

# **Transport Economics**

## **Lecture 8**

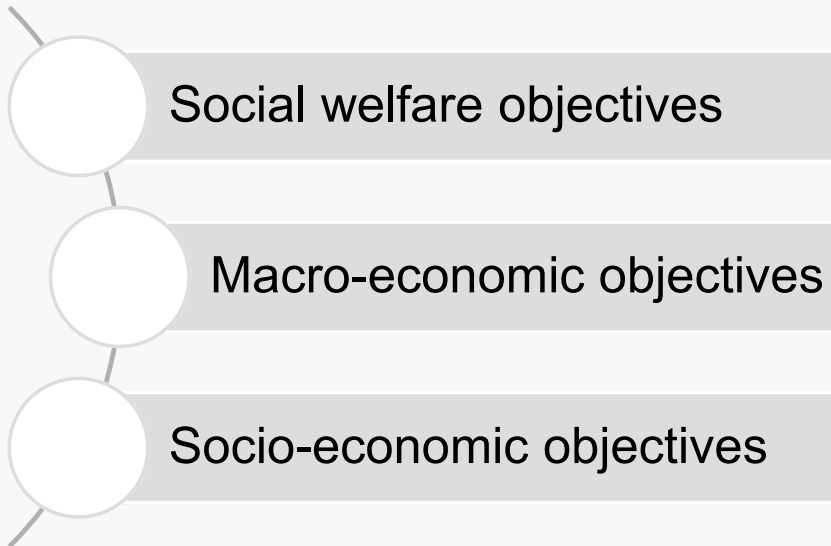
**Ashraf Samir Ph.D.**

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# **The Regulation and Financing of Transportation Networks**

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## ■ Objectives for Government Intervention in transportation sector



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## ■ Social welfare objectives

### Welfare Economics

Focuses on the optimal allocation of resources and how the allocation of these resources affects social prosperity.

income distribution and income redistribution policies

**A government regulatory policy:**

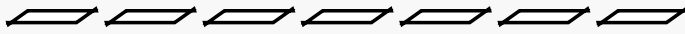
maximize of **social welfare**

**through** the **remedy of** various types of **market failure**.

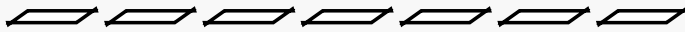
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**Such as:**

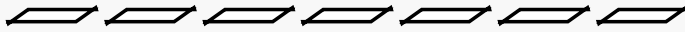
**Inaccurate information or asymmetric information**



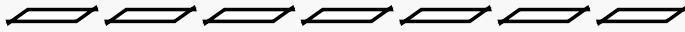
**Adverse Selection and moral hazard**



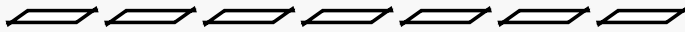
**Property rights infringement**



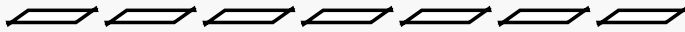
**Existence of Natural monopolies**



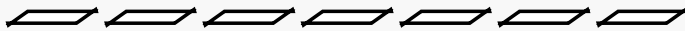
**Non-enforcement of Contract obligations**



**Existence of externalities**



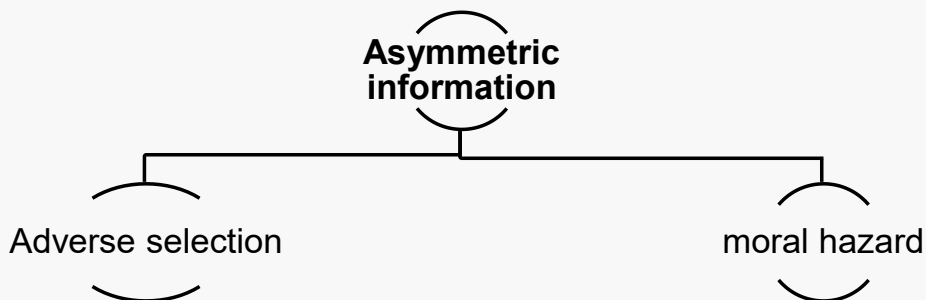
**Absence of Competitive markets**



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## **Asymmetric information**

- One party to a transaction knows more than does the other.
- Inefficient trades



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### Adverse selection

- A situation where **sellers** have information that buyers do not, or vice versa, about some aspect of **product quality**.

**Example1-** , when renting a vehicle, a buyer may know some defects in the vehicle, while consumer doesn't know.

**Example 2-** when driver obtain coverage at lower premiums than the insurance company would charge if it were aware of the actual risk regarding the driver

### Moral hazard

- A situation in which **one party** gets involved in a **risky activity** knowing that it is protected against the risk and the **other party** will **incur the cost**.

**Example,** A transport company get insurance against accidents, it may involve in risky driving behavior.

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- **Both adverse selection and moral hazard problems are special importance in transportation studies**

Because,

**Insurance plays an important role in terms of insuring:**

**The value of cargo**

against damage

**Drivers**

against damage caused by their vehicles

**Passengers**

against death in airplane crashes

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## Problems with Property Rights

The lack / absence of property rights

➔ lead to **Misuse/Over-use** of resources  
**Negative externalities**

Instances of market failures related to such problem are:

➔ The Existence of Public goods or Common property Resources

**Examples,** The Misuse of Roadways

The Traffic Congestion

- ✓ No nobody own public roads
- ✓ nobody is charged higher rates for using highly trafficked roads or offer discounts for traveling during nonpeak hours.

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## Natural Monopoly

It exists because the cost of producing the transport services is lower due to economies of scale or economies of density (if there is just a **single producer** than if there are several competing producers).

- There are **natural monopolies** in infrastructure provision of transport services.
  - **This usually prevent**  
**a rival firm** to build a competitive infrastructure.

**This is often due to:**

High fixed costs

Economies of scale

Economies of density

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### Examples (Infrastructure),

Railroads

Pipelines

### Examples (Manufacturing),

The production of large aircraft

The production of large container ship

There are **strong incentives** for natural monopolies to abuse their **market position** in order to **increase profits** and to **enhance their power**.

Charging prices far  
above the cost of  
production

Providing lower  
quality products

Suppressing new  
technologies

This usually results in pressure from consumers for government regulation.

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## Externalities

- Regulatory efforts toward externalities often focus on **negative externalities**.

**For example,**

- ✓ many modes of transportation experience congestion where **prices** as a means of rationing capacity are **absent**.
- ✓ The consumption of energy often leads to **emission of pollutants** which, when **unpriced**, can lead to undesirable outcomes.

- **Positive types of externalities** are also possible.

**For example,**

Speeding up the growth of the transportation network so that it serves a large number of users can lead to increase social welfare.

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### To sum up,

- Existence of any of the above mentioned market failures means allocation **does not achieve** the **best possible outcome**, from society's point of view.

### In this case,

- Agents can gain **market power** through the creation of monopolies that limit the benefits from competitive markets.
- A regulatory policies by government are required.

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Thank you

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