

## Econ 101 Discussion Section-Handout 7

Emilio Cuiilty

10/17/2014

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### 1 Review

#### Important Key Concepts of the week:

- Trade: So far we have seen why countries engage in trade only from the opportunity cost perspective. However is trade always good for everybody?
  - What happens if the international price is below the domestic price?
    - \* The country increases the imports
    - \* In U.S.A.?
      - 1) Oil (\$389.3 billion)
      - 2) Machines, Engines or Pumps (\$311.2 billion)
      - 3) Electronic Equipment (\$303.5 billion)
      - 4) Vehicles(\$253.3 billion)
      - 5) Medical, Technical Equipment(\$72.1 billion)
    - \* From whom?
      - 1) China
      - 2) Canada
      - 3) Mexico
      - 4) Japan
      - 5) Germany
  - Should government interfere to protect one side of the market?
    - \* Mexico used to have a very protective policy back in the 80's. Then in the 90's Mexico, USA and Canada agreed to liberalize all quotas or tariffs. Today there is no more barriers to trade. Was it good? In general yes. If you are interested in this topic, you should take an international trade course.
  - Is the government efficient?
    - \* As we seen there is dead weight loss when we use this measure. Because of that, during the 90's the IMF urged all economies in the world to liberalize trade.
  - Are there any differences when the demand is inelastic or elastic?
    - \* Yes, maybe there is some way to minimize dead weight loss.
- Tools of the government: How can the government preclude or impulse trade?
  - Tariffs
  - Quotas
  - Trade Agreements
- Math Review: Percentages!

## 2 Problems:

1. Consider the market of Economics books in Country X. Take quantities in the units of thousands of books. Domestic demand:  $P = -3Q + 100$  Domestic supply:  $P = Q$ 
  - (a) Assume that the economy of Country X is closed . Calculate the equilibrium quantity, price, consumer surplus, and producer surplus in the market
  - (b) Suppose the world price of Economics books is \$10. Now assume that this economy opens to world trade. How many units of books will this country import or export? What's the total surplus? Is there a dead-weight loss when this economy opens to trade?
  - (c) Continue to assume that this economy is open to world trade, but now the government has imposed a tariff of \$9 per book. Calculate the new equilibrium and the dead-weight loss in the market when this economy imposes this tariff
2. Consider the Sewers of New York City, home of the Teenage Mutant Ninja Turtles. They rule the sewers as a small closed economy. They love pizza, poor Ralphie cooks all the pizza. Imagine that the aggregate demand of the rest plus master Splinter per day is:  $Q = 30$ . Raphael supplies the Pizza with the following relationship:  $P = Q$ . Where P and Q are the price per slice of pizza in dollars, and Q is the numbers of slices sold in this market.
  - (a) Find the equilibrium price, equilibrium quantity and producer surplus in this little market. Graphically illustrate your answers.
  - (b) Domino's Pizza charges \$15 per slice, with full deliver to the sewers. If master Splinter allows the turtles to order find the price that pizza trades for in Sewers. How many units of pizza are consumed? How many are imported or exported in the sewers of New York when the turtles are able to order in? What is the producer surplus for Raphael? Graphically illustrate your answers.
  - (c) Mike uses the only phone in the sewers all day (usually to prank April), and somehow he manages to impose a \$10 tariff, not because he wants to help his brother, but to continue his monopoly on the phone. Find the price that pizza trades for in the Sewers given this tariff. How many slices are consumed and how many are imported given this tariff? What is now Raphael's surplus when this tariff is imposed in this market? Given the tariff, how much revenue will Mike raise and what is the size of the deadweight loss? Graphically illustrate your answers
  - (d) Hamato Yoshi, (also Known as Master Splinter), asks Leonardo and Donatello to kick Mike ass and let the phone alone. However to help Raphael, HamatoYoshi changes his public policy. Now he only allows 10 units from Domino's. Given this import quota (and no tariff), find the price that pizza will trade for in the Sewers. Given this import quota, how many units of pizza are consumed and how many are imported? Given this import quota, what is Raphael's surplus? How much revenue will the Master Splinter raise and what is the size of the deadweight loss? Graphically illustrate your answers.
3. Percentages: Solve the following Problems
  - (a) Suppose my wage drops from \$12.50/hour to \$10/hour. What percent pay cut have I taken?
  - (b) I put \$100 in my back account at the beginning of the year. I earn 4% interest a year. If I do not deposit or withdraw, how much will I have at the end of the first year? The second year? The third? In each year, round the bank's interest deposits to the 2nd decimal place. What is the percentage increase in my back account after 3 years