Sales Management

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The two lectures

- Today – How to design the optimal compensation plan for sales employee? (Principal-Agent Theory)
- Next time – When should a firm have its own sales employee (sales department) and when should it outsourced this? (Transaction Cost Economics)

Agenda

1. Agency theory
2. Tradeoff between risk and high-powered incentives
3. Multitasking problems
4. The compensation plan as an screening instrument

1. Agency theory (I)

- The part that delegates tasks is called the principal whereas the one executing the task is called the agent
- (Jensen & Meckling 1976) have defined an agency relationship as "…a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent." (p. 308)

1. Agency theory (II)

The owner(s)	Principal
↓	
The executive director	Agent/principal
↓	
The head of department	Agent/principal
↓	
The sales employees	Agent

1. Agency theory (III)

- Two basic features/assumptions:
  - Asymmetric information: the agent typically knows more than the principal about the completion of the tasks and has therefore an information advantage
  - The principal and agent have conflicting objectives

1. Agency theory (IV)

- If the agent and the principle do not have conflicting objectives and have symmetric information contracting would not be a problem – we can delegate the tasks without being worried about the completion of the task – END OF STORY

1. Agency theory (V)

- The principal's problem:
  - The agent has more information about the task – has an information advantage
  - The principal cannot perfectly and costlessly observe the agent's actions
  - The agent has no spontaneous incentive to maximize output since effort is costly to the agent and if the agent is not compensated for these costs, he has no incentive to provide the appropriate effort. The agent has a propensity to shirk and deliver only the minimum level of effort

1. Agency theory (VI)

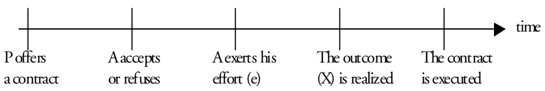
- The principal's goal:
  - The principal wants to induce the agent to behave as if he were maximizing the principal's welfare.
  - The principal's goal is to structure the relationship such that the agency loss is minimized and the principal's (expected) welfare is maximized.

1. Agency theory (VII)

- Two types of principal-agent models
  - In the hidden action (moral hazard) model, the principal cannot observe the agent's actions, i.e. the agent's effort to perform the task
  - In the hidden information (adverse selection) model the agent has private information and is better informed than the principal about exogenous parameters of importance when the contract is made (e.g. the agent's abilities as a salesman)

1. Agency theory (VIII)

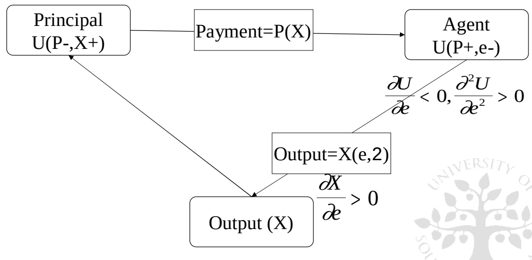
- Timing of the standard moral hazard (hidden action) model



- The principal can verify output (X) but are unable to verify the agent's effort (e)
- Which implies that the agent has a propensity to shirk (moral hazard)

1. Agency theory (IX)

- Illustration of the principal-agent framework



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1. Agency theory (X)

- Definition of moral hazard:
  - "The Agent takes a decision ("action") that affects his utility and that of the Principal; the Principal only observes the "outcome", an imperfect signal of the action taken; the action the agent would choose spontaneously is not Pareto-optimal." (Salanie 1997: 108)
  - "Moral hazard refers to the problem of inducing agents to supply proper amounts of productive inputs when their actions cannot be observed and contracted for directly." (Holmstrom 1982: 324).

1. Agency theory (XI)

- Participation constraint:
  - the agent's utility of accepting the contract equals or exceeds the opportunity level of utility or 'reservation utility' of not going into the contract
- Incentive compatibility constraint:
  - the agent is induced to choose the efficient level of effort in the contract that the principal offers him

2. The choice of compensation plan (I)

- Two types of compensation plans:
  - Flat wage (salary)
  - Performance-based compensation (e.g. bonus, commissions)
- Which incentives do these give the agent?
- Why do firms not solely choose performance-based compensation?

2. The choice of compensation plan (II)

- Risk
  - Uncertainty of sales response of effort
  - X=X(e,2), 2 is a random factor influencing sales response
  - The output (sales revenue) may be small even when the agent provide a large effort!

2. The choice of compensation plan (III)

- Risk attitude
  - The principal is assumed to be risk neutral
  - The agent is assumed to be risk averse (burden of risk is a welfare loss for the agent)

2. The choice of compensation plan (IV)

- Tradeoff between high-powered incentives and risk
  - Higher degree of performance-based compensation increases the agent's incentive to provide the appropriate effort but it increases the agent's risk

2. The choice of compensation plan (V)

- Predictions:
  - When the agent's effort is nonverifiable, the principal prefer more performance-based compensation plans
  - In areas with huge variations in sales revenue, the agent prefer more salary-weighted compensation plans
  - When the agent is very risk averse, the more salary-weighted compensation plans are preferred

3. Multitasking problems (I)

- The agent performs two task for the principal
  - The output of one of the tasks is verifiable whereas the output of the other task is nonverifiable
  - The principal wants the agent to provide equal effort to perform both tasks
- Example:
  - Task 1: maximize present sale
  - Task 2: maintain a good relationship to the purchaser (i.e. maintain the value of a brand and maximizing future sales)

3. Multitasking problems (II)

- Performance-based compensation
  - What happens if present sale is rewarded very heavily in the agent's compensation plan?

3. Multitasking problems (III)

- The multitask problem
  - If we reward what we can measure, we distort behavior, if we do not, we discourage efficiency
- When the principal wants the agent to put equal effort into interrelated tasks, a more salary-weighted compensation plan is chosen

Empirical findings - Eisenhardt (I)

- Hypothesis 1: Job programmability (verifiability of effort) is positively related to the use of salaries and negatively related to the use of commissions
- Hypothesis 2: Span of control (verifiability of effort) will be negatively related to the use of salaries and positively related to the use of commissions
- Hypothesis 3: Outcome uncertainty will be positively related to the use of salaries and negatively related to the use of commissions
- The hypotheses are confirmed

Empirical findings - Eisenhardt (II)

- 54 specialty stores
- Programmability measure: selling technique, selling time, sales training time, sales effort
- Span of control measure: size of the space and the number of employees
- Outcome uncertainty measure: failure rates, number of competition

4. Compensation plan as a screening instrument (I)

- Adverse selection principal-agent models
- The firm wants to attract salesman with high abilities – but how?
- Lets assume that:
  - The firm is unable to disclose the salesmen's abilities
  - The salesmen's abilities vary

4. Compensation plan as a screening instrument (II)

- How do we 'screen' the salesmen so that our firm gets the salesmen with the highest abilities?
  - High salary?
  - Require a high education level?
  - Former jobs?

4. Compensation plan as a screening instrument (III)

- Performance-based compensation attracts only those salesmen who know that they have high abilities
- Flat wage compensation attracts salesmen with lower abilities

- Dilemma: performance-based compensation is good for screening but may give the employees to high risk!

Next lecture

- In this lecture we assumed that the salesmen where employed in the firm
  - But when should the firm have its own sales department and when should it outsource the responsibility of sales?