
Fiscal Policy

How to Use It to Smooth Business Cycles?

Outline

1. An Overview of Government Spending and Taxes
 2. Macroeconomic Effects of Fiscal Policy
 3. Fiscal Policy vs Monetary Policy
- Textbook Readings: Ch. 16

Types of Goods

	Excludable	Non-Excludable
Rival	Private Goods "Typical Goods" (Clothes, Food, Flowers, etc.)	Common Goods "Common Pool Resources" (Mines, Fisheries, Forests, etc.)
Non-Rival	Club Goods "Artificially Scarce Goods" (Cable TV, Private Parks, Cinemas, etc.)	Public Goods "Collective Goods" (Air, News, Sunshine, etc.)

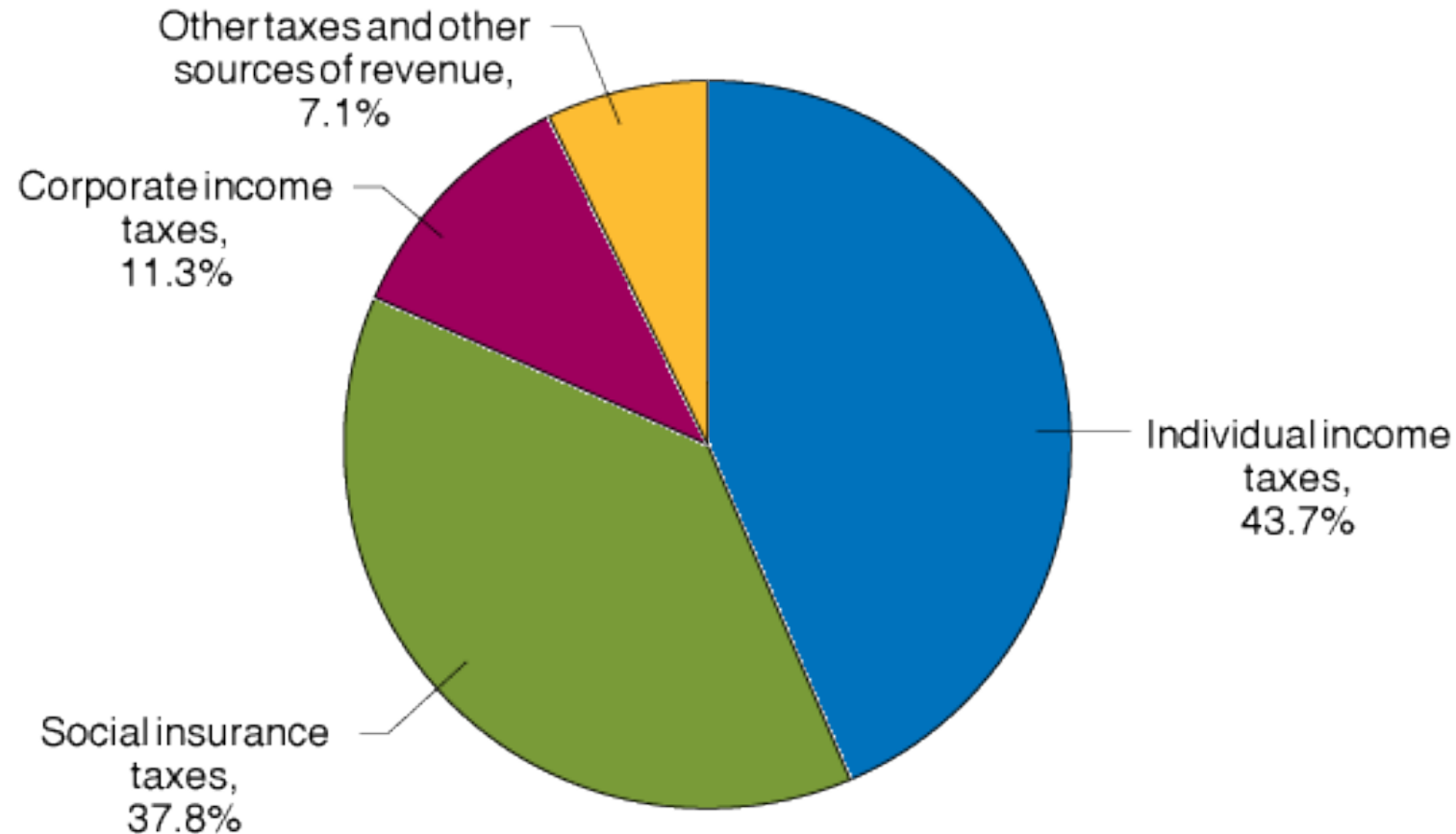
When Is Government A Preferred Provider of Goods?

- **Pure public goods**
- Two conditions: **Non-rival** and **Non-excludable**
 - My consumption of the good does not reduce its availability to you
 - My benefit does not reduce the benefit to you
 - It is impossible to exclude any individuals from consuming the good

Why A Governmental Agency Provides A Police Service?

- An answer: **Free-Rider Problem**
- Suppose you 'privatize' the police force
- How would you charge for it?
 - Volunteer funds, and the sum pays for the policing
 - But I can **contribute ZERO** and I get exactly the **same protection**—because the police **can't exclude me** from their efforts

Where Does Federal Revenue Come From?



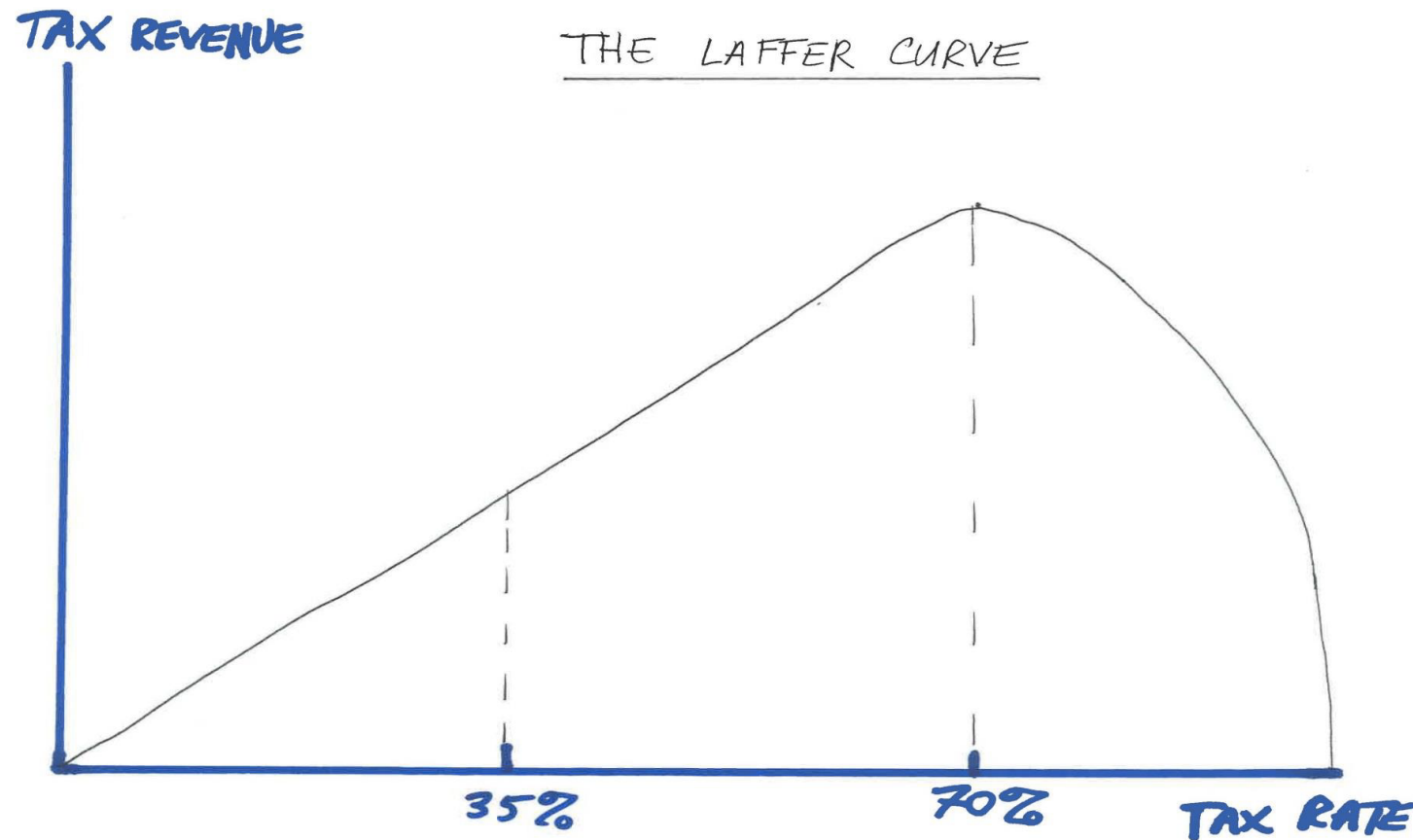
Federal Revenues, 2017

	billions of \$	% of GDP	% of total revenues
Individual Income Taxes	1,574	8.2%	47.6%
Payroll Taxes	1,164	6.1%	35.2%
Corporate Income Taxes	310	1.6%	9.4%
Other	267	1.4%	8.1%
Total	3,315	17.3%	100.0%

Source: Congressional Budget Office, 9/17 Report

The Laffer Curve

- Taxation can **adversely** affect effort
 - One cannot ignore **effects on incentives**

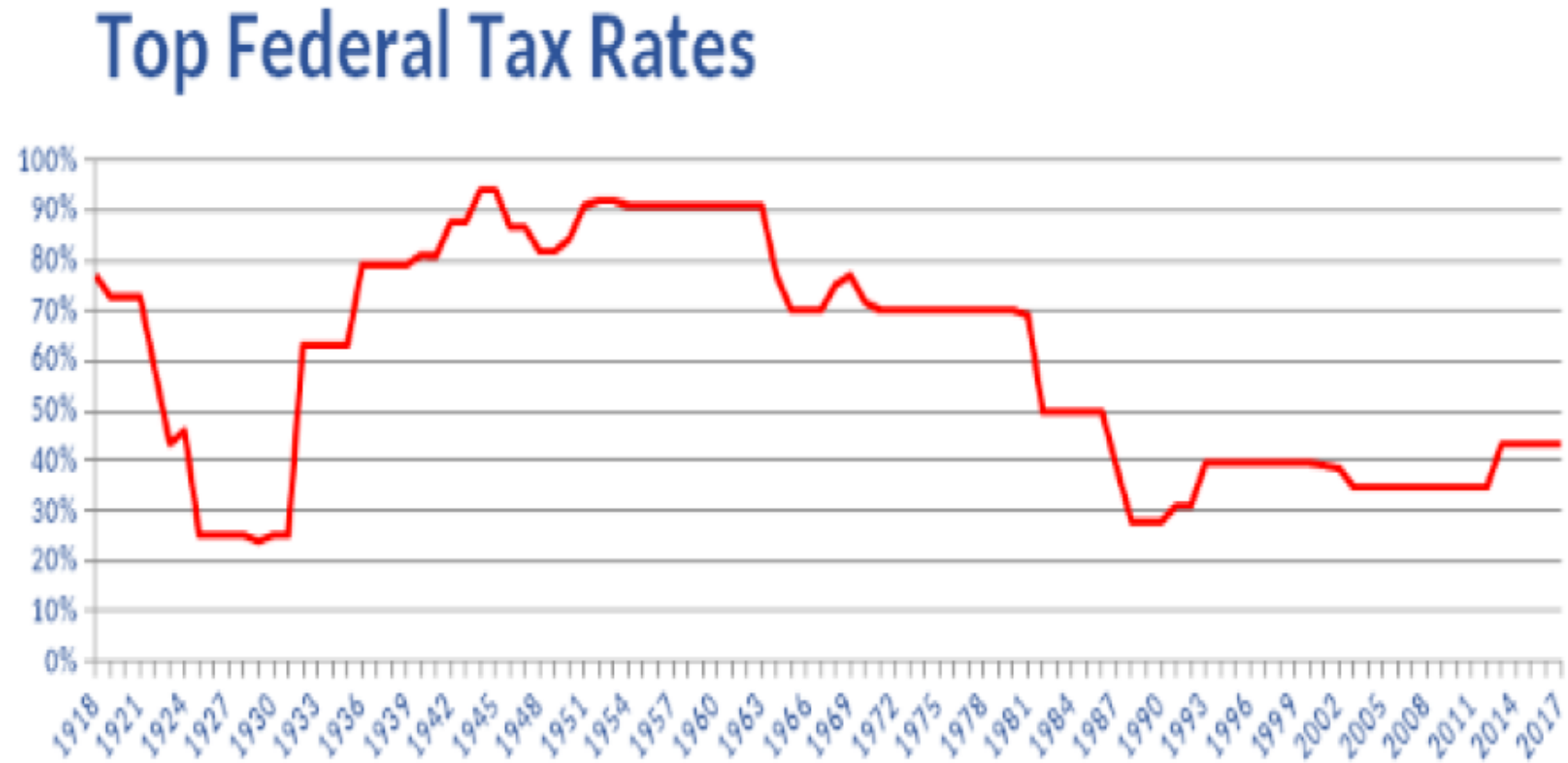


Tax Brackets

2017 Tax Brackets		2018 Tax Brackets	
Income Tax Rate	Income Bracket	Income Tax Rate	Income Bracket
10%	Up to \$18,650	10%	Up to \$19,050
15%	\$18,651 to \$75,900	12%	\$19,051 to \$77,400
25%	\$75,901 to \$153,100	22%	\$77,401 to \$165,000
28%	\$153,101 to \$233,350	24%	\$165,001 to \$315,000
33%	\$233,351 to \$416,700	32%	\$315,001 to \$400,000
35%	\$416,701 to \$470,000	35%	\$400,001 to \$600,000
39.60%	\$470,001 or more	37%	over \$600,000

Top Tax Rate

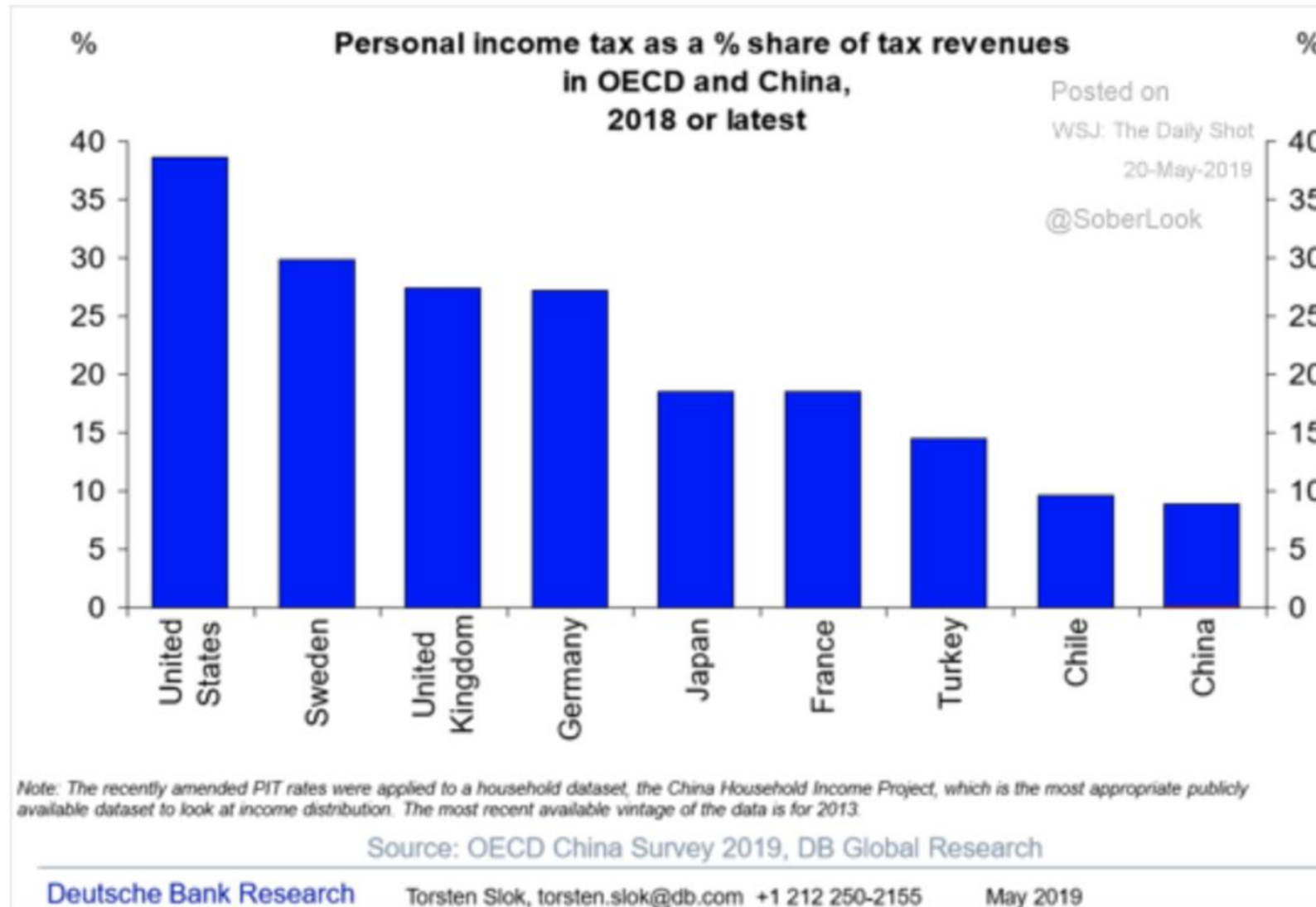
- From 1932 to 1981, top tax rate was higher than today's



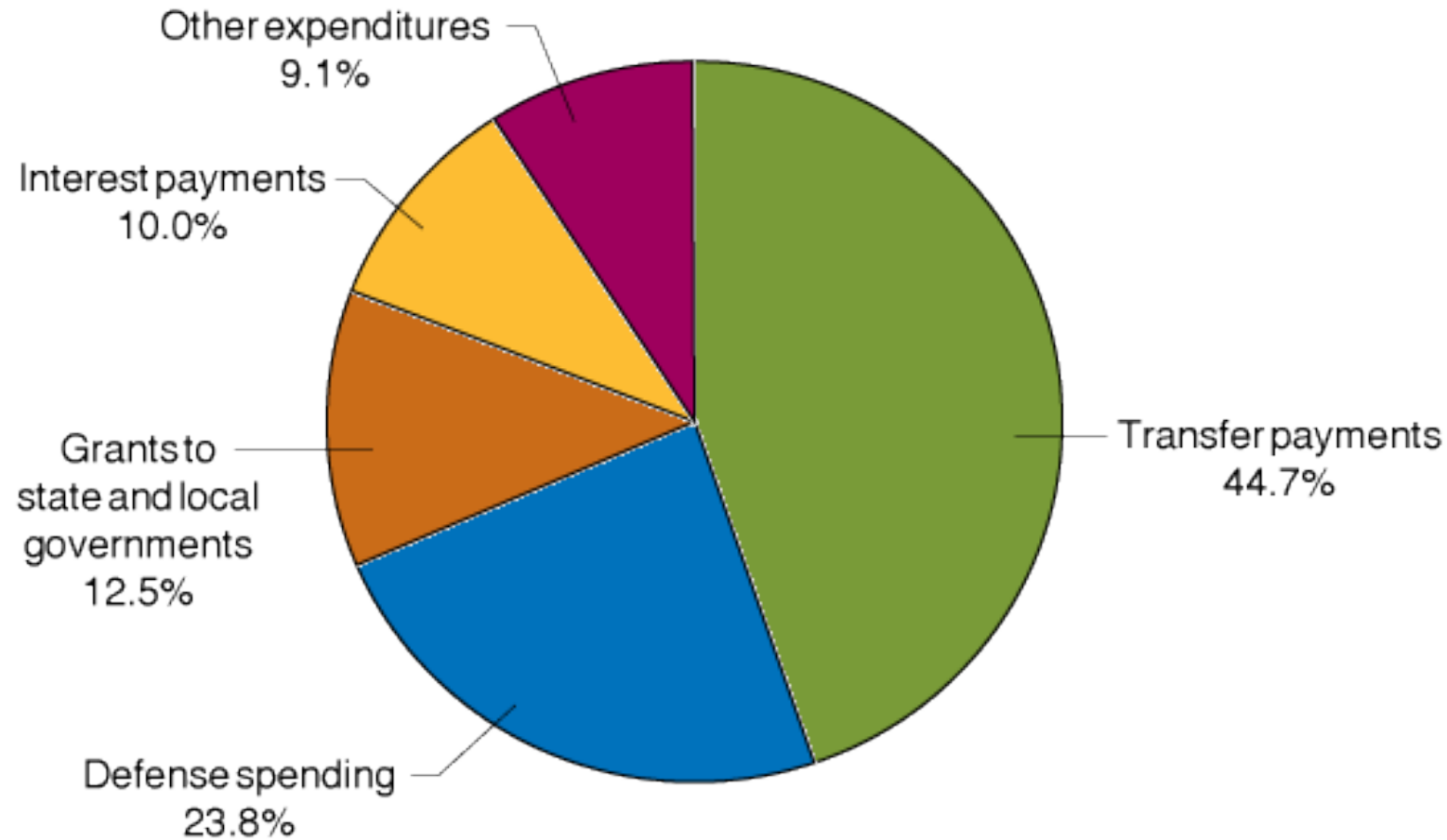
Top Tax Rate: Where Are We Today on the Laffer Curve?

1950s through 1970s	70%
1981 Reagan Tax cut	50%
1986 Reagan Tax reform	28%
1992 Clinton Budget	39.6%
2001 Bush tax cut (temporary)	35%
2012 Obama Tax Cut Extension	39.6%
2012 Affordable Care Act	43.4%

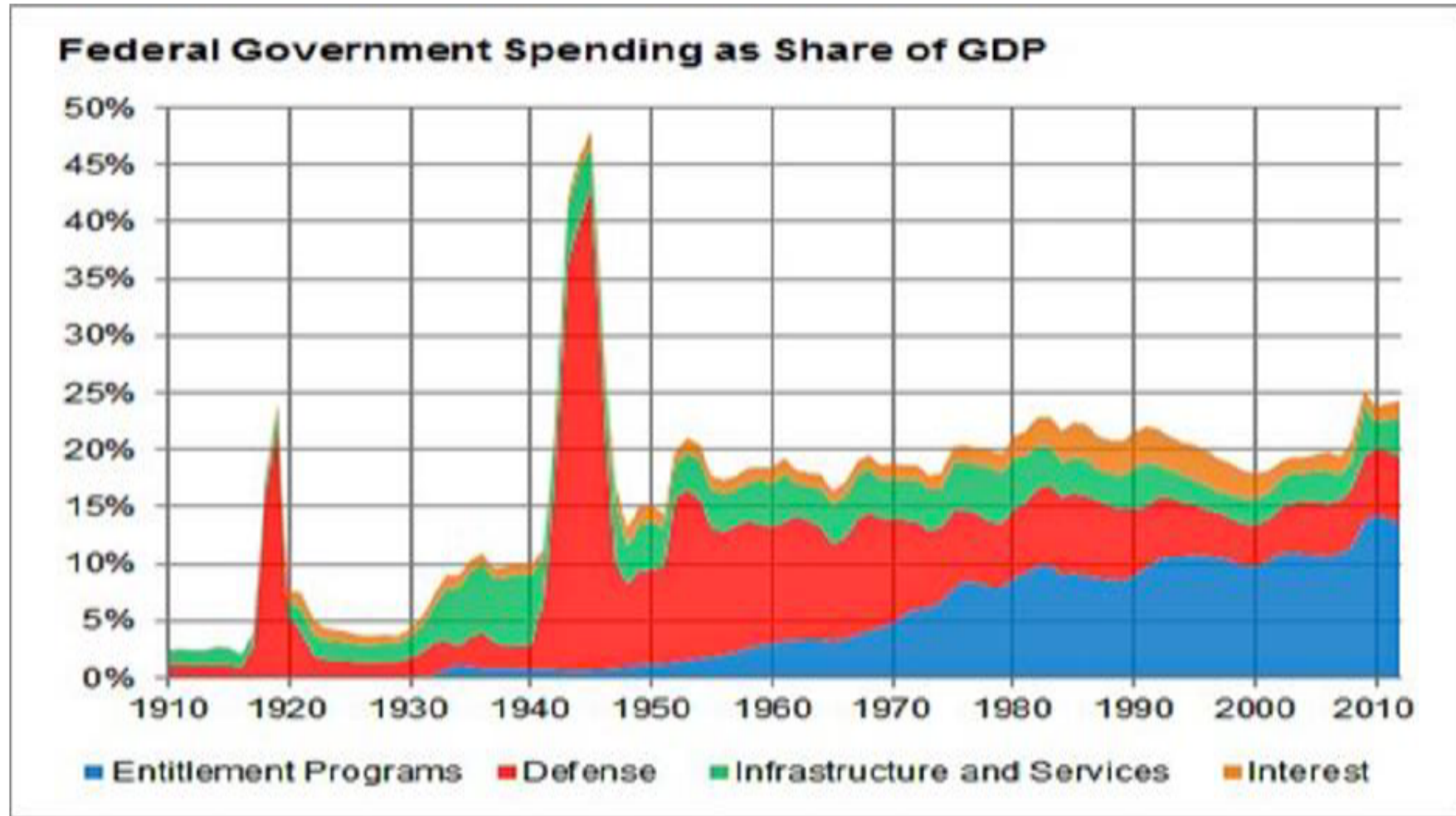
Tax Revenues Around the World: Income Tax



What Does The Federal Government Spend Money On?



Federal Government Outlays as a Share of GDP



Source: Nate Silver's blog

Outlays, 2017

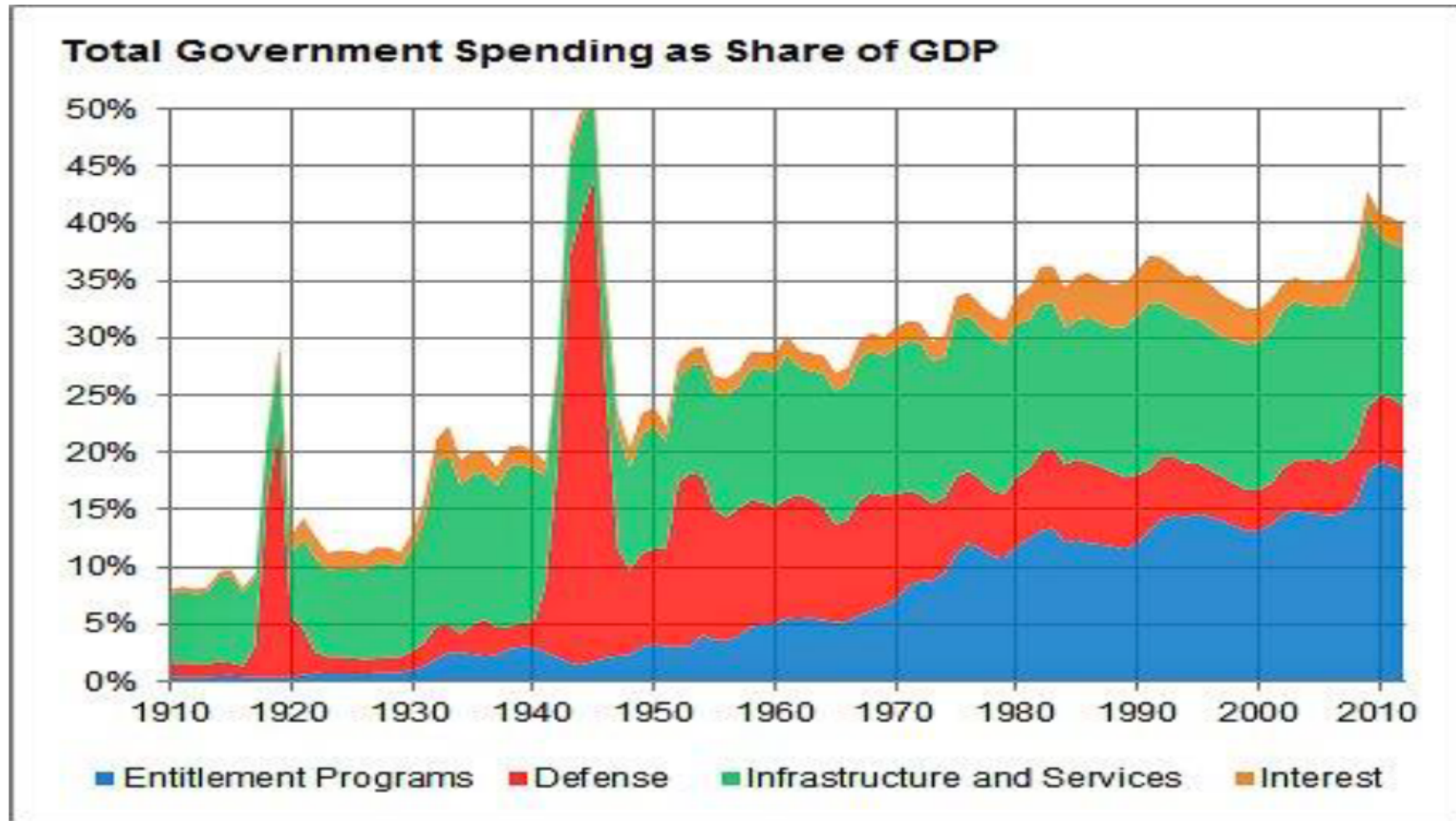
	<u>billions of \$</u>	<u>% of GDP</u>		
Social Security & Government Retirees	1101	5.8%		
Medicare & Medicaid & Child Health Ins	1,152	6.0%		
Welfare Programs	297	1.6%		
Defense	589	3.1%		
Other discretionary items	600	3.1%		
Interest	269	1.4%		
Total Outlays	4,008	21.0%		
nominal GDP	19,120	100.0%		

	<u>percent of GDP</u>
Social Security	5.8%
Medical	6.0%
Defense	3.1%
Interest	1.4%
Big 4 Total	16.3%
Overall Total	21.0%

Big 4 as % of Overall	77.5%
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Source: Congressional Budget Office

Total Government Outlays as a Share of GDP



Source: Nate Silver's blog

Size of Government: International Comparisons

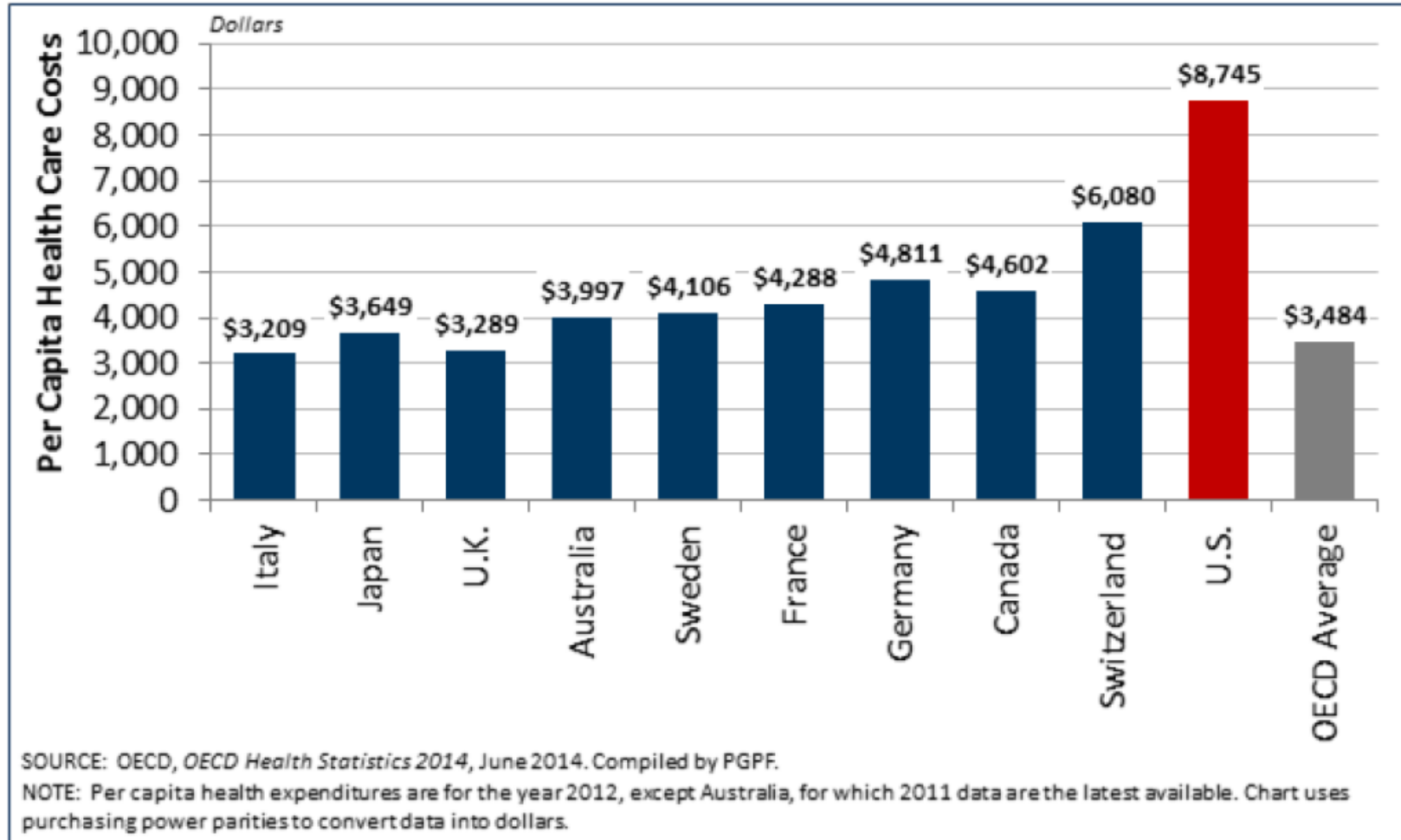
	Total	total
	outlays	ex-defense
France	56%	53%
U.K.	48%	45%
Germany	45%	44%
Japan	42%	41%
U.S.A.	42%	38%
Brazil	39%	37%
India	27%	24%
China	24%	20%

An International Free-Rider Problem?

- Trump: “Why should the US be the world’s policeman?”

		MILITARY SPENDING		
	DOLLARS (BILLIONS)	PERCENT OF GDP	POPULATION (MILLIONS)	DOLLARS PER CAPITA
USA	612	4.1	318	1,925
CHINA	126	4.3	1,360	93
RUSSIA	77	3.9	150	513
SAUDI ARABIA	57	10.1	28	2,036
U.K.	53	2.7	65	815
JAPAN	49	0.8	128	383
INDIA	46	2.5	1,220	38
GERMANY	45	1.5	82	549
FRANCE	43	2.6	67	642
ITALY	34	1.8	63	540

U.S. Health Care Costs: A Major Contributor to Outlays



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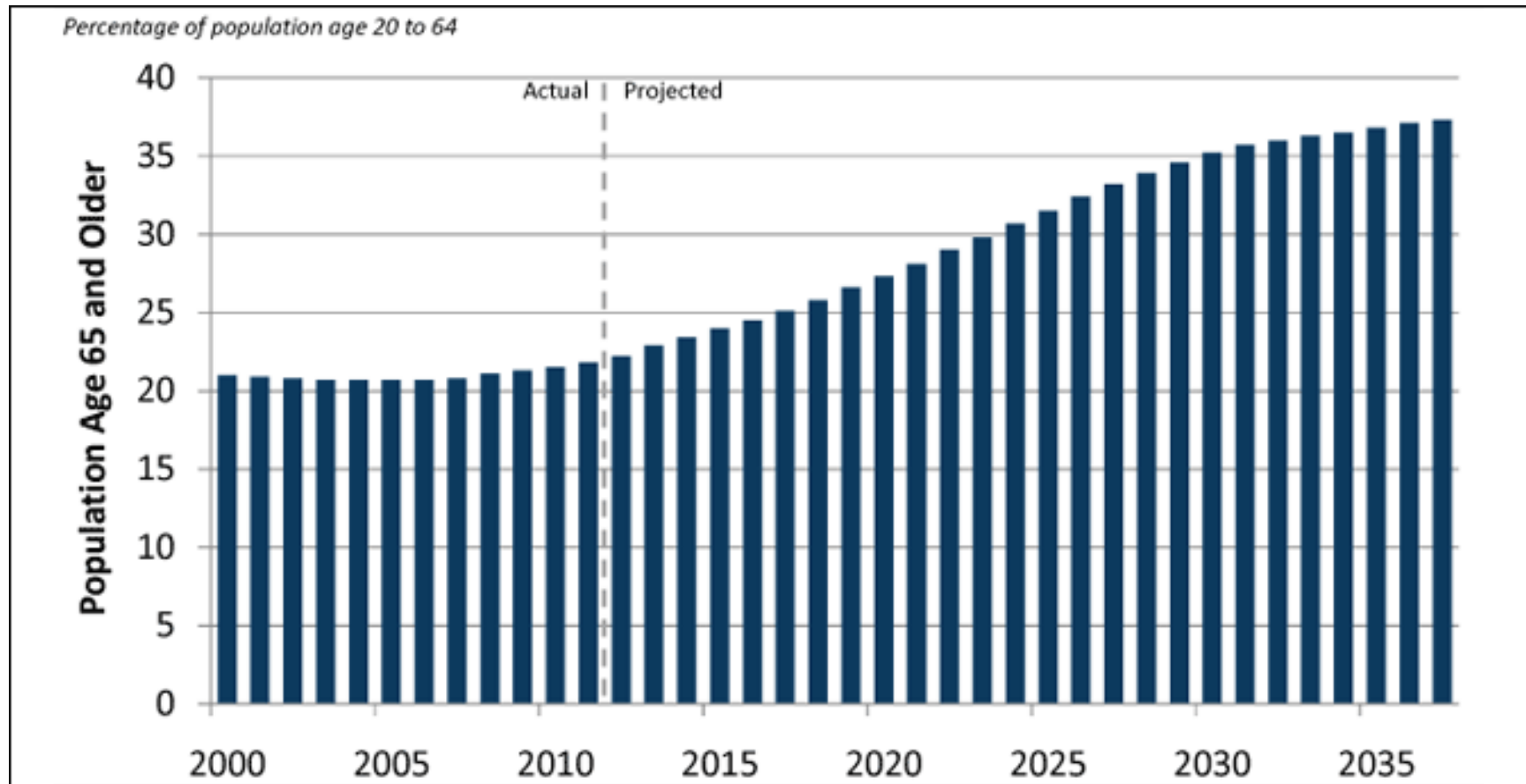
Health Outcomes in High Income Countries

- U.S. spends twice as much on medical care
 - U.S. spending in social security is very inefficient

HEALTH OUTCOMES IN HIGH INCOME COUNTRIES:	2012 DATA:				
	USA	CANADA	JAPAN	U.K.	OECD AVG.
Life Expectancy, newborn	79	81	83	81	78
Life expectancy, 65 yr.old Male	18	18	19	18	17
Life expectancy, 65 yr.old Female	20	22	24	21	21
Infant mortality (deaths per 1,000)	6	5	2	4	3.5
Obesity (% of pop ≥ 30% above BMI*)	36%	26%	3%	26%	13%
MRI's per 1,000	26%	8%	43%	6%	10%

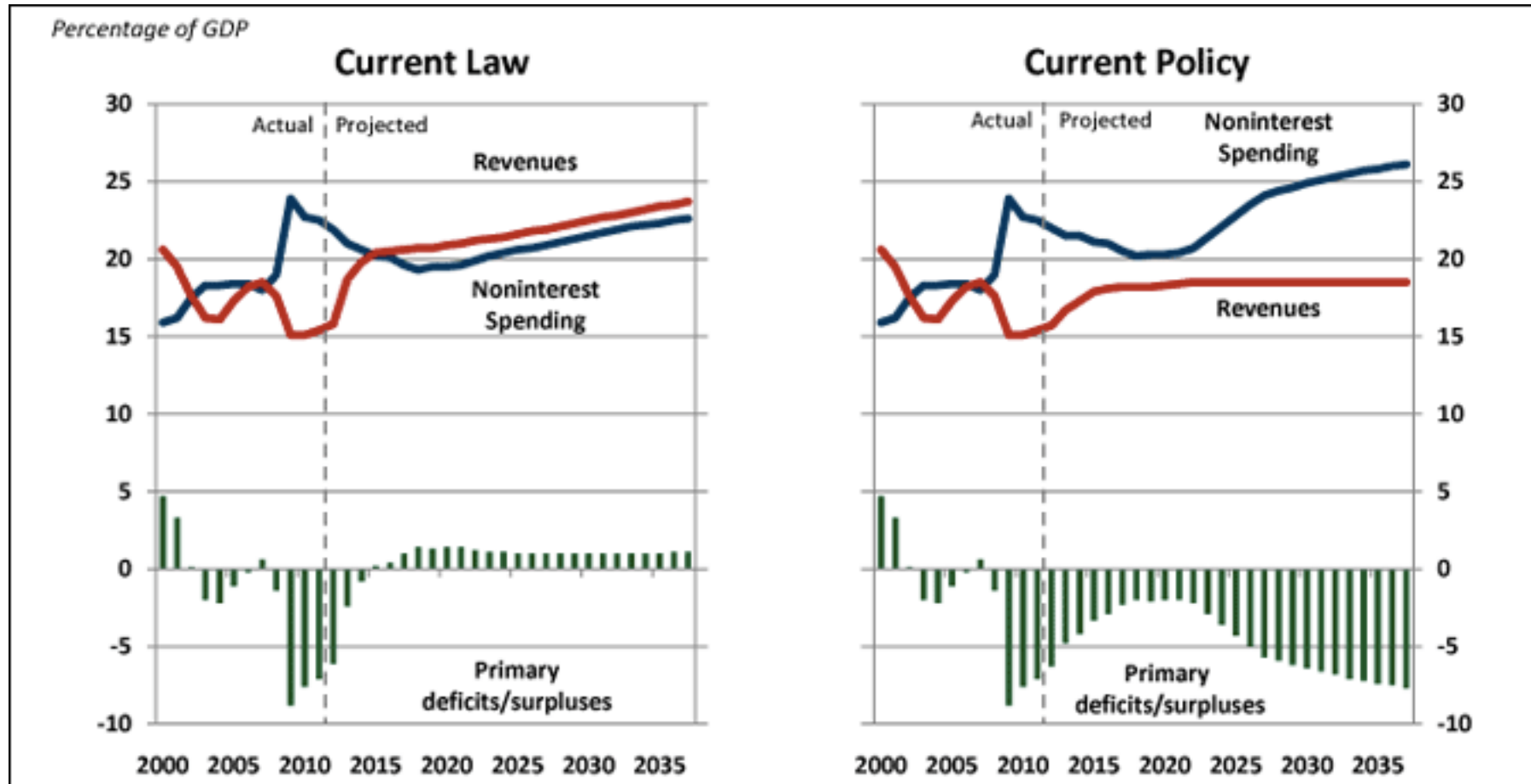
Is There A Looming Fiscal Crisis in the US?

- Fiscal crisis is when lenders don't want to lend because they see a lot of risk → Borrowing costs rise



Budget Forecast 2011

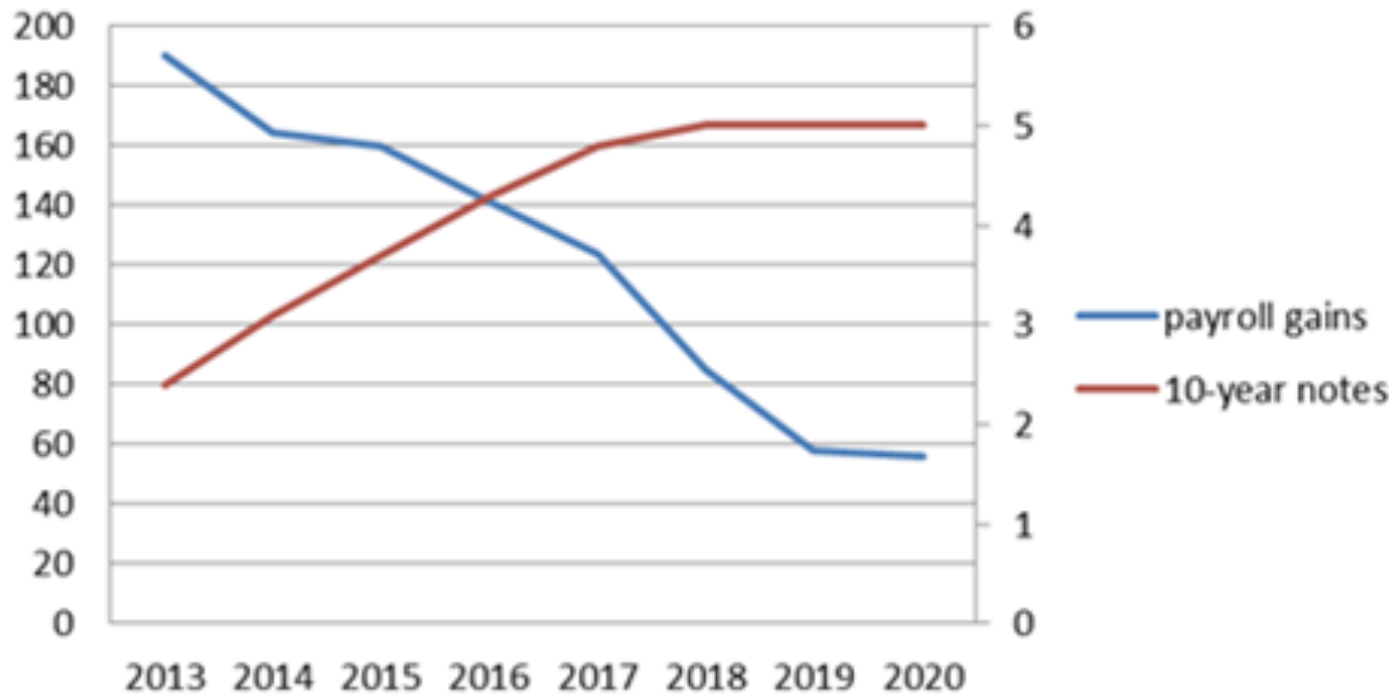
- In 2011, estimates suggested a radical increase in U.S. government debt



The 2013-2015 Reality?

- A fiscal crisis looms...

Forecast



- But job growth was strong and bond yields fell!

			job	job
	10-Year	10-Year	growth	growth
	(CBO)	(actual)	(CBO)	(actual)
2013	2.35%	2.35%	190	200
2014	3.10%	2.35%	162	260
2015	3.70%	2.20%	159	235
2016	4.20%	1.80%	135	190

Is There A Precedent For A Giant Budget Forecast Error?

2001: \$5 tr surplus by 2010

Everything that can go right will go right

Individual **tax receipts** stay at **10%** of GDP

They have been there for 5 years

Labor productivity rises at **2.6%** per year

It had risen at that rate for 5 years

We fight **no wars**

None fought in 10 years

We have **no recessions**

No recession had occurred in 10 years

2009: \$1 tr deficit

Everything that could go wrong went wrong

Individual **tax receipts swooned**

Falling stocks squeezed receipts

Labor productivity decreased on average

U.S. fought **two wars**

U.S. had **two recessions**

Small in 2001, Great Recession 2008-09

Size of the Government: Summary

- Some items need to be **provided** by the government
- **High tax rates** stifle growth and can, paradox., reduce tax receipts
 - Progressive system for income tax but not when including all other taxes
- Nations have **different sizes** of government
 - To reduce it, U.S. needs to go into social security and military spending
- Some argue that the U.S. faces a **fiscal crisis**
 - Maybe, but a lot depends on **assumptions** about productivity and real interest rates
 - Ample precedent for forecast errors by extrapolating the past few years

What Is Fiscal Policy?

- Fiscal policy refers to changes in *federal* **taxes** and **purchases** that are intended to achieve **macroeconomic policy objectives**
- What is **not** fiscal policy?
 - State and local government taxes and spending are not generally aimed at affecting *national-level* objectives
 - Tax cut to buy electric cars → Environmental policy action
 - Spending increases to fund a war → Defense security policy

Automatic Stabilizers vs Discretionary Fiscal Policy

- **Automatic stabilizers** refers to government spending and taxes that *automatically* increase or decrease along with the business cycle
 - **Example:** Unemployment insurance payments are larger during a recession
- **Discretionary** fiscal policy refers to *intentional* actions the government takes to change spending and taxes
 - **Example:** Tax cuts and spending increases by Trump administration

Does Government Spending Create Jobs?

- Government spending is a component of GDP:

$$Y = C + I + G + NX$$

- It seems as if $G \uparrow \rightarrow Y \uparrow$ and other variables like employment
- Some economists argue that G simply shifts employment from one sector to another $\rightarrow$ It does not increase total employment
- **Debate** was **important after 2007-09 recession**
 - Can the government use discretionary FP to increase employment?

Expansionary Fiscal Policy

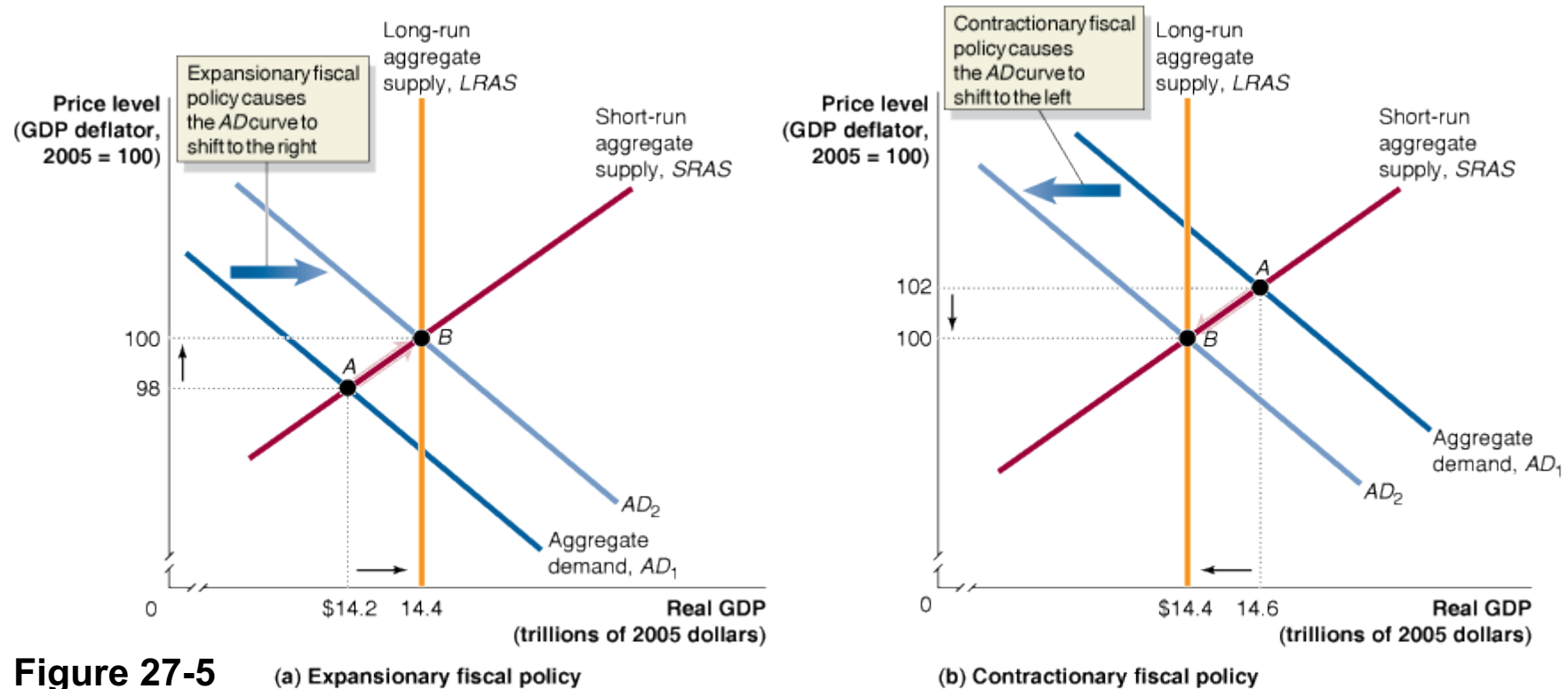
- Involves **increasing G** or **decreasing T**
 - Increasing G *directly* increases AD
 - Decreasing T *indirectly* affects demand by increasing disposable income, and hence consumption spending
- If the government believes real GDP will be **below** potential GDP, it can enact an **expansionary** FP in an attempt to restore long-run equilibrium
 - Decreasing **unemployment**

Contractionary Fiscal Policy

- Involves **decreasing G** or **increasing T**
- Works like expansionary FP, only in reverse
- If the government believes real GDP will be **above** potential GDP, it can enact an **contractionary** FP in an attempt to restore long-run equilibrium
 - Decreasing **inflation**

Effects of Fiscal Policy on Real GDP and the Price Level

Expansionary and Contractionary Fiscal Policy



- Terminology: **Fiscal Stimulus** & **Fiscal Austerity**

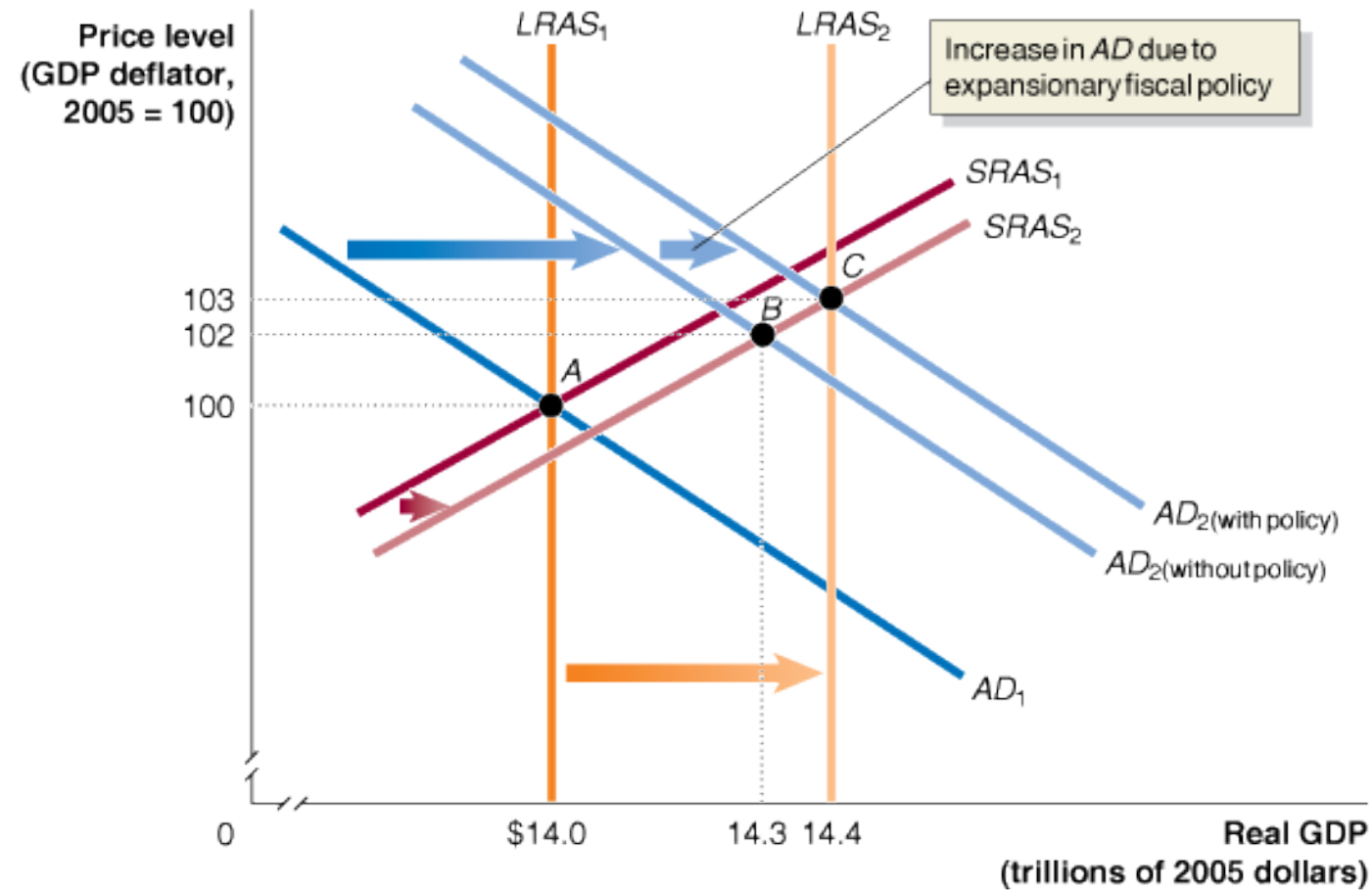
Effects of Fiscal Policy on Real GDP and the Price Level

A Summary of How Fiscal Policy Affects Aggregate Demand

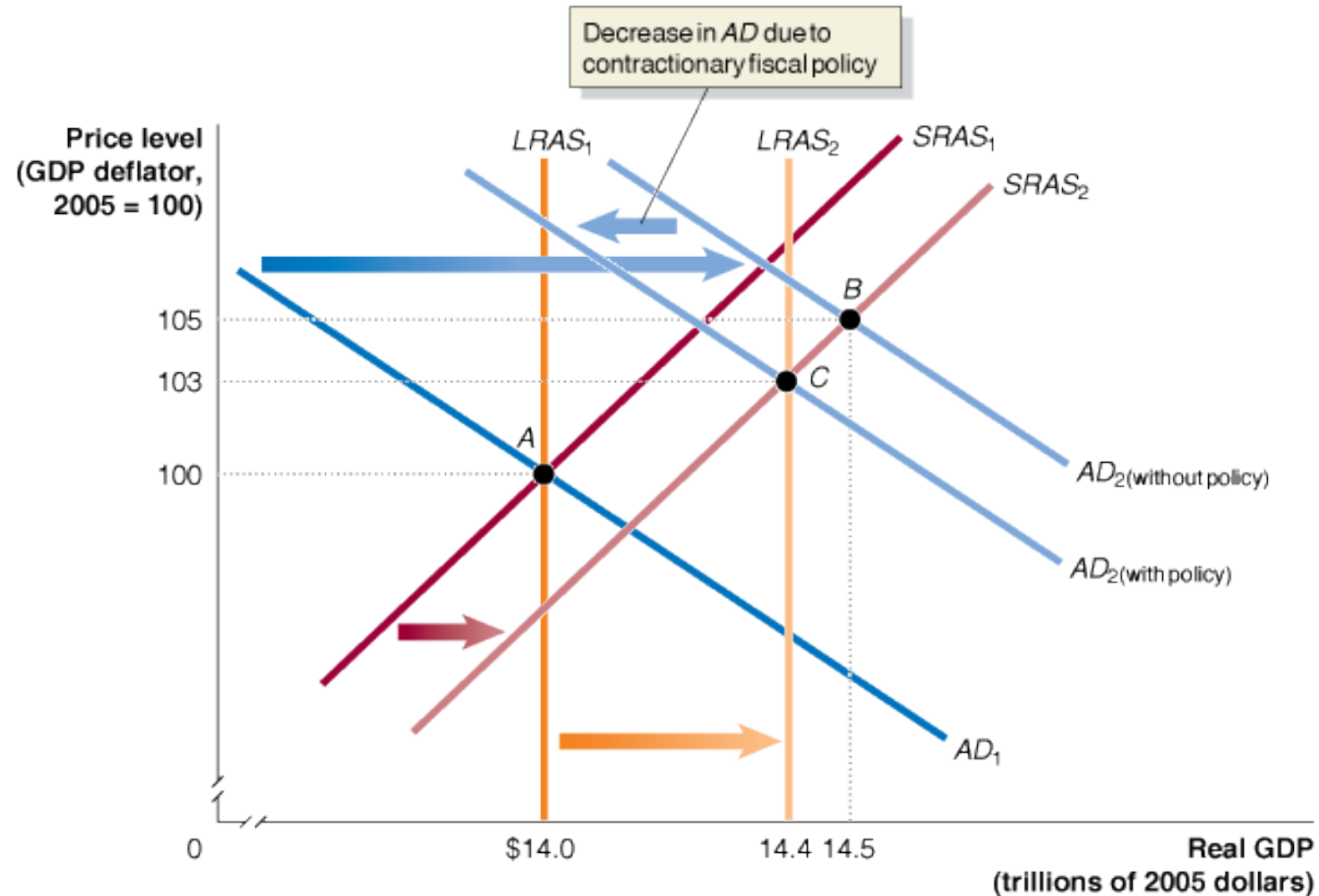
Countercyclical Fiscal Policy

PROBLEM	TYPE OF POLICY	ACTIONS BY CONGRESS AND THE PRESIDENT	RESULT
Recession	Expansionary	Increase government spending or cut taxes	Real GDP and the price level rise.
Rising inflation	Contractionary	Decrease government spending or raise taxes	Real GDP and the price level fall.

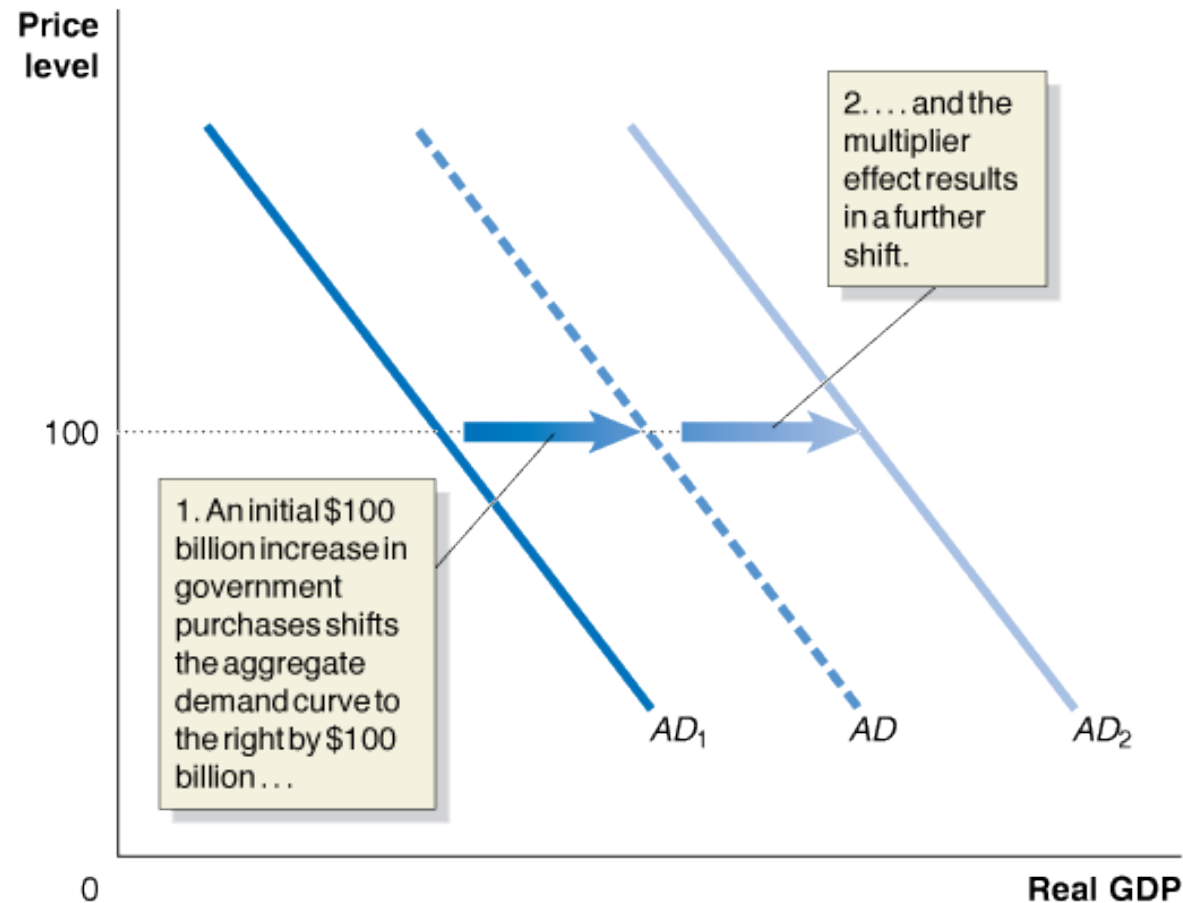
An Expansionary Fiscal Policy in the Dynamic Model



A Contractionary Fiscal Policy in the Dynamic Model

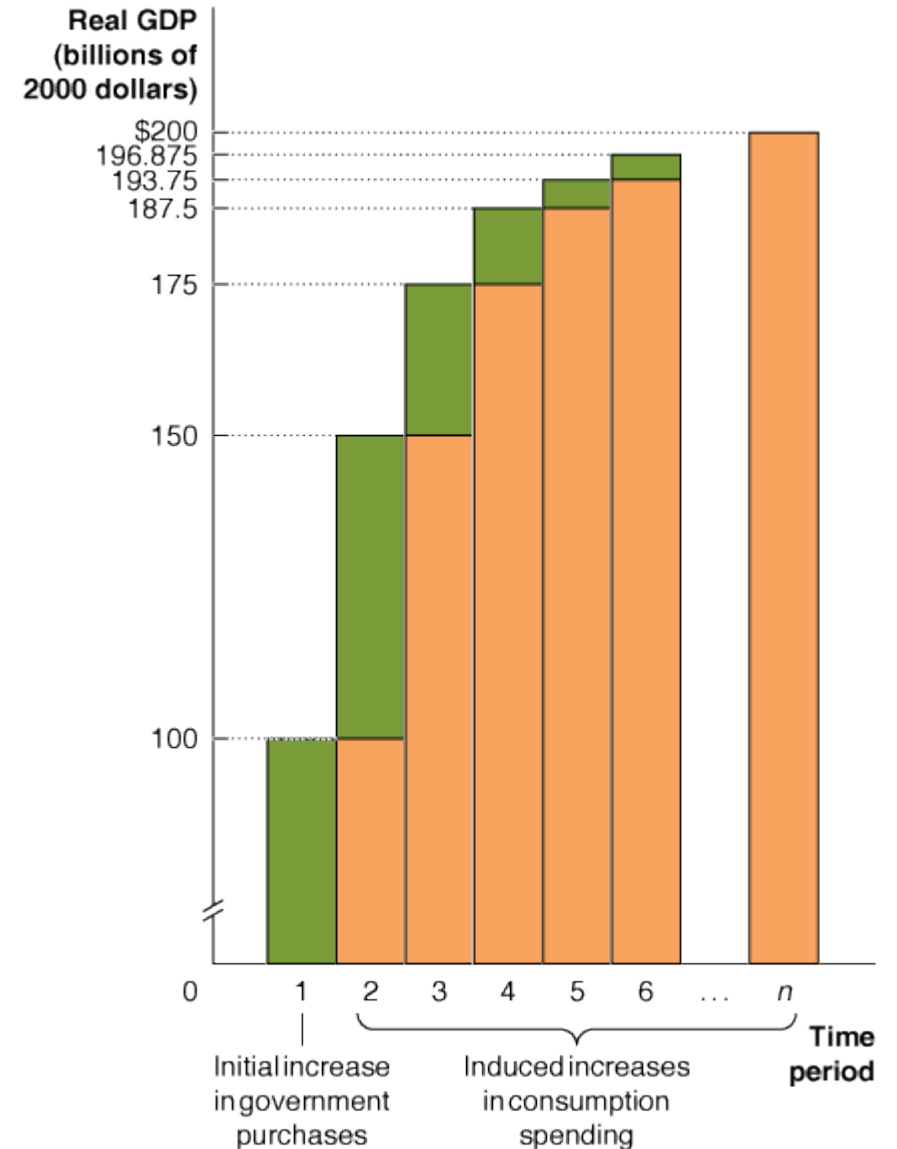


The Multiplier Effect and Aggregate Demand



Government Purchases and Tax Multipliers

Period	Additional Spending this Period	Cumulative Increase in Spending and Real GDP
1	\$100 billion in government purchases	\$100 billion
2	\$50 billion in consumption spending	\$150 billion
3	\$25 billion in consumption spending	\$175 billion
4	\$12.5 billion in consumption spending	\$187.5 billion
5	\$6.25 billion in consumption spending	\$193.75 billion
6	\$3.125 billion in consumption spending	\$196.875 billion
⋮	⋮	⋮
n	0	\$200 billion



The Size of the Multiplier

- **Key** to estimating the effects of fiscal policy
- Economists have been debating size of the multiplier for years
 - Difficult to estimate because over time several factors shift AD and SRAS
- **Estimates** of the size of the multiplier **vary widely**
 - From 0.5 to 3
- This **complicates assessment** of effects of fiscal policy

Effects of 2009 Stimulus Package

- Congressional Budget Office (CBO) is a non-partisan organization that estimates the **effects of government policies**
- CBO estimated effect of **2009 stimulus package**, *relative to what would have happened without it*

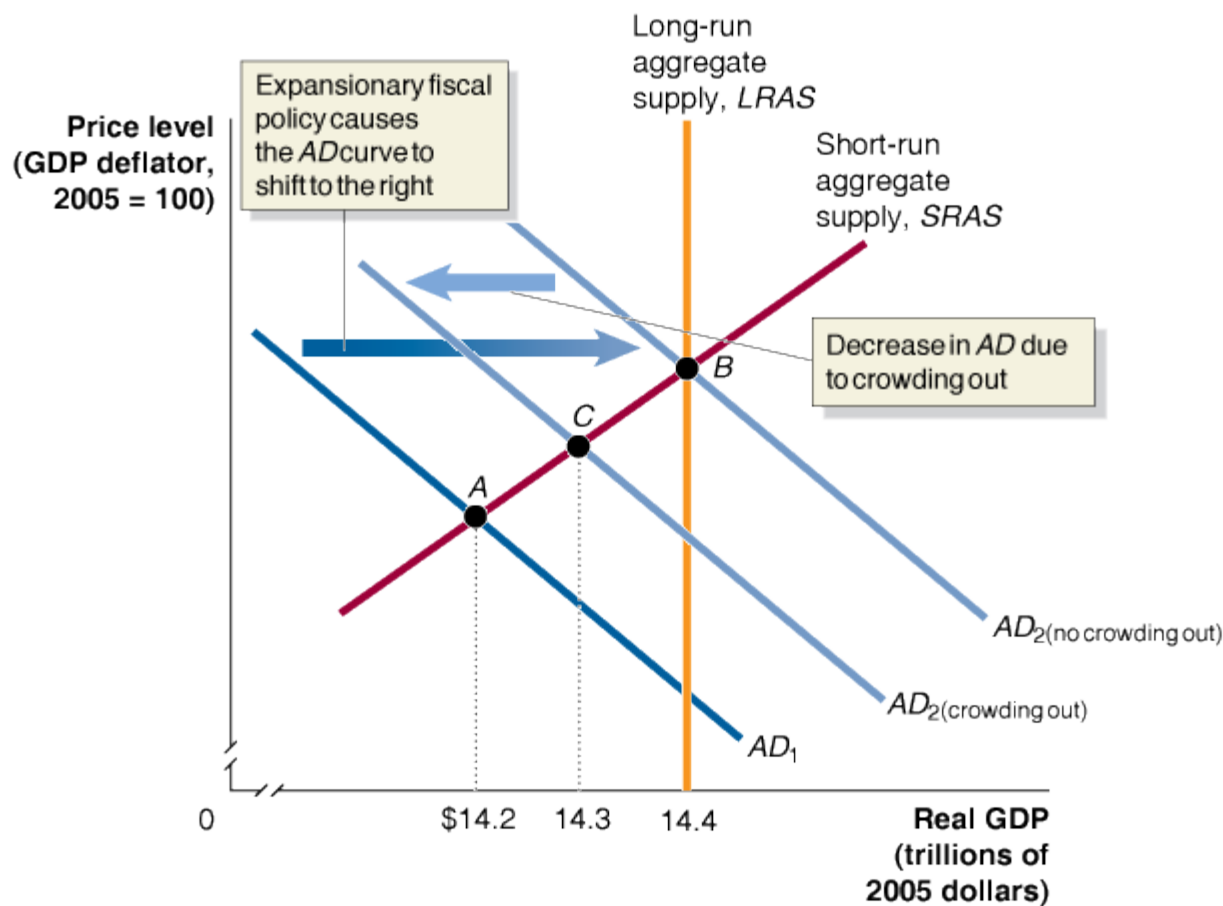
Table 16.2			
Year	Change in Real GDP	Change in the Unemployment Rate	Change in Employment (millions of people)
2009	0.9% to 1.9%	−0.3% to −0.5%	0.5 to 0.9
2010	1.5% to 4.2%	−0.7% to −1.8%	1.3 to 3.3
2011	0.8% to 2.3%	−0.5% to −1.4%	0.9 to 2.7
2012	0.3% to 0.8%	−0.2% to −0.6%	0.4 to 1.1

- **CBO's Conclusion:** It **reduced the severity** of the recession but it **did not** come close to **bring** the economy close to **full employment**

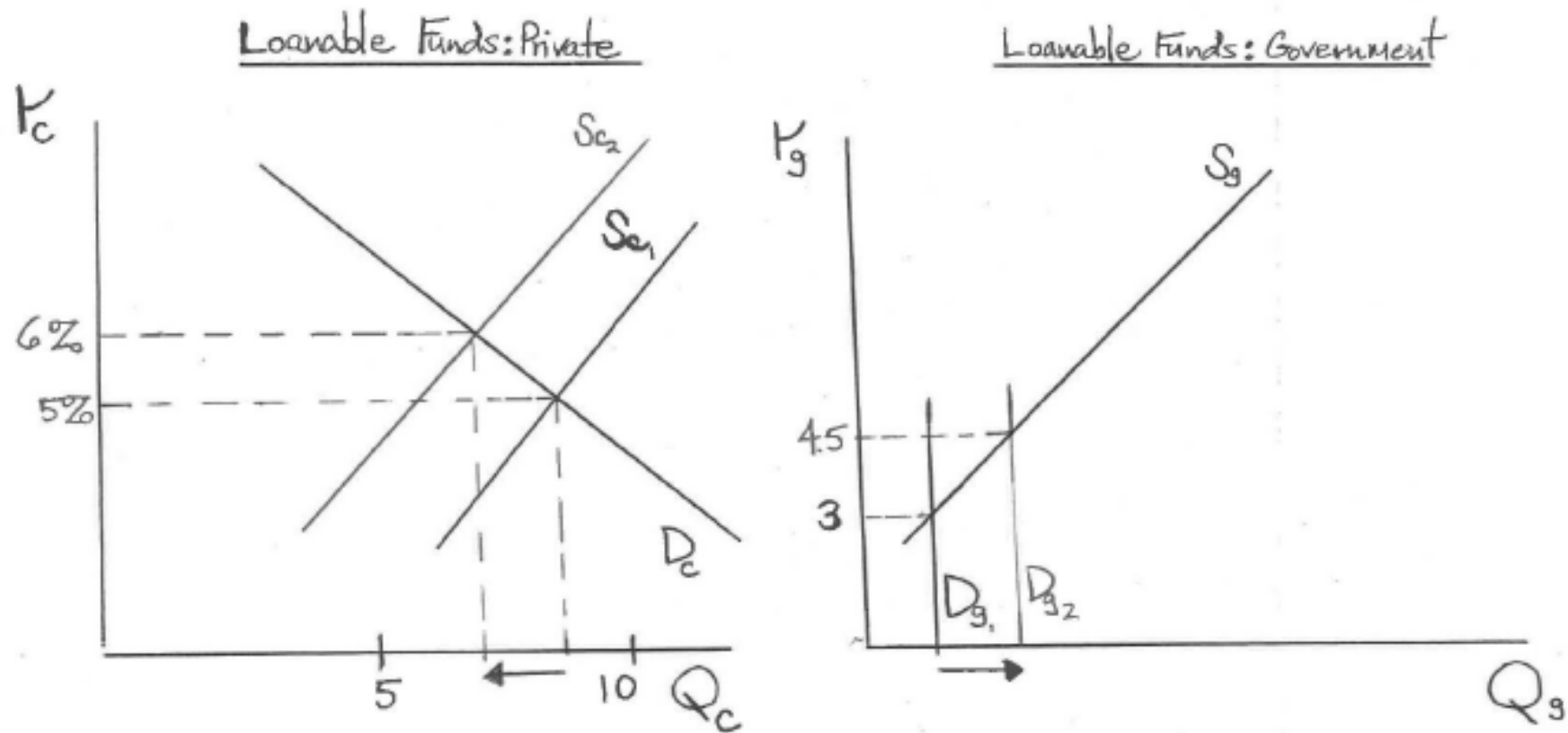
Obama 2009 Stimulus vs Trump 2017 Stimulus

- Obama: stimulus with U3 = 8%
- Trump: stimulus with U3 = 4%
- You need to ask **where** you are **in the business cycle** before a shock
- If you want to champion a stimulus at U3 = 4%, you need to sell it as having supply side effects (labor force and labor productivity)
 - Did it work? Yes, real GDP grew 3.5%
 - But it looks like a Keynesian 3.5%: C and G increased, LRAS didn't shift right 3.5%

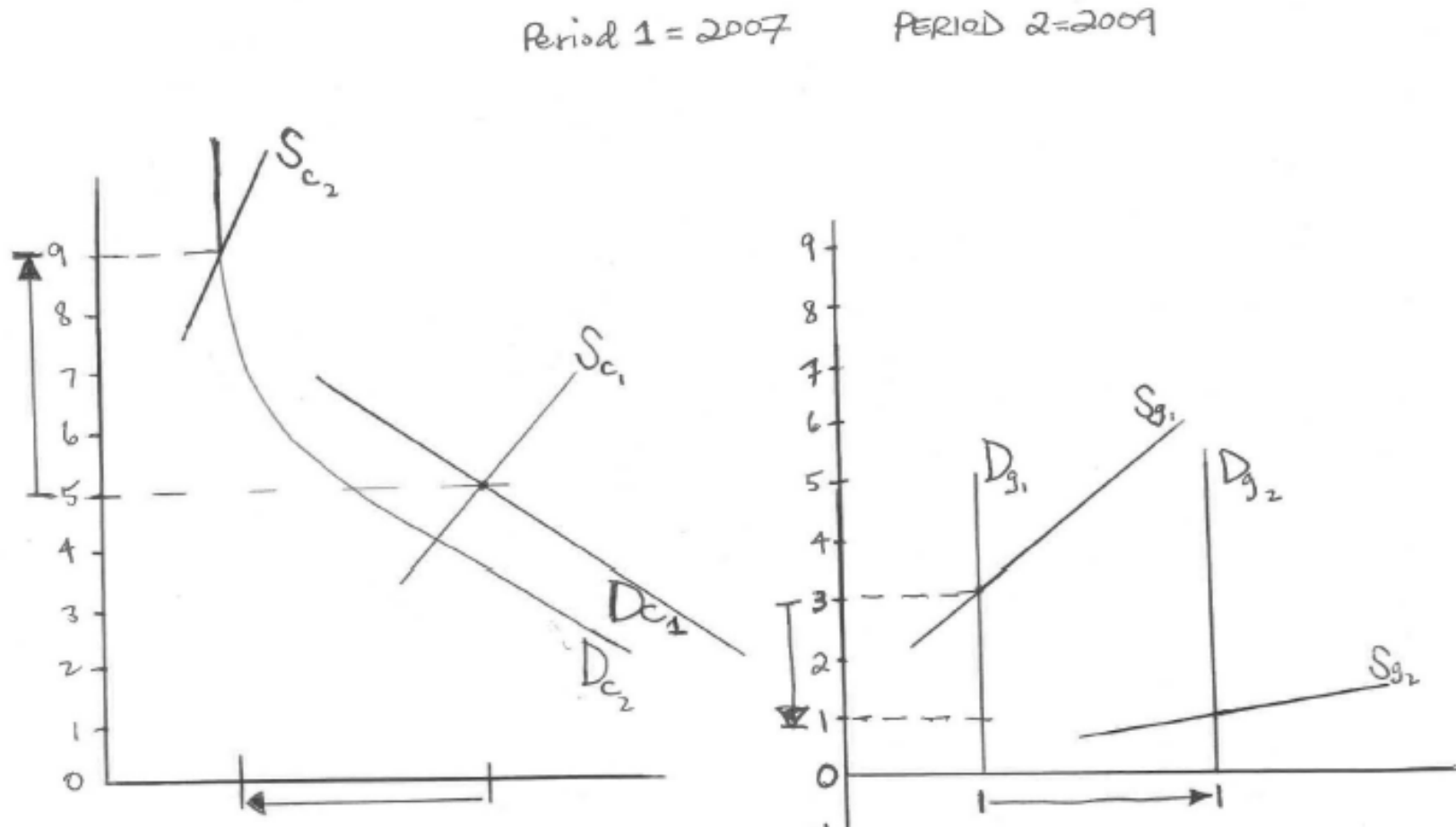
Effects of Crowding Out in the Short Run



Crowding Out Near Full Employment



Crowding Out During the Great Recession?



- Government borrowing rate **plunged** → **No crowding out** occurred

Fears of Crowding Out In Disastrous Recessions

- In our expanded loanable funds model we saw that **collapsing risk appetites** radically **reduced government's borrowing costs** during the Great Recession
- So the 2008-09 debate makes no sense
 - Although it was waged by well-known economists
- Perhaps other motives existed behind arguing that G could crowd out in 2009-10
 - Size of the government

Fears of Crowding Out In Disastrous Recessions

- Those warning of crowding out spoke of rising borrowing costs for companies

	Q4:2006	Q4:2008	Q4:2010
U.S. 10-YEAR	4.7	2.2	3.3
CORPORATE BOND	6.2	8.4	6.1
SPREAD	1.5	6.2	2.8

- We got the opposite

Fiscal Policy vs Monetary Policy

Fiscal Policy vs Monetary Policy

- Both aim to be at potential, **smooth business cycles**
 - But they attempt to reach goal in different ways
- Monetary policy, each and every day, works toward delivering desired macroeconomic objectives
 - Low inflation
 - Low unemployment
 - Strong real GDP growth
 - Secure financial system
- **Monetary policy** is on the job **24/7**

Discretionary Fiscal Policy?

- Monetary policy is more nimble, and so **better suited to manage the macroeconomy** (steer the bus)
- Fiscal stimulus
 - Policies that give money away are very easy to enact but very hard to take back
- Fiscal policy is a product of Congress and the White House so:
 - It is always **highly politicized**
 - It takes **TOO much time**

How Long Does It Take To Get A Fiscal Stimulus Deal?

- 435 House representatives must pass a bill
- 100 Senators must pass a bill
- A House/Senate conference must agree upon a compromise bill
- Both the Senate and the House must approve the compromise bill
- The President must sign the bill
- Then the changes can begin to be implemented

How Long to See Effects of Fiscal Policy?

- Jobless benefits immediately put money into the pockets of the unemployed –a good thing
- Similarly, monetary policy is enacted the moment it appears a change is needed
 - Its *effects take time* but the policy change requires only a vote among 12 people
- It takes **more time** for (discretionary) fiscal policy **to show** its **effect**

When Is Fiscal Policy A Reasonable Alternative?

- Fiscal policy especially good when monetary policy is hampered
- When the **federal funds rate** is **at ZERO**, the Fed has fired all of its traditional ammunition
- At such times fiscal policy seems like a **reasonable alternative** to 'hoping things get better'
- Discretionary policy only **in the worst of times**