

Introductory Microeconomics 41-110

Lecture 10

University of Windsor

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Consumer choice
(maximize utility)

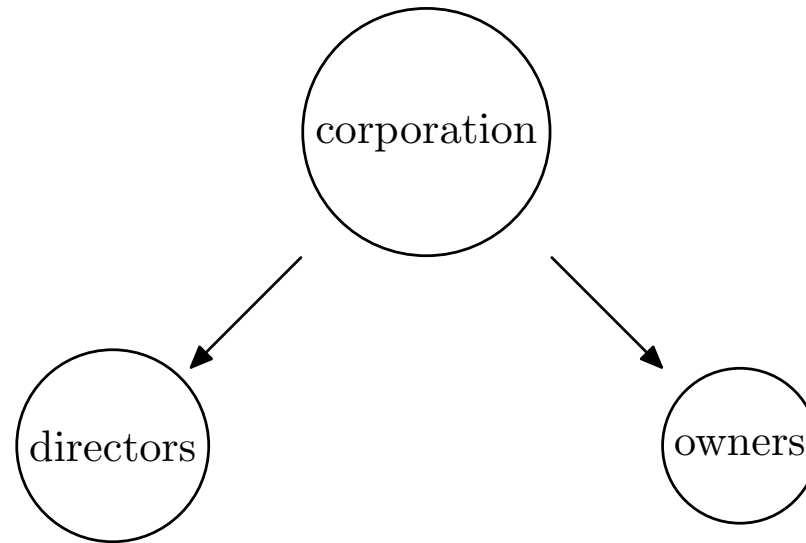


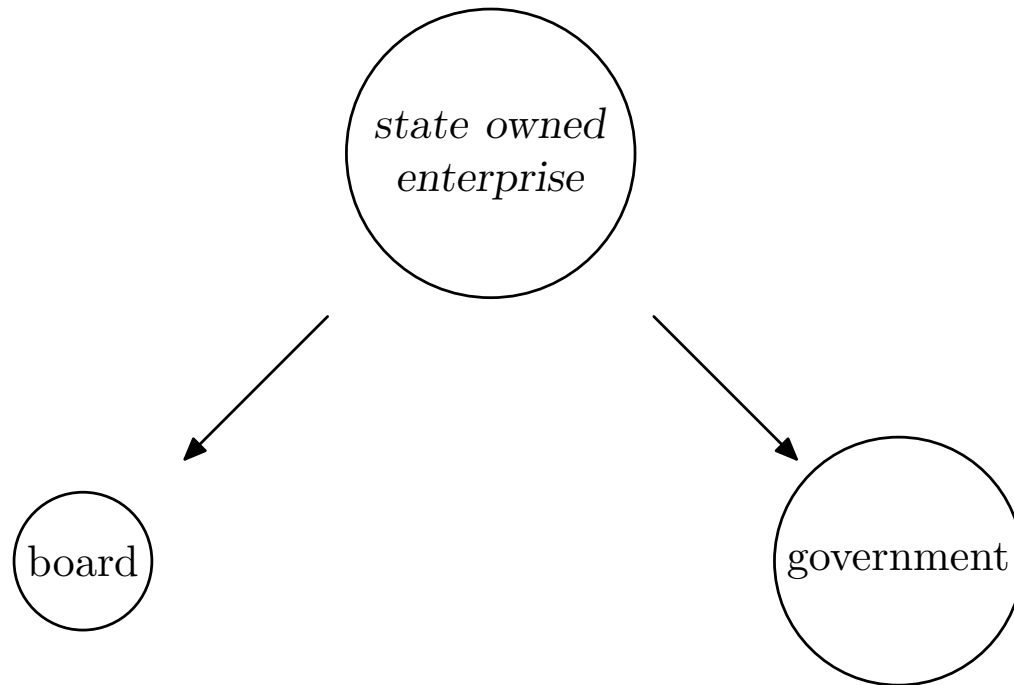
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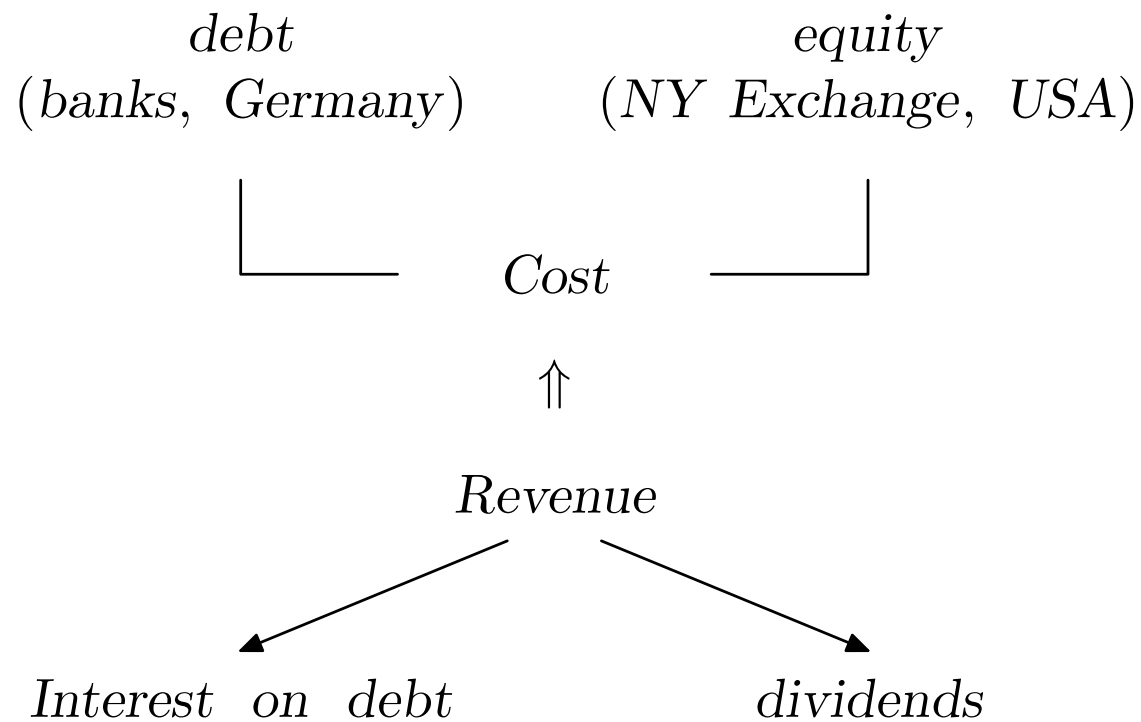
Firm production choice
(maximize profits)



Supply







Choice to start business



your own business

- lease office space

corporate rat

- hire people

Costs (Table)

$r = 10\%$ loan = 20,000 your own money = 10,000

Direct Cost

wages	10,000
lease	5,000
interest	$r \times \text{loan} = 2,000$

Opportunity cost

cost of time	30,000
cost of money	$r \times \text{your money} = 1,000$

Costs (classification)

Total Cost (TC)

Variable Cost

Fixed Cost

Labor (wL)

Capital (rK) + F_0

$$TC = \underbrace{wL}_{\text{variable}} + \underbrace{rK + F_0}_{\text{fixed}}$$

Sunk Cost – has been incurred and can not be recovered.

Short and long run

Short run

Long run

Variable cost:

labor (wL)

Variable cost:

labor (wL), capital (rK)

Fixed (sunk) cost:

capital + opportunity cost $rK + F_0$

Fixed cost —

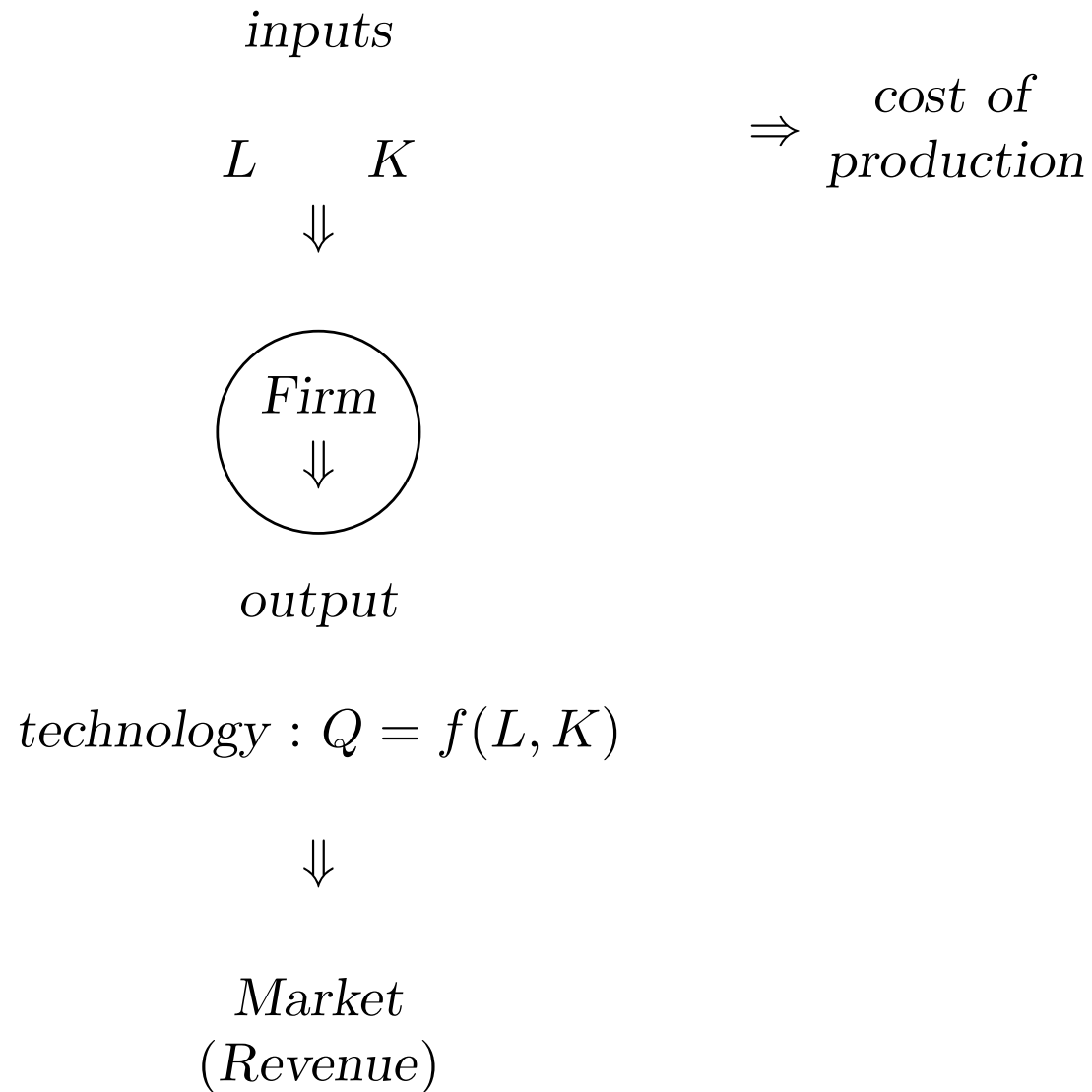
number of firms is *fixed*

number of firms is *variable*

- produce single product (Q – quantity of the product)
- firm = single manager chooses

L (short run) (L, K) (long run)

- choice determines production $Q = f(L, K)$
- objective – maximize profits



$$\text{profits}(Q) = \text{revenue}(Q) - \text{cost}(Q)$$

revenue(Q)

cost(Q)

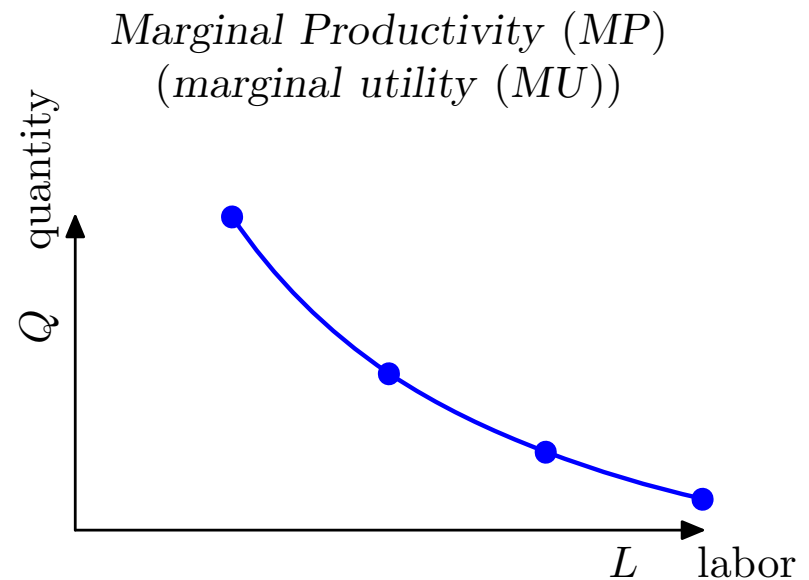
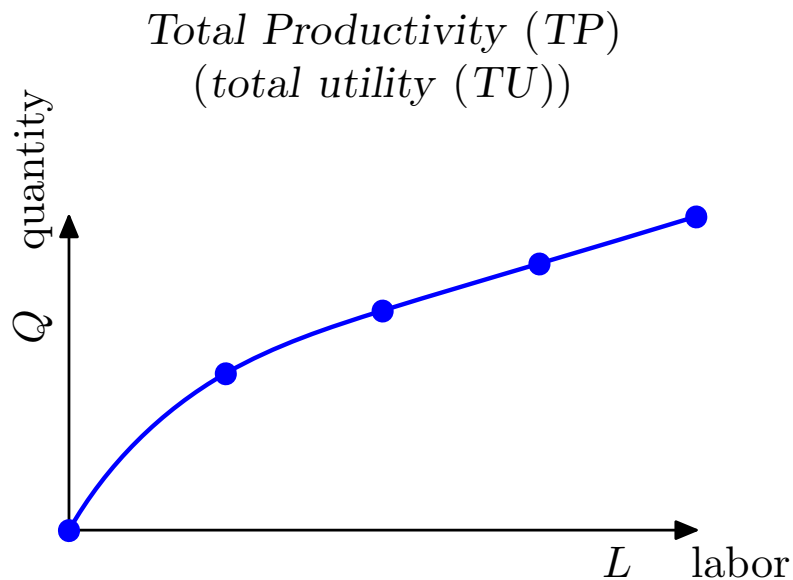
depends on demand

depends on production technology

Production in short run

K – fixed

L – variable



Total productivity of 5 workers – quantity produced by 5 workers

Marginal productivity of the 5th worker – quantity produced the 5th worker