

FIRMS AND MARKETS III

MPA 612: Economy, Society, and Public Policy

March 4, 2019

*Fill out your reading report
on Learning Suite*

PLAN FOR TODAY

Supply and demand

Changes in supply and demand

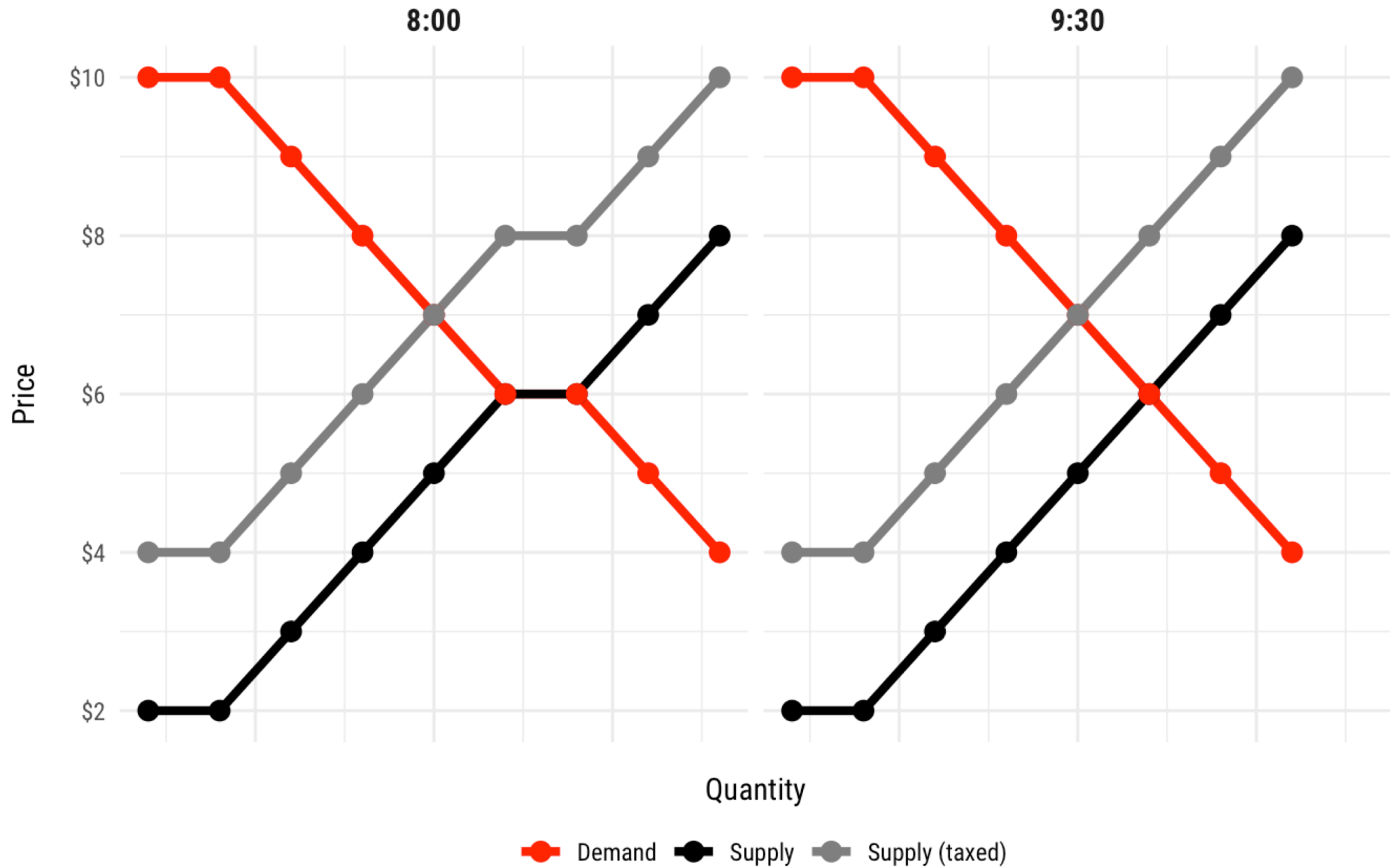
Surplus

Taxes, incidence, and DWL

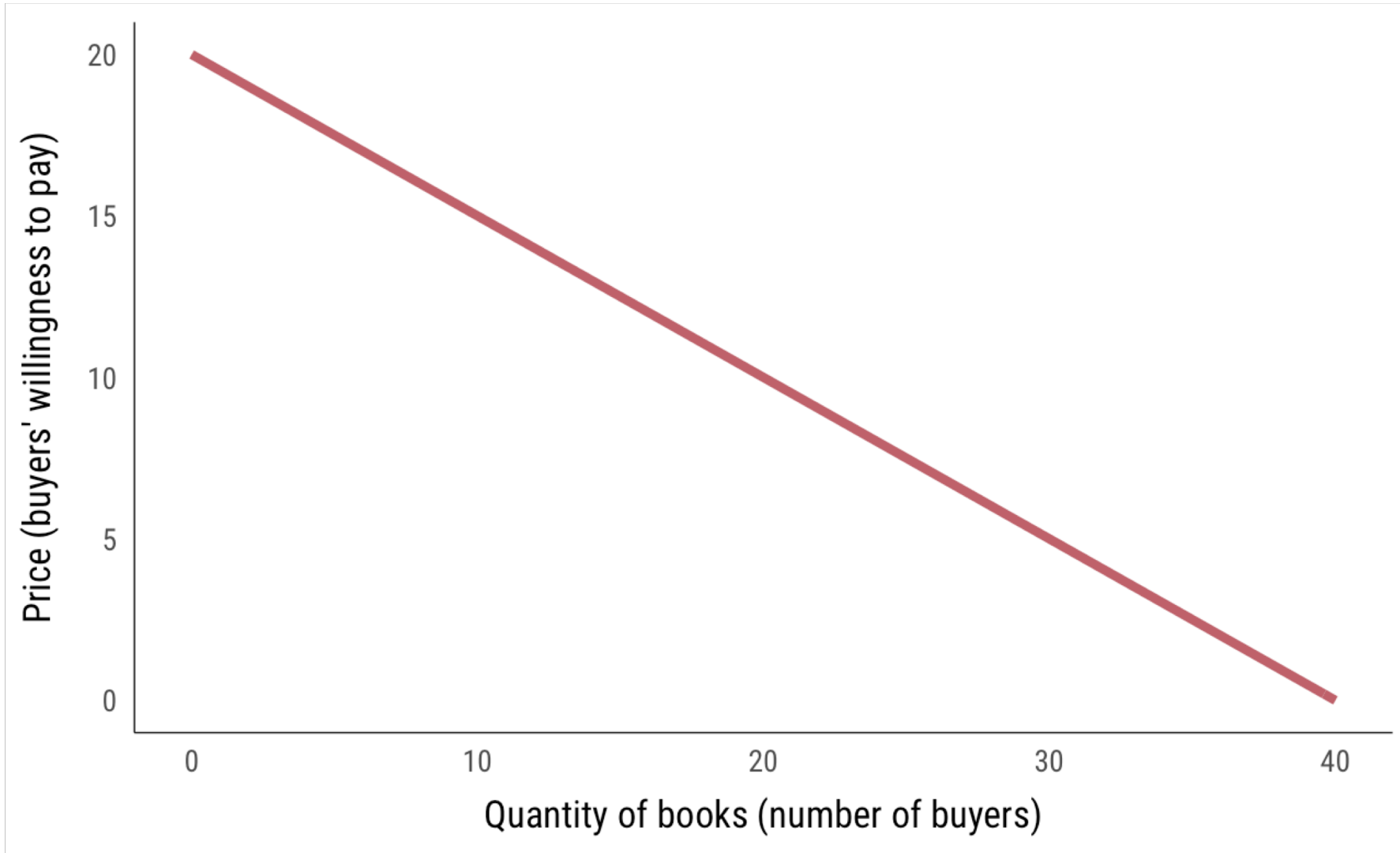
SUPPLY AND DEMAND



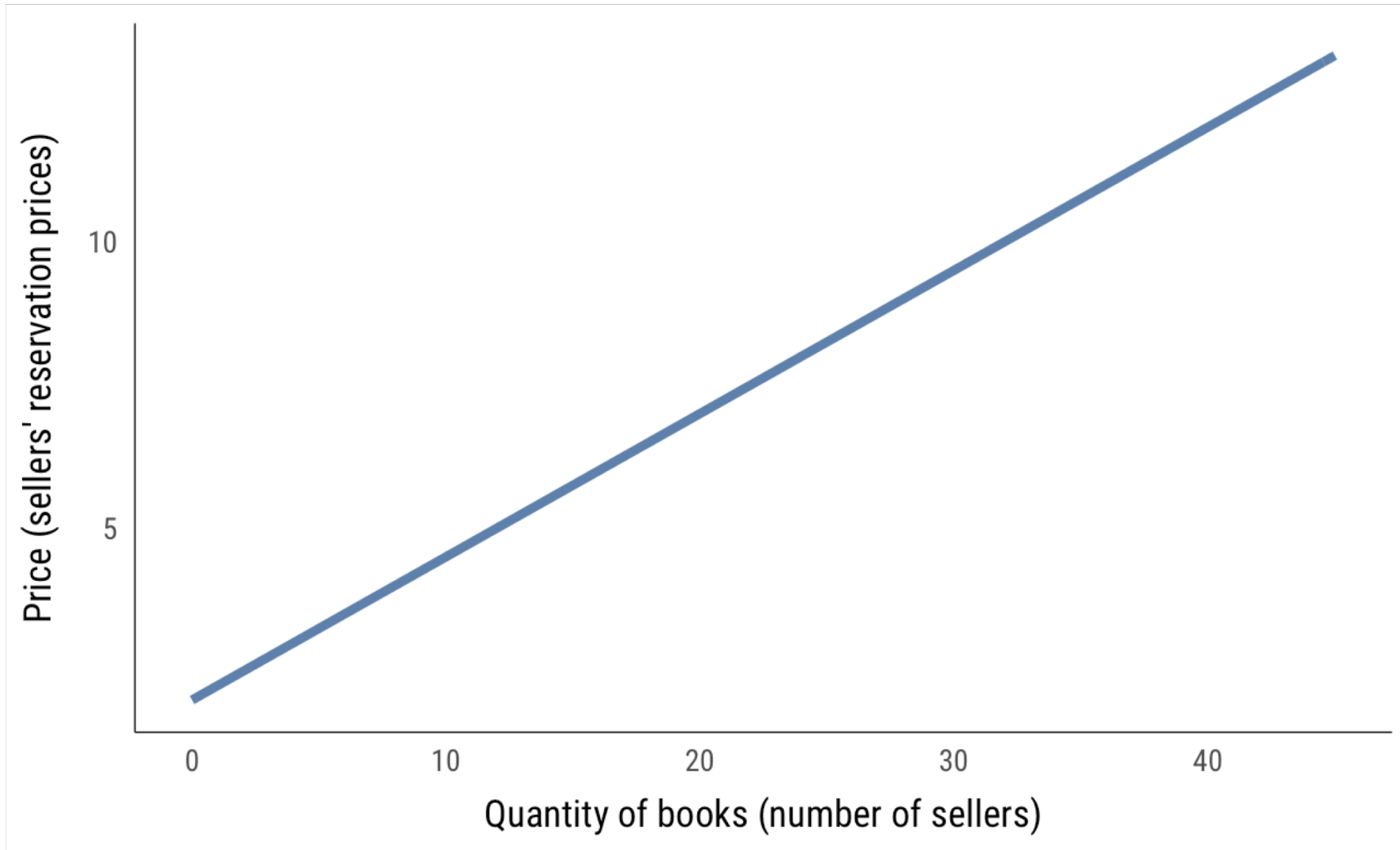
Supply, demand, and price for paper clips

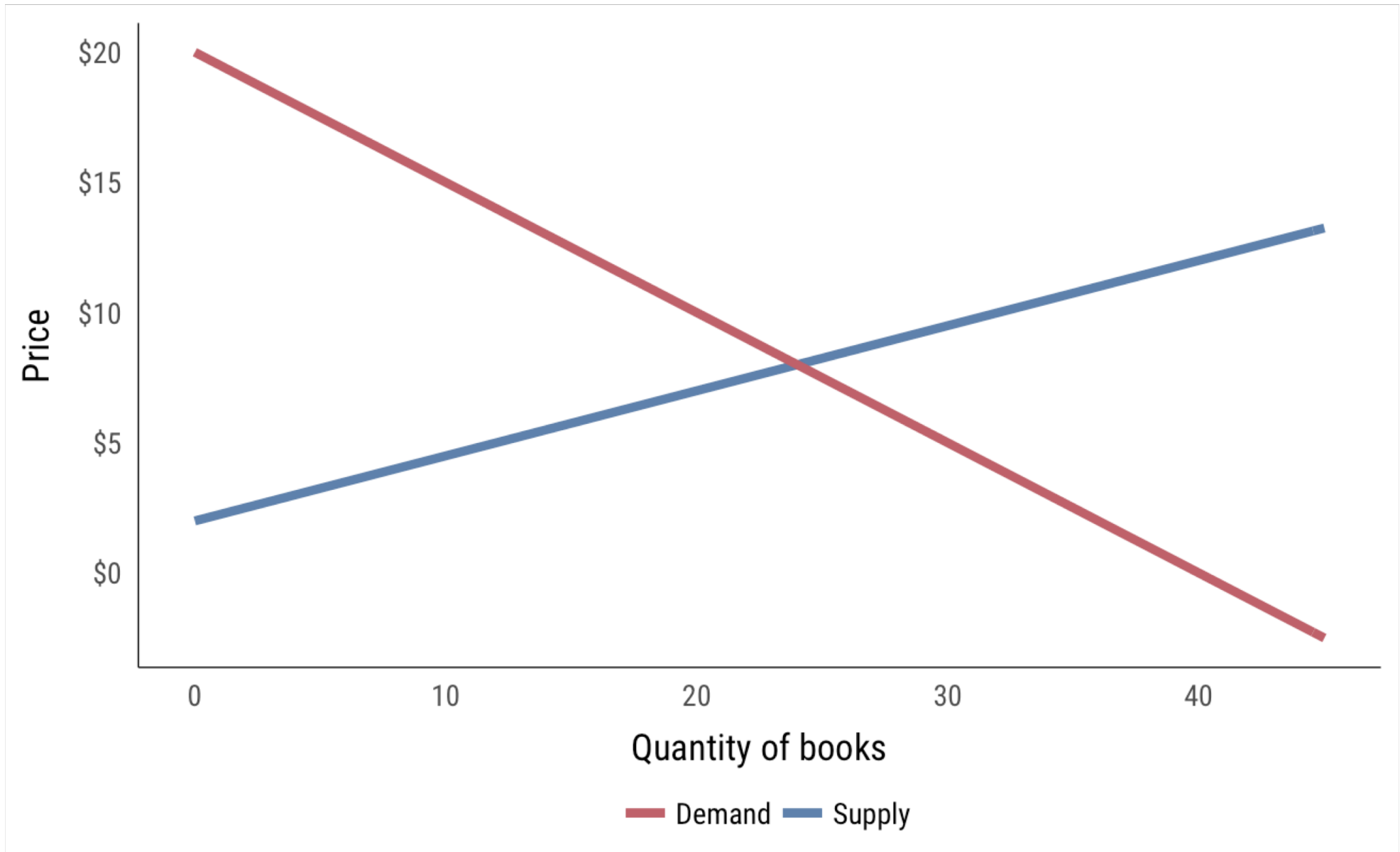


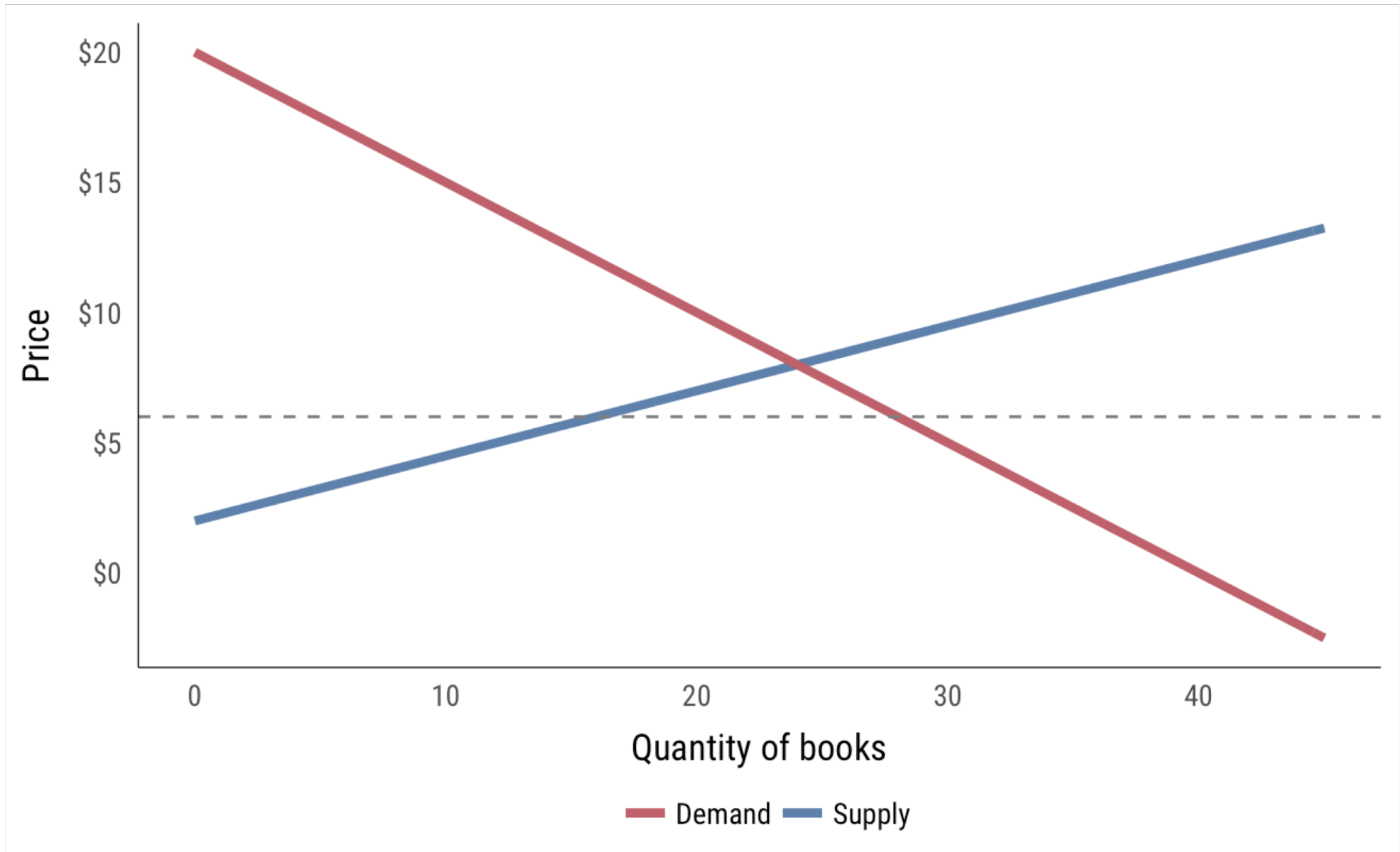
$$\text{DEMAND} = \text{WTP} \\ = \text{MARGINAL BENEFIT}$$

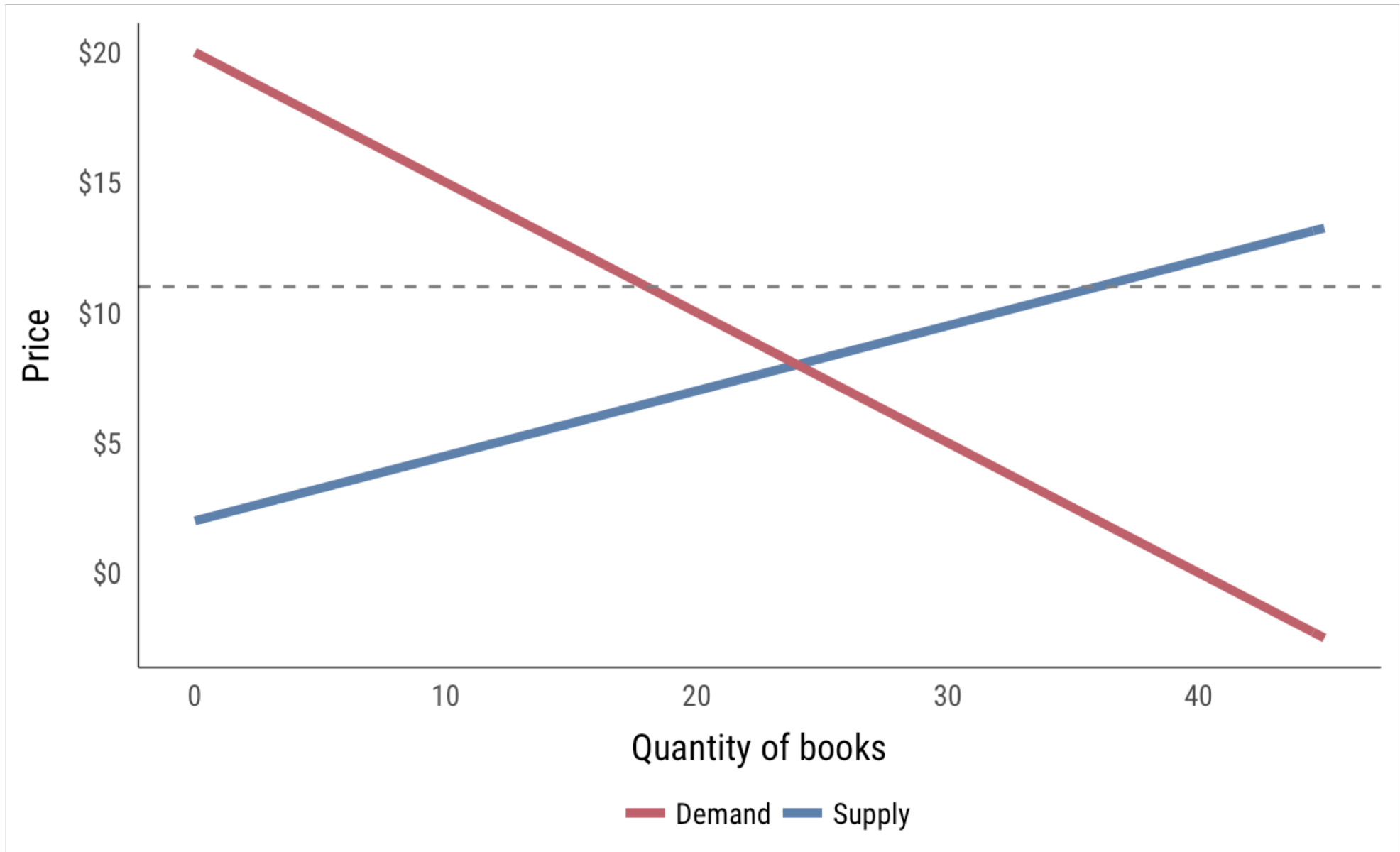


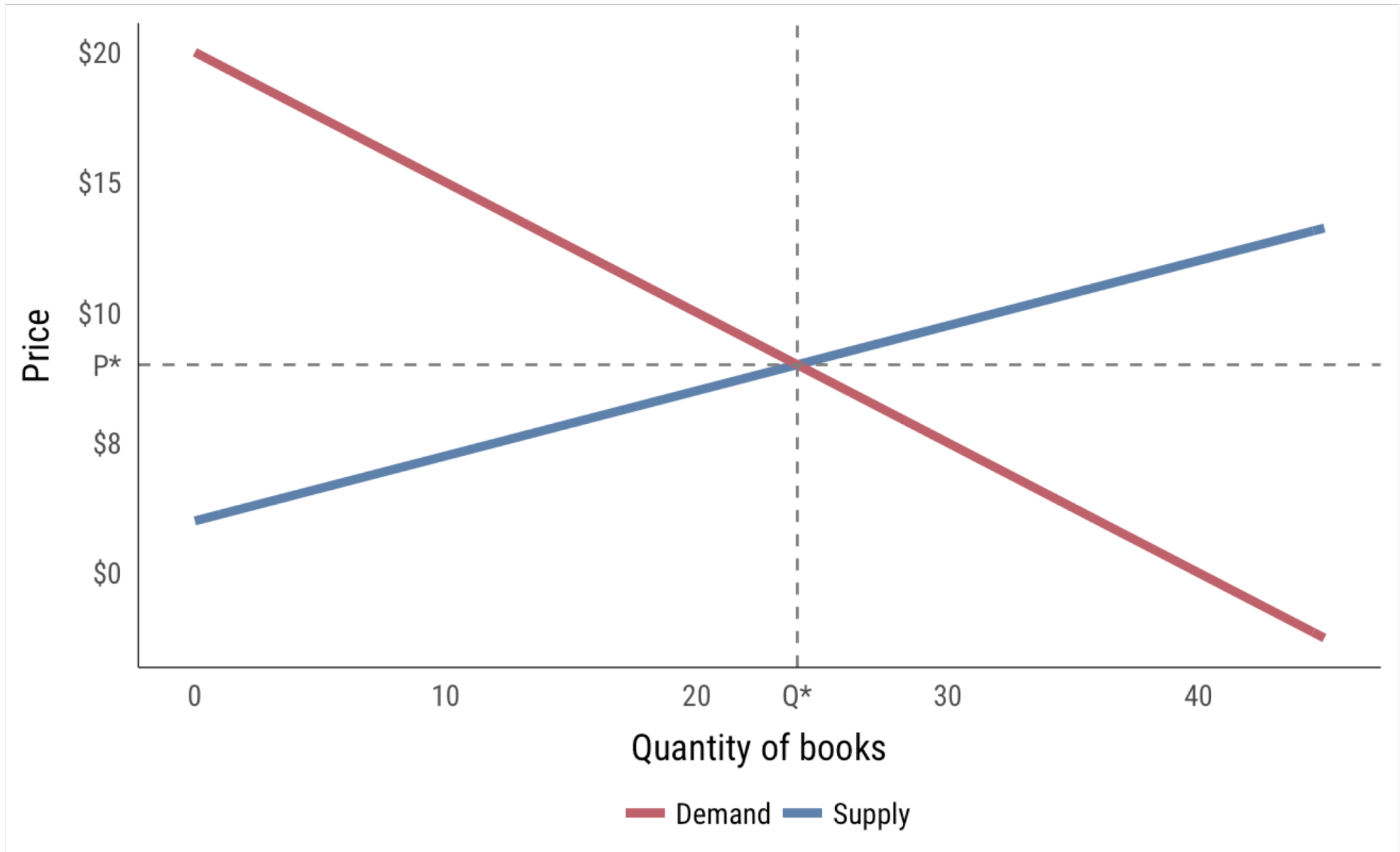
$$\text{SUPPLY} = \text{WTA} \\ = \text{MARGINAL COST}$$





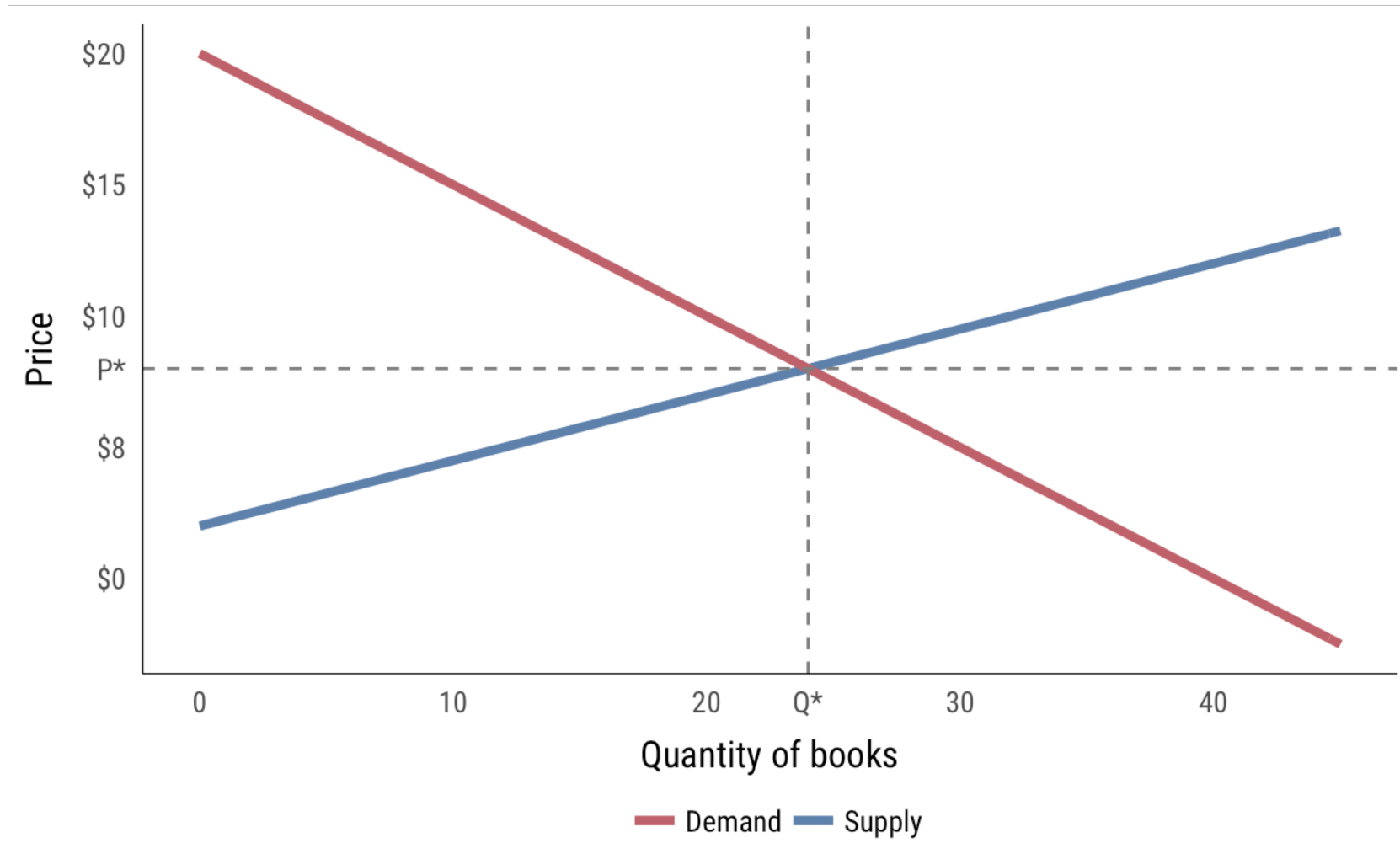






Demand: $P = -0.5Q + 20$

Supply: $P = 0.25Q + 2$





The Making of a Fly: The Genetics of Animal Design (Paperback)

by Peter A. Lawrence

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Price at a Glance

List Price: \$70.00

Used: from **\$35.54**

New: from **\$1,730,045.91**

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All

New (2 from \$1,730,045.91)

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Sorted by [Price + Shipping](#)

New 1-2 of 2 offers

Price + Shipping	Condition	Seller Information	Buying Options
\$1,730,045.91 + \$3.99 shipping	New	<p>Seller: profnath</p> <p>Seller Rating: ★★★★★ 93% positive over the past 12 months. (8,193 total ratings)</p> <p>In Stock. Ships from NJ, United States. Domestic shipping rates and return policy.</p> <p>Brand new, Perfect condition, Satisfaction Guaranteed.</p>	<p>Add to Cart</p> <p>or</p> <p>Sign in to turn on 1-Click ordering.</p>
\$2,198,177.95 + \$3.99 shipping	New	<p>Seller: bordeebok</p> <p>Seller Rating: ★★★★★ 93% positive over the past 12 months. (125,891 total ratings)</p> <p>In Stock. Ships from United States. Domestic shipping rates and return policy.</p> <p>New item in excellent condition. Not used. May be a publisher overstock or have slight shelf wear. Satisfaction guaranteed!</p>	<p>Add to Cart</p> <p>or</p> <p>Sign in to turn on 1-Click ordering.</p>



Paperclips: 212

Business

Available Funds: \$ 6.65

Unsold Inventory: 15

Price per Clip: \$ 0.14

Public Demand: 57%

Level: 1

Cost: \$ 100.00

Manufacturing

Clips per Second: 3

788 inches

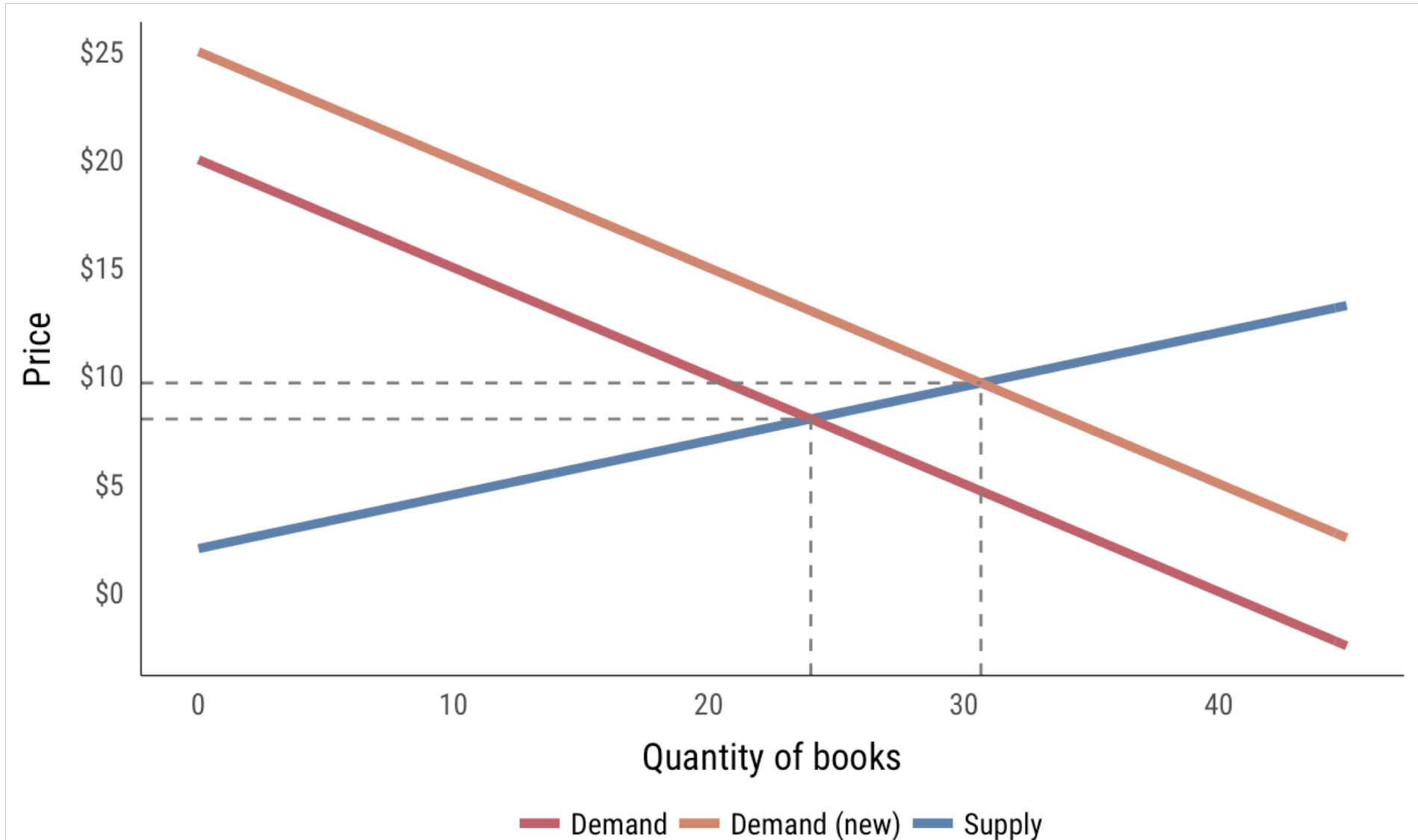
Cost: \$ 15

3

Cost: \$ 6.33

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

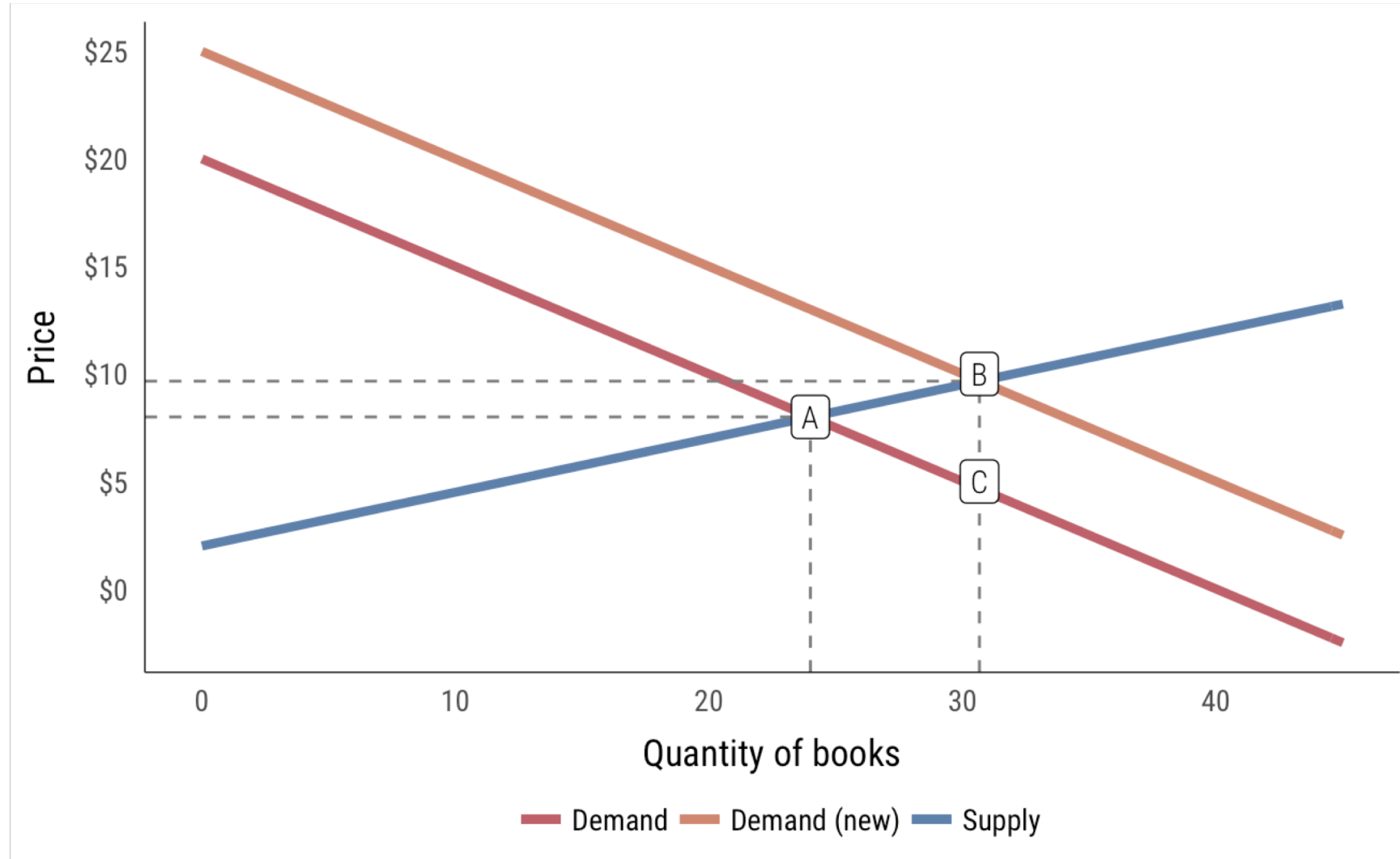
Two ways to get
from 24 to 31ish

A → C

Change in quantity
demanded
Only price changes

A → B

Change in demand
New demand curve



CAUSES OF SHIFTING DEMAND

Change in price of complementary goods

Change in price of substitute goods

Change in population of buyers

Change in income

Change in preferences

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

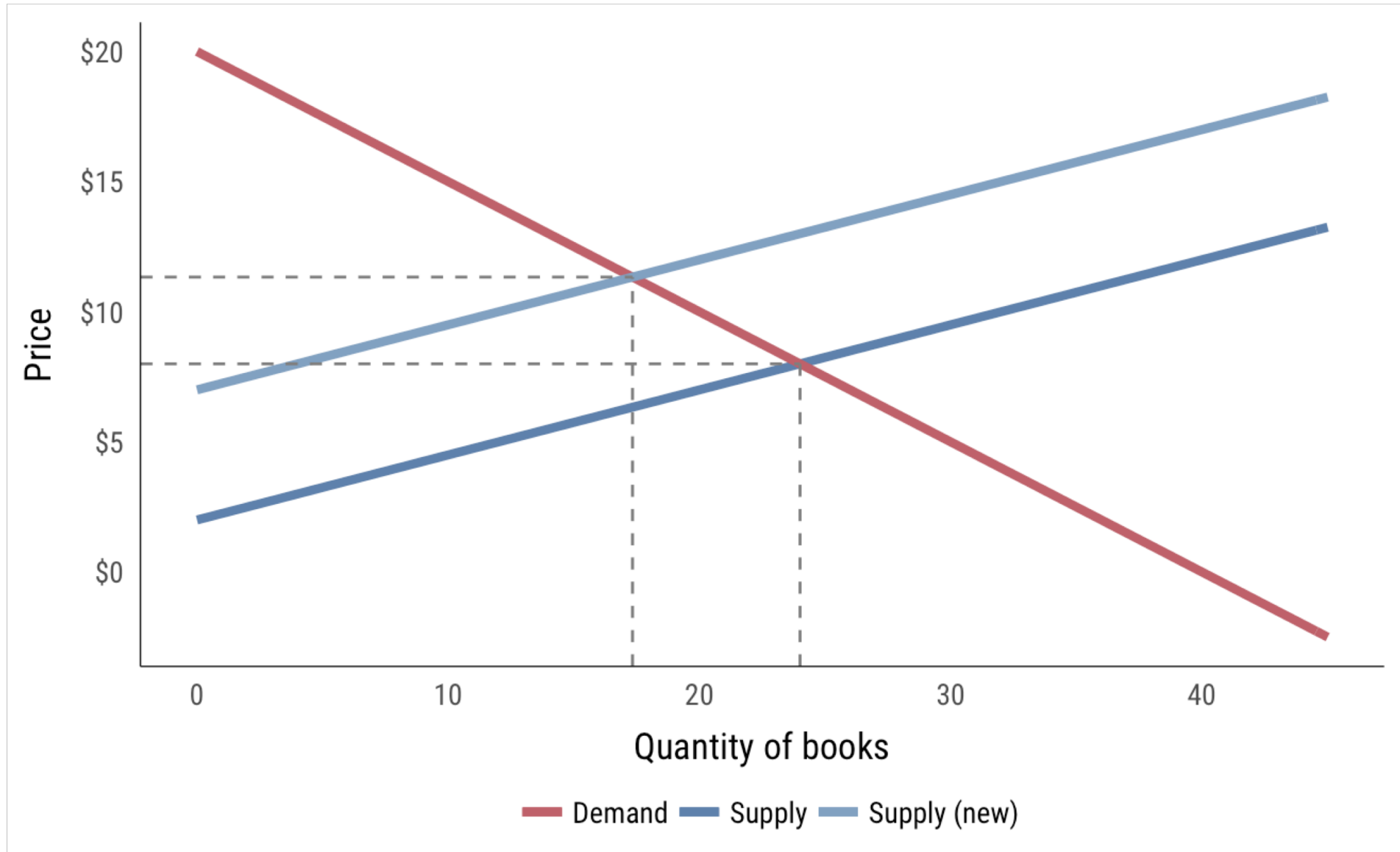
Shoe market

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

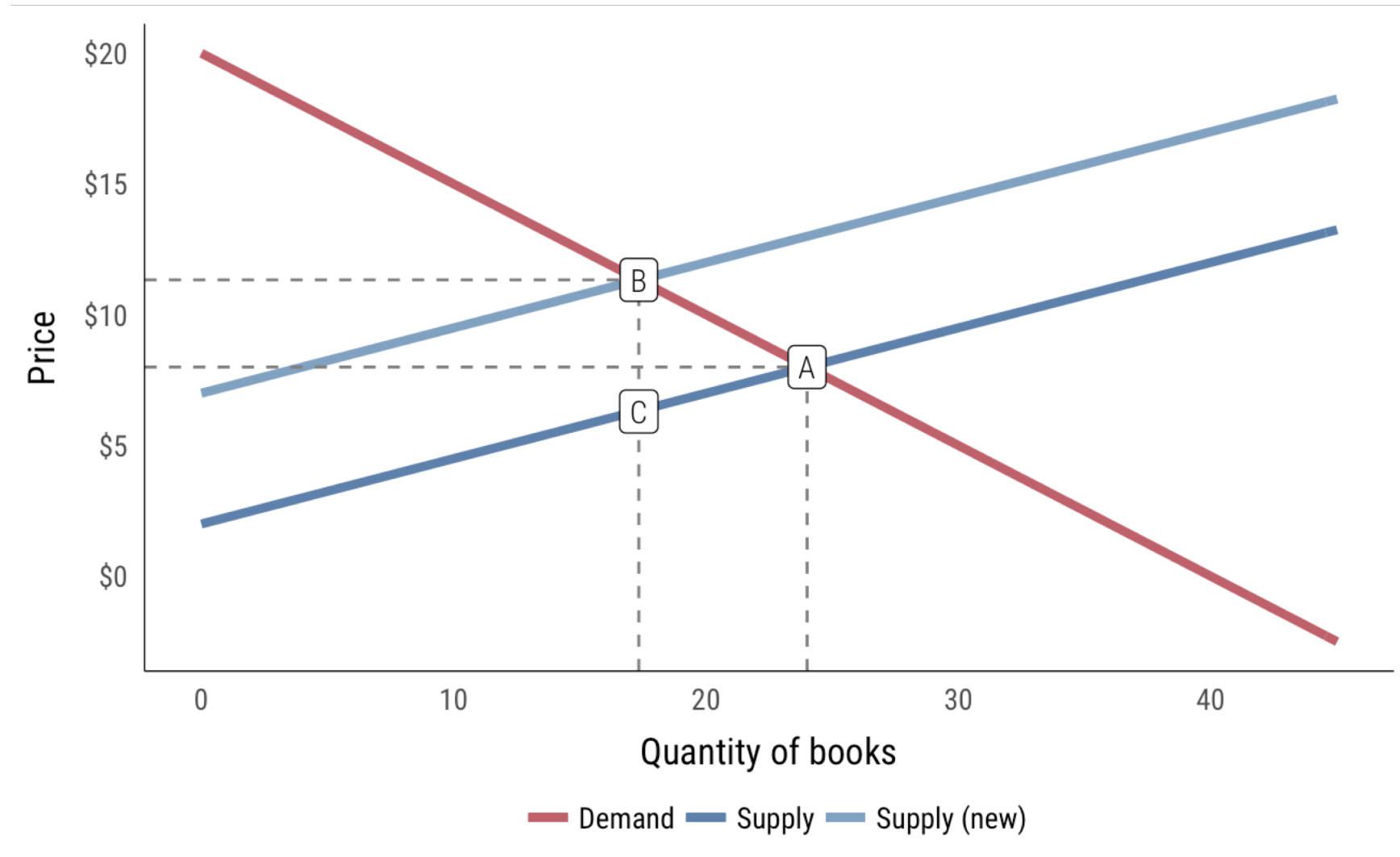
Change in quantity
supplied

Only price changes

A → B

Change in supply

New supply curve



CAUSES OF SHIFTING SUPPLY

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



SURPLUS

Consumer surplus

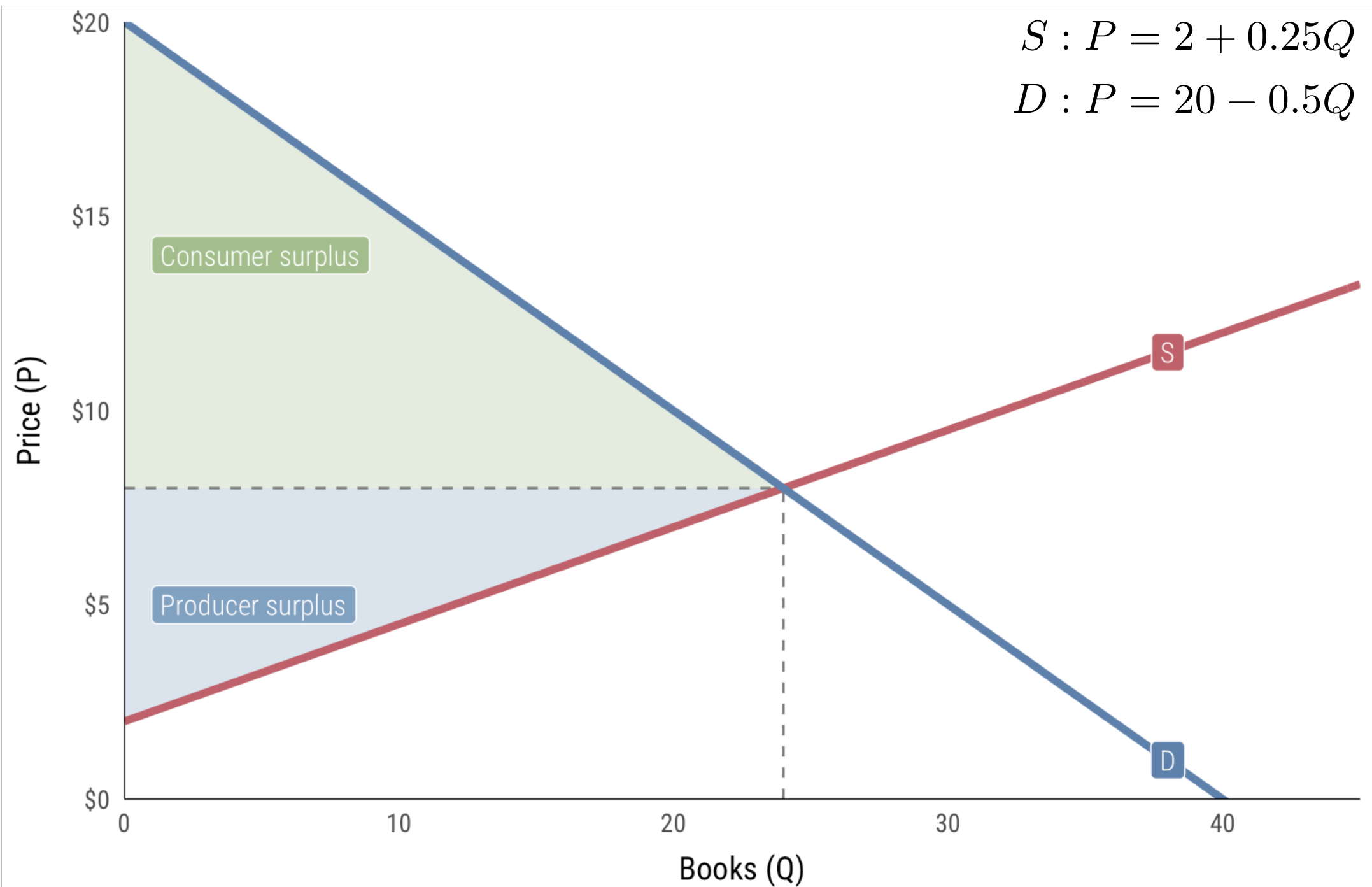
Difference between WTP and price

How good of a deal consumer gets

Producer surplus

Difference between price and WTA

How good of a deal producer gets



TAXES, INCIDENCE, AND DWL

WHY DO GOVERNMENTS TAX?

Raise revenue for services

Redistribute resources

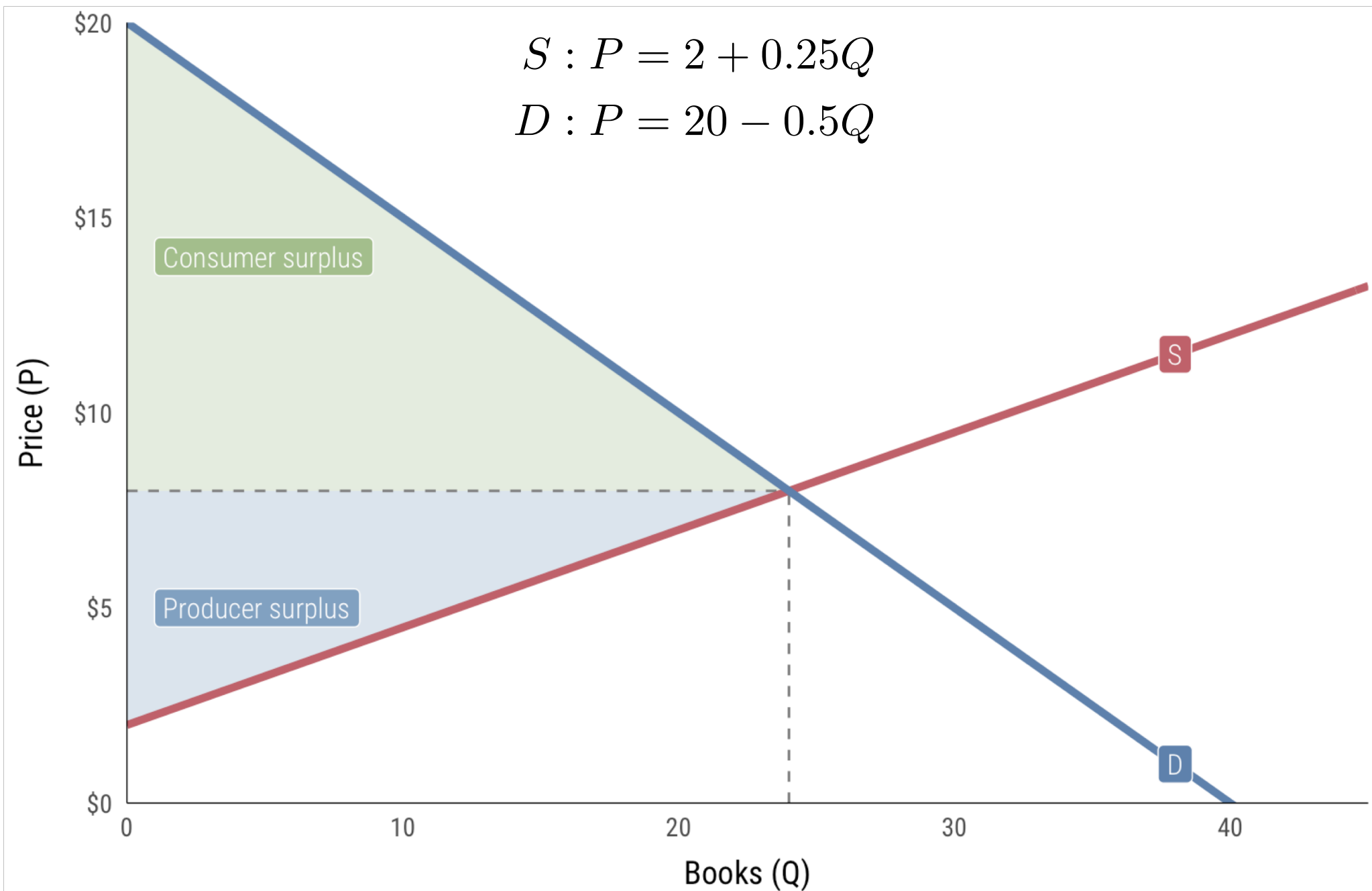
**Encourage or
discourage consumption**

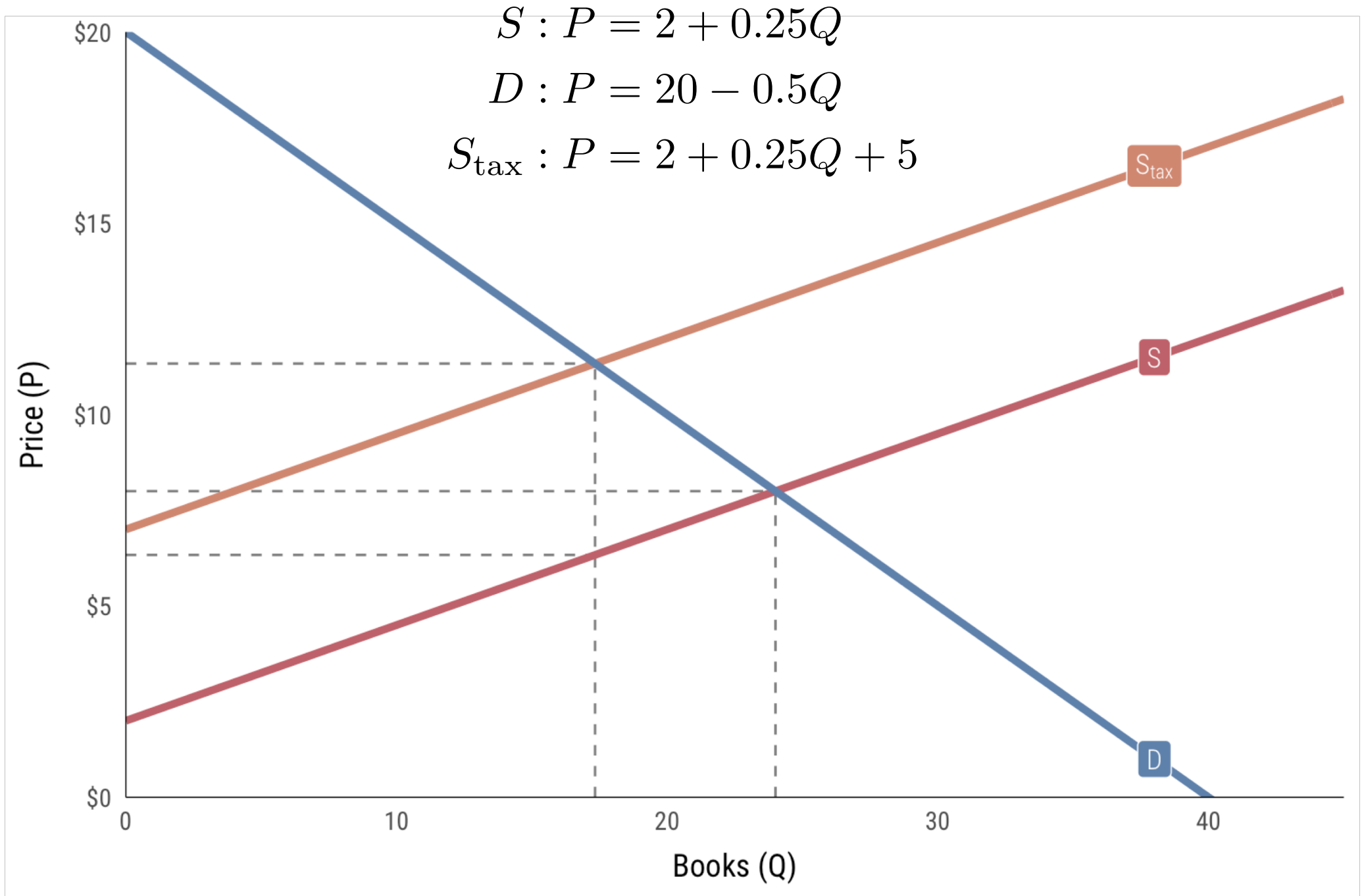
WHAT HAPPENS WHEN GOVERNMENTS TAX?

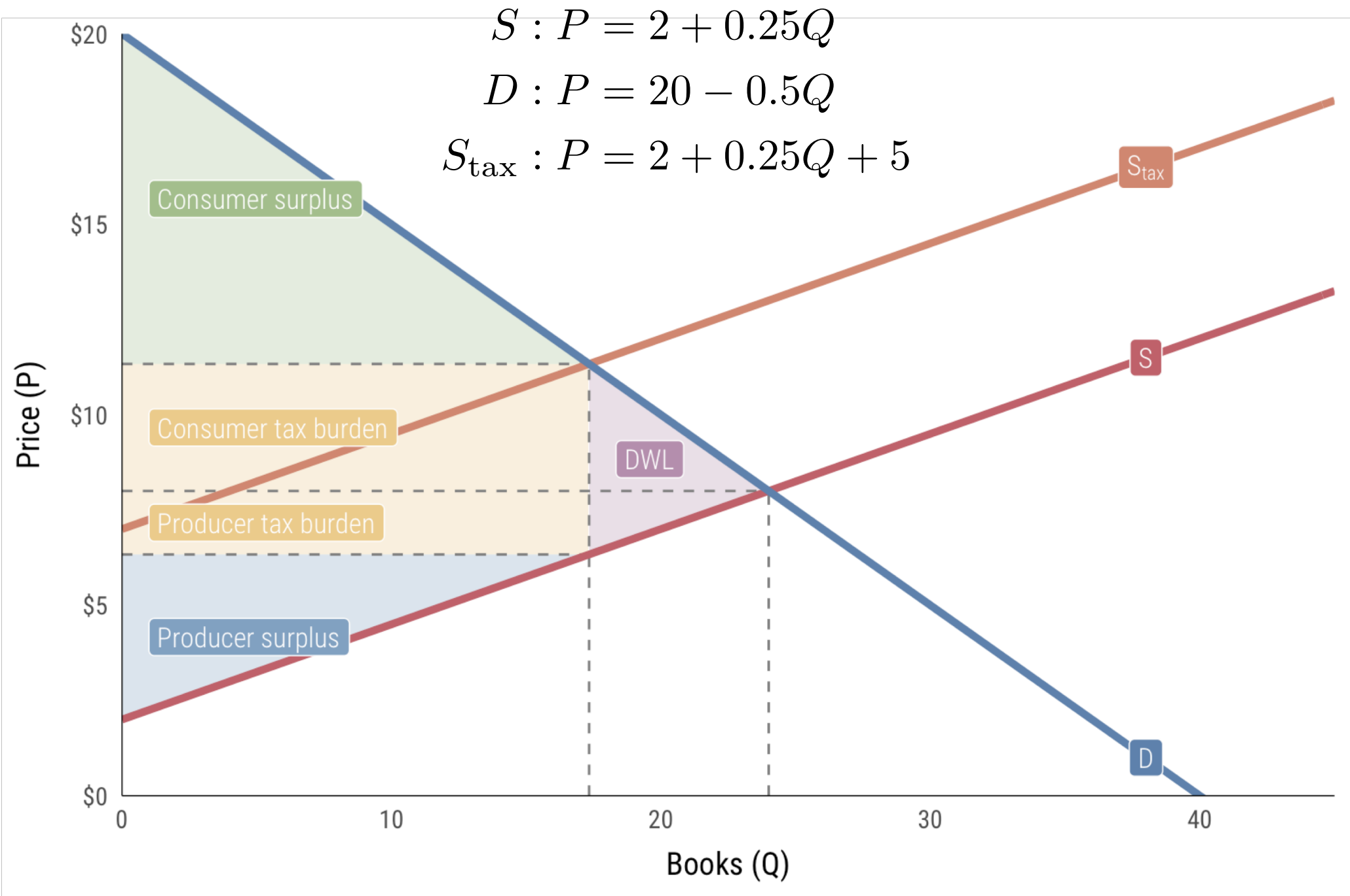
Revenue raised for public goods

Resources redistributed

**Markets distorted;
loss of efficiency**







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

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

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

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

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

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

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

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

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

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

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

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

P and Q at competitive equilibrium

Size of producer and consumer surpluses

P and Q at tax equilibrium

Size of DWL

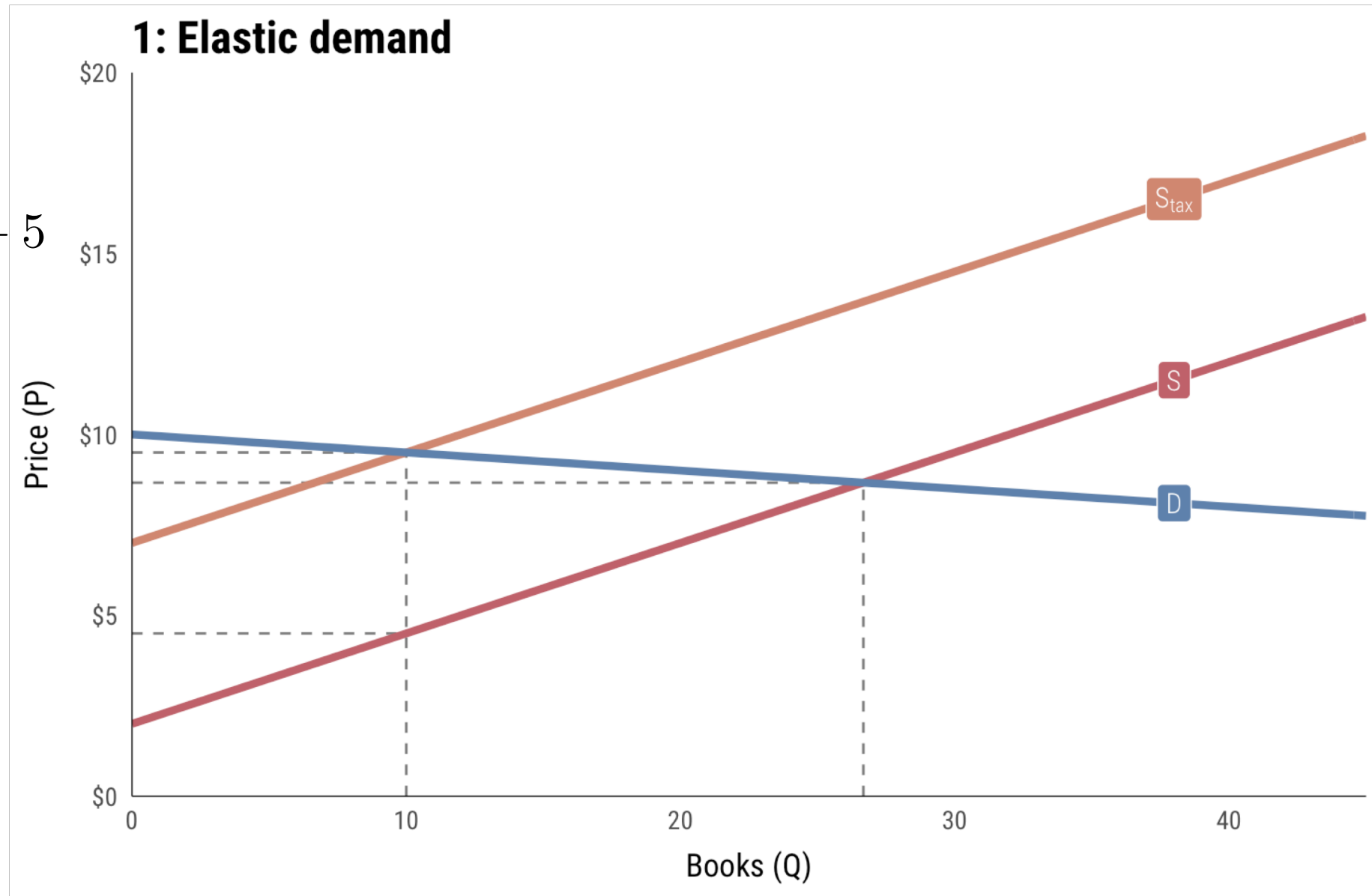
Producer and consumer incidence

1: Elastic demand

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

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

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

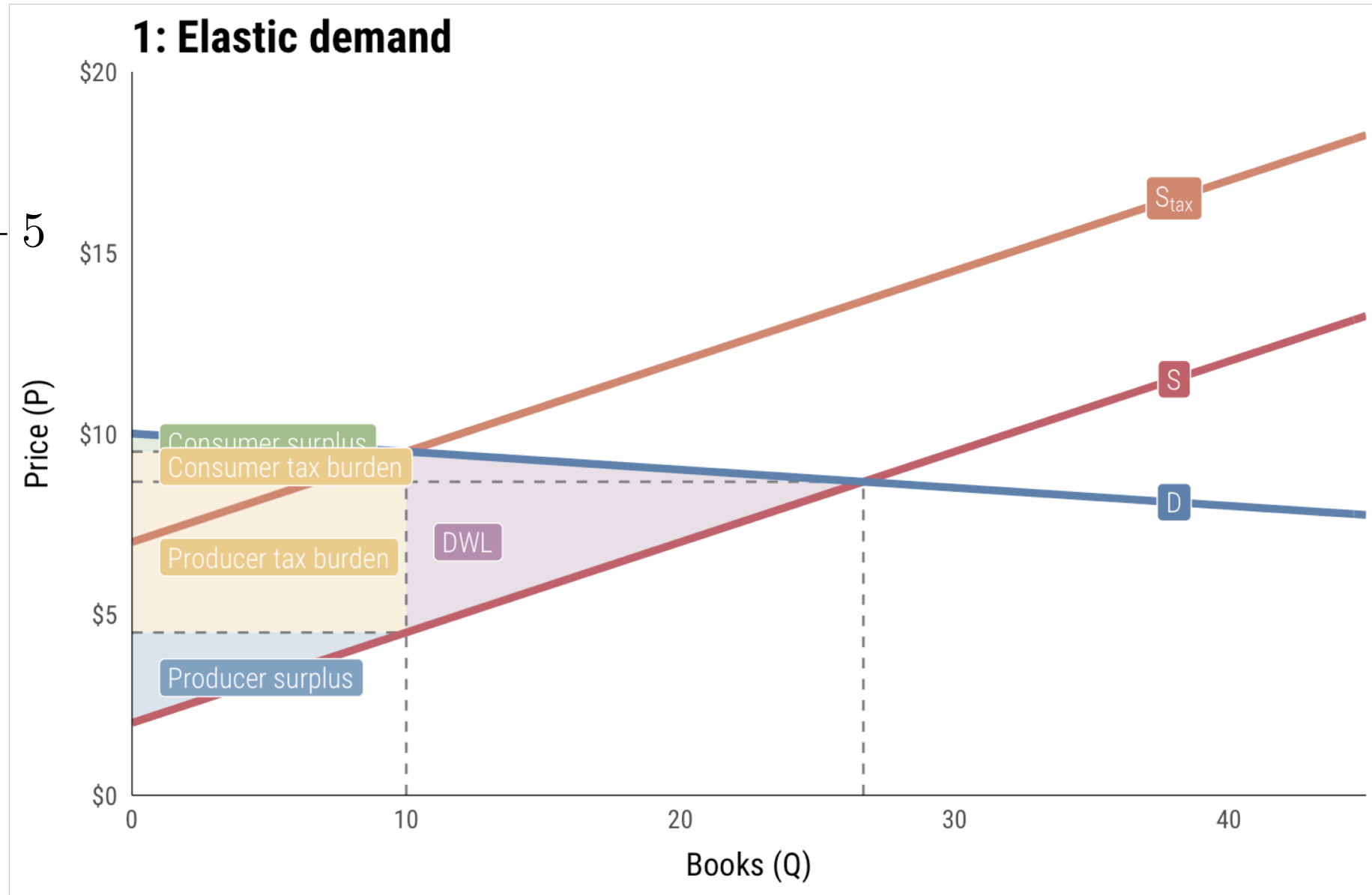


1: Elastic demand

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

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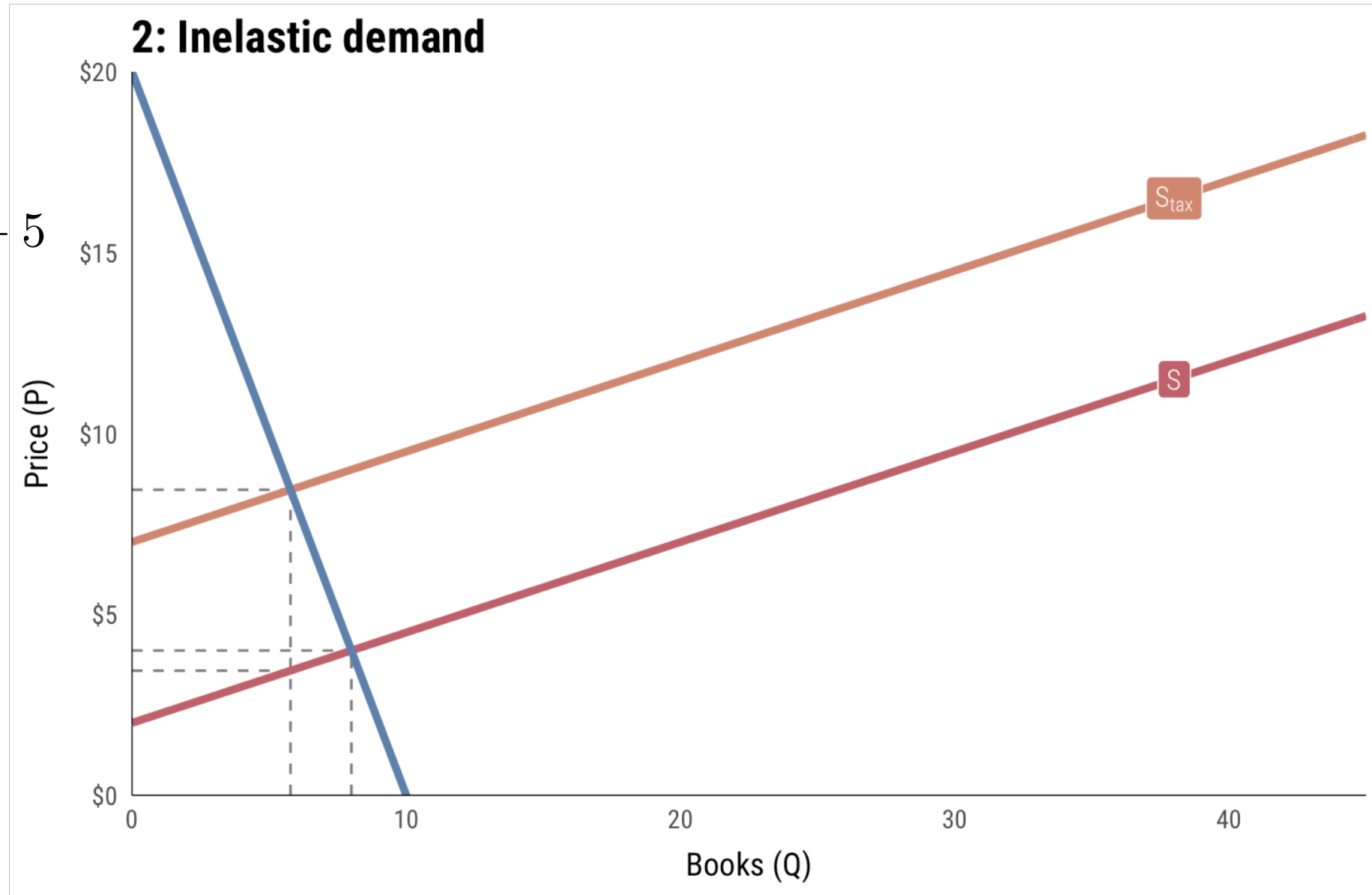


2: Inelastic demand

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

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

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

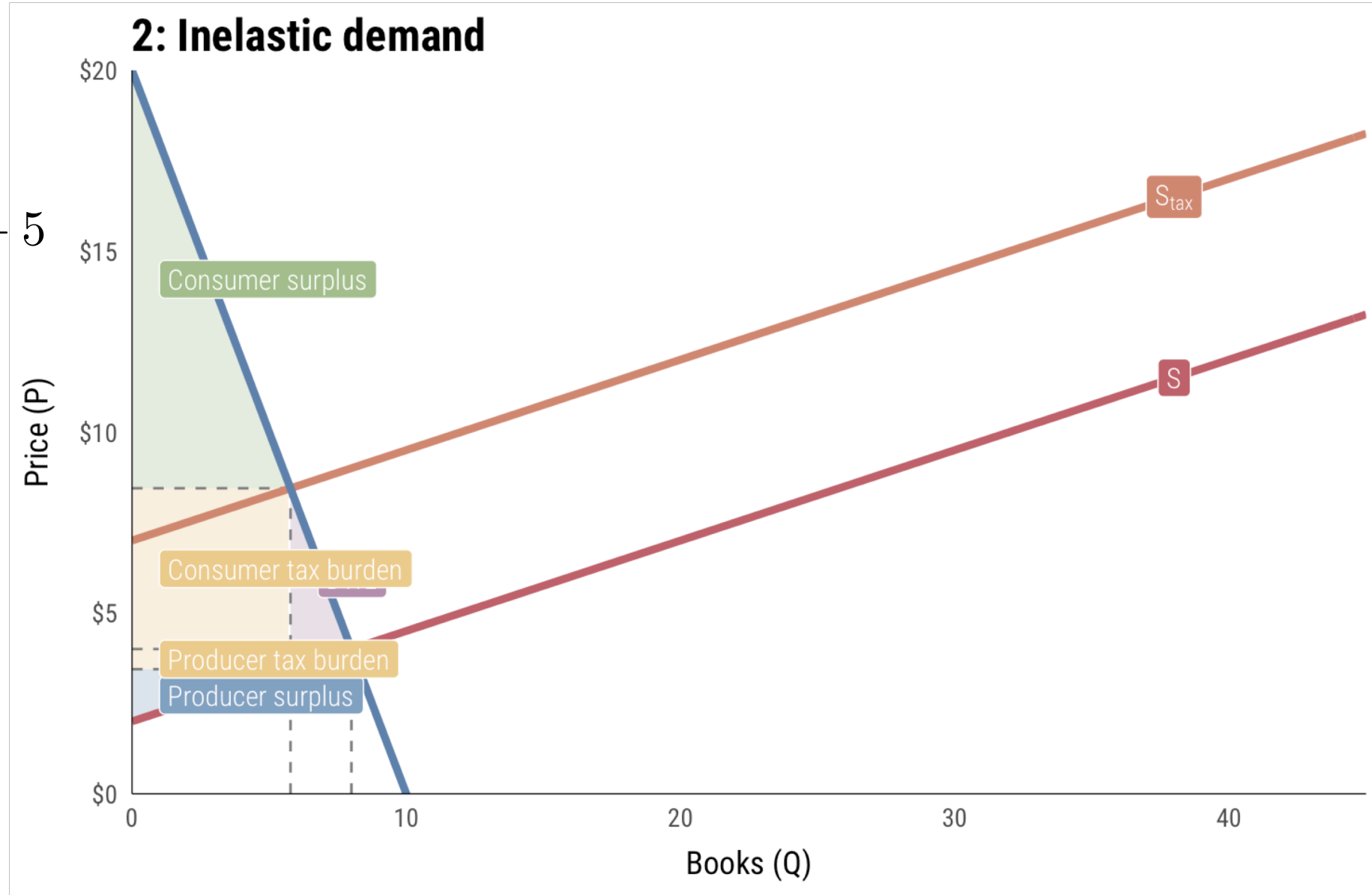


2: Inelastic demand

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

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

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

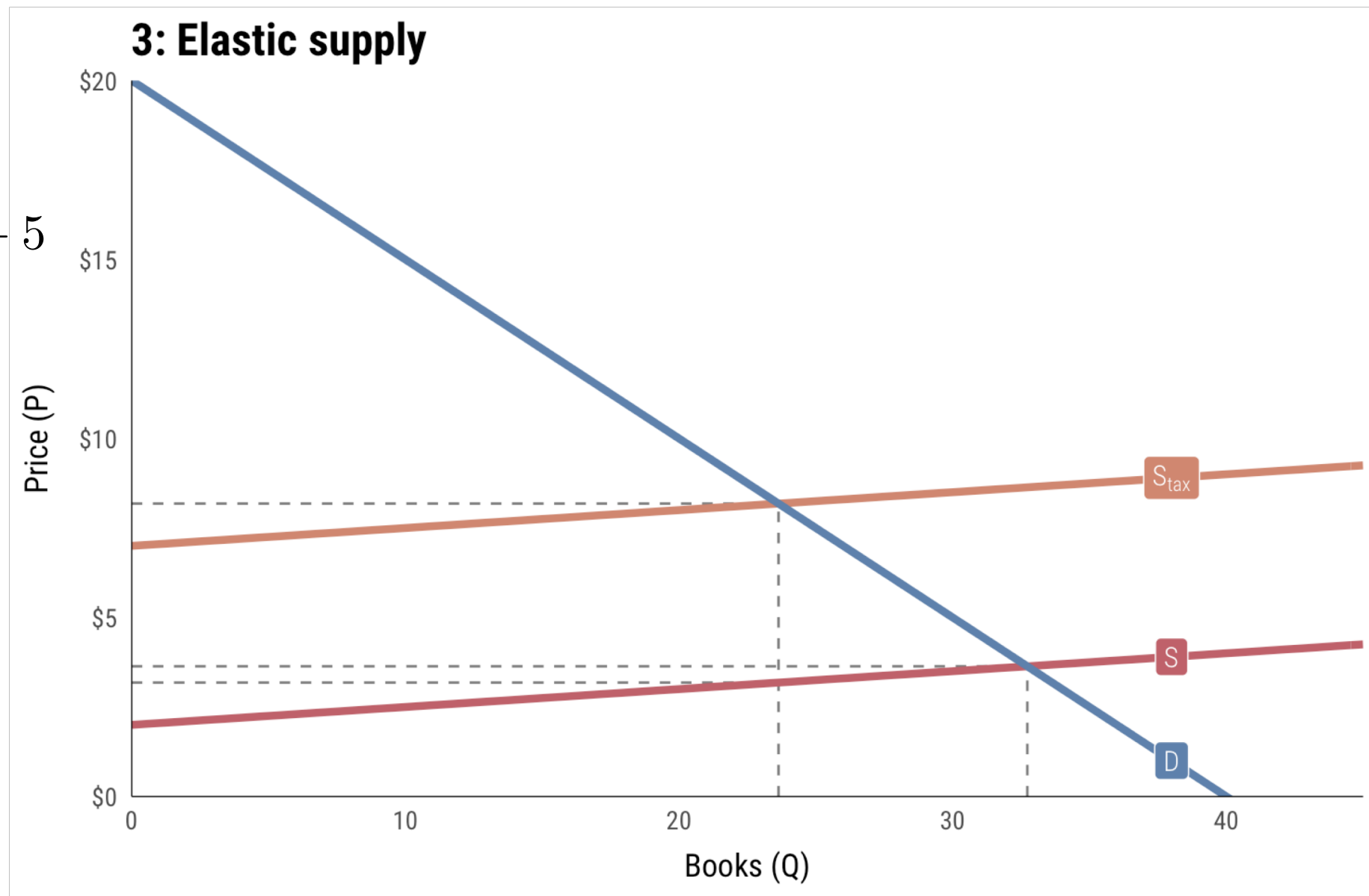


3: Elastic supply

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

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

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

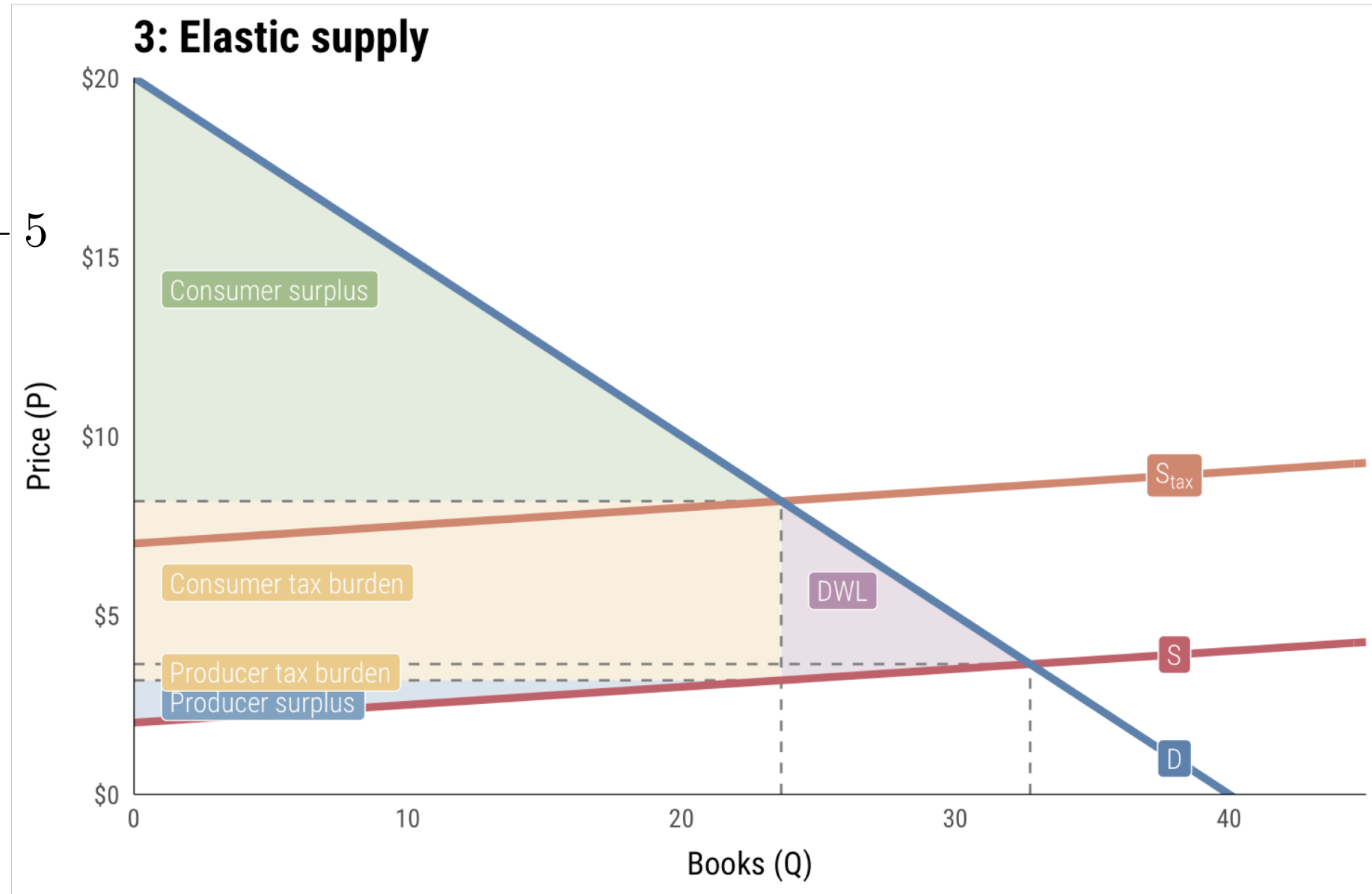


3: Elastic supply

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

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

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

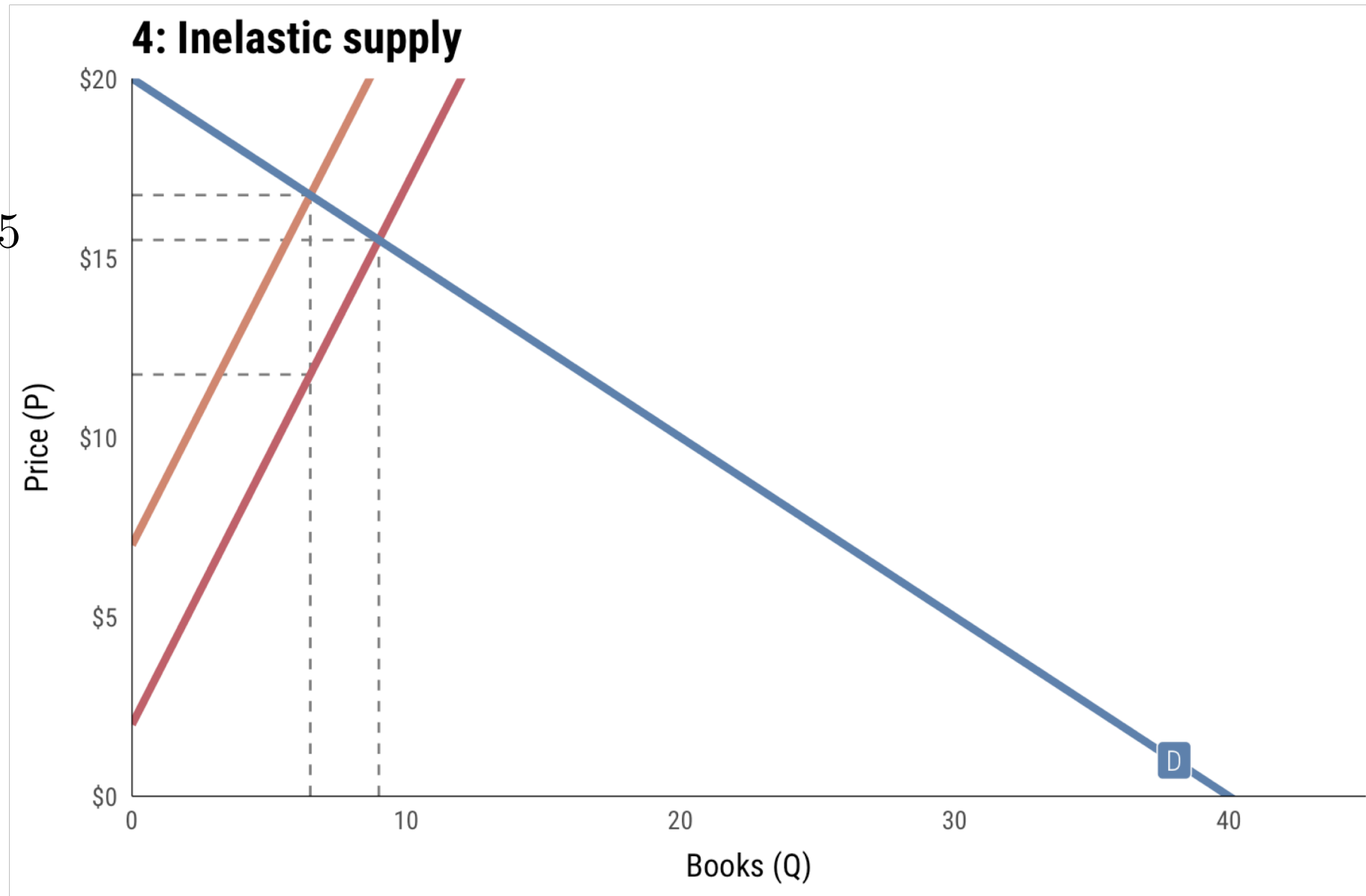


4: Inelastic supply

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

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

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

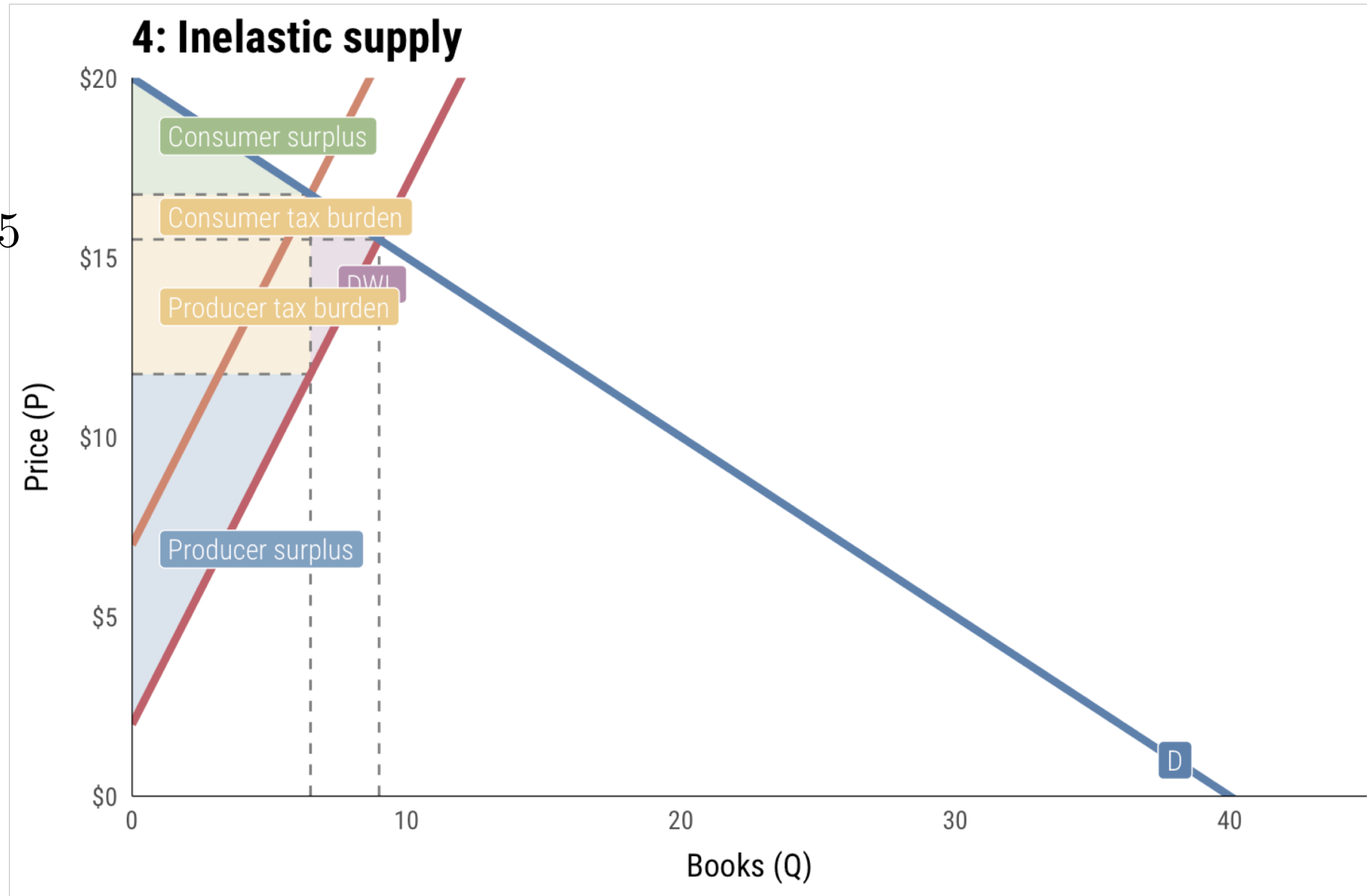


4: Inelastic supply

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

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

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



TAX INCIDENCE AND €

**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

NEXT TIME

**Market power and
monopolies**