Essentials of

Government Economics [Unit 8]

Volume [1]
[Coverage: **E**ssentials **1**]

[SPECIFICALLY DESIGNED FOR ADVANCED LEVEL **2024** & ONWARDS]

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Learning Keys

Essentials 01

(01) What is meant by **'Market Failure'?'**

- Market failure is essentially a situation where the **market** or **price mechanism** is **inefficient** in its **overall resource allocation efforts** or function.

- Such market failure is mainly results from the demise of competition, externalities, public good and lack or asymmetry of information. Decisive government intervention might be needed to overcome or correct such market failure.

- It is highly noteworthy to identify that functioning based on self-interest in liberal markets may lead to results that may **not** be efficient. In addition to market failure there tends to be high degree of macroeconomic instability and inequality or unfairness in income and wealth distribution.

(02) **Outline** the main **'Situations where the Market Economic System produces Suboptimal outcomes (Causes** or **Sources)**

[**1**] Market Failure

- **The demise of Competition**: 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**.

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

[3] **Situations of macroeconomic instability**

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

(A) Pure **Public Goods**
(B) Pure **Private Goods**
(C) **Quasi-Public Goods**
(D) **Common Resources**

(A) Pure **Public Goods**

- ✓ **Non-Rival** in Consumption
- ✓ **Non-Excludable**

- ✓ Essentially creates a **positive utility** and represents **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…

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.

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(C) Semi (Quasi) Public Goods

- Non-Rival in Consumption, up to capacity (Congestible Consumption)
- **Excludable**

- Essentially creates a positive utility and tends to represents external benefits
- 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.

Outline: Causes of Market Failure

[01] Perfect, Asymmetric and Imperfect Information

[A] Perfect Information

All market related **information**, needed to make consumption and production **decisions** are made available, with the following features

- **Accurate** (100% correct) information
- **Relevant** (Timely) information
- Available **free of charge** to all parties
- Ensures **efficient resource allocation**

[B] Asymmetric Information

One party having more information (highly accurate and relevant) in comparison to the other party involved within the decision-making process, with relevance to resource allocation. Leads to moderate **inefficiencies in resource allocation**

[C] Imperfect Information

- Inaccurate (incorrect) information
- Irrelevant (untimely) information
- May not be available even at a price or will be available at very high prices
- Leads to **inefficient resource allocation**

[02] Factor Immobility

- If factors of production are not responsive towards price signals issued in the market, i.e. if factor immobility exists, it leads to inefficiencies in resource allocation and market failure.
    - Geographical mobility and immobility
    - Occupational mobility and immobility

[03] Missing Markets

- Products which do not represent a unique market for itself, with a demand and/ or supply dedicated to the specific product.
- Leads to inefficient resource allocation

  <u>Examples</u>
- Public goods, Common resources, externalities created based on environmental pollution

[04] Market Power

- Ability to influence the market process (Market price or Quantity)
- **High market power** held by firms, leads to inefficiencies in resource allocation thus **market failure** (market breakdown)
- In **perfectly competitive** markets (I.e., where the Demand curve faced by the firm is parallel to the horizontal axis, or perfectly elastic), **P = MC** and represents **allocative efficiency**
- In **imperfect and monopoly** markets (where the Demand curve is downward sloping from left to right), **P > MC** which may lead **allocative inefficiency**

[05] 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 at consumption levels less than or below capacity, without an actual increase in Marginal Cost.

'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'.

(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

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Outline: Government Intervention

Government Intervention to Correct (Remedy) Market Failure

✓ The creation of situations restricting competition (barriers to competition) such as the creation of monopoly markets, the centralization of economic power etc.

Government Intervention - Consumer Affairs Authority (CAA), Telecommunication Regulatory Commission (TRC), Securities and Exchange Commission (SEC), CBSL, Insurance Board of Sri Lanka etc.

✓ The lack of providing pure public goods (Government will have to intervene and provide essential public goods)

✓ Inadequate provision of resources to produce and supply merit goods
Government Intervention – Measures to provide free education and national healthcare etc.

✓ The over or excessive provision of resources to produce demerit goods
Government Intervention – Charging a very high proportion of taxes on alcohol, cigarettes, casinos etc., and rules and regulations by the Central Environmental Authority on activities causing environmental prolusion.

✓ The immobility of resources and imperfect knowledge or information
Government shall intervene by practicing Labour market, educational and other structural reforms, while ensuring perfect information

✓ Free market decided 'Price' may be unfavorable or unfair on certain parties, thus the government will be expect to intervene though price control policies, especially on essentials such as milk powder, petroleum, bus fares etc., and guaranteed prices on paddy, liquid milk, minimum wage controls

✓ The inability to clearly define the ownership of common property resources, Government shall intervene and define the ownership, and protect and sustain such resources.

✓ Government is expected perform a regulatory function, in terms of ensuring and protecting real (physical) and intellectual property rights.

Inequalities Income Distribution
High level of disparities in income and wealth distribution and overall social-economic disparities leading to inequalities in resource allocation.

Government Intervention – Implementing a progressive and equality driven tax system, social protection and welfare programs such as Samurdhi benefits, pension payments, micro-finance schemes.

Macroeconomic Instability
Since a free market economic system represents high tendency to cause situations of macroeconomic instability, the government shall intervene using different macroeconomic policies (Fiscal and Monetary) to maintain stability and promoting economic growth.

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(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.
- Externalities can be classified into four (4) main categories namely;

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

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

(A) **Merit** Goods
(B) **De-merit** Goods

(B) Demerit 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

- Examples - Cigarettes, alcohol, gambling etc.

Outline: Key Externalities Related 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)**

Brief Definitions [Total Concepts]:

[1] Private Cost (PC or TPC)

The **cost incurred** by the **party directly engaged in a given economic activity**, due to such activity. Private cost in production refers to the **cost incurred by producers** to **purchase** or rent **inputs** for the **process of producing** goods and services.

Since this cost is directly incurred by the producer or instigator, it can be termed as an internal or private cost. This is the **cost** generally considered in the process of **estimating profits and losses.**

[2] External Cost (EC or TEC)

External cost refers to **negative outcomes** or impact created on **persons external** to a certain **production** or economic **activity,** because of the actions of a producer or instigator, which is **beyond the private cost of the activity.**

[3] Social Cost (SC or TSC)

Social cost refers to the **cost incurred** by the **producer and the external society**, due to the **production** of a certain good or service. The cost incurred by the greater society is generally **not considered in the process of estimating profits and losses.**

Accordingly Social Cost (SC) is a combination of Private Cost (PC) and External Cost (EC), created on the individual producer and the individuals of the greater society as a result of a certain economic (production) activity, i.e., **SC = PC + EC**

[4] Private Benefits (PB or TPB)

The **benefit received** by the **party directly engaged in a given economic activity,** due to such activity. Private benefits in consumption; refer to the **benefits received directly by the consumers** who **purchase a given good or services**, in the process of **satisfying a specific want; need**.

Since this benefit is directly received by the consumer or instigator, it can be termed as an internal or private benefit. This is the benefit generally considered in the process of **estimating total utility or satisfaction attained by the consumer.**

[5] External Benefit (EB or TEB)

External benefit refers to **positive outcomes** or impact created on **persons external** to a certain **consumption or economic activity**, because of the actions of a consumer or instigator, which is **beyond the private benefit of the activity**.

[6] Social Benefit (SB or TSB)

Social benefit refers to the **benefit received** by the **consumer and the external society**, due to the **consumption** of a certain good or service. The benefit received by the greater society may not be considered in the process of estimating the total utility or benefit to the individual.

Accordingly Social Benefit (SB) is a combination of Private Benefit (PB) and External Benefit (EB), created on the individual consumer and the individuals of the greater society as a result of a certain economic (consumption) activity, i.e., **SB = PB + EB**

Brief Definitions [Marginal Concepts]:

[7] Marginal Private Cost (MPC)

This is the **extra cost** incurred by a producer when **producing one extra unit** of a certain product, i.e., the extra private cost incurred to produce one additional unit of output.

[8] Marginal External Cost (MEC)

This is the **extra cost or negative outcomes** created on **persons external** to a certain production or economic activity, because of **producing one extra unit** of a given good by a producer or instigator, which is **beyond the marginal private cost of the activity.**

[9] Marginal Social Cost (MSC)

This is the **extra cost** incurred by **society** (the producer and other parties external to the production firm in society) when **producing one extra unit** of a certain product. Accordingly, this is the combination of Marginal Private Cost (MPC) and Marginal External Cost (MSC),
MSC = MPC + MEC

[10] Marginal Private Benefit (MPB)

This is the **extra benefit** received by a consumer when **consuming one extra unit** of a certain product, i.e., the **extra private benefit** received by consuming one additional unit of the product [relevant to estimating marginal utility]

[11] Marginal External Benefit (MEB)

This is the **extra benefit or positive** outcomes received by persons external to a certain **consumption** or **economic activity**, because of **consuming one extra unit** of a given good by a consumer or instigator, in addition to the marginal private benefit or utility of the activity.

[12] Marginal Social Benefit (MSB)

This is the **extra benefit** received **by society** (the consumer and other parties external to the consumer in society) when **consuming one extra unit** of a certain product. Accordingly, this is the combination of Marginal Private Benefit (MPB) and Marginal External Benefit (MSB),
MSB = MPB + MEB

‘Examples’ of Externalities

[**Source**; Prof. D. Atpattu. Approach to Economics Text 2 – 2011. p. 19 - 20]

(A) **Positive** externalities in **Consumption**

- *Receiving education*
- *Receiving professional and vocational training*
- *Receiving vaccination to prevent certain diseases*
- *Maintaining a clean garden / households*
- *Good personal hygiene and health practices*
- *Disposing garbage responsibly*

(B) **Negative** externalities in **Consumption**

- *Pollution (air and sound) caused by using personal vehicles*
- *Disposing garbage along the roadside and in public places*
- *Cruel treatment of pets and other animals*
- *Anti-social activities such as vandalizing public property*
- *Damage to others through passive smoking*
- *Violent behavior induced by alcohol and other abusive substances*

(C) **Positive** externalities in **Production**

- *Providing education and vocational training*
- *Engaging in research and development to improve and develop new technology*
- *Providing school students, a mid-day meal or a glass of milk*
- *Restoring and protecting archeological sites*
- ***Development of infrastructure, employment opportunities, due to the establishment of a new industrial zone or park.***
- *Projects to provide flood protection and land conservation*

(D) **Negative** externalities in **Production**

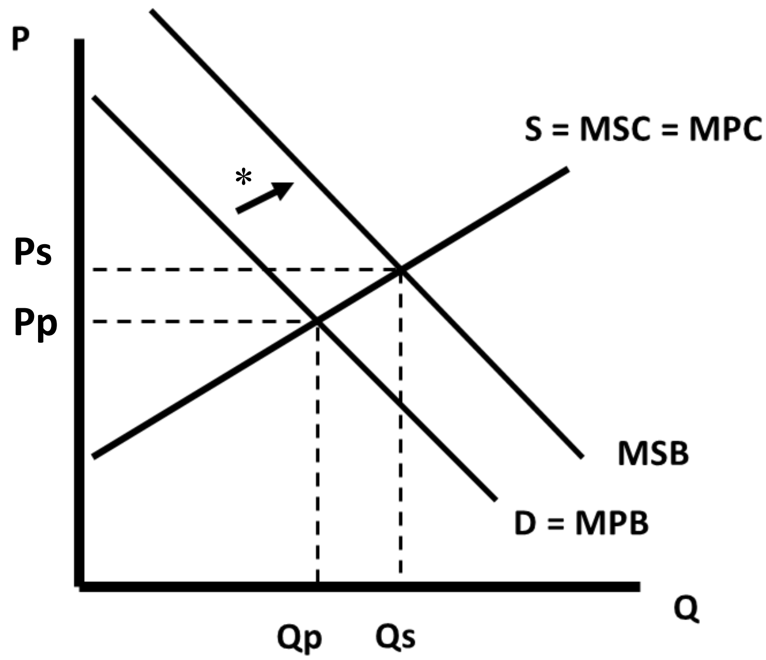
- *Pollution due to waste or chemical mixed water released by an industrial plant or factory*
- *Air pollution caused by industries or factories (air pollution caused by carbon emissions)*
- *Loss of natural forest areas due to the timber and wooden furniture industry*
- *Production using materials and chemicals which harm the environment (non-biodegradable materials)*
- *Sound pollution through commercial activities*

Application:

(07) **Outline** using appropriate diagrams, the **impact on** the **efficiency** of **resource allocation** in a market economy, caused by the **presence** of the following **situations of externalities.**

(A) Positive Externalities of Consumption
(B) Negative Externalities of Consumption
(C) Positive Externalities of Production
(D) Negative Externalities of Production

(A) POSITIVE EXTERNALITIES OF CONSUMPTION



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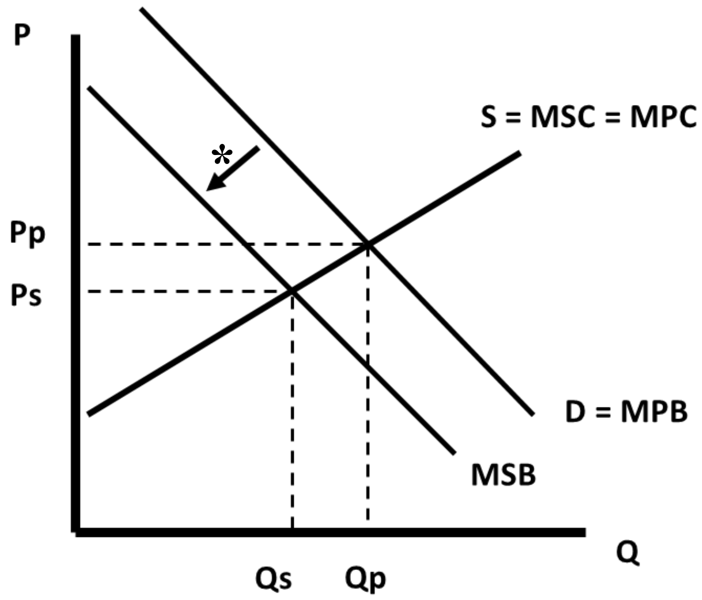
(B) NEGATIVE EXTERNALITIES OF CONSUMPTION



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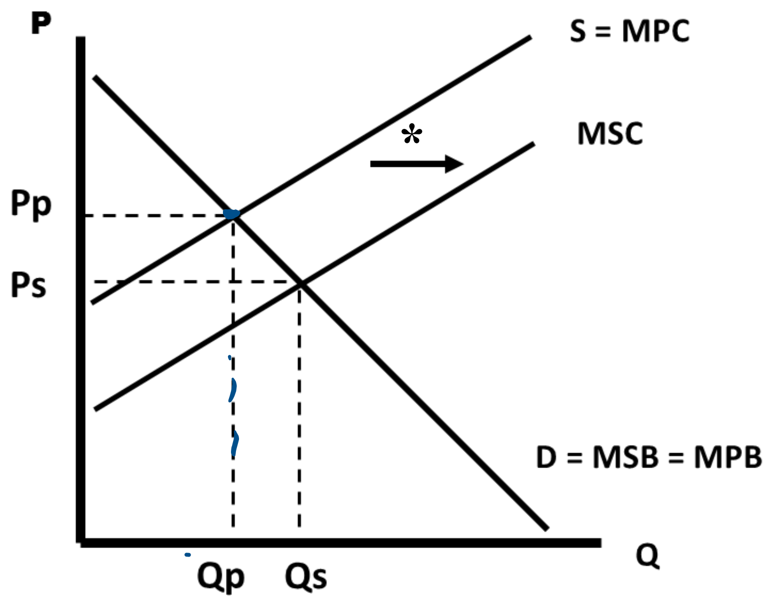
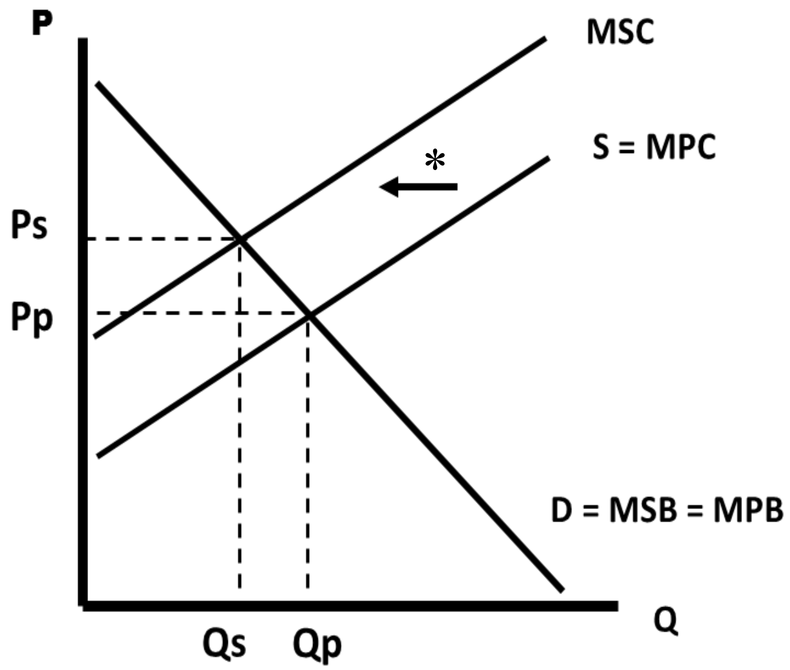
(C) POSITIVE EXTERNALITIES OF PRODUCTION



(D) NEGATIVE EXTERNALITIES OF PRODUCTION



(08) Describe the manner in which the **existence of externalities** may lead to **market failure**

Externalities and Market Failure

'Concept Definition'

- ✓ Externalities created through the process of production or consumption (economic activity), shall result in creating External Cost and Benefits.
- ✓ The creation of external benefits and costs shall result in difference between Private benefits (or cost) and Social benefits (or costs).

'Negative Externalities'

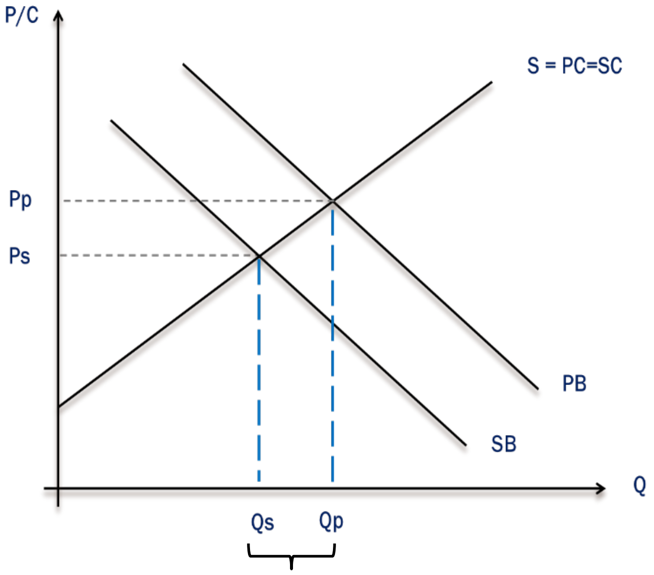
- ✓ If a certain production or consumption activity creates a Negative externality, either the social cost is greater than the private cost or the Private benefits becomes greater than the social benefit.
- ✓ The market reality of this development is the production of the given product at a level beyond (in excess of) the socially optimum or desirable level of output or consumption.

'Positive Externalities'

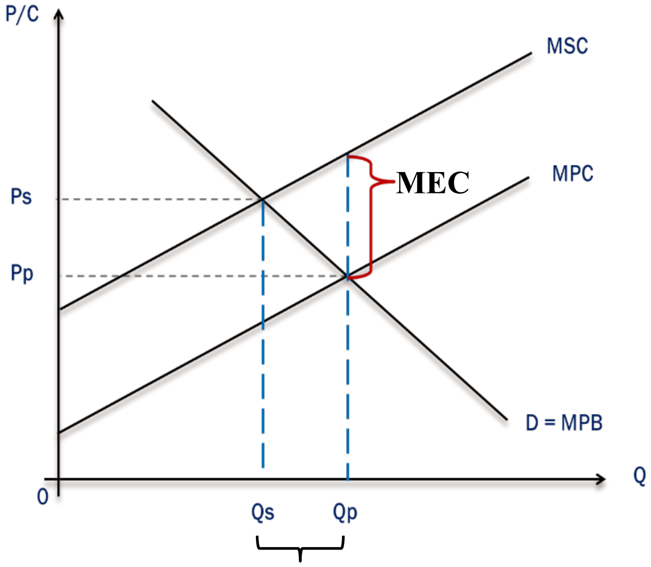
- ✓ If a certain production or consumption activity creates a Positive externality, either the Private cost is greater than the Social cost or the Social benefits becomes greater than the Private benefit.
- ✓ The market reality of this development is the production of the given product at a level below (less than) the socially optimum or desirable level of output or consumption.

(09) Using an appropriate diagram, explain how the surge in the number of private vehicle owners in the context of congested motorways in Colombo, may lead to socially suboptimum outcomes

- ✓ This represents a Negative externality created through a consumption process. In using personal vehicles or motor cars, the consumption decision (demand decision) is purely based on 'Private Benefits' and the uses (drivers) of such vehicles will not give any consideration towards the external cost (negative externality) caused because of using a vehicle on a personal basis.
- ✓ Accordingly, a high level of vehicular traffic and traffic blocks will be created.



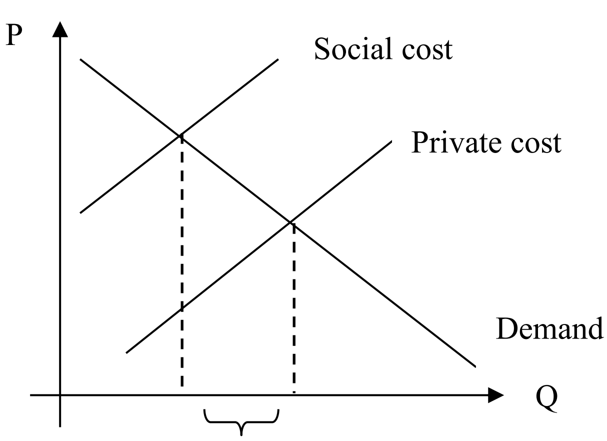
Excessive Use of Roadways



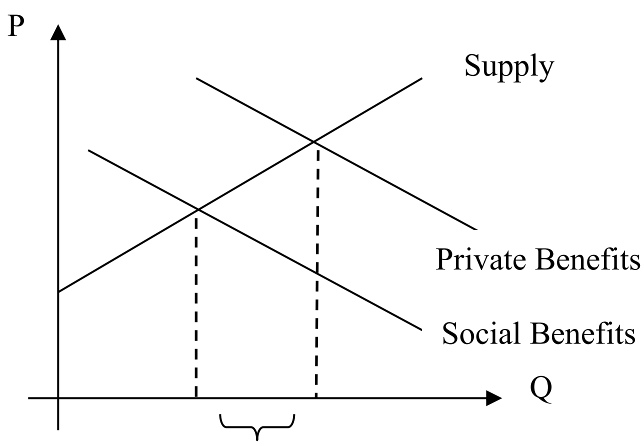
- ✓ Any activity causing such negative externality within the consumption process, shall result in the Social Benefit becoming lower than Private Benefit (PB>SB). But since private consumption decisions are made based on private benefit considerations, there tends to be over consumption of such goods (i.e. the use of private vehicles is in excess of the socially desirable or optimum level).
- ✓ The above diagrams (alternative) tend to represent the consumption or use of vehicles above the socially optimum or desirable level, due to the Negative Externalities in the use of personal vehicles.

Alternative Approach

In situations where there is the existence of negative externalities in consumption or productions.



Excess production



Excess production

(10) **Outlin**e the steps taken to **Manage Externalities**, and improve the efficiency of the resource allocation process

- ✖ Implementing **regulations** and **laws** to discourage and completely restrict activities which lead to the creation of negative externalities in production and consumption such as setting **standards**, providing **pollution reducing targets** and implementing strict process requirements.
- ✖ Enforcing **eco** or **pollution taxes [Pigovian tax,** also spelled **Pigouvian tax].** Such taxes are mainly aimed at '**internalizing**' the cost pollution or negative externalities caused by production and consumption activities.
- ✖ Mobilizing **compensation** (mobilizing compensation from parties causing externalities or external cost towards parties affected by such cost or activities)
- ✖ Providing **subsidies** (proving the necessary encouragement through **financial** and **material** subsidies to promote activities with positive externalities or external benefits to **socially optimum levels**)
- ✖ Direct government **regulations** to **encourage** activities which create **external benefits** (receiving vaccination, prevention of viral flues and receiving education etc.)
- ✖ Providing an efficient **legal framework** ensuring property rights and especially that of **common property resources** in order to **prevent** the **exploitation** of such mainly nonrenewable resources.

(09) **Briefly describe** what is meant by the phenomenon of **'Government Failure'** and **state** the **main causes** of such as development

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- **Bureaucracy** and **Political Self-interest** leading to inefficiencies
- **Corruption**, bribery and wastage commonly associated with public sector operations
- The large time lag between the point of making public administration and investment decisions and implementing such decisions.
- **Rigidness** of government policies and politicization
- Inappropriate and unnecessary expenditure incurred due to adverse pressure from voters and politicians
- The lack of long-term policies and strategies, working to provide short-term solutions **(Policy myopia or Political myopia)**
- The use of less productive **incentives** and transfers to reduce inequalities in income disparities
- Government decisions tend to be inefficient due to **imperfect information** and lack of resources

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Additional **'Food for Thought'**

Key Success Factors [Market Economic System]

The efficiency of the market economic system as a resource allocation mechanism in the process of solving basic economic problems depends on some of the following factors or attributes.

- The ability to provide and derive most accurate information
- High level of flexibility
- The ability to adjust for changes
- Decentralized decision making

Pareto Optimality

A market economy functioning based on a combination of perfectly or highly competitive markets, at equilibrium is able to achieve the highest level of overall resource allocation efficiency, in the form of pareto optimality.

- All production sectors or markets achieve productive and allocative efficiency.
- Marginal cost will equal the market price (MC = P)
- Social cost will equal private cost (SC = PC)
- In all markets consumer and producer surpluses (economic surplus) will be at the highest level
- No further room to improve efficiency or welfare of one person or a given market without foregoing that of another market or person.
- Any external or government intervention is not required to maintain existing optimum efficiency.
