Thinking Like an Economist

Models

- **Normative analysis**: prescriptive (value judgement; "ought" or "should")
  - Can't be proven true or false
- **Positive analysis:** descriptive (theoretically verifiable; "is")
  - Either true or false

Resource: anything that can be used to produce something else

- People must make choices because resources are scarce.
- **Scarcity:** when a resources is limited so that all demands for it can't be satisfied
  - If you choose something, you can't choose something else
- Resources should be used as efficiently as possible.
  - An economy is efficient if it takes all opportunities to make some people better off without making other people worse off.
  - Because people usually exploit gains from trade[1], markets usually lead to efficiency.
  - When markets don't achieve efficiency, government intervention can improve society's welfare.

Opportunity cost(OC): the value of the alternative forgone when using a resource

- What you give up in order to get an item you want

OC=true cost of using a resource

- **OC = Implicit Cost (Val_{NBA} [2]$- P_{item}$) + Explicit Cost (P_{item})**
  = $Val_{NBA} - P_{item} + P_{item}$
  = Val_{NBA}
  - Explicit cost: actual cost of an item
  - Implicit cost: value($) of the benefits that are forgone (how much you give up)
- Give up the LEAST painful thing (smallest OC)

Marginal Benefit(MB) / Marginal Cost(MC)[3]

- MB(n)=TB(n)-TB(n-1) or MC(n)=TC(n)-TC(n-1)

Willingness to Pay

- Depends on how you value the item, implicit cost(extra surplus)
- WTP(n)=the most the consumer is willing to pay the seller for n items(if given the choice between n and 0 items)

Marginal willingness to pay: MWTP(n)=WTP(n)-WTP(n-1)

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[1] Gains from trade: people can get more from trade than by being self-sufficient.

[2] Value of the next-best alternative.

[3] MC=explicit cost

- MWTP=Val_{item}-implicit cost
- When comparing WTP or MWTP to costs, costs include only explicit costs

Marginal decisions: deciding about whether to do a bit more or less of an activity

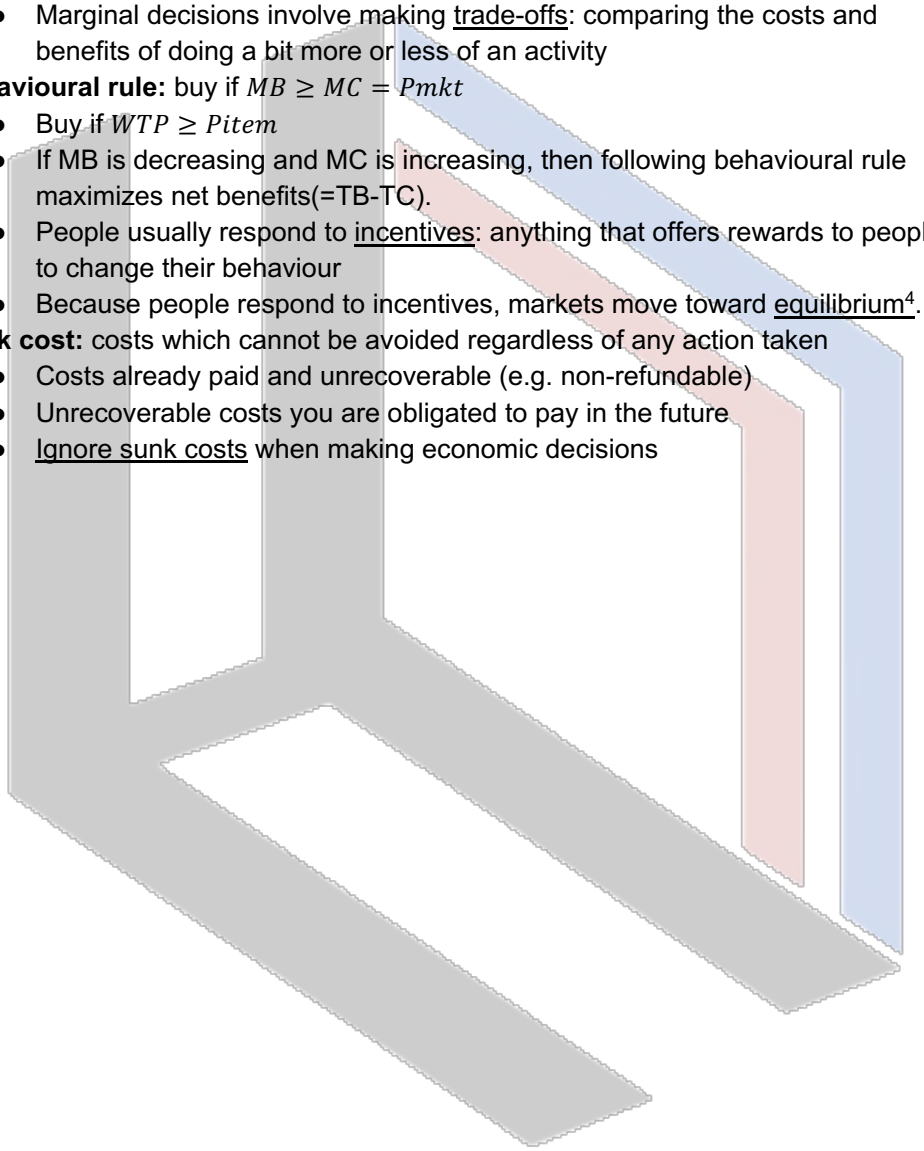
- Marginal decisions involve making trade-offs: comparing the costs and benefits of doing a bit more or less of an activity

Behavioural rule: buy if $MB \geq MC = Pmkt$

- Buy if $WTP \geq Pitem$
- If MB is decreasing and MC is increasing, then following behavioural rule maximizes net benefits(=TB-TC).
- People usually respond to incentives: anything that offers rewards to people to change their behaviour
- Because people respond to incentives, markets move toward equilibrium[4].

Sunk cost: costs which cannot be avoided regardless of any action taken

- Costs already paid and unrecoverable (e.g. non-refundable)
- Unrecoverable costs you are obligated to pay in the future
- Ignore sunk costs when making economic decisions



[4] Equilibrium: a situation in which no individual can be better off by doing something different

Gains from Trade

Absolute advantage: if a person/firm/country produces more output per each input than others

Comparative advantage: if OC of producing is a good or service is lower for a person/firm/country than for others

$$OC=\frac{give\ up}{get}$$

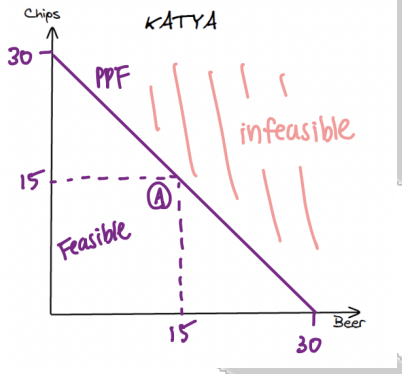
- Between any two agents, each has a comparative advantage in something (unless OC is equal)
- If both items are produced and consumed by both without trade, then both are better off with trade (each specializing in its comparative advantage)

Trade: providing goods and services to others and receiving goods and services in return

- **Specialization**: each person specializes in the task that he or she is good at performing

Production Possibility Frontier(PPF): all efficient output combinations

$$|Slope_{PPF}|=OC_{horizontal\ good}$$



A: Initial production and consumption point

Efficient: only way to get more of one good is to get less of another

Feasible: can be produced with given resource

Infeasible: cannot be produced

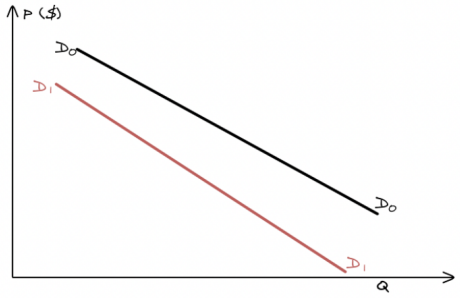
Supply, Demand, and Equilibrium

Implications

- Buyers: buy if MC(n) =P_{mkt}
- Sellers: sell if MB(n)= P_{mkt}

Competitive market: a market in which there are many buyers and sellers of the same item, none of whom can influence the P_{item}

< Demand >



Law of Demand: if P decreases, Q^d increases[5] (given other things equal)

- Q^d: actual amount of an item that consumers are willing to buy at specific P
- Demand(D)=MWTP=slope of a curve

MWTP is decreasing b/c:

- Each successive unit is generally less valuable than previous unit
- Exception: threshold goods (ex. Education: more is better)

- Increasing implicit cost

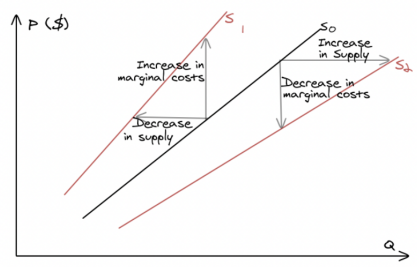
Change in D: shift of the demand curve (due to a relevant change in anything but P)

- Change in P of related goods
  - **Substitutes**: if $P_A\uparrow \rightarrow Q^d_B\uparrow$, then A and B are substitutes(e.g. android phones and iPhone)
  - **Complements:** if $P_A\uparrow \rightarrow Q^d_B\downarrow$, then A and B are complements(e.g. cereal and milk)
- Expected future P
  - If $\uparrow P_{future}$, D curve shifts out and upwards
- Changes in income(wealth)
  - **Normal good**: income and D move are positively correlated (e.g. luxuries)
    - If ↑income, D curve shifts out and upwards
  - **Inferior good**: income and D move are negatively correlated (e.g. junk food)
    - If ↑income, D curve shifts in and downwards
- Change in number of consumers <u>in the market</u>
- ↓P→↑consumers in the market
- Changes in preferences and tastes

[5] P: price; Q_d: quantity demanded=MWTP

Change in Qd: movement along the curve (due to change in P)

< Supply >



Q^s: amount of item sellers are willing to supply at specific P[6]

- MC is increasing b/c: cost=OC

Change in S: shift of the supply curve (due to a relevant change in anything but P)

- Input prices: if ↑P_{input}, S curve shifts in and upwards
- Technology: if ↑technology, S curve shifts out and downwards
- Expected future P: if ↑P_{future}, S curve shifts in and upwards

Change in Q_s: movement along the curve (due to change in P)

Individual → Market

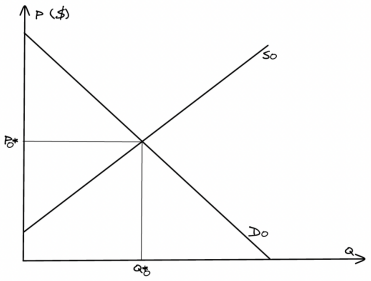
Individual: $q_i(P)$ vs Market: Q(P)

- Assumption: each buyer/seller is small relative to the entire market; an individual cannot change P_{mkt}

Equilibrium[7]

- P*: where $Q^S(P^*)=Q^d(P^*)$ in a perfectly competitive market
- Q*: where $Q^d(P^*)(=Q^s(P^*))$

	P	**Q**
D shift: up/out ↑→	↑	↑
S shift: down/out ↓→	↓	↑
Total effect	?	↑↑



Equilibrium as a prediction of what is going to happen

- Positive claim: the decentralized, perfectly competitive market finds the price P* where quantity supplied equals quantity demanded

[6] Qs: quantity supplied=MC

[7] Qo*:quantity equilibrium; Po*: price equilibrium