

Firms and customers I

MPA 612: Public Management Economics

February 12, 2018

Fill out your reading report on Learning Suite!



Current events

Now expanded to take advantage of your new vocabulary!

Plan for today

Outsourcing revisited

Demand and profit maximization

Popsicle Sticks, Inc.

Costs and profit

Outsourcing

When should government privatize stuff?

Conditions for contracting

The bigger the adverse consequences of cost-cutting on quality, the stronger the case for in-house provision

Should governments outsource...

Snowplows

Garbage

Mail

Schools

Healthcare

Prisons

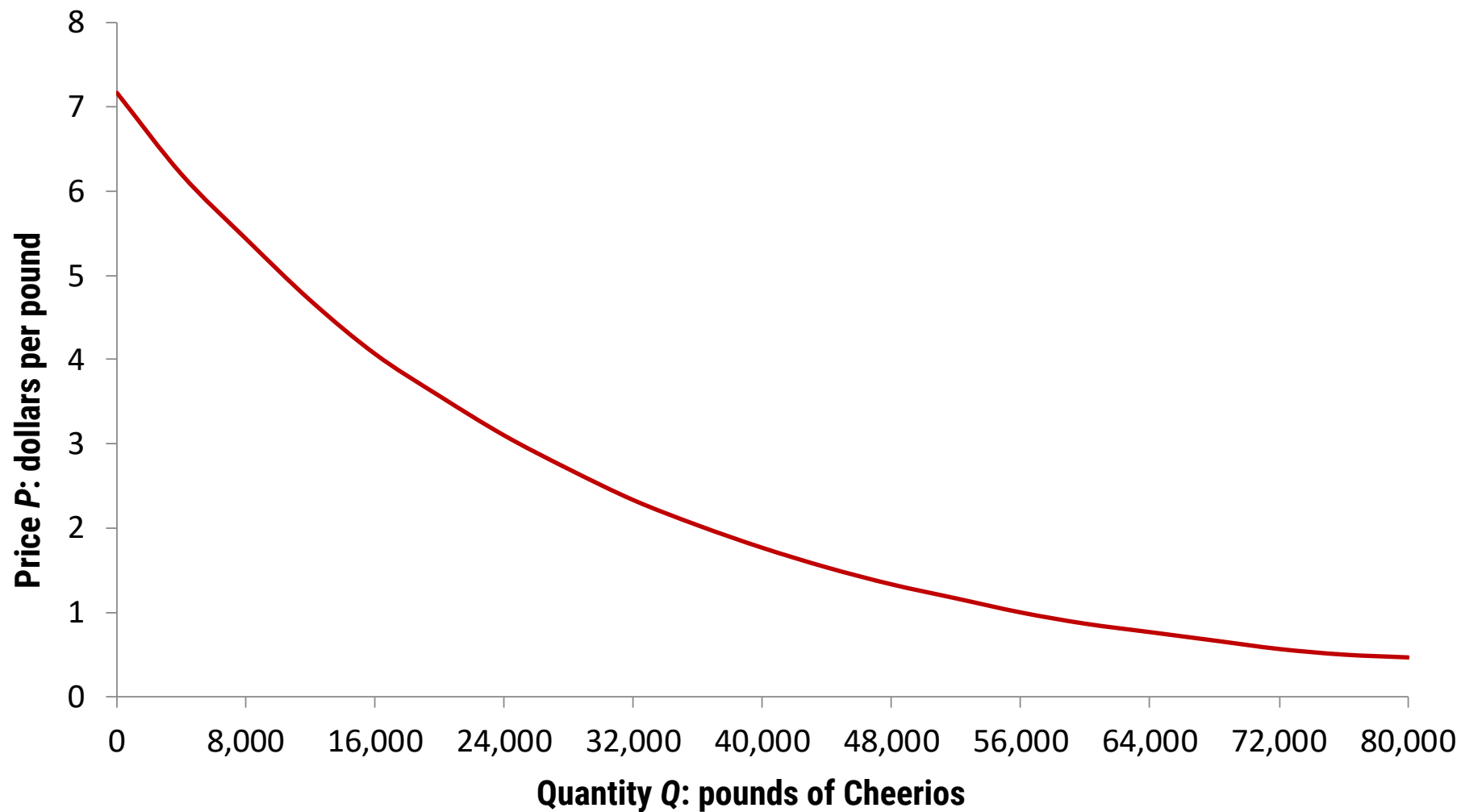
Police

Military

Demand and profit maximization

How much stuff should you make and how much should you charge for it?

Demand and WTP



Total costs (TC)

Unit cost \times quantity

$$\text{\$2} \times Q$$

Total revenue (TR)

Price \times quantity

$$P \times Q$$

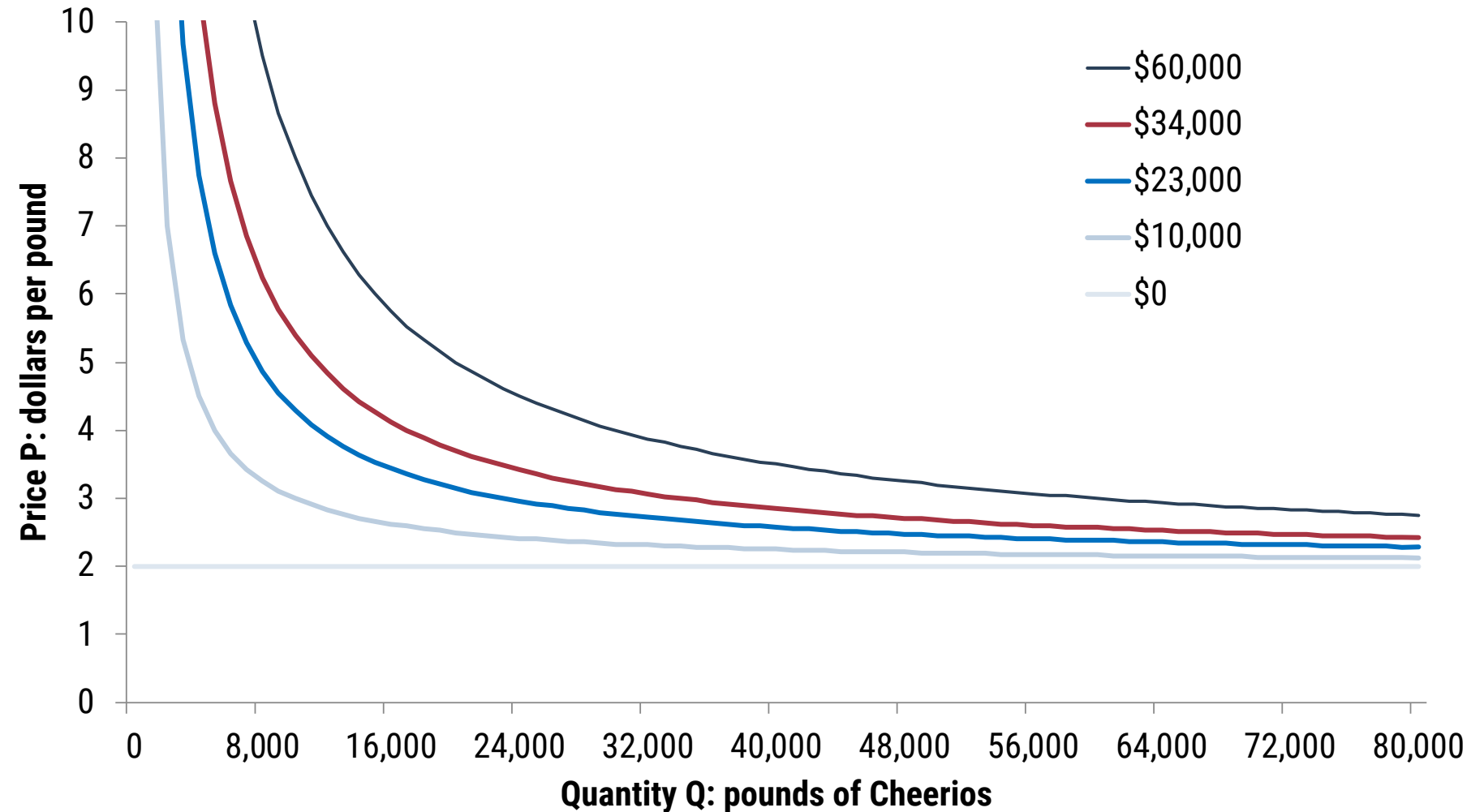
Profit (TR - TC)

$$P \times Q - \text{\$2} \times Q$$

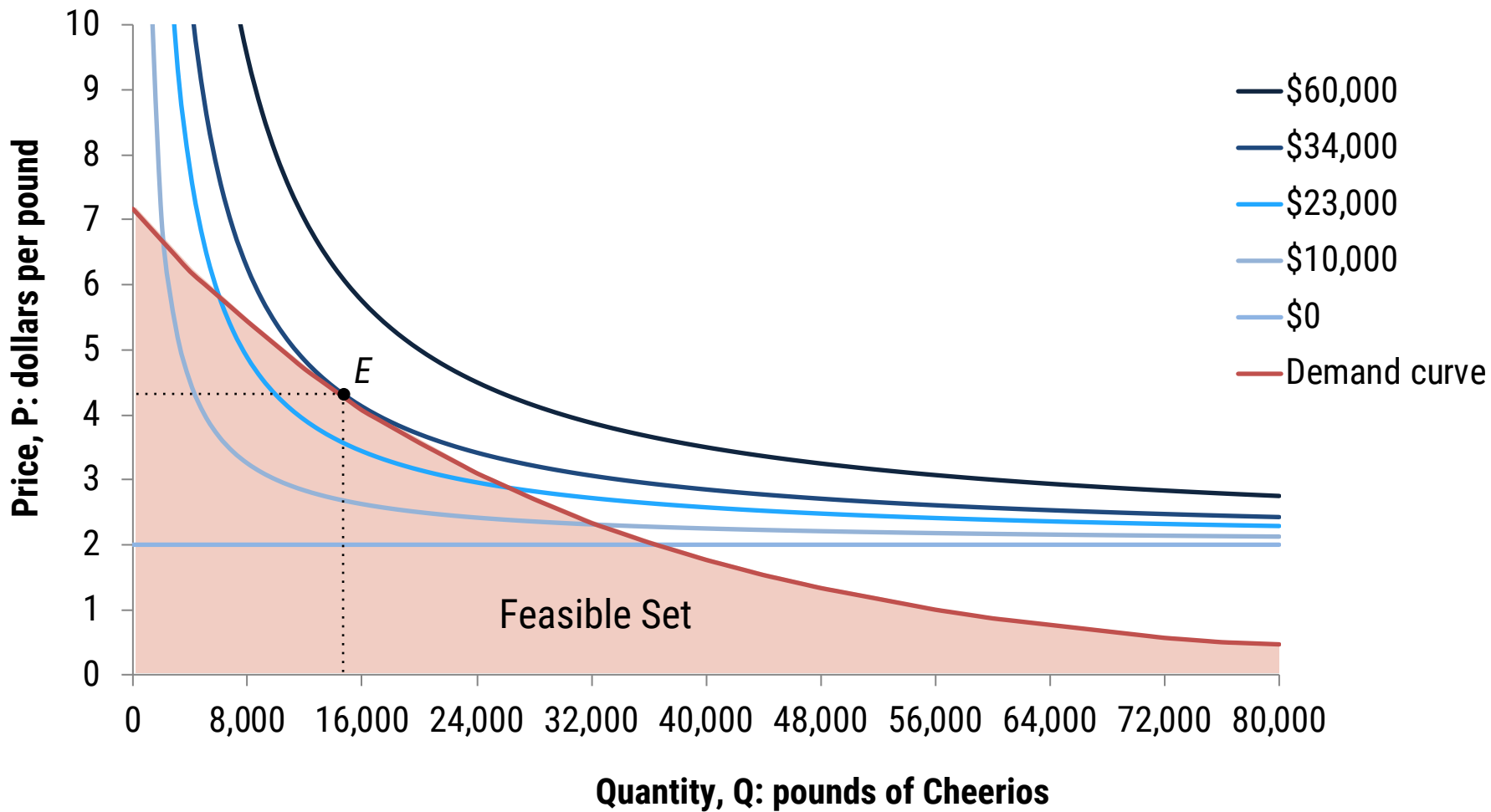
$$(P - \text{\$2}) \times Q$$

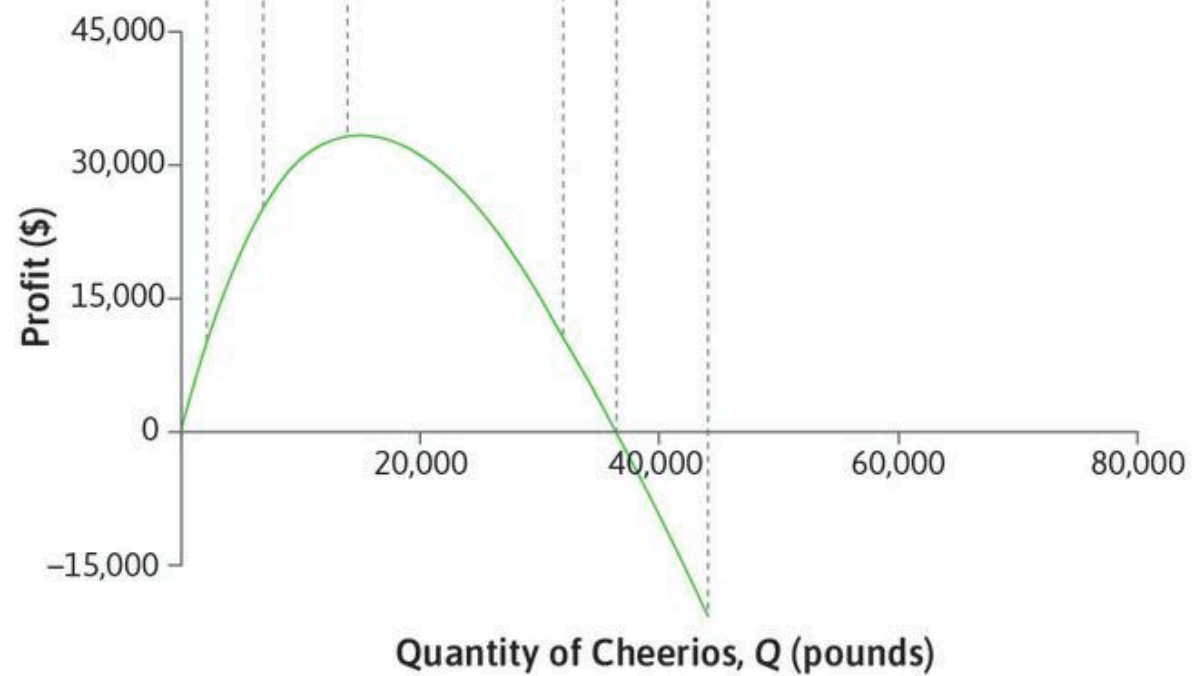
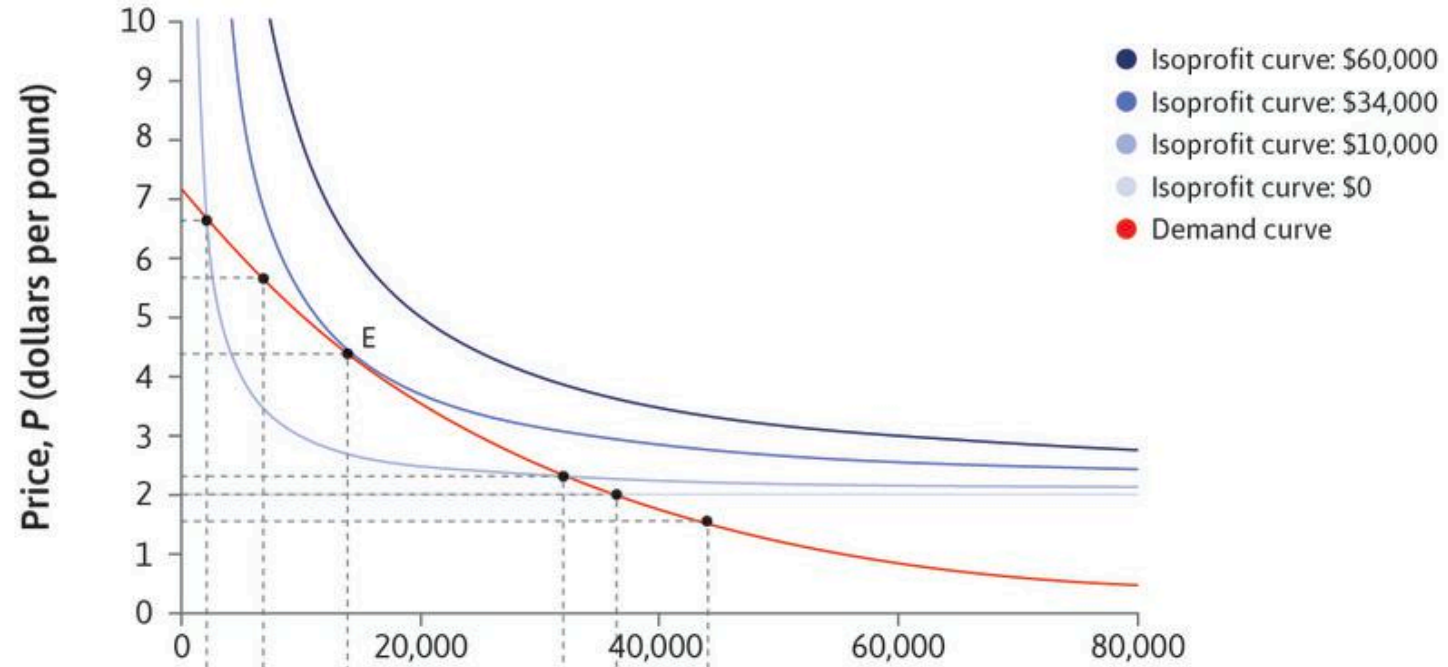
Isoprofit curves

$$(P - \$2) \times Q$$



Profit maximization





Popsicle Sticks, Inc.

Sister company to XYZ Airlines, probably

Specifications

Squares attached at all four corners using labels

Labels **cannot** be wider than sticks

Squares must be square when inspected

Labels must be cut with the scissors, not be torn

Costs

Table rental: \$1.00

Scissor rental: \$0.50

Popsicle stick: \$0.10

Label per corner: \$0.05

Wage per active employee: \$0.40

Round 1

1 worker allowed

Table rental: \$1.00

Scissor rental: \$0.50

Popsicle stick: \$0.10

Label per corner: \$0.05

Wage per employee: \$0.40

Round 1

1 worker allowed

Table rental: \$1.00

Scissor rental: \$0.50

Popsicle stick: \$0.10

Label per corner: \$0.05

Wage per employee: \$0.40

03:00

Round 2

2 workers allowed

Table rental: \$1.00

Scissor rental: \$0.50

Popsicle stick: \$0.10

Label per corner: \$0.05

Wage per employee: \$0.40

Round 2

2 workers allowed

Table rental: \$1.00

Scissor rental: \$0.50

Popsicle stick: \$0.10

Label per corner: \$0.05

Wage per employee: \$0.40

03:00

Round 3

Unlimited workers allowed

Table rental: \$1.00

Scissor rental: \$0.50

Popsicle stick: \$0.10

Label per corner: \$0.05

Wage per employee: \$0.40

Round 3

Unlimited workers allowed

Table rental: \$1.00

Scissor rental: \$0.50

Popsicle stick: \$0.10

Label per corner: \$0.05

Wage per employee: \$0.40

03:00

Round 4

Unlimited workers allowed

Table rental: \$1.00

Scissor rental: \$0.50

Popsicle stick: \$0.10

Label per corner: \$0.05

Wage per employee: \$0.40

Round 4

Unlimited workers allowed

Table rental: \$1.00

Scissor rental: \$0.50

Popsicle stick: \$0.10

Label per corner: \$0.05

Wage per employee: \$0.40

03:00

Round 5

Unlimited workers allowed

Table rental: \$1.00

Scissor rental: \$0.50

Popsicle stick: \$0.10

Label per corner: \$0.05

Wage per employee: \$0.40

Round 5

Unlimited workers allowed

Table rental: \$1.00

Scissor rental: \$0.50

Popsicle stick: \$0.10

Label per corner: \$0.05

Wage per employee: \$0.40

03:00

Fixed costs

Variable costs

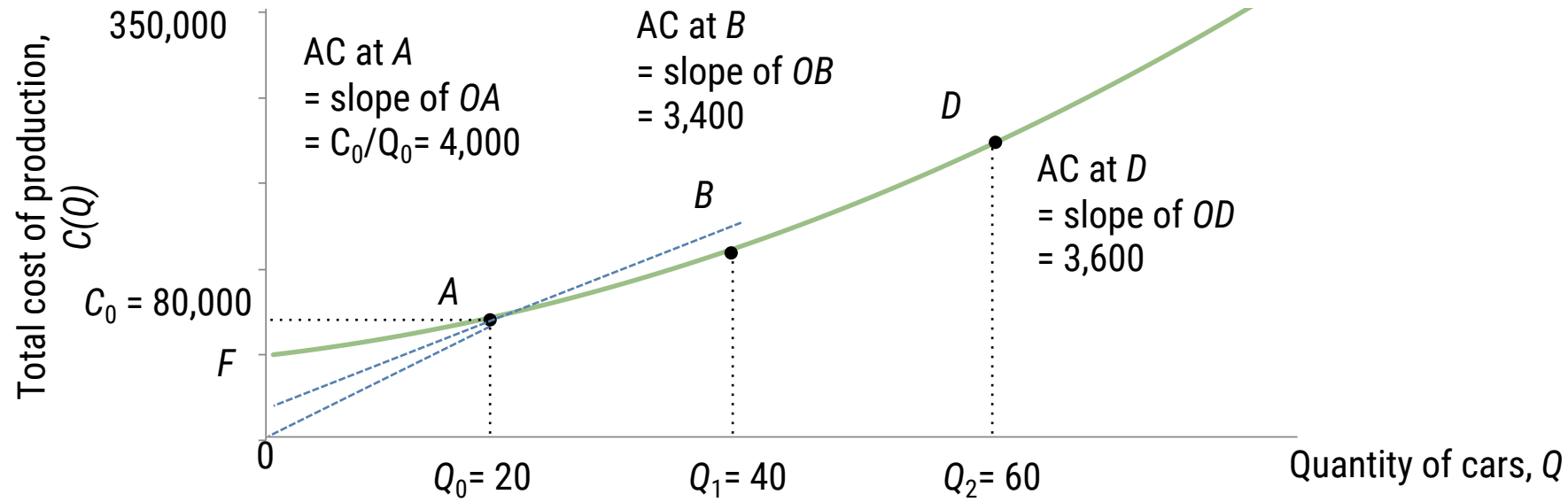
Average costs

Cost function shape

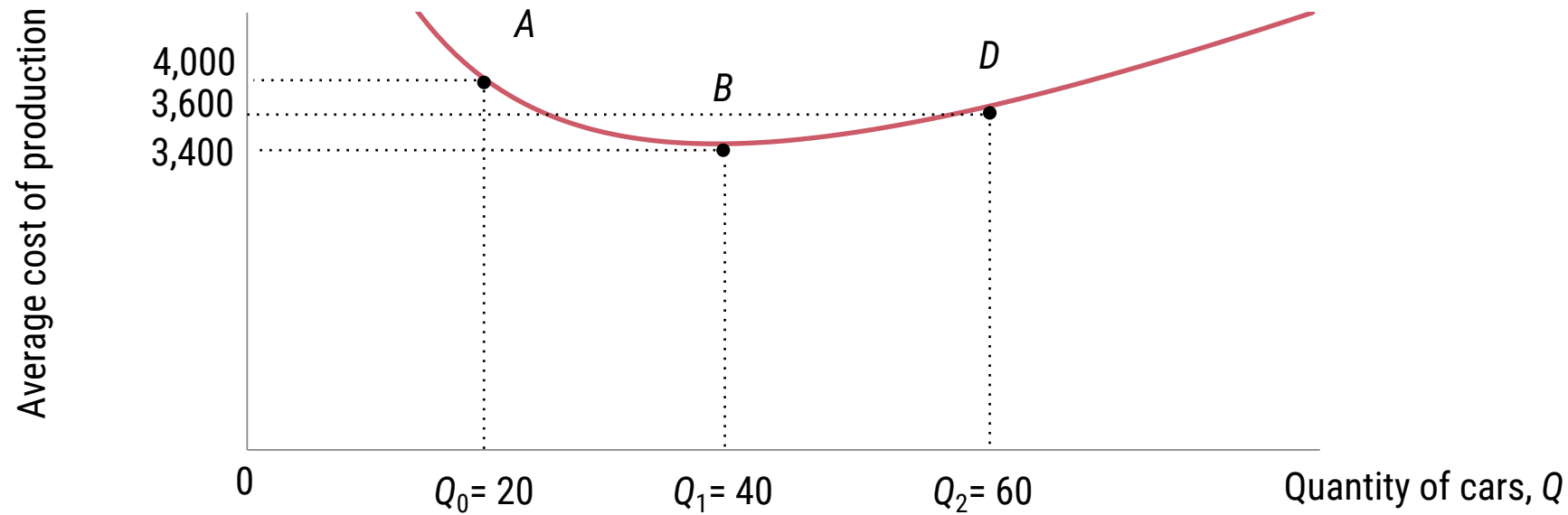
Costs and profit

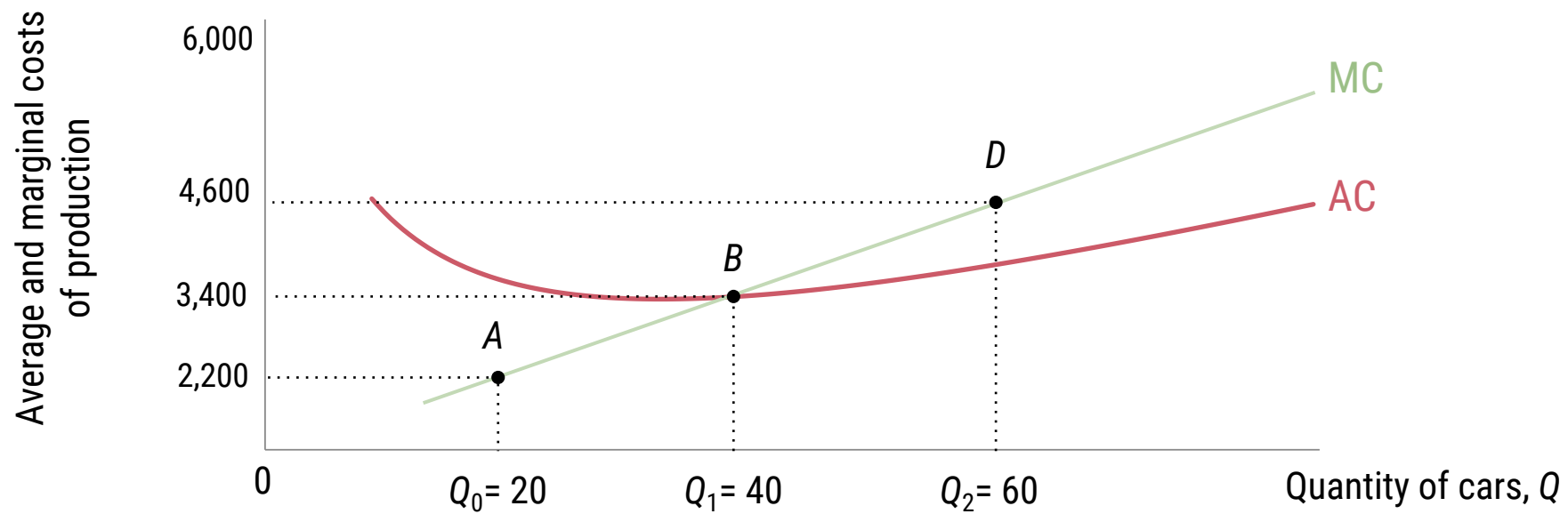
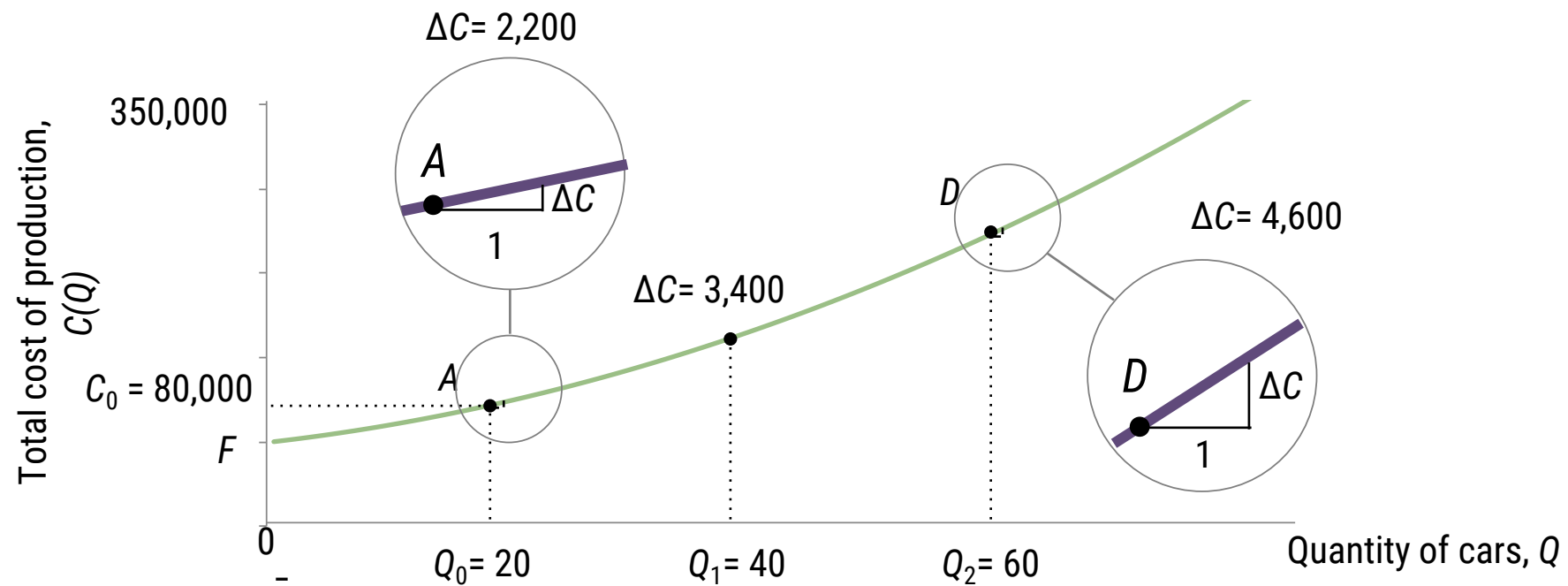
Making stuff costs money and affects profits

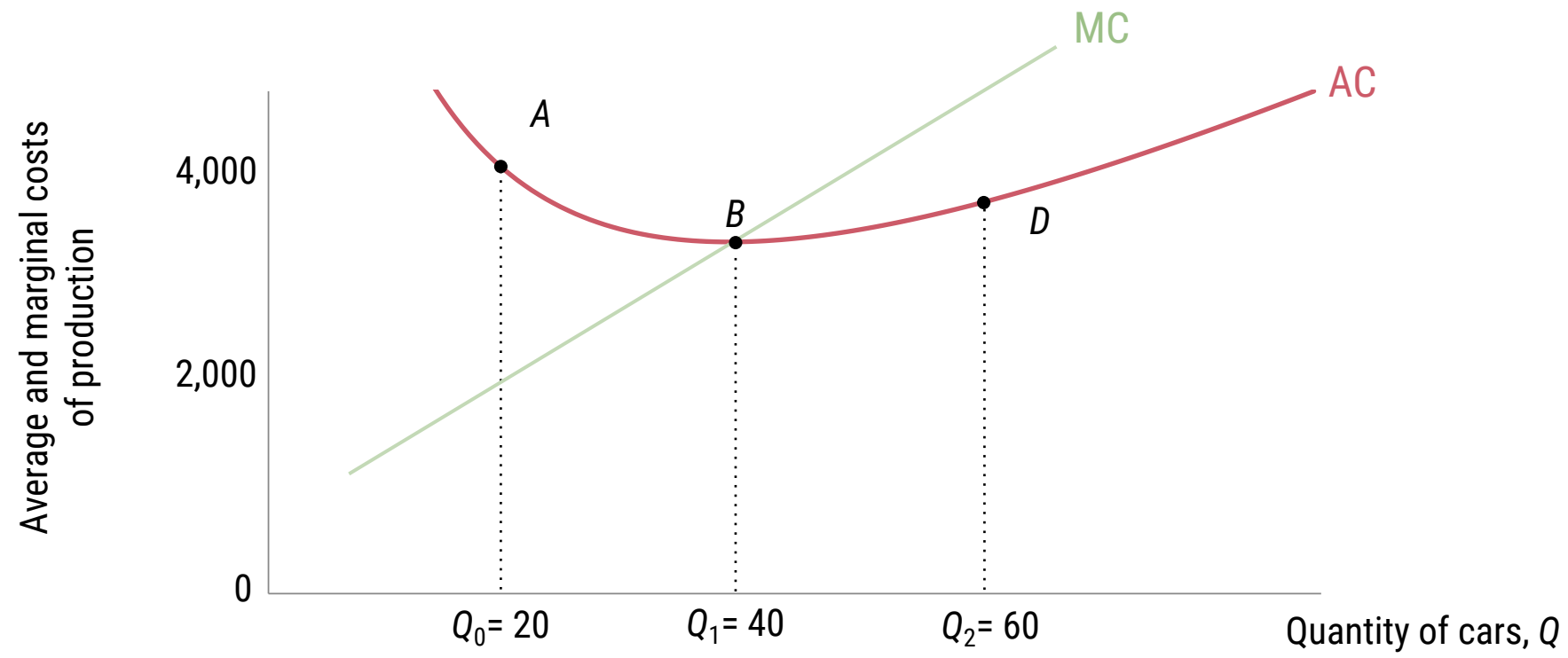
Total cost of production, $C(Q)$



Average cost







Size and location

Economies of scale (Dis-)

Cost to make stuff goes down as you make more stuff

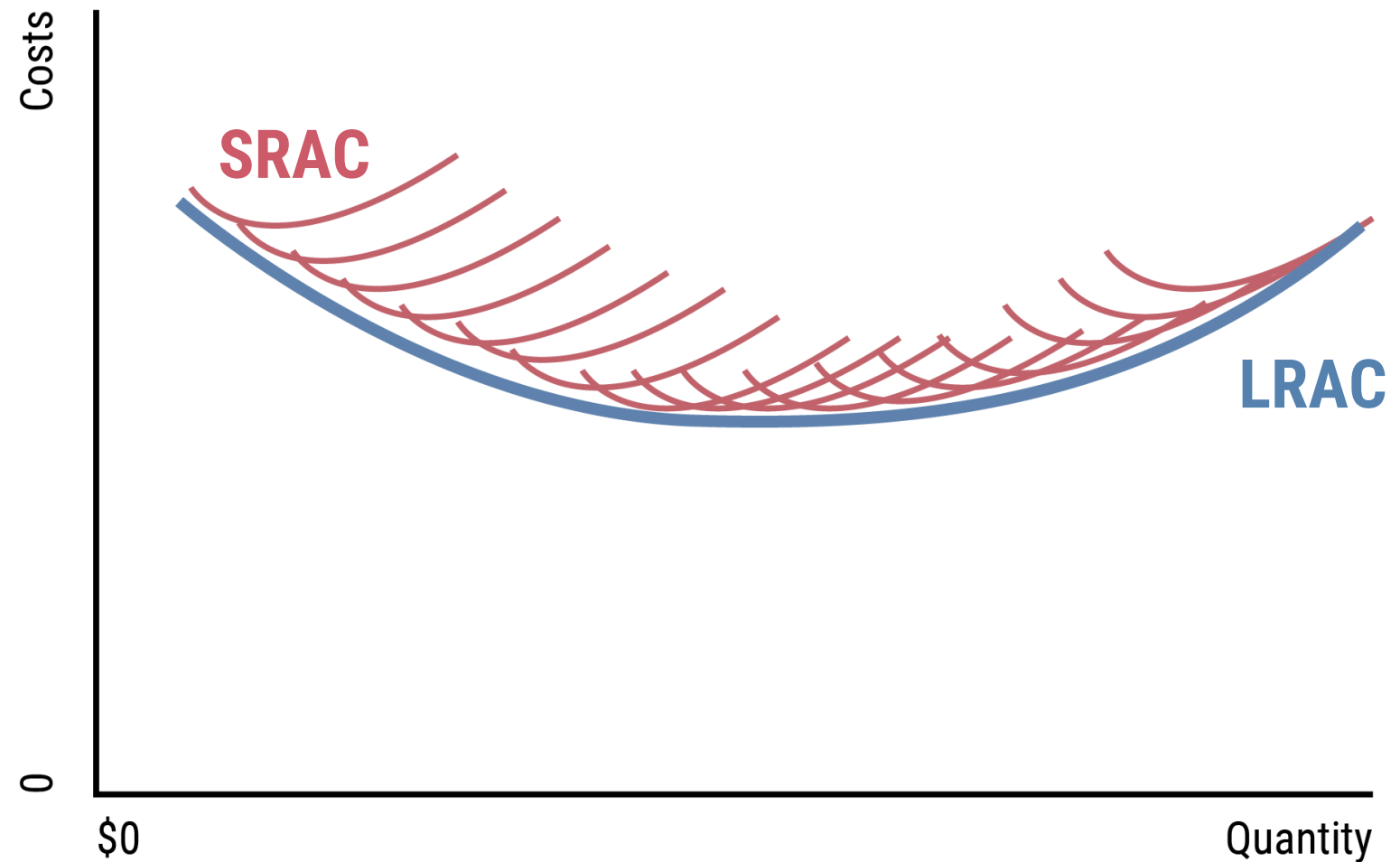
Economies of agglomeration

Cost to make stuff goes down as you clump together

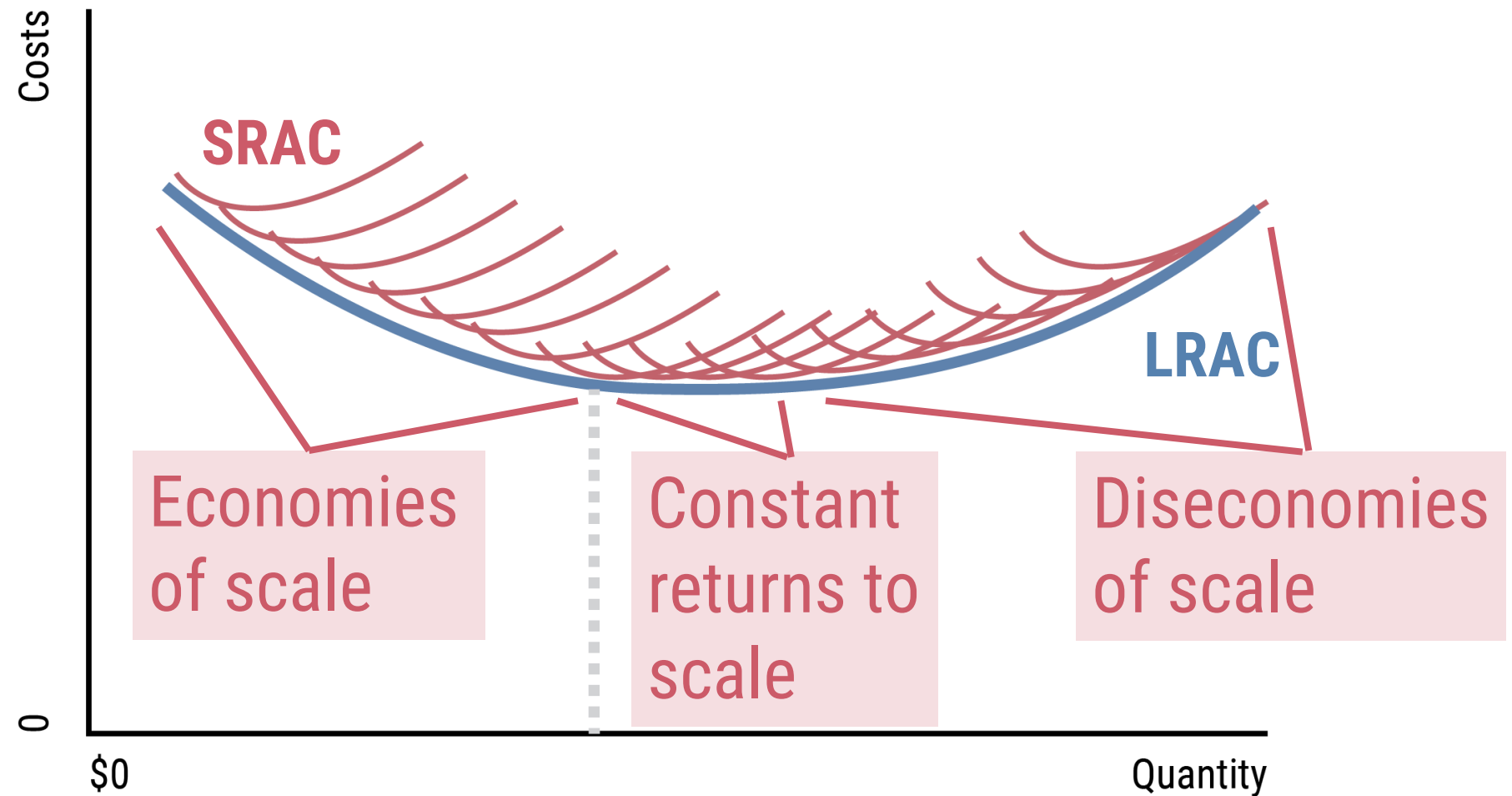
Network effects

Cost to make stuff goes down when everyone uses your stuff

Long-run vs short-run costs



Costs and scale



Next time...

Profit maximization
without isoprofit curves

Elasticities, taxes,
market power