

TC

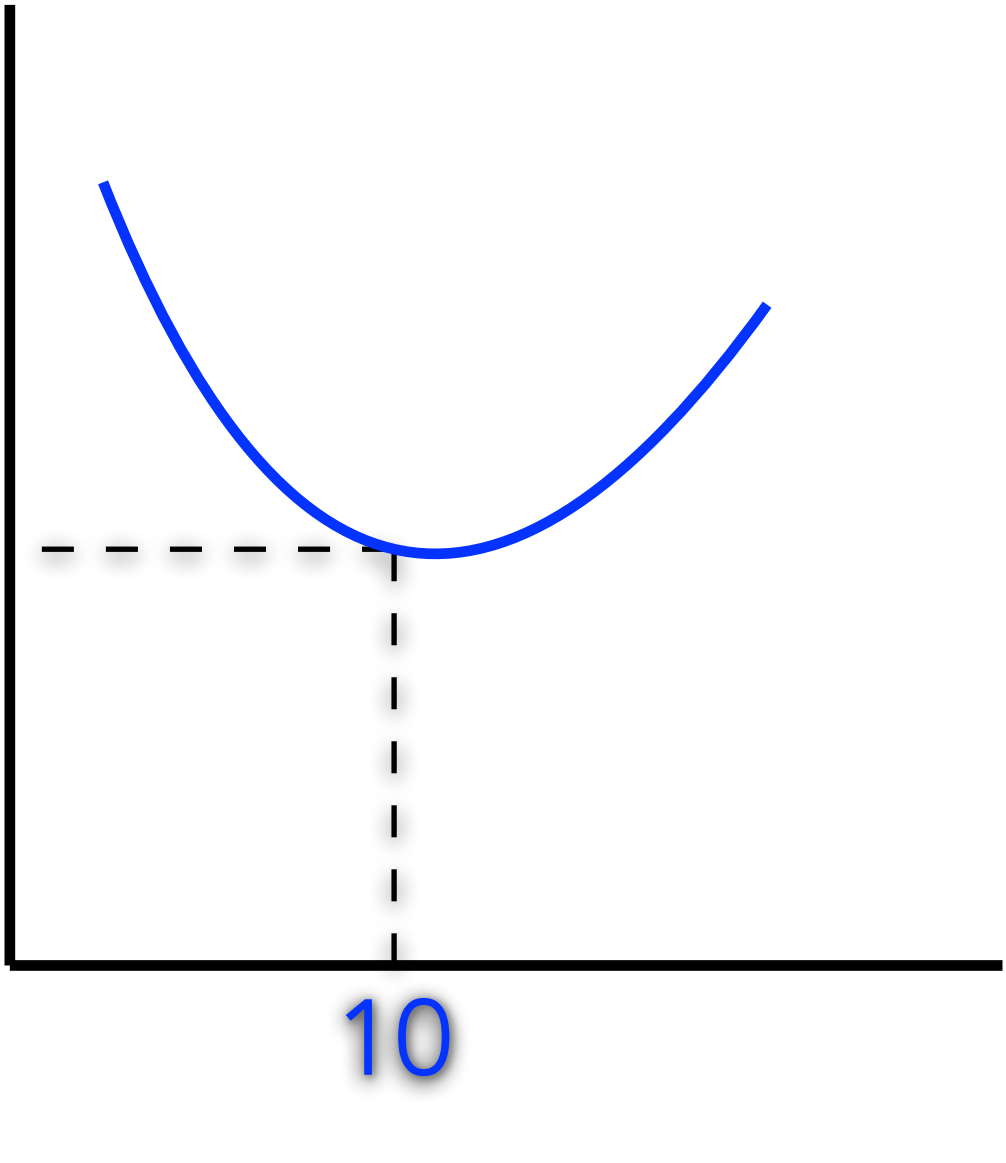
Q

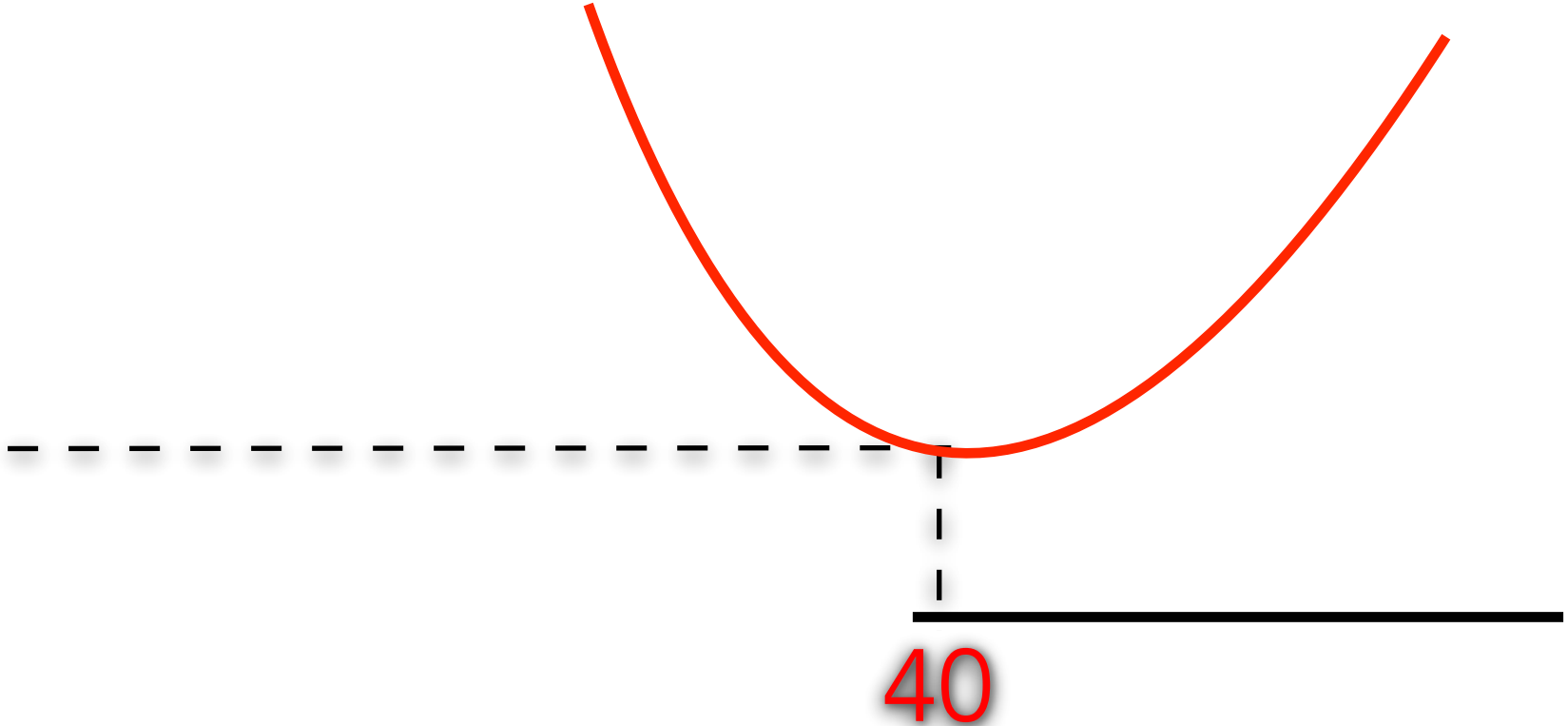
ATC =

A white speech bubble with a black outline and a small tail pointing downwards. Inside the bubble, the text "\$20" is written in a bold, blue, sans-serif font.

\$20

\$20





\$

1

0

SRATC₁





SRATC₂

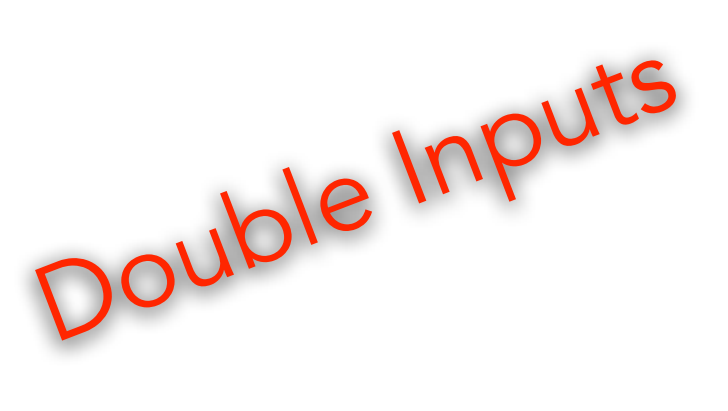
Or Economies of Scale



Increasing Returns to Scale

Reduction in costs due to larger plant

Double Costs

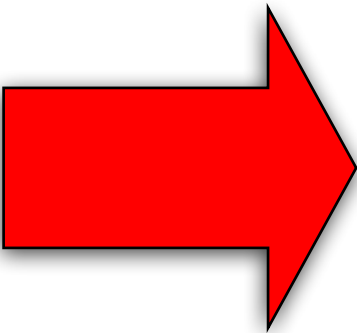


Double Inputs

2TC

4Q

More than Double Output





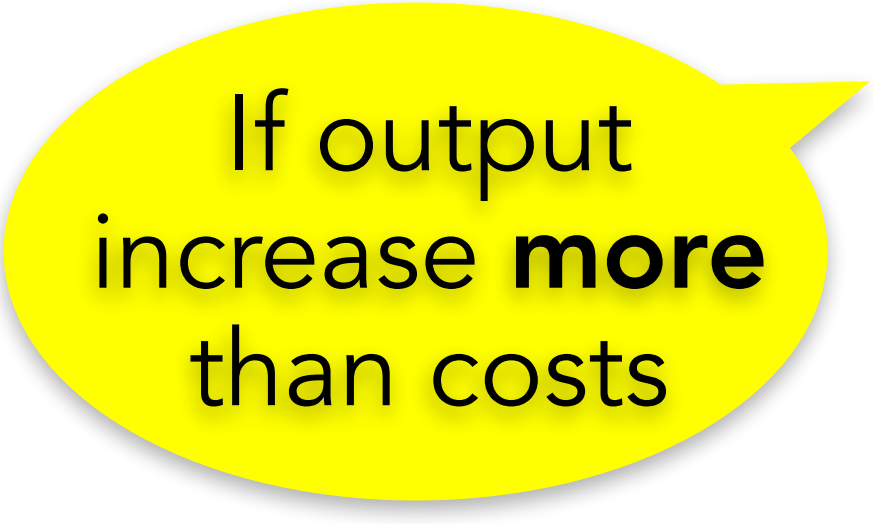
\$10

= ATC

$$= \frac{200}{10}$$

$$= \frac{2(200)}{4(10)}$$

ATC
decrease

A bright yellow speech bubble with a tail pointing towards the top right corner. Inside the bubble, the text "If output increase **more** than costs" is written in black. The word "more" is bolded.

If output
increase **more**
than costs

An example

A blue speech bubble with a white background and a dark blue outline. The bubble has a tail pointing towards the bottom right corner. Inside the bubble, the text "Lowest possible cost per unit with this plant size" is written in a black, sans-serif font, centered and arranged in five lines.

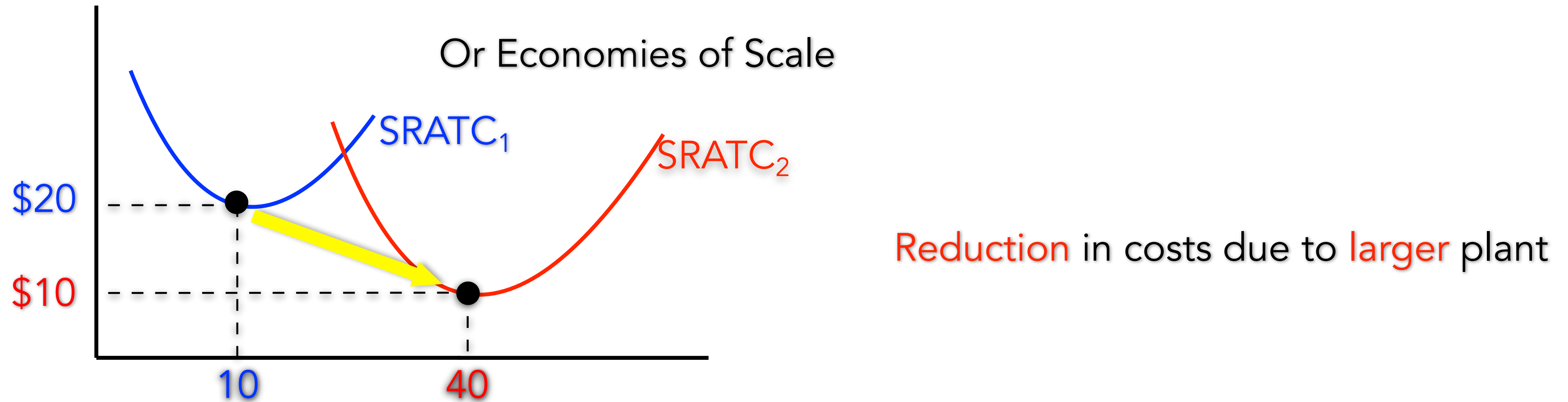
Lowest
possible cost per
unit with this plant
size

To reduce costs the firm has to
expand the plant

In a larger plant, if the firm use double
the inputs, then costs also double

Because the firm can use more
productive technology, output **more**
than doubles

Increasing Returns to Scale



Double Inputs

Double Costs

More than Double Output

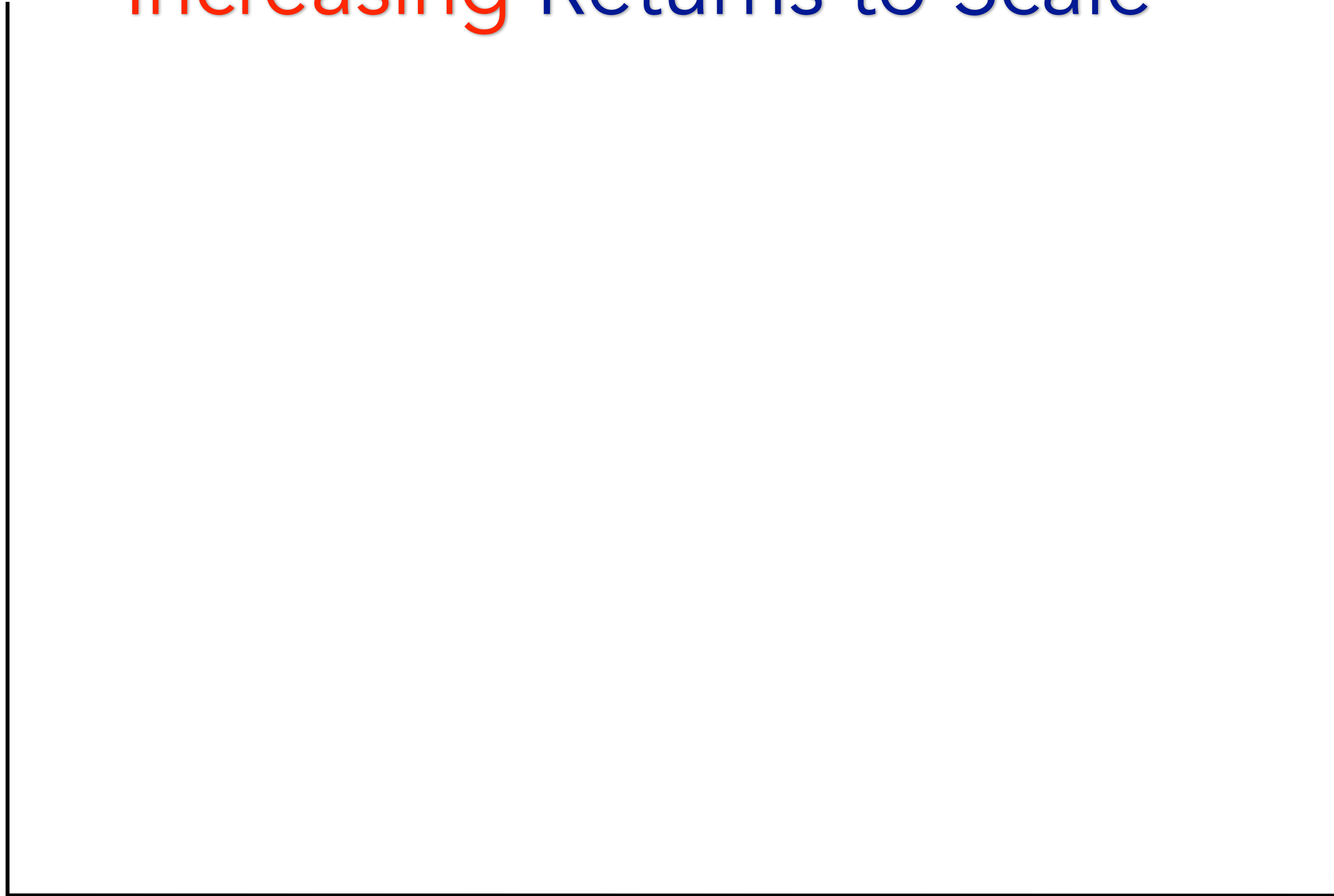
If output increase **more** than costs

ATC decrease

$$ATC = \frac{TC}{Q} = \frac{200}{10} \rightarrow \frac{2TC}{4Q} = \frac{2(200)}{4(10)} = ATC$$

Increasing Returns to Scale

ATC



output