ECON10004: INTRODUCTORY MICROECONOMICS

PRE-TUTORIAL TASKS FOR TUTORIAL 3
(Week beginning August 6)

Minimum Reading

GKM – Chapter 4
Borland – Case studies 2.1, 2.3, 2.4 (both editions).

Key Concepts

Perfectly competitive markets
Price-taker
Demand function and demand curve
Supply function and supply curve
Market equilibrium price, quantity and expenditure or revenue
Normal/Inferior good
Substitute/Complement
Excess demand (shortage) and excess supply (surplus)
Comparative statics

Review Questions

1. State whether each of the following statements is true or false. Explain your answer.
   a) A change in consumer tastes leads to a movement along the demand curve.
   b) An increase in price leads to a decrease in quantity demanded.
   c) A decrease in production costs leads to a rightward (or downward) shift in the supply curve.
   d) An increase in price leads to a leftward (upward) shift in the supply curve.

2. For each of the following pair of products, indicate whether the goods are substitutes, complements, or unrelated:
   a) Peanut butter and bread;
   b) Private and public transport;
   c) Milk shakes and fruit juices;
   d) Alarm clocks and motor vehicles; and
   e) Tennis racquets and tennis balls.

3. Answer each of the following questions:
   a) When price in a market is not equal to the equilibrium price, what determines the quantity traded?
   b) When does excess demand (shortage) occur in a market?
   c) When does excess supply (surplus) occur in a market?

4. Consider the following perfectly competitive market:

$$Q_S = 2P$$
$$Q_D = 100 - 2P$$

where Q_S = quantity supplied, Q_D = quantity demanded, and P = price.

a) Draw the demand and supply curves.
b) What are the equilibrium price and quantity traded?
c) What is total revenue in the market?
d) What would be the situation if P = 30?

5. Describe what happens to the equilibrium price and quantity traded of soft drinks in response to each of the following. Explain your answer using a diagram.

a) Global warming makes for longer and hotter Australian summers;
b) New health concerns about the preservative content in soft drinks;
c) An increase in the price of sugar used to produce soft drinks;
d) A decrease in the price of petrol.

6. Read articles 1-4 below. Use the demand/supply model to show the effect of changes to demand and/or supply that are described in the articles on:

a) The price and quantity traded of iron ore (Article 1);
b) The prices and quantities traded of oranges and frozen orange juice concentrate (Article 2);
c) The prices and quantities traded of corn and ethanol (Article 3);

Article 1
The lore of ore
The Economist, 13 October 2012, p. 85
'The iron-ore price has since become another indicator of China's economic health. So what does the recent price plunge show? The slowing of China's economy has undoubtedly taken a toll on iron ore. But other factors are at work, too. Supply...has grown by 7.4% in the first half of 2011.'

Article 2
Orange juice prices to rise as drought squeezes annual crop
The Age, 9 November 2006, p. 5
Bridie Smith
The cost of fresh orange juice is set to rise, as citrus growers deliver one of the smallest crops of Valencia oranges in two decades. The Australian Citrus Growers, which represents about 2500 commercial growers, said yesterday the drought, frost damage and cuts in water allocation were to blame for the reduced crop. Vice-Chairman Kevin Cock said the 2005-06 Valencia crop used for fruit and juice would be just 207,000 tonnes, a 26 percent reduction on last year. "A large volume of Valencia oranges are used in juice products and our concern is that we are going through the crop at a far quicker rate than we would normally," Mr Cock said. "And if there is a reduction in supply, those other uses will be affected." Crops from the US and Brazil are also down due to disease and cyclones. The shortage means world prices for frozen concentrate orange juice are up to the highest level since 1992. Prices per tonne now range between $180 and $200 – a significant contrast to the $80 per tonne from previous seasons.

Article 3
Corn on the cusp
The Economist, 4 August 2012, p. 59
'A lack of rain has brought the worst drought in over 50 years to a region that usually provides over half the corn (maize) to world markets…. Corn prices have climbed…. America's [corn] crop goes in roughly equal measure to production of ethanol, feeding livestock and for export…. Ethanol production has already dropped sharply….'

Preparation for your tutorial
In preparation for your tutorial, please read the article below 'On your bike'. In the tutorial, you will be asked to use the demand/supply model to answer the following questions:

a) What does the article describe as the main changes to demand for and supply of bicycles?
b) How would you predict these changes would affect the equilibrium price of bicycles? Does the article confirm your prediction?
c) The article suggests that the total quantity of bicycles sold has increased. What does this suggest about the relative magnitudes of changes to demand and supply?
d) What does the text 'Each market has its own idiosyncrasies…' suggest is an important determinant of demand in any country?

On your bike
The Economist, 20 September 2008, p. 75
These are tough times for carmakers, many of which are labouring under high oil prices, slowing demand and financial weakness. For makers of human-powered, two-wheeled vehicles, by contrast, business is booming. Giant Manufacturing, the world's largest bicycle-maker, sold a record 460,000 units last month, and is heading for its best year ever…

After a slow 2006, sales took off last year in Europe and America as fuel prices shot up. Suddenly a bicycle seems like the remedy for many modern ills, from petrol prices to pollution, and to the desire for better health. Each market has its own idiosyncrasies. Europeans mainly use bikes for commuting, but have the habit of ignoring models made explicitly for that purpose in favour of sleeker, faster models…Americans prefer off-road BMX trail bikes. Taiwanese demand is led by racing-style bikes used for exercise.

Giant, as the largest producer, makes everything for every market. Its share price has held up fairly well…despite dramatically higher costs for raw materials, notably aluminium. Strong demand and a desire for better bikes have allowed bikemakers to pass higher material costs on to buyers. Since 2004 wholesale prices of bikes have gone up by 23% in Europe, 45% in America, and almost 50% in Asia.