

PRINCIPLES OF MICROECONOMICS, SEMESTER 1, 2016

Tutorial 4 (Week 5)

Q1. The government is worried about the effect of climate change on sheep farmers, and decides to set a price floor of \$4.00 per bale of wool. The following functions are for the Australian domestic wool market:

$$Q_D = 8 - P \quad \text{and} \quad Q_S = P + 2$$

[Quantities are in millions of tonnes, prices in \$ per bale of wool]

- a. Graph the market. What is the equilibrium price and quantity in this market?
- b. Comment on the government's current policy.
- c. The government is considering changing their price floor to \$6.00 a bale. Calculate the consumer surplus, producer surplus, and dead weight loss.
- d. What other policies might the government reasonably consider?
- e. If the government ends up choosing to implement the \$6.00 a bale price floor, as in (c), what can we expect would happen over time to the surplus facing the market, and why?

Q2. As the owner of a business, would it ever be possible that you would choose to hire an additional worker where their marginal product of labour (MP_L) was less than the *previous* worker you hired? Why / why not?

Q3. Governments often levy high taxes on cigarettes, arguing that they want to improve health outcomes for their citizens.

- a. Whilst governments usually *do* have a keen interest in the health of their citizens, what other reason might there be for governments to choose to raise revenue from cigarette taxes in particular?
- b. Assuming that cigarettes remain legal, what would be a more effective policy for the government to adopt if it wanted to reduce cigarette consumption? Illustrate your answer using a supply and demand model.

Q4. The demand and supply functions in the Papua New Guinean market for cars are as follows:

$$P = 30 - Q_D$$

$$P = 12 + 0.5Q_S$$

[Quantities are in hundreds of thousands of units per year, prices are in thousands of kina.]

a. Graph the market. What is the equilibrium price and quantity in this market?

b. Assume that the current price of a car is K24,000. What is the quantity demanded and quantity supplied? What is this situation in the market called? What would you expect would happen to this price?

c. There is suddenly a new function for the supply curve in the market: $P = 2 + 0.5Q_S$

What is the new equilibrium price and quantity? Give two examples of what could have caused this change in the market.