Lecture 9: Fiscal Policy

Instructor: Fei Tan

 @econdojo   @BusinessSchool101   Saint Louis University

Course: Macroeconomics 201

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The Road Ahead

What Is Fiscal Policy?

Government budget constraint

$$\underbrace{B_t - B_{t-1}}_{\text{deficits in year } t} = \underbrace{rB_{t-1}}_{\text{interest payments}} + \underbrace{G_t - T_t}_{\text{primary deficit}}$$
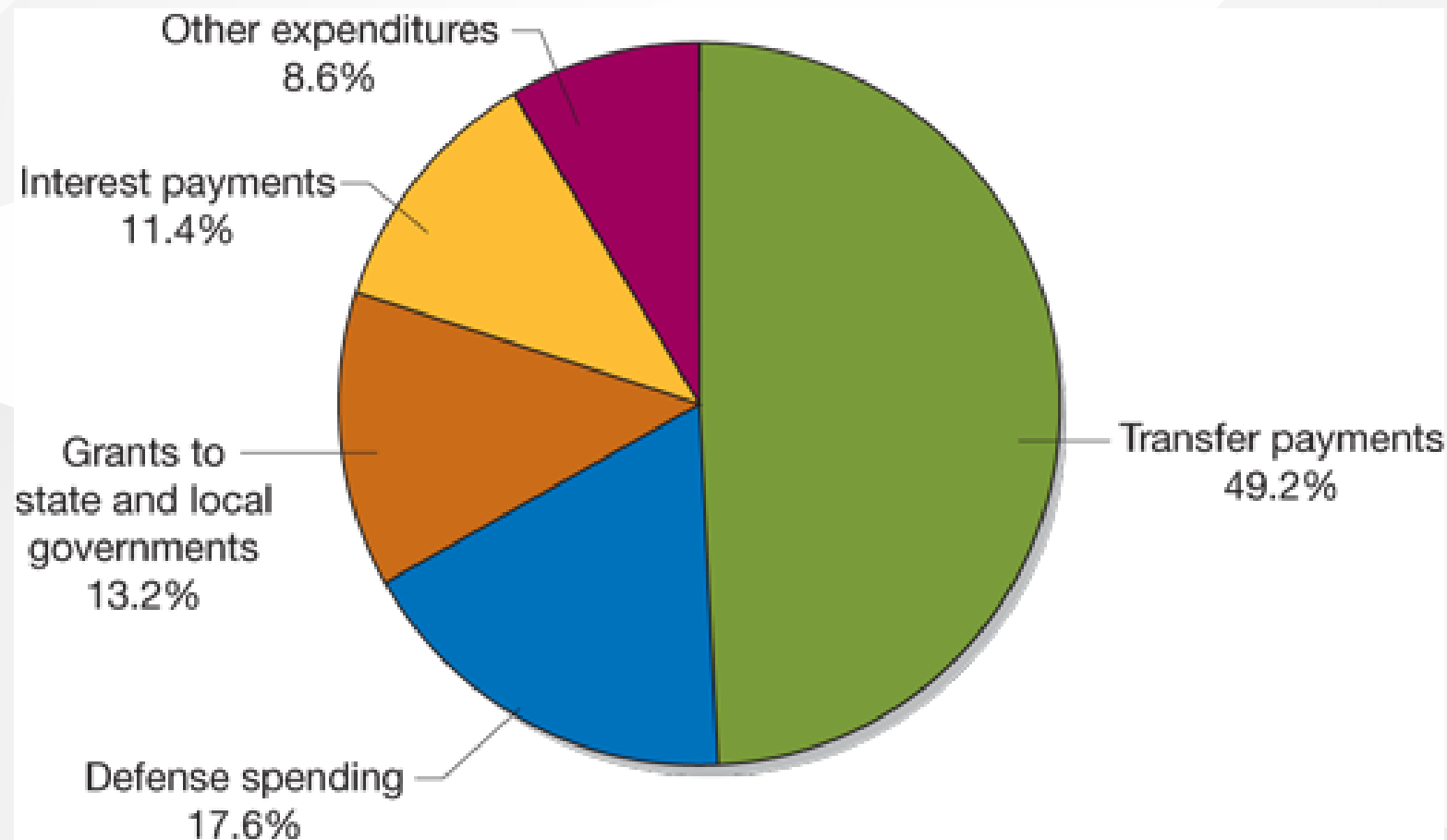
$$\Rightarrow \quad B_t = (1+r)B_{t-1} + G_t - T_t$$

- Some remarks

  ○ deficit (flow, $B_t - B_{t-1}$) v.s. debt (stock, B_t)

  ○ evolution of debt-to-GDP ratio

$$\underbrace{\frac{B_t}{Y_t} - \frac{B_{t-1}}{Y_{t-1}}}_{\text{change in debt ratio}} = (r - g) \underbrace{\frac{B_{t-1}}{Y_{t-1}}}_{\text{initial debt ratio}} + \underbrace{\frac{G_t - T_t}{Y_t}}_{\text{primary deficit ratio}}$$
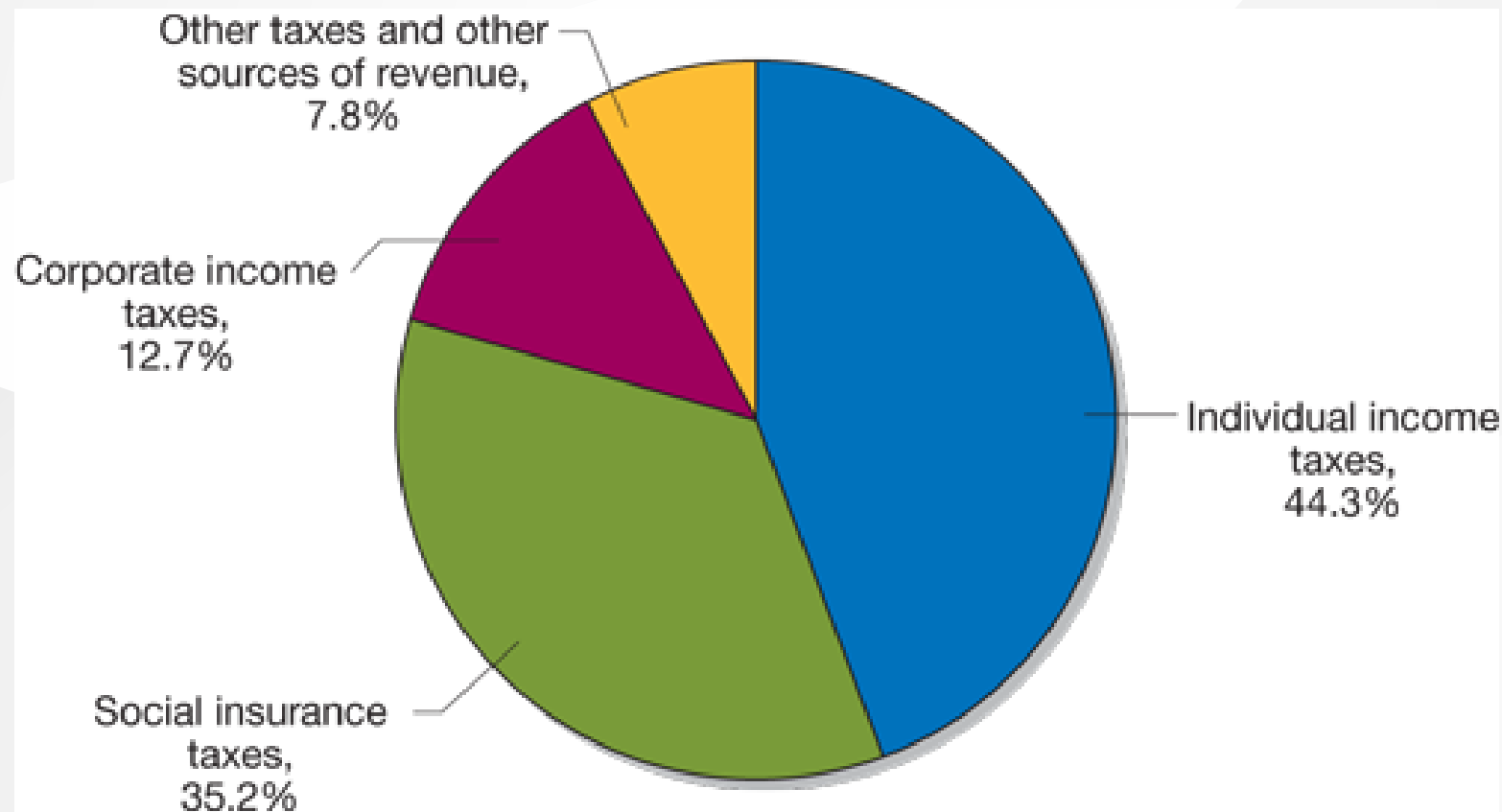
- Fiscal policy (changes in (G_t, T_t) to achieve macro objectives) v.s. automatic stabilizer
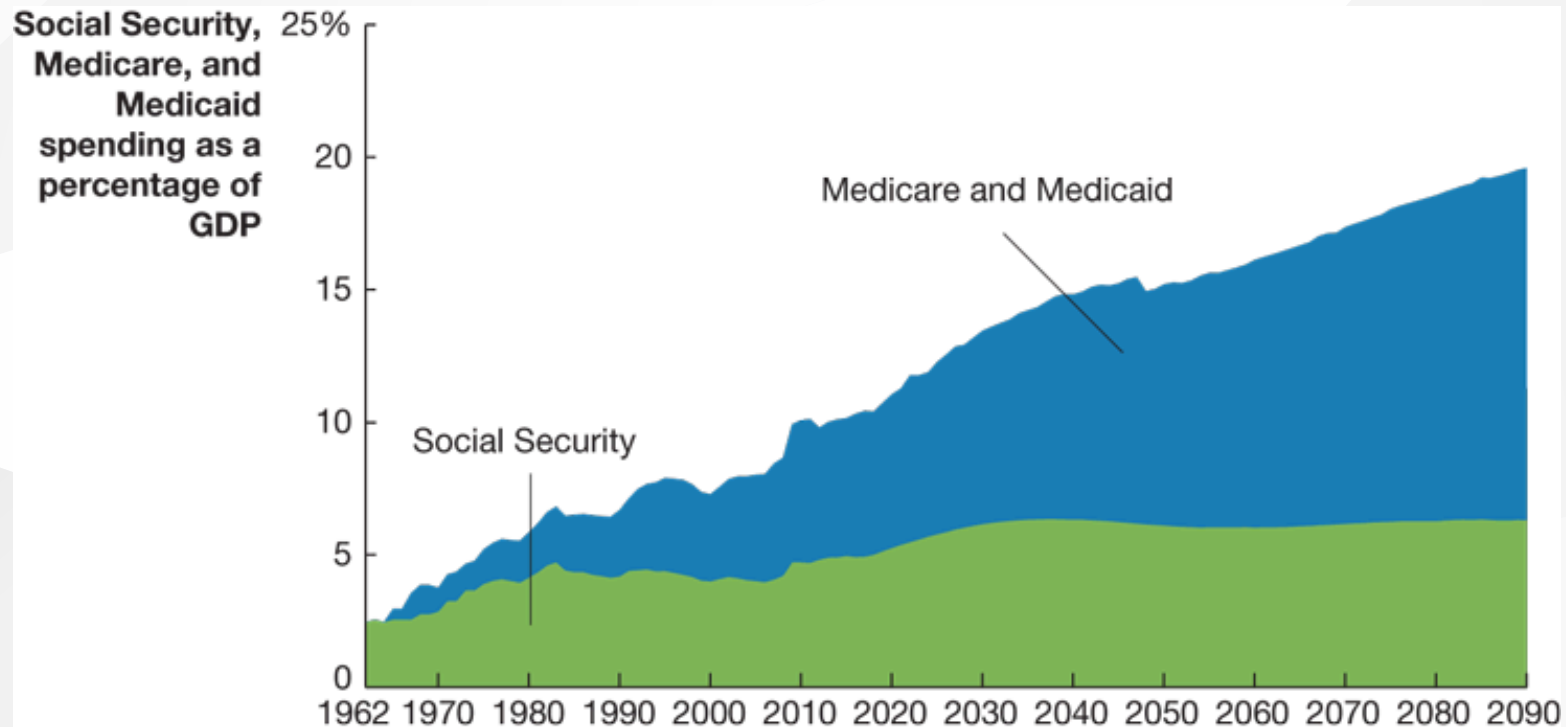
Federal Government Expenditures, 2016

- Federal government purchases v.s. expenditures

Federal Government Revenue, 2016

- Social Security and Medicare programs funded by payroll taxes

Three Largest Transfer Programs

Social Security, Medicare, and Medicaid spending as a percentage of GDP

Medicare and Medicaid

Social Security

(y-axis: 0, 5, 10, 15, 20, 25%)
(x-axis: 1962 1970 1980 1990 2000 2010 2020 2030 2040 2050 2060 2070 2080 2090)

- Source: Congressional Budget Office (CBO)

- *Social Security*: payments to retired/disabled workers

- *Medicare*: health care coverage to people age 65+

- *Medicaid*: medical care to low-income people

Federal Budget Deficit
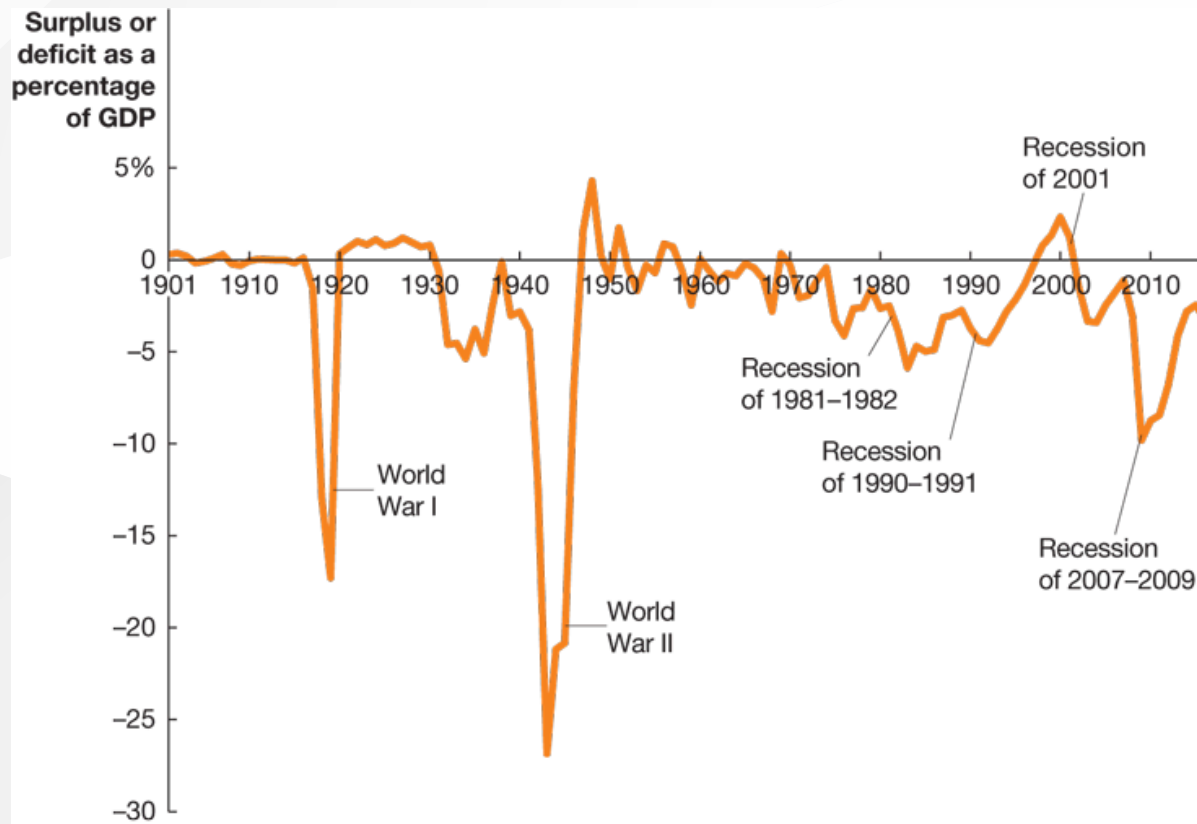
- Deficits rise during wartime and recessions (source: BEA)
- Actual deficit = cyclically adjusted (FP) + automatic stabilizer
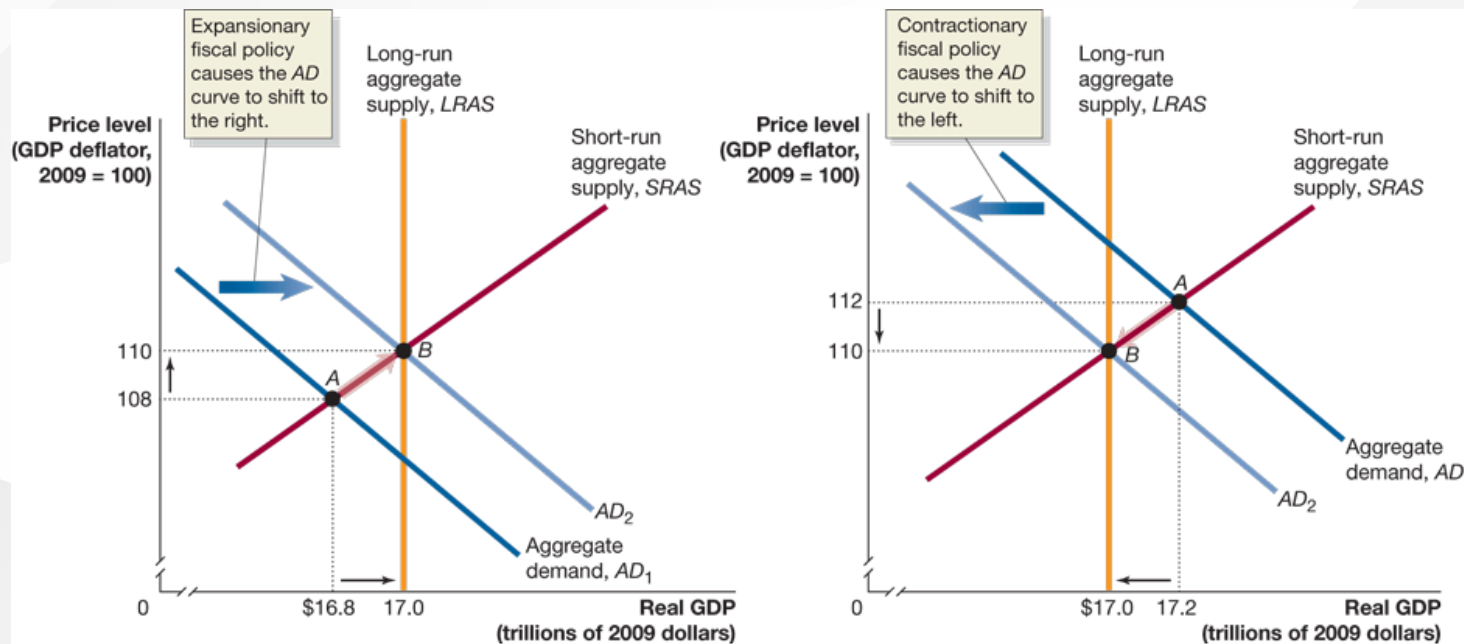- Should federal budget always be balanced?

Federal Government Debt

- Total value of U.S. Treasury bonds (source: Bureau of Census)

- Budget deficit (surplus) $\Rightarrow$ debt $\uparrow$ ($\downarrow$) $\Rightarrow$ crowding-out effect

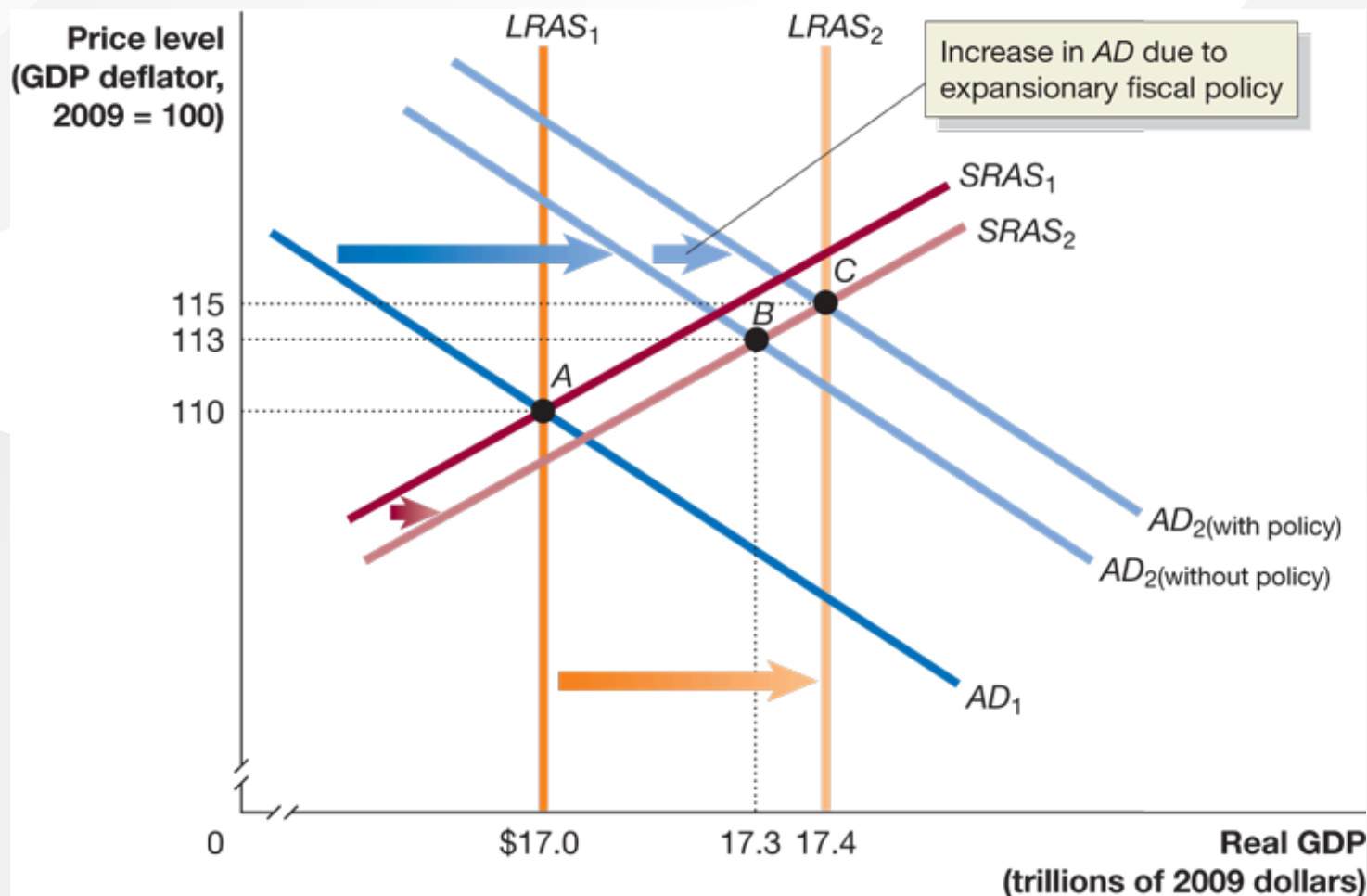- High debt hinders long-run economic growth
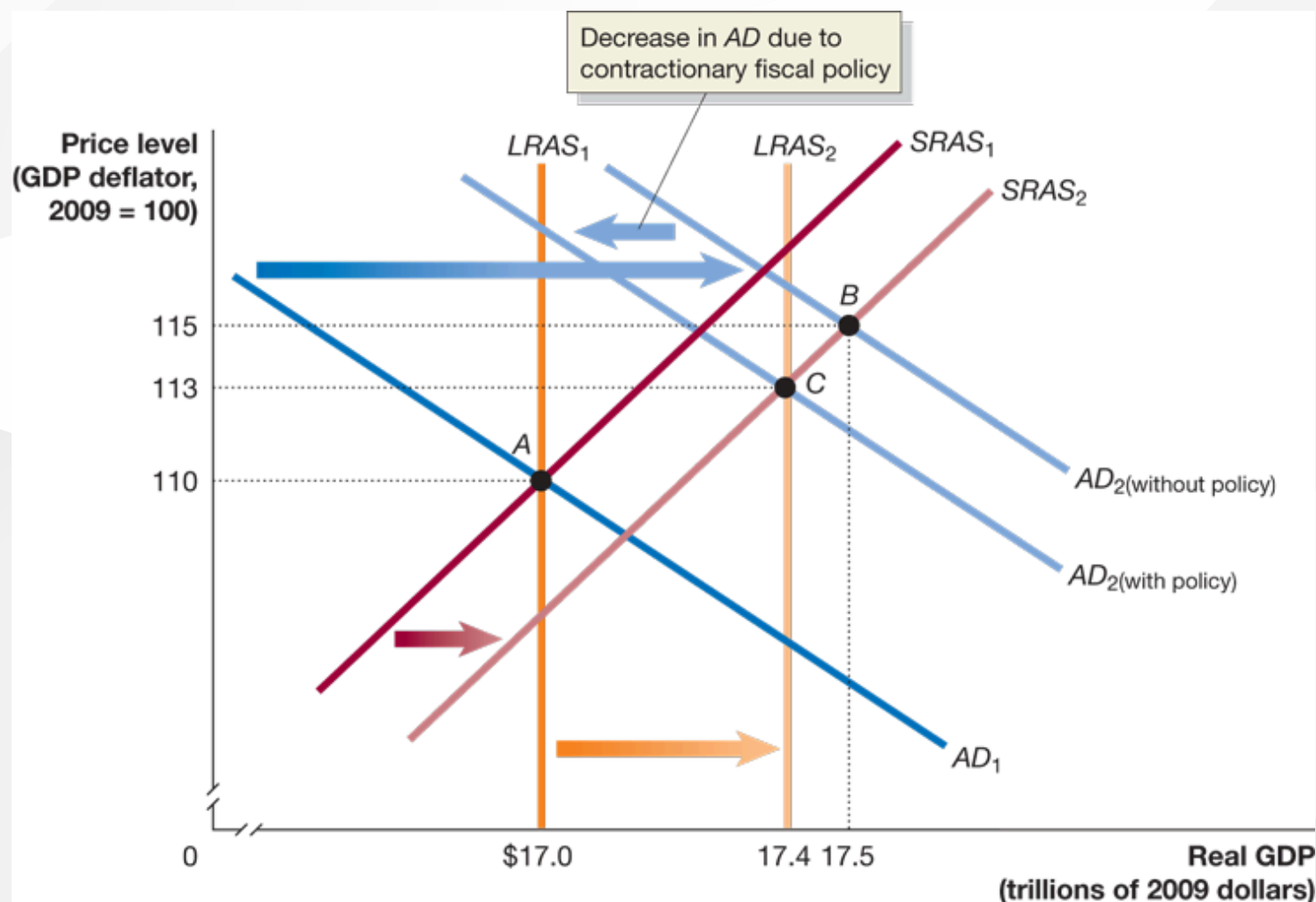
Effects of Short-Run Fiscal Policy

- Expansionary (contractionary) fiscal policy, e.g., President Obama's stimulus package

  - $G \uparrow (\downarrow), T \downarrow (\uparrow) \Rightarrow Y \uparrow (\downarrow) \Rightarrow M^d \uparrow (\downarrow) \Rightarrow i \uparrow (\downarrow)$
  - $i \uparrow (\downarrow) \Rightarrow$ crowding-out effect: $C, I, NX \downarrow (\uparrow)$

- AD curve shifts to right (left)
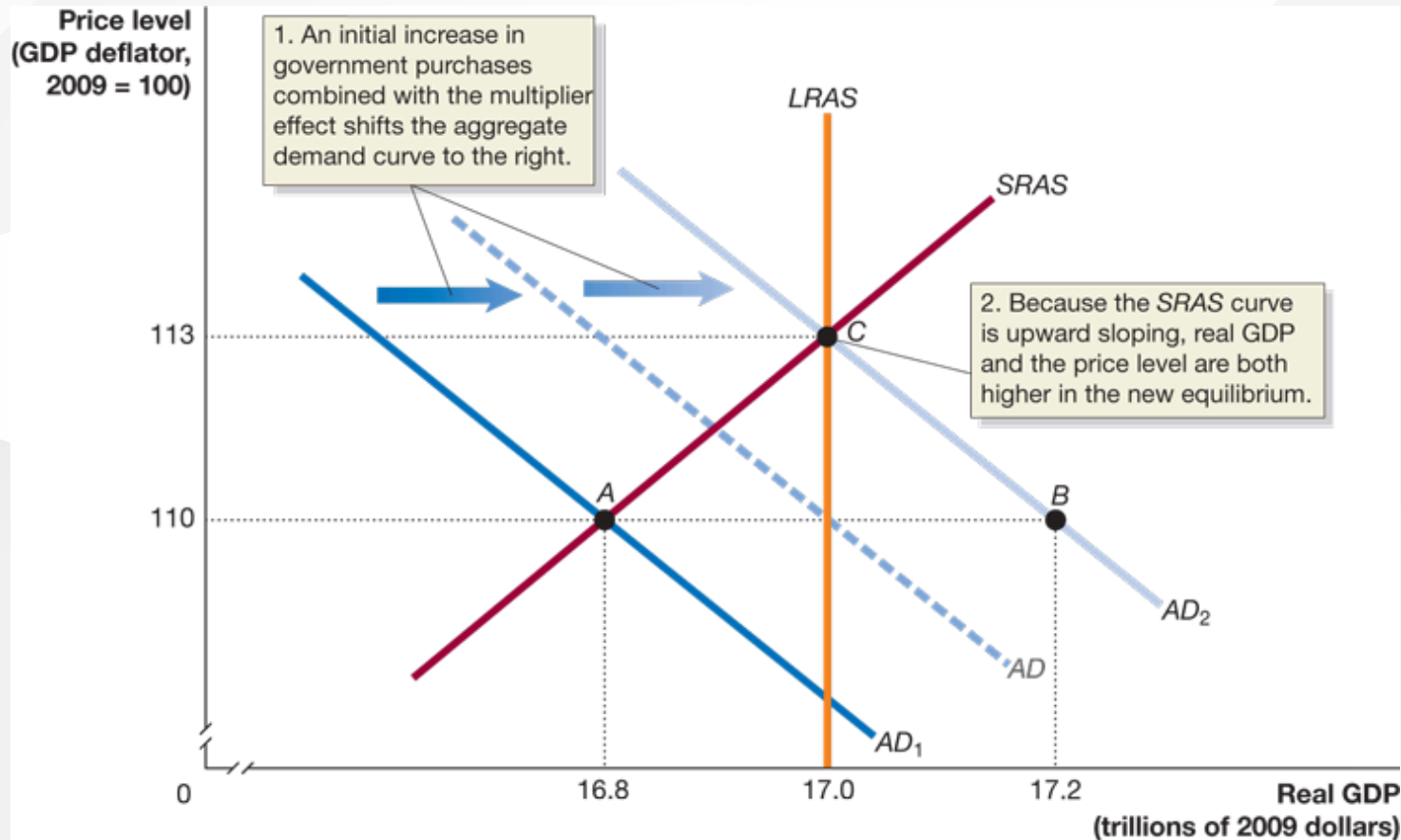
Effects of Short-Run Fiscal Policy (Cont'd)

- Expansionary fiscal policy to fight recession
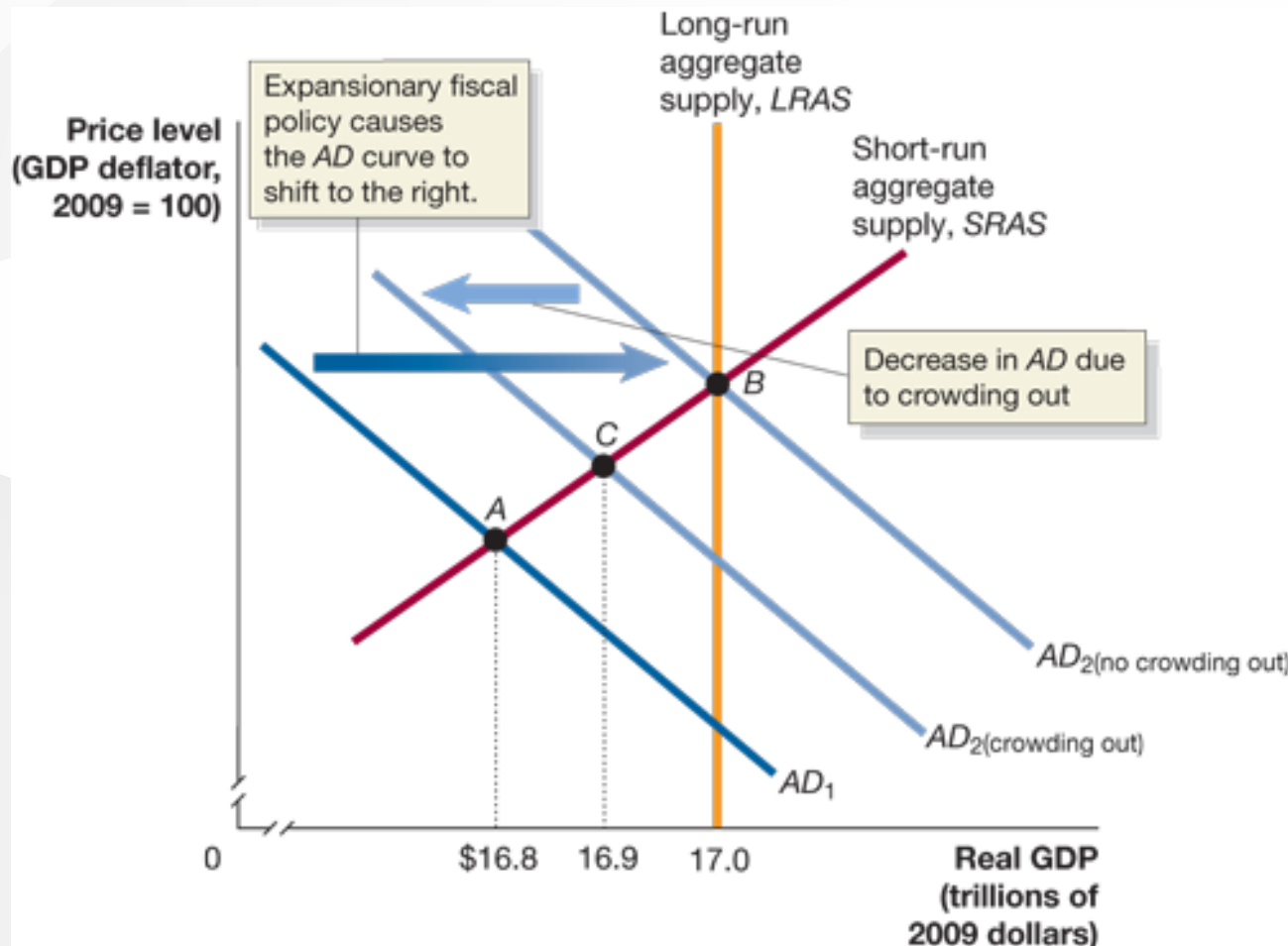
Effects of Short-Run Fiscal Policy (Cont'd)

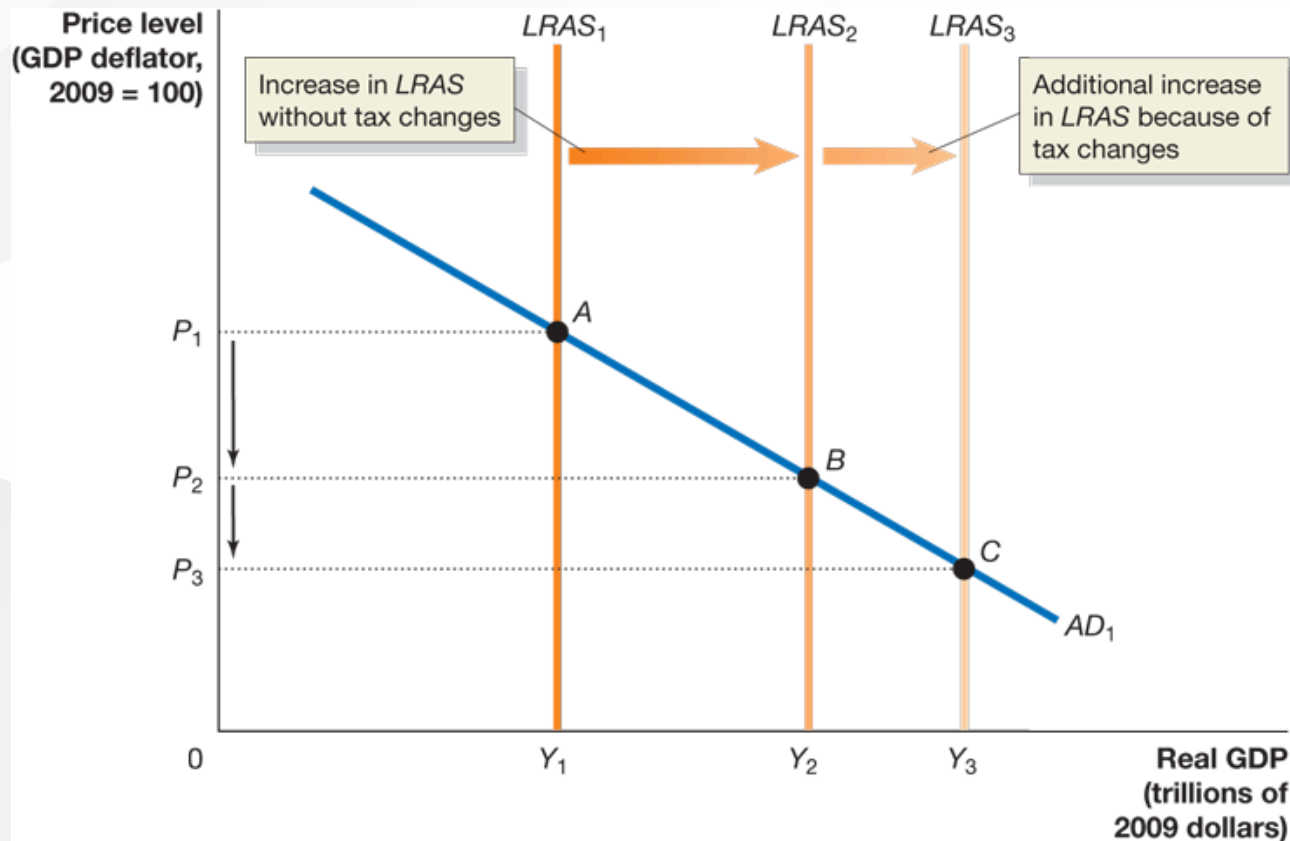- Contractionary fiscal policy to fight inflation

Fiscal Multipliers

- Given $\Delta G = -\Delta T$ and constant P, $\Delta Y / \Delta G > -\Delta Y / \Delta T$
- Rising price level partly offsets multiplier effect

Effects of Crowding Out

- $G \uparrow \Rightarrow Y \uparrow \Rightarrow M^d > M^s \Rightarrow i \uparrow \Rightarrow C \downarrow, I \downarrow, NX \downarrow$

- Short-run partial v.s. long-run complete crowding out

Effects of Long-Run Fiscal Policy

- Effects of tax reduction (or simplification), e.g., President Trump's tax reform: $T \downarrow$ $\Rightarrow N \uparrow, S = I \uparrow, K \uparrow \Rightarrow g_Y \uparrow$
- LRAS curve shifts to right

Readings & Exercises

- Readings

  - HO: chapter 16

  - BJ: lecture 19 (supplementary)

- Exercises

  - HO: problem 1.5, 2.4, 2.5, 3.5, 4.6, D16.2

  - Derive evolution of debt-to-GDP ratio from government budget constraint and explain how to reduce it.