Principles of Economics Review Session

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§6.1–6.2 How Producers Make Choices

- Producers choose a quantity q that maximizes profit $\pi = TR - TC$
- Marginal analysis tells us that π is maximized when $MR = MC$
- In perfect competition, producers take price as given, so $MR = P$
- So producers produces at quantities such that $P = MC(q)$
- Hence firm's supply is basically MC, but under some conditions

§6.4–6.6 Short Run and Long Run

- Sunk cost: When a cost is irreversible, it is sunk 付出的愛收不回
- For a rational decision maker, sunk costs are irrelevant, since no matter what you do now, you will always have to pay that cost
- In the short run, producers can always choose to shutdown
  - Fixed costs are sunk in the short run, so shutdown if $P < AVC$
  - So short run supply is the part of MC that is above AVC
- In the long run, producers can also choose to exit
  - Since fixed costs are no longer sunk, firms choose to exit if $P < ATC$
  - Hence long run supply is the part of MC that is above ATC
  - If we allow free entry, other firms may choose to enter if $P > ATC$
  - Under free entry and exit, long run supply is the part of MC that equals to ATC, which is $\min ATC$

§7.1–7.5 Perfect Competition and Welfare

- Pareto improvement: A change of allocation that makes some people better off and others unchanged
- Pareto efficient: No Pareto improvement can be made, so any allocation change will make at least one person worse off
- First Welfare Theorem: Equilibrium outcome under perfect competition maximizes social surplus, which is Pareto efficient
  - Adam Smith theorem, the power of the invisible hand
- Distortions to a perfect competitive market usually decrease social welfare, we call them deadweight loss 無謂損失
- Pareto efficiency is silent on equity
  - Unequal allocations may still be Pareto efficient
  - Other than efficiency, we may also care about equity