Ch 13: Fiscal Policy

Goals

Talk about fiscal policy:

- Scale
- Theoretical effect
- Critique
- Implementation difficulties

Where are we in the business cycle

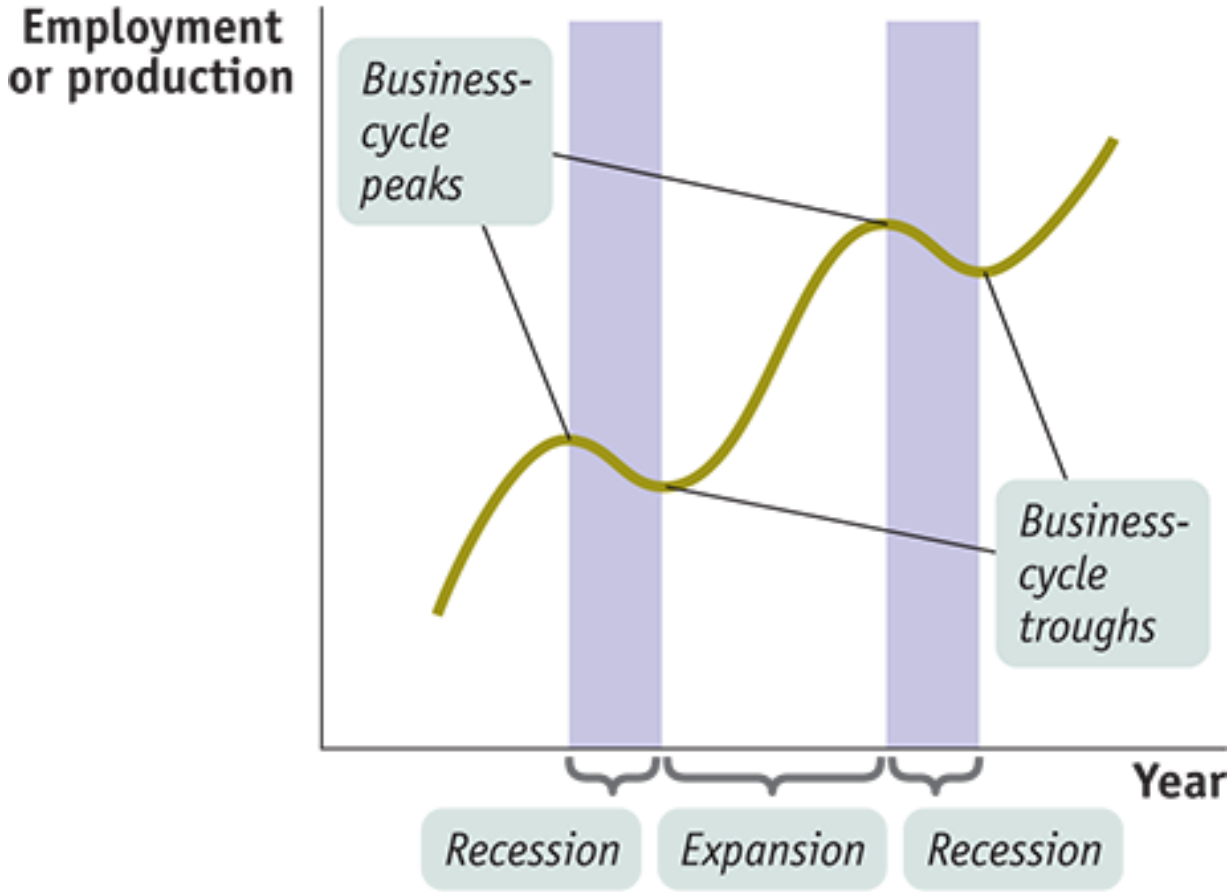


FIGURE 6-3 Krugman/Wells, *Macroeconomics*, 5e,

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

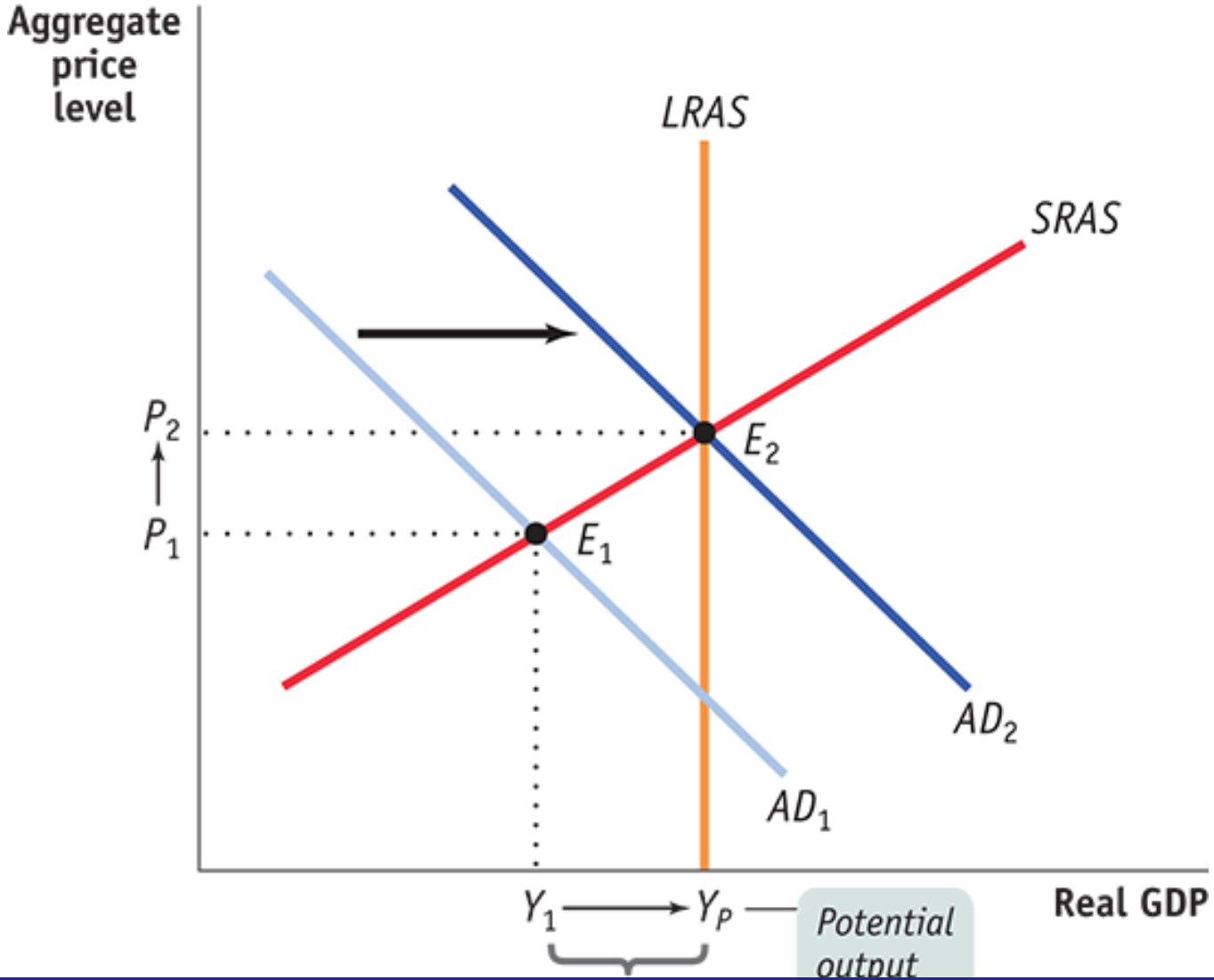
- Positive cyclical unemployment
- Other labor market harm (Remember that you can be underemployed in the U-6 sense)

Each Has Different Prescriptions

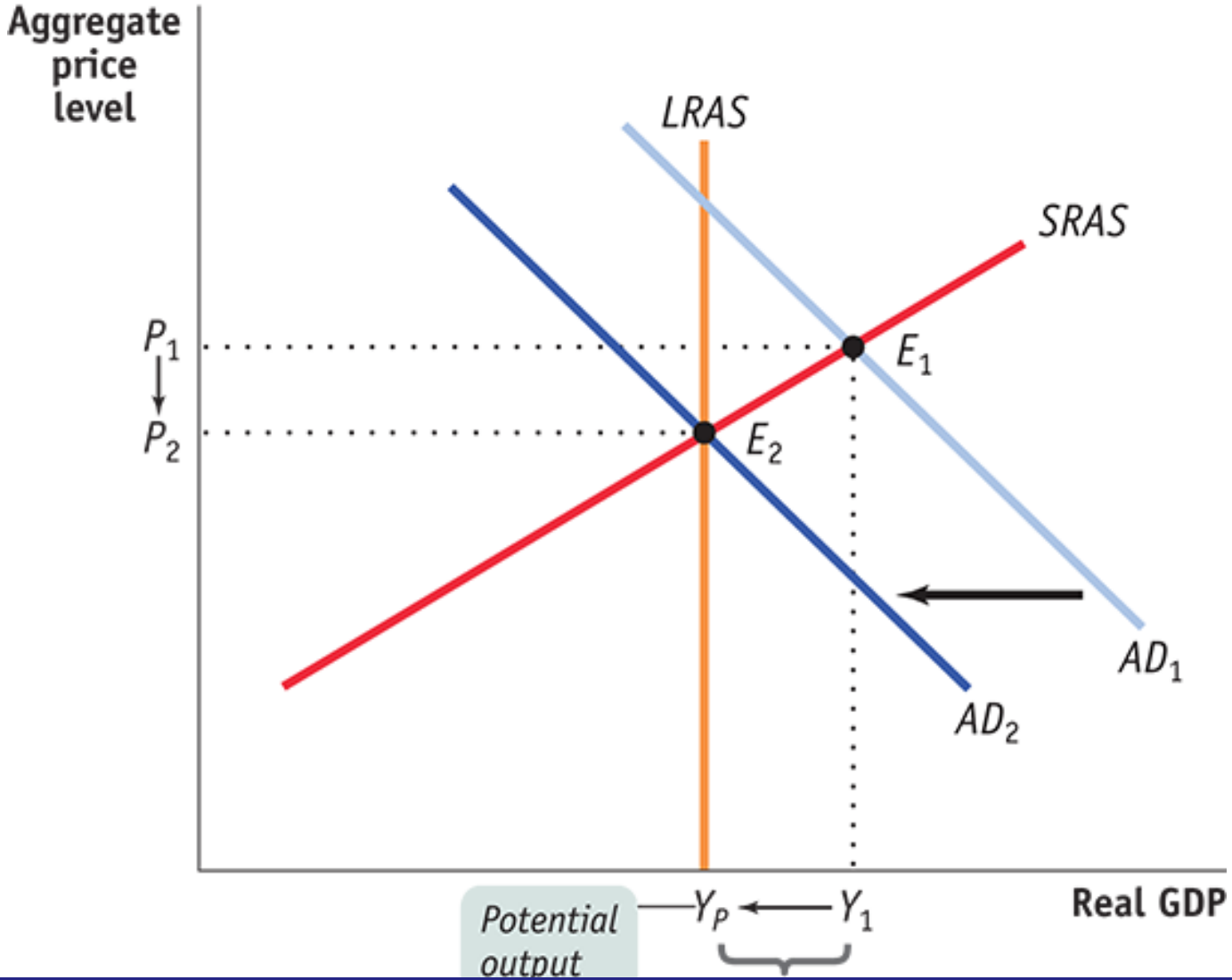
- If recessionary gap, increase aggregate demand
- If inflationary gap, decrease aggregate demand.

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

Close Recessionary Gap By Increasing AD



Close Inflationary Gap By Decreasing AD



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.

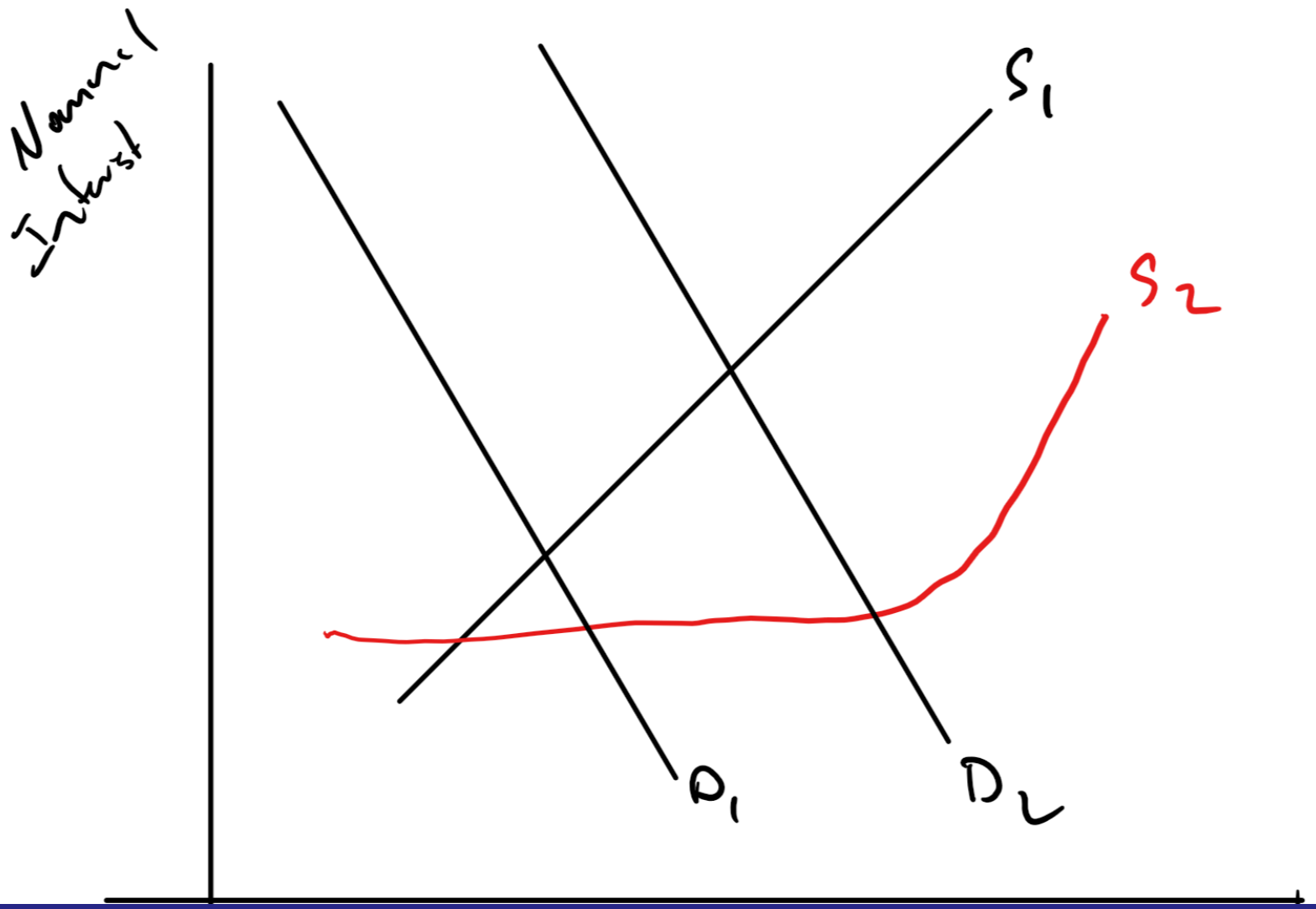
Claim 2

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



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, the 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
  - The 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.

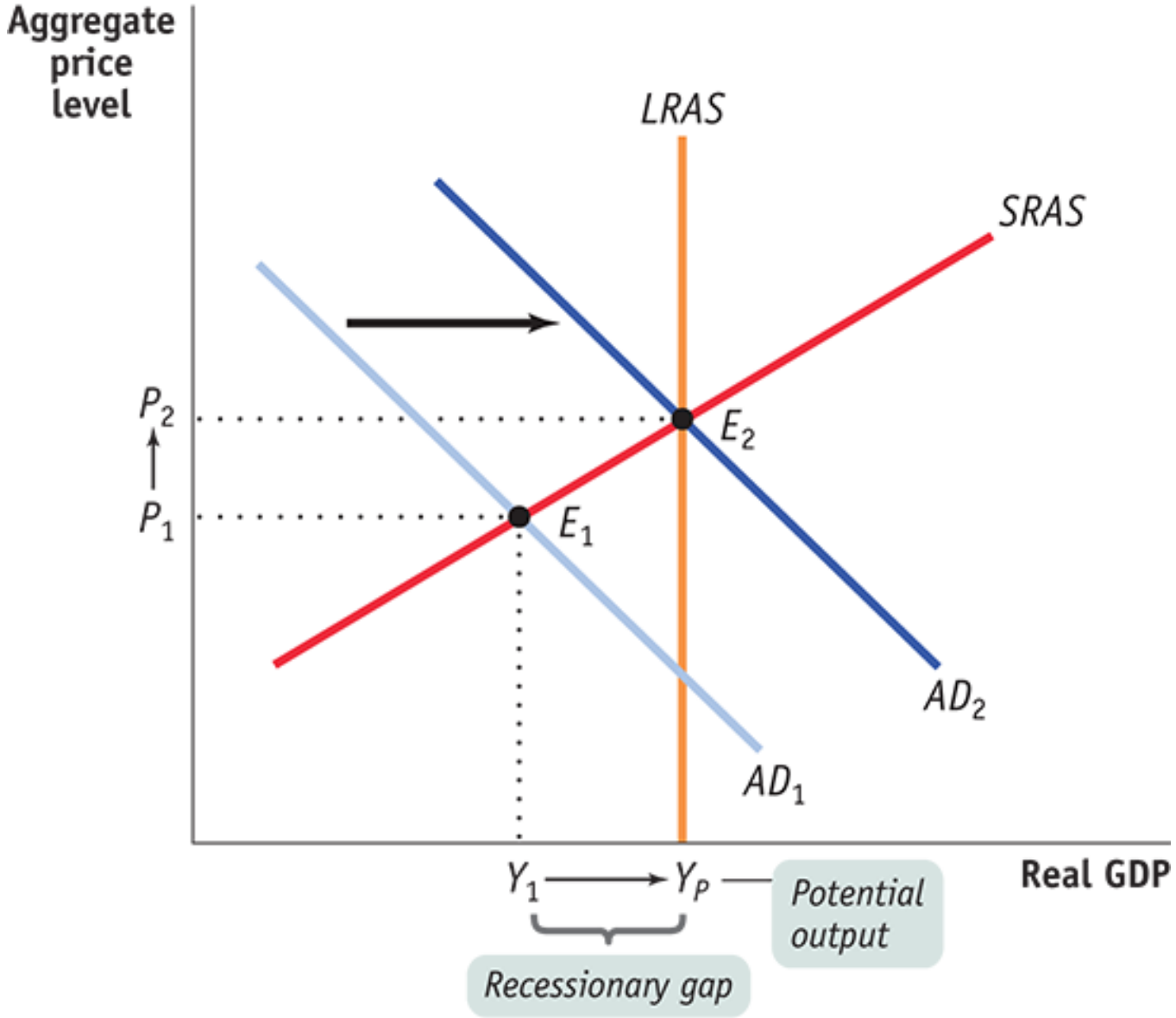


FIGURE 13-4 Krugman/Wells, *Macroeconomics*, 5e, © 2018 Worth Publishers

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**

- 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

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

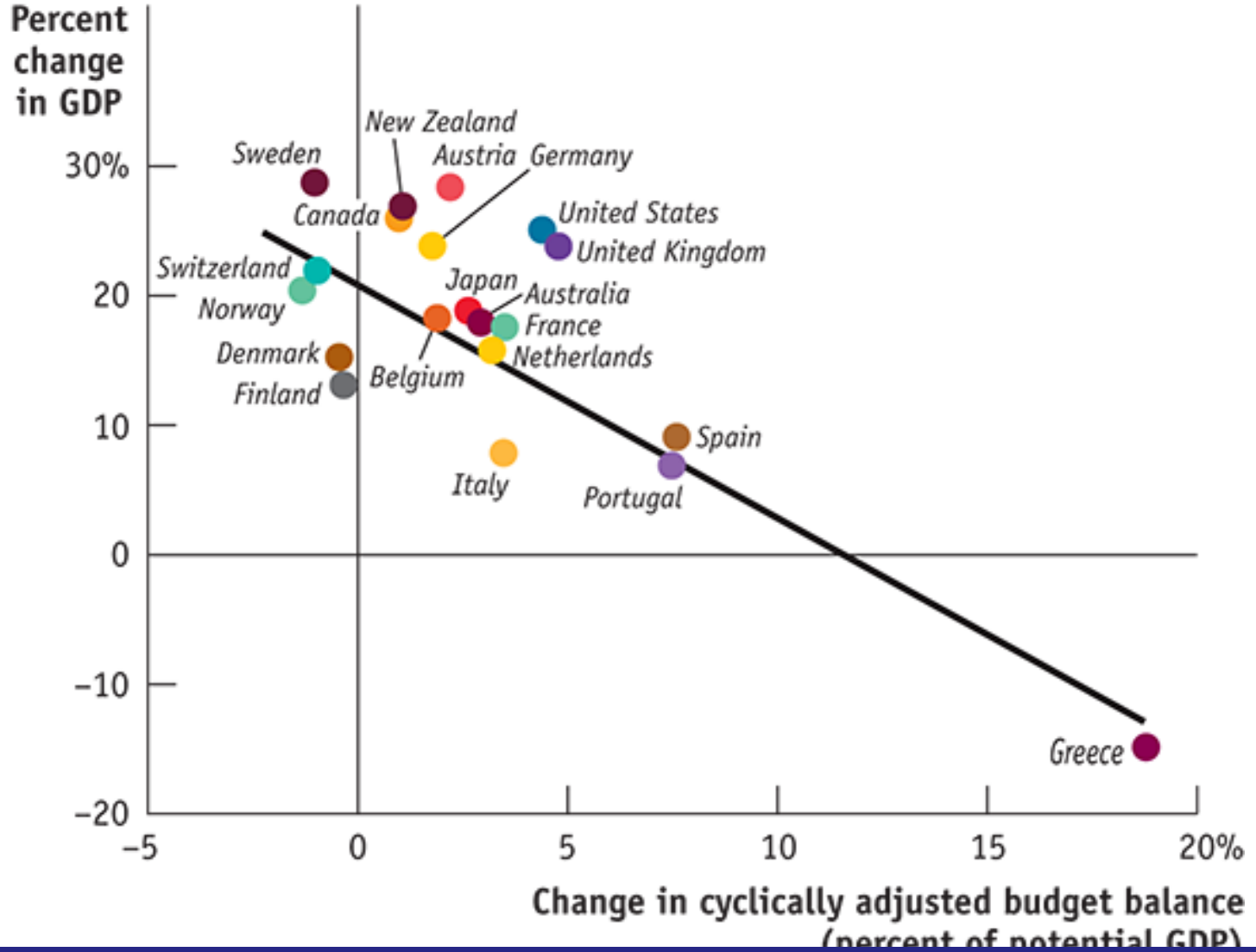
The logic is:

- 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 1/2 and 3 1/2.
  - 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



The Multiplier Depends on

- Persistence of change
- The specific kind of expenditure or tax. Rules are important.
- How the expenditure or tax change was financed.
- Anticipated or surprise
- How distributed
- State of economy

If anyone ever asks, say the multiplier is 2 ± 1, but estimates range from .3 to 2+

Also, tell them that the tax multiplier can be less than 1, but estimates range form .2 to 5

(Ramey 2019)

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

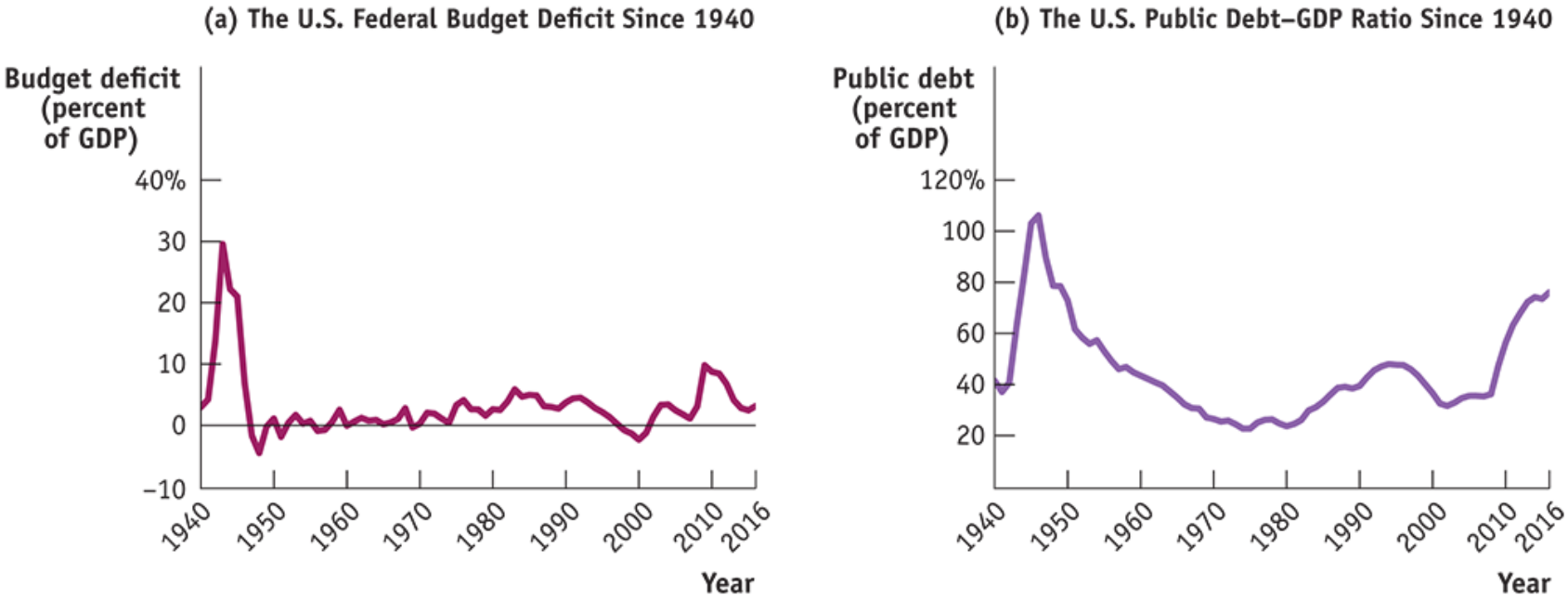


FIGURE 13-13 Krugman/Wells, *Macroeconomics*, 5e, © 2018 Worth Publishers
Data from: Office of Management and Budget; Federal Reserve Bank of St. Louis.

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