

Info failure vocab 348

We have said all we will say about the consumers decision making process.

We have given a rough sketch of the governments motivations and actions.

Now we will getting into the firms decision making process: Firmer quantitative models.

Explicit and implicit costs

Repeat: Economic vs normal profit

short run vs long run

KEY GRAPH: page 164

Fixed, variable cost

Marginal cost vs. Average variable cost vs. Average total cost

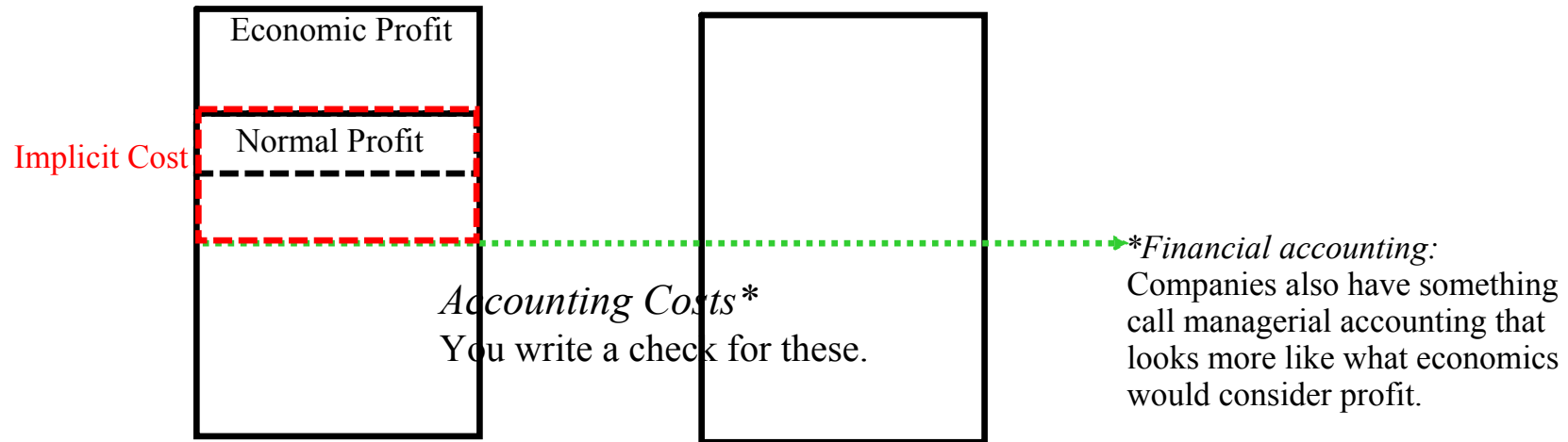
Long run cost model

OLD MESSAGE:

Normal Profit: Appropriate compensation to the entrepreneur.
Pays for time and risk.

Economic Profit: Excess profit/pure profit. A windfall to the entrepreneur arising from fortunate circumstance.

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NEW REFINEMENT:

Normal profit is just one example of a special kind of cost.
These are opportunity costs the business must cover to be truly profitable,
BUT you do not have to write someone a check to incur the cost.

(Self employed persons time, your Mom's garage, alternative investments)

Example:

You start a painting business:

Your time.

Your Mother's garage where you store the stuff.

The interest you could be earning on the money tied up
in your truck and ladders.

The brushes you wear out.

I don't like the book on this, they leave out a whole profession:

Companies spend a ton of time and effort trying to track these things.

Is there a cost of not doing other things with our resources?

Is there a cost to risk?

Are we recognizing the wear and tear on our assets?

(They sometimes take reserves, which do appear in financial accounting.)

Short run versus long run: slippery and relative definition.

Short run => The timeframe in which you are deciding how many of your product to make

- without changing how many you need to make later to stay profitable.

or

- by just buying more inputs that are consumed in production (labor, materials, etc.)

or

- without running into problems of how long it takes to change how many you can make

Long run => The timeframe that is so long that you can adjust all factors of production.

A year from now you could have a bigger shop, more machines, etc..

SHORT RUN * PRODUCTION COST

Variable costs and Fixed Costs

Variable: costs that change directly with the level of output.

Generally, move directly with cost. $\#made * unit\ cost.$

Fixed: costs that do not change with the level of output.

Subject to the law of diminishing returns:

*Why do we ONLY talk about variable and fixed in the context of the short run?

In the long run everything is variable.

Law of diminishing returns:

As you apply more and more variable inputs to the same fixed resources,
you eventually hit a point
where they get in each other's way and
the next unit variable input produces less new output
than the last unit of variable input

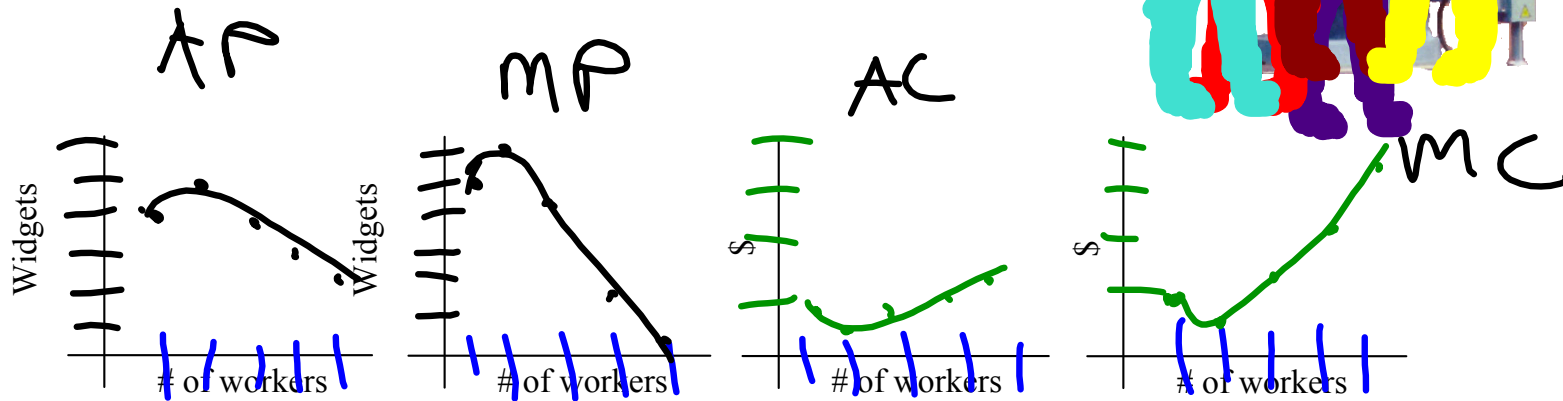
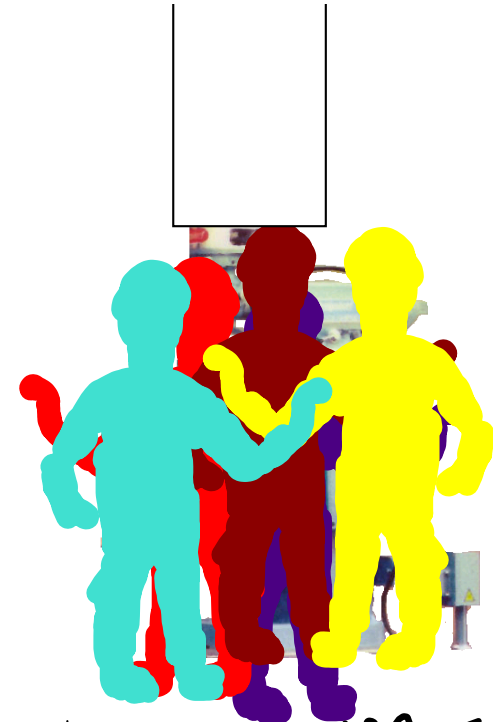
Book: as successive units of a variable resource are added to a fixed resource beyond
some point the extra, or marginal, product that can be attributed to each additional
unit of the variable resource will decline.

**YOU MUST BE ABLE TO DEMONSTRATE, RECOGNIZE,
AND DISCUSS THIS IDEA BASED ON GRAPHS AND
TABLES.**

Diminishing returns is a productivity story
 Productivity goes down.
 Each new guy make less

What is the marginal product of each worker?

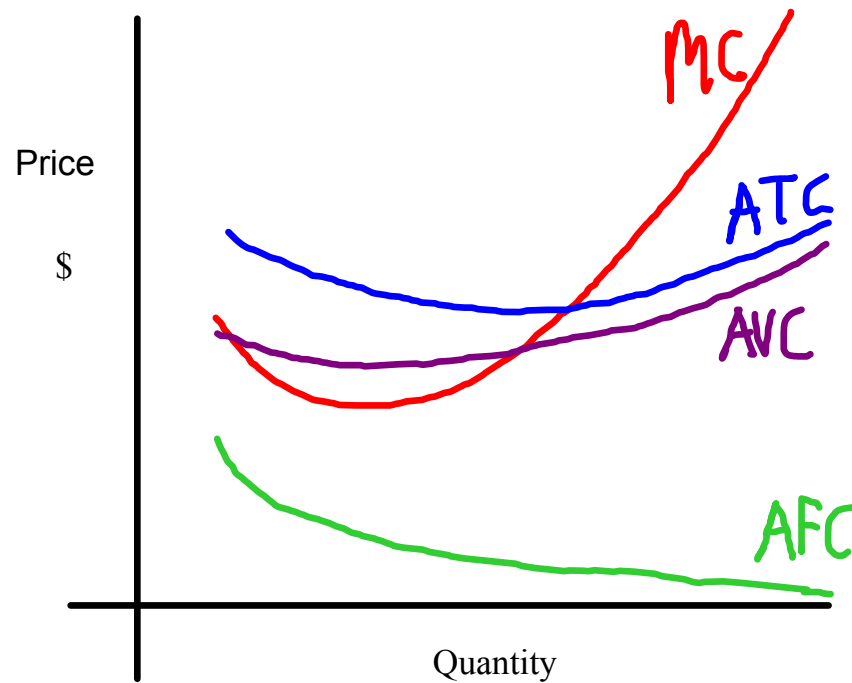
	(\$200/g/d)	Marginal product	Avg	Marginal cost
1 guy	50 widgets/day	50 w	4.00 \$/w	4.00 \$/w
2 guys	110 widgets/day	60 w	3.64 \$/w	3.33 \$/w
3 guys	150 widgets/day	40 w	4.00 \$/w	5.00 \$/w
4 guys	170 widgets/day	20 w	4.71 \$/w	10.00 \$/w
5 guys	180 widgets/day	10 w	5.56 \$/w	20.00 \$/w



atcavcfc.xlsm



Identify the curves
Know the principals behind them
 How to calculate them
 Why they have their shapes
Know the expenses that move them
Understand how they relate to each other



- *1) What is significance of ATC?
 - Your breakeven price
 - The summary of the dynamics of your scale of business.

Key points:

- 2) Your guide for deciding Q based on \$ cost.
- 3) Two meaningful shapes:
 - a) MC "check" L of D Returns
 - b) Constatly declining AFC

4) $ATC = AFC + AVC$

- *5) MC crosses ATC and AVC at minimum.
- *6) AFC is often left out, because it is depicted twice. Where?

1) What is significance of ATC?

- Your breakeven price
- The summary of the dynamics of your scale of business.

$$P \times Q = TR \text{ or } P = \frac{TR}{Q}$$

P is really, Average Price, but usually we charge the same price for all items sold.

$$ATC = \frac{TC}{Q} \text{ or } ATC \times Q = TC$$

$$\text{Economic Profit} = TR - TC \text{ or } \text{Economic Profit} = Q \times (P - ATC)$$

if Economic Profit = 0 Then $0 = Q \times (P - ATC)$

$$0 = (P - ATC)$$

$$P = ATC$$

$$ATC = \frac{TC}{Q}$$

Economic Profit = Total Revenue - Total Cost

$$= \# \text{ of units} * \text{Price} - \# \text{ of units} * (\text{Total Cost} / \# \text{ of units})$$

$$= P * Q - ATC * Q$$

Economic Profit = # of units * (Price - ATC)

$$= Q * (P - ATC)$$

5) MC crosses ATC and AVC at

You start out badly in a class and then improve, your scores look like this:

Tests:Average

68	68
60	64
56	61.33
52	59
54	58
56	57.67
58	57.71
60	58
70	59.33
80	61.4
90	64

Predict what happens to the average

6)

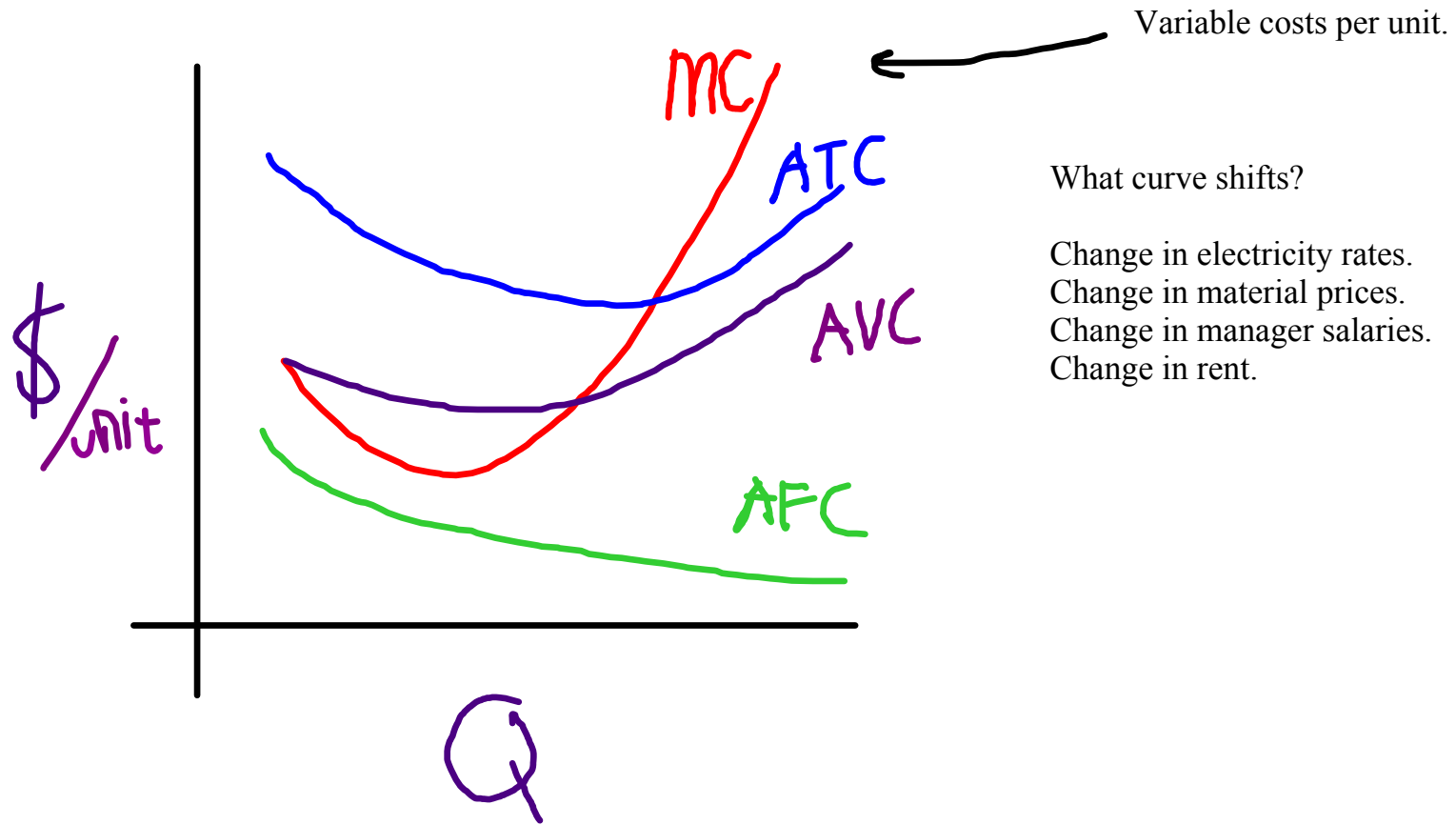
$$ATC = AVC + AFC$$

$$AVC = ATC - AFC$$

$$AFC = ATC - AVC$$

$$TC = TVC + TFC \text{ etc.}$$

MTC = MVC + MFC is a stupid statement, why?



What curve shifts?

- Change in electricity rates.
- Change in material prices.
- Change in manager salaries.
- Change in rent.

Bigger is better

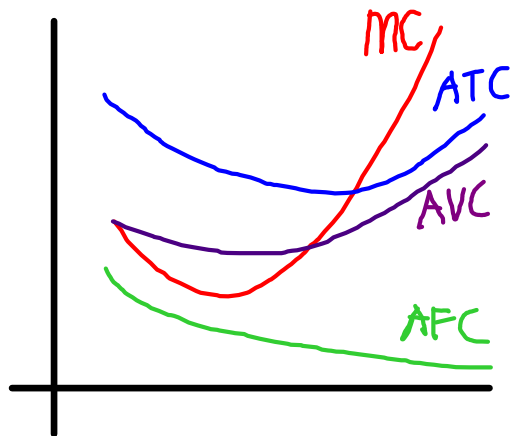
Economies of scale

- Labor Specialization

Managerial specialization

Ideal/appropriate/most efficient capital

Discounts, influence, money spent once, fixed cost effects



Bigger is bad

Diseconomies of scale

Distance - logistically

Distance - managerially

Inertia - more parties with interests/specialties

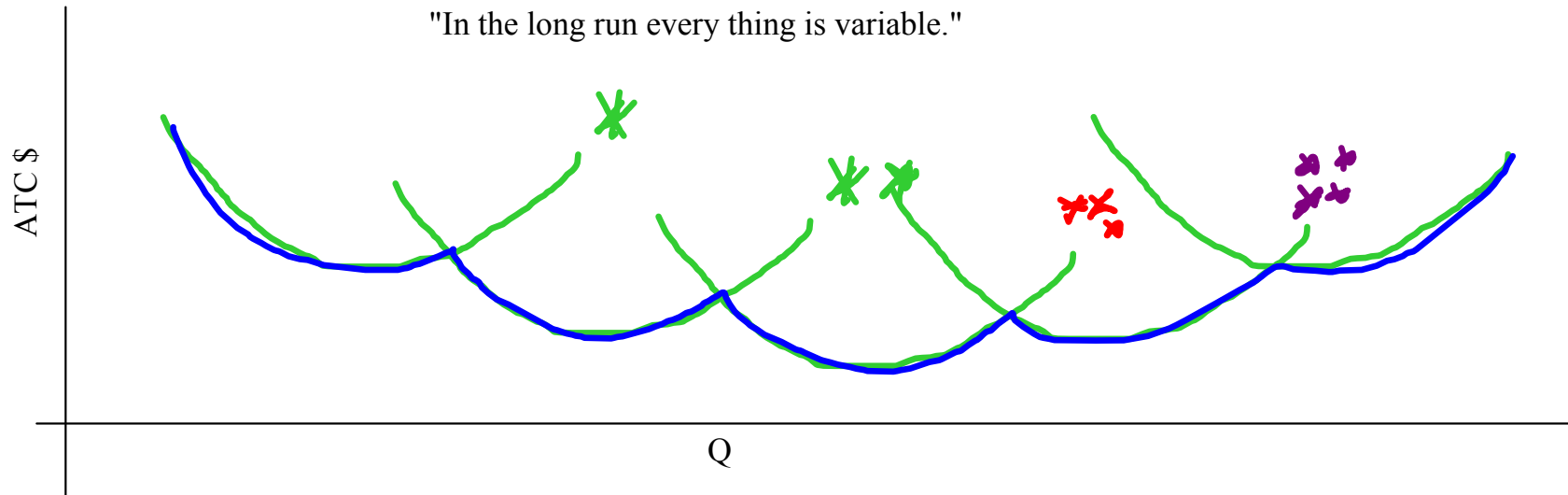
Inertia - more to move to change

Complexity - in an ability to predict results

Complexity - an inability to get an accurate picture

By getting bigger, you initially move ATC out and down, but

- eventually volume gets in the way
- it does not move smoothly it moves in lumps



* 1 building
 15 machines
 200 employees
 12 managers
 (2 layers)

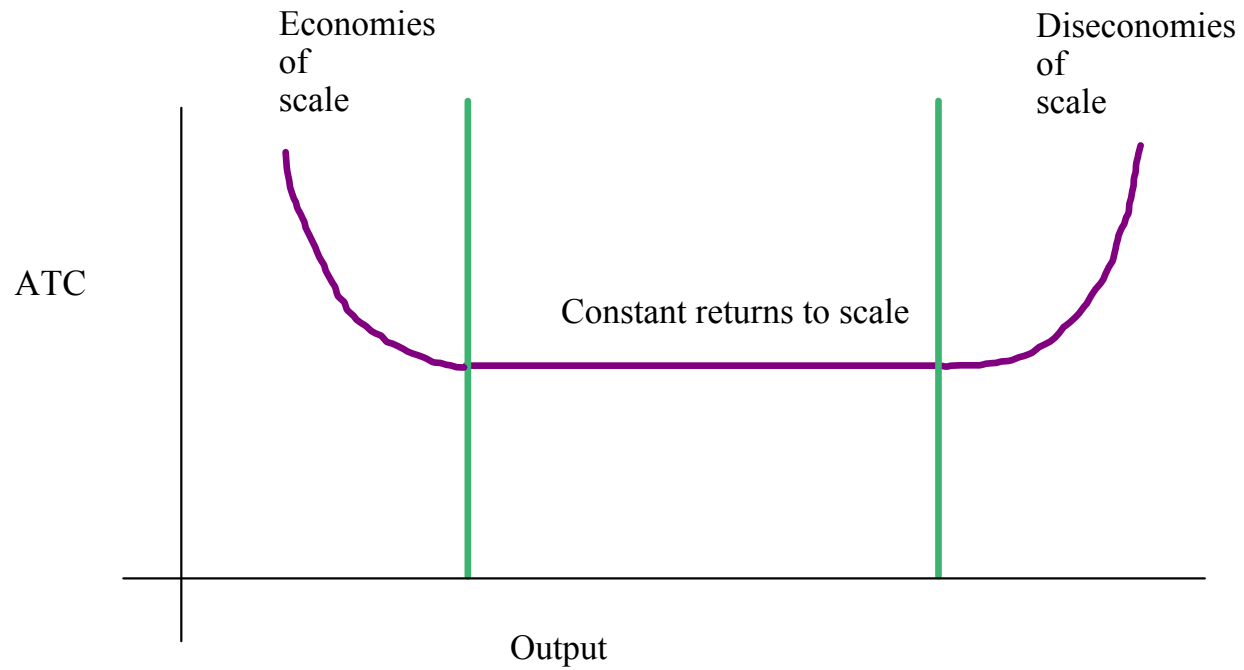
* 2 building
 35 machines
 425 employees
 27 managers
 (4 layers)

* 3 buildings
 55 machines
 650 employees
 39 managers
 (4 layers)

* 4 buildings
 (in different parts of town)
 70 machines
 900 employees
 50 managers
 (6 layers)

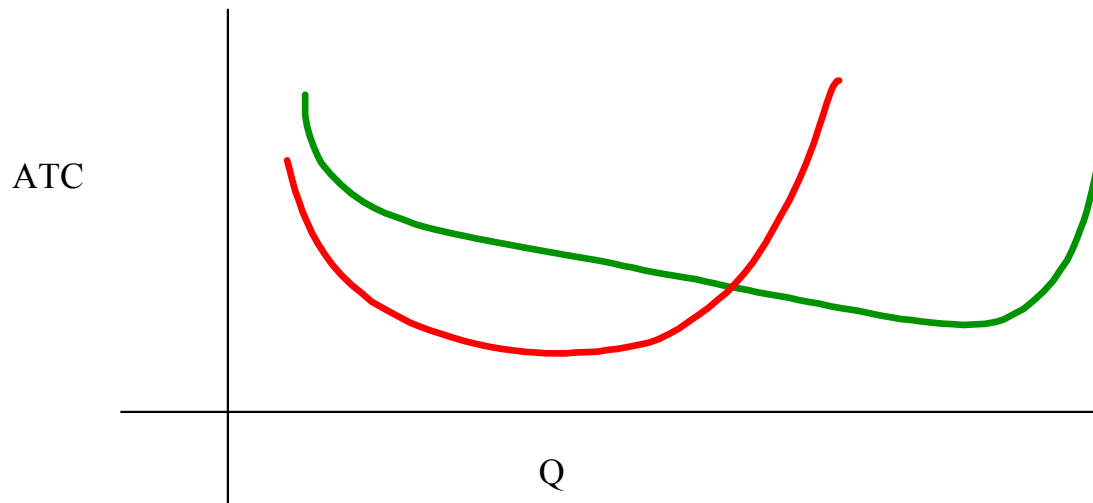
Why put all your call centers in India?

Long run ATC



Every industry is different 1) has a different curve
2) is at a different place on the curve

example: computer centers



Sketch a probable long run ATC for each industry:

- Cars
- Fast food
- Discount retailers (Walmart)
- Software
- Cell phones
- Pianos
- Skateboards

What could be circumstance of an industry where one firm just keeps dominating?

What might be the circumstance of an industry with lots of firms competing?

What might be the circumstance of an industry with just a few entrenched firms?

Why Google?

Attachments

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