

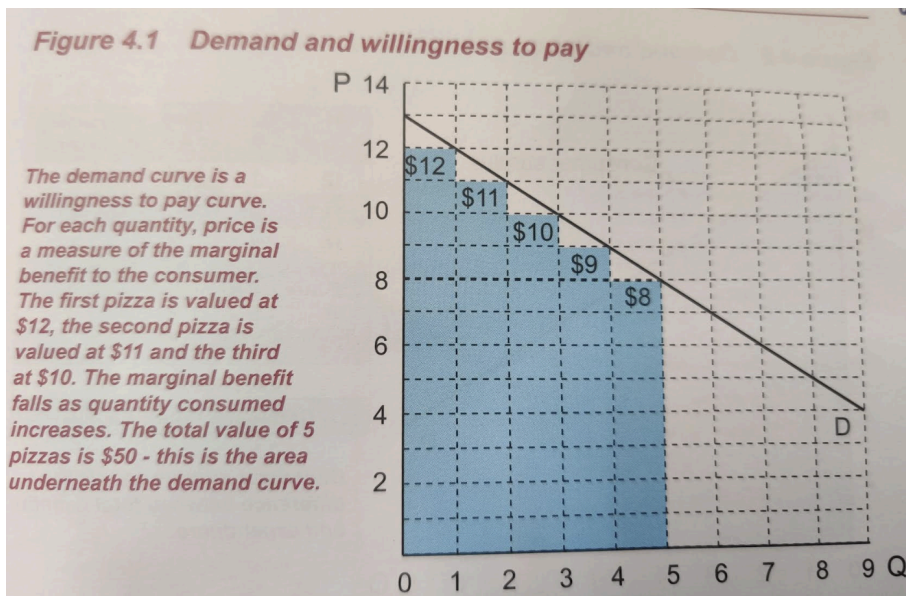
### 30. the concepts of consumer surplus, producer surplus, total surplus, deadweight loss

AND

### 31. the efficiency of market equilibrium, i.e. maximising total surplus

#### Demand and Consumer Surplus

- Another way of looking at the demand curve is that it is the “willingness to pay curve”. The curve reflects the maximum price a consumer is prepared to pay for a particular good.
- It is also known as the Marginal Benefit Curve (MB). **Marginal Benefit** is the additional satisfaction or utility that a consumer receives when the additional good or service is purchased. Marginal Benefit falls along a demand curve as quantity increases (Why is that?)
- Marginal Benefit falls along the demand because the satisfaction for each extra unit is less and less. However the total benefit increases. Lets look at the diagram below to illustrate this



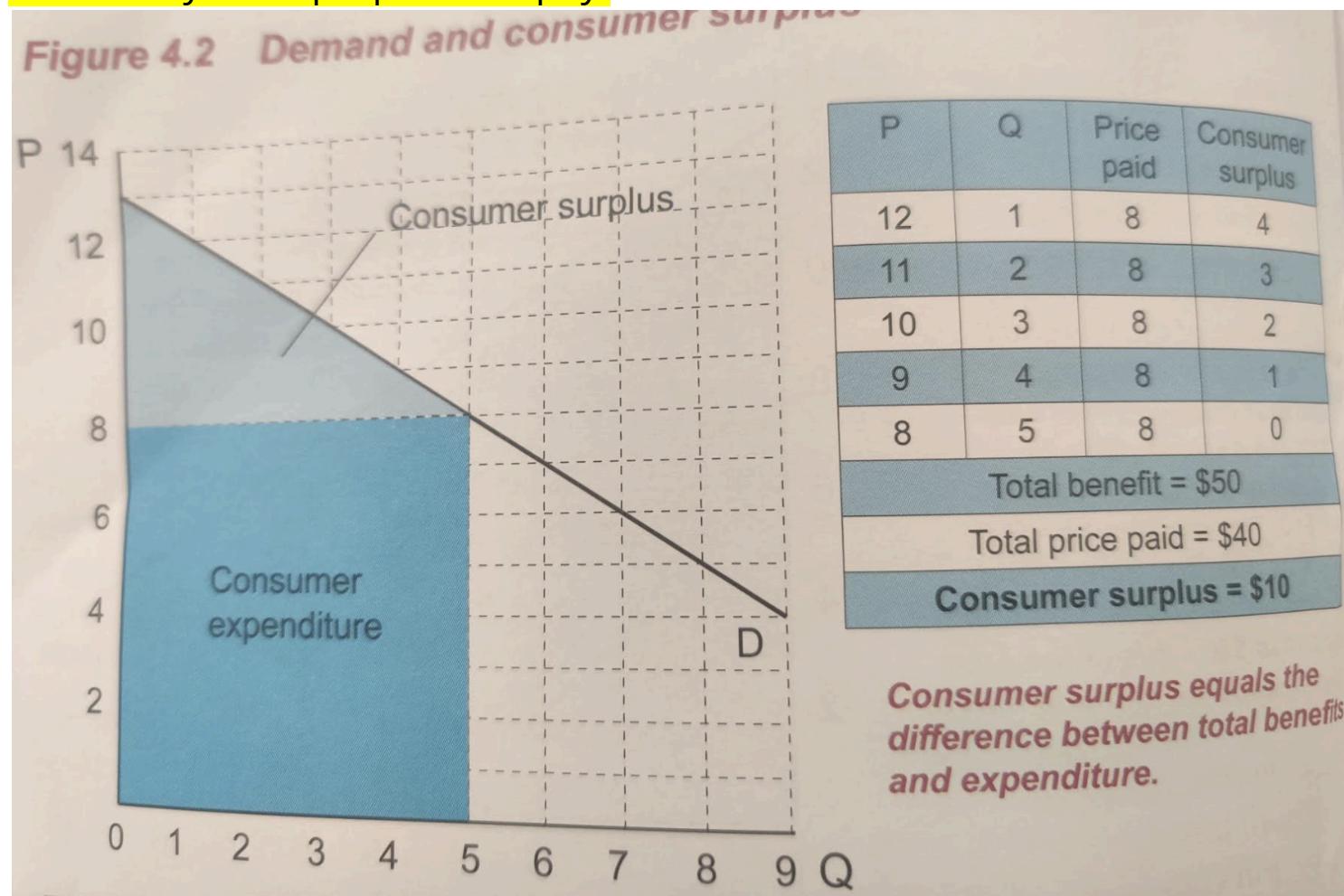
Suppose that the market price (equilibrium) for Pizza's is \$8.

At this price consumers are willing to purchase 5 pizzas. **Therefore Consumer Expenditure is \$40.** However this is not the same as total consumer value.

Consumers value the 1st Pizza at \$12, the second at \$11, the third at \$10, the fourth at \$9 and the 5th at \$8, so the consumer actually values the 5 Pizza's at \$50. However, 8 pizza's only cost \$40. **This introduces us to the concept of Consumer Surplus**

**Consumer surplus is the difference between the highest price consumers were willing and able to pay for a good, and the actual price they end up paying.**

Another way of defining consumer surplus is the extra satisfaction (or utility) gained by consumers from paying a price that is lower than that which they were prepared to pay.

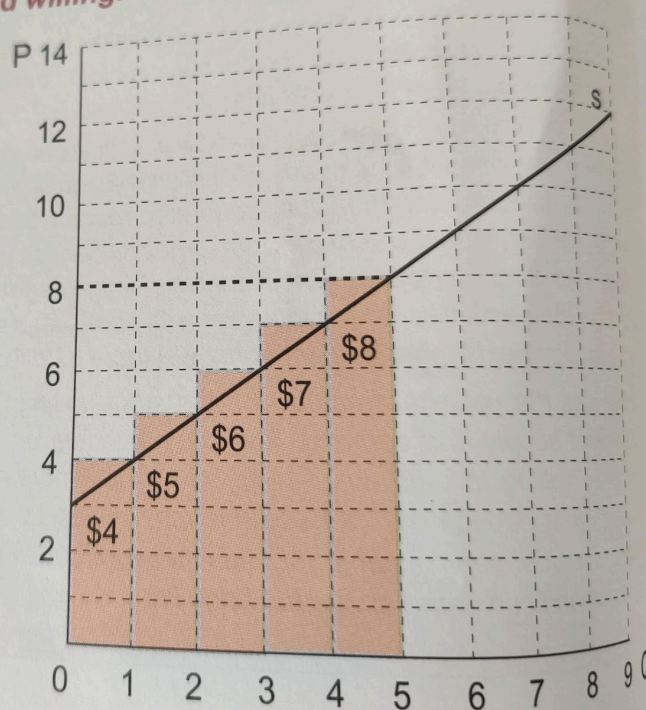


Another way of saying it is Consumer Surplus equals the difference between total value (utility) and expenditure. So from the Pizza example, The total price paid at equilibrium is \$40, however the total benefit was \$50. **Therefore, Consumer Surplus is \$10.**

## Supply and Producer Surplus

- Another way of looking at the supply curve is that it is the “willingness to accept curve”. The curve reflects the minimum price a producer is willing to sell a particular good.
- It is also known as the Marginal Cost Curve (MC). Marginal Cost is the cost added by producing one additional unit of a product or service. Marginal Cost increases along a supply curve as quantity increases (Why is that?)
- Marginal Cost increasing along the supply curve is a more difficult concept to grasp. The theory suggests that the more time and effort you put into producing a good means the more time you are away from producing other potential profit making goods (opportunity cost). Also the more units you produce of a good the more potential overtime pay you might need to pay your workers.. Click [here](#) for what I think is the best explanation of this. Let's look at a diagram to illustrate this

Figure 4.4 Supply and willingness to accept



Suppose that the market price (equilibrium) for Pizza's is \$8.

At this price producers are willing to supply 5 pizzas.

**Therefore Producer Revenue is \$40.** However this is not the same as total producer value.

Producers are willing to sell the 1st Pizza for \$4, the second for \$5, the third for \$6, the fourth for \$7 and the 5th at \$8. So producers are actually willing to sell the pizza's at \$30 (the sum of 4,5,6,7,8). However, at the equilibrium price of \$8, producers receive \$40. **This introduces us to the concept of Producer Surplus**



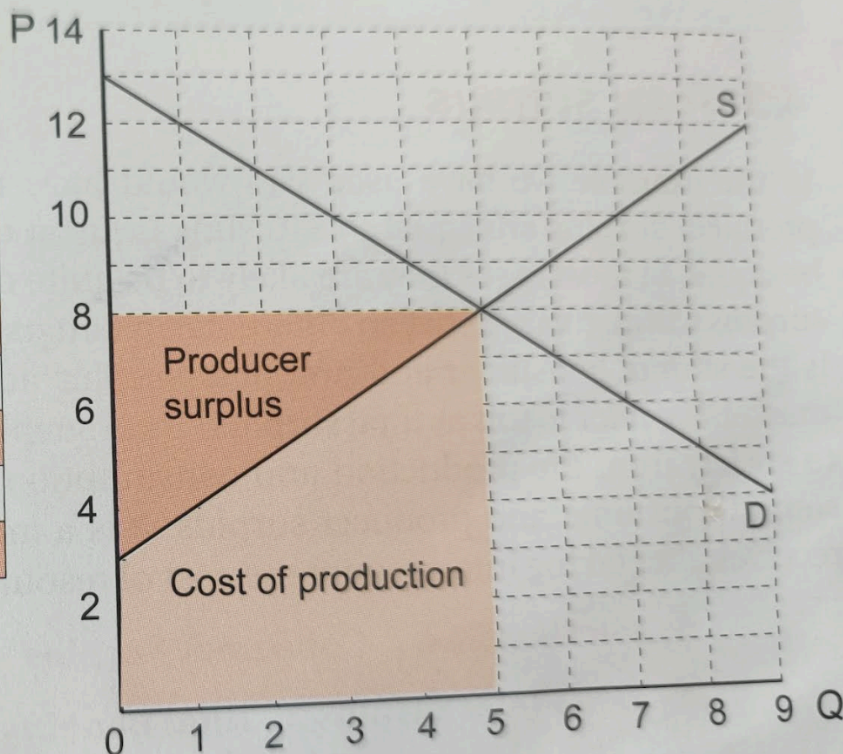
Producer surplus is the difference between what a producer is willing to receive and what they actually receive in the market.

It can also be defined as the excess of actual earnings that a producer makes from a given quantity of output, over and above the amount the producer would have been prepared to accept for that output.

Figure 4.5 Supply and producer surplus

P	Q	Price received	Producer surplus
4	1	8	4
5	2	8	3
6	3	8	2
7	4	8	1
8	5	8	0
Total cost = \$30			
Total revenue = \$40			
Producer surplus = \$10			

*Producer surplus equals the difference between total revenue and the cost of production*



So from the Pizza example, The total received at equilibrium is \$40, however producers were willing to receive \$30. **Therefore, Producer Surplus is \$10.**

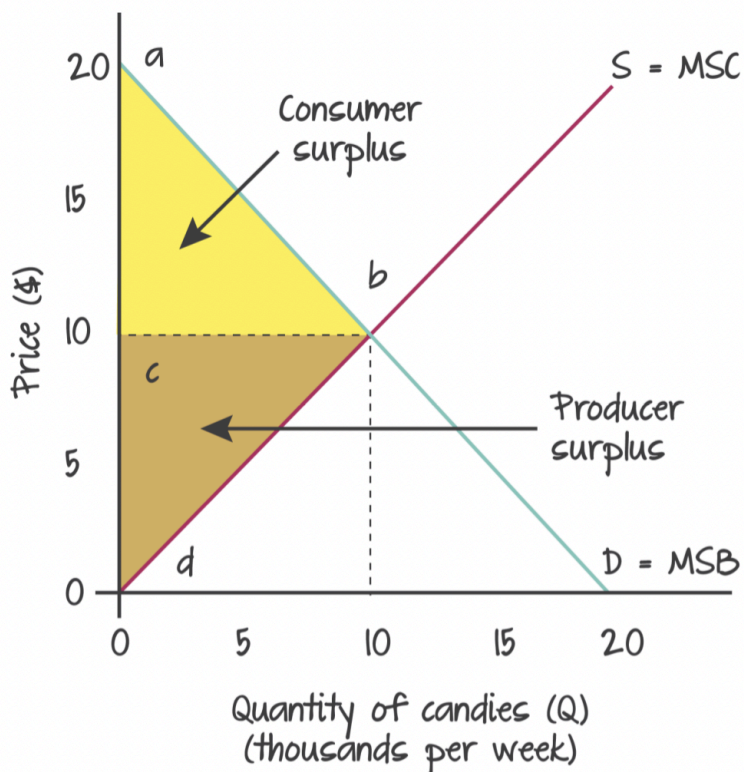


## TOTAL SURPLUS

- **Total Surplus** is a measure of the net benefits to society from the production and consumption of the good.
- Total Surplus is the sum of consumer and producer surplus
- Total surplus is an extremely important concept because it provides us with a measure of economic efficiency. If we can allocate resources so that total surplus is maximised in each market, then we are using the economy's resources in the most efficient way
- The aim of society should be to increase total surplus in every market.
- This brings us back to allocative efficiency from the previous dot point.

**Allocative Efficiency occurs when total surplus is at maximum. Total Surplus is only maximised at equilibrium**

**Total surplus is only maximised at the equilibrium point. This is the optimum allocation of resources from the society's point of view, and it occurs when demand is equal to supply, or where the marginal social benefit of consuming a good is equal to the marginal social benefit of producing it.**



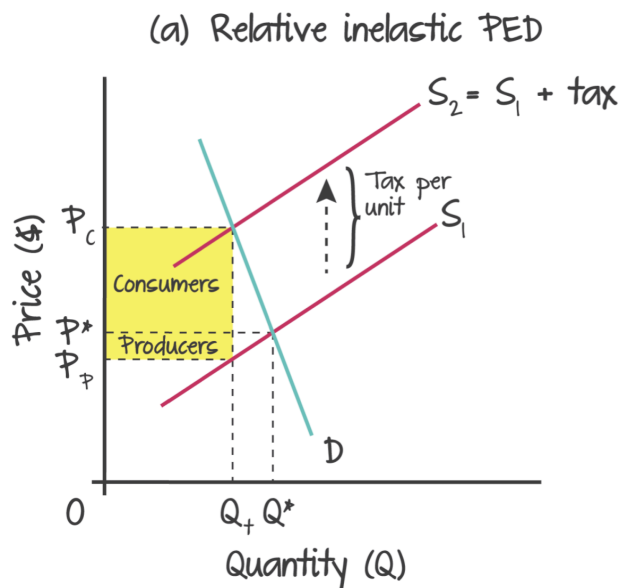
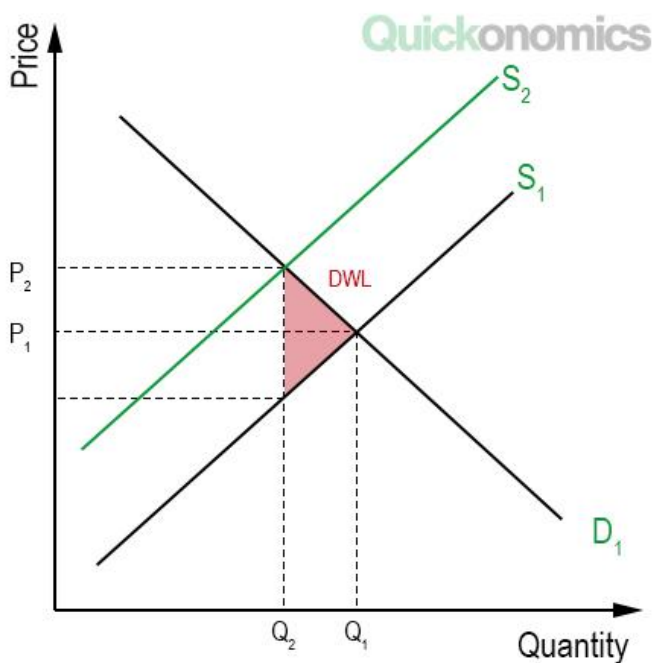
**Allocative Efficiency occurs at b where Consumer and Producer Surplus are maximised.**

**Note that the D curve is also called the MSB curve (Marginal Social Benefit) and the S curve is also called MSC Curve (Marginal Social Cost). Include these when explaining this concept**

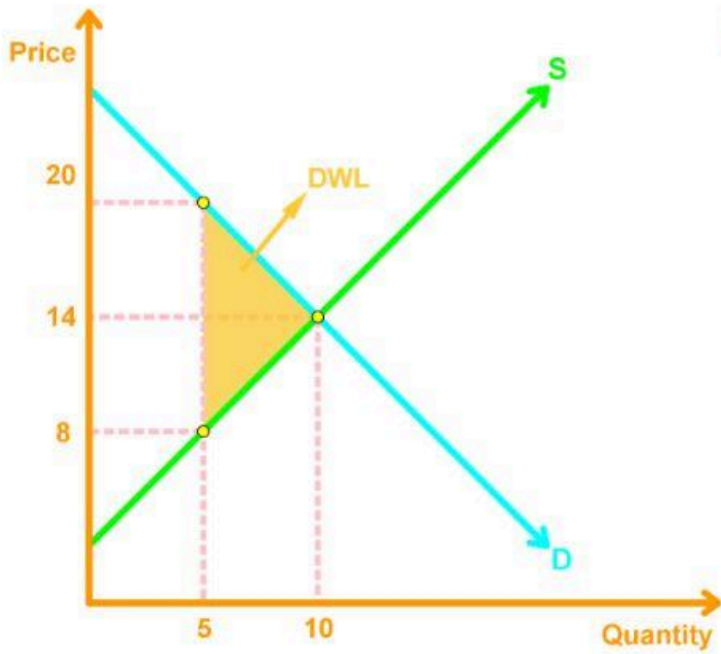
## Deadweight Loss

**Definition: A cost to society created by market inefficiency, when supply and demand are out of equilibrium.**

- A deadweight loss refers to an avoidable decrease in total surplus because something has prevented the market from producing the optimal output.
- The many causes of deadweight loss come up in the dotpoints that follow
- Examples of deadweight diagrams are below. You will be drawing deadweight 100s of times



Underproduction



Overproduction

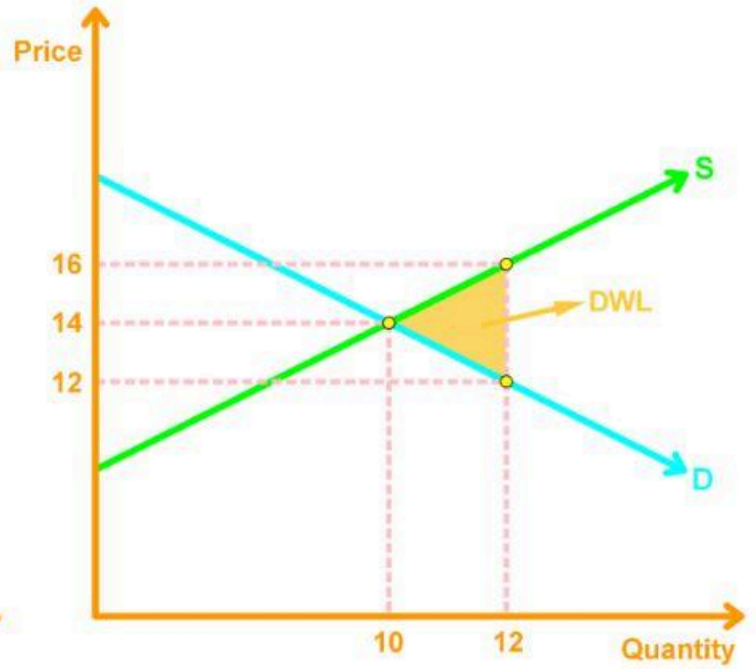
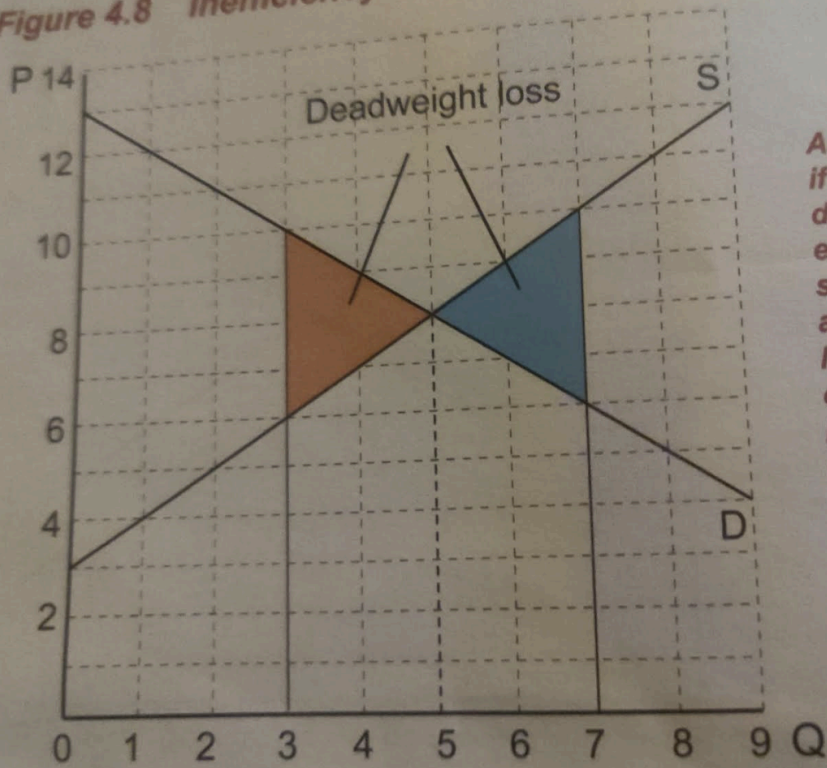


Figure 4.8 Inefficiency - deadweight loss



A deadweight loss occurs if the market produces a different output than the equilibrium output. Total surplus is always maximised at equilibrium. Producing less than or more than the equilibrium output results in a decrease in economic welfare.