

Government Economics (Public Finance) [Unit 8]

Econ-Hub

Combined

Mind-Hub

Government Economics

Market Failure & Government Failure [Unit 8] [Chapter 1]

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Theory Learning Questions [TLQs]
Practice Questions [PQs]

Essentials

**'LETS MASTER
GOVERNMENT ECONOMICS (PUBLIC FINANCE)**

ESSENTIALS [1]

Theory Learning Questions [TLQs]

[Q1] What is meant by 'Market Failure'?

- **Market or price mechanism is inefficient as a mechanism of resource allocation.**
- **Unable to produce optimum results in terms of:**
 - Economic efficiency and Equality
 - Overall social and economic welfare
- ***It is highly noteworthy to identify that functioning based on self-interest in liberal markets, may lead to results that may NOT be efficient.***
- **Three broad causes (3I's): Inefficiency, inequality and instability**

SM (P): 3

MAIN 'SITUATIONS OR CAUSES' FOR 'MARKET FAILURE'

- [A] Inefficiency in resource allocation
- [B] Inequalities in income and wealth distribution
- [C] Macroeconomic Instability

The simple 3I's Approach

SM (P): 3

[Q2] Outline the main 'Situations or Causes' for 'Market Failure'

The creation of situations restricting competition or **markets moving away from perfect competition** is cited as the **principal reason** for market failure as caused by **inefficiency in resource allocation**.

The main reasons (obstacles) leading to said imperfections in competition and inefficiency in resource allocation can be stated as follows:

SM (P): 3

[Q2] Outline the main 'Situations or Causes' for 'Market Failure'.....

[B] High level of **disparities in **income** and wealth distribution and overall social-economic disparities leading to **inequalities** in resource allocation.**

[C] Situations of macroeconomic instability

ALLOCATIVE INEFFICIENCY 'GOODS' BASED MKT FAILURE.....

Basics First:

A Good: Anything which is able to provide a **positive utility** (satisfaction)
[Broadly: represents 'tangible goods' and 'intangible services']

A Bad: Anything which creates a **negative utility** (dissatisfaction or disutility)

Economic Good: A good produced using relatively scarce resources, thus limited in supply and represents an opportunity cost

Free Good: A good unlimited in availability (supply), since it is not a result of a production process which uses relatively scarce resources, thus does not represent an opportunity cost

(Not in SM)

Basics First [Context: Pure Public Good]:

Non Rival in Consumption:

- ✓ The consumption of a pure public good by one person will not lead to another person or someone else not being able to consume the same public good nor have a lesser quantity available to consume.
- ✓ **The ability to consume by a large number or multiple number of people at the same time, without any reduction in the quantity or opportunity available for each other, i.e. 'Collective Consumption' is possible.**
- ✓ The Marginal Cost (MC), i.e. the increase in total cost to provide a public good to one extra person, is zero

(Not in SM)

Basics First [Context: Pure Public Good]:

Non Excludable:

- ✓ **Inability or stop or exclude non payers from consuming a pure public goods**
- ✓ Once a pure public good is provided, every one in society can consume the good collectively, without any restrictions.
- ✓ **No practical mechanism to effectively implement property rights or controls**
- ✓ Free rider problem exists (contributors as well as non contributors to society benefit from the good)
- ✓ Profit motivated private firms will not allocate resource to produce

(Not in SM)

SM (P): 4

[Q3] Outline the principal '**Characteristics**' of the following types of goods, while stating **appropriate examples**

(A) Pure Public Goods

(C) Quasi – Public Goods

(B) Pure Private Goods

(D) Common Resources

(A)

✓ **Non-Rival** in Consumption

✓ **Non-Excludable**

✓ Essentially creates a **positive utility** and tends to represent external benefits

✓ Compulsory consumption (only in terms of certain public goods)

Examples: National defense, Lighthouses, Environmental protection, Television and radio signals, the law, Knowledge, RND, Clock towers, sunrise, and sunset...

SPECIAL TYPES...

Global Public Goods:

Benefits consumed on a **global basis**, beyond domestic boundaries (E.g. protecting the atmosphere, ozone layer, maintaining financial stability, attaining universal knowledge, world peace and security).

Public Bads:

Anything which might create a **negative utility** (disutility) or **negative impact** on a person or society, on **public (common)** or **general basis**.

Examples include:

Changes in weather patterns due to global warming, global terrorism, **epidemics and pandemics**, hazardous disposal of household and industrial garbage and waste, global inequalities in income and wealth distribution.

SM (P): 4

(B) Pure Private Goods

SM (P): 5

(C) Semi (Quasi) Public Goods

- Non-Rival in Consumption, up to capacity (Congestible Consumption)
- **Excludable**
- Essentially creates a positive utility and tends to represent external benefits

Continued.....

(C) Semi (Quasi) Public Goods.....

- May represent an **'inefficient exclusion'**
- Generally provided by an industry which is a **'Natural Monopoly'**
- AKA: **Club Goods, Collective Goods**
- Examples include - a seashore, police service, libraries, museums, public parks and play grounds, open air concerts, highways and bridges, social clubs etc

(D) Common Property Resources

- **Rival in Consumption**
- Non-Excludable
- Lack of clearly defined property rights (tragedy of the commons) and may represents external benefits
- **Examples include:**
Fisheries resources, common pastures, atmosphere, rivers, lakes, forests etc.

Inefficient Exclusion

- Relevant to Semi or Quasi Public Goods and another form of market failure or breakdown.
- Created due to congestible Consumption (collective consumption subjective to available capacity)
- Private sector operators can charge a price (P) at consumption levels less than or below capacity, without an actual increase in Marginal Cost (MC).

“The inefficient exclusion occurs in a situation where, even if a consumer who is *willing* to pay a *price* above the *actual Marginal Cost*, but *below* the *nominal price* charged by a certain *private* sector *firm* for providing a certain semi-public good and is *unable to buy* or receive the benefit of the good”.

FURTHER REASONS FOR ALLOCATIVE INEFFICIENCY

- **Perfect, Asymmetric and Imperfect Information [SM Page: 5]**
- **Factor Immobility [SM Page: 6]**
- **Missing Markets [SM Page: 6]**
- **Market Power [SM Page: 6]**

SM (P): 7

(04) State the Inevitable aspects of **Government's Role in a Market Economic System**

- **Specially formulating and implementing private property protection laws and regulations**
- Improving overall economic efficiency by eliminating factors leading to market failure
- Protecting the environment and common resources
- Strengthening the process of economic growth (inclusive and sustainable)
- Measures to minimize income and price fluctuations and **stabilizing** the economy
- Ensuring a level of economic **equality or fairness** acceptable by all parties in society

ALSO RELEVANT

Major functions of the government in a 'Mixed Economy'

- Improve efficiency in resource allocation (inefficiency occurs due to externalities, provision of merit goods and public goods)
- Ensure fair distribution of income and wealth
- Attain macroeconomic stability
- Establishing the legal framework for efficient functioning of the market system (enforcement of laws and contracts)
- Promote infrastructure development
- Regulation to ensure competition

(Not in SM)

SM (P): 8

(05) What is meant by '**Externalities**' of economics activities?

- **Externalities refer to the cost or benefits (positive or negative effects) created by a certain economic activity or process to the external society, which is not received or considered by the performer (i.e. instigator) of the given activity.**
- In other words these are activities that affect others for better or worse, without those others paying or being compensated for the unsolicited or unexpected benefit received or cost incurred through the activity.
- Therefore externalities are the spill-over effects, third party effects or neighborhood effects of production and consumption.
- Externalities tend to be present when private cost or benefit does not equal social cost or benefits

SM (P): 8

EXTERNALITIES....

- Externalities can be classified into four (4) main categories namely;
 - 1) Positive externalities of Consumption
 - 2) Negative externalities of Consumption
 - 3) Positive externalities of Production
 - 4) Negative externalities of Production

Externalities can be created on a global level, **such as acid rains, global warming [rise in global average temperature; greenhouse effects], global terrorism, nuclear experiments etc.**

EXTERNALITIES STANDARD 'EXAMPLES'

SM Page 12

MERIT VS. DEMERIT

(06) Outline the principal '**Characteristics**' of the following types of goods, while stating **appropriate examples**

(A) Merit Goods

(B) De-merit Goods

(A) Merit Goods

- Represents a high degree of '**Positive Externalities**' in **consumption** (or production)
- Social Benefits (SB) > Private Benefits (PB)
- Tendency to be **under consumed**, when provided by the market

SM (P): 9

MERIT VS. DEMERIT....

MERIT VS. DEMERIT....

(B) De-merit Goods

- Represents a high degree of **‘Negative Externalities’** in **consumption** (or production)
 - Social Benefits (SB) < Private Benefits (PB)
 - Tendency to be **over consumed**, when provided by the market
 - Rival in Consumption
 - Excludable
- } Essentially a ‘Private Good’
- Examples – Cigarettes, alcohol, gambling etc.

SM (P): 9

KEY CONCEPTS

Total Social Cost (SC) = Total Private Cost (PC) + Total External Cost (EC)

Total Social Benefits (SB) = Total Private Benefits (PB) + Total External Benefits (EB)

Marginal Social Cost (MSC) = Marginal Private Cost (MPC) + Marginal External Cost (MEC)

Marginal Social Benefits (MSB) = Marginal Private Benefits (MPB) + Marginal External Benefits (MEB)

CONCEPT KEY:

'Cost' Concepts:

Economic Activity: **'Production'** (Producers POV)

Social Cost exceeds the private cost

$$SC (MSC) = PC (MPC) + EC (MEC) : \quad SC (MSC) > PC (MPC)$$

Alternatively

External **Cost** is **negative (reduced)** external **Benefit**

$$SB (MSB) = PB (MPB) + (-EB \text{ OR } -MEB) : \quad SB(MSB) < PB (MPB)$$

(Not in SM)

CONCEPT KEY:

'Benefit' Concepts:

Economic Activity: **'Consumption'** (Consumers POV)

Social Benefit exceeds the Private Benefit

$$SB (MSB) = PB (MPB) + EB (MEB) : \quad SB (MSB) > PB (MPB)$$

Alternatively

External **Benefit** is **negative (reduced)** external **Cost**

$$SC (MSC) = PC (MPC) + (-EC \text{ OR } -MEC) : \quad SC(MSC) < PC (MPC)$$

(Not in SM)

CONCEPT KEY:

Private (Cost/Benefit):

Cost incurred (or Benefit received) by the party, directly engaged in a **given economic activity**

External (Cost/Benefit):

Negative outcomes or impact (or **Positive outcomes** or benefits) created on **persons external** to a certain economic **activity**

Social (Cost/Benefit):

Cost incurred (or Benefits received) by the **producer (or consumer)** and **the external society**, due to the **production (or consumption)** of a certain good or services.

GRAPHICAL PRESENTATION APPROACHES

Externalities of Consumption

- Generally using the **Benefits Approach** (Positive or Negative Externality)
- Using **Demand Curve** Diagrams
- Comparison of **SB (MSB)** vs **PB (MPB)**
- Social Benefits = Pvt. Benefit + Ext. Benefits

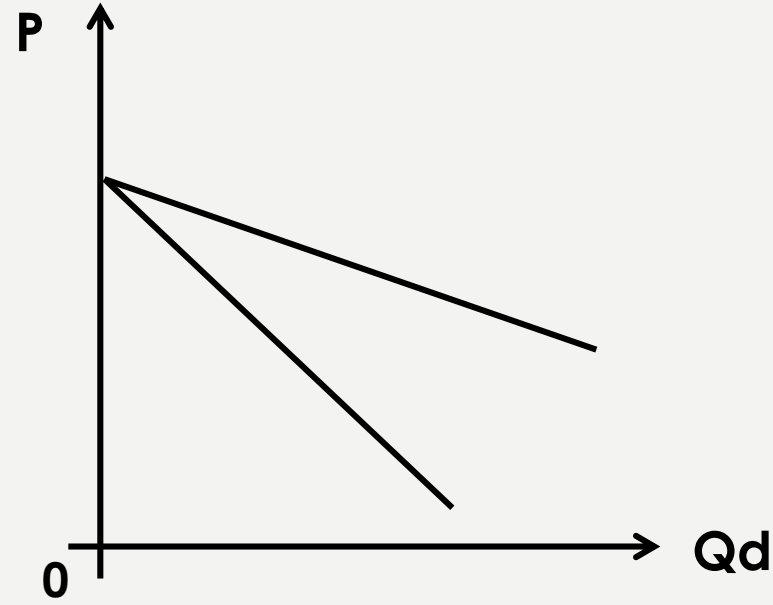
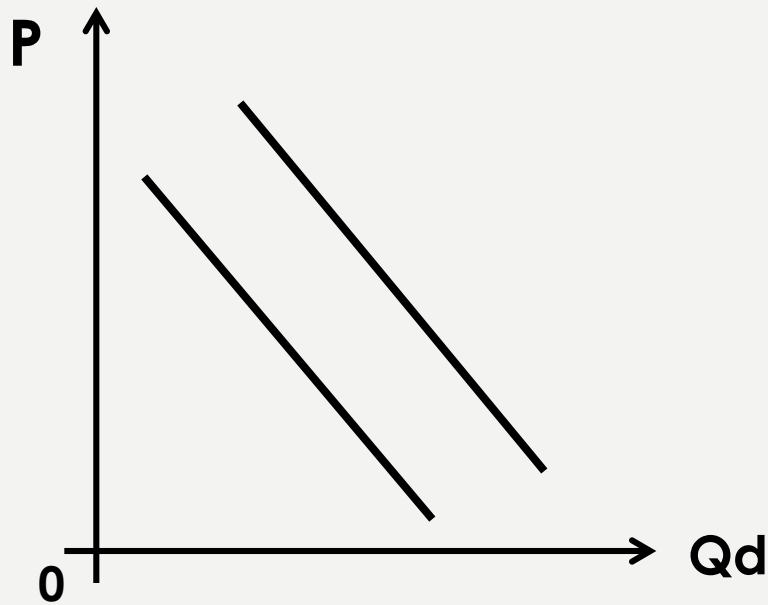
$$\mathbf{SB (MSB) = PB (MPB) + EB (MEB)}$$

(Not in SM)

Externalities of Consumption & Demand Curve

[Consumption Approach]

SB [MSB] Vs. PB [MPB]



(Not in SM)

EXTERNALITIES OF CONSUMPTION

$$\text{Social Benefit (SB)} = \text{Private Benefit (PB)} + \text{External Benefit (EB)}$$

$$\text{Social Benefits} = \text{Private Benefits}$$

No External Benefits

Positive Externalities

$$\text{SB} = \text{PB} + \text{EB}$$
$$\text{SB} > \text{PB}$$

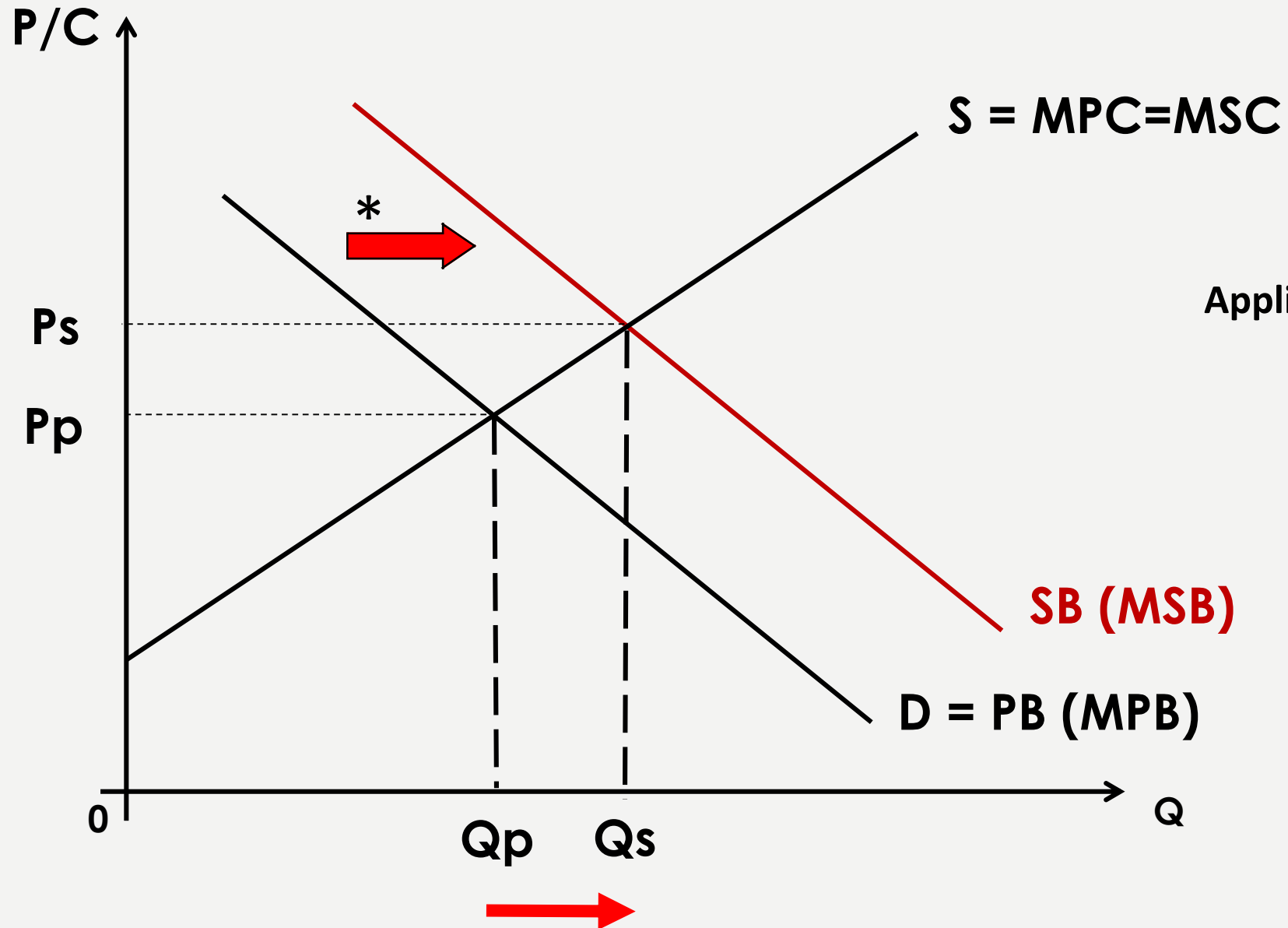
Positive externality shall create a **positive external benefit**

Negative Externalities

$$\text{SB} = \text{PB} + (-\text{EB})$$
$$\text{SB} < \text{PB}$$

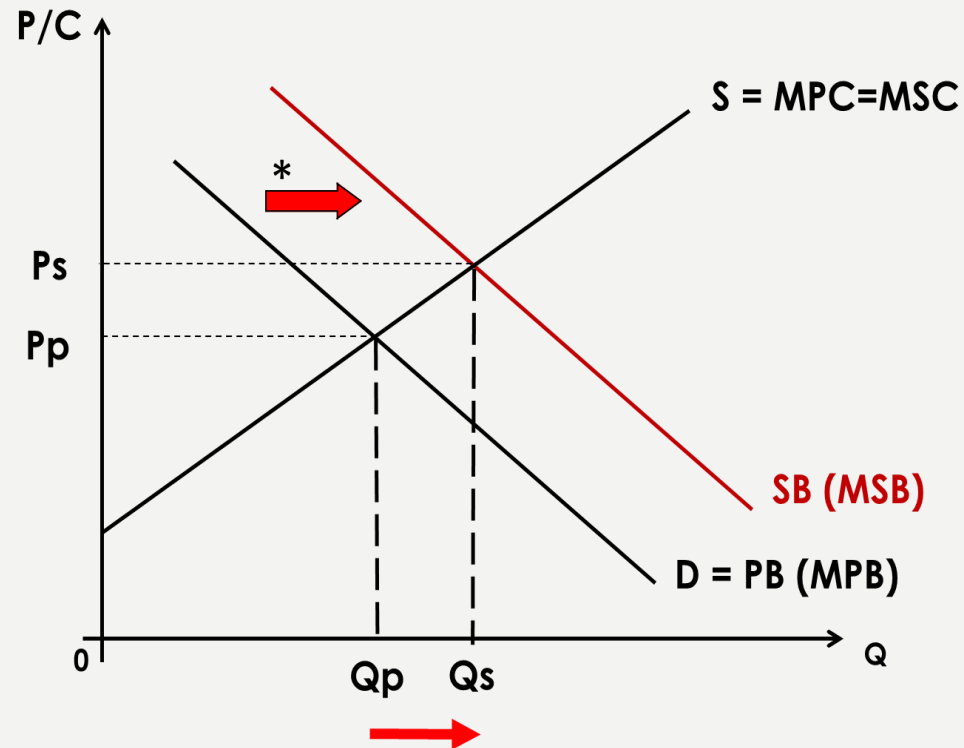
Negative externality shall create a **negative external benefit**

(A) Positive Externalities of Consumption



Application :

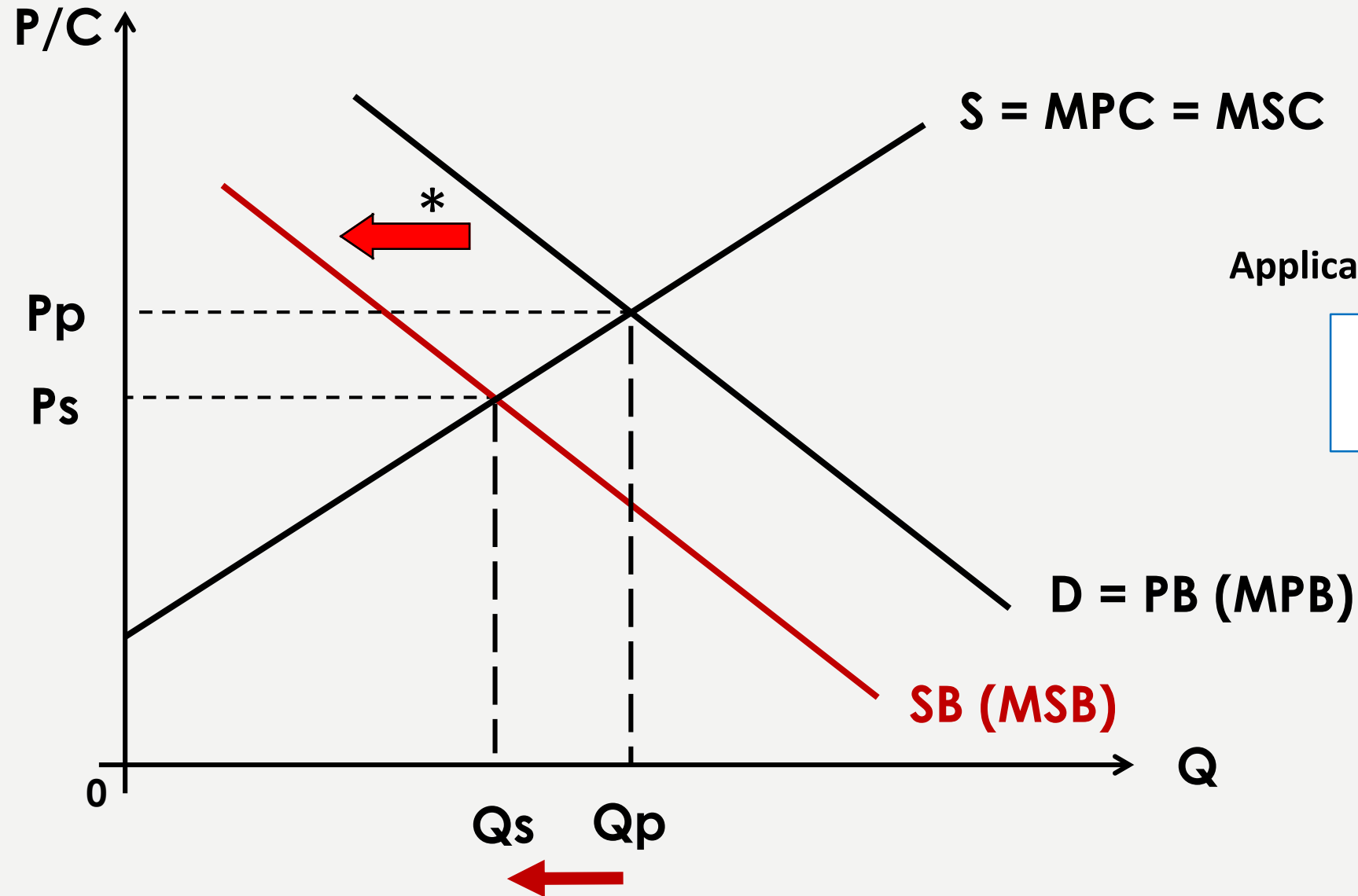
$$SB = PB + EB$$
$$SB > PB$$

ANALYSIS:

(P_p): Market Price (Actual Price)
 (P_s): Socially Optimum (Desirable) Price

(Q_p): Market Quantity (Actual Quantity)
 (Q_s): Socially Optimum (Desirable) Quantity

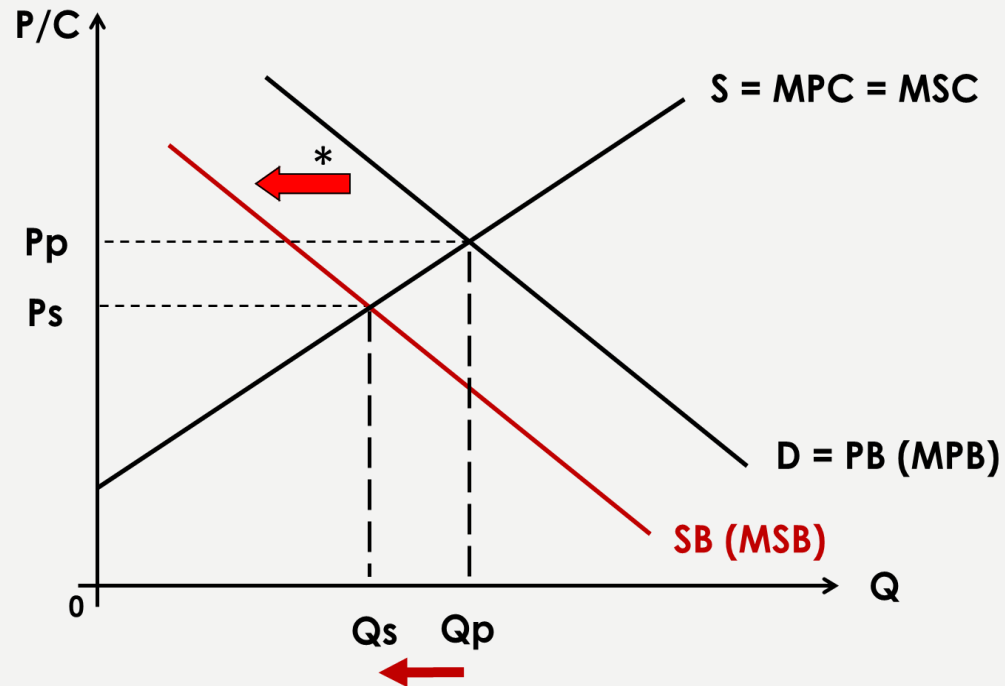
(B) Negative Externalities of Consumption



Application :

$$SB = PB + (-EB)$$
$$SB < PB$$

ANALYSIS:



(P_p): Market Price (Actual Price)
 (P_s): Socially Optimum (Desirable) Price

- The market has overproduced the good, above the socially optimum level ($Q_p > Q_s$)
- The market charges a price which is too high, above the socially optimum price ($P_p > P_s$)
- *Implementing a specific consumer tax or government regulation may help bring the (PB or MPB) demand (D) curve to the socially optimum level

(Q_p): Market Quantity (Actual Quantity)
 (Q_s): Socially Optimum (Desirable) Quantity

GRAPHICAL PRESENTATION APPROACHES

Externalities of Production

- Generally using the **Cost Approach** (Positive or Negative Externality)
- Using **Supply Curve** Diagrams
- Comparison of **SC (MSC)** vs **PC (MPC)**
- Social Costs = Pvt. Costs + Ext. Costs

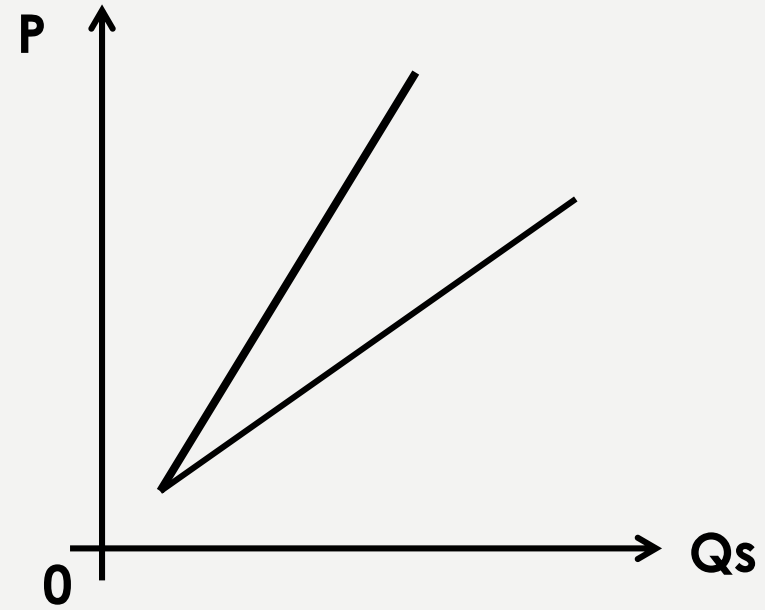
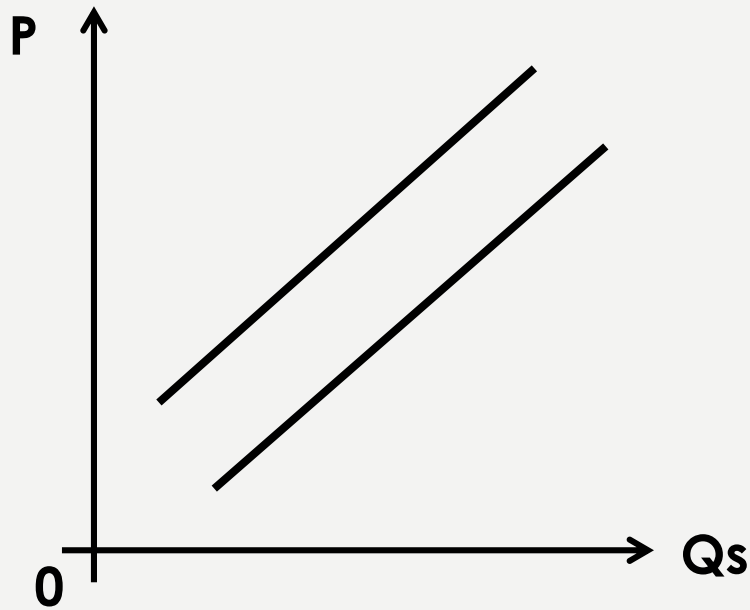
$$\mathbf{SC (MSC) = PC (MPC) + EC (MEC)}$$

(Not in SM)

Externalities of Production & Supply Curve

[Production Approach]

SC [MSC] Vs. PC [MPC]



EXTERNALITIES OF PRODUCTION

$$\text{Social Cost (SC)} = \text{Private Cost (PC)} + \text{External Cost (EC)}$$

$$\text{Social Cost} = \text{Private Cost}$$

No External Benefits

Positive Externalities

$$\text{SC} = \text{PC} + (-\text{EC})$$
$$\text{SC} < \text{PC}$$

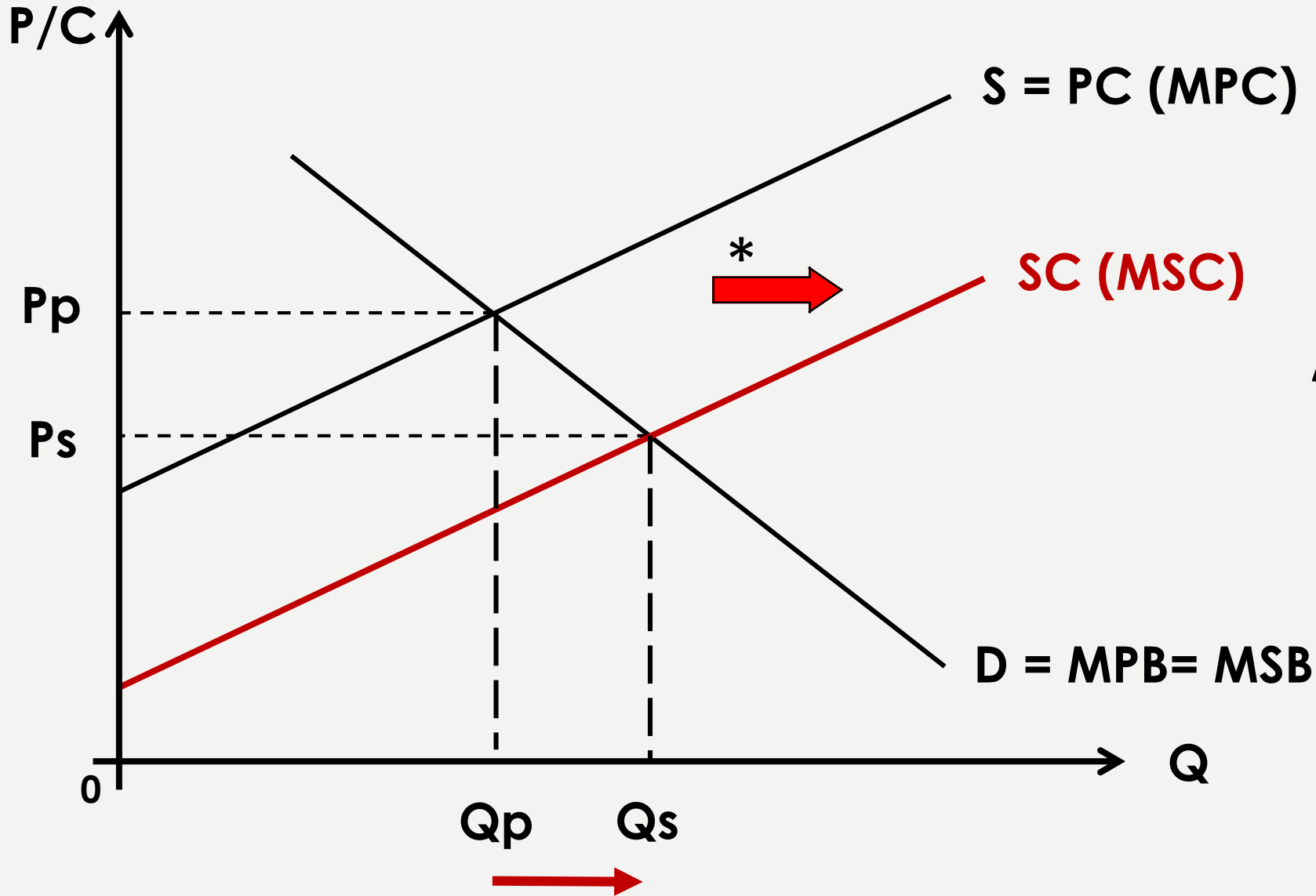
Positive externality shall create a **negative** external cost

Negative Externalities

$$\text{SC} = \text{PC} + \text{EC}$$
$$\text{SC} > \text{PC}$$

Negative externality shall create a **positive** external cost

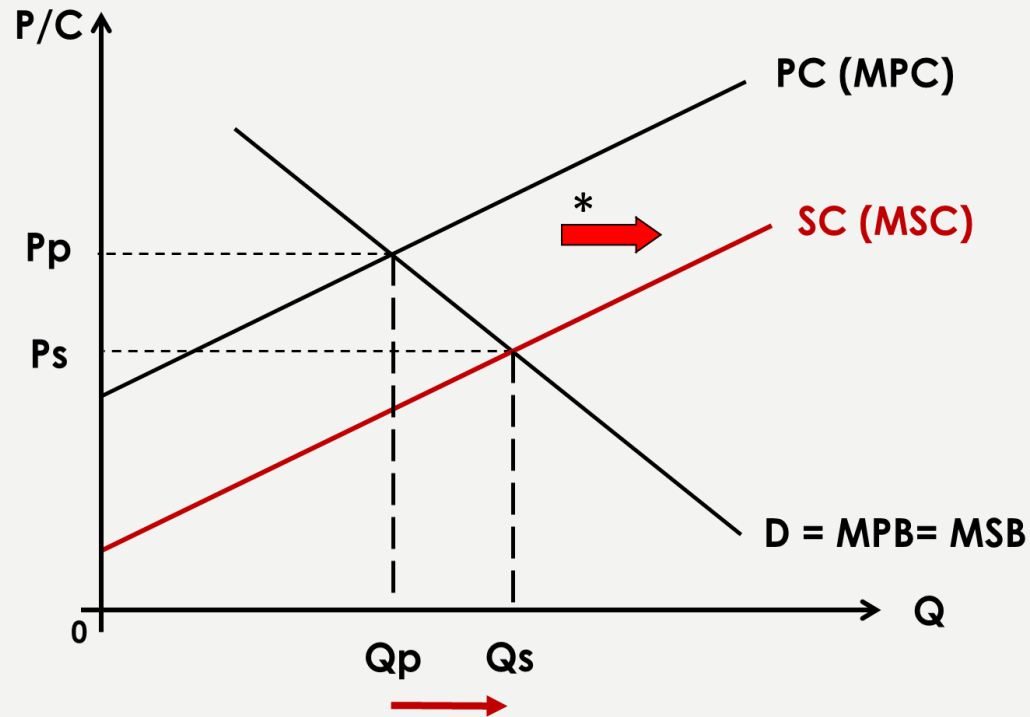
(C) Positive Externalities of Production



Application :

$$SC = PC + (-EC)$$
$$SC < PC$$

ANALYSIS:



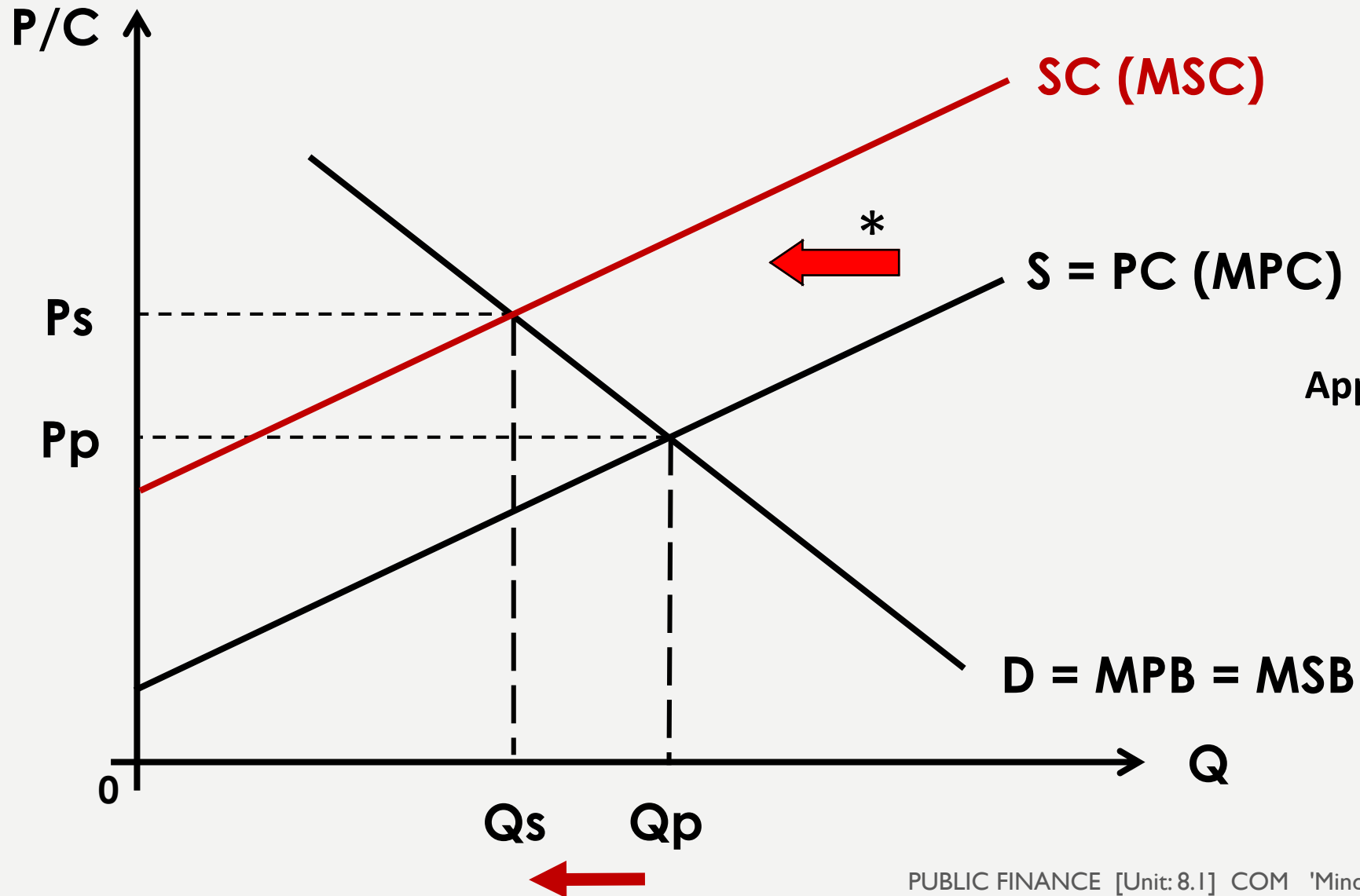
(P_p): Market Price (Actual Price)

(P_s): Socially Optimum (Desirable) Price

(Q_p): Market Quantity (Actual Quantity)

(Q_s): Socially Optimum (Desirable) Quantity

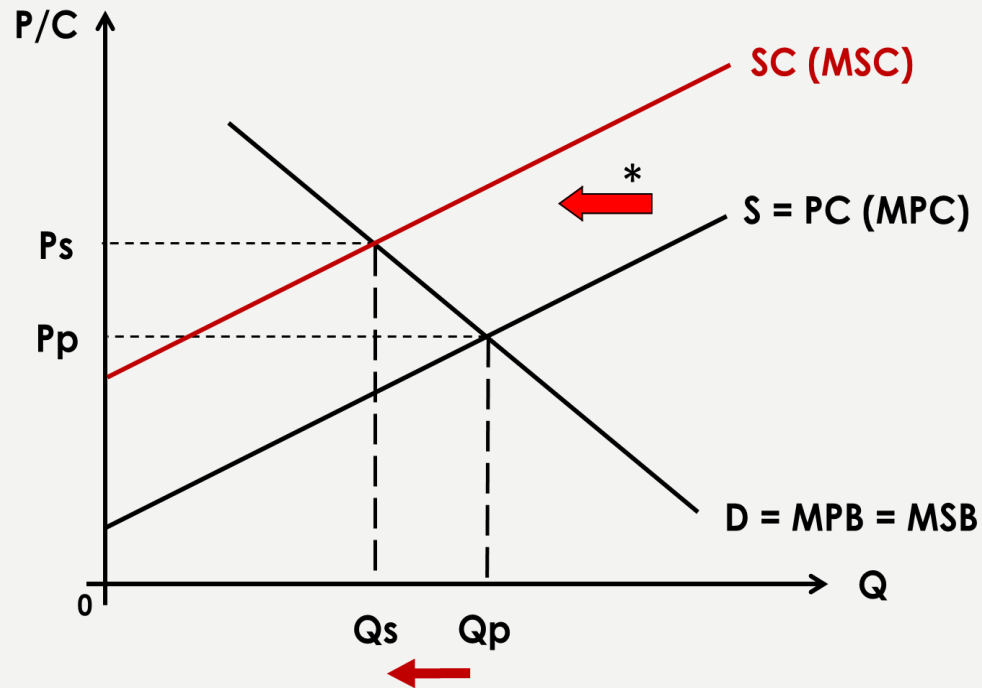
(D) Negative Externalities of Production



Application :

$$SC = PC + (-EC)$$
$$SC < PC$$

ANALYSIS:



(Pp): Market Price (Actual Price)
 (Ps): Socially Optimum (Desirable) Price

(Qp): Market Quantity (Actual Quantity)
 (Qs): Socially Optimum (Desirable) Quantity

- The market has overproduced the good, above socially optimum level ($Q_p > Q_s$)
- The market charges a price which is too low, below the socially optimum price ($P_p < P_s$)
- *Measures to internalize external cost, through legal measures, regulations and specific taxes on production, which may bring the (PC or MPC) supply (S) curve to the socially optimum level

FURTHER

Managing Externalities (Page: 18)

Externalities and market failure (Page: 16)

Government Failure (Page: 18-19)

