

經濟學原理（上）

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【本著作除另有註明外，採取創用CC「姓名標示—非商業性—相同方式分享」臺灣3.0版授權釋出】

本課程指定教材為N. Gregory Mankiw: Principles of Economics (2012), 6th edition.

參考教材為吳聰敏，「經濟學原理」，雙葉書廊。

本講義僅引用部分內容，請讀者自行準備。



6

Supply, Demand and Government Policies

PRINCIPLES OF

ECONOMICS

SIXTH EDITION



Supply, Demand, and Government Policies

- ▶ In a free, unregulated market system, market forces establish equilibrium prices and exchange quantities.
- ▶ While equilibrium conditions may be efficient, it may be true that not everyone is satisfied.
- ▶ One of the roles of economists is to use their theories to assist in the development of policies.



10 The Government in the Economy: Taxation and Regulation

The function of government: Friedman (1962)

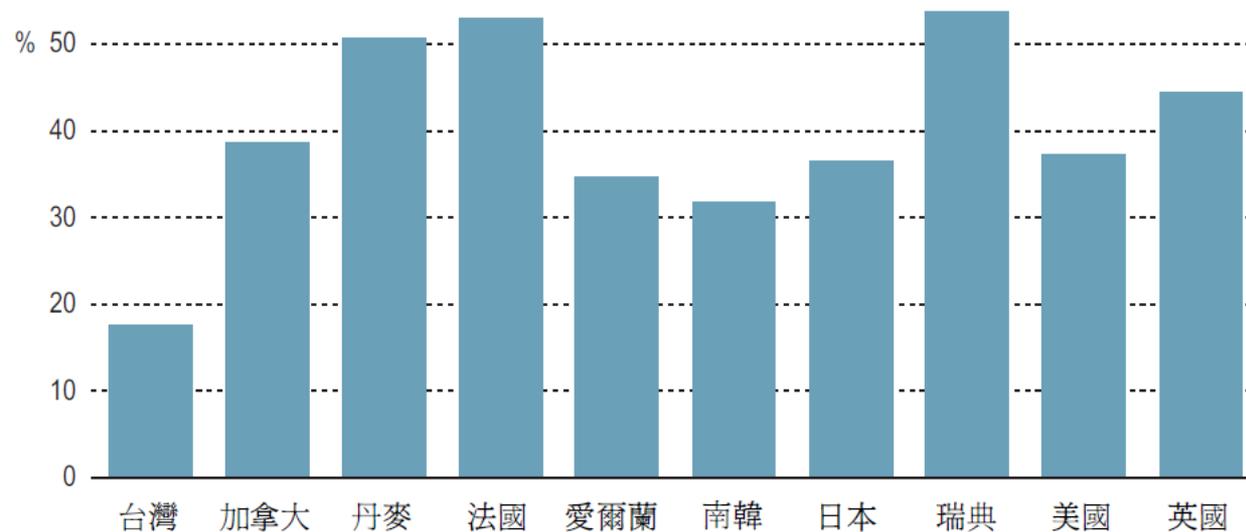
- maintains law and order
- denies property rights, adjudicates disputes about the interpretation of the rules
- enforced contracts, promoted competition
- overcomes neighborhood effects (external cost)

widely regarded as important to justify government intervention



10 The Government in the Economy: Taxation and Regulation

財政支出占 GDP 比率

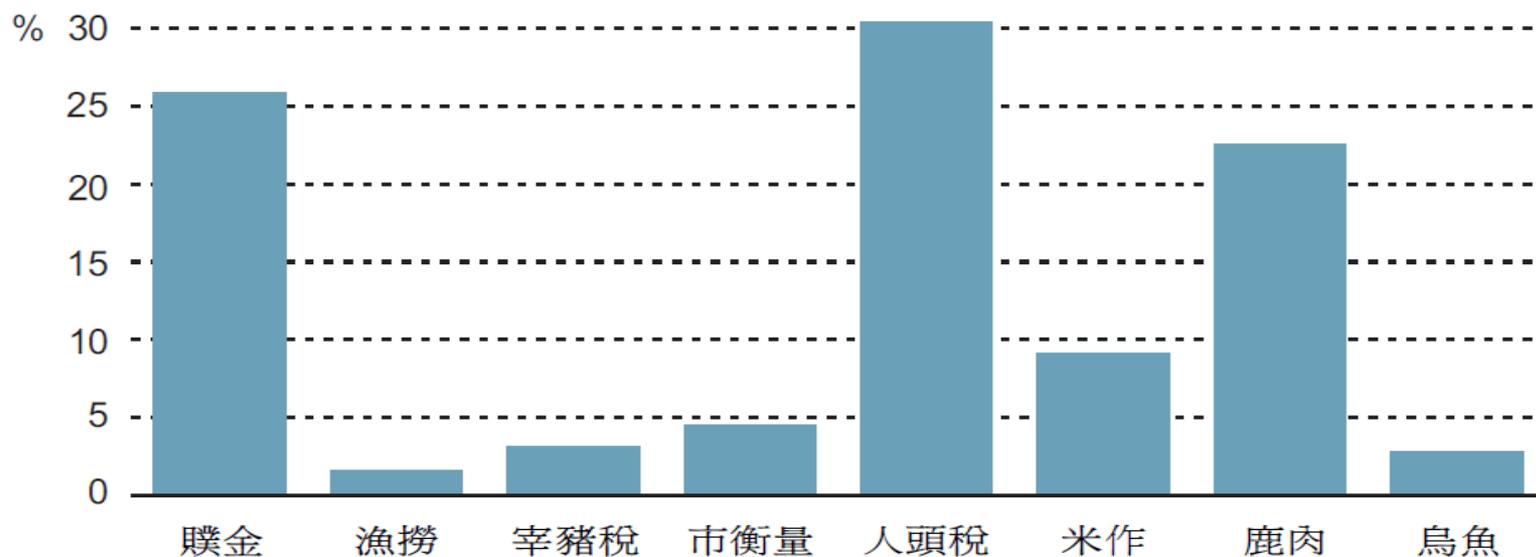


- 政府需要有收入才能融通支出
- 台灣的財政支出占 GDP 比率低於其他國家



10 The Government in the Economy: Taxation and Regulation

台灣之稅收: 1654年



- 贖金: 荷人對漢人贖商與原住民之鹿產交易課稅
- 人頭稅是對來台工作之漢人課稅
- 鹿肉指鹿肉出口稅



10 The Government in the Economy: Taxation and Regulation

財政收入 (2008年)

各級政府歲入淨額			稅課收入			
	總額 (億)	比率		總額 (億)	平均每人 (元)	比率
合計	22,316	100.0%	合計	17,106	74,255	100.0%
稅課收入	17,106	76.7%	營利事業所得稅	4,452	19,327	26.0%
營業盈餘	2,649	11.9%	綜合所得稅	3,897	16,918	22.8%
規費收入	943	4.2%	營業稅	2,440	10,590	14.3%
健康福利捐	201	0.9%	貨物稅	1,267	5,498	7.4%
其他	1,417	6.3%	證券交易稅	906	3,934	5.3%
			其他	4,144	17,988	24.2%

- 公營企業營業盈餘中, 央行盈餘占 7.5%



10 The Government in the Economy: Taxation and Regulation

所得稅

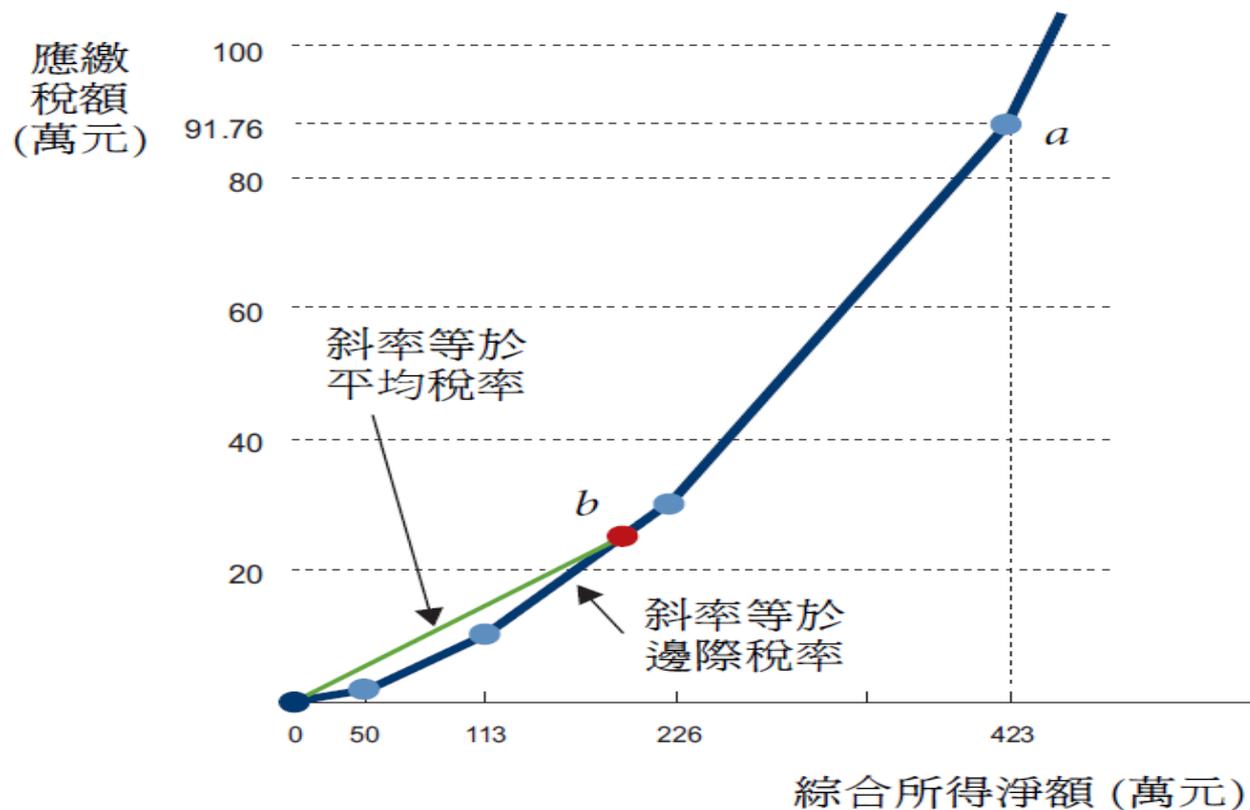
綜合所得淨額	邊際稅率
0-50 萬元	5%
50-113 萬元	12%
113-226 萬元	20%
226-423 萬元	30%
423 萬元以上	40%

- 所得淨額 = 所得總額 - 免稅額 - 扣除額
- 邊際稅率 (marginal tax rate): 所得再增加 1 元時之稅額
- 若綜合所得淨額為新台幣 60 萬元, 應繳稅額為:
 $50 \times 5\% + (60 - 50) \times 12\% = 3.7$ 萬元。
- 平均稅率 (average tax rate) = $3.7 / 60$
 應繳稅額占所得之比率



10 The Government in the Economy: Taxation and Regulation

所得稅



10.1 Taxation and Government Spending in the United States

US: Three levels of government:

- Federal
- State
- Local

All can collect taxes and spend revenues.



10.1 Taxation and Government Spending in the United States

Budget surplus

Tax revenues are greater than spending

Budget deficit

Spending is greater than tax revenues



10.1 Taxation and Government Spending in the United States

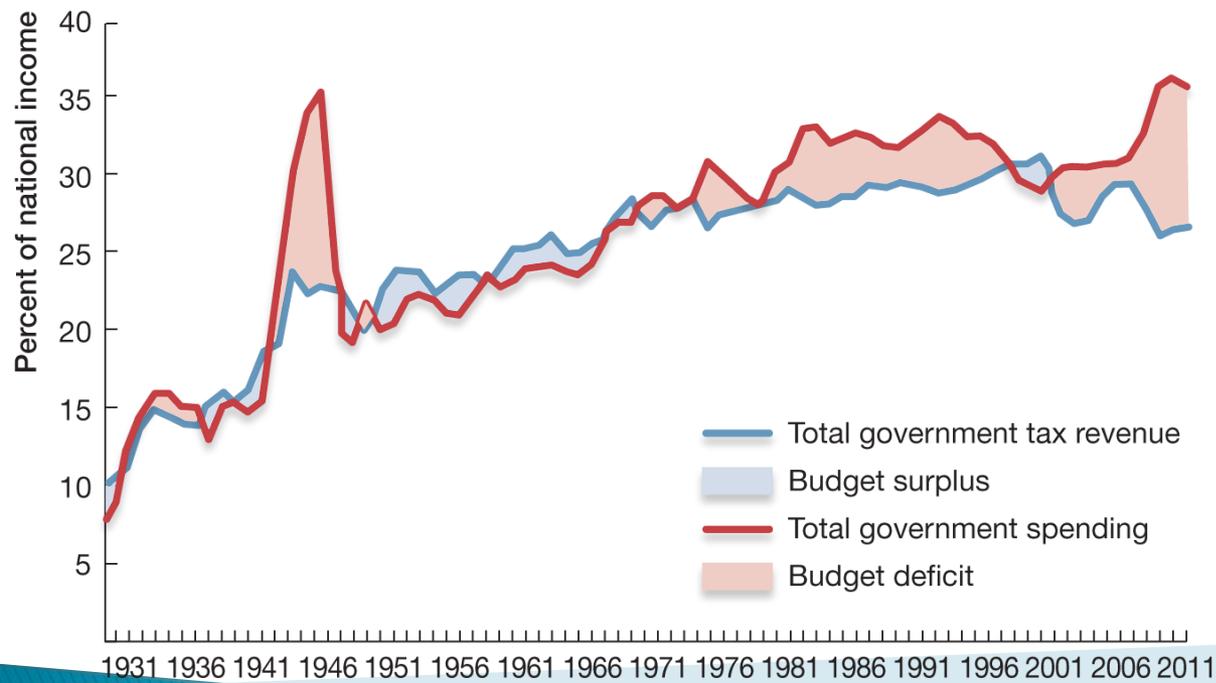


Exhibit 10.1 Total Government Spending and Total Government Tax Revenue as a Percentage of National Income (1929–2011)



10.1 Taxation and Government Spending in the United States

Why Does the Government Tax and Spend?

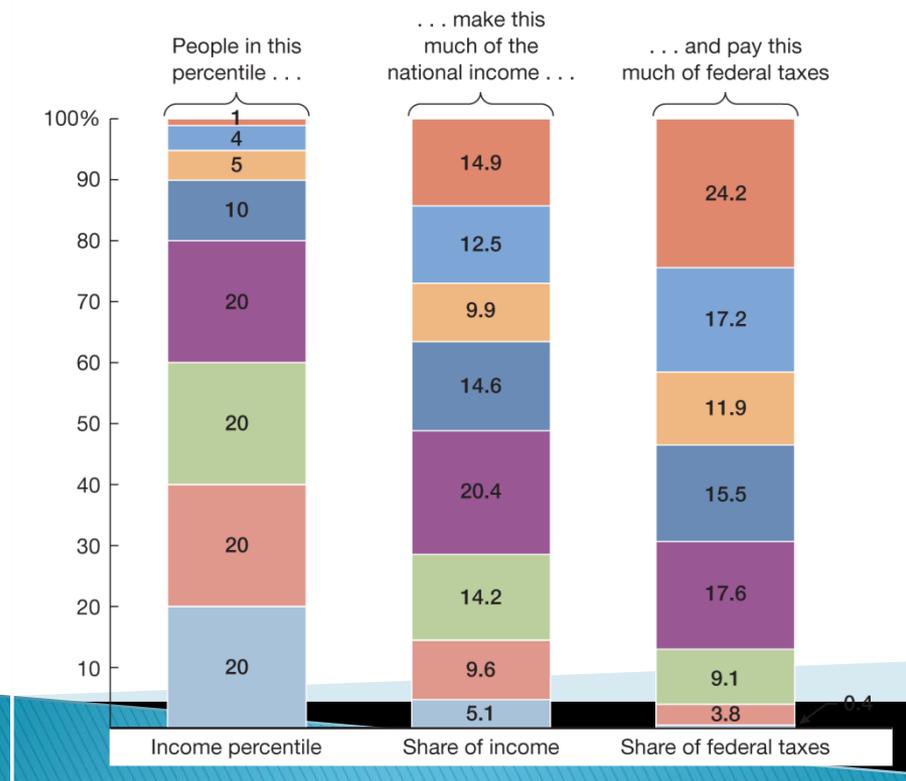


Exhibit 10.7 The Distribution of Income and Federal Taxes in 2009



CONTROLS ON PRICES

- ▶ Are usually enacted when policymakers believe the market price is unfair to buyers or sellers.
- ▶ Result in government-created price ceilings and floors.



CONTROLS ON PRICES

▶ *Price Ceiling* (價格上限)

- A legal *maximum* on the price at which a good can be sold.

▶ *Price Floor* (價格下限)

- A legal *minimum* on the price at which a good can be sold.



How Price Ceilings Affect Market Outcomes

- ▶ Two outcomes are possible when the government imposes a price ceiling:
 - The price ceiling is not binding if set above the equilibrium price.
 - The price ceiling is binding if set below the equilibrium price, leading to a shortage.



Figure 1 A Market with a Price Ceiling

(a) A Price Ceiling That Is Not Binding

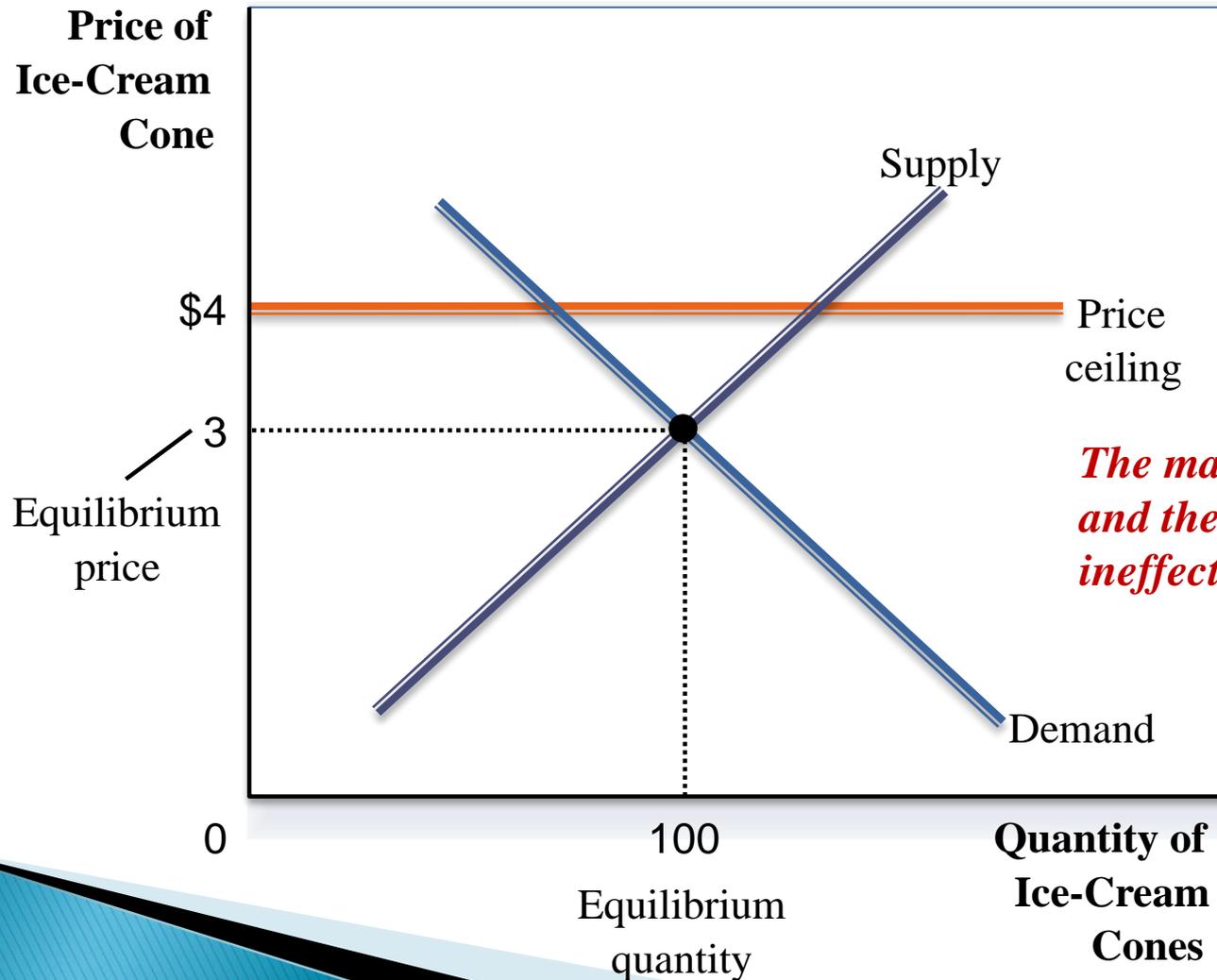
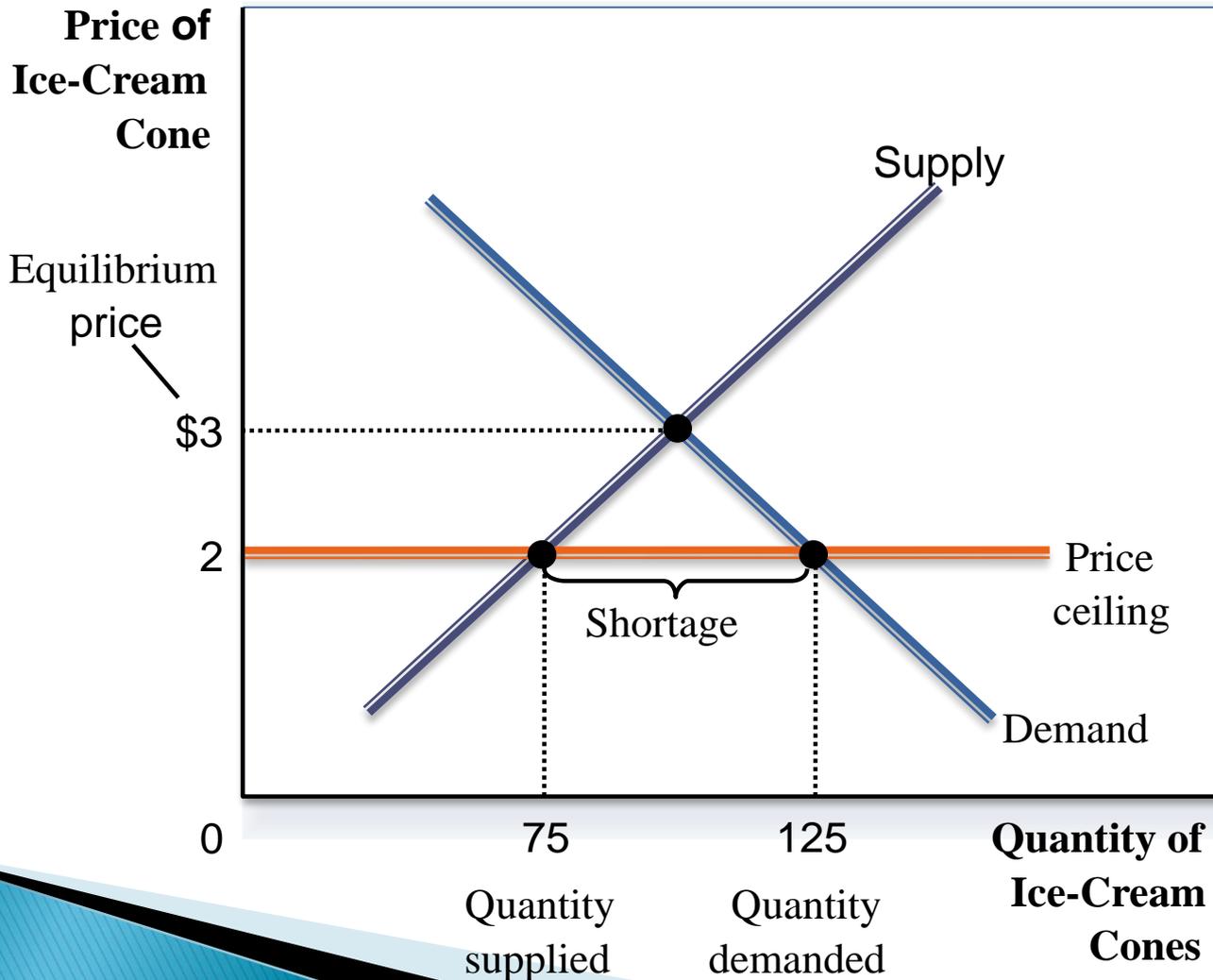


Figure 1 A Market with a Price Ceiling

(b) A Price Ceiling That Is Binding



How Price Ceilings Affect Market Outcomes

- ▶ Effects of Price Ceilings
- ▶ A binding price ceiling creates
 - Shortages because $Q_D > Q_S$.
 - Example: Gasoline shortage of the 1970s
 - Nonprice rationing
 - Examples: Long lines, discrimination by sellers



CASE STUDY: Lines at the Gas Pump

- ▶ In 1973, OPEC raised the price of crude oil in world markets. Crude oil is the major input in gasoline, so the higher oil prices reduced the supply of gasoline.
- ▶ What was responsible for the long gas lines?
- ▶ Economists blame government regulations that limited the price oil companies could charge for gasoline.



Figure 2 The Market for Gasoline with a Price Ceiling

(a) The Price Ceiling on Gasoline Is Not Binding

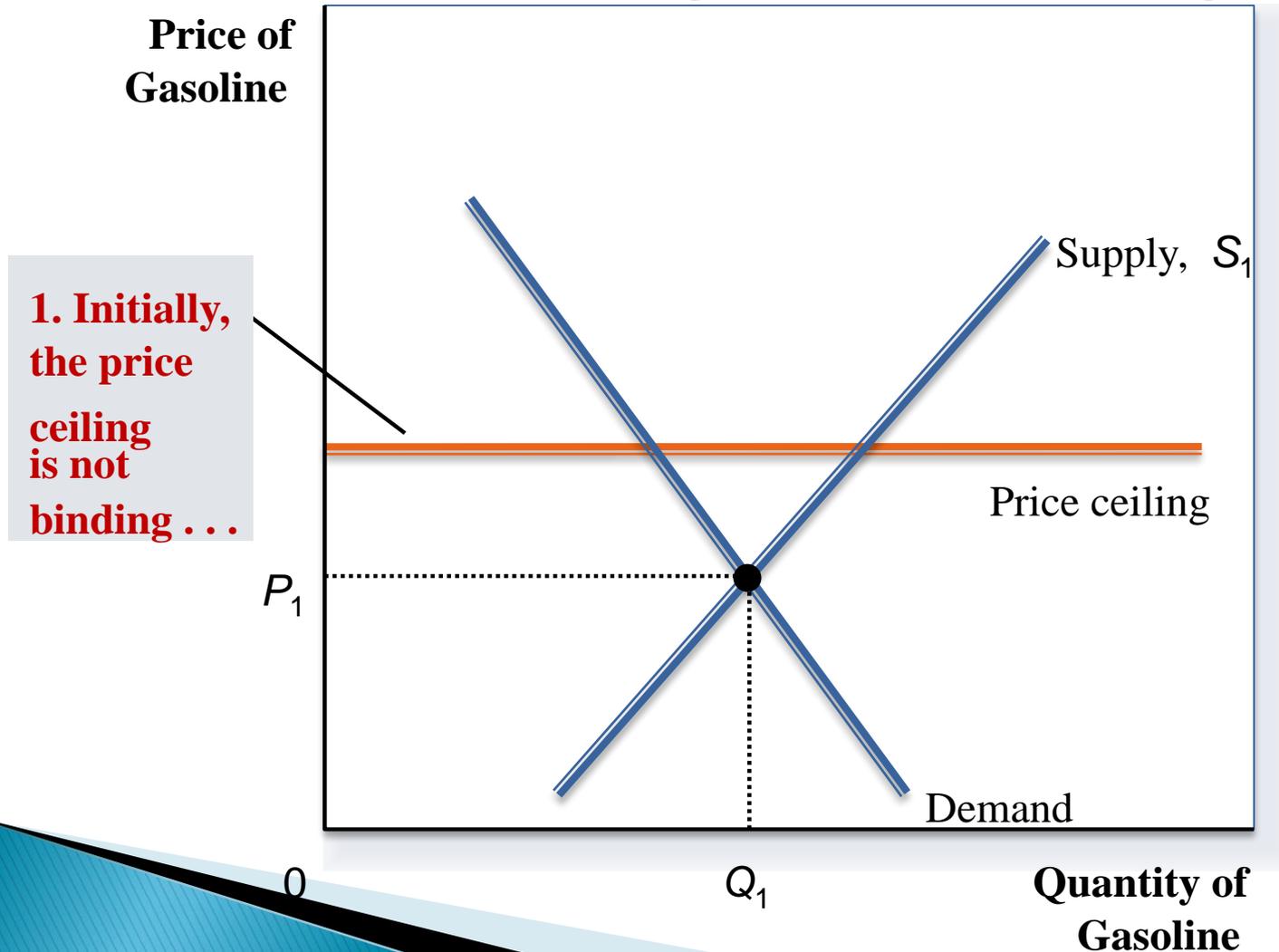
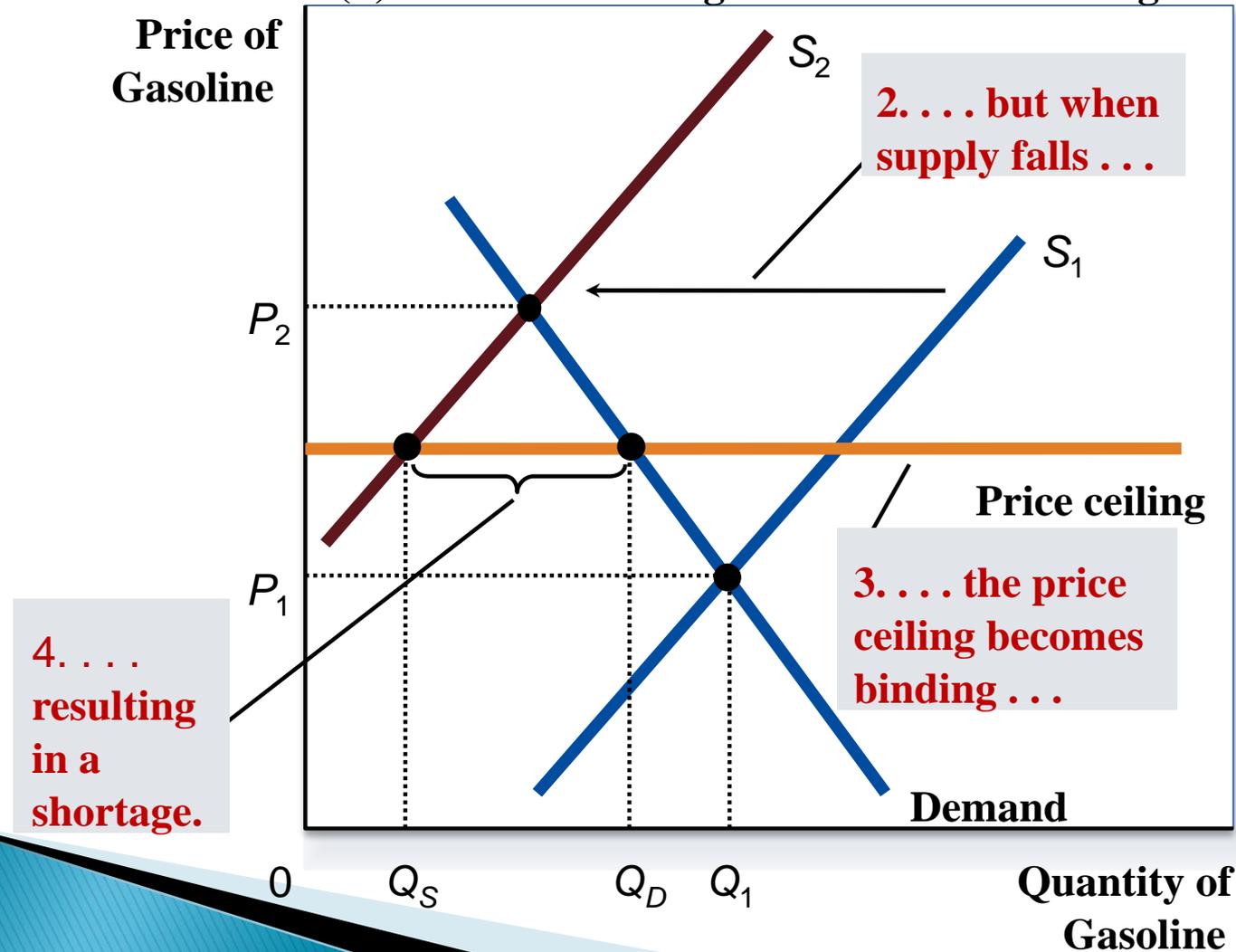


Figure 2 The Market for Gasoline with a Price Ceiling

(b) The Price Ceiling on Gasoline Is Binding



CASE STUDY: Rent Control in the Short Run and Long Run

- ▶ Rent controls are ceilings placed on the rents that landlords may charge their tenants.
- ▶ The goal of rent control policy is to help the poor by making housing more affordable.
- ▶ One economist called rent control “the best way to destroy a city, other than bombing.”



Figure 3 Rent Control in the Short Run and in the Long Run

(a) Rent Control in the Short Run
(supply and demand are inelastic)

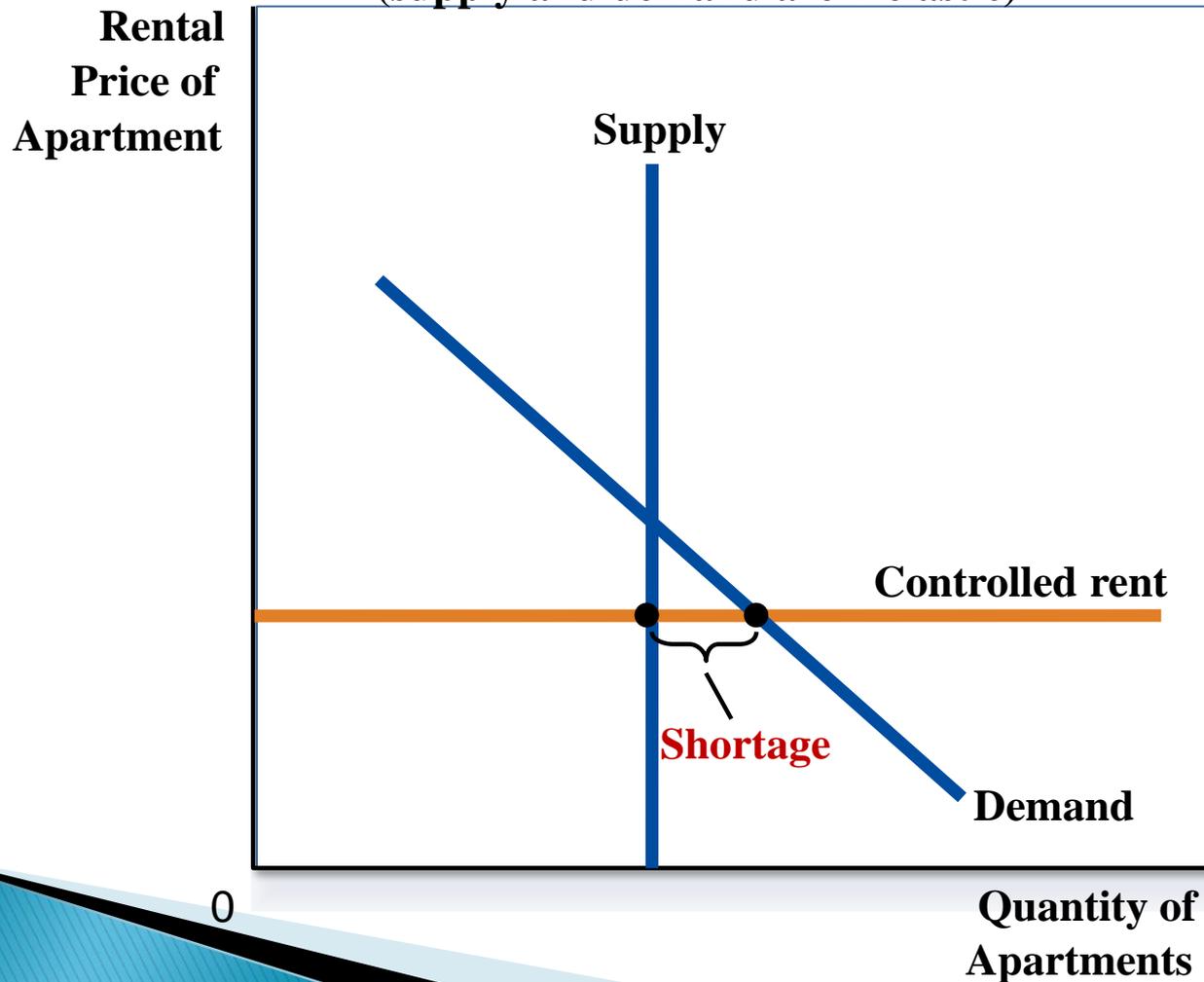
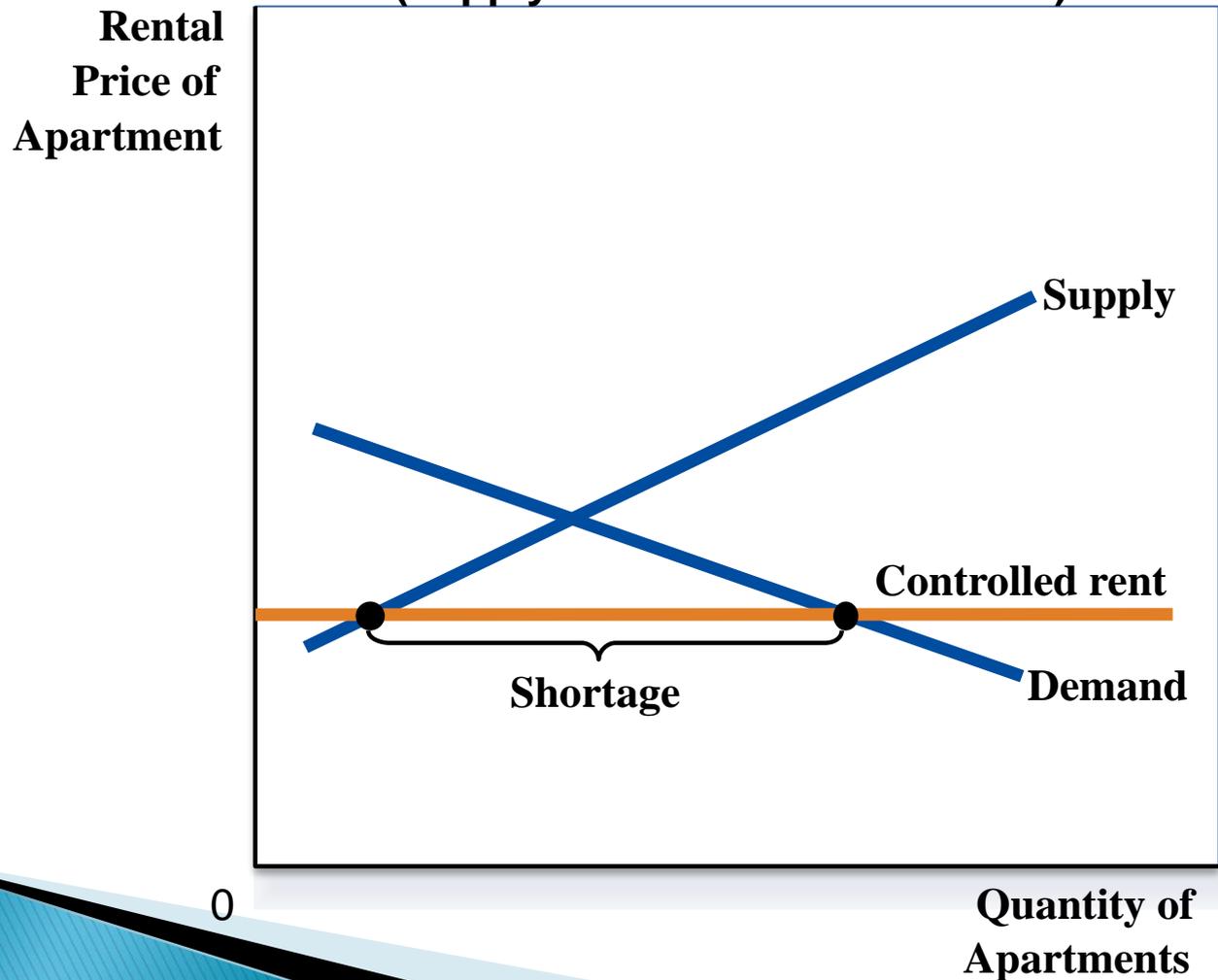


Figure 3 Rent Control in the Short Run and in the Long Run

(b) Rent Control in the Long Run
(supply and demand are elastic)



Ex:

- ▶ Rent control in New York
- ▶ In Paris, too
- ▶ College Tuition control in Taiwan
- ▶ Chavez's war on market(p122)



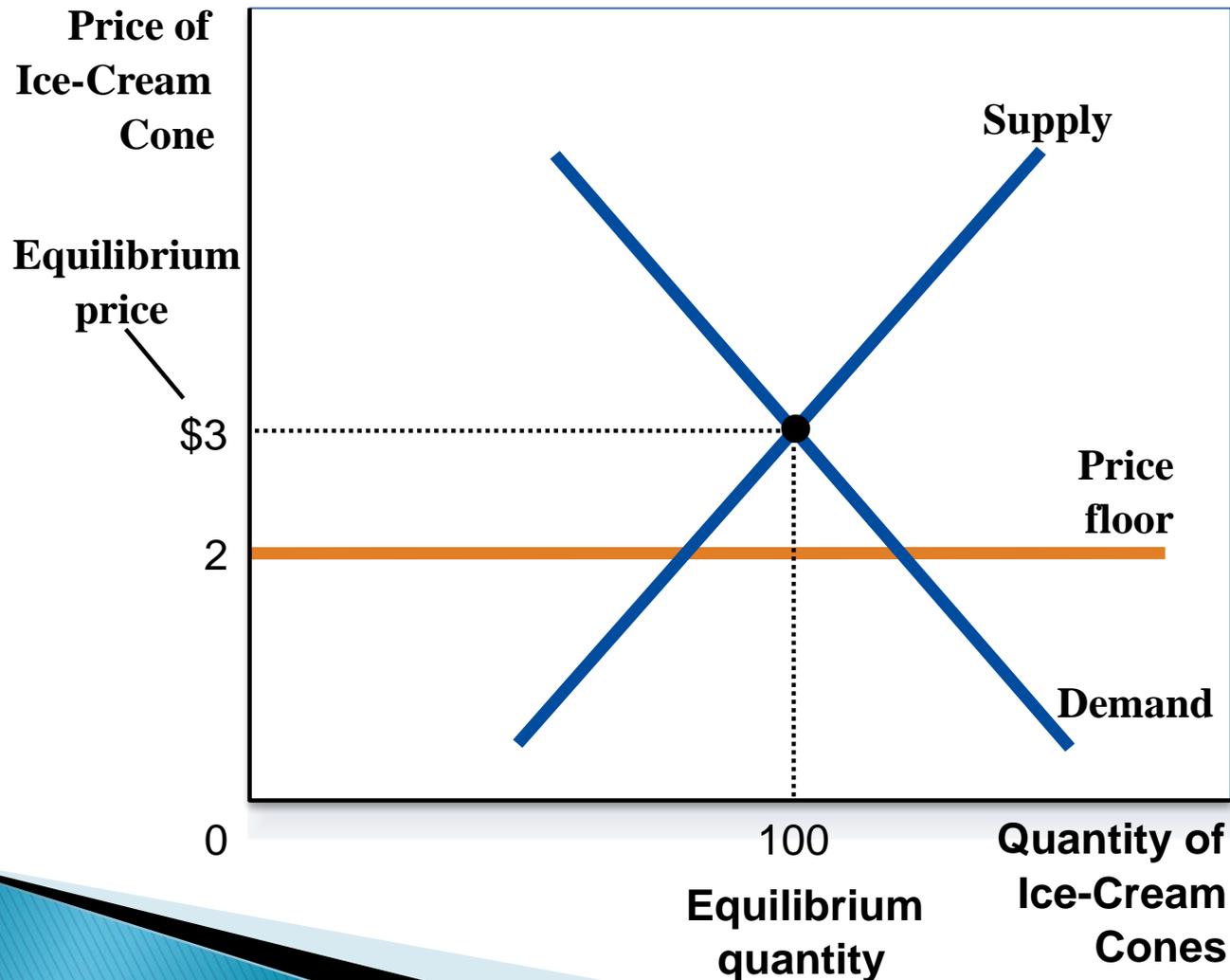
How Price Floors Affect Market Outcomes

- ▶ When the government imposes a price floor, two outcomes are possible.
 - The price floor is not binding if set below the equilibrium price.
 - The price floor is binding if set above the equilibrium price, leading to a surplus.



Figure 4 A Market with a Price Floor

(a) A Price Floor That Is Not Binding

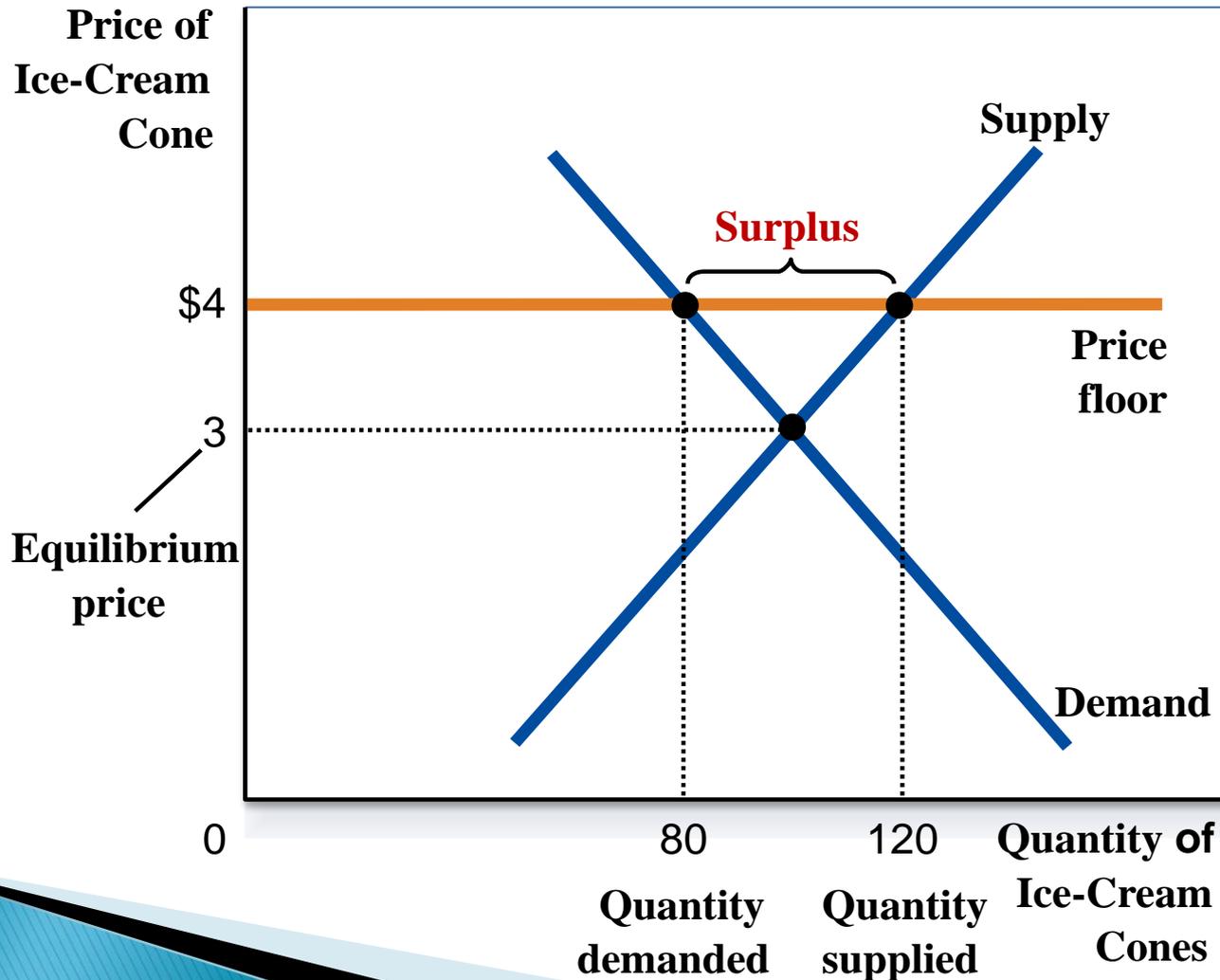


The government says that ice-cream cones must sell for at least \$2; this legislation is ineffective at the current market price.



Figure 4 A Market with a Price Floor

(b) A Price Floor That Is Binding



How Price Floors Affect Market Outcomes

- ▶ A price floor prevents supply and demand from moving toward the equilibrium price and quantity.
- ▶ When the market price hits the floor, it can fall no further, and the market price equals the floor price.



How Price Floors Affect Market Outcomes

- ▶ A binding price floor causes . . .
 - a surplus because $Q_S > Q_D$.
 - nonprice rationing is an alternative mechanism for rationing the good, using discrimination criteria.
 - Examples: The minimum wage, agricultural price supports



CASE STUDY: The Minimum Wage

- ▶ An important example of a price floor is the minimum wage.
- ▶ Minimum wage laws dictate the lowest price possible for labor that any employer may pay.



Figure 5 How the Minimum Wage Affects the Labor Market

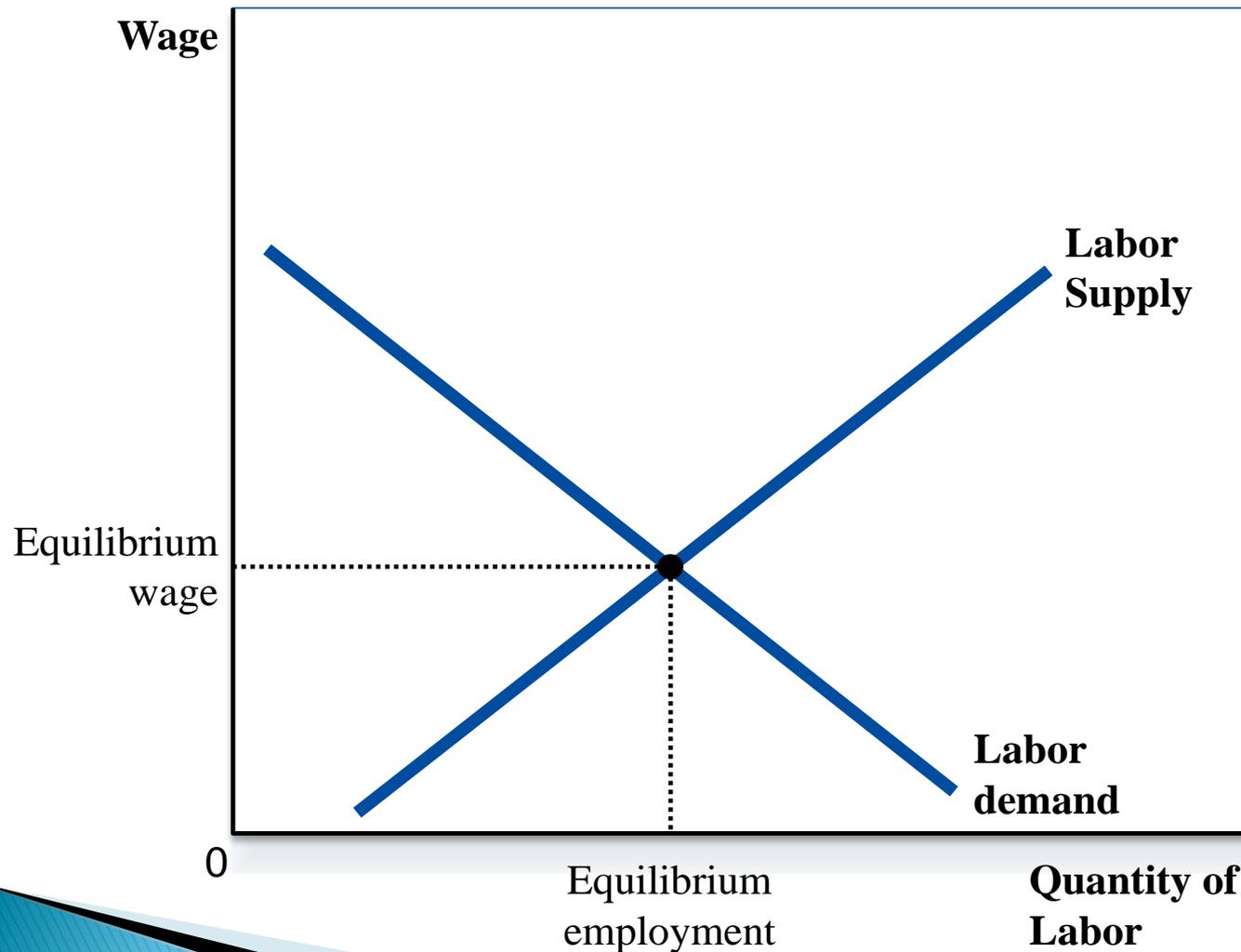
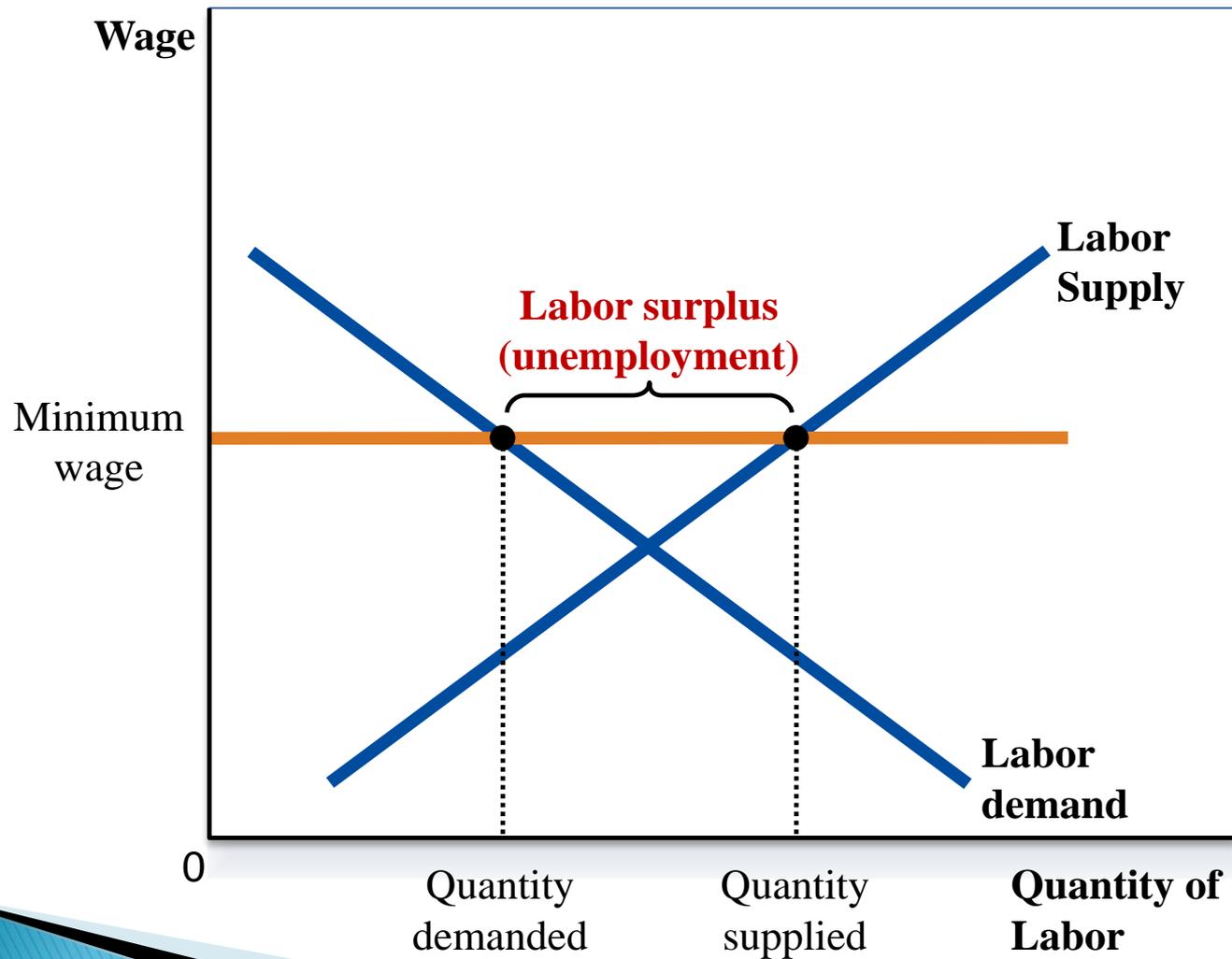


Figure 5 How the Minimum Wage Affects the Labor Market



The Controversy of Minimum Wage Effect

- ▶ David Card and Allan Kruger vs the rest of economists
- ▶ Marginal worker effect exists?
- ▶ <http://www.theverge.com/2014/10/28/7083313/taco-bell-launches-mobile-ordering>
- ▶ <http://www.economicpolicyjournal.com/2014/05/battling-higher-minimum-wages-mcdonalds.html>
- ▶ <http://www.heraldscotland.com/news/home-news/lloyds-bank-were-cutting-9000-jobs-and-shutting-150-branches.1414481111>
- ▶ <http://www.cbo.gov/publication/44995>



Prize announcement



EKONOMIPRISET 2021
THE PRIZE IN ECONOMIC SCIENCES 2021



KUNGL. VETENSKAPS- AKADEMIEN
THE ROYAL SWEDISH ACADEMY OF SCIENCES



Photo: UC Berkeley

David Card, USA

Born in Canada, 1956
University of California,
Berkeley, USA



Photo: Creative Commons Wiki

Joshua D. Angrist, USA

Born in the USA, 1960
Massachusetts Institute of
Technology, Cambridge, USA



Photo: Stanford Graduate School of Business

Guido W. Imbens, USA

Born in the Netherlands, 1963
Stanford University, USA

#nobelprize



- ▶ 哪一天GOOGLE發展寫C O D E的機器人 也不意外
- ▶ 市場有自己淘汰不適任人選的PACE
- ▶ Minimum wage policy disturb it, and make a vicious circle.
- ▶ 口口聲聲基於道德與公平正義.... It is either a disguise of one's selfishness(最低工資提高後你不會被淘汰 但會加薪), 或者就是道德上的中二病



Other examples:

- ▶ Organ transplantation
- ▶ <http://online.wsj.com/articles/SB10001424052702304149404579322560004817176>
- ▶ <http://marketdesigner.blogspot.tw/2014/01/cash-for-kidneys-case-for-market-for.html>

天下雜誌

- ▶ 國中小教師市場



TAXES

- ▶ Governments levy taxes to raise revenue for public projects.



How Taxes on Buyers Affect Market Outcomes

- *Tax incidence* is the study of who bears the burden of a tax.
- Taxes result in a change in market equilibrium
- Buyers pay more and sellers receive less, regardless of whom the tax is levied on.



Figure 6 A Tax on Buyers

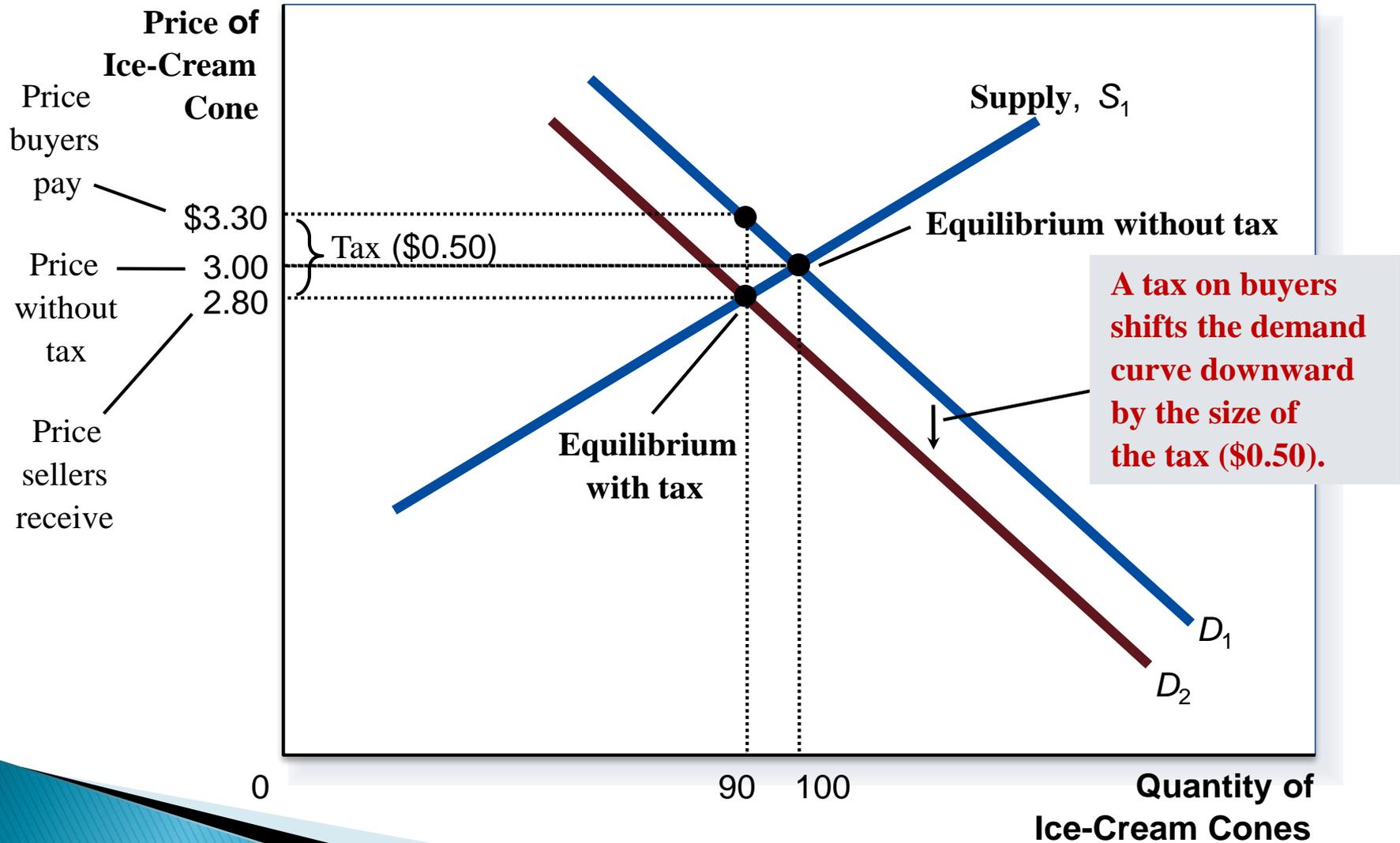
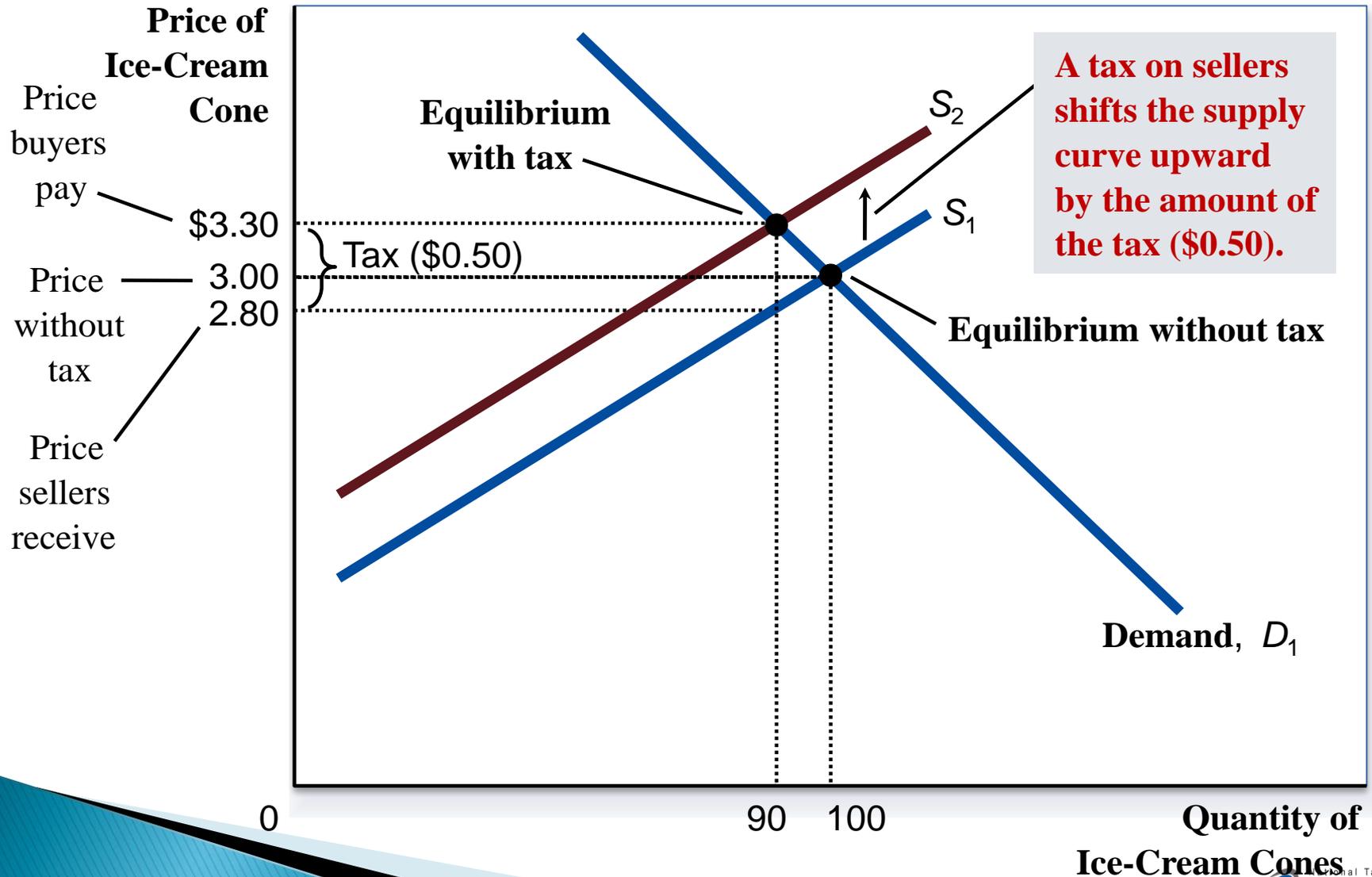


Figure 7 A Tax on Sellers



A tax on sellers shifts the supply curve upward by the amount of the tax ($\$0.50$).



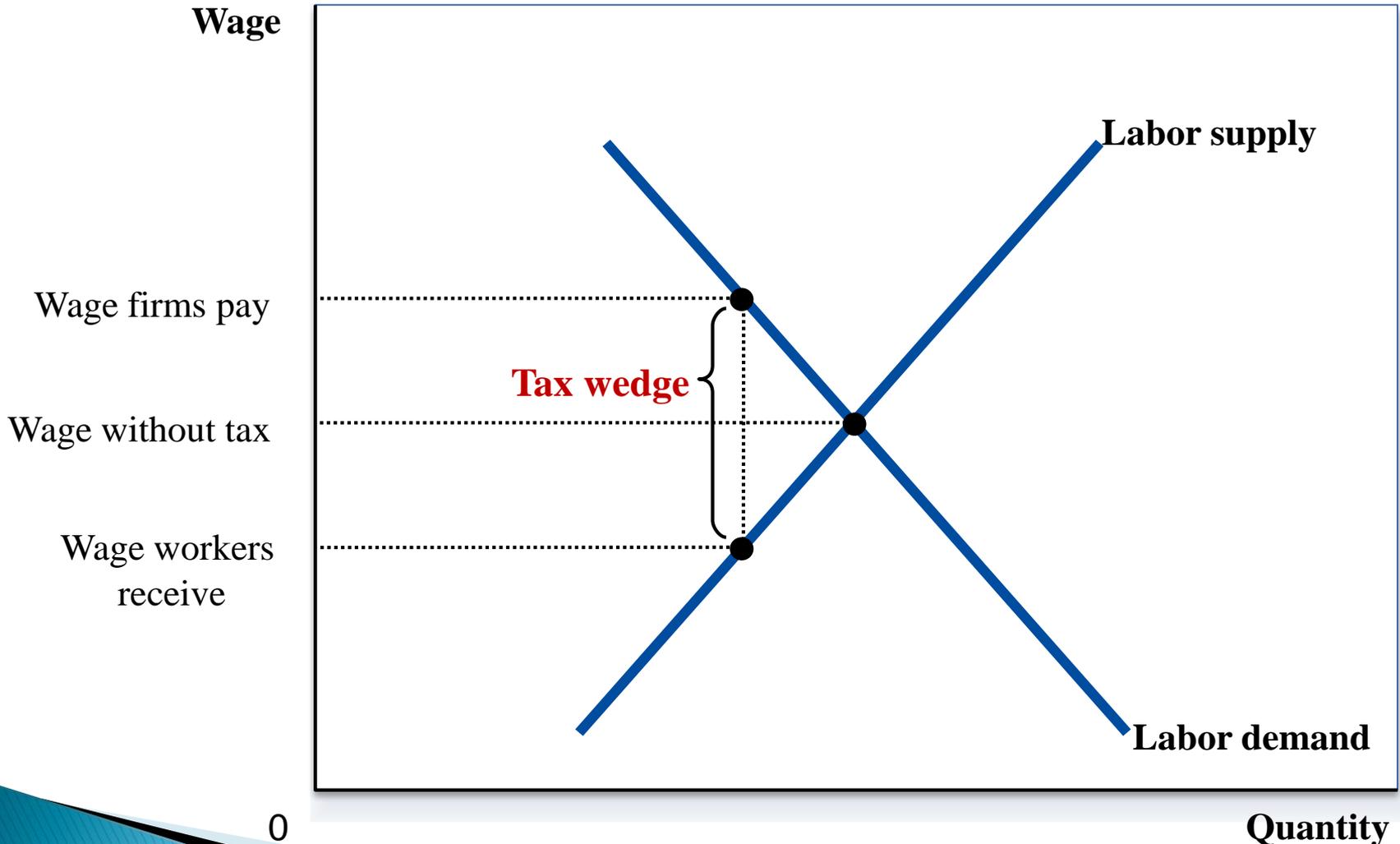
Elasticity and Tax Incidence

▶ What was the impact of tax?

- Taxes discourage market activity.
- When a good is taxed, the quantity sold is smaller.
- Buyers and sellers share the tax burden.



Figure 8 A Payroll Tax



Quantity
of Labor

Elasticity and Tax Incidence

- ▶ In what proportions is the burden of the tax divided?
- ▶ How do the effects of taxes on sellers compare to those levied on buyers?
- ▶ The answers to these questions depend on the elasticity of demand and the elasticity of supply.



Figure 9 How the Burden of a Tax Is Divided

(a) Elastic Supply, Inelastic Demand

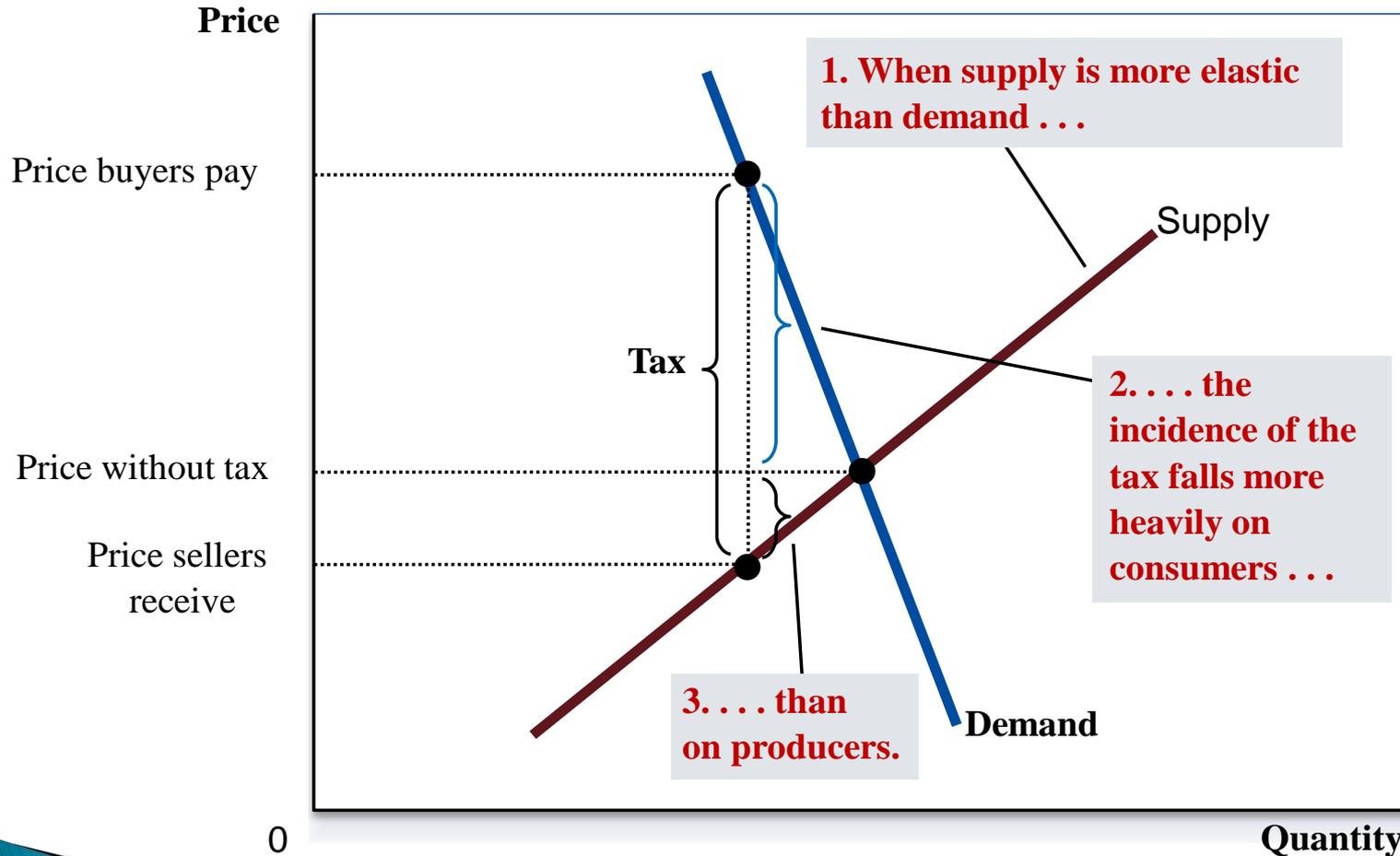
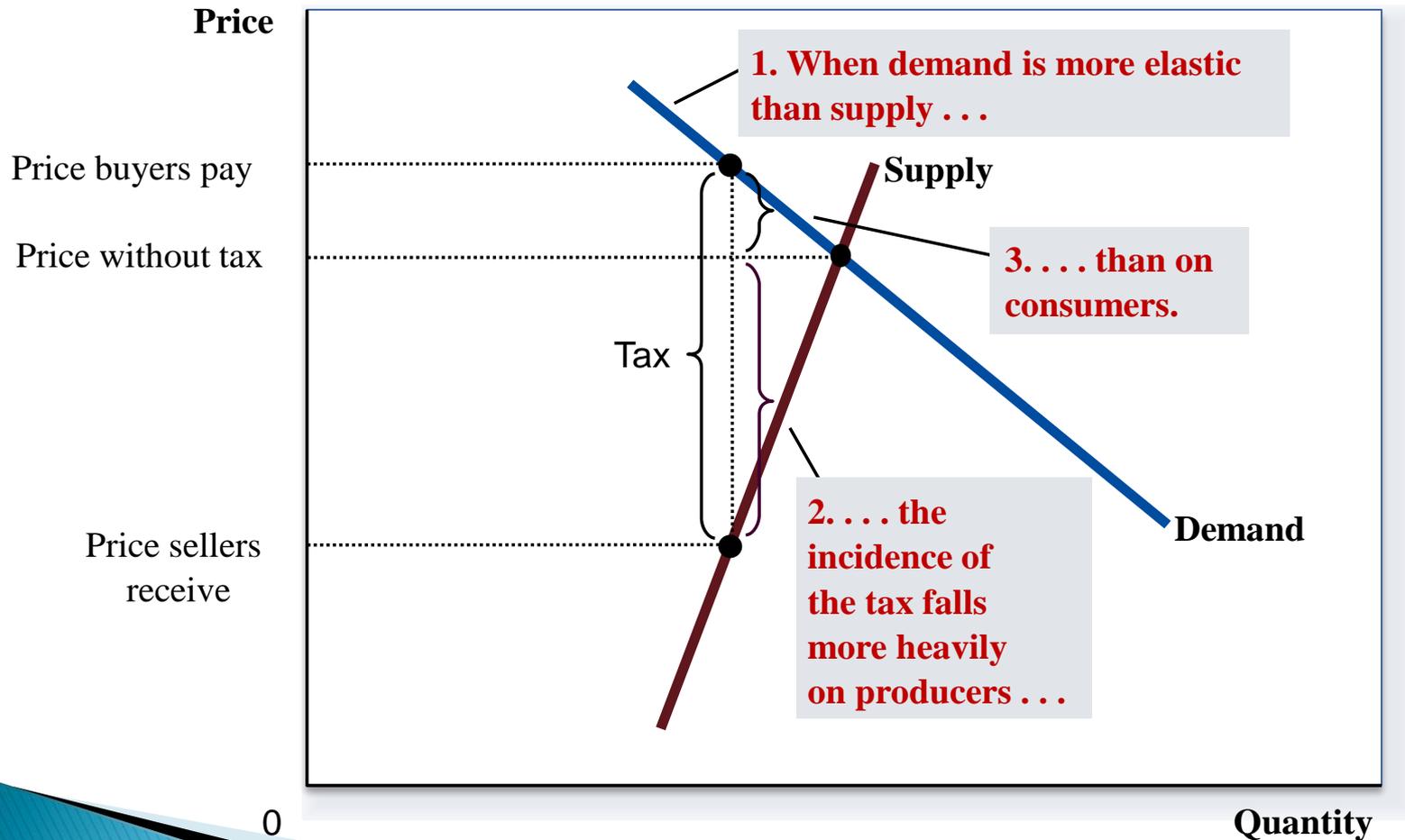


Figure 9 How the Burden of a Tax Is Divided

(b) Inelastic Supply, Elastic Demand



Elasticity and Tax Incidence

So, how is the burden of the tax divided?

The burden of a tax falls more heavily on the side of the market that is less elastic.



Ex: Who pays the Luxury Tax

- ▶ 1990, congress adopted a new luxury tax on yachts, private air planes, jewelry, and expensive cars....get money from the rich guy!
- ▶ However, demand for yacht is elastic, (he can buy a castle in Europe instead)
- ▶ But for the yacht factory and the workers, supply is inelastic (at least in the short term)...
- ▶ Congress repealed it in 1993.

