# EFFICIENCY: <br> Demand Supply and SURPLUS 

## WTP

- Willingness to pay is the maximum amount that a buyer will pay for a good.
- It measures how much the buyer values the good or service.


## CONSUMER SURPLUS

- Consumer surplus is the buyer's willingness to pay for a good minus the amount the buyer actually pays for it.


## CONSUMER SURPLUS

- The market demand curve depicts the various quantities that buyers would be willing and able to purchase at different prices.


## The Demand Schedule and the Demand Curve

Quantity
Price
Buyers
Demanded

| More than $\$ 100$ | None | 0 |
| :--- | :--- | :--- |
| $\$ 80$ to $\$ 100$ | John | 1 |
| $\$ 70$ to $\$ 80$ | John, Paul | 2 |
| $\$ 50$ to $\$ 70$ | John, Paul, <br> George | 3 |
| $\$ 50$ or less | John, Paul, <br> George, Ringo | 4 |

Figure 1 The Demand Schedule and the Demand Curve


## Figure 2 Measuring Consumer Surplus with the Demand Curve

(a) Price $=\$ 80$


## Figure 2 Measuring Consumer Surplus with the Demand Curve



- The area below the demand curve and above the price measures the consumer surplus in the market.


## Figure 3 How the Price Affects Consumer Surplus

(a) Consumer Surplus at Price $P_{1}$


## Figure 3 How the Price Affects Consumer Surplus

(b) Consumer Surplus at Price $\mathbf{P}_{\mathbf{2}}$


- Consumer surplus, the amount that buyers are willing to pay for a good minus the amount they actually pay for it, measures the benefit that buyers receive from a good as the buyers themselves perceive it.


## PRODUCER SURPLUS

- Producer surplus is the amount a seller is paid for a good minus the seller's cost.
- It measures the benefit to sellers participating in a market.
- Just as consumer surplus is related to the demand curve, producer surplus is closely related to the supply curve.


## The Supply Schedule and the Supply Curve

Quantity
Price
Sellers
Supplied

| $\$ 900$ or more | Mary, Frida, <br> Georgia, Grandma | 4 |
| :--- | :--- | :--- |
| $\$ 800$ to $\$ 900$ | Frida, Georgia, <br> Grandma | 3 |
| $\$ 600$ to $\$ 800$ | Georgia, Grandma | 2 |
| $\$ 500$ to $\$ 600$ | Grandma | 1 |
| Less than $\$ 500$ | None | 0 |

## Figure 4 The Supply Schedule and the Supply Curve



- The area below the price and above the supply curve measures the producer surplus in a market.

Figure 5 Measuring Producer Surplus with the Supply Curve
(a) Price $=\$ 600$


## Figure 5 Measuring Producer Surplus with the Supply Curve

(b) Price $=\$ 800$


## Figure 6 How the Price Affects Producer Surplus

(a) Producer Surplus at Price $\boldsymbol{P}_{1}$


## Figure 6 How the Price Affects Producer Surplus

(b) Producer Surplus at Price $\boldsymbol{P}_{\mathbf{2}}$


## MARKET EFFICIENCY

- Consumer surplus and producer surplus may be used to address the following question:
- Is the allocation of resources determined by free markets in any way desirable?


## MARKET EFFICIENCY

> Consumer Surplus
> = Value to buyers - Amount paid by buyers
> Producer Surplus
> = Amount received by sellers - Cost to sellers
> Total surplus
> = Consumer surplus + Producer surplus
> or
> $=$ Value to buyers - Cost to sellers

## MARKET EFFICIENCY

- Efficiency is the property of a resource allocation of maximizing the total surplus received by all members of society.


## MARKET EFFICIENCY

## - EFFICIENZA e' DIVERSA da EQUITA'!!!

- equity - the fairness of the distribution of well-being among the various buyers and sellers.


## Figure 7 Consumer and Producer Surplus in the Market Equilibrium



## EFFICIENZA e perdita di benessere



