Review Notes – Consumer Surplus

- Consumer Surplus
  - How do we derive a demand curve graphically from indifference curve analysis?
    - Note that here utility yields a demand curve
    - But in real world actually observe demand not utility
      - => How do we derive utility from demand?
      - One answer = consumer surplus.
  - Consumer surplus for a discrete good
    - What is a discrete good?
    - What is a reservation price?
    - What does D for a discrete good look like?
    - Why does reservation price (Demand) equal marginal utility?
      - Only strictly true for quasi-linear preferences
    - What is total value or the gross surplus for the discrete good equal to?
      - $r_1 + r_2 + r_3 + \ldots + r_n$
    - Consumer Surplus or Net Consumer Surplus
      - Subtracts the cost per unit – the price – from the gross surplus
      - $= (r_1 - p) + (r_2 - p) + (r_3 - p) + \ldots + (r_n - p) =$ Gross Surplus – np
      - What does this look like graphically?
  - Quasi-linear Preferences – what do you need to know about them?
    - What are they? $U(x,y) = V(x) + by$
    - What impact do they have on reservation prices and demand?
      - In general reservation prices for one good depend upon consumption of the other good. But not true for quasi-linear preferences.
      - D exactly measures marginal utility for QL preferences.
      - Area under D measures total utility for QL preferences.
      - For other types of utility D ~ MU and area under D ~ TU.
  - Consumer surplus for a continuous good
    - What is a continuous good?
    - Is D still = MU?
    - Is area under D = TU? (How do you measure area?)
    - Is Consumer Surplus still TU – pn?
    - How do we interpret the change in consumer surplus when price changes?

- Compensating and Equivalent Variation
  - How are these similar/different to Consumer Surplus?
    - Still a method of calculating the change in value resulting from a change in price of a good.
    - Uses utility rather than D to measure => arguably better measure although more difficult to get utility than D.

- Assumptions/Definitions
  - We know the person's utility/preferences.
  - Only 2 goods; one whose price changes interested in; one whose price = $1 => composite good (money left after buying first good => available to buy all other goods). Why do we make this assumption?
  - The price of the first good (P_1) changes => trying to measure how much value the consumer gets from this price change.
    - Be able to show optimal consumption both before and after the price changes on an indifference curve graph. Should have two prices for good 1; P_1 = old price and P_1^2 = new price reflected by two budget lines, BL_1 (old) and BL_2 (new) along with two indifference curves, I_1 (old) and I_2 (new).
    - Compensating Variation = the change in income needed to restore the consumer to his original indifference curve after a change in price for the first good. (New price, P_1^2, new income, old indifference curve, I_1)
    - Equivalent Variation = the change in income needed before the price of the first good changes to move the consumer onto the new indifference curve. (Old price, P_1, new income, new indifference curve, I_2)
- CV and EV graphically
  - Should know how to find both graphically for two different situations
    - P_1 increases
    - P_1 decreases
    - How are these related to Hicks decompositions?
    - Will you stay up late nights thinking about EV and CV?

- Net Producer Surplus
  - Is net producer surplus = profit?
  - Similar concept to consumer surplus => net producer surplus = total value – total cost = the difference between the price the firm actually gets and the price the firm would take (given by the supply curve).
  - What does it look like graphically?
  - What does a change in net producer surplus look like as price of the good changes?

- Net Surplus = Net Consumer Surplus + Net Producer Surplus
  - How is this related to allocative efficiency?
  - Changes in Net Surplus = Deadweight Losses
  - Examples
