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"Subjective Evaluation versus Public Information"

Abstract

We study a moral hazard problem with subjective performance evaluation in a one-shot interaction between one principal and one agent. The agent chooses an unobservable effort, which determines the probability that the project is a success. The principal receives some private and non-verifiable information about the project’s success. In addition, there is a noisy public performance signal. The agent is covered by limited liability. The optimal contract must give the agent incentives to exert effort, and the principal incentives to report his information truthfully. Some ex-post inefficiencies are necessary to induce truthful reporting by the principal: Giving a bad performance evaluation must be costly for the principal if the performance is in fact good; otherwise, the principal would be tempted to report bad performance to save on wage costs. The literature has studied two ways to solve this incentive problem: (i) ex-post inefficient project termination, as for example in up-or-out contracts (see, for example, Kahn and Hubermann 1988), and (ii) payments to third parties ("money burning") (see Mac Leod 2003). We allow for both project termination and money burning and show that project termination is a more cost effective way to give the principal incentives, even if the threat of project termination cannot be used to motivate the agent. Whether or not payments to third parties are used in addition depends on the fraction of output that is lost for the principal when the project is terminated. Interestingly, the payoff of the principal increases (weakly) in the fraction of output lost by project termination. The effort implemented in the optimal contract is not monotone, however, in the fraction of output lost due to project termination. Moreover, we study how to optimally combine the public signal with the subjective performance evaluation. When the principal reports before knowing the realization of the public signal, the wage paid to the agent can be structured such that it only depends on the principal’s report and not on the public information. In this case, the public information is used only to check the principal’s report. When the principal reports after getting to know the public information, the agent’s wage may need to depend on the public signal as well. Interestingly, the attainable profit of the principal is independent of when he reports his information. The principal has thus no incentive to acquire information about the project’s success early on. Finally, we discuss a slight extension of our model where the fraction of output lost due to project termination is increasing over time. Here the principal is strictly better off by delaying his report. When the timing of the report can be selected by the principal, he will report when the fraction of output lost due to project termination is high enough such that no payments to third parties are necessary to solve the incentive problems.

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