MARKET FAILURE

The competitive market solution affects all market participants (private economic solution) and also non-participants (society at large).

“Externality” → Impact of market solution on non-market participants (social costs)
FOR ALL MARKET PARTICIPANTS – BUYERS AND SELLERS

IS THERE ANY IMPACT ON NON-PARTICIPANTS IN THE MARKET?

DEFINITION:
Non-participants do not buy or sell in this market and are simply “bystanders” in the market activity.

COMPETITIVE MARKET SOLUTION

FOR ALL MARKET PARTICIPANTS – BUYERS AND SELLERS

NONE:
NO MARKET FAILURE (MOST COMMON OUTCOME)

IMPACT ON MARKET BY-STANDERS

YES, GOOD!
YES, BAD!
LOWER "SOCIAL COST"
HIGHER "SOCIAL COST"

IMPACT ON MARKET BY-STANDERS

IMPACT ON MARKET BY-STANDERS

SOCIAL COST

NO MARKET FAILURE: SOCIAL COST=PRIVATE COST

IMPACT ON MARKET BY-STANDERS

A BENEFICIAL EXTERNALITY

YES, GOOD!
MARKET TRANSACTIONS IN GENERAL

The competitive market equilibrium provides the solution to the cost of economic resources – both to private economic agents and to society as a whole.
MARKET FAILURE

A case where market transactions create a divergence (inequality) between private costs (of the market participants) and social costs (covering the side-effects on others).

A GRAND EXAMPLE OF MARKET FAILURE

EARTH’S CLIMATE CHANGE ISSUES

MARKET FAILURE

- The competitive market solution affects all market participants (private economic solution) and also non-participants (society at large).
- “Externality” → Impact of market solution on non-market participants (social costs)
MARKET TRANSACTIONS IN GENERAL

The competitive market equilibrium provides the solution to the cost of economic resources – both to private economic agents and to society as a whole.

MARKET FAILURE

A case where market transactions create a divergence (inequality) between private costs (of the market participants) and social costs (covering the side-effects on others).

MARKET TRANSACTIONS IN GENERAL

The competitive market equilibrium provides the solution to the cost of economic resources – both to private economic agents and to society as a whole.
MARKET FAILURE

A case where market transactions lead to a difference between private cost (among market participants) and social cost (covering the side-effects on non-market participants).

EXTERNALITY

- Side-effect of a market transaction or outcome on non-market participants
  - Positive externality: Private cost is greater than ("\(\gt\)") Social cost
  - Negative externality: Private cost is less than ("\(\lt\)") Social cost

DIVERGENCE OF PRIVATE COST WITH SOCIAL COST: EXAMPLE OF NEGATIVE EXTERNALITY

In this case, producing \(Q_0\) output has a higher cost to society than to the market participants.
DIVERGENCE OF PRIVATE COST WITH SOCIAL COST: EXAMPLE OF NEGATIVE EXTERNALITY

Ideally, social cost can be lowered by reducing output to $Q_{\text{ideal}}$.

NORMAL CASE: SOCIAL COST−PRIVATE COST
“The market solution is the social solution.”

FREE RIDERS: PRIVATE COST > SOCIAL COST

NEGATIVE EXTERNALITY

NORMAL CASE: SOCIAL COST−PRIVATE COST
“The market solution is the social solution.”

FREE RIDERS: PRIVATE COST < SOCIAL COST

POSITIVE EXTERNALITY
ANATOMY OF MARKET FAILURE:  “POSITIVE EXTERNALITY”

PRIVATE COST IS GREATER THAN (>) SOCIAL COST; LESS P, MORE Q IS DESIRED.

ANATOMY OF MARKET FAILURE:  “NEGATIVE EXTERNALITY”

PRIVATE COST IS LESS THAN (>) SOCIAL COST; MORE P, LESS Q IS DESIRED.

ANATOMY OF MARKET FAILURE:  “POSITIVE EXTERNALITY”

Because of abundant pollination, flower gardens are beautiful & fruit harvests are abundant.
NON-MARKET PARTICIPANTS
Æ CITIZENS WHO LIVE IN AREAS NEARBY

IT IS POSSIBLE TO HAVE LESS Q AT HIGHER P THROUGH “TAXATION” OR PUBLIC REGULATION.

Public health problem – high incidence of respiratory diseases

EXAMPLE # 6 FACTORIES WITH LARGE SMOKE EMISSIONS
NON-MARKET PARTICIPANTS ➔ CITIZENS WHO LIVE IN AREAS NEARBY

ANATOMY OF MARKET FAILURE: “NEGATIVE EXTERNALITY”

COMPETITIVE MARKET SOLUTION

IT IS POSSIBLE TO HAVE LESS Q AT HIGHER P THROUGH “INTERNATIONAL AGREEMENT”

CLIMATE CHANGE: TOTAL SUM OF WORLD’S ENERGY USE HAS DISTURBED EARTH’S ATMOSPHERIC SHIELD FROM THE SUN
NON-MARKET PARTICIPANTS ➔ ALL COUNTRIES SUFFER FROM CLIMATIC DISTURBANCES
WORLD TREATY ON CLIMATE CHANGE: KYOTO, COPENHAGEN AGREEMENTS

ANATOMY OF MARKET FAILURE: “NEGATIVE EXTERNALITY”

OIL EXPLORATION: BP’s example of OFFSHORE OIL DRILLING AND THE ACCIDENT
NON-MARKET PARTICIPANTS LIVELIHOODS IN THE AFFECTED AREAS – FISHING, TOURISM, HOUSING VALUES, ETC.
US GOVT REQUIRED BP TO PUT UP CASH (HUGE AMOUNT) TO PAY FOR DAMAGE INCURRED TO AFFECTED PARTIES.
ANATOMY OF MARKET FAILURE: “NEGATIVE EXTERNALITY”

EXAMPLE: MINING – MINE WASTES ARE THROWN INTO RIVER/ COMMUNITY

NON-MARKET PARTICIPANTS – FISHERMEN AND COMMUNITIES NEARBY

Pollution of river and seashore affects fishery and other livelihoods.

ANATOMY OF MARKET FAILURE: “NEGATIVE EXTERNALITY” IN CONSUMPTION

EXAMPLE #2 TOWN FIESTA EXPENSES

LAVISH EXPENSES

WASTEFUL CONSUMPTION RESULTS – LOWER RATE OF SAVING!

ANATOMY OF MARKET FAILURE: “NEGATIVE EXTERNALITY”

EXAMPLE #5 INFRASTRUCTURE

CLOGGED AND LIMITED ROAD SYSTEMS

NON-MARKET PARTICIPANTS TRAVELING & WORKING CITIZENS

Cost of personal and commercial travel increases. Time wasted means lost opportunities.
NON-MARKET PARTICIPANTS: SECOND HAND SMOKE AFFECTS THE HEALTH OF NON-SMOKERS


ANATOMY OF MARKET FAILURE: “NEGATIVE EXTERNALITY”

CIGARETTE SMOKING → IN RESTAURANTS, BUILDINGS, MOVIE HOUSES, ETC.

COMPETITIVE MARKET SOLUTION

IT IS POSSIBLE TO HAVE LESS Q AT HIGHER P THROUGH “TAXATION” OR PUBLIC REGULATION.

ANATOMY OF MARKET FAILURE: “POSITIVE EXTERNALITY”

EXAMPLE (FAMOUS) #8 LIGHT HOUSE TO GUIDE SHIPS

COMPETITIVE MARKET SOLUTION

IT IS POSSIBLE TO HAVE MORE Q AT LESS P THROUGH PUBLIC INVESTMENT IN NAVIGATIONAL GUIDES.

NON-MARKET PARTICIPANTS → NEIGHBORHOODS, VILLAGE PEOPLE, FISHERMEN, ETC.

Lighthouse provides a point of reference for villagers, additional lighting, and also guides airplanes and other vessels.

IMPORTANT NOTE: ONLY GROUP OR GOVERNMENT ACTION CAN CORRECT A MARKET FAILURE

- To raise private costs to correct a negative externality, tax an economic activity or regulate that activity to raise private cost to the level of social cost.
- To attain the social benefits implied by a positive externality, subsidize the industry to expand its output level so that the social benefits are achieved and private cost equalizes social cost.
Analyzing social costs — Negative externality

To correct the divergence of private cost with social cost

Divergence of private cost with social cost

The tax will cause a fall in output and a new price along the social optimum.
Social benefits — Positive externality

TO CORRECT THE DIVERGENCE OF PRIVATE COST WITH SOCIAL COST: CASE OF POSITIVE EXTERNALITY

PRIVATE COST (Cost to market participants)
SOCIAL COST (Cost to society)

SUBSIDIZE THE INDUSTRY SO THAT THE OUTPUT INCREASES.

AS A RESULT, INDUSTRY OUTPUT RISES TO HIGHER LEVEL, $Q_{ideal}$. 
INSTITUTIONS AND ECONOMIC DEVELOPMENT

Compare countries with well-developed social institutions versus those with deteriorating or ill-developed institutions.

Characteristics of high “social capital” (institutions)

- Respect for property rights
- Well-developed rules of personal and private conduct
- Accountable leadership (national, local, business)
- Institutions function according to their purposes
- Etc.

CASE OF HIGHLY DEVELOPED SOCIAL CAPITAL

<table>
<thead>
<tr>
<th>Price</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>P₀</td>
<td>Q₀</td>
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<tr>
<td>P₁</td>
<td>Q₁</td>
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CONCLUSION:
Private costs fall; development takes place more easily.
CASE OF POORLY DEVELOPED SOCIAL CAPITAL

Social Costs
Private Costs (Supply)

Social cost per unit

Qs
Ps

Private costs are higher and less development possible

END OF TODAY’S LECTURE.

Good day!

Lecture 13

READ CAREFULLY “FOOD FOR THOUGHT” on pages I-178 to I-179.

CONCLUSION:
Price
Quantity
Social Cost per unit
Demand

P0
Q0

Qs
Ps