

Ms. Hephzibah and Ms. Geetanjali have published case study titled “**Elasticity of Demand and Supply in the Grain Market: Analyzing Shifts in Demand and Supply Curves and Their Impact on Farmers' Incomes**”. This case study is used for first year MBA students for **MANAGERIAL ECONOMICS**.

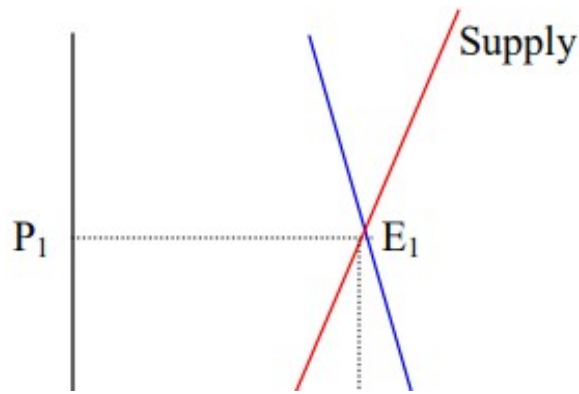
Case study 11

Take the grain market, for instance. (1) In relation to price, is the demand for grains somewhat elastic or relatively inelastic? Tell us why. (2) In terms of income, is the demand for grains somewhat elastic or relatively inelastic? Tell us why. (3) Is the supply of grains in relation to the price generally elastic or relatively inelastic? Tell us why. (4) Trace the demand and supply curves on the graph according to how you just described them. Display the price and quantity at equilibrium. (5) Wheat demand has drifted to the right over time. Why did this happen? (6) The wheat supply has migrated to the right over time. Why did this occur? (7) Do you think the supply or demand curve has changed more over the past century? Tell us why. The graph should then display these two shifts. (8) As a result of these two changes, wheat prices will (rising or falling?) Because of the wheat market's price elasticity of demand, farmers' overall incomes will (increase or fall?) The end outcome is that farmers' overall revenues will _____ (rise or fall?) (9) The farmer is receiving a message from the market. What does it advise the farmer to carry out?

SOLUTION

Let's start with the need for cereals. If so, how elastic or inelastic would this demand be? Most research indicate that the solution is comparatively inelastic. Why? People's reluctance to use alternatives for goods manufactured from grains, like bread, is one factor. Another justification is the affordability of grain-based goods in terms of average incomes. Now think about the supply. Would this wheat supply be reasonably elastic or reasonably inelastic? Most research indicate that the solution is comparatively inelastic. Why? Supply could become perfectly inelastic in a short amount of time. The supply cannot be changed until the following planting after the seeds have been sown. Farmers can alter the supply by planting more or less over a longer period of time. However, this is constrained by the farmer's restricted access to land, barn space, and equipment. The demand and supply are comparatively inelastic, as shown in the graph below.

Price of Grain

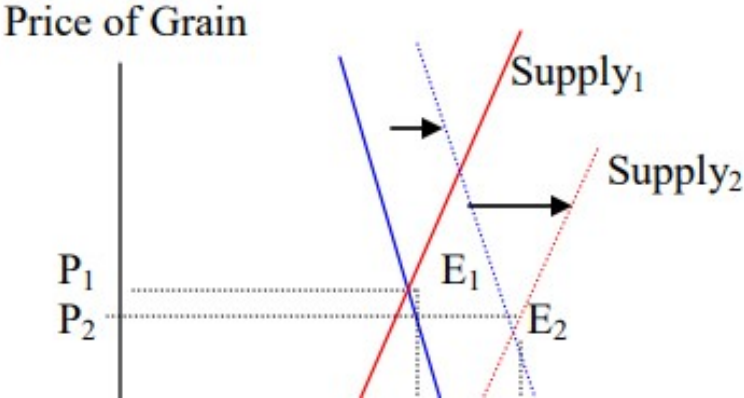


The demand for wheat will increase over time (move to the right). Why? Population growth is one factor (due to both an increase in the number of Americans and an increase in farmer sales in international markets). The increase in earnings is another. However, Engel's Law states that the demand for goods manufactured from grains has a low income elasticity. This implies that the demand for these goods—as well as many other food goods—increases very little as earnings grow. The third factor driving the rise in demand is a movement in consumer preferences towards eating more meat. The demand for wheat increases as people consume more meat. This happens because if an animal eats a plant and then a person eats the animal, nearly 90% of the sun's energy is wasted. However, as more health-conscious individuals have experimented with all-protein diets recently, preferences may have created a leftward shift in demand for wheat.

Wheat supply will increase over time as well (shift to the right). Why? The enormous technical advancements that have raised productivity and reduce production costs are to blame. The effort of universities, agricultural extension initiatives, and the businesses that sell products to farmers has led to these technical advancements. The federal government has contributed significantly to the cost of this technical advancement.

Which do you think has shifted more to the right, in your opinion? The supply has gone to the right considerably more than the demand has, which is the explanation. Below is a graph that illustrates this. Over the past century, technology has advanced exceptionally well. The price of wheat must decrease if the supply grows more quickly than the demand does. The previous century has seen this happening in fact. What is going to occur to the overall amount of money earned if the price drops and customer demand is generally inelastic? It falls, is the solution. People do not consume as much more when the price drops. The farmer wants to cut expenses in order to keep earnings stable as overall revenue declines. However, many of the expenses cannot be cut. The cost of the land, structures, and equipment must be covered. Since many of the

employees are family members, they cannot be terminated (although family members sometimes accept temporary employment in the neighbouring town). The result is that profits fall.



The farmer is receiving a message from the market. It is advising them to stop farming and pursue other activities. What sin commits the farmer? It's not that the farmer has been ineffective or has chosen poorly in business. The farmer is too skilled, which is a concern. Farmers produce more food than people are willing to pay to buy it at prices that will make a profit for them.