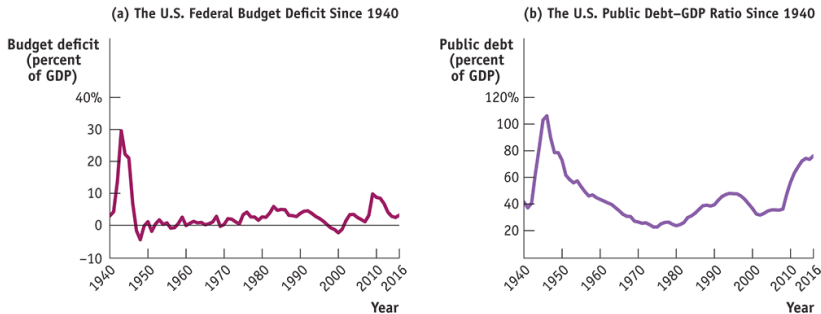


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Data from: Office of Management and Budget; Federal Reserve Bank of St. Louis.

Figure 7:

Comments

- ▶ Yes, 2008 was special.
- ▶ We reduced debt in the 90s
- ▶ Kicked both up after 2001.

Oh you want a number?

Here you go

Please don't take this that seriously. GDP is an annual rate and does not go up constantly like that.

Logic Check on the Public Debt

- ▶ Borrow \$10 at 5%.
 - ▶ Doubles in $\frac{70}{5} = 14$ years.
- ▶ Invest at 10%.
 - ▶ Doubles in $\frac{70}{10} = 7$ years.
 - ▶ Quadruples in 14.

Why pay it back when the cost is less than the benefit? Paying it back would reduce the benefits you receive.

Next Up

MONEY