Incentives in Organizations
Eyal Winter, June 2011

1. List of Topics
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1. Moral Hazard Models in Organizations.
2. Incentives and Hierarchies in Organizations.
3. Optimal Incentives in Sequential Production.
4. Optimal Assignment of Agents and Tasks to Production Slots.
5. The Effect of Information about Peers on Incentives.
6. Repeated Interaction among Peers.
7. Incentive Reversal- When may Pay Raises have Counter Effects .
8. Less Monitoring May Generate Better Incentives.
9. Functional-Based vs. Process-Based Teams.
10. Incentive Mechanisms in Organizations vs. Public Good Mechanisms.
11. Empirical and Experimental Results on Incentives and Team Production.
12. The Role of Social Preferences and Emotions in the Design of Incentives

2. Course Description

The course will survey some of the recent theoretical literature on incentive schemes in organizations with special emphasis on the role peer effects in designing optimal incentives. The internal information about peer effort in the organization and its effect on agents' incentives and the principal's cost of providing these incentives will be central topics of the course. We will discuss the implications of the work area (i.e., private offices vs. open space or "war rooms").

We shall start with a short introduction to standard models of principal-multi-agent, and then move on to a moral hazard model of organizations in which agents' effort decisions are mapped into a probability of the project's success. We shall see that optimal incentive mechanisms may require that agents be rewarded differentially even when they are completely identical and induced to act the same. Within this context we shall discuss the role of hierarchies in organizations.

Our next step in the course will be to consider models in which agents are asymmetrically informed about each other's effort. We will start with a model in which agents move sequentially in performing their tasks (as in an assembly line) with each agent observing the effort of his predecessors. We shall see how agents' role in the production process affects the rewards they receive in the optimal mechanism. We shall use an extended version of the model to address the issue of the optimal allocation of agents and tasks to different production slots depending on agents' skills and the criticality of tasks to the success of the entire project. In interpreting these

results we shall reflect again on issues such as the role of leadership and of hierarchies in organizations.

From the model of sequential production we shall move on to a general multi-agent model in which the information structure among agents about peer effort is described by a directed graph in which an arrow from agent i to agent j represents a situation in which i sees the effort decision of j before making his own decision. This model will allow us to compare architectures of information structures and address several issues on the optimal design of the work area. In particular, we shall show why process-based teams (in which each agent resumes a different function in the production of the same product) are more effective than function-based teams (where all agents perform the same function).

We shall discuss other multi-agent models related to the above models including one in which agents are assumed to interact repeatedly in performing a joint project, and another model in which agents compete under a scheme that rewards them based on relative performance. Within the latter model we shall also demonstrate why excessive monitoring by the principal may be counterproductive even when monitoring is not costly.

In the empirical part of the course we shall discuss several empirical papers that bring evidence on the role of incentives in boosting workers performances. We shall also discuss the role of reciprocity in teams.

Finally, we will survey a number of experimental results on incentives and team production. We shall bring experimental evidence on incentive reversal and will study several papers that compare several incentive schemes in the lab.

3. Bibliography

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