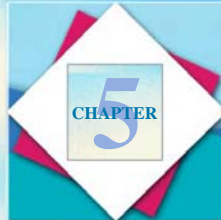


EFFICIENCY AND EQUITY



Objectives

- Efficiency
- Consumer surplus
- Producer surplus
- Market failures.
- Corrections for market failure.

Efficiency and the Social Interest

Allocatively efficient allocation of resources

- occurs when it is not possible to produce more of a good or service without giving up some other good or service that is valued more highly.
- depends on people's preferences.

Efficiency: A Refresher

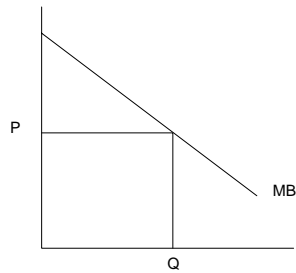
Marginal Benefit

- the benefit a person receives from consuming one more unit of a good or service.
- the dollar value of other goods and services that a person is willing to give up to get one more unit of it.
- decreasing marginal benefit implies that as more of a good or service is consumed, its marginal benefit decreases.

Efficiency: A Refresher

For any given price, a consumer will buy all units of the good where $MB=P$

The MB curve will be identical to the consumer's demand curve.



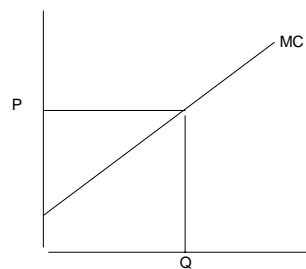
Efficiency: A Refresher

Marginal Cost

- the opportunity cost of producing *one* more unit of a good or service.
- the *dollar value* of other goods and services required to produce one more unit of the good.
- increasing marginal cost* implies that as more of a good or service is produced, its marginal cost increases.

Efficiency: A Refresher

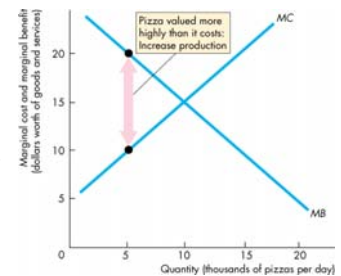
- The MC curve is upward sloping.
- A firm will produce all units of a product where $P > MC$
- The MC curve is the firm's supply curve (more details later).



Efficiency: A Refresher

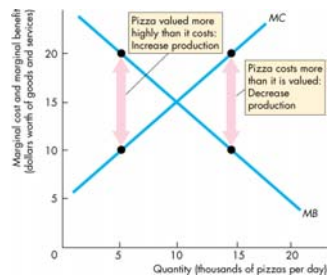
Efficiency and Inefficiency

If the marginal benefit from a good exceeds its marginal cost, producing and consuming *more* of the good uses resources more efficiently.



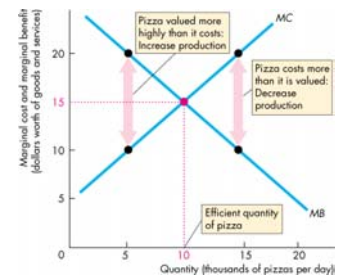
Efficiency: A Refresher

If the marginal cost of a good exceeds its marginal benefit, producing and consuming *less* of the good uses resources more efficiently.



Efficiency: A Refresher

If the marginal cost of a good equals its marginal benefit, resources are being used efficiently.



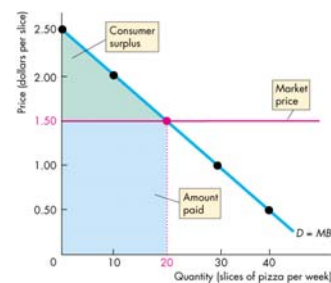
Value, Price, and Consumer Surplus

Consumer Surplus

Consumer surplus is the value of a good minus the price paid for it, summed over the quantity bought.

It is measured by the area under the demand curve (marginal benefit curve) and above the price paid, up to the quantity bought.

Value, Price, and Consumer Surplus



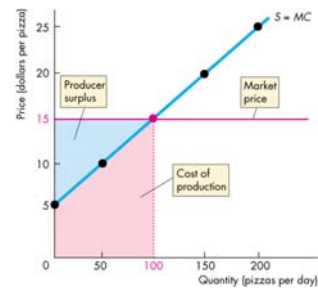
Cost, Price, and Producer Surplus

Producer Surplus

Producer surplus is the price of a good minus the marginal cost of producing it, summed over the quantity sold.

Producer surplus is measured by the area below the price and above the supply curve, up to the quantity sold.

Cost, Price, and Producer Surplus

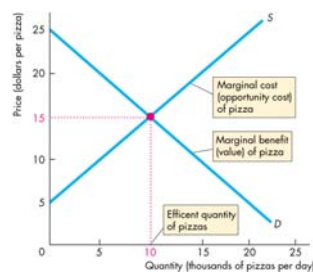


Is the Competitive Market Efficient?

Efficiency of Competitive Equilibrium

This graph shows that a competitive market creates an efficient allocation of resources at equilibrium.

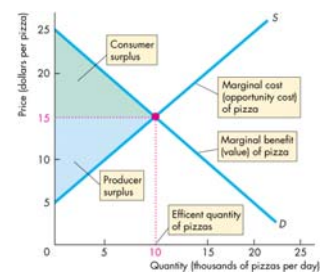
In equilibrium, the quantity demanded equals the quantity supplied.



Is the Competitive Market Efficient?

At the equilibrium quantity, marginal benefit equals marginal cost, so the quantity is the efficient quantity.

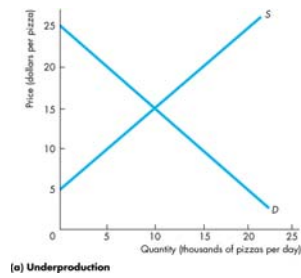
The sum of consumer and producer surplus is maximized at this efficient level of output.



Is the Competitive Market Efficient?

Underproduction and Overproduction

Obstacles to efficiency lead to underproduction or overproduction and create a deadweight loss—a decrease in consumer and producer surplus.

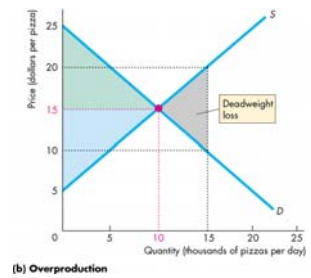


Is the Competitive Market Efficient?

This graph shows the effects of overproduction.

Again, the efficient quantity is 10,000 pizzas a day.

If production is expanded to 15,000 pizzas a day, a dead weight loss arises from overproduction.

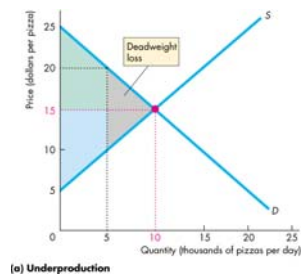


Is the Competitive Market Efficient?

This graph shows the effects of underproduction.

The efficient quantity is 10,000 pizzas a day.

If production is restricted to 5,000 pizzas a day, a dead weight loss arises from underproduction.



Is the Competitive Market Efficient?

Obstacles to Efficiency

Markets are not always efficient and the obstacles to efficiency are:

- Externalities
- Price ceilings and floors
- Taxes, subsidies, and quotas.
- Monopoly
- Public goods and common resources

Is the Competitive Market Efficient?

When there are negative externalities:

Social MC = Private MC + per unit negative externality

When there are positive externalities:

Social MB = Private MB + per unit positive externality

Regardless of whether there are externalities, in a competitive market:

Supply = Private MC

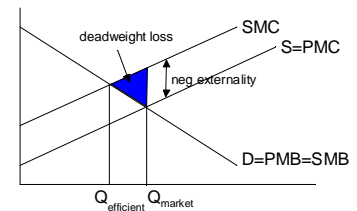
Demand = Private MB

Is the Competitive Market Efficient?

When there are negative externalities, social marginal cost (SMC) exceeds private marginal cost (PMC=S) by the size of the per unit externality.

The market produces "too much" and there is a deadweight loss.

Taxes could "fix" market.

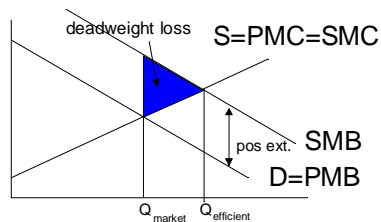


Is the Competitive Market Efficient?

When there are positive externalities, social marginal benefit (SMB) exceeds private margin: benefit (PMB=D) by the size of the per unit externality.

The market produces "too little" and a deadweight loss occurs

Subsidies could "fix" market.



Is the Competitive Market Fair?

Ideas about fairness can be divided into two groups:

- It's not fair if the *result* isn't fair
- It's not fair if the *rules* aren't fair

Is the Competitive Market Fair?

It's not fair if the *result* isn't fair

- Utilitarianism:
 - Maximize happiness by distributing income equally
 - Since MB of income falls with income, can increase happiness by taking from rich and giving to poor
 - Ignores inefficiencies created by income redistribution (equity – efficiency trade-off)

Is the Competitive Market Fair?

It's Not Fair If the *Rules* Aren't Fair

- Argument for **symmetry principle**, which is the requirement that people in similar situations be treated similarly.
- ***Equality of opportunity, not equality of income.***
 - The state must create and enforce laws that establish and protect private property.
 - Private property may be transferred from one person to another only by voluntary exchange.