**Market**

Place or context where goods/services traded between buyers/sellers

Goods/services produced and traded depends on preferences of consumers and availability of resources

Every transaction in market should be mutually satisfactory

Each party trying maximize well being

Consumer and producer try to maximize the difference between costs and benefits

An efficient allocation for a good is one in which all transactions that increase society’s net well-being have been exhausted

Markets allocate many goods/services efficiently

Most environmental goods have no natural market

Example: Although just about everyone values clean air, there is no natural place to go to buy some

We consume the good collectively

The amount a consumer wants to pay for good reflects value consumer places on good

Willingness to pay is a function of preferences and income (among other possible factors)

Should be possible for consumer to determine the amount he is willing to pay to consume various quantities of good at given time

**Hypothetical consumer demand for** [**household air freshener**](http://milesfinney.net/334/air_freshener.jpg)

|  |  |
| --- | --- |
| Units of air freshener purchased in a week | How much willing to pay? |
| 1st | $4.50 |
| 2nd | $3.00 |
| 3rd | $2.00 |
| 4th | $1.25 |

Consumer is marginally willing to pay $4.50 for first unit, $3.00 for second etc.

Marginal Willingness to Pay reflects value consumer places on next or marginal unit of good

 MWTP normally falls as consumption of good increases

Relationship between willingness to pay and quantity is a demand curve

 Price Individual Consumer’s Demand

4.50

$3.00

$2.00

demand

 1 2 3 Units of Air Freshener per Week

Each point on demand curve represents consumer’s marginal benefit, or maximum willingness to pay for unit

Suppose market price is $3.00/per unit. How many units would consumer purchase?

How much is consumer willing to pay for the last unit purchased?

How much is the most she is willing to pay for all units purchased?

Why didn’t consumer purchase the 3rd air freshener at the given price?

Demand curve reflects consumer equating marginal willingness to pay with market price

Suppose market for air freshener consists of 3 people

Given that use of good is not normally shared

Market demand for the good is constructed by summing the quantities demanded

|  |  |  |
| --- | --- | --- |
|  | **Individual Quantities Demanded** |  |
| price | A | B | C | **Market Demand** |
| $4.50 | 1 | 2 | 3 | 6 |
| 3.00 | 2 | 3 | 4 | 9 |
| 2.00 | 3 | 4 | 5 | 12 |
| 1.25 | 4 | 5 | 6 | 15 |

More realistic assumption: Market for the good consists of thousands of consumers

 Price Market Demand

$5.00

$3.50

$2.00

D

 10 15 20 Units of Air Freshener (in 1000’s)

Suppose market price is $3.50

Market quantity demanded is 15,000 units/week

For every purchase made, consumer must have been willing to pay at least $3.50

**Assuming air freshener is a private good**

The consumption of the good generates no costs or benefits to anyone other than the purchaser/consumer

The Social Benefit of the good equals the Private Benefit

The benefit of the next individual unit is the marginal benefit, measured by marginal willingness to pay

If good is private, the Marginal Private Benefit (MPB) equals the Marginal Social Benefit (MSB)

Private good: MSB=MPB

The benefit society reaps from the next freshener consumed equals the benefit gained by the individual consumer

Give example in which: MSB>MPB

MSB<MPB

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**Cost of producing air freshener**

The manufacture of air freshener diverts resources (crude oil, labor etc.) from other uses

The opportunity cost of producing air freshener would be the best alternative good not produced with the resources used to manufacture the good

 Best alternative is determined by what people value

Supply of Air Freshener

S

P

The supply curve reflects the various

quantities suppliers are willing to produce

b

as a function of price

$5.00

a

Collection of points revealing opportunity cost

$3.50

of producing next unit of freshener

20

15

Units of Freshener (1,000’s)

Cost of producing 20,000th freshener produced in a week is higher than producing 15,000th

Why?

Resources are scarce; more resources used at 20,000 units per week

Cost of resources greater at point b than point a

Assume that all costs of producing freshener are borne by actual manufacturer

Opportunity cost to society equals cost to producer

Marginal Social Cost (MSC) – represents the value of output society gives up when a unit of freshener is produced

Marginal Private Cost (MPC) - Cost borne by the producer

Assume MSC=MPC

What is scenario if MSC>MPC?

**Market Equilibrium**

P

S=MPC=MSC

P\*=3.00

D=MPB=MSB

Quantity (1,000’s per week)

Q\*= 25

**Market Equilibrium**

Assuming no external costs or benefits in consumption or production

1. Market equilibrium P\*, Q\* is socially efficient
	1. Q\* is the *correct* amount of freshener that should be produced per time period
	2. All transactions in which the cost to society is less (or equal to) the benefits to society are exhausted
	3. No transaction takes place in which the opportunity cost to society is greater than social benefit
2. An output level such as Q=20 would be considered inefficient. Why?
3. An output such as Q=30 is inefficient. Why?