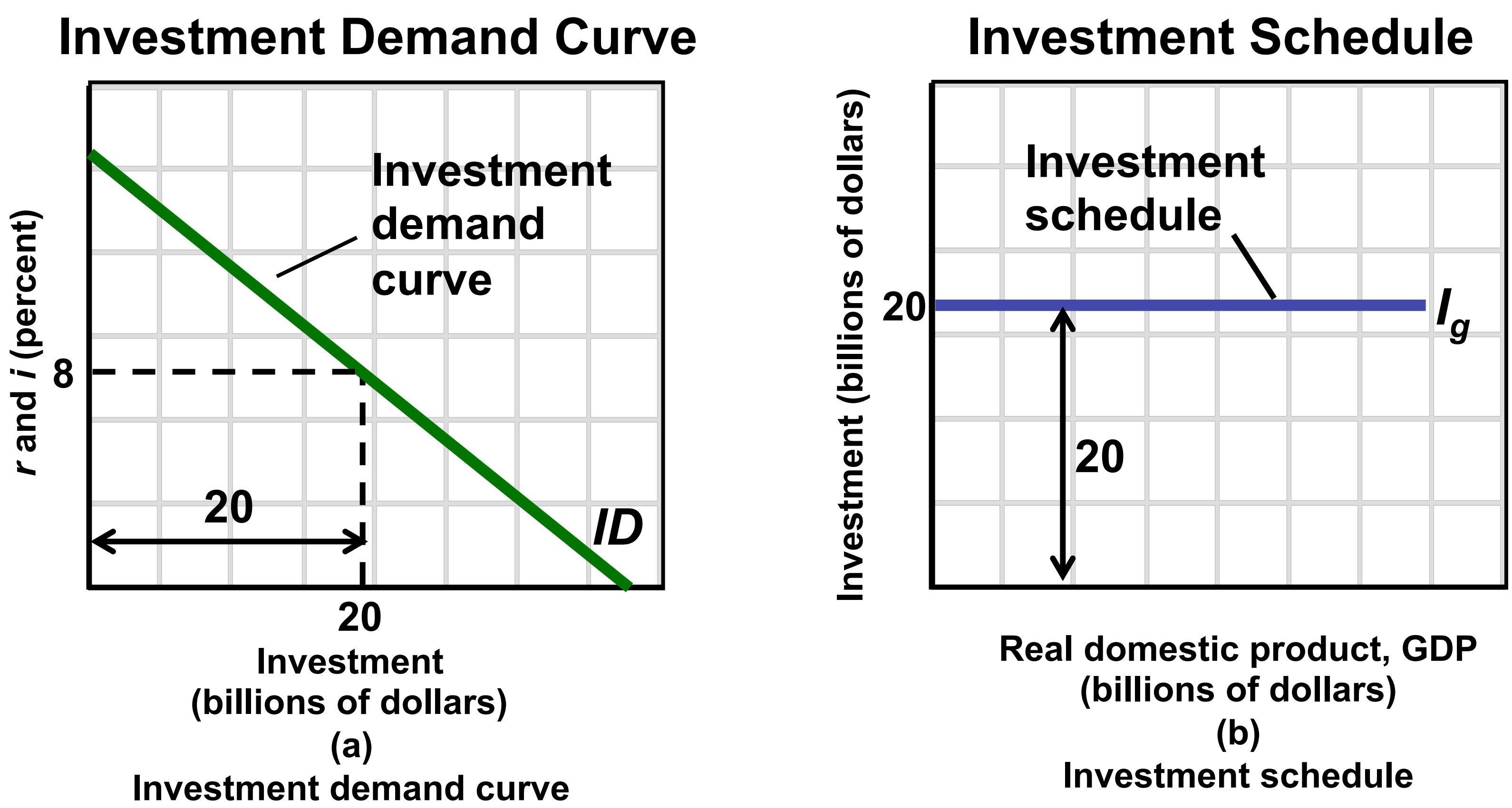
The Aggregate Expenditures Model

McGraw-Hill/Irwin

Assumptions and Simplifications

- Use the Keynesian aggregate expenditures model
- Prices are fixed
- GDP = DI
- Begin with private, closed economy
  - Consumption spending
  - Investment spending

Consumption and Investment



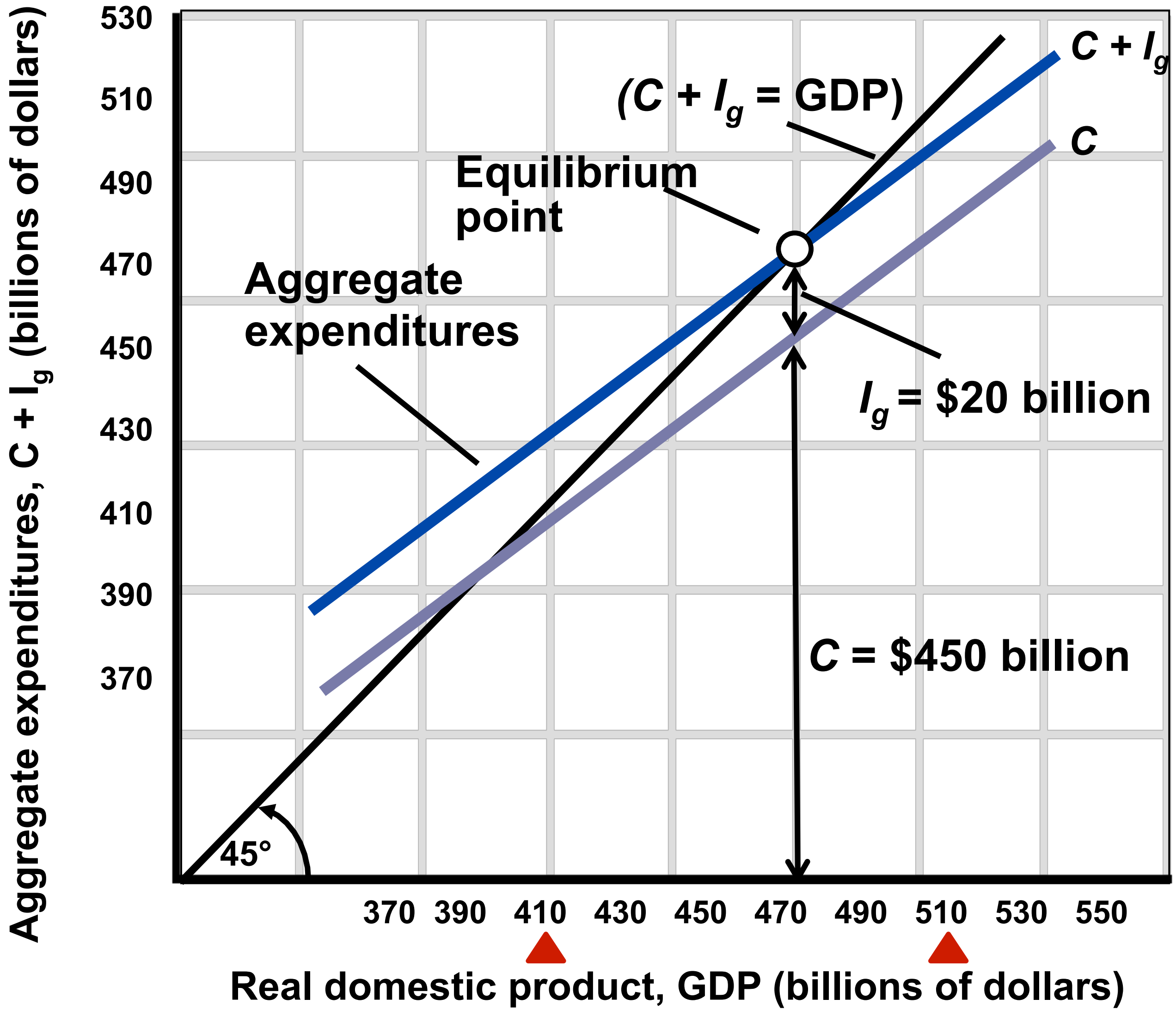
Equilibrium GDP

Determination of the Equilibrium Levels of Employment, Output, and Income: A Private Closed Economy

(1) Possible Levels of Employment, Millions	(2) Real Domestic Output (and Income) (GDP = DI),*Billions	(3) Consumption (C), Billions	(4) Saving (S), Billions	(5) Investment (I_g), Billions	(6) Aggregate Expenditure ($C+I_g$), Billions	(7) Unplanned Changes in Inventories, (+ or -)	(8) Tendency of Employment, Output, and Income
(1) 40	$370	$375	$-5	$20	$395	$-25	Increase
(2) 45	390	390	0	20	410	-20	Increase
(3) 50	410	405	5	20	425	-15	Increase
(4) 55	430	420	10	20	440	-10	Increase
(5) 60	450	435	15	20	455	-5	Increase
(6) 65	470	450	20	20	470	0	Equilibrium
(7) 70	490	465	25	20	485	+5	Decrease
(8) 75	510	480	30	20	500	+10	Decrease
(9) 80	530	495	35	20	515	+15	Decrease
(10) 85	550	510	40	20	530	+20	Decrease

* If depreciation and net foreign factor income are zero, government is ignored and it is assumed that all saving occurs in the household sector of the economy, then GDP as a measure of domestic output is equal to NI,PI, and DI. Household income = GDP

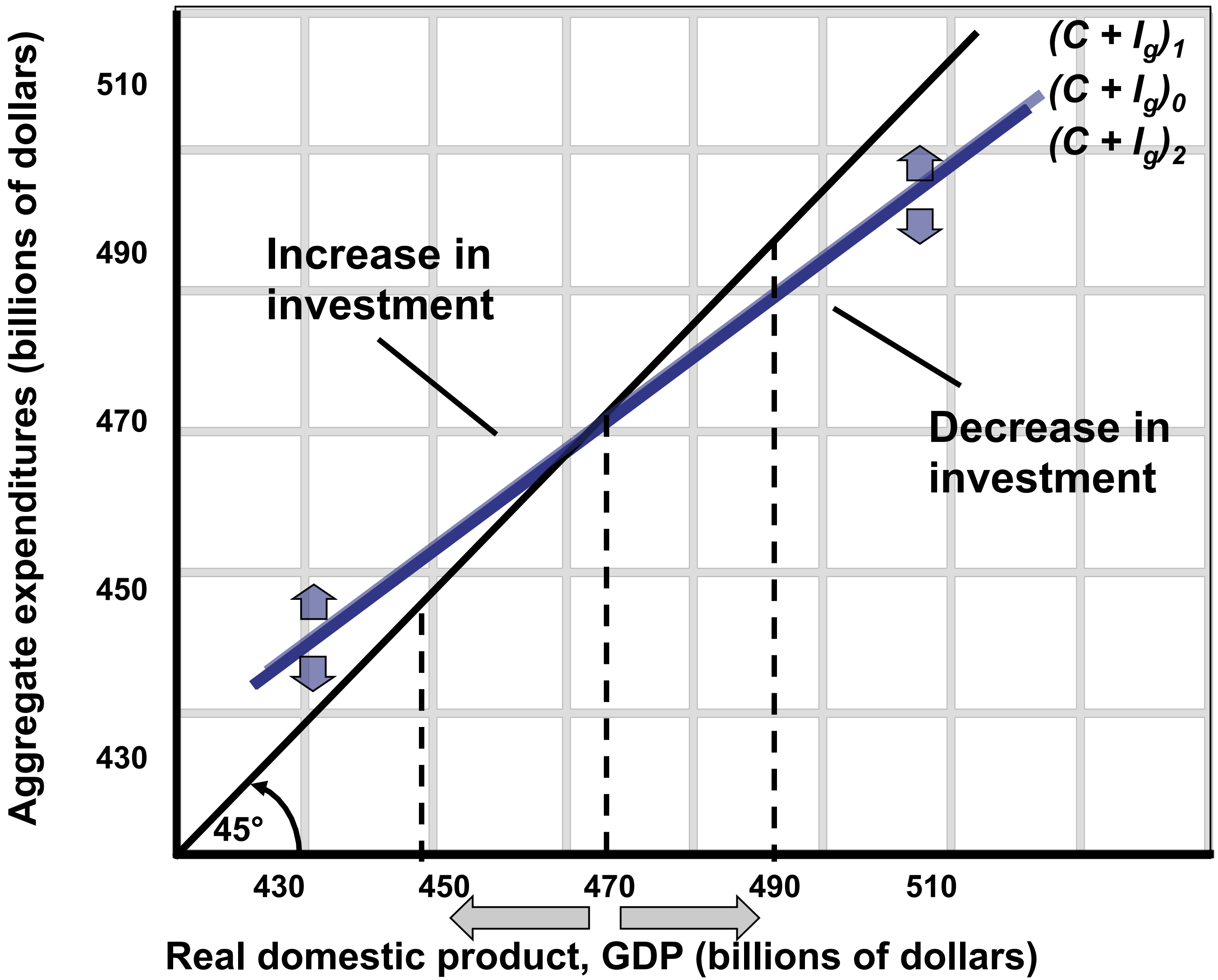
Equilibrium GDP



Other Features of Equilibrium GDP

- Saving equals planned investment
  - Saving is a leakage of spending
  - Investment is an injection of spending
- No unplanned changes in inventories
  - Firms do not change production

Changes in Equilibrium GDP



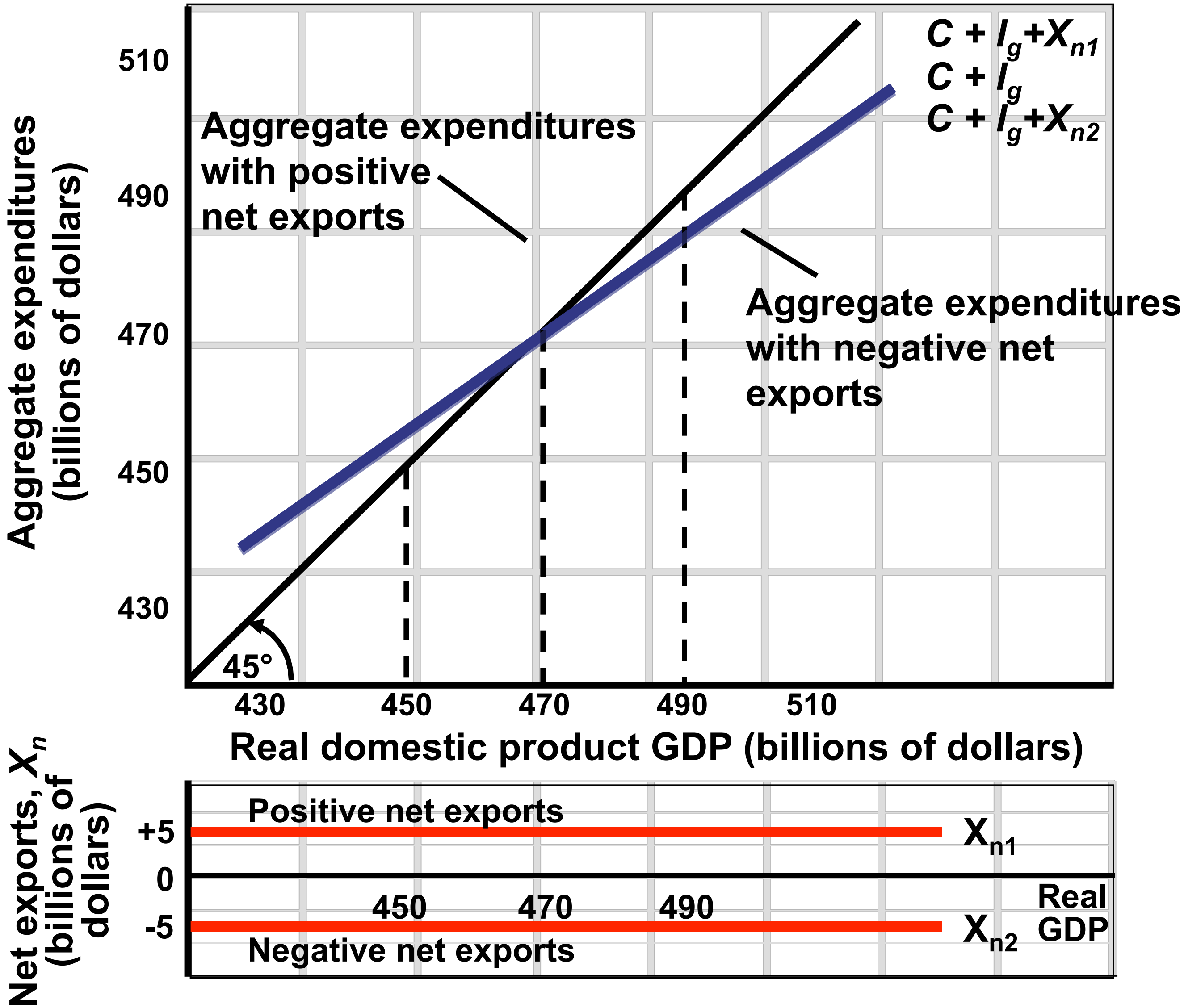
Adding International Trade

- Include net exports spending in aggregate expenditures
  - Private, open economy
- Exports create production, employment, and income
- Subtract spending on imports
- X_n can be positive or negative

The Net Export Schedule

Two Net Export Schedules (in Billions)		
(1) Level of GDP	(2) Net Exports, X_{n1} (X > M)	(3) Net Exports, X_{n2} (X < M)
$370	$+5	$-5
390	+5	-5
410	+5	-5
430	+5	-5
450	+5	-5
470	+5	-5
490	+5	-5
510	+5	-5
530	+5	-5
550	+5	-5

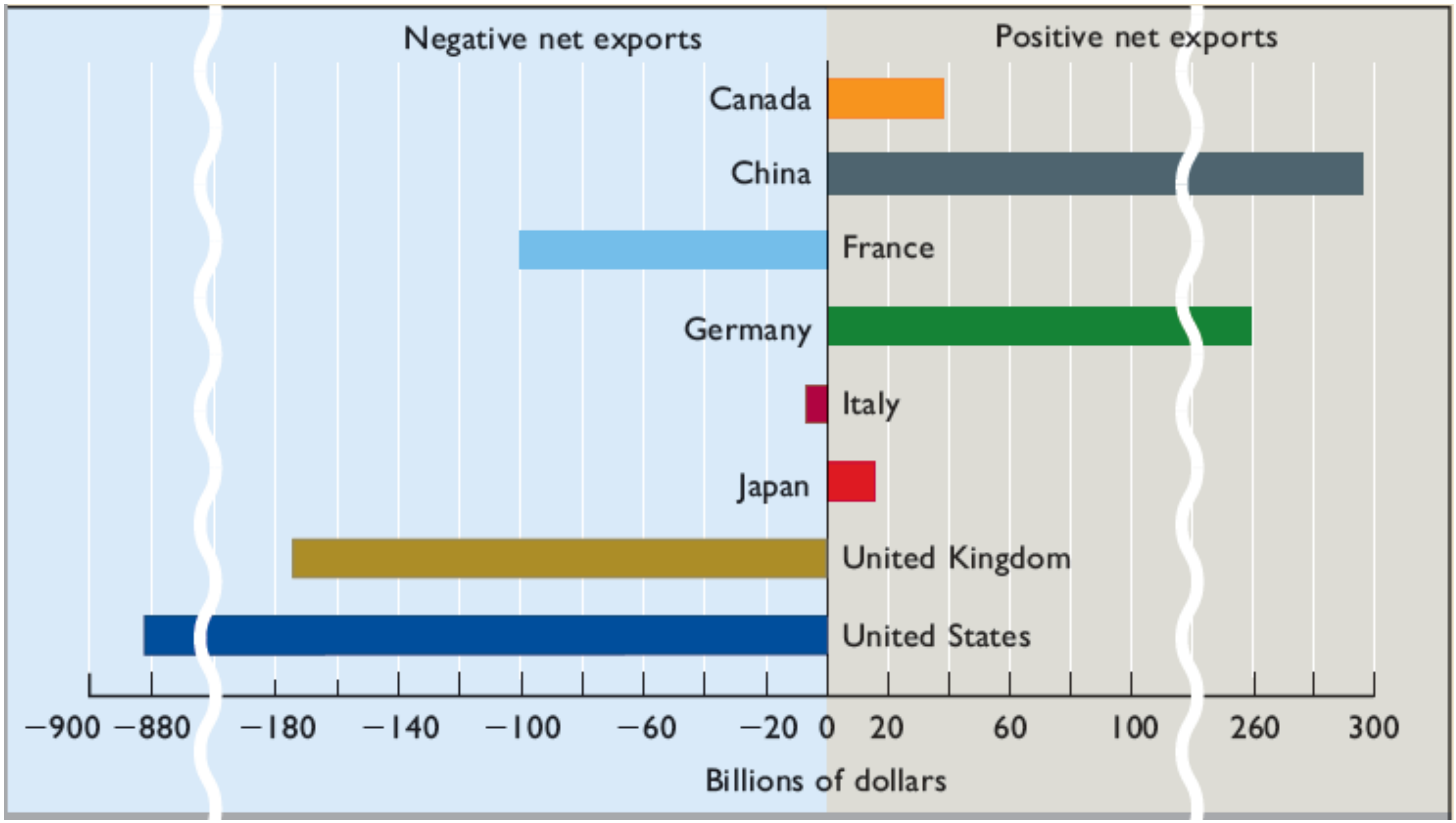
Net Exports and Equilibrium GDP



International Economic Linkages

- Prosperity abroad
  - Can increase U.S. exports
- Exchange rates
  - Depreciate the dollar to increase exports
- A caution on tariffs and devaluations
  - Other countries may retaliate
  - Lower GDP for all

Global Perspective



Source: World Trade Organization, http://www.wto.org.

Adding the Public Sector

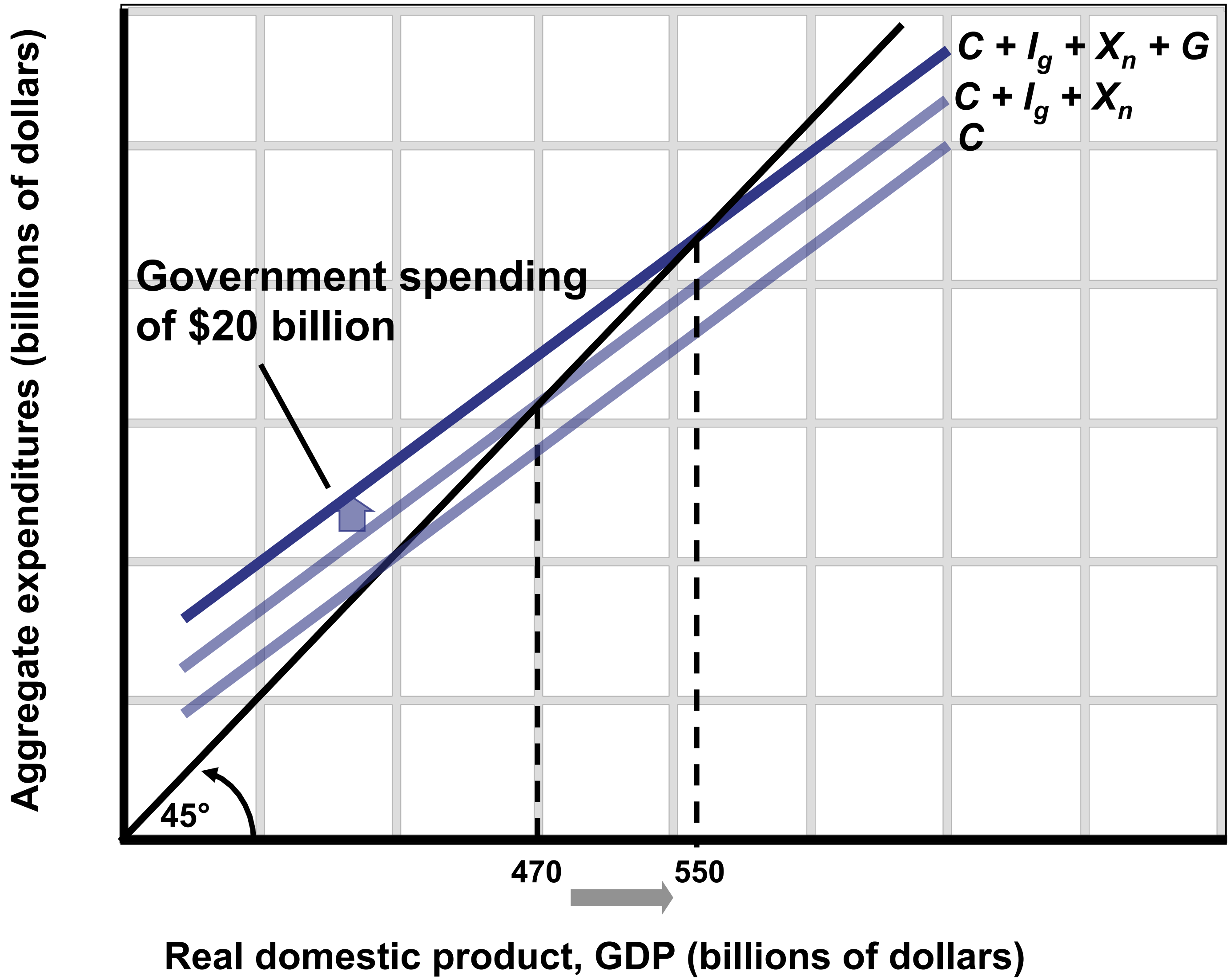
- Government purchases and equilibrium GDP
  - Government spending is subject to the multiplier
- Taxation and equilibrium GDP
  - Lump sum tax
  - Taxes are subject to the multiplier
  - DI ≠ GDP

Government Purchases and Eq. GDP

The Impact of Government Purchases on Equilibrium GDP

(1) Real Domestic Output and Income (GDP=DI), Billions	(2) Consumption (C), Billions	(3) Saving (S), Billions	(4) Investment (I_g), Billions	(5) Net Exports (X_n), Billions		(6) Government Purchases (G), Billions	(7) Aggregate Expenditures ($C+I_g+X_n+G$), Billions (2)+(4)+(5)+(6)
				Exports (X)	Imports (M)		
(1) $370	$375	$-5	$20	$10	$10	$20	$415
(2) 390	390	0	20	10	10	20	430
(3) 410	405	5	20	10	10	20	445
(4) 430	420	10	20	10	10	20	460
(5) 450	435	15	20	10	10	20	475
(6) 470	450	20	20	10	10	20	490
(7) 490	465	25	20	10	10	20	505
(8) 510	480	30	20	10	10	20	520
(9) 530	495	35	20	10	10	20	535
(10) 550	510	40	20	10	10	20	550

Government Purchases and Eq. GDP

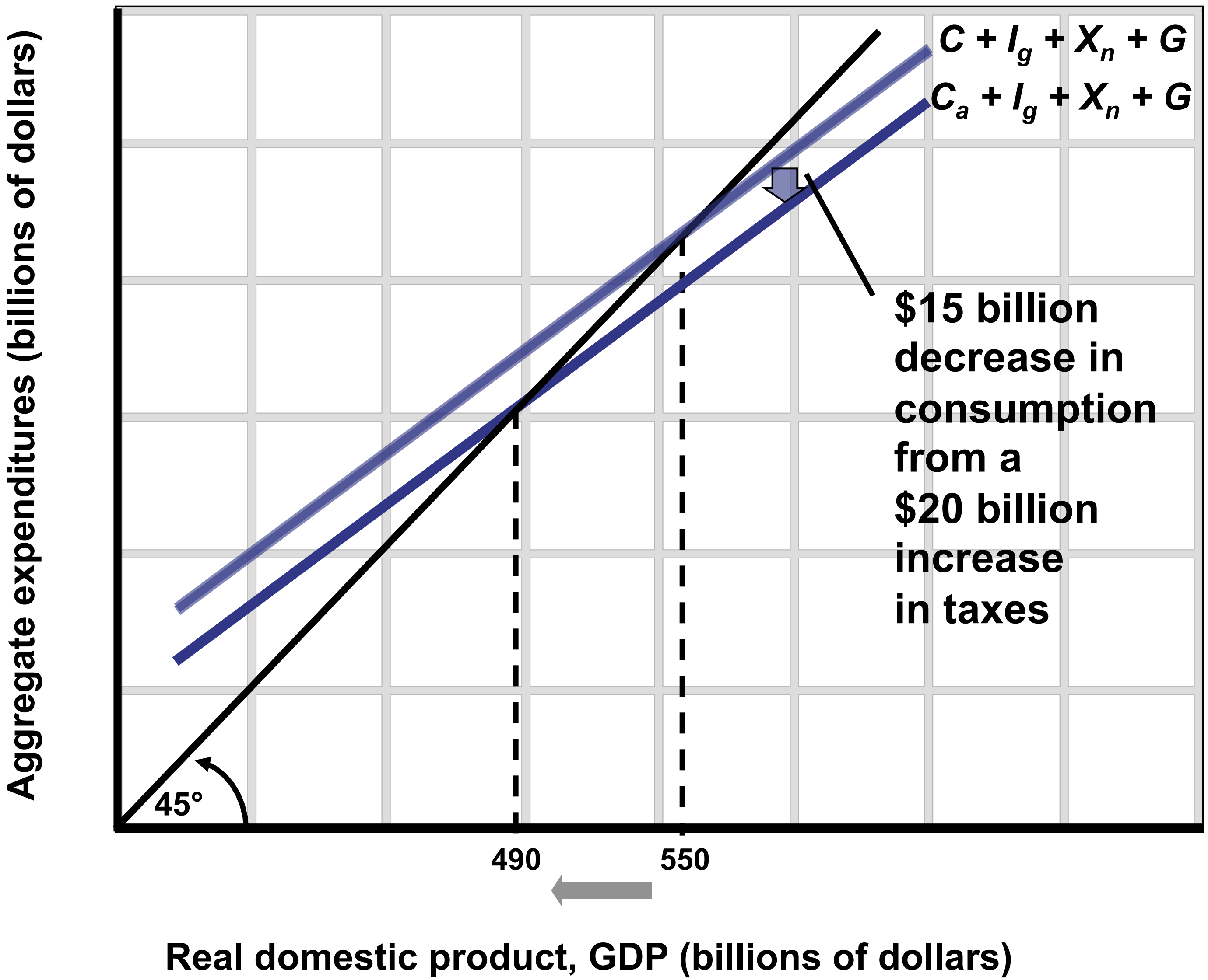


Taxation and Equilibrium GDP

Determination of the Equilibrium Levels of Employment, Output, and Income: Private and Public Sectors

(1) Real Domestic Output and Income (GDP=DI), Billions	(2) Taxes (T), Billions	(3) Disposable Income (DI), Billions, (1)-(2)	(4) Consump-tion (C), Billions	(5) Saving (S), Billions	(6) Invest-ment (I_g), Billions	(7) Net Exports (X_n), Billions		(8) Govern-ment Pur-chases (G), Billions	(9) Aggregate Expendi-tures ($C+I_g+X_n+G$), Billions (4)+(6)+(7)+(8)
						Exports (X)	Imports (M)		
(1) $370	$20	$350	$360	$-10	$20	$10	$10	$20	$400
(2) 390	20	370	375	-5	20	10	10	20	415
(3) 410	20	390	390	0	20	10	10	20	430
(4) 430	20	410	405	5	20	10	10	20	445
(5) 450	20	430	420	10	20	10	10	20	460
(6) 470	20	450	435	15	20	10	10	20	475
(7) 490	20	470	450	20	20	10	10	20	490
(8) 510	20	490	465	25	20	10	10	20	505
(9) 530	20	510	480	30	20	10	10	20	520
(10) 550	20	530	495	35	20	10	10	20	535

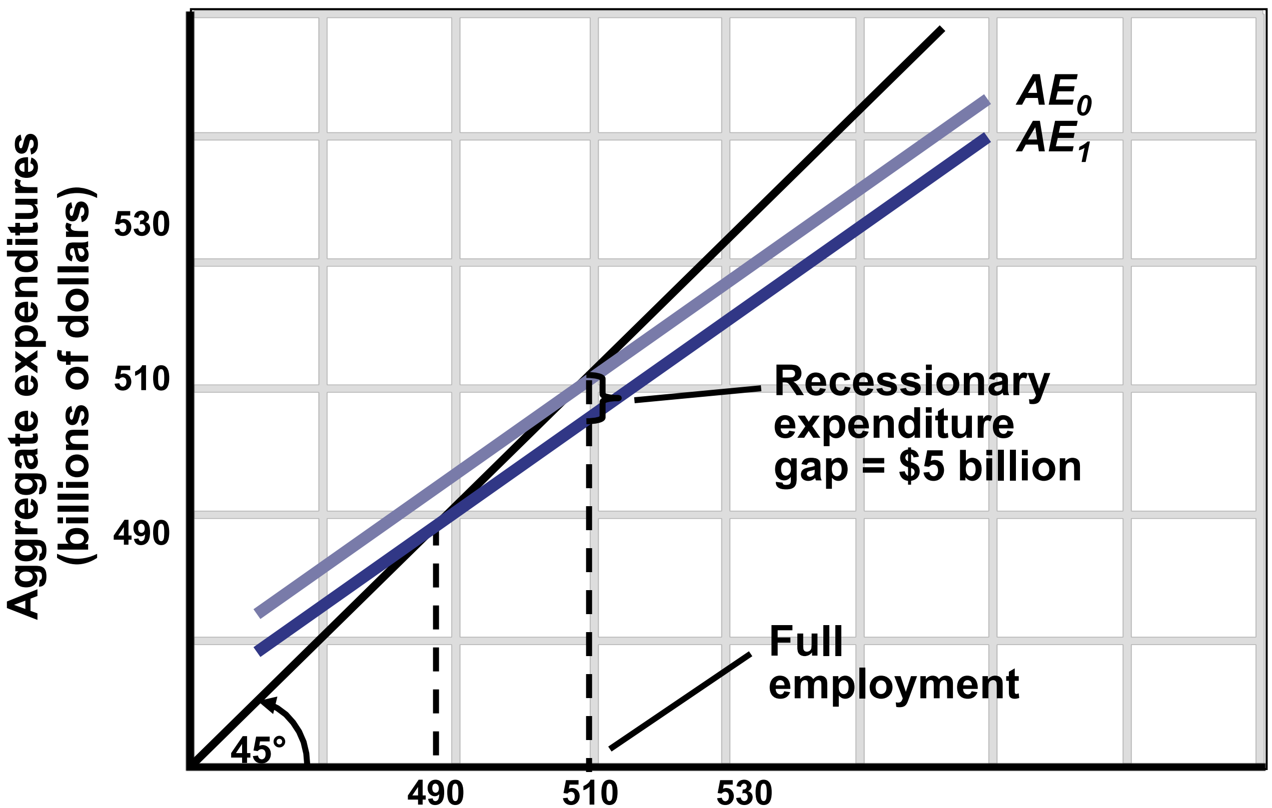
Taxation and Equilibrium GDP



Equilibrium versus Full-Employment

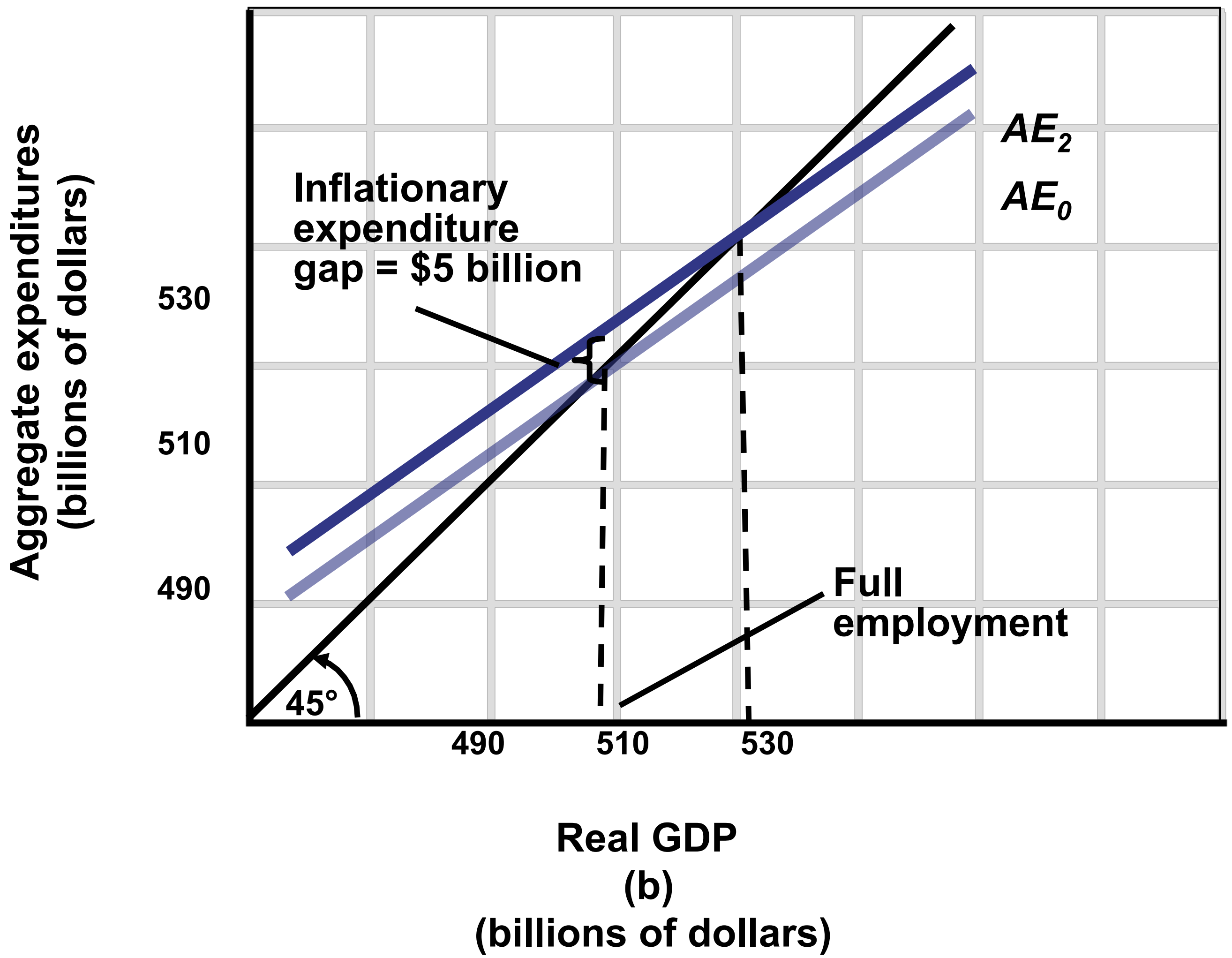
- Recessionary expenditure gap
  - Insufficient aggregate spending
  - Spending below full-employment GDP
  - Increase G and/or decrease T
- Inflationary expenditure gap
  - Too much aggregate spending
  - Spending exceeds full-employment GDP
  - Decrease G and/or increase T

Equilibrium versus Full-Employment



(a)
Recessionary expenditure gap

Equilibrium versus Full-Employment



Application: The Recession of 2007-09

- December 2007 recession began
- Aggregate expenditures declined
  - Consumption spending declined
  - Investment spending declined
  - Recessionary expenditure gap

Application: The Recession of 2007-09

- Federal government undertook Keynesian policies
  - Tax rebate checks
  - $787 billion stimulus package

Say's Law, Great Depression, Keynes

- Classical economics
  - Say's Law
  - Economy will automatically adjust
  - Laissez-faire
- Keynesian economics
  - Cyclical unemployment can occur
  - Economy will not correct itself
  - Government should actively manage macroeconomic instability

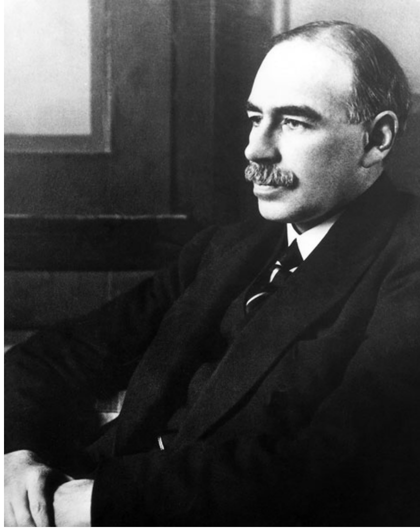
Say’s Law

- “Supply creates its own demand.”
- By producing goods and services, firms create a total demand for goods and services equal to what they have produced.

The Classical view

- Market industrialized economies are inherently ***stable*** and tend ***automatically*** to full employment.
- Government policies that aim to improve the performance of the economy ***do more harm than good***.
- “Laissez-faire.”

The Keynesian View



J.M. Keynes

- Market, industrialized economies are inherently ***unstable*** and ***do not*** automatically tend to full employment.
- Private spending (and most importantly, investment spending) is volatile—causing business cycle fluctuations.
- “The economy needs to be stabilized, the economy can be stabilized, the economy should be stabilized.”
- Keynesian economics is an attack on the Classical theory.