

**Problem 1**

Welfare analysis of tariff

- a) Home's demand curve for wheat is  $D=100-20P$ , supply curve is  $S=20+20P$ . Derive Home's import demand. What would be the price of wheat in the absence of trade?
- b) Now Foreign country's demand curve is  $D^*=80-20P$ , supply curve is  $S^*=40+20P$ . Derive Foreign's export supply curve. What would be the price of wheat in the absence of trade?
- c) Now allow Foreign and Home to trade with each other, at zero transportation cost. What's equilibrium world price under free trade? What's the volume of trade?
- d) Now Home imposes a specific tariff of 0.5 on wheat imports, i.e.  $t=0.5$ . What's the new price of wheat in each country, the quantity of wheat supplied and demanded in each country, and what's the new volume of trade?
- e) Now with all the results you've gotten so far, draw a graph similar to Figure 8-9 on page 190 in your textbook. Calculate consumer loss, producer gain and government revenue of Home country. What's the net welfare of tariff of Home in this case?

**Problem 2**

The following questions are related to the issue of *trade and inequality*.

The US imports huge amount of goods from China each year. Because labor cost in China is much cheaper (10% of US level according 2009 estimate), those imported goods tend to drive down the price of similar products in the US. Let's assume the US has two sectors: high-tech and low-tech, the latter of which is in direct competition with China.

- a) What is the impact of China's imports on relative wages between the two sectors in the US? Explain within the context of Stolper-Samuelson (SS) theorem.
- b) If you were a top US policy maker and your goal is to keep US manufacturing industry strong so that it continues to provide job opportunities for the blue-collar workers at home. Meanwhile, you don't want to resort to protectionist measures because free trade has been advocated by the US for many years, and these measures could potentially invoke a trade war with China and hurt US consumers. What would be your policy recommendation to President of the United States? Elaborate.