

Managerial Economics

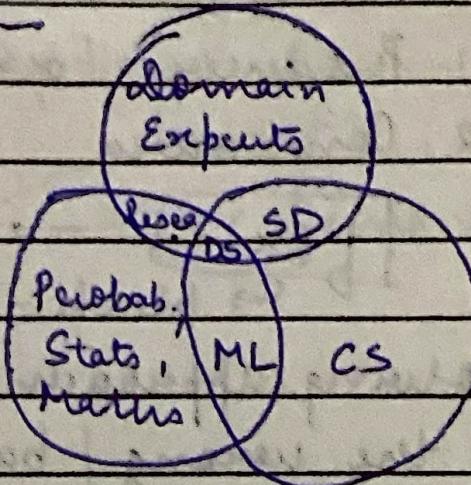
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Week 1

L1

Introduction



DS is a fusion of many disciplines.

- Economics → Domain Expert (Business Sc., Social Sc.)
↳ Statistics (Econometrics)
↳ CS (Computational Social Sc.)
- Complementarity - A framework to understand world and solve problems.
- Economics - A Sc. of decision making. A study of human behaviour in ordinary business of life. A study of allocating scarce resources to satisfy our desires. A framework to study societal & business problems. An applied course in constraint optimization.
- Manager - A person who directs resources to achieve a stated goal.
- ME - The study of how to direct scarce resources in the way that most eff. achieves a managerial goal. Application of Eco to business problems.

- Economics - Micro, Macro & Econometrics
- Microeconomics → 1. Producer → Firm → Manager
2. Consumers 3. Markets

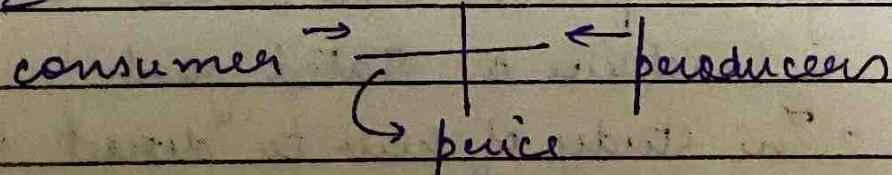
$$x \rightarrow [f(x)] \rightarrow y$$

↓ black-box (Technology)

- Problem solving approach →
- 1. Who made the wrong / bad decisions ?
- 2. Did the decision maker have enough info. ?
- 3. Did she/he have the incentive to do so ?

L2 Economic Models

- complexity reduced → abstract, simplified
- \longrightarrow [] \longrightarrow
exogenous var. endogenous var.
- optimization → constraint
 - ↳ manager - max. profit / min. cost
 - consumer - max. utility
- \downarrow GE



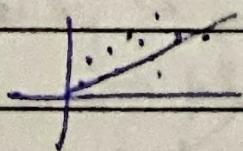
- comparative statistics
Exo → [] → Endo. var.

- Regression analysis

$$y = x\beta + \epsilon$$

↓ error

Eq. linear eq.



Demand estimation

L3

Buyer's Perspective

- Eq. own apt. complex. 10 Buyers are there you can evict out 5 apta.

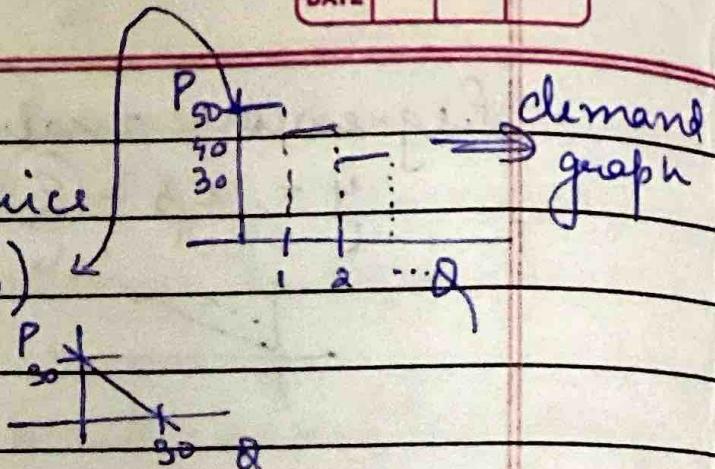
1	2	3	4	5	6	7	8	9	10
70	15	60	30	22	35	55	40	20	65

Price \rightarrow 40 (1, 3, 7, 8, 10)

- Pricing, price, good (tangible), service (intangible), transactⁿ (buyer, seller, evict., govt.), reason for the transactⁿ, buyer & evict. in pricing.
- Buyer's value $\geq P \geq$ Cost + (producer)

- A rational buyer - preference criteria (consistency, decision-making ability)
- Reserveⁿ price - max. amt. that someone is willing to pay for 1 additional item.
- Consumer surplus - Reserveⁿ price - bought price

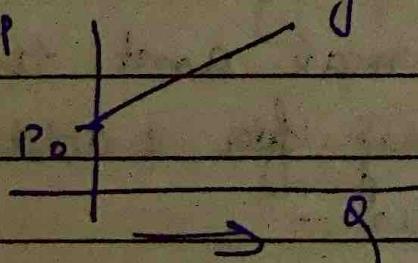
- demand funcⁿ
- dec. revenueⁿ price
- choke price (p_0)
- Eq. $P = 30 - Q$



- problems with assumⁿ of rationality
 - ↳ effect of setting on the revenueⁿ price, absolute vs % savings, influence price

L4 Seller's Perspective

- Seller → Aims: Max. profit
- $\Pi = \text{Total revenue} - \text{Total cost}$
- $\Pi = PQ - c(Q)$
- $\Pi = \max_Q (PQ - c(Q))$
- revenue → price & quantity
- cost → raw material & technology
- Seller/business → wealth creation and moving assets into high value uses (money)
- a seller's willingness to supply



- Monopoly \rightarrow 1 seller, many buyers
- Monopsony \rightarrow 1 buyer, many sellers
- Oligopoly \rightarrow few buyer, few seller
- comp. \rightarrow perfect competition (DNE)
- marginal cost - cost to produce 1 unit
- pricing \rightarrow outcome of a negotiation btw. a buyer & seller.
- 2 aspects \rightarrow price & decision
- techniques \rightarrow negotiation, fixed price, auction, price discrimination
- how to go about decision making
 - \hookrightarrow alternatives, the choice to maximize surplus/ happiness