Case 2.2 Something fishy? No, it’s just a matter of supply and demand

Summary

This case study uses a variety of examples of changes in the price of fish to illustrate how the demand/supply model can provide a coherent framework for understanding why those changes occur.

Suggested answers

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

a global warming makes for longer and hotter Australian summers

Hotter summers will increase demand for soft drinks (graphically represented as a rightward or upward shift of the demand curve). This will increase the equilibrium price, and increase the equilibrium quantity traded.

b new health concerns arise about the preservative content in soft drinks

New health concerns are likely to decrease demand for soft drink (graphically represented as a leftward or downward shift of the demand curve). This will decrease the equilibrium price, and decrease the equilibrium quantity traded.

c there is an increase in the price of sugar used to produce soft drinks

Sugar is an input to production of soft drinks. Hence an increase in the price of sugar will decrease supply of soft drinks (graphically represented as a leftward or upward shift in supply curve). This will increase the equilibrium price, and decrease the equilibrium quantity traded.

d a decrease in the price of petrol

The answer to this question depends on whether petrol is used in the production or sale of soft drinks. For example, it is possible that soft drinks are delivered to retail outlets by trucks. In this case a decrease in the price of petrol will increase supply of soft drinks (graphically represented as a rightward or downward shift in supply curve). This will decrease the equilibrium price, and increase the equilibrium quantity traded. However, if all soft drinks were delivered by some other method of transport that does not require petrol, it is possible there will be no effect on the market for soft drinks.

2 An article in The Economist (2019) described several main changes that have occurred in the market for chicken meat in recent years: higher incomes of consumers; new evidence that eating red meat may be associated with an increased risk of colon cancer; and the increased use of antibiotics making it cheaper to raise chickens.

a What do you think will be the effect of these changes on the demand for and supply of chicken meat?

Demand for chicken meat is likely to increase. First, higher consumer incomes imply that (as a normal good) there will be an increase in demand. Second, evidence of health effects of eating red meat will cause some switching of consumption to red meat to the substitute of white meat.

Supply of chicken meat will increase as the cost of production is reduced by use of antibiotics.

b What affect would those changes in demand and supply have on the market price and quantity traded of chicken meat?

The effect of an increase in both the demand for and supply of chicken is:

* An increase in the quantity of chicken meat to be traded
* An ambiguous effect on the price of chicken meat. An increase in supply by itself will cause a decrease in price and an increase in demand by itself will cause an increase in price. Hence the effect on price will depend on the relative magnitudes of the increases in supply and demand.

c The article also described how consumers in the United States prefer white meat from chicken breasts and Asian consumers prefer dark meat from the legs and wings. What effect do you think these preferences would have on the relative price of chicken breasts and chicken legs in the United States and Asia?

In the United States there is a relatively higher preference for white meat than dark meat unlike in Asia. Hence the demand for white meat will be relatively higher than dark meat in the United States. It follows that we would expect the price of white meat relative to dark meat to be higher in the United States.

In Asia there is a relatively higher preference for dark meat than white meat unlike in the United States. Hence the demand for dark meat will be relatively higher than white meat in Asia. It follows that we would expect the price of dark meat relative to white meat to be higher in Asia.

3 Adverse weather conditions – a combination of frost and drought – affected wheat crops in eastern Australian in 2018; with forecasts being for reductions in crop sizes of 40 to 50 per cent (Phelan, 2018).

a How do you think the decrease in crop size would affect the market price and quantity traded of wheat?

Adverse weather conditions will decrease the supply of wheat. The effect of the decrease in supply will be to decrease the market quantity traded and increase the market price. (Wheat is traded on a world market. But Australia is such a large supplier of wheat onto the world market that a decrease in its supply will cause an appreciable decrease in world supply.)

b At the same time as forecasting smaller crops, industry groups also predicted higher prices of some types of food? Why might higher prices of food occur, and which types of food would be likely to be most affected?

An increase in the price of wheat will cause an increase in the cost of production for goods that use wheat as an input (such as flour); and hence an increase in the market prices of those goods. That increase in price will cause consumers to shift towards substitute goods whose price has not increased (for example, from flour tortillas to corn tortillas). That increase in demand will cause an increase in the market price of the substitute goods. The types of goods most likely to experience price increases are therefore:

* foods that use wheat as an input
* foods that are close substitutes for goods using wheat as an input.