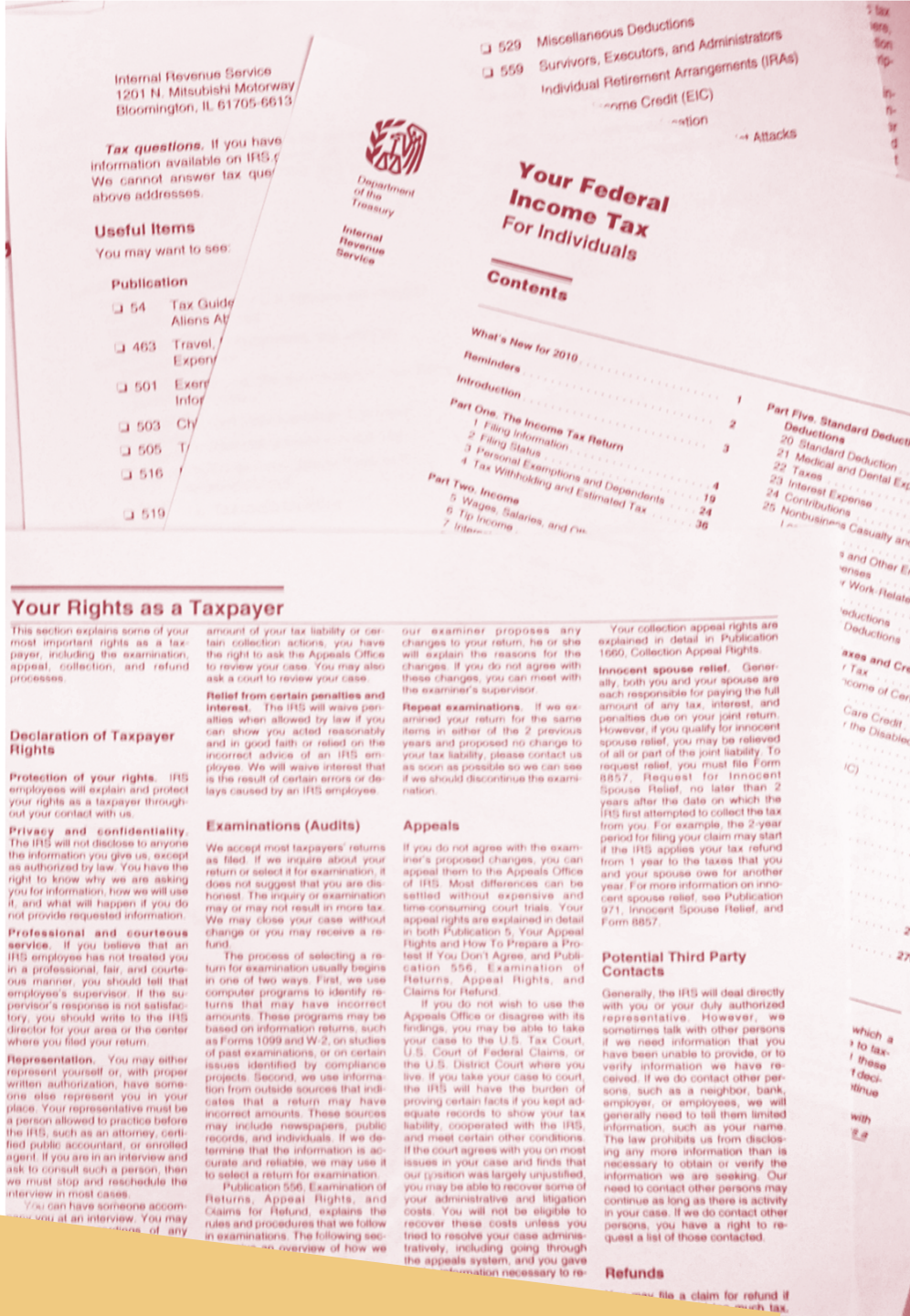
Firms and markets II

MPA 612: Public Management Economics

February 26, 2018



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Current events

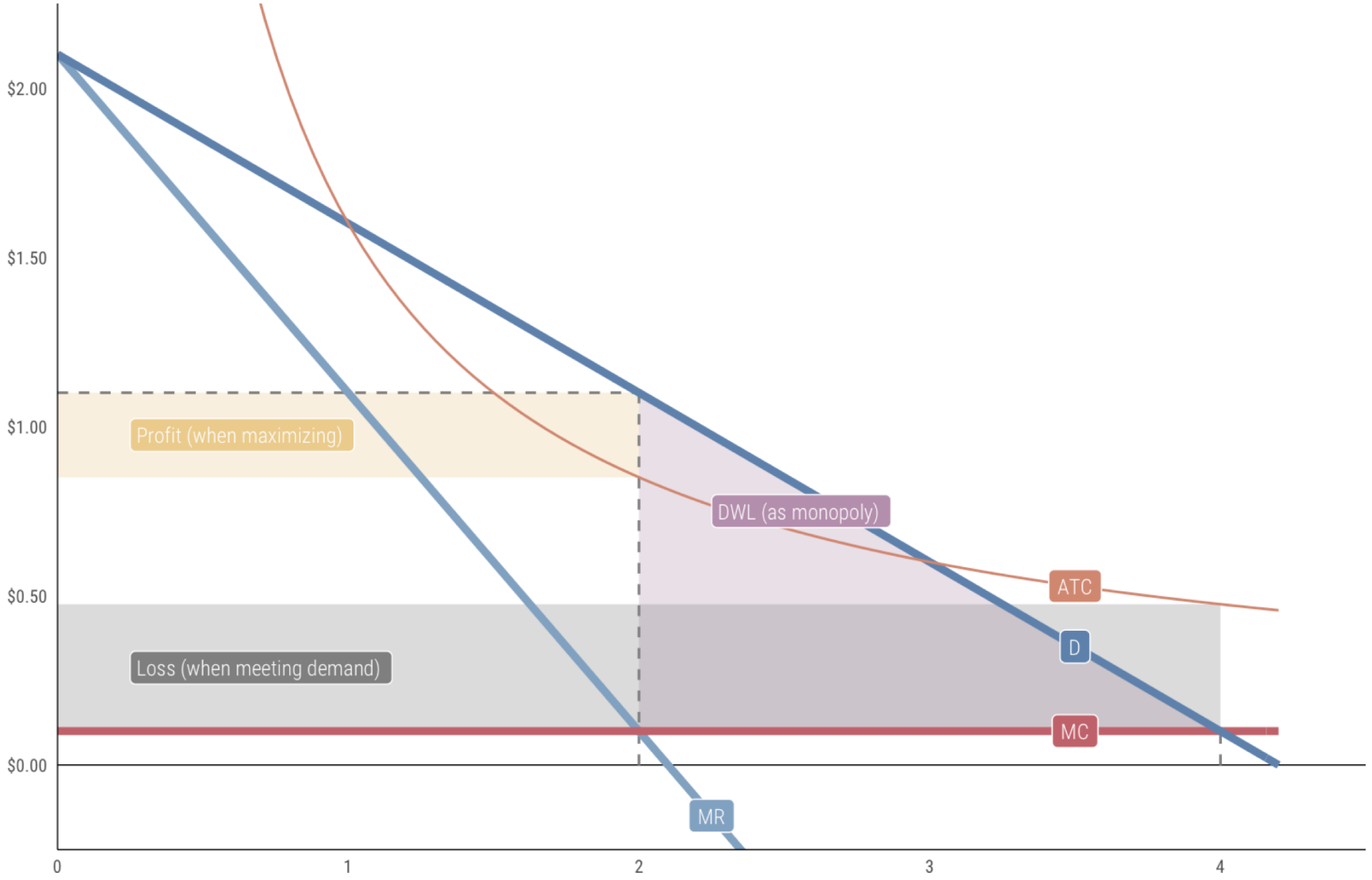
Plan for today

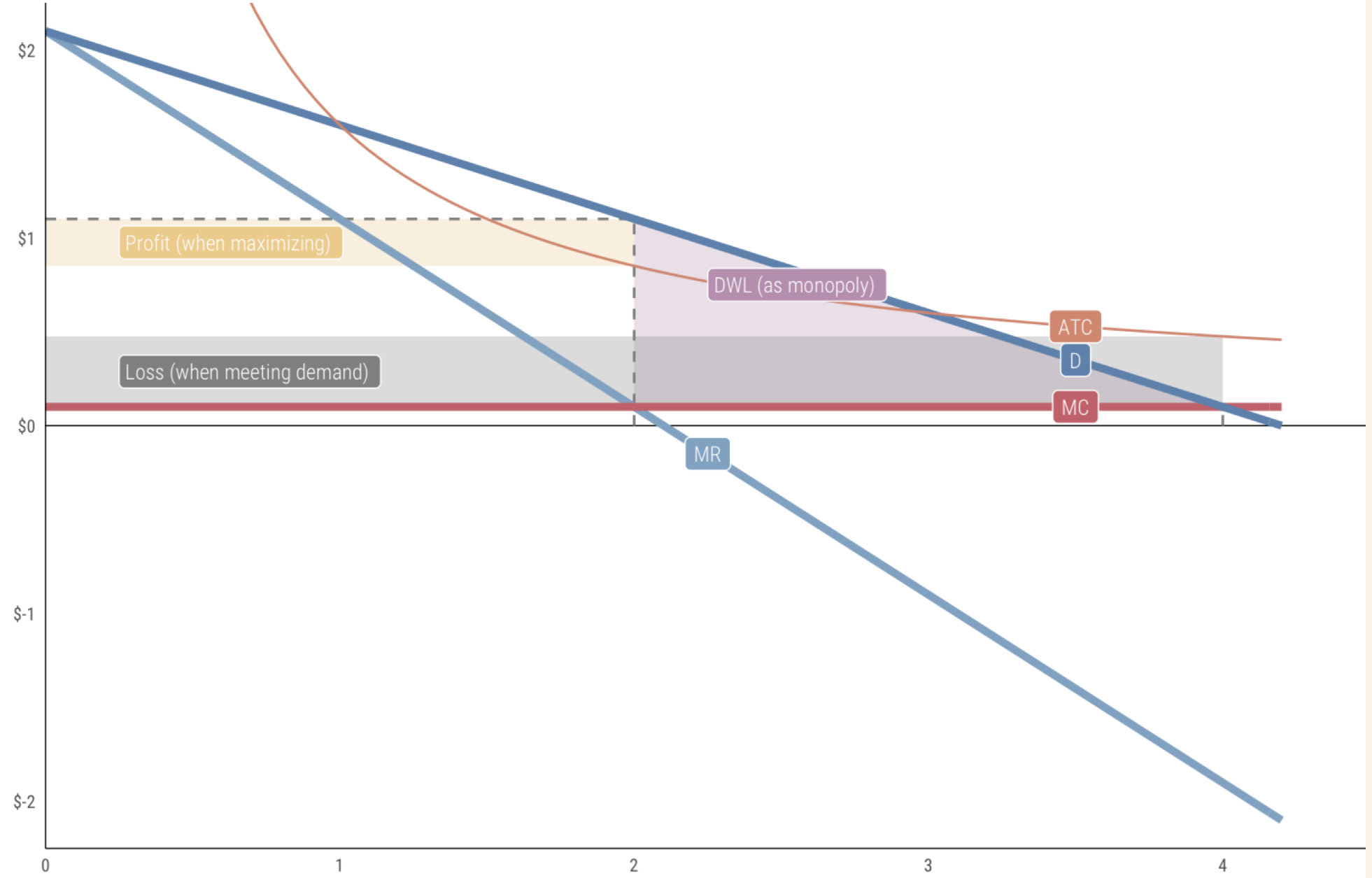
Changes in supply and demand

Consumer and producer surplus

Taxes and distributional issues

Competition in a price-taking world


$2.00
$1.50
$1.00
$0.50
$0.00
0
1
2
3
4
Profit (when maximizing)
Loss (when meeting demand)
DWL (as monopoly)
ATC
D
MC
MR


$2
$1
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$-2
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1
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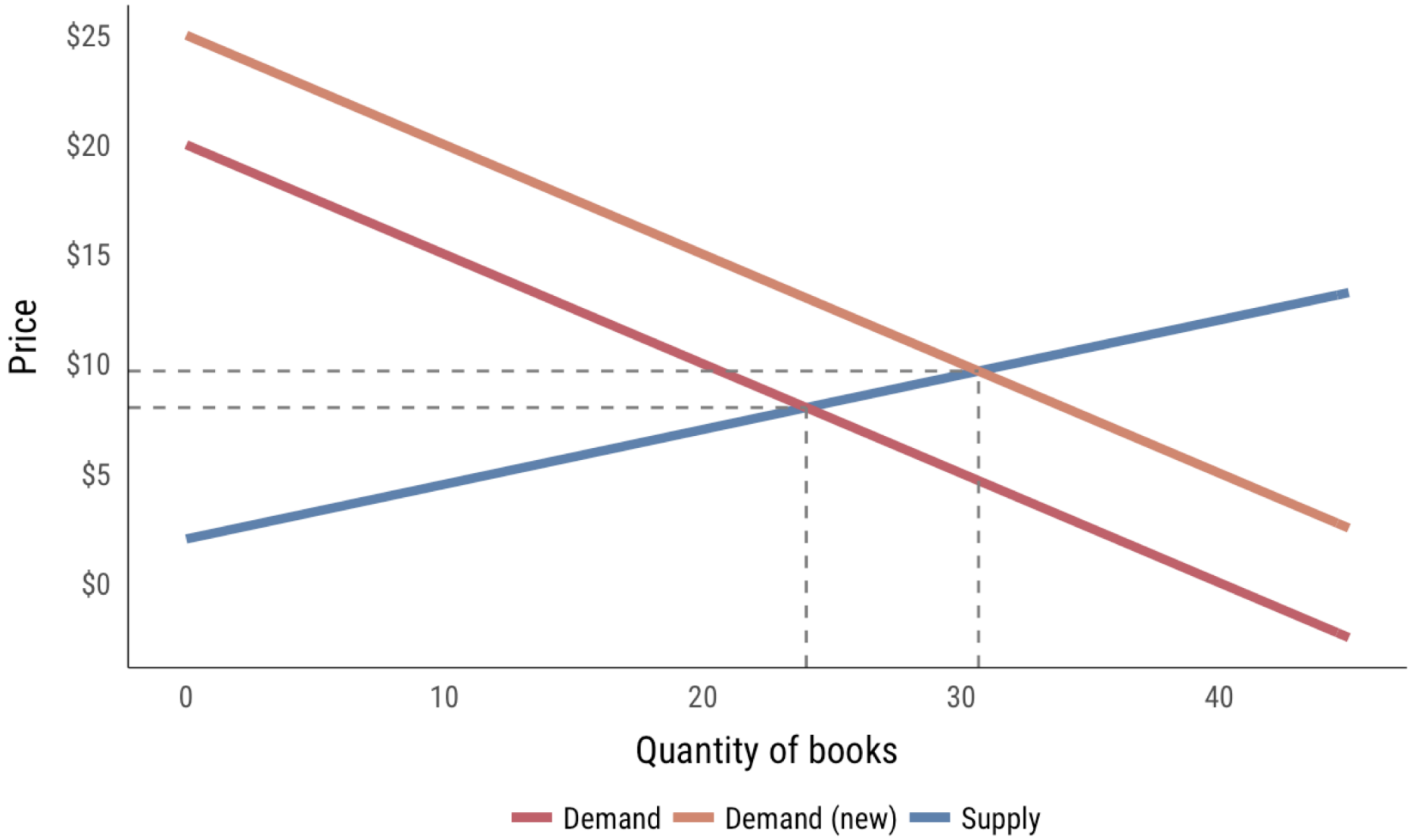
Profit (when maximizing)
Loss (when meeting demand)
DWL (as monopoly)
ATC
D
MC
MR

Changes in supply and demand

Change in demand



Change in demand

Demand higher at every possible point

Structural change

Price increases; quantity increases (or decreases/decreases)

Supply remains the same

People start preferring hamburgers over pizza

Change in quantity demanded

Prices and quantity change…

…but not because of structural issues

Movement along demand curve

Supply remains the same

Price of pizza changes

Two ways to get from 24 to 17ish

A → C

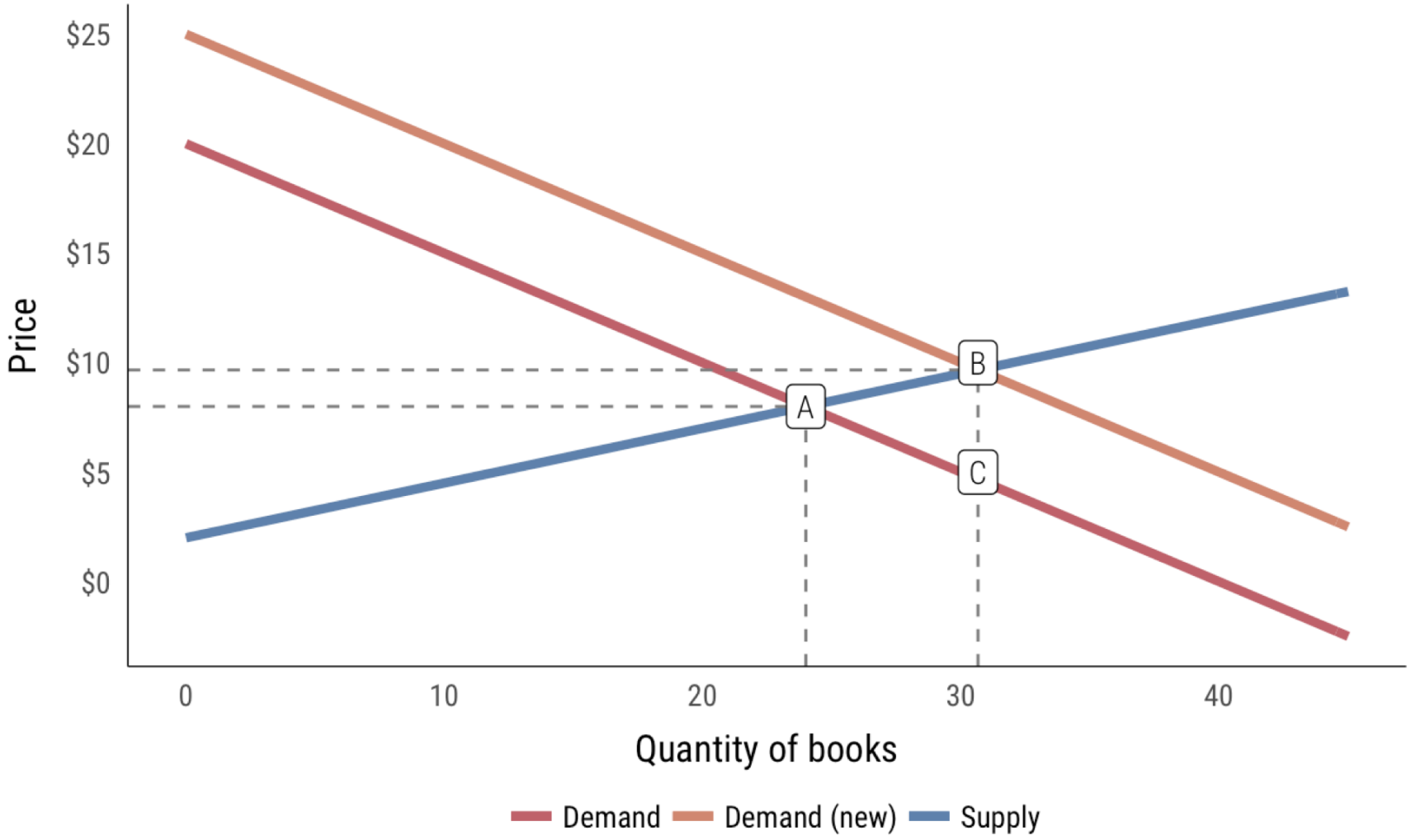
Change in quantity demanded

Only price changes

A → B

Change in demand

New demand curve



Factors that cause demand to shift

Change in price of complementary goods

Change in income

Change in price of substitute goods

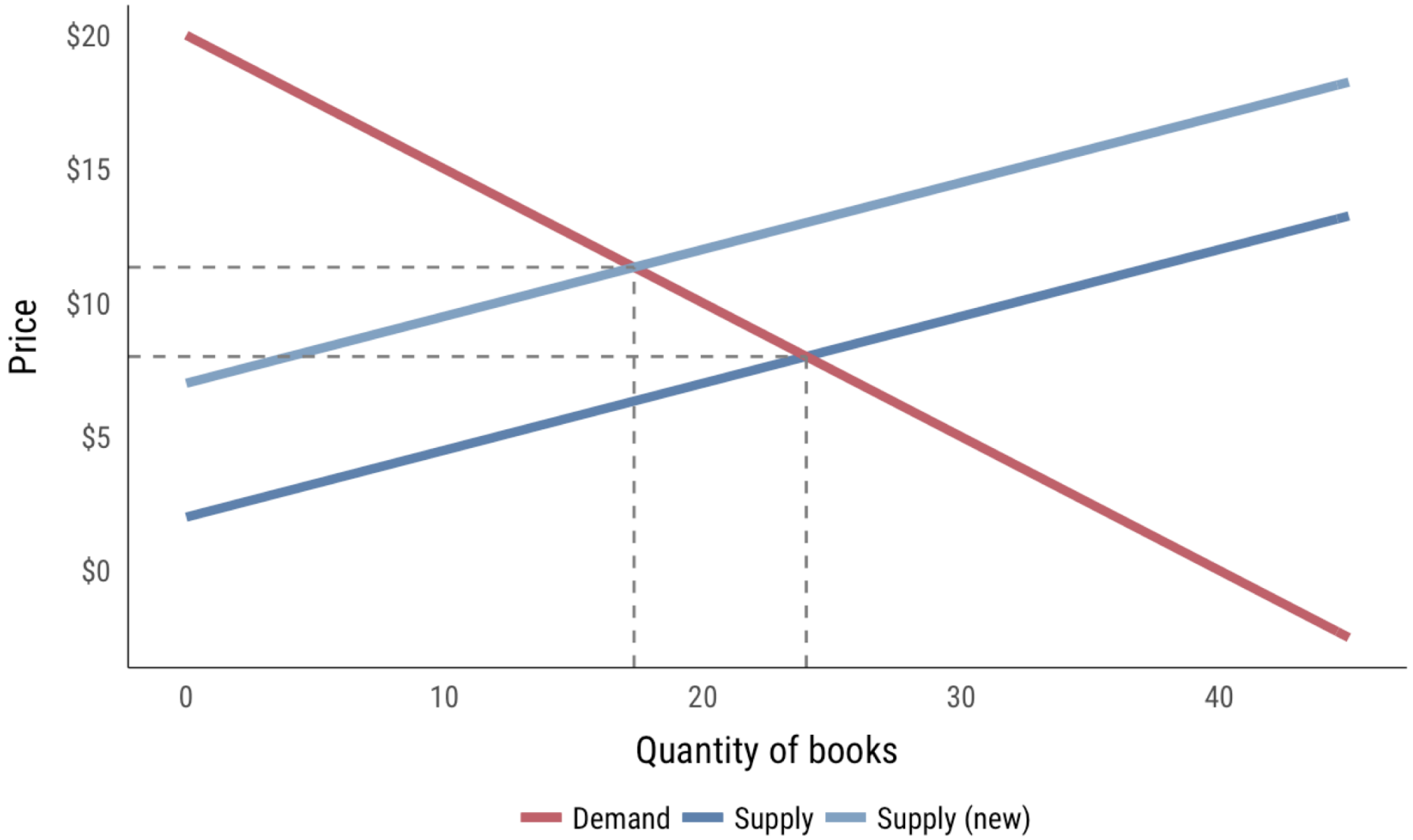
Change in preferences

Change in population of buyers

Expectation of higher prices

Orange market	Dr. Oz promotes new fad diet where everyone eats 10 oranges a day
Car market	Consumer income rises
Car market	Gas prices double
Shoe market	More manufacturers make shoes
Lettuce market	Price drops by 10 cents

Change in supply



Change in supply

Supply higher at every possible point

Structural change

Price increases; quantity increases (or decreases/decreases)

Demand remains the same

Cost of production changes because of technology or input costs

Change in quantity supplied

Prices and quantity change…

…but not because of structural issues

Movement along supply curve

Demand remains the same

Price of product changes

Two ways to get from 24 to 17ish

A → C

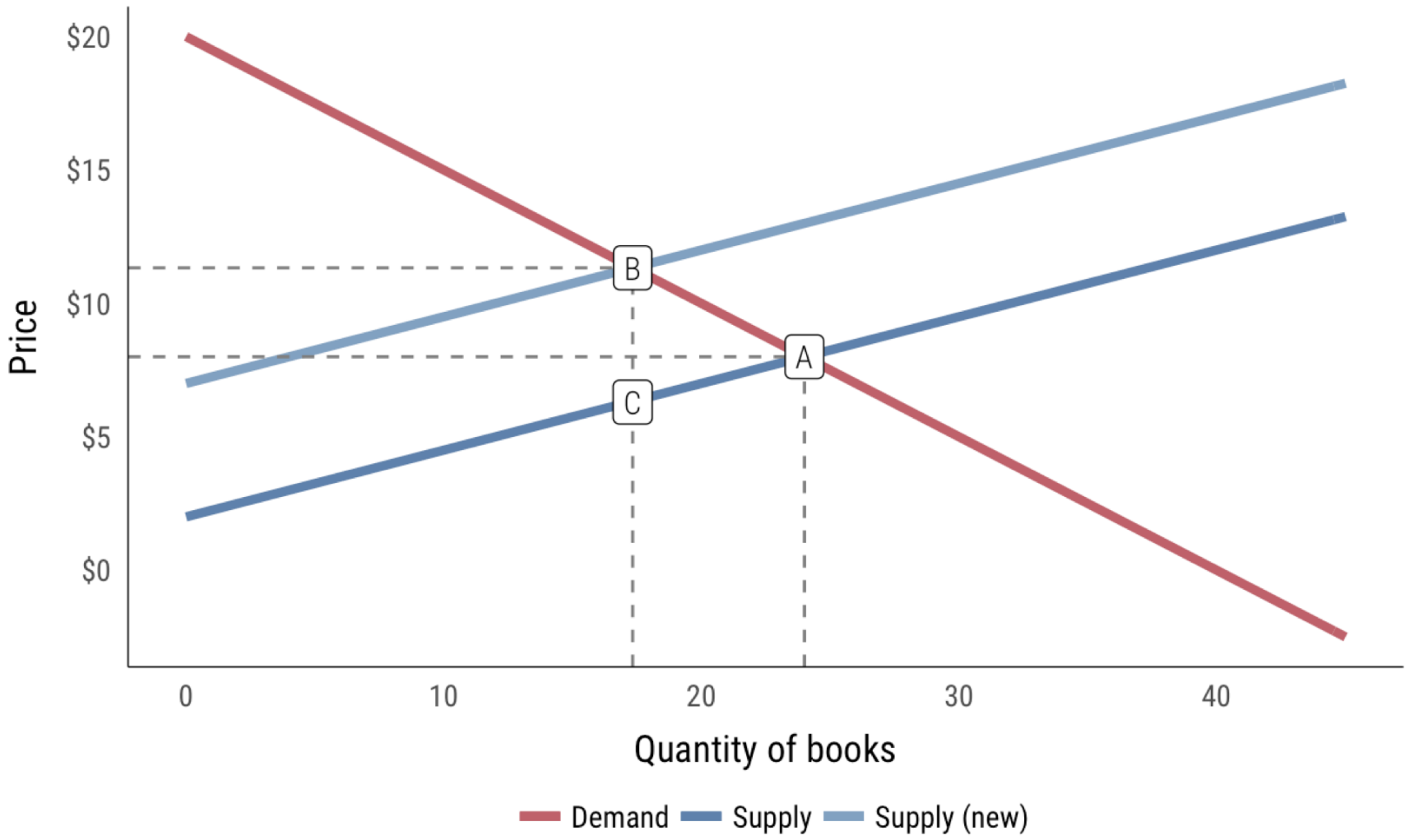
Change in quantity supplied

Only price changes

A → B

Change in supply

New supply curve



Factors that cause supply to shift

Change in cost of inputs

Change in cost of production

Change in weather

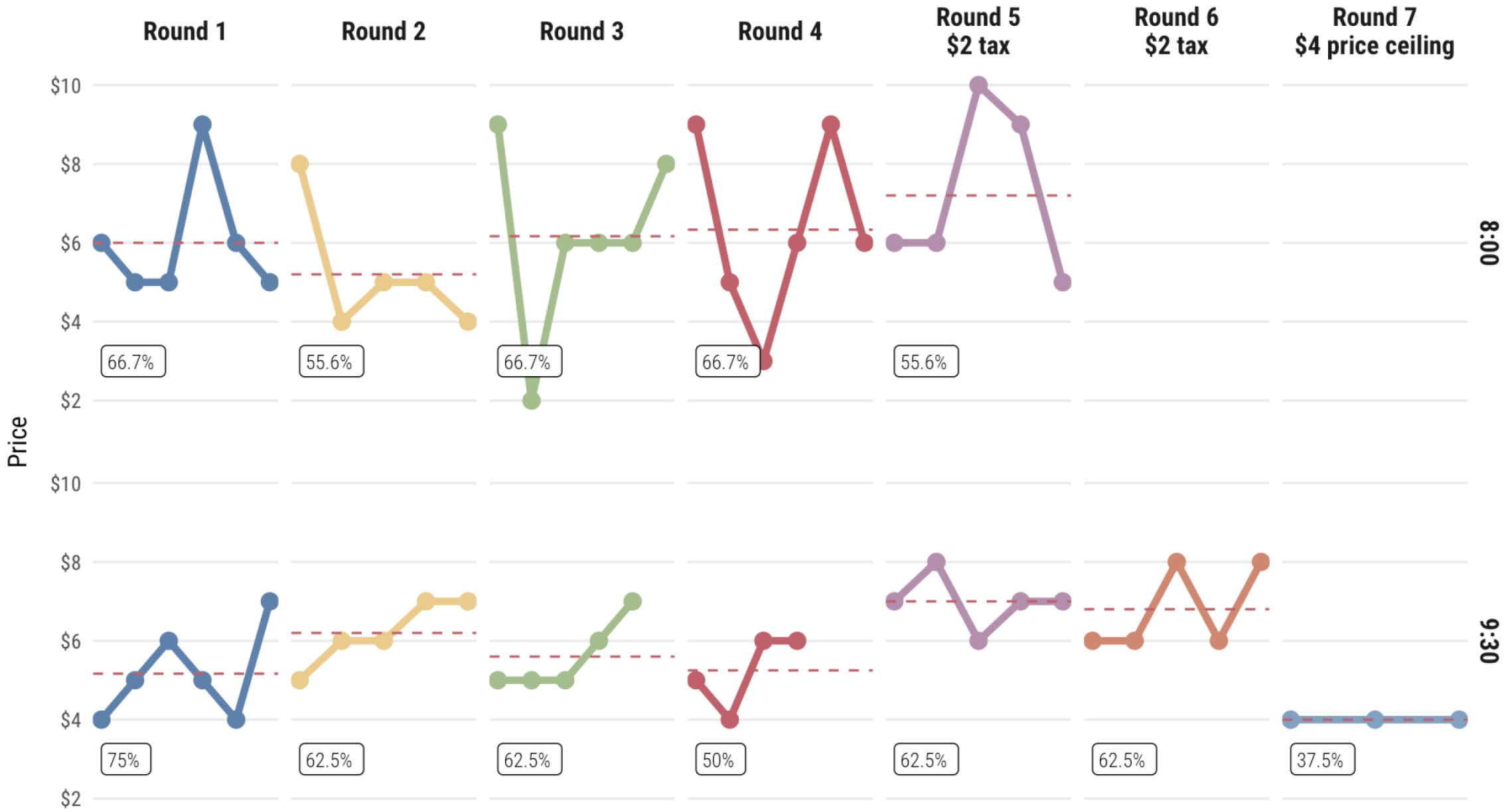
Change in number of suppliers

Expectation of lower prices

Car market	New engine design reduces production costs
Orange market	Freeze in Florida kills 50% of the crop
Shoe market	Price of shoes increases
Shoe market	Price of leather increases

Consumer and producer surplus

Coloring in all the lines


Round 1
Round 2
Round 3
Round 4
Round 5
$2 tax
Round 6
$2 tax
Round 7
$4 price ceiling
Price
$10
$8
$6
$4
$2
66.7%
55.6%
66.7%
66.7%
55.6%
8:00
9:30
75%
62.5%
62.5%
50%
62.5%
62.5%
37.5%

Consumer surplus

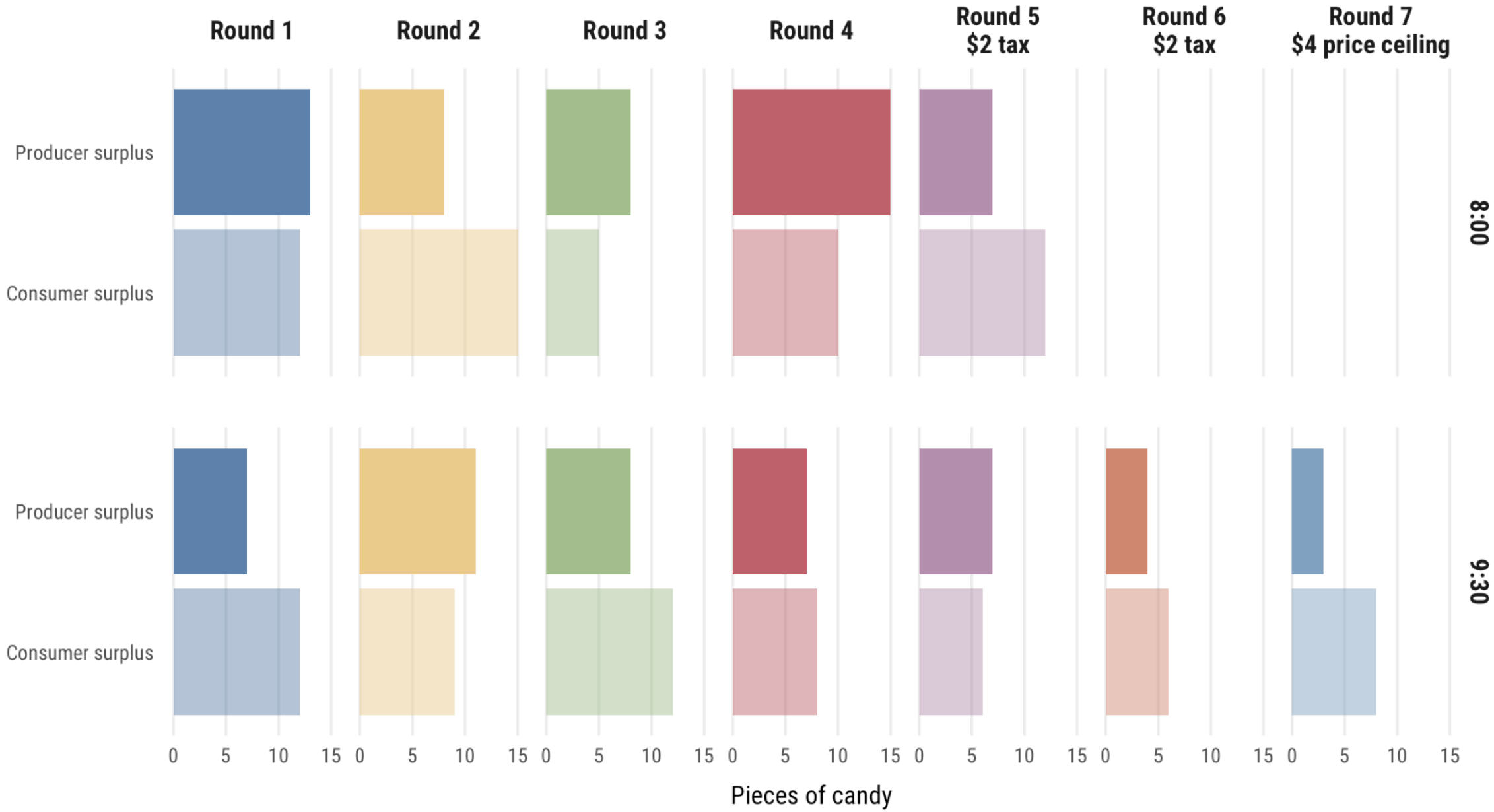
Difference between WTP and price

How good of a deal consumer gets

Producer surplus

Difference between price and WTA

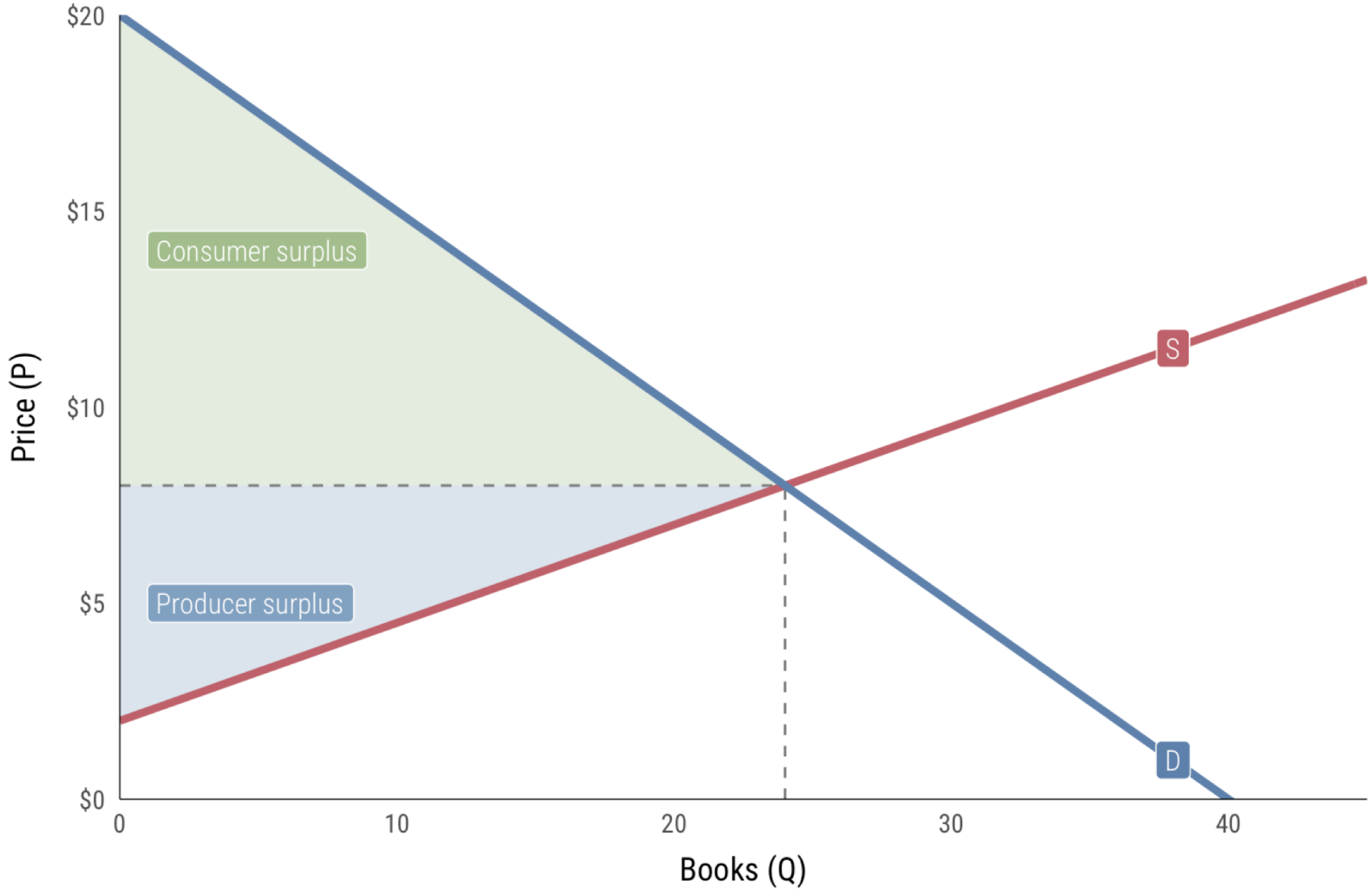
How good of a deal producer gets


Round 1
Round 2
Round 3
Round 4
Round 5
$2 tax
Round 6
$2 tax
Round 7
$4 price ceiling
Producer surplus
Consumer surplus
8:00
Producer surplus
Consumer surplus
9:30
0
5
10
15
Pieces of candy

$$S : P = 2 + 0.25Q$$

$$D : P = 20 - 0.5Q$$

$$S : P = 2 + 0.25Q$$
$$D : P = 20 - 0.5Q$$



Taxes and distributional issues

Why do governments tax?

Raise revenue for services

Redistribute resources

Encourage or discourage consumption

What happens when governments tax?

Revenue raised for public goods

Resources redistributed

Markets distorted; loss of efficiency

Types of taxes

Excise

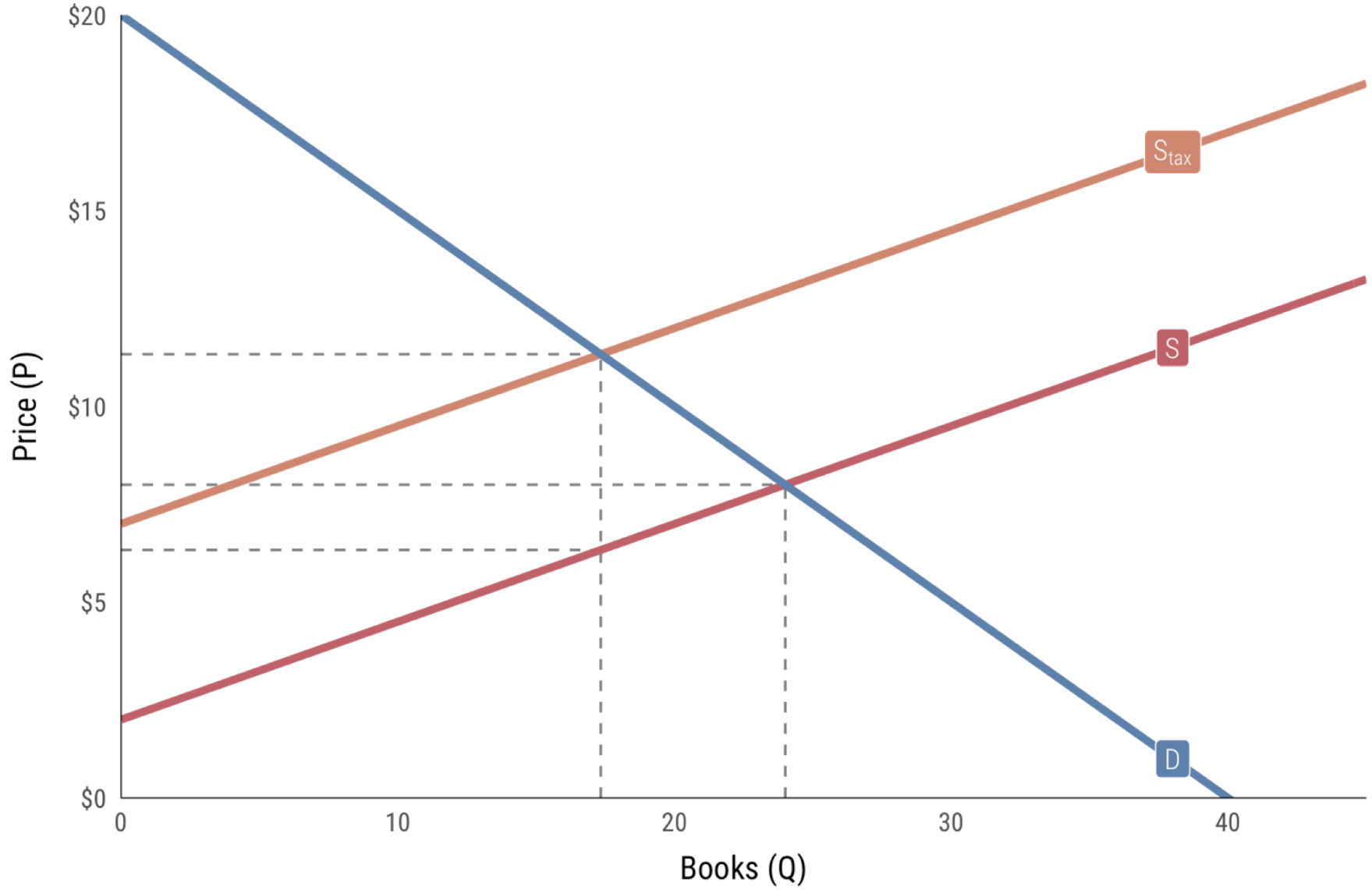
Income, payroll, sales, profit, property

$$S : P = 2 + 0.25Q$$

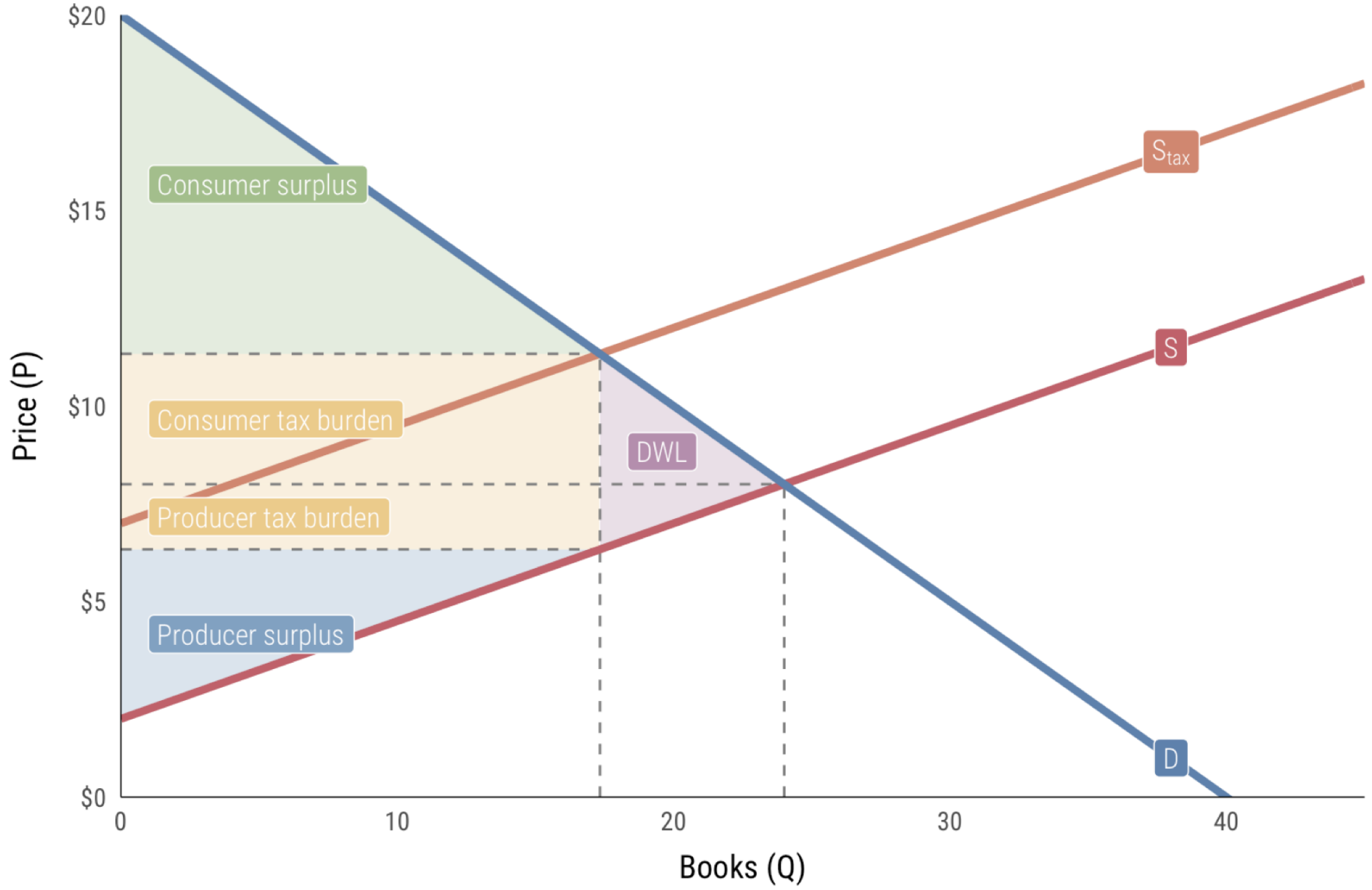
$$D : P = 20 - 0.5Q$$

$$S_{\text{tax}} : P = 2 + 0.25Q + 5$$

$$S : P = 2 + .025Q$$
$$D : P = 20 - 0.5Q$$
$$S_{\text{tax}} : P = 2 + 0.25Q + 5$$



$$S : P = 2 + 0.25Q$$
$$D : P = 20 - 0.5Q$$
$$S_{\text{tax}} : P = 2 + 0.25Q + 5$$



$$S_1 : P = 2 + 0.25Q$$

$$D_1 : P = 10 - 0.05Q$$

$$S_{1\ \text{tax}} : P = 2 + 0.25Q + 5$$

$$S_3 : P = 2 + 0.05Q$$

$$D_3 : P = 20 - 0.5Q$$

$$S_{3\ \text{tax}} : P = 2 + 0.05Q + 5$$

$$S_2 : P = 2 + 0.25Q$$

$$D_2 : P = 20 - 2Q$$

$$S_{2\ \text{tax}} : P = 2 + 0.25Q + 5$$

$$S_4 : P = 2 + 1.5Q$$

$$D_4 : P = 20 - 0.5Q$$

$$S_{4\ \text{tax}} : P = 2 + 1.5Q + 5$$

P and Q at competitive equilibrium

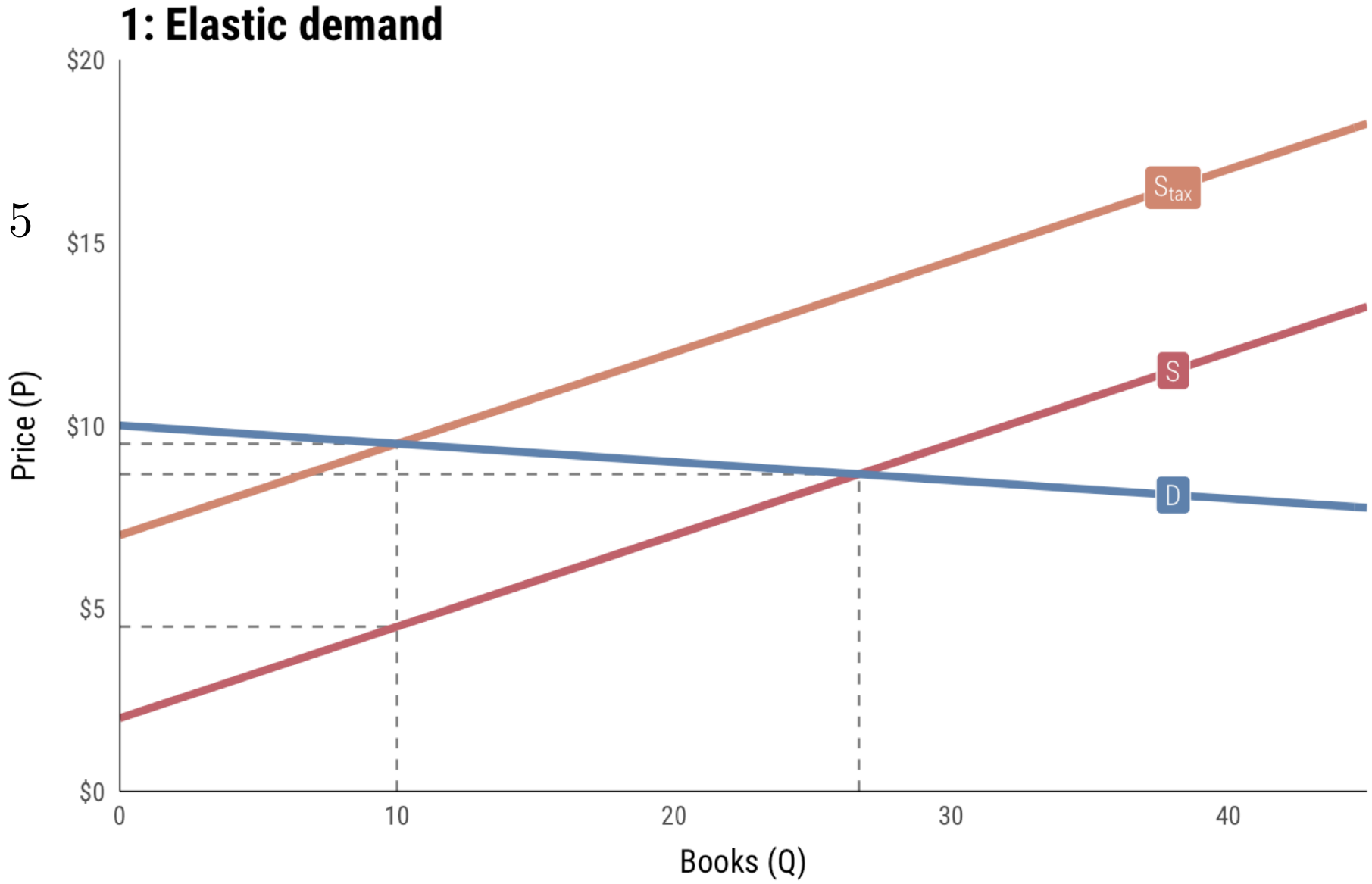
Size of producer and consumer surpluses

P and Q at tax equilibrium

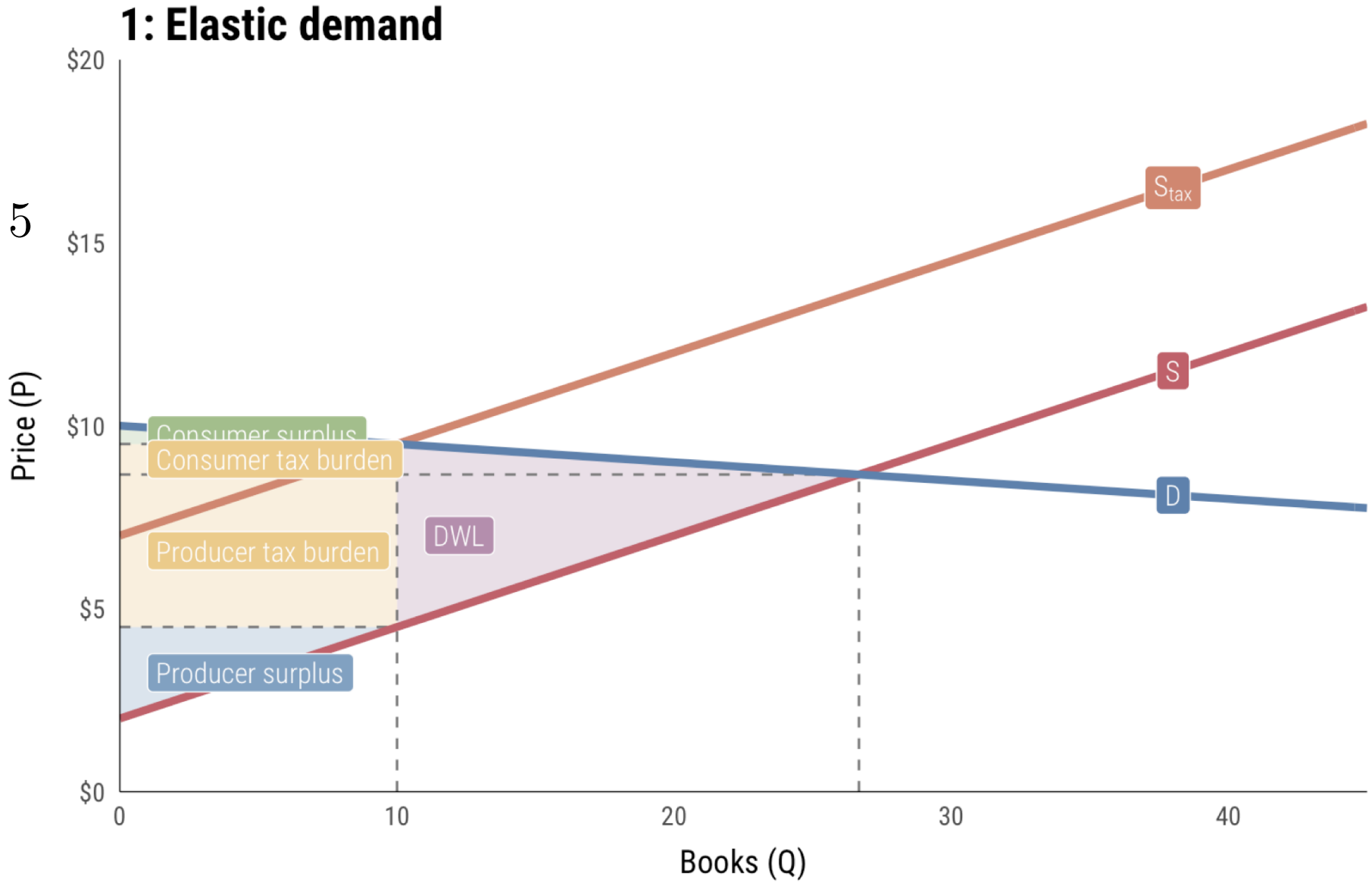
Size of deadweight loss

Producer and consumer incidence

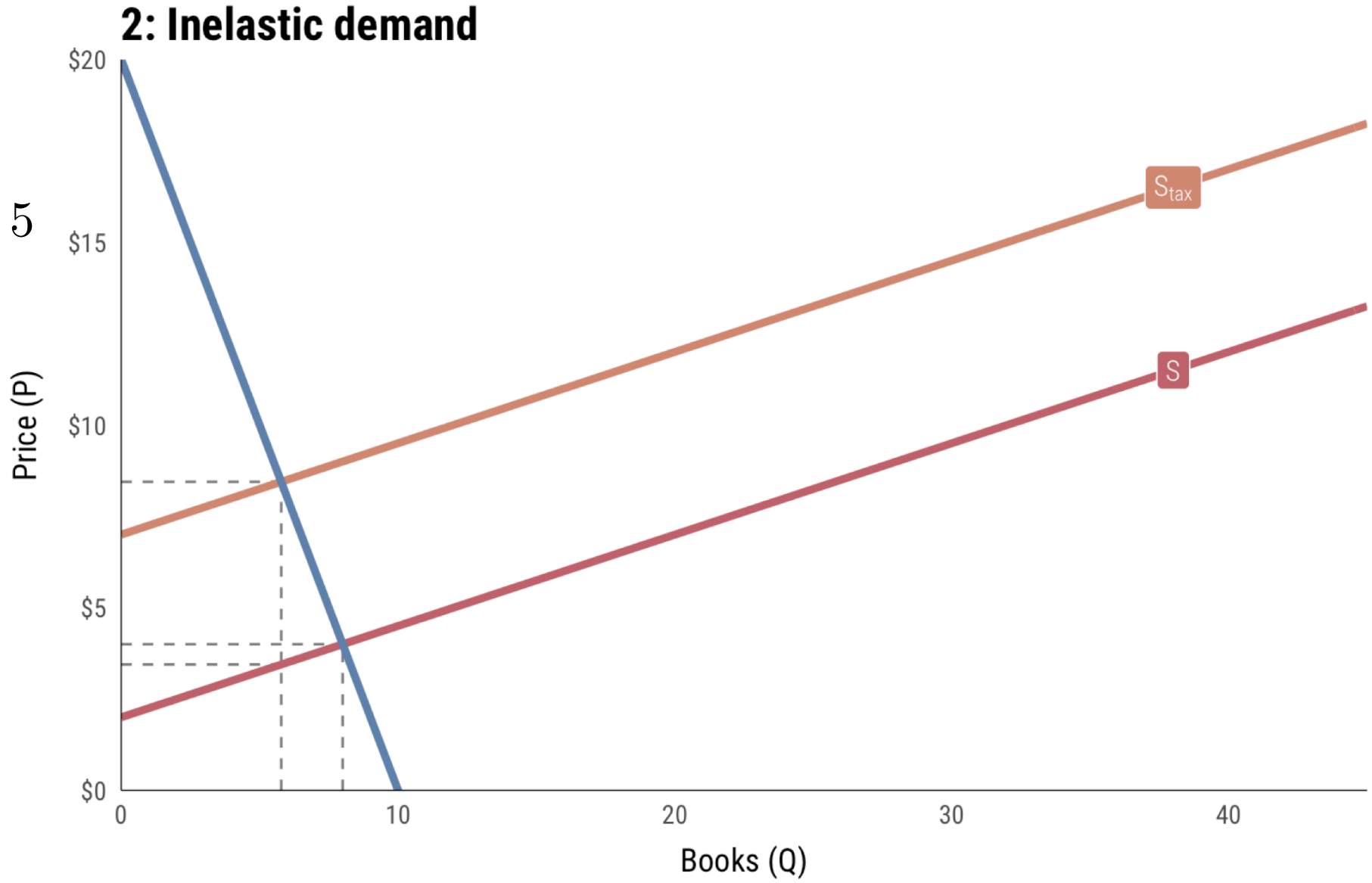
$$S_1 : P = 2 + 0.25Q$$
$$D_1 : P = 10 - 0.05Q$$
$$S_{1\ \text{tax}} : P = 2 + 0.25Q + 5$$



$$S_1 : P = 2 + 0.25Q$$
$$D_1 : P = 10 - 0.05Q$$
$$S_{1\ \text{tax}} : P = 2 + 0.25Q + 5$$



$$S_2 : P = 2 + 0.25Q$$
$$D_2 : P = 20 - 2Q$$
$$S_{2\ \text{tax}} : P = 2 + 0.25Q + 5$$



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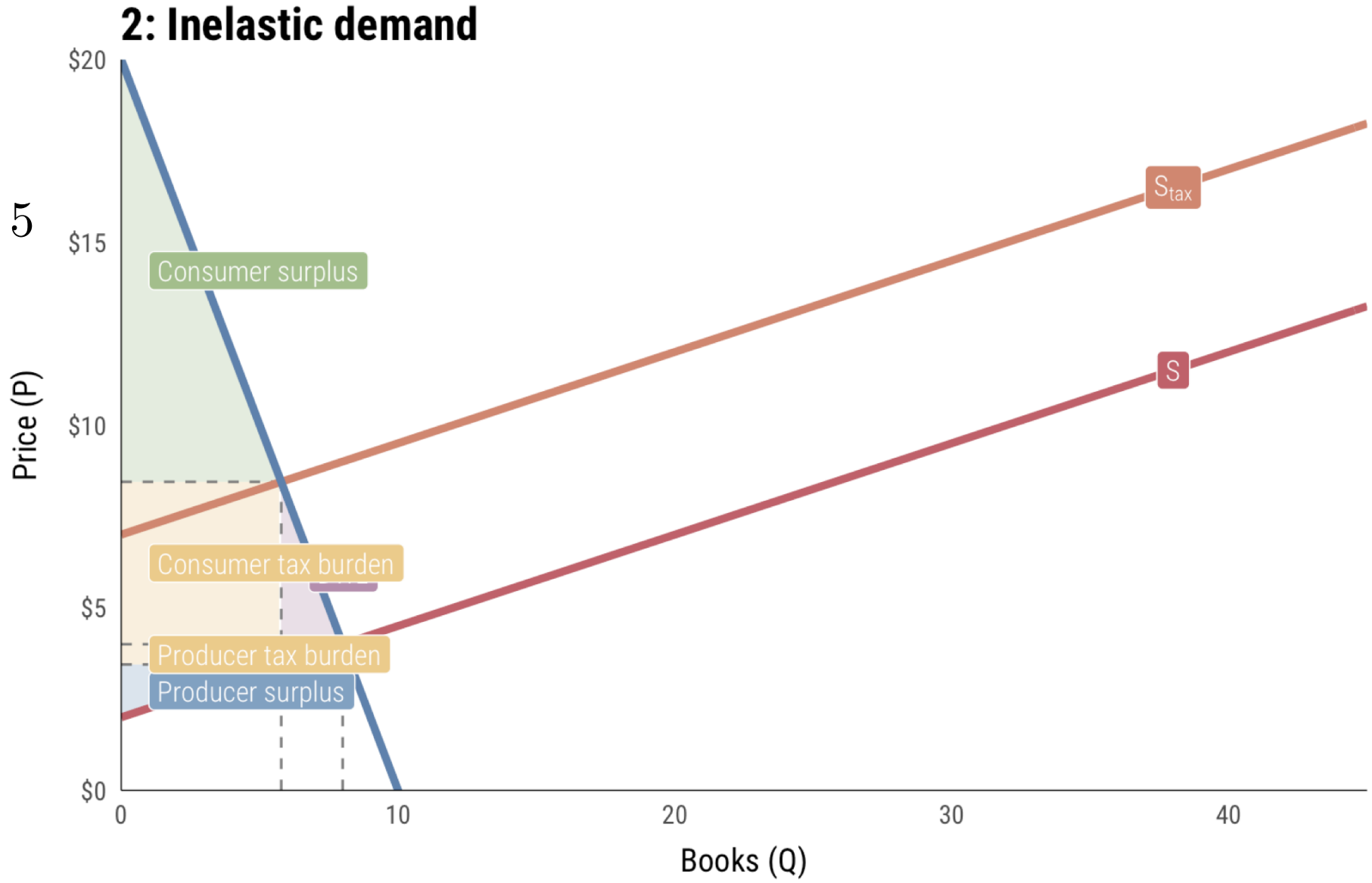
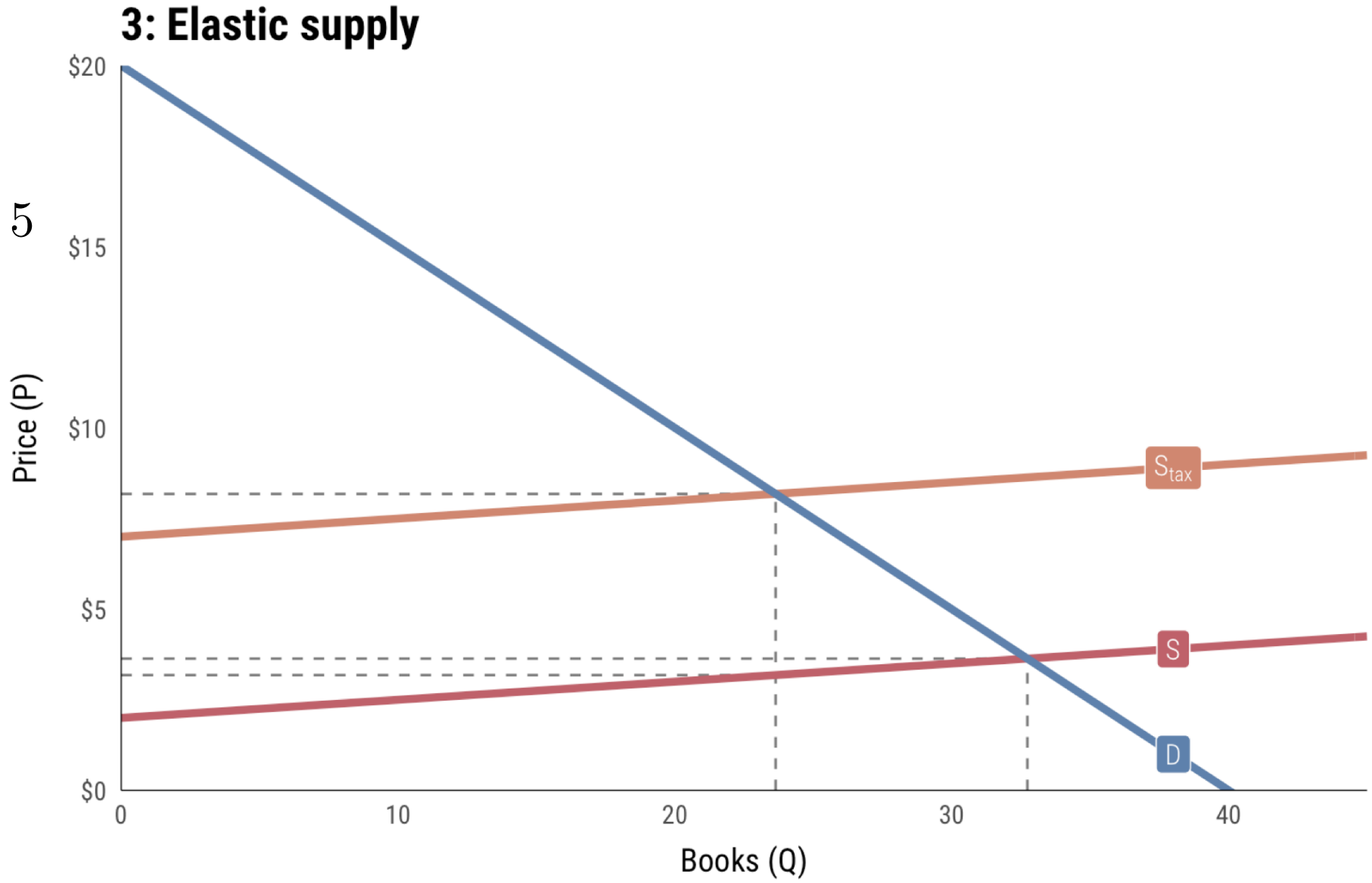
$$D_2 : P = 20 - 2Q$$
$$S_{2\ \text{tax}} : P = 2 + 0.25Q + 5$$



$$S_3 : P = 2 + 0.05Q$$
$$D_3 : P = 20 - 0.5Q$$
$$S_{3\ \text{tax}} : P = 2 + 0.05Q + 5$$



$$S_3 : P = 2 + 0.05Q$$
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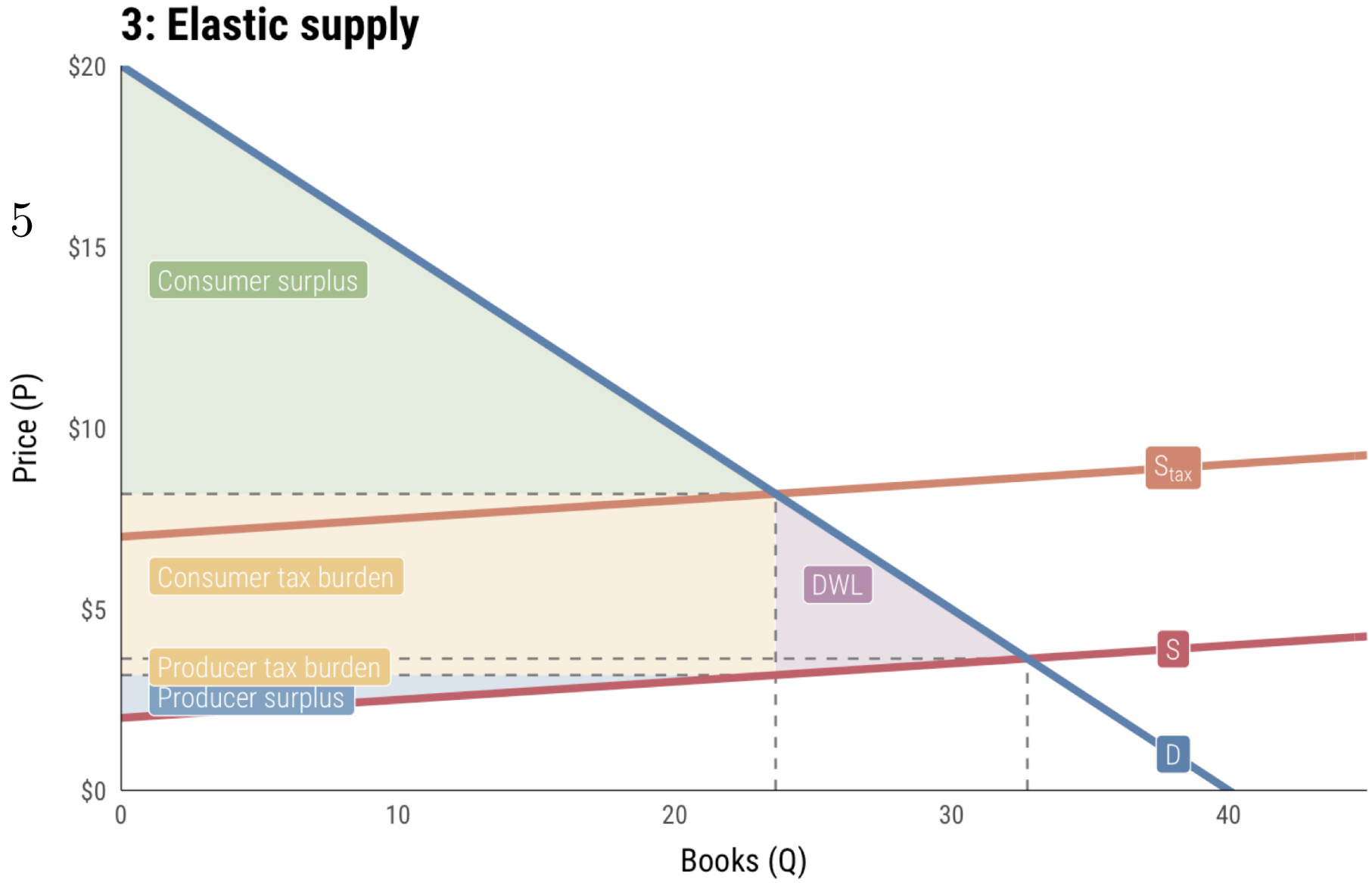

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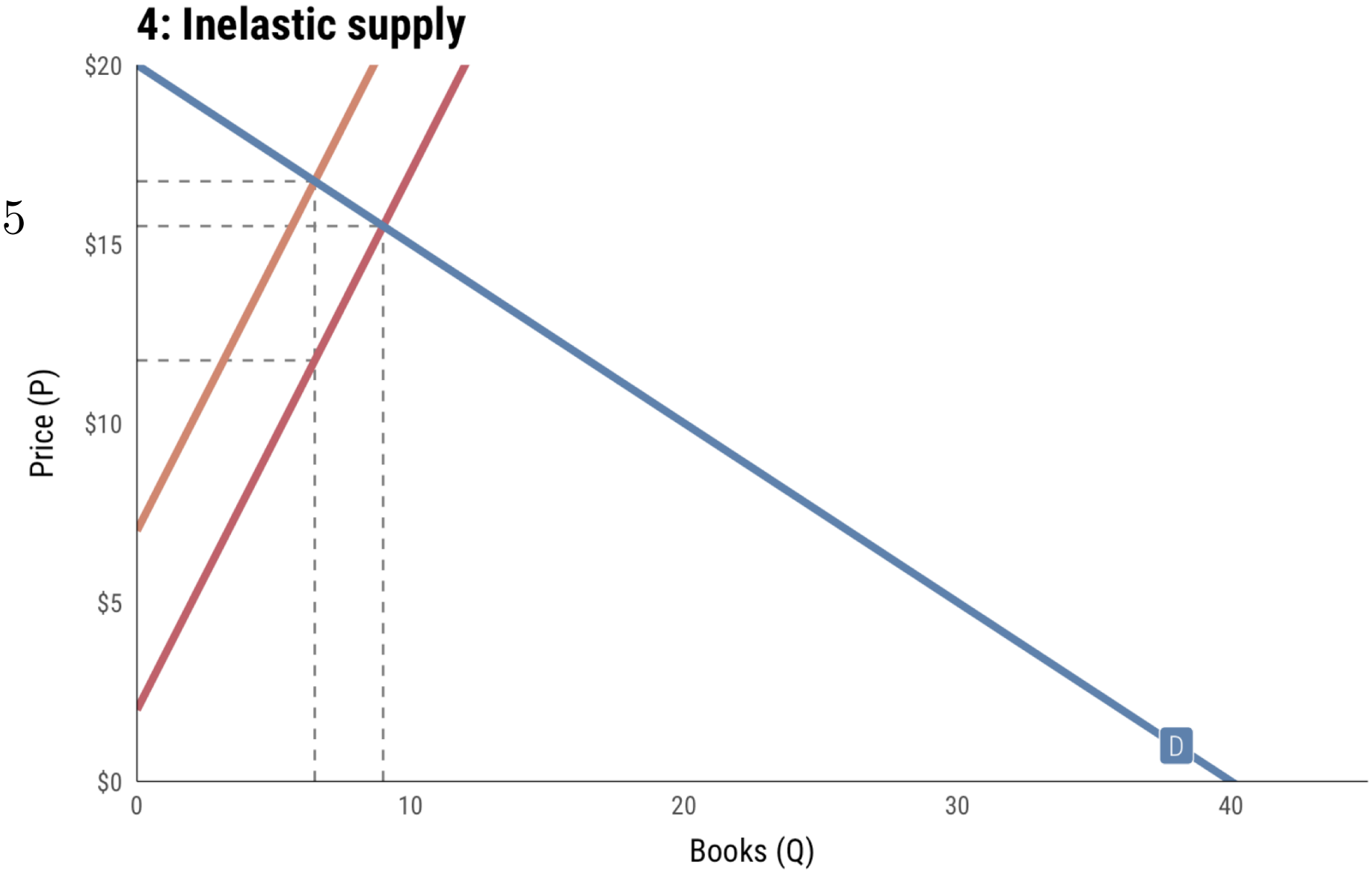
$$S_{4\ \text{tax}} : P = 2 + 1.5Q + 5$$



$$S_4 : P = 2 + 1.5Q$$
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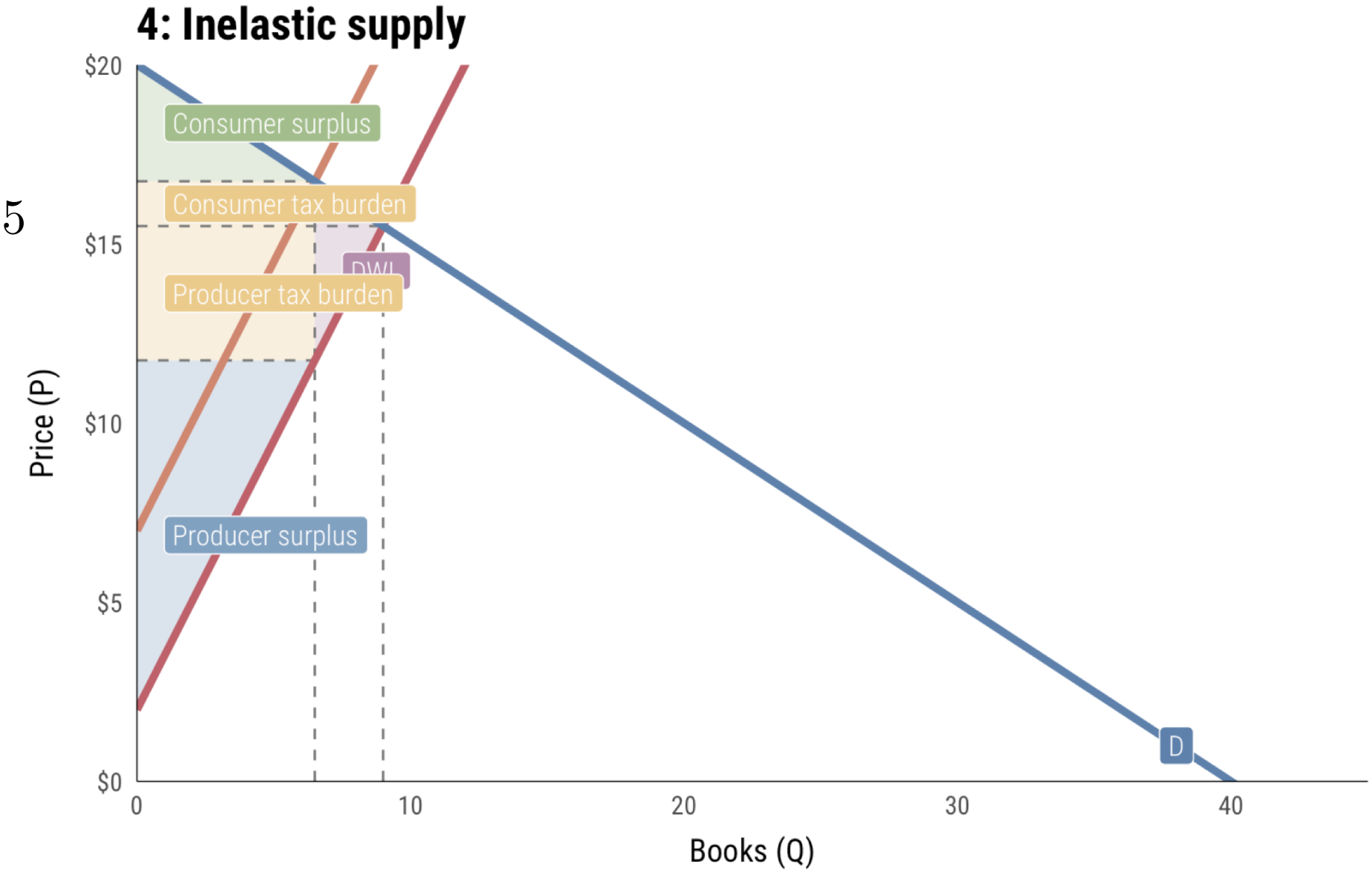
$$S_{4\ \text{tax}} : P = 2 + 1.5Q + 5$$



Tax incidence and ε

Incidence depends on elasticity of supply or demand

Tax burden falls on those least able to escape it

Incidence within consumers

Progressive taxes

Rich pay more

Income taxes (but loopholes)

Regressive taxes

Poor pay more

Sales taxes, payroll taxes

Tax fairness

Benefits principle

Those who benefit from public spending should bear the burden of the tax

Ability-to-pay principle

Those with a greater ability to pay a tax should pay more tax

Competition in a price-taking world

Messing with capitalism and competition to be more capitalistic and competitive

Continued Existence Of Edible Arrangements Disproves Central Tenets Of Capitalism

3/31/11 8:00am • SEE MORE: OUR ANNUAL YEAR 2011

Economists say the franchise "goes against all we previously held to be true about the concept of supply and demand."

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GOVERNMENT

Episode 657: The Tale Of The Onion King

October 14, 2015 · 9:10 PM ET

15:51

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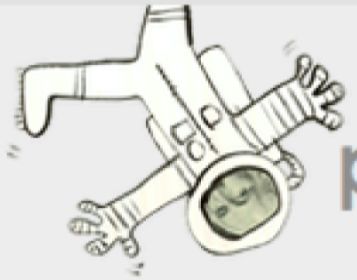

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TRADE

Episode 438: Mavericks, Monopolies And Beer

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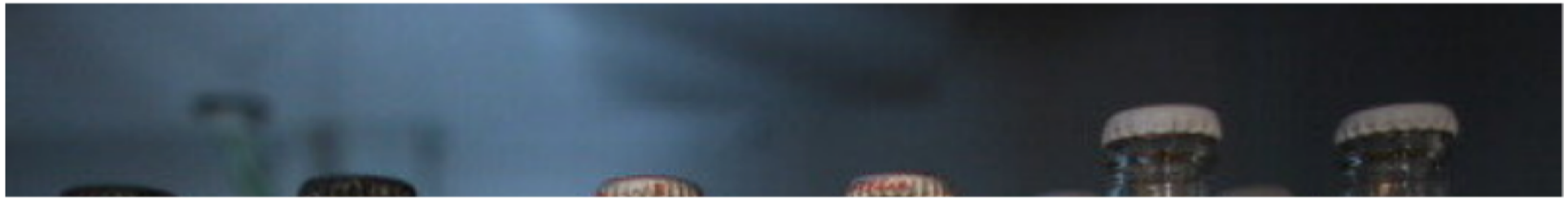
February 23, 2013 · 11:00 AM ET



Price-making firm	Price-taking firm
Sets P and Q to maximize π	Sets Q to maximize π, given P
MC < P	MC = P
Deadweight loss	Pareto efficient
Advertising and marketing	Little advertising (public good)
Lobbying to influence politics	Little lobbying (public good)
Research, innovation, prevention of copying	Little incentive for innovation because of risk of copying

OUPblog

Oxford University Press's
Academic Insights for the Thinking World

Is competition always good?

MARCH 25TH 2013