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Disclosure of status in an agency setting☆

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ABSTRACT

We develop a model in which the principal and the agent share private information about the value of the agent for a multi-agent organization. The principal can disclose private information and make public the relative standing or status of all agents in the organization. We study whether it is better in terms of profit and utility to disclose or to not disclose status to the group of agents. Conditions for the optimality of disclosure versus non-disclosure are characterized for the cases of exogenous and endogenous human capital.

1. Introduction

In most multi-agent organizations, the principal and an individual agent share private information regarding the value of that agent for the organization. Such information might arise in the course of day-to-day interaction between the principal and the agent or come from periodic performance reviews. The organization then has a choice in most situations to make the private information public, and thus disclose the relative standing or status of all members of the organization. In this paper, we study this novel organizational design question in the context of an endogenously optimal agency contract while building on recent theoretical and empirical works on status.

Our analysis is motivated by the observation that firms devote significant management attention to thinking about the nature of evaluative feedback given to workers, and specifically about whether to disclose rankings as part of the feedback process to improve organizational performance. The right disclosure policy is not clear a priori, as a higher than expected rank can incentivise one worker while at the same time a lower than expected rank can disincentivise another worker going forward. Indeed, McGregor (2006) discusses the struggles that many prominent companies have recently had in

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implementing evaluation systems that use rankings. She points out that as many as one third of U.S. corporations reveal rankings to their employees. However, companies such as Goldman Sachs Group Inc., General Electric Co., and Chemtura have had doubts concerning the use of rankings to motivate employees and have adjusted the implementation of such systems.

The benefits and costs to an agent of status revelation can in principle emanate from an organizational reward structure related to status and/or through status entering the agent's utility function directly. In a field experiment involving employees at Amazon's crowd-sourcing website, Mechanical Turk, Barankay (2010) carefully shuts down the former channel to test the direct utility channel and shows that on average relative performance feedback reduces future effort. In another field experiment involving salespeople at a furniture company, Barankay (2011) again finds that such feedback reduces performance. Similarly, Ashraf et al. (2014) find that disclosures that are carefully designed to induce social comparisons reduce effort, especially among low ability workers in a nationwide health worker training program in Zambia. In a laboratory setting where students can signal ability to others, McManus and Rao (2013) also find that social comparisons reduce effort. In contrast, Azmat and Iriberri (2010) study the effect of relative performance feedback on student effort and find that it improves performance. These field studies suggest that status directly affects utility, and the conflicting results on performance suggest that the effect of status revelation on organizational effort incentives and performance can depend on organization specific circumstances. Our theoretical analysis identifies such conditions.

As hypothesized in much of the literature in economics and psychology, we assume that status and wages are complements in the agent's utility. Given this assumption, we consider multiple identical agents in an organization where there is a hidden action agency problem for the principal with regard to each agent. The principal designs an optimal incentive contract for each agent and commits to a disclosure or a non-disclosure policy at the time of hiring the agents. Initially, we assume that each agent is endowed with a certain probability of having high human capital and study the effect of disclosing status to the group of agents after the agents' human capital levels are realized. We find that disclosure is optimal for the principal if the firm faces a sufficiently favorable production situation – one in which the typical agent exhibits a high sensitivity of cash flow production to effort and/or a low sensitivity of effort cost to effort. In such situations, status concerns play a positive motivational role and increase the principal's profit. Conversely, if the firm faces a sufficiently unfavorable production situation, then status concerns play a negative motivational role and non-disclosure is optimal for the principal. Interestingly, we find that agents always prefer disclosure to non-disclosure because more information about status allows them to better condition their effort choices. Thus, our model points to status concerns as a possible source of tension between agents and principals regarding the appropriate amount of organization-wide transparency in principal–agent relationships.

In the basic model, we also ask how changes in human capital affect the principal's profit. We find that under either disclosure rule, an increase in the typical agent's probability of having high human capital can have a strong negative motivational effect through toughened competition for status and decrease the principal's expected profit when there is rapidly rising or falling returns to status in utility. In all other cases, an increase in human capital increases expected profit as it normally does in standard models.

In a final section of the paper, we extend the model by allowing the agent to exert costly effort to increase the probability of having high human capital. If the firm faces a favorable production situation and there are increasing returns to status, then disclosure always results in greater human capital effort and expected profit as long as returns to status are not rising too rapidly. On the other hand, if the production situation is unfavorable and there are decreasing returns to status, then non-disclosure generates greater human capital effort and expected profit as long as returns to status are not falling too rapidly.

Our work is broadly related to a growing literature on social status. Departing from traditional preferences over absolute consumption, this literature considers social status as an additional argument in the utility function, which is similar to how psychologists and sociologists view preferences. Various experimental studies confirm the existence of preferences for status by inducing status in the lab. (See Heffetz and Frank (2011) for an excellent survey.)

Motivated by Maslow's (1943) hierarchy of needs, we use a preference specification featuring a positive interaction between status and wealth. Consistent with Maslow's theory that status and self-actualization motives are high-level psychological needs that come only after basic physiological necessities are met, the positive interaction between status and wealth implies that more wealthy agents care more about status. While advances from related fields continue to refine thinking in psychology in important ways, the broad outlines of Maslow's hierarchical approach to understanding human motivation remain central (Kenrick et al., 2010).

Our other modeling assumptions are intended to capture key features of status that consistently appear in empirical and experimental research. First and foremost, status is positional with respect to a desirable trait. We take human capital to be that desirable trait in an organization. Status is also non-tradable and only acquired through actions. In our model, we assume that agents can engage in costly effort to accumulate human capital and thereby acquire status. Lastly, status is based on social perceptions and visibility. This is our main motivation for focusing on disclosure policies.

Our paper is related to recent works on behavioral agency theory that consider non-material incentives such as status and respect in optimal contracts (Auriol and Renault, 2008; Ellingsen and Johannesson, 2008).[1] These works also explore

[1] Moldovanu et al. (2007) and Dubey and Geanakoplos (2010) consider agents concerned with status and formulate optimal status partitions in their respective problems.