Econ 101 Discussion Section-Handout 3

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1 Review

Important Key Concepts of the week:

- All about Supply: Think as a producer, the supply captures how production relates to prices, inputs and technology.
  - Supply Function: we say that the supply usually has a negative relation with prices, nevertheless this is not always the case
    - "Supply with a Positive Slope", the higher the price you want to produce more.
    - "Vertical Supply" when the quantity is fixed. No how much you pay you can only find 9 studio albums from The Beatles.
    - "Horizontal Supply", there is a fixed price for some goods
    - "Backward Bending Supply" Labor market
  - Supply Shocks
    - New Technology
    - Prices on inputs
  - Market Supply: same Idea as with demand
- Equilibrium: The general idea is that the supply and the demand reach to a market price and a market quantity.
  - Consumer Surpluss: How much gain from buying the good the consumer gets.
  - Producer Surpluss: How much gain from selling the good the producer gets.
- Public policy : The government can change the producer surplus or consumer surplus to benefit one specific group.
  - Price floor: The government wants to help the producers
  - Price Ceiling: The government helps the consumers
  - Quantity floor: is this even a real scenario? energy, vaccines, education.
  - Quantity ceiling: Sometimes it is important to keep consumption low. Health, international trade are always good examples.

2 Problems:

1. The Pumpkin Market:

   Consider pumpkins sold in the Fresh Market. Suppose the demand for pumpkins is given by Q = 100 – 2P, and the supply is given by Q = 2P + 20. Answer the following questions.

   (a) Calculate equilibrium price and quantity in the market for pumpkins. How large is consumer surplus at equilibrium? What about producer surplus?

   (b) How would the demand (supply) curve move in following scenarios? How would equilibrium price and quantity change?

      i. Halloween is coming and everyone wants a pumpkin lantern. But a sudden storm destroys 1/3 of pumpkins in the field.

      ii. A new chemical fertilizer is invented and the cost to plant pumpkins falls by one half. Influenced by a gourmet magazine, more people at Madison start to believe that pumpkin pies are much healthier than other pies. 3)

   (c) To make sure that people can enjoy cheap pumpkin pies, the state government decides to set a price ceiling of $25. Would that achieve its goal?

   (d) Would a price ceiling of 10 be effective? How large are consumer surplus and producer surplus in this case? How large is the deadweight loss?

   (e) What should the state government do if they want to guarantee that pumpkin planters can earn a higher profit? Is that good or bad for the entire society?

2. The Pumpkin Market with Trade

   Suppose that initially the pumpkin market in the US is closed, the demand and supply equations are the same as in 1). Now a new law is implemented, free trade permitted in this market. Consider following scenarios:

   (a) If the world price for pumpkins is $30, what will be the quantity demanded and supplied in the domestic market? Will the US have excess demand or supply? How large is it? How much will consumer and producer surplus change compared to the closed market case?

   (b) If the world price for pumpkins is $10, what will be the quantity demanded and supplied in the domestic market? Will the US have excess demand or supply? How large is it? How much will consumer and producer surplus change compared to the closed market case?

   (c) Suppose that the world price for pumpkins is $10, and now the US government implements a tariff of $5, then how many pumpkins will be imported? What's the deadweight loss from the tariff? What if the tariff is $15?