Consumer and producer surplus

Peter Smith summarises central aspects of these two key concepts in economics

1

The demand curve (*D*) reflects the value that consumers place upon a product — it shows their willingness-to-pay at any given price. At a relatively high price, fewer consumers are prepared to buy.

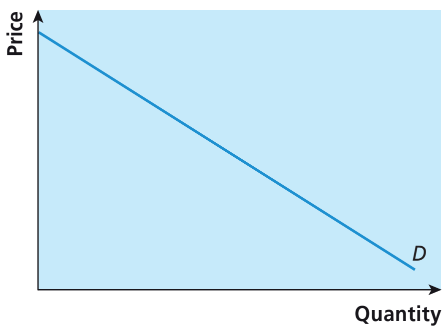

Figure 1 Demand as willingness to pay

2

If all consumers pay the same price (*P*) this means that there is a marginal consumer, who just values the good at this price — so the price represents the marginal benefit received by consumers of this product.

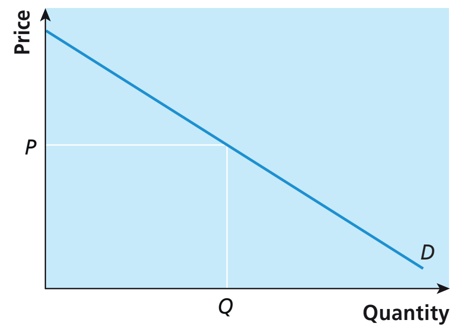

Figure 2 What if all consumers pay the same price?

3

Although the marginal consumer pays exactly his or her willingness-to-pay valuation of the product, there are other consumers who would have been prepared to pay more — these consumers therefore gain a surplus of satisfaction from their consumption. The total surplus is shown by the shaded area in Figure 3, and is known as **consumer surplus**.

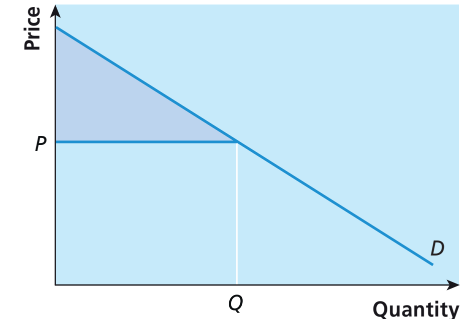

Figure 3 Consumer surplus

4

In a competitive market, the quantity that firms are prepared to supply depends upon the market equilibrium price. Given the costs faced by firms, they will be prepared to supply more at a higher price.

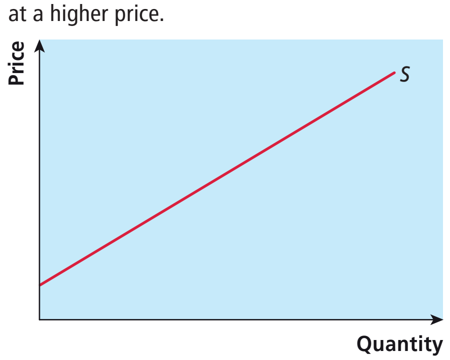

Figure 4 Willingness to supply

5

With the equilibrium price at *P*, firms will be prepared to supply the quantity *Q* of the product. If the price were slightly below *P*, the last unit would not be worth supplying. This may be seen as the marginal cost of supplying this product, where cost includes the opportunity cost of production.

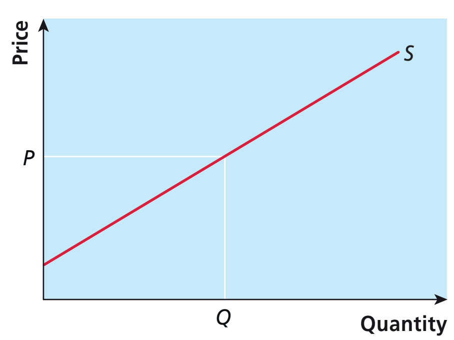

Figure 5 What if there is a single price in the market?

6

The shaded area in Figure 6 shows the total surplus earned by firms from selling at price *P* given that they would have been prepared to supply at a lower market price. This is known as **producer surplus**.

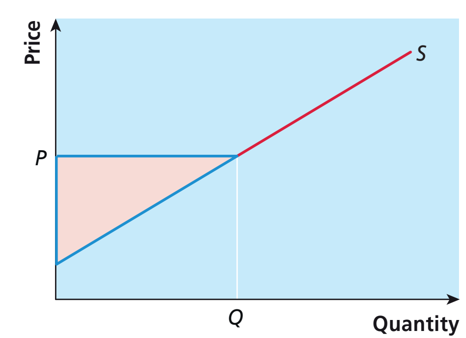

Figure 6 Producer surplus

7

This diagram brings together consumer and producer surplus. The relative size of each depends upon the shape and position of the demand (*D*) and supply (*S*) curves.

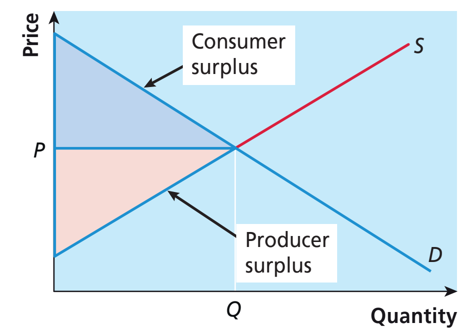

Figure 7 Consumer and producer surplus

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