

## AAU - Microeconomics (ECO 120/2) - Spring 2010

### Design a Contract!

1. Imagine you are the owner of a firm (principal) but you lack the expertise to run your company properly. Therefore you decide to hire an expert (agent).
2. Your task is to design a contract between you and the expert.
3. The expert can accept or reject your proposal. If the expert rejects the proposal, you both earn nothing.
4. If the expert accepts the contract and is therefore willing to run your company, he/she chooses his/her work effort. For simplicity, we assume that there are three work effort levels the expert can choose (Low, Medium, High).
5. The work effort determines the total return that is generated as a result of the expert's work effort. The higher the expert's work effort the higher the total return, but also the cost the expert has to bear.

Your contract offer to the expert consists of two elements:

1. A **fixed payment**, which can be
  - positive (i.e., the expert gets a salary)
  - or negative (i.e., the expert has to pay this amount to you).
2. The expert's **return share**, in multiples of 10%, which states the share of the total return that belongs to the expert (the rest automatically goes to you).

**Summary: For contract offers the following rules hold:**

$$-200 \leq \text{fixed payment} \leq 200 \text{ (only integers!)}$$

The experts return share: between 0% and 100%  
(0%, 10%, 20%, ..., 100%)

Work effort levels, total return from the experts work effort and the experts cost of the work effort:

Effort	Total Revenue	Agent's Cost of Effort
Low	140	20
Medium	240	40
High	280	70

*Contract design sheet for the principal*

I make the following contract proposal to the expert:

Fixed payment (between -200 and +200): .....
Expert's return share (in multiples of 10%, between 0% and 100%): .....

.....

*Effort decision sheet for the agent*

**Now you are an expert!**

You have just received a contract offer! You now have to make two decisions.

1. Your first decision is to decide whether you accept or reject this contract.
2. If you accept the contract, you have to choose your work effort.

1. Do you accept the offer? Yes/No: .....
2. If yes, choose the level of effort: .....