Lecture 8
Agency theory - Moral hazard
TrC and opportunism

Adverse selection
- Opportunism ex ante

Moral hazard
- Opportunism ex post

Transaction costs
- Search costs
- Bargaining costs
- Contract-making costs
- Monitoring costs
- Enforcement costs
**Moral hazard: definition**

*Moral hazard* is unfair behavior of the agent generated by informational asymmetry about endogenous variables (e.g. agent’s efforts, their realizations or other events).

Hence, the principal aims to create such motivation schemes, which encourage the agent to make actions in accordance with principal’s interests.
Moral hazard: reasons

- different aims of contracting parties
- difficulties of monitoring
- bonded agent’s responsibility for his/her actions or decisions
Moral hazard with hidden actions

- nature
- agent
- principal

set of contracts \(\rightarrow\) accept one \(\rightarrow\) efforts \(\rightarrow\) external conditions \(\rightarrow\) Payoffs

decline all \(\rightarrow\) Payoffs
Moral hazard with hidden information

- nature
- agent
- principal

set of contracts

accept one
decline all

external conditions
efforts

Payoffs

Payoffs
Moral hazard in the open corporation

- Relationships “actioner – manager”
- Property rights are fully separated from control
- Management is professional
- Delegation of authority
- Possibilities of manager’s opportunism
Examples of opportunism by managers

- Consumption in the workplace
- Distortion or concealment of important information
- Participation in transactions involving excessive risks
- Entering into costly long-term projects with immediate expansion of administrative resources
- Delay with technological or structural restructuration

- What are the consequences of moral hazard?
  - Fall of the company's value
  - Bankruptcy
What are agency costs?

- Agency costs are costs caused by delegation
- Benefits of specialization $\leftrightarrow$ Agency costs
To delegate or not to delegate?

to delegate → execute

not to delegate → deviate

to delegate

- nature

- agent

- principal

execute

Good → (1; 1)

Bad → (0.5; 0.5)

deviate

Good → (0.5; 1.2)

Bad → (0; -0.5)

not to delegate

Good → (0.7; 0)

Bad → (0.3; 0)
To delegate or not to delegate?

to delegate

execute

to delegate

deviate

not to delegate

Good

Bad

Good

Bad

Good

Bad

Good

Bad

- nature

- agent

- principal

(1; 1)

(0.5; 0.5)

(0.5; 1.2)

(0; -0.5)

(0.7; 0)

(0.3; 0)
To delegate or not to delegate?

- Agent’s actions depend on external conditions
To delegate or not to delegate?

- Agent’s choice

<table>
<thead>
<tr>
<th>Nature</th>
<th>Execute</th>
<th>Deviate</th>
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<tbody>
<tr>
<td>Good</td>
<td>$p$</td>
<td>1</td>
</tr>
<tr>
<td>Bad</td>
<td>$(1-p)$</td>
<td>0.5</td>
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</tbody>
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\[ p*1 + (1 - p)*0.5 \geq p*1.2 + (1-p)*(-0.5) \]

\[ \Rightarrow p \leq 5/6 \]
To delegate or not to delegate?

- Principal’s choice

<table>
<thead>
<tr>
<th>Agent executes</th>
<th>Principal</th>
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<td>Delegate</td>
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<td>Nature</td>
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</table>
To delegate or not to delegate?

Delegation game: equilibrium

\[
\begin{align*}
& p > \frac{5}{6} \quad \text{- the principal doesn’t delegate, the agent deviates} \\
& p \leq \frac{5}{6} \quad \text{- the principal delegates, the agent executes}
\end{align*}
\]

The higher the probability of the favorable scenario is, the higher the probability that the principal will not be delegated.
Monitoring as a way to fight MH

Monitoring is an internal mechanism of reducing moral hazard
It is widely used in the labor market

What are the results of monitoring?
And what are the drawbacks of it?
Monitoring - group loan model

Grameen Bank of Bangladesh

Moral hazard – misuse of credit

Lender
→ gives a loan

Borrower
→ takes a loan for specific purposes

Borrowing group
→ control the use and the return


Monitoring - group loan model

Evidence from Eritrea
*The Saving and Microcredit program* since 1996
Group size – 3-7 people
Accumulation of 10% of the loan amount
Loan sizes – $70-$710
Number of participants – 14 000 (2002)

*The Southern Zone Saving and Credit Scheme* since 1994
Group size – 3-7 people
Accumulation of 5% of the loan amount
Loan sizes – $70-$570, first one < $150
Number of participants – 6250 (2001)

Monitoring - group loan model

Evidence from Eritrea

• Return level - 98%
• The role of the leader - difference from the Grammen bank model
• Social relations and monitoring by the group leader reduces the likelihood of moral hazard in a group
• Only the leader monitors and uses his connections for monitoring
• The remaining members of the group are shirking, since monitoring is costly and they expect that the leader will perform
Incentive contract with manager

**Incentive contract:** remuneration is determined depending on the target (observed) performance indicators of the company: revenues, profits, etc.

Compensation of efforts of the manager, depending on market performance indicators of the company:

- Solving the problem of control efforts and problem of horizon
- Options for the purchase of company shares
- **BUT:** incentives to invest in high risk projects and increase the amount of debt
Incentive contract with manager

Compensation of the manager's efforts, depending on the indicators of internal audit evaluation of his subdivision’s activities in the company:

• Bonuses based on the results of internal audit evaluation of the unit, department or project team of the manager
• Important for stimulating middle management
• The possibilities to disaggregate the results of the company's activity by separate subdivisions
Incentive contract and its efficiency

- Switching of the manager to the observed indicators
- The manager's efforts do not fully influence the company's observed performance indicators
- Managers are not prone to risk, and at the same time they are shifting uncertainty associated with the volatility of the company's performance indicators

- Dilemma “risk – incentives”
Example: airport performance

- **Problem**: queue at check-in in the airport
- **Solution**: pay for performance

"Imagine that all people who stand in line have an inscription on forehead: 2 rubles. 10 kop. It's very simple: if you serve them, money will go to you. Otherwise your colleague will earn it."

Source: Elena Gorelova, The Taming of the Lazy // Vedomosti of 02.11.2011, No. 207 (2973)
Example: airport performance

• Results for 2009 vs. 2011
  • Waiting for registration: 40 minutes vs. 20 minutes
  • Registration time: 90 seconds vs. 45 seconds
  • Number of agents: decreased by 12%
  • Passenger flow: increased 56%

• Negative effects:
  • Competition and quality
  • Decreased incentives for cooperation

Solution: Fine = amount earned for 10 passengers
Institutions and MH

Relationships “owner – manager”:
In addition to monitoring and incentive contracts
• Reputation in the market of agents (managers)
• The threat of absorption or bankruptcy
• The competition in the market of the final product
Conclusions

- The asymmetry of information between contract parties leads to opportunistic behavior: before and after the conclusion of the contract.
- Institutions can play an important role in reducing the risks of opportunism and preventing the fiasco of markets.
- Mechanisms for opportunism prevention are costly:
  - There is a connection between adverse selection and moral hazard.
  - If the parties do not take any action to reduce costs before the conclusion of the contract, they minimize ex ante costs, but face the problem of adverse selection.
  - If the parties do not take any action to reduce costs after the conclusion of the contract, they minimize ex post costs, but face the problem of moral hazard.