Status and Discretionary Bonus Payments: Evidence from a Chinese Hospital

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Abstract

We examine how the status of department heads affects the degree of discretion they exert in allocating bonuses to themselves and to their subordinates. We argue that status disciplines the way department heads exercise discretion in bonus decisions. We expect high-status heads will exert less discretion in bonus decisions than low-status heads. We consider two (related) decisions: (1) the slice of the bonus pool department heads keep themselves and (2) the degree to which department heads differentiate the bonuses they allocate to their subordinates. Using a proprietary dataset from a Chinese hospital, we find evidence consistent with this expectation. We also find that the department's future performance is negatively associated with the discretionary bonus that department heads keeps themselves, but positively associated with the differentiation between subordinates' discretionary bonuses.

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1. Introduction

There are few compensation decisions that do not involve managerial discretion (Gibbs et al. 2004; Ederhof 2010; Ederhof et al. 2011). Prior research demonstrates that managers' incentives for private benefits affect the way they exert discretion in compensation decisions (Prendergast and Topel 1993; Prendergast and Topel 1996; Bol 2011). These private benefits include the value associated with social factors such as maintaining one's prestige, esteem, reputation, popularity, or acceptance. We focus on one social factor known to influence decision making within firms, namely, status, and examine its relation to discretionary bonus decisions. Status is defined as the "the prestige, respect and esteem that a party has in the eyes of others" (Blader and Chen 2012, p2); it depends on others' opinion and determines an individual's rank within the social hierarchy.

We have a particularly rich and somewhat unique setting in which to study the determinants of discretionary bonus decisions. Our research site is a large hospital that has multiple clinical departments with physicians as heads of departments and a group bonus system based on department performance. All clinical heads have formal authority but differ in their status both in relation to other clinical heads and also relative to other clinicians working in their departments. They have almost complete discretion to determine how the group bonus (i.e. the department bonus) is distributed within their department. What is unique is that department heads' discretion applies to their own bonus as well as those of their subordinates. We predict that it is the difference in status between the head of the clinical unit and other physicians in their department that influences the behavior of department heads when making discretionary bonus decisions.

Status is particularly salient in professionally-dominated organizations such as hospitals, law and accounting firms, and among academics working in universities. It has long been recognized by economists and others that status confers informal authority which is a significant determinant in explaining organization decision making (Magee and Galinsky 2008); it influences relations among 'coworkers, bosses and subordinates' and thus is likely to influence managers' compensation decisions. We highlight status as a crucial aspect of the

personal relations between subordinates and their managers and examine how status affects discretionary bonus[1] decisions.

We consider two types of bonus decisions: how much of the bonus pool the department head keeps for herself and how she differentiates among subordinates when allocating the remainder among her subordinates. We consider status as a disciplining mechanism that operates in the same way that public outrage constrains CEOs from seeking excessive compensation (Bebchuk et al. 2002). It works because, like CEOs who are concerned with maintaining their reputation, highly trained professionals are also deeply concerned with maintaining their status due to the private benefits it bestows. Status in our setting is a form of "internal" governance (Acharya et al. 2011); it is a social form of control that disciplines heads when making discretionary bonus decisions. We predict that high-status heads will not award themselves discretionary bonuses that cannot be justified nor will they want to risk the outrage associated with "unfairness" claims when differential bonuses are paid to subordinates. Conversely, if physicians working within a department have higher status relative to their head, the head gains limited utility from status. Thus, the possibility of losing status owing to outrage is less of a deterrent. Consequently, we expect that low-status heads will exercise their formal authority and award themselves higher discretionary bonuses and exercise greater discretion when differentiating subordinates' bonuses.[2]

We find that high-status heads exert less discretion than low-status heads both in allocating themselves a bonus and in allocating the bonuses to their subordinates. This finding is consistent with our hypothesis that maintaining status is a mechanism that disciplines heads' discretionary bonus decisions. We also explore whether there are performance implications as a result of discretionary bonus decisions. Given competing theoretical explanations, we do not predict a directional relationship between discretionary bonus decisions and performance. However, we find that when a head allocates herself a lower discretionary bonus, next year's performance improves. In contrast, performance deteriorates when less discretion is exercised in the differentiation of her subordinates' bonuses.

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[1] Managers could determine their own and their subordinates' bonuses either by choosing a bonus formula or by using complete unverifiable information (e.g., behavioral observations). We define discretionary bonuses as those which are not determined by the formula and cannot be verified by the third party.

[2] Each clinical department has one department head and they are physicians in our case. Other physicians and nurses within the department report to the head. We use the term subordinate to refer to the collective group of physicians and nurses reporting to the head. .

Our study contributes to the performance evaluation and compensation literature by providing empirical evidence on how the status of managers influences discretionary bonus decisions. Only a few empirical studies directly investigate determinants of discretion in bonus decisions (Gibbs et al. 2004; Rajan and Reichelstein 2006; Ederhof 2010; Bol 2011). We highlight the importance of the informal social hierarchy vis a vis the formal authority structure in explaining an important dimension of organization functioning. To the best of our knowledge, we are the first to study simultaneously a manager's discretion in bonus payments to different types of recipients (i.e., to herself and to her subordinates). We provide insights into how managers allocate bonuses to multiple recipients and into the subsequent consequences of these allocation decisions.

Our study relates indirectly to empirical research testing managerial power theory particularly the role of 'outrage' in constraining CEO behavior (Kuhnen and Niessen 2012; van Essen et al. 2012).We provide evidence that the disciplinary mechanism of "outrage" (and attendant status loss) for CEOs proposed in Bebchuk et al. (2002) applies to lower-level managers as well. While public outrage is not normally directed at lower-level managers, we document that the status of a department manager disciplines these lower-level managers' behaviors in a similar manner to the discipline that activist shareholders and the media exert on CEOs. Given that relative status depends on the views of 'others' department heads with high status will not want to risk harming their reputation and prestige as perceived by others. And finally, our study adds to relatively scarce evidence on compensation design in professional service organizations (Ittner et al. 2007; Pizzini 2010).

Section 2 reviews prior research on determinants and consequence of managers' discretion in compensation decision and develops the hypotheses. The research setting, variable measurement, and empirical design are presented in Section 3. Section 4 presents the empirical results. Section 5 concludes and discusses unresolved issues.

2. Hypothesis development

2.1 Discretion in compensation decisions

We define discretionary bonus decisions as those which are based on a manager's subjective assessment and judgment of subordinates' performance. They differ from non-discretionary bonus decisions in that the subordinate or a third party cannot *ex-ante* compute or *ex-post* verify the bonus claim. If bonuses were determined using a predetermined

formula[3] that was known *ex ante*, this would represent a non-discretionary bonus as these bonuses could be verified by subordinates (and also third parties) based on objective information and an understanding of the decision process.

Considerable attention has been devoted to managers' discretion in compensation decisions (Prendergast and Topel 1993; Prendergast and Topel 1996; Hayes and Schaefer 2000; Gibbs et al. 2004; Murphy and Oyer 2004; Ederhof et al. 2011). Most studies indicate that compensation decisions involve managers' subjective and hence non-contractible judgments about subordinates' performance (Murphy and Oyer 2004; Moers 2005; Bol 2011; Höppe and Moers 2011; Woods 2012). Whether discretion leads to positive or negative outcomes continues to be debated. Baker et al. (1994) argue that the use of subjective performance measures (i.e. those requiring discretion or judgment by managers) overcomes the imperfection of objective performance measures, including distortion, insensitivity and imprecision (Banker and Datar 1989; Baker 2000; Baker 2002). The *ex post* discretion used to determine the bonus provides a useful means of filtering out the uncontrollable events which cannot be foreseen *ex ante*. In other words, discretion in compensation reduces the riskiness of objective performance measures (Gibbs et al. 2004; Bol 2008; Höppe and Moers 2011).

Despite the perceived benefits of discretion in compensation decisions, others find that managers evaluate subordinates' performance inaccurately (Ittner et al. 2003; Moers 2005; Bol 2011). Several theoretical models point to the importance of agency conflicts[4] in subjective performance evaluation (Holmstrom 1981; Murphy and Cleveland 1991; Harris 1994). When managers have the authority to exercise discretion in decisions affecting themselves and others, they will do so to increase their private benefits (Prendergast and Topel 1993; Prendergast and Topel 1996; Bol 2008). Private benefits can include both monetary and psychological benefits. Economic theory would predict that managers maximize the present value of their monetary utility by making a trade-off between keeping bonuses to themselves and offering bonuses to subordinates. On the one hand, managers would like to appropriate as much as possible of the bonus pool for themselves. On the other hand they should provide bonuses to subordinates to the extent that such payments motivate

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[3] The formula might be based on the salary, seniority or performance.

[4] Although the principal does her best to design an optimal incentive contract to minimize potential conflict of interest between the principal and the agent, the agent's interest is arguably still not perfectly aligned with the principal's interest. An obvious example is that CEOs have incentives for rent extraction in their compensation negotiations. The personal private interest may also be psychological. For example, the manager may give a higher rating to the employee who has similar personality or similar connections with the manager (Du et al. 2012).

effort and thus increase the future bonus pool. Moreover, managers will also want to create adequate incentives for subordinates to exert effort and thus are likely to differentiate the subordinates' bonuses. Doing so also has the potential for the manager to derive non-monetary utility. Prendergast and Topel (1996) argue that managers derive utility from affecting subordinates' wealth. Intuitively, changing subordinates' wealth is a means by which the manager reinforces the importance of her role as "boss" and to demonstrate her formal authority over subordinates. Thus, a manager's non-monetary utility could increase by using their discretion to differentiate the size of the bonus paid to subordinates. Taken as a whole, these studies highlight that managers' private benefits play an important role when they can make bonus payments either for themselves or for their subordinates based on their own judgment.

2.2 Status as a disciplining mechanism

We expect that the value of status loss varies among managers. Status clearly differentiates an individual within a group (Overbeck et al. 2005) and is a private benefit valued by most people. Peers determine the status of individuals within a group based on signals such as objective achievements relating to awards or prizes, personal characteristics such as those associated with competence, race, age, education level, and standing in the profession. Status is transferred by others and as such is vulnerable to the opinion of others.

Most social scientists agree that individual behavior is motivated in large part by "social" factors, such as the desire for prestige, esteem, popularity, or acceptance. Based on prior literature, a key assumption in our argument is that individuals care directly about their status (Bernheim 1994; Auriol and Renault 2008; Ellingsen and Johannesson 2008). Merton (1968) terms this phenomenon the "Matthew effect". Generally, the Matthew effect refers to the fact that higher-status individuals obtain greater recognition and rewards for performing a given task and lower-status individuals receive correspondingly less. For example, Belliveau, O'Reilly and Wade (1996) find that being a high-status CEO and having a low-status Chair of the firm's compensation committee increases CEO pay. Groysberg, Polzer, and Elfenbein (2011), in their study of Wall Street equity analysts, also document the psychological utility and economic benefits of status.

We expect the desire to maintain status disciplines behavior.[5] Graffin, Wade, Porac and McNamee (2008) find a CEO's high status spills over to other executives, who benefit from the status leakage from the high-status CEO and who find better placement afterwards. In addition, high-status individuals suffer from the burden of celebrity – i.e., higher performance expectations or stricter ethical behavioral standards are imposed on them (Fombrun and Shanley 1990; Wade et al. 2006). Higher expectation *per se* might not only restrict the manager's latitude of actions (e.g., the degree of discretion) but also result in the high-status managers suffering negative consequences (e.g., status loss) to a much greater extent than low-status managers (Wade et al. 2006). Hence, high-status managers are more likely to be influenced by threats to their status than low-status managers.

Discretionary compensation decisions create a potential to influence the relation between managers and subordinates. By definition, discretionary bonus decisions cannot be verified or justified by objective performance information; they therefore give rise to disputes more readily than formula-based compensation decisions. Negative reactions from subordinates concerning compensation decisions pose a threat to managerial status in the same way that public outrage disciplines CEOs' rent seeking behavior (see van Essen et al. 2012 for a summary of the literature examining this phenomenon).[6] Managers who care about status will want to curb their discretion when making bonus decisions.

In our setting, we are able to observe two potential threats to status from discretionary bonus decisions. The first source is the negative reaction that occurs when the manager grants herself a bonus which is large relative to her subordinates' bonus, particularly when there is a fixed bonus pool. Any bonus kept by the manager reduces the bonus available to her subordinates. The second threat occurs when the manager exercises discretion in determining subordinates' bonuses. This occurs when managers differentiate the bonus given to subordinates based on non-verifiable information. Studies that consider the psychological costs of incentives point out that large bonus differentiation among subordinates produces the perception of unfairness owing to the interplay between two factors. The first is that

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[5] In this paper we distinguish between status and power although our notion of status is similar to Finkelstein's (1992) notion of 'expert power' (Larcker and Tayan 2012). While both status and power are sources of managers' influences over others (Blader and Chen 2012) they differ in their determinants. Power is often associated with an individual's hierarchical position and control over critical resources including their control over information. Status is based on how the individual is valued by other people.

[6] The outrage constraint argument is consistent with the firm's concern for its reputation (Baker et al. 1994). An incentive contract based on subjective performance measures (i.e., implicit contract) cannot be enforced by the court, so the agent is vulnerable to reneging by the firm. However, the firm's concern for its reputation constrains it from reneging on the implicit contract.

subordinates care not only about the absolute level of rewards but also about the relative rewards with their peers as this reflects social comparisons (Lazear 1989; Main et al. 1993; Larkin et al. 2012). These comparisons are based on subordinates' assessment of others' input (i.e., effort) to the remuneration of the outcome (i.e., performance pay) (Akerlof and Yellen 1990). A fair compensation equals the perceived value of effort. The psychological costs of differential bonuses are low if subordinates perceive that efforts and/or performance are observable and objectively measured. Matsumura and Shin (2006) document that unfairness is less likely to emerge if subordinates feel that there is a "fair" process for determining bonuses. However, when inputs, such as talents and efforts, are not observable and there are differences in their bonuses, claims of unfairness or bias emerge. People tend to assume that they have worked as long or as hard as their coworkers (i.e., they have equal level of input) and yet their bonus is lower (Larkin et al. 2012).

A second factor influencing claims of "unfairness" is that people tend to view themselves above the average in terms of ability or performance (Dunning et al. 2004). Larkin et al. (2012) describe this tendency as overconfidence. In particular, when inputs are unobservable and performance outcomes difficult to measure, the biased self-assessment (i.e., overconfidence) is likely to emerge. When the outcome of the bonus decision is based on the manager's personal judgment rather than on verifiable information, outrage among subordinates easily emerges as subordinates attribute the outcome to procedural unfairness, namely the manager's biases, instead of their own failings.

In sum, individuals have incentives to maintain and enhance status in order to enjoy the associated psychological and economic utility. However, they also bear the costs of status. Two status characteristics demonstrate that it is costly to obtain status (Bendersky and Hays 2012). First, status is structural and can involve many group members.[7] Second, status is a fixed social resource, i.e., gaining status means lowering another's rank in the hierarchy because status is a zero sum outcome. Meanwhile, status has long-term implications because patterns of deference established in current interactions tend to persist into the future. Therefore, the benefits of status persist over time once people obtain status. Individuals will value their status when the net present value of the benefits of status outweighs the cost of maintaining it. Whether an individual is willing to pay the price to maintain or enhance status depends on their current status position. High-status people have higher incentives to

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[7] Note that while we focus on relative status within a group, the determinants of status can come from external sources. We see this in academic settings; our colleagues' status can be influenced by where they publish; whether they are editors of prestigious journals, winners of prizes or awards, etc.

maintain or enhance status than low-status people. As Frank (1985) points out, subordinates are willing to accept lower monetary compensation in exchange for higher status suggesting that maintaining or enhancing status outweighs short term monetary benefits. We see evidence of this with executives of acquired firms where their decision to stay or leave depends not on their compensation but on their relative standing in the newly combined firm (Hambrick and Cannella 1993).

Based on prior research examining the importance of status in explaining individual behavior we expect that discretionary bonus decisions will depend on managerial status. Managerial status matters both for decisions relating to the size of the manager's bonus and the discretion she exercises when making bonus decisions for subordinates. We expect that high-status managers are willing to forego short term monetary benefits and any utility associated with exercising their positional power through making differential bonus decisions relating to their subordinates. The effect is stronger for the high-status managers than for low-status managers because high-status managers gain more utility from maintaining their status than low-status managers. In other words, they have more to lose. We expect that high-status managers use less discretion in making compensation decisions than those with relatively lower status. We summarize our first hypothesis as follows:

> **H1**: *Ceteris paribus, the manager's status is negatively associated with the degree of discretion exercised in bonus decisions.*

2.3 Consequence of discretionary compensation decisions

We now consider whether discretionary bonus decisions have performance consequences. For a fixed bonus pool, the size of the bonus that a manager keeps herself automatically reduces the size of the bonus available for subordinates. If the manager keeps a smaller discretionary bonus, we expect that the performance of the department increases. This occurs for two reasons. First, the incentives available for subordinates to exert effort increase overall. Second, subordinates observe that their manager is not using her discretion for her own private economic benefits; the reduced compensation gap between the managers and subordinates signals that the manager identifies more with the team, i.e., the subordinates, rather than with her hierarchical position. Both effects strengthen team identity and group cohesion and should lead to performance benefits. Thus, we expect to observe a negative relation between the size of the discretionary bonus that the manager keeps herself and future performance.

__H2__: Ceteris paribus, the size of the manager's discretionary bonus is negatively correlated with the future performance.

Our prediction for the performance effects of the bonus decisions made by the manager for subordinates within the department is less clear-cut. On the one hand, subordinates, on average, are less likely to view an equal discretionary bonus distribution as unfair or biased as undifferentiated bonuses are consistent with individuals' preference for equality. This has two positive effects on performance. First, low differentiation within a group creates group cohesion and encourages mutual help and information sharing which in turn yield higher performance (Lazear 1989; Main et al. 1993). Second, low differentiation reduces the marginal return to influence activities and hence suppresses subordinates' incentives to engage in misdirected effort, such as lobbying the boss for more money (Milgrom and Roberts 1988; Du et al. 2012). Subordinates are less likely to manipulate information which facilitates decision making. Hence, in terms of information accuracy and effort allocation, we expect low differentiation among subordinates will improve group performance.

On the other hand, if managers do not differentiate between subordinates when allocating bonuses, free-riding becomes more likely as subordinates respond with less effort and lower performance. Better performers feel their pay does not reflect effort and thus consider the bonus unfair. This is costly, as they reduce their effort level to restore fairness (Hart and Moore 2008). Several studies indicate that unfairness leads to worse performance (Mas 2006; Mas 2008). Performance declines when bonuses are compressed as poor performers have little reason to improve and high performers leave the firm or reduce effort both of which impose additional costs to the firm.

The relation between incentives and performance is further complicated in a context where bonuses are discretionary and based on subjective information. The manager's (potential) personal biases in the compensation decision add noise to the performance evaluation process, so agents require stronger incentives to compensate them for bearing more risk (Prendergast and Topel 1993). Low differentiation in determining bonus among subordinates will not work in this setting as it further weakens the effect of incentives and, in turn, negatively influences group performance. In sum, as prior research points out two opposing effects of discretion on performance we do not make a directional prediction.

3. Research Design

In this section, we first describe the research site including the design of the incentive plan. Next we describe the sample and specify the data used to test our hypotheses. We then explain how we measure the variables of interest. We also present descriptive statistics.

3.1 Research site

We require a research setting with two features: (1) status is a salient aspect of interpersonal relations and (2) the manager has complete discretion to make performance evaluation and compensation decisions. Our research site is a large general hospital in China, with 35 clinical departments. Our research site is on the highest rank of the classification of Chinese hospitals[8] ; it is the only general hospital within that rural area. Each clinical department has a physician as a department head. There are three types of clinical departments: medical, surgical, and medical support.[9] The revenues for the hospital over the investigation period (i.e., 2007-2010) have grown by 1.86 times.[10] Revenues come from both outpatient (40%) and inpatient services (60%). The hospital has a profit center reporting structure in which all patient revenues are allocated to the departments as earned and all direct costs incurred where expended.

The management of clinical departments requires expert clinical knowledge and a management structure that relies on an informal hierarchy based on expertise rather than on a formal hierarchical structure. Status matters in this setting. Status matters in this setting. Moreover, what is specific to this hospital is that physicians do not have better outside opportunities in the neighborhood, and firing employees is also difficult. Such a long-term working relationship makes social factor (i.e., Status) more salient in our research site. Heads of clinical departments all have the same hierarchical authority but may differ in their status in a ranked social hierarchy.[11] Heads of clinical departments are also not the only ones with high status; it is entirely possible that other physicians working within the department have

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[8] There are 9 levels in the classification system of Chinese hospitals. There are 3 tiers and each tier has subsidiary 3 levels. The classification is based on a hospital's ability to provide medical care, such as level of service provision, size, medical technology, and medical equipment.

[9] Medicine departments include Pediatrics, Nephrology, Neurology and Gastroenterology. Surgery departments include Obstetrics and Gynecology, Urology, Orthopedics, Stomatology, and Neurosurgery. Medical support departments include Radiology, Ultrasonography, and Pathology.

[10] This revenue growth may be due to the reform of the rural cooperative medical system (RCMS). Under RCMS, the government reimburses the medical spending of listed major medical treatment for rural habitants.

[11] Status is also of value for the hospital as it is instrumental in attracting patients and thus revenue to the hospital. Patients are unable to objectively evaluate service quality and thus are attracted to hospitals with high-status physicians.

equal or greater status than the head. We expect that the status of clinical heads relative to the status of those working within the clinical department will vary across departments in our sample.

We focus only on the clinical staff which includes both physicians and nurses. Physicians and nurses in the clinical departments receive a fixed salary as well as a bonus determined on a monthly basis. The hospital has a group bonus system in which the monthly department bonus pool is determined by the monthly department profit. There is no explicit formula for allocating individual bonuses within the departments. The hospital does not set any individual-level performance indicators either for physicians or for nurses. The general guideline is that department heads should reward each individual subordinate according to his/her contribution to the department. However, the hospital does not document any individual performance data (e.g., revenue generated, number of patients treated, quality of treatment, etc). Thus, when a department head allocates the bonus pool to subordinates, there is no objective verifiable data available. Nonetheless, there is one clear rule which caps the department head's bonus: the head's maximum bonus cannot be more than 3.5 times the average bonus of all subordinates within the department. Other than this restriction the allocation of the bonuses within the department is completely at the discretion of the department head. The department head has to make two decisions: (1) the fraction of the bonus pool the department head keeps for herself and (2) how much to differentiate the bonuses among subordinates in the department. [12] We study the role of status in both decisions.

3.2 Data

The hospital provided us with proprietary archival data. Data are available with respect to (1) monthly departmental performance, such as revenue, profit and cost; (2) monthly salary and bonus data at the individual level; and (3) personnel data, including age, tenure, and gender. [13] Data are available from 2007 to 2010. Our data cover those formally employed by the hospital, including physicians and nurses. We have data for each nurse, physician, and head on a monthly basis grouped by department. For each month, the number of observations ranges from 480 to 496. The average department size in terms of the number of individuals

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[12] There is nothing that restricts the sharing of compensation information within the hospital although the information is not publically available. As in most organizations, people care about their relative compensation and thus are incentivized to seek for compensation information of others through informal communication channels. We expect this to be the case in our setting.

[13] Out of 35 department managers, only 4 are female.

which includes heads and subordinates is 15. The ratio of variable bonus to fixed pay at the department level is 2.5 (see Table 1), suggesting that bonuses are an economically meaningful part of total compensation.[14] The department head's average salary is about twice the average salary of a subordinate (see Table 5). There are 230 unique physicians and 290 unique nurses in our sample. In addition to the proprietary archival data, we also collect information from the hospital's website on the physicians' personal details including prizes and their memberships in medical professional associations. The hospital also identifies "star" physicians on the website.

3.3 Variable measurement
Discretionary bonus decisions

It is important to capture the discretionary component of a bonus as it is this component that can create adverse reaction from subordinates. We use the *discretionary* bonus to capture a head's degree of discretion in bonus decisions. Specifically, we measure the degree of discretion that a head exercises in two bonus decisions as (1) the size of discretionary bonus of the manager (*Head_Dis*) and (2) the standard deviation of discretionary bonus of subordinates (*Sub_Dis*).

Firm policy states that bonuses should be based on each individual's "contribution" to the department. To separate discretionary from non-discretionary bonuses, our empirical strategy is to find the objective referent distribution which might resemble a "contribution" distribution. Deviations from the referent distribution increase the difficulties for the department head to justify the compensation decision and are more likely to give rise to outrage. Hence, we measure discretion as the deviation from the referent distribution. Fixed salary generally represents the average of each individual's productivity determined by experience or expertise and thus reflects their relative potential contribution to the department's performance.[15] We propose that the distribution of fixed salary within the department is a reasonable approximation for a would-be non-discretionary bonus distribution. For example, the department head usually receives a higher salary than the subordinates. Accordingly, subordinates might expect the department head to receive a bonus relative to their higher salary; such an allocation is unlikely to lead to frictions with the subordinates. A valid referent distribution should reflect the individuals' relative average

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[14] The strong incentive is also consistent with the evidence in Cooke (2004).
[15] Indeed, our untabulated result shows that physician's salary is positively associated with tenure and education level.

productivity within a department.[16] Given the fact that there is no objective individual performance information available in the research site, we use "salary slice" (i.e., a proxy for each individual's relative contribution to the department) as the appropriate benchmark to determine the size of the discretionary bonus for both the head of the department and the subordinates within the department. We take the salary slice[17] within the department as the benchmark and take the difference between the bonus slice *(Paid_Bonus_Slice)* and the salary slice *(Salary_Slice)* as the head's discretion for each individual. We define discretionary slice, paid bonus slice and salary slice in the following expressions.

$$Paid\_Bonus\_Slice_{ijt} = \frac{Paid\_Bonus_{ijt}}{\sum_{i=1}^{i=n} Paid\_Bonus_{ijt}} \qquad (1)$$

$$Salary\_Slice_{ijt} = \frac{Salary_{ijt}}{\sum_{i=1}^{i=n} Salary_{ijt}} \qquad (2)$$

$$Discretionary\_Slice_{ijt} = Paid\_Bonus\_Slice_{ijt} - Salary\_Slice_{ijt} \qquad (3)$$

Where subscript i represents each individual, j the department, and t the year-month, respectively.

Turning to the measurement of the degree of discretion the head exercises in determining both her own bonus and her subordinates' bonuses, we construct the head's discretionary bonus *(Head_Dis)* as the difference between actual bonus slice and salary slice. With respect to the discretion in subordinates' bonuses, we are interested in the extent to which the department head differentiates between subordinates when making subordinate bonus decisions. We measure the department head's discretion in subordinates' bonuses as the dispersion of the subordinates' discretionary slices. Specifically, we compute the standard deviation of the subordinates' discretionary slices within a specific department and use this measure as the proxy for the department manager's degree of discretion in the subordinates' bonus allocation decision *(Sub_Dis)*. We assume that each department head uses the salary slice as the "referent distribution", and recognize that this may not be the case in practice. However, since we are interested in variations in discretion across department heads, holding

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[16] Allocating the bonus equally to each individual within in a department is not a good referent distribution because it does not capture each individual's relative contribution. The fixed salary component is a reasonable proxy for this.

[17] The salary slice is smaller than the maximum bonus slice restricted by the hospital's compensation policy. Since the salary slice is not above the enforced cap, the deviation from the salary slice is still at the manager's discretion. Salary slice is qualified to be used to determine the referent distribution.

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our computation of discretionary bonus constant across departments helps to capture the variation in discretion. A simple illustration in Appendix A demonstrates how the department heads' compensation choices are reflected in our measures.

Explanatory variable: Status

Department heads are the unit of analysis. They all have the same authority to make department bonus pool decisions; what varies between department heads is status. We compute the status of the head and of her subordinates. This distinction in status between the manager and her subordinates is important as a social hierarchy is characterized by a rank ordering of individuals by the amount of respect accorded by others.[18] The head's status is derived from the subordinate's subjective interpretation of the head's accomplishments or characteristics (Magee and Galinsky 2008), so status is difficult to measure objectively. We proxy for head's relative status by measuring the distance between the head's and the subordinates' credentials using observable status markers. We have data on a number of objective credentials, which are verifiable indicators of respect, competence and expertise; all are important determinants of status. These proxies are not perfect in the sense that they do not consider the subordinates' subjective interpretation of those objective credentials. Therefore, these observable status markers are reasonable proxies to capture the heads' status relative to subordinates'.

We use age, tenure, education level, and the ranking of the graduate school in which the individual completed his degree as indicators of status (Bunderson 2003).[19] People respect individuals who are senior in terms of age or tenure.[20] Age and tenure reflect experience; similarly, education level and the ranking of the graduate school capture competence or expertise in an individual's professional domain. We also use the number of prizes won, the number of memberships in professional associations, and whether a given individual is identified as a star physician on the hospital's website. Together, we have seven indicators of status, which are listed in Appendix B. We construct our empirical measure of

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[18] Our definition of status resembles the "interpersonal authority" concept in Van den Steen (2010).

[19] Connection with the Chinese Communist Party may bring the heads valuable resources, but a party membership does not necessarily imply status. Moreover, 82% of the department heads in our research site are members of Chinese Communist Party and each department head at least has more than two subordinates who also have a party membership. Therefore, the variation in the heads' status is not large in terms of a party membership. We also perform a robustness check by including a party membership as a status indicator. This party membership factor does not significantly affect the department heads' discretion in both types of bonus decisions.

[20] There is Chinese saying that the amount of salt eaten by the old is much more than the rice eaten by the young, which suggests that young people should listen to older people because the latter have accumulated valuable experience.

"Status" as follows. First, we perform a principal component analysis (promax rotation) on the seven indicators using the physician sample[21], which includes both heads and subordinate physicians. The seven indicators load on three factors, labeled *Prestige*, *Experience,* and *Education* (see Table 3, Panel C). The rotated factor pattern (see Table 3, Panel C) is consistent with the correlation among the seven status indicators (see Table 3, Panel A); *Membership*, *Prize* and *Star* are highly correlated and load on the factor we label "*Prestige*"; *Tenure* and *Age* load on the factor we label "*Experience*"; *Edu_level* and *Edu_ranking* load on the factor we label "*Education*". The three factors explain more than 80% of the variation in the seven indicators (see Table 3, Panel B)

Next, we compute the factor score on each factor for each physician, based on the weighting in Table 3, Panel D. Hence, each physician in the sample has three factor scores, namely for (1) prestige, (2) experience, and (3) education. After computing the factor scores for each physician, we use two different methods to create the head's status measure: (1) the relative status (*Status_Gap*) on each factor and (2) the aggregate status for heads and subordinates. Figure 1 in Appendix C schematically illustrates the way in which we construct *Status* by using the head's and subordinates' status scores.

We use "*Status_Gap*" to describe the head's status relative to the subordinate physicians', i.e., the "relative" status. *Status_Gap* is the difference between the head's and the subordinate physicians' status scores. The head's aggregate status (*Head_Status*) is the sum of her raw status score across three factors, *Head_Prestige*, *Head_Experience*, and *Head_Education*. Similar to the head's aggregate status, the physicians' aggregate status (*Sub_Status*) is the sum of *Sub_Prestige*, *Sub_Experience*, and *Sub_Education*. Each head ultimately has six scores to construct her status, *Head_Prestige*, *Head_Experience*, *Head_Education*, *Sub_Prestige*, *Sub_Experience*, and *Sub_Education*. Given that the head's relative status can be described as *vis-à-vis* any number of subordinate physicians, we take the maximum score on each factor among *subordinates physicians* for each department as the subordinates' status score. Alternative ways of measuring subordinates' status are discussed in Section 5.

3.4 Descriptive Statistics

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[21] In constructing the *Status* measure, we only include subordinate physicians. Presumably department heads who are all physicians care about their status among physicians. Nurses typically do not create a threat to physicians' status. Thus, we argue that disciplining mechanism of managerial status mainly come from other physicians working in the department.

Table 4 shows the descriptive statistics of the status measures. It is worth noting that most of the seven indicators are fixed over time,[22] but differ between department heads. We exploit between head variations in status rather than within head variations. The department head's score on the *Prestige* factor (1.51), is on average higher than the subordinates' (-0.08). However, this is not the case for the *Experience* and *Education* factors. Evidently, the key difference in status between department heads and subordinates derives from prestige.

Table 5 presents the descriptive statistics of the bonus allocation. The department head's bonus slice has a reasonable range. The hospital's policy prescribes the bonus cap, which determines the maximum bonus slice. Table 5, Panel A shows that the average fraction of bonus pool that department heads are entitled to receive (*Max_Head_Slice*) is 26%, the average fraction that the department heads actually keep to themselves (*Paid_Bonus_Slice*) is 21%, and the fraction that the department heads retain if they allocate the bonus pool equally to each individual within the department (*Equal_Slice*) is 11%. In other words, the department heads, on average, do not award themselves the maximum amount. Moreover, they do not allocate the bonus pool equally between themselves and their subordinates, taking a larger stake than equal sharing predicted based on the difference in salary between the head and the subordinates. The fact that the department head's actual bonus slice (*Paid_Bonus_Slice*) is on average below the maximum slice (*Max_Head_Slice*) is consistent with the notion that a disciplining mechanism indeed works to constrain department head's discretion when awarding herself a bonus. Table 6 presents the Pearson correlations among variables. There is a negative and significant relation between department head's status (*Head_Status*) and her discretion in two types of bonus decision (*Head_Dis*, r=-0.41, *p*<0.01; *Sub_Dis*, r=-0.27, *p*<0.01). This finding is consistent with our hypothesis that status disciplines the head's discretionary bonus decisions.

4. Empirical model and results

We describe empirical models and findings for hypothesis H1 in Section 4.1 before turning to performance implications of discretionary bonus decision described in hypothesis H2 in Section 4.2

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[22] Although each individual's tenure and age vary over time, they do not create variations in status score across time. Also personnel turnover rate is low in this hospital, so the relative status of department heads is almost constant across time within the department.

4.1 Status and discretion in bonus payment

We test whether the difference in status between heads explains their decisions of how much bonuses they kept for themselves and the extent to which they differentiate between subordinates' bonuses. We use the discretion in bonus decisions as the dependent variable and status as the variable of interest. We have two models with different dependent variables. First, we use the head's discretionary slice (i.e., *Head_Dis*). Second, we use the standard deviation of subordinates' discretionary slice (i.e., *Sub_Dis*). We specify our empirical model for H1 as follows:

$$Discretion_{jt}=\alpha_0 + \alpha_1\ Status_{ijt}+ \alpha_2 Dep\_Profit_{jt}+ \alpha_3 N\_physician_{jt}+ \alpha_4\ N\_nurse_{jt}$$
$$+ \alpha_5\ Dep\_Medicine_j+ \alpha_6\ Dep\_Surgery_j + \varepsilon_{jt} \qquad (4)$$

Where subscript *i* represents each department head, *j* the department, and *t* the year-month, respectively, and *Discretion_{jt}* is *Head_Dis_{jt}* or *Sub_Dis_{jt}*. Model (4) is estimated at the department level by pooled OLS regression with robust standard errors clustered by department.

We add as controls measures of department performance, department size, and other department characteristics as these variables might affect the discretion in bonus decision systematically. We include department profit (*Dep_Profit*), which determines the bonus pool. We add the number of physicians (*N_physician*) and the number of nurses (*N_nurse*) as measures of size. Finally, we use two proxy variables, *Dep_Medicine* and *Dep_Surgery*, to capture any task, clinical or risk differences that have the potential to influence discretionary bonus decisions.

Based on hypothesis H1, we expect a negative relationship between *Discretion* and *Status_Gap*. While we did not hypothesize the effect of the head's and subordinates' aggregate status on the head's discretionary bonus slice separately, it is straightforward to predict that the head's (the subordinate's) aggregate status is negatively (positive) correlated the head's discretionary bonus slice given that the head's relative status is the difference between the head's and the subordinate's absolute status.

We have three specifications in terms of different Status constructs. First, we include the heads' relative status scores on three factors, namely *Status_Gap_Prestige*, *Status_Gap_Experience,* and *Status_Gap_Education*. Second, we include the heads' and subordinates' aggregate status scores (e.g., *Head_Status*, and *Sub_Status*). Third, we include the heads' and subordinate's raw status scores on three factors. In this specification, there are

six variables, i.e., *Head_Status_Prestige*, *Head_Status_Experience*, *Head_Status_Education*, *Sub_Status_Prestige*, *Sub_Status_Experience*, and *Sub_Status_Education*.

Our findings of all three specifications are presented in Tables 7. The results are generally consistent with our first hypothesis. With respect to the discretion in determining the head's bonus, we hypothesize that *Status_Gap* is negatively associated with *Head_Dis*. In column (1) of Table 7 Panel A, the coefficients for *Status_Gap_Prestige*, *Status_Gap_Experience*, and *Status_Gap_Education* are statistically significantly negative (-0.0102, $p<0.01$; -0.0241, $p<0.01$; -0.0135, $p<0.05$, respectively). Heads with high *Status_Gap* have lower discretionary bonus slices than heads with low *Status_Gap*. The results in Column (2) of Table 7 Panel A show that while the head's aggregate status (*Head_Status*) reduces *Head_Dis* (-0.0112, $p<0.01$), the subordinate's aggregate status (*Sub_Status*) increases *Head_Dis* (0.0112, $p<0.01$). The results in Column (3) of Table 7 Panel A show that the coefficients for *Head_Prestige*, *Head_Experience*, and *Head_Education* are all statistically significantly negative (-0.0099, $p<0.01$; -0.0286, $p<0.01$; -0.0131, $p<0.1$, respectively) and that the coefficients for *Sub_Experience* and *Sub_Education* are statistically significantly positive (0.0212, $p<0.05$; 0.0127, $p<0.1$).

Overall, the negative relationship between *Status_Gap* and *Head_Dis* is consistent with our hypothesis. Our interpretation based on column (2) and column (3) is that heads with high status do not want to run the risk of losing their status, and hence they retain a smaller discretionary bonus slice than low status heads. Our results also indicate that when faced with high status subordinates, heads choose to retain a larger discretionary bonus slice than when confronted by low status subordinates. The latter finding confirms that the subordinates' status matters in disciplining the head's discretion in deciding on her own bonus. Given that a head has high absolute status, an increase in subordinates' status reduces the head's *Status_Gap*, and limits her utility from status. As a result, the head retains a larger discretionary bonus slice.

With respect to the discretion in differentiating between subordinates, we hypothesize that heads' relative status reduces the degree of discretionary differentiation in subordinates' bonus. The results are reported in Table 7 Panel B (Column 1) and demonstrate that heads with higher relative status, as measured by prestige (*Status_Gap_Prestige*) and education (*Status_Gap_Education*), differentiate between subordinates to a lesser extent in bonus allocation decision than those who have low relative status (-0.0014, $p<0.05$; -0.0043, $p<0.01$, respectively). However, the relative status on experience (*Status_Gap_Experience*) does not

significantly affect the head's discretion in subordinates' bonus allocation. Moreover, column (2) in Table 7 Panel B indicates that the head with high aggregate status (*Head_Status*) differentiates between subordinates to a lesser extent than the head with low aggregate status (-0.0019, *p*<0.01). However, unlike our findings for the head's discretionary bonus the subordinate's aggregate absolute status (*Sub_Status*) does not affect the heads' discretion in differentiating between subordinates' bonuses.

In Column (3) of Table 7 Panel B, the coefficients for *Sub_Prestige*, *Sub_Experience*, and *Sub_Education*, are all statistically insignificant, and only the coefficient for *Head_Education* is significantly negative (-0.0075, *p*<0.01). Our results in column (2) and (3) suggest that only the heads' status affects the discretion they exert in differentiating between subordinates' bonuses, but the subordinates' status does not. Furthermore, the finding that the low (either relative or aggregate) status heads differentiate among subordinates to a larger extent provides additional support for the idea that heads gain utility from the exercise of positional authority over subordinates (Prendergast and Topel 1996). Our finding suggests that low-status heads are less vulnerable to outrage and demonstrate their positional authority more through differentiation of subordinates' bonuses.

As a whole, the findings support our prediction that the head's "relative" status disciplines her discretion in rewarding herself and in differentiating between subordinates' bonuses. Head's absolute status matters in both bonus decisions, but the subordinate's absolute status only influence the head's discretion in rewarding herself but not in differentiating bonuses among subordinates.

4.2 Performance effect of discretion in bonus payment

We are also interested in the performance effects of discretionary bonus decisions. Since status has the potential to discipline managerial behavior when making bonus decisions, we assess the performance implications of discretionary bonuses. We use the change in performance (i.e., ΔPerformance) as the dependent variable, which is measured as percentage change in department revenue.[23] We use revenue as our measure of performance as unlike profits, it is not subject to arbitrary cost allocations. Department costs are both fixed and variable and include costs that do not relate to the service level, such as denied insurance claims. We use model (5) to test the performance consequences of discretion.

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[23] Hospitals are not only concerned with financial performance, but also concerned with quality of treatment and operating efficiency. However, given the data limitation, we only examine financial performance implications.

$$\Delta Performance_{jt} = \gamma_0 + \gamma_1 Head\_Dis_{jt} + \gamma_2 Sub\_Dis_{jt} + \gamma_3 Status_{ijt} + \gamma_4 \Delta N\_physician_{jt}$$
$$+ \gamma_5 \Delta N\_nurse_{jt} + \gamma_6 Dep\_Medicine_j + \gamma_7 Dep\_Surgery_j + \varepsilon_{jt} \qquad (5)$$

Where subscript i represents each department head, j the department, and t the year-month, respectively. Model (5) is estimated at the department level by pooled OLS regression with robust stand errors clustered by department.

The control variables are similar to those in model (4). However, we include the change in the department size. The increased number of subordinates enables the treatment of more patients, ceteris paribus, and thus imply more revenue. We do not want out estimation of the performance consequence of discretion confounded with the effect of status on performance. Thus we add the department head's status in model (5).

We only predict a negative association between the head's discretionary bonus slice and performance improvement (i.e., $\gamma_1 < 0$). The empirical result in Table 8 is consistent with our prediction. When the head allocates herself a larger discretionary bonus, department performance deteriorates. However, we find a positive association between the discretion in differentiating subordinates' bonuses and performance improvement (i.e., $\gamma_2 > 0$). We were unable to predict, a priori, whether the costs associated with differentiation in subordinates' bonuses would outweigh the benefits; the evidence suggests that the incentive effect of discretionary differentiation in subordinates' bonus outweighs the costs.

5. Additional Analysis and Robustness Checks
5.1 Disciplining mechanism may differ across changes in department bonus pool.

Our primary analysis examines whether status disciplines department heads' discretion in two types of bonus decisions. We examine further whether the disciplining mechanism of status varies depending on whether the department pool increases or decreases. The intuition is that when the department bonus pool increases, each individual's bonus on average increases and such bonus increase could decrease the likelihood of threats to the head's status. Therefore, we anticipate that the disciplining mechanism of status would be less strong when department bonus pools increase than when department bonus pools decrease.

In model (4), we include one additional indicator variable (i.e., *Up_BP*) which indicates whether the department bonus pool increases or decreases, and an interaction term between this indicator variable and the measure of Status. The findings are presented in Table

9. The results of the main effects of *Status_Gap_Prestige*, *Status_Gap_Experience*, and *Status_Gap_Education* on *Head_Dis* and *Sub_Dis* are qualitatively the same as those in our primary analysis (in Table 7 Panel A and B), and support our hypothesis that department heads' status disciplines their discretion in two types of bonus decisions. Since we include three interaction terms in our regression, the proper way for testing these interaction terms is an *F-test* to see whether including these interactions explains the variations in *Head_Dis* or *Sub_Dis* more. The results reported in Table 9 show that these interaction terms cannot explain the variation in *Head_Dis* more ($F=0.52$, $p>0.1$) but explain *Sub_Dis* more ($F=3.54$, $p<0.1$). This finding suggests that the decreasing bonus pool mitigates the disciplining mechanism of status when heads award bonuses to subordinates; however, it is not the case when they retain bonuses for themselves.

5.2 Alternative measures of subordinates' status

Since there is more than one subordinate in each department, we use three alternative ways of constructing the subordinate's status: (1) we identify the physician who has the highest score on Prestige factor and compute the subordinate's status score of this "protagonist" among the subordinates; (2) we identify the physician who has the highest aggregate status, the sum of the raw scores across the three factors, and compute the related subordinate's status score based on this identified physician's factor scores, and (3) we compute the average score on each dimension of all *subordinate physicians* for each department .[24] We present the results with different alternative measures of subordinate's status in Table 10. The statistical significance of our testing varies across different alternative measures; the empirical results are consistent with the primary analysis documented in Table 7 and Table 8.

6. Conclusions

The primary purpose of this study is to examine whether the status of a manager influences their discretionary bonus decisions. Data from a large hospital in China allows us to study this relation. The hospital grants decision rights to clinical managers of departments to allocate bonuses both to themselves and to their subordinates. Status is particularly salient in professionally dominated organizations such as hospitals and is thus likely to be an

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[24] Although the three dimensions capture different aspects of status, arguably it is possible to construct a uni-dimensional score used to rank the status (Podolny 1993). The empirical challenge in constructing status measure is the unknown weight on different dimensions. We assume that each dimension weighs equally and thus sum the factor score across dimensions.

important determinant of bonus decisions. In our setting where status is highly valued, we find that high-status managers exert less discretion in bonus decision than low-status managers. In essence, the possibility of status loss disciplines the manager's behavior, particularly those who value status most but doesn't always lead to more efficient bonus decisions in terms of performance improvement. The potential importance of mitigating discretion is illustrated by effects on subsequent performance. There are positive effects on performance when managers exercise less discretion in determining their own bonus, i.e. they take a smaller bonus slice but performance deteriorates when managers exercise less discretion when differentiating subordinates' bonuses. It would appear that high status managers who are less likely to use discretion can therefore both harm or benefit the firm.

Our study contributes to prior research on performance evaluation and compensation design particularly those studies concerned with subjectivity. Our findings demonstrate that a non-monetary incentive, namely, status explains in part discretionary bonus decisions. We provide evidence consistent with the idea that the "outrage constraint" as described by Bebchuk et al. (2002) applies to lower level managers as well. Our study also supports recent findings of Kuhnen and Niessen (2012) that maintaining status matters in compensation design. Status is derived from one's position within their social hierarchy, and as such managers' behaviors are constrained by the reactions of their subordinates to the decisions they make.

Our study also speaks to prior research on hospitals, particularly studies concerned with the adverse consequences when physicians dominate decision making (Ramanujam and Rousseau 2006). We limit our study to the impact of discretionary bonus decisions on the financial performance of the department; others have demonstrated that high status physicians can have a beneficial effect on other professionals in the clinical unit as well as on the quality of the work performed (Nembhard and Edmondson 2006; Ramanujam and Rousseau 2006). Our results potentially create a conundrum for hospital management – they must weight up the costs and benefits of granting decision rights for compensation decisions to clinical managers with varying degree of status. Is it better to have clinical units with leadership provided by high status physicians whose behavior is primarily disciplined by threats to their status? Or by physicians who have become bureaucratized as part of the management process and whose behavior is disciplined by financial incentives. There is strong support in the management and health care literatures that the overall wealth effects would suggest the former – bureaucratization of professionals does not lead to quality

outcomes which in the long run have serious economic consequences (Ramanujam and Rousseau 2006)

Our study is potentially subject to several limitations that create opportunities for future research. We only use data from one large hospital in China. Our "status" measure is based on objective measures that attempt to capture reputation and/or academic standing. Given that status is determined by one's peers a more direct measure would require obtaining perceptions of the manager's status as rated by subordinates. We only measure financial performance outcomes. Data restrictions did not enable us to measure quality outcomes at the department level although future research could incorporate both efficiency and effectiveness outcomes. Despite these potential limitations, this is the first study that examines how status constrains discretionary bonuses decisions.

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Appendix A: Illustrations of discretionary bonus payment

Assume there is a department of five individuals, including one department head and four subordinates. We compute *Salary_Slice* (column 1), *Paid_Bonus_Slice* (column 2) and *Discretionary_Slice* (column 3) as well as the measures of the degree of discretion (column 4). In case 1, the head allocates the bonus completely based on the salary distribution within the department. Hence, the bonus allocation in case 1 does not involve any discretionary bonus decision. According to our definition, if subordinates question the bonus allocation decision, the head could justify herself with the objective salary distribution. Therefore, case 1 represent the setting in which the department head does not exert discretion in distributing the bonus to herself or across the subordinates.

In case 2, the department head receives more bonus than her salary predicts. The discretion (*Discretionary_Slice*) in the head's bonus equals 10% (i.e., the difference between *Paid_Bonus_Slice*, 40%, and *Salary_Slice*, 30%) and the discretion in the subordinates' bonuses equals 0.06[25], which is the standard deviation of *Discretionary_Slice* of the four subordinates. In this case, the department head exerts discretion both in rewarding herself and the subordinates.

In case 3, the head exerts discretion in rewarding herself, but no discretion in rewarding subordinates. We use this case to illustrate that while there may be a positive *Discretionary_Slice* for each subordinates, our measure of discretion in subordinates' bonus is zero because *Discretionary_Slice* is equal across subordinates. The relative position of each subordinate's bonus is still the same as that in the salary distribution, so we do not expect an adverse reaction from subordinates based on the bonus pay differentiation.[26]

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[25] 0.06 equals the standard deviation of 0.05, -0.1, -0.05, and 0.

[26] The shape of the actual bonus distribution is the same as that of salary distribution. What is different is the mean of the two distributions. We argue that the outrage of unfairness or biases is mainly driven by the relative reward based on social comparison theory. The way we construct this measure is consistent with our theoretical argument.

Case 1: No discretion in either the head' or subordinates' bonus

	(1) Salary_Slice (%)	(2) Paid_Bonus_Slice (%)	(3)=(2)-(1) Discretionary_Slice (%)	(4) Discretion
Head	30	30	0	0.00
Subordinate 1	25	25	0	0.00
Subordinate 2	20	20	0	
Subordinate 3	15	15	0	
Subordinate 4	10	10	0	
Total	100	100	0	

Case 2: Discretion in both the head's and subordinates' bonus

	(1) Salary_Slice (%)	(2) Paid_Bonus_Slice (%)	(3)=(2)-(1) Discretionary_Slice (%)	(4) Discretion
Head	30	40	10	0.10
Subordinate 1	25	30	5	0.06
Subordinate 2	20	10	-10	
Subordinate 3	15	10	-5	
Subordinate 4	10	10	0	
Total	100	100	0	

Case3: Discretion in the head's bonus but not in subordinates' bonus

	(1) Salary_Slice (%)	(2) Paid_Bonus_Slice (%)	(3)=(2)-(1) Discretionary_Slice (%)	(4) Discretion
Head	30	40	10	0.10
Subordinate 1	25	22.5	-2.5	0.00
Subordinate 2	20	17.5	-2.5	
Subordinate 3	15	12.5	-2.5	
Subordinate 4	10	7.5	-2.5	
Total	100	100	0	

Appendix B: Definition of Status Indicators

Factors of status	Variable	Description
Prestige	Membership	The number of memberships of medical professional associations, which is shown on the hospital's website
	Prizes	The number of prizes which is shown on the hospital's website
	Star	Dummy variable, 1 if the individual is indicated as a star on the hospital's website
Education	Edu_level	Education level, ranges from doctoral (100) to bachelor degree. The larger value means higher education level.
	Edu_ranking	Based on the top one hundred medical schools in China, the indicator ranges from 0 to 100. 100 represents the best medical school. Any medical school not listed in the top one hundred medical schools is coded 0. The larger value means higher ranking of the school.
Experience	Tenure	The number of years since employed
	Age	The individual's age

Appendix C

Figure 1
Conceptual Framework of Status Composition
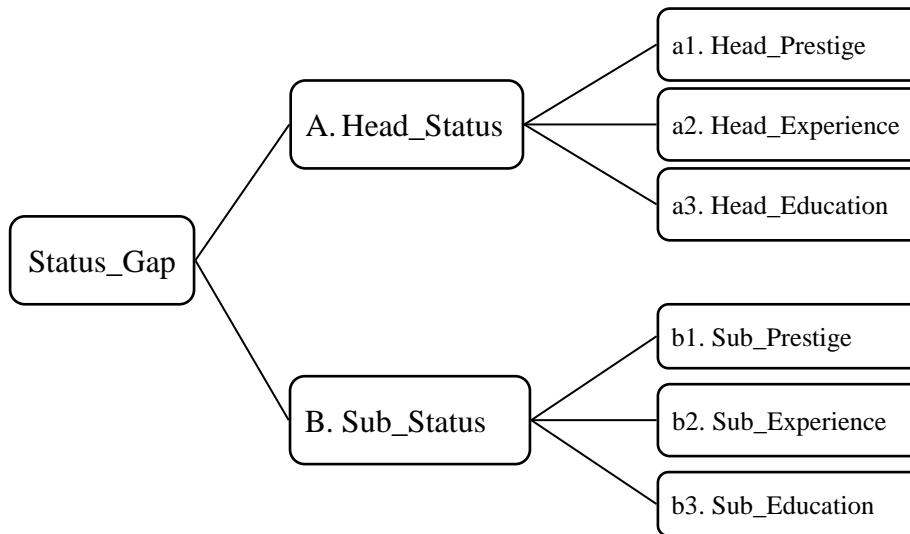
Variable Definitions:

Status_Gap	=Head_Status-Sub_Status
	=A-B
Head_Status (A)	=the department head's aggregate status
	=Head_Prestige+Head_Experience+Head_Education
	=a1+a2+a3
Sub_Status (B)	=the subordinates' aggregate status
	=Sub_Prestige +Sub_Experience +Sub_Education
	=b1+b2+b3
Status_Gap_Prestige	=the department head's relative status on Prestige factor
	=Head_Prestige-Sub_Prestige
	=a1-b1
Status_Gap_Experience	=the department head's relative status on Experience factor
	=Head_Experience-Sub_Experience
	=a2-b2
Status_Gap_Education	=the department head's relative status on Education factor
	=Head_Education-Sub_Education
	=a3-b3

Appendix D: Variable Description

Variables	Description
Dep_Profit	=the departmental profit, which is the basis for bonus pool calculation
Dep_Revenue	=the department monthly revenue
Dep_Bonus_Pool	=the department bonus based on department monthly performance
	=sum of the all individuals' bonus in the department
Dep_Sum_Salary	=sum of the all individuals' salary in the department
Paid_Bonus_Slice	=the ratio of each individual's bonus to the sum of all individuals' bonus in the department
Equal_Slice	=1/the number of individuals within the department
Salary_Slice	=the ratio of each individual's salary to the sum of all individuals' salary in the same department
Max_Head_Slice	=the department head's maximum bonus prescribed in the hospital's policy/ department bonus pool
Head_Dis	=the head's discretionary bonus slice, which is the difference between the head's actual bonus slice and her salary slice
Sub_Dis	=the standard deviation of subordinates' discretionary bonus slice
ΔPerformance	=(Revenue$_{jt+1}$-Revenue$_{jt}$)/ Revenue$_{jt}$
Head_Prestige	=the department head's factor score on Prestige factor
Head_Experience	=the department head 's factor score on Experience factor
Head_Education	=the department head 's factor score on Education factor
Sub_Prestige	=the subordinates' factor score on Prestige factor
Sub _Experience	=the subordinates' factor score on Experience factor
Sub _Education	=the subordinates' factor score on Education factor
Status_Gap_Prestige	=the department head's relative status on Prestige factor
Status_Gap_Experience	=the department head's relative status on Experience factor
Status_Gap_Education	=the department head's relative status on Prestige factor
Head_Status	=the department head's aggregate status
Sub_Status	=the subordinates' aggregate status
Up_BP	=Dummy variable, 1 if the change in department bonus pool (Dep_Bonus_Pool$_t$ -Dep_Bonus_Pool$_{t-1}$) is positive; otherwise 0
Up_BP*Status_Gap_Prestige	=interaction term between Up_BP and Status_Gap_Prestige
Up_BP*Status_Gap_Experience	=interaction term between Up_BP and Status_Gap_Experience
Up_BP*Status_Gap_Education	=interaction term between Up_BP and Status_Gap_Education
N_physician	=the number of physicians
N_nurse	=the number of nurses
ΔN_physician	=N_physician $_{it+1}$- N_physician $_{it}$
Δ N_nurse	=N_nurse $_{it+1}$- N_nurse $_{it}$
Dep_Medicine	=Dummy variable, 1 if the department is a medicine department (such as Pediatrics); otherwise 0
Dep_Surgery	=Dummy variable, 1 if the department is a surgery department (such as Cardiovascular surgery); otherwise 0

Table 1 Summary statistics on variables at the department level

Variable	Mean	Std Dev	Minimum	Median	Maximum
Dep_Profit*(¥)	396,520	392,169	-1,790,577	302,512	3,442,268
Dep_Revenue*(¥)	1,802,587	1,274,811	37,967	1,555,671	7,576,272
Dep_Bonus_Pool*(¥)	116,697	89,448	1,205	91,949	681,808
Dep_Sum_Salary*(¥)	46,060	27,749	5,124	39,650	183,489
Head_Dis	0.0485	0.0584	-0.2206	0.0359	0.2451
Sub_Dis	0.0202	0.0172	0.0031	0.0157	0.1692
N	15.58	9.43	2	13	41
N_physician	7.33	4.04	2	7	22
N_nurse	8.25	6.74	0	7	27

*The values of Dep_Profit, Dep_Revenue, Dep_Bonus_Pool and Dep_Sum_Salary have been rescaled because of confidentiality.

Variable Definitions

Dep_Profit	=the departmental profit, which is the basis for bonus pool calculation
Dep_Revenue	=the department monthly revenue
Dep_Bonus_Pool	=the department bonus based on department monthly performance
	=the sum of the all individuals' bonus in the department
Dep_Sum_Salary	=the sum of the all individuals' salaries in the department
Head_Dis	=the head's discretionary bonus slice
Sub_Dis	=the standard deviation of the subordinates' discretionary bonus slice
N	=the total number of subordinates including physicians and nurses
N_physician	=the number of physicians
N_nurse	=the number of nurses

Table 2 Summary Statistics on Status Indicators

Panel A Head Sample (N=1422)

Variable	Mean	Std Dev	Minimum	Median	Maximum
Membership	1.27	1.55	0.00	0.00	5.00
Prize	2.45	4.14	0.00	0.00	14.00
Star	0.36	0.48	0.00	0.00	1.00
Edu_level	79.09	3.26	70.00	80.00	89.00
Edu_ranking	56.86	30.67	0.00	76.00	95.00
Tenure	25.47	4.19	16.00	26.00	38.00
Age	47.40	3.81	41.00	47.00	57.00

Panel B Subordinate Physician Sample (N=9081)

Variable	Mean	Std Dev	Minimum	Median	Maximum
Membership	0.02	0.23	0.00	0.00	3.00
Prize	0.04	0.36	0.00	0.00	4.00
Star	0.01	0.07	0.00	0.00	1.00
Edu_level	79.23	4.78	60.00	79.00	100.00
Edu_ranking	45.64	33.27	0.00	37.00	99.00
Tenure	20.77	7.99	4.00	21.00	40.00
Age	41.86	6.47	27.00	43.00	58.00

Panel C Subordinate Nurse Sample (N=11939)

Variable	Mean	Std Dev	Minimum	Median	Maximum
Membership	0.00	0.00	0.00	0.00	0.00
Prize	0.00	0.00	0.00	0.00	0.00
Star	0.00	0.00	0.00	0.00	0.00
Edu_level	75.87	3.22	65.00	77.00	80.00
Edu_ranking	55.87	33.36	0.00	77.00	81.00
Tenure	19.44	5.18	3.00	19.00	35.00
Age	38.61	5.25	26.00	38.00	53.00

Variable definitions: See Appendix B.

Table 3 Principal Component Analysis of Status Indicator (Physician sample)

Panel A Correlation among status indicators

	Membership	Prize	Star	Edu_level	Edu_ranking	Tenure	Age
Membership	1						
Prize	0.61 (0.00)	1.00					
Star	0.63 (0.00)	0.79 (0.00)	1.00				
Edu_level	0.04 (0.00)	0.04 (0.00)	0.08 (0.00)	1.00			
Edu_ranking	0.11 (0.00)	0.10 (0.00)	0.13 (0.00)	0.52 (0.00)	1.00		
Tenure	0.16 (0.00)	0.14 (0.00)	0.10 (0.00)	-0.33 (0.00)	-0.27 (0.00)	1.00	
Age	0.18 (0.00)	0.17 (0.00)	0.13 (0.00)	-0.28 (0.00)	-0.21 (0.00)	0.94 (0.00)	1.00

P-values are in parentheses.

Panel B Eigenvalue

	Eigenvalue	Difference	Proportion	Cumulative
1	2.58	0.38	0.37	0.37
2	2.20	1.16	0.31	0.68
3	1.04	0.56	0.15	0.83
4	0.48	0.05	0.07	0.90
5	0.43	0.23	0.06	0.96
6	0.20	0.15	0.03	0.99
7	0.05		0.01	1.00

Variable definitions: See Appendix B.

Table 3 (continued)

Panel C Rotated factor pattern

	Factor1 (Prestige)	Factor2 (Experience)	Factor3 (Education)
Membership	0.82	0.05	0.02
Prize	0.91	-0.01	-0.02
Star	0.92	-0.04	0.01
Edu_level	-0.03	-0.05	0.85
Edu_ranking	0.03	0.03	0.88
Tenure	-0.01	0.97	-0.04
Age	0.01	0.99	0.03

Panel D Score weighting

	Factor1 (Prestige)	Factor2 (Experience)	Factor3 (Education)
Membership	0.35	0.03	0.01
Prize	0.39	0.00	-0.02
Star	0.39	-0.02	0.00
Edu_level	-0.01	-0.02	0.56
Edu_ranking	0.01	0.02	0.58
Tenure	0.00	0.50	-0.02
Age	0.00	0.51	0.03

Variable definitions: See Appendix B.

Table 4 Summary statistics on status measure (factor score) (N=1422)

	Variable	Mean	Std Dev	Minimum	Median	Maximum
a1	Head_Prestige	1.51	2.15	-0.28	0.68	5.80
a2	Head_Experience	0.65	0.54	-0.41	0.60	2.02
a3	Head_Education	0.16	0.81	-1.96	0.55	1.98
A	Head_Status	2.32	2.52	-1.58	1.60	8.52
b1[a]	Sub _Prestige[a]	-0.08	0.43	-0.26	-0.24	1.48
b2[a]	Sub _Experience[a]	1.02	0.75	-1.15	1.09	2.37
b3[a]	Sub _Education[a]	1.23	0.89	-1.96	0.88	3.21
B[a]	Sub_Status[a]	2.17	1.20	-1.58	2.35	4.64
a1-b1[a]	Status_Gap_Prestige[a]	1.59	2.07	-0.94	0.01	6.04
a2-b2[a]	Status_Gap_Experience[a]	-0.37	0.79	-2.17	-0.32	1.22
a3-b3[a]	Status_Gap_Education[a]	-1.07	1.09	-2.70	-1.12	2.33
b1[b]	Sub _Prestige[b]	-0.08	0.43	-0.26	-0.24	1.48
b2[b]	Sub _Experience[b]	0.05	0.99	-1.71	0.11	2.27
b3[b]	Sub _Education[b]	0.35	0.87	-2.08	0.70	1.38
B[b]	Sub_status[b]	0.32	1.12	-1.69	0.43	3.41
a1-b1[b]	Status_Gap_Prestige[b]	1.59	2.07	-0.94	0.01	6.04
a2-b2[b]	Status_Gap_Experience[b]	0.60	1.13	-2.17	0.61	3.03
a3-b3[b]	Status_Gap_Education[b]	-0.19	1.27	-2.70	-0.22	4.06
b1[c]	Sub _Prestige [c]	-0.10	0.43	-0.31	-0.25	1.48
b2[c]	Sub _Experience [c]	0.20	0.87	-1.89	0.27	2.27
a3[c]	Sub _Education [c]	1.07	1.06	-2.08	0.87	3.21
B[c]	Sub _status [c]	1.17	1.04	-1.58	0.98	3.41
a1-b1[c]	Status_Gap_Prestige [c]	1.60	2.07	-0.94	0.03	6.07
a2-b2[c]	Status_Gap_Experience[c]	0.46	0.98	-2.17	0.45	3.03
a3-b3[c]	Status_Gap_Education [c]	-0.91	1.27	-2.70	-1.08	3.08
b1[d]	Sub_Prestige[d]	-0.22	0.11	-0.27	-0.26	0.22
b2[d]	Sub_Experience[d]	0.00	0.62	-1.52	-0.04	1.79
b3[d]	Sub_Education[d]	0.07	0.63	-1.96	-0.06	1.89
B[d]	Sub_status[d]	-0.15	0.78	-1.76	-0.19	1.59
a1-b1[d]	Status_Gap_Prestige[d]	1.73	2.12	-0.13	0.65	6.06
a2-b2[d]	Status_Gap_Experience[d]	0.65	0.68	-1.05	0.60	2.01
a3-b3[d]	Status_Gap_Education[d]	0.10	0.96	-1.75	0.16	3.14

[a]The subordinate's score is the maximum score on each factor. The scores may not be from the same subordinates.

[b]The score is from the subordinates who has the highest prestigious score in the department.

[c]We first sum each subordinate's factor scores across three factors and identify the subordinate with the maximum aggregate score among the subordinates. The subordinate's score is all from this identified subordinate.

[d] The subordinate's score is the average score on each dimension. The scores may not be from the same subordinate.

Variable definitions: See Appendix D.

Table 5 Bonus and Bonus slice
Panel A Head Sample (N=1422)

Variable	Mean	Std Dev	Minimum	Median	Maximum
Salary*(¥)	5,345	1,637	2,420	5,421	9,389
Paid_Bonus*(¥)	17,426	7,878	294	16,343	63,910
Equal_Bonus*(¥)	7,622	3,199	134	7,189	26,382
Max_Head_Bonus*(¥)	21,482	8,832	367	20,421	71,234
Paid_Bonus_Slice(%)	21.09	14.08	3.72	17.45	77.62
Salary_Slice(%)	16.24	10.61	2.88	13.34	54.88
Equal_Slice(%)	10.53	9.84	2.44	7.69	50.00
Max_Head_Slice (%)	26.15	16.00	8.05	22.58	77.78
Discretionary_Slice (%)	4.85	5.84	-22.06	3.59	24.51
Unequal_Slice (%)	10.56	5.49	-7.40	9.36	31.88
OverCap_Slice (%)	-5.06	4.68	-29.19	-4.04	11.41

*The values of Salary, Paid_Bonus, Equal_Bonus, and Max_Head_Bonus have been rescaled because of confidentiality.

Panel B Subordinate Sample (Physicians and Nurses) (N=21020)

Variable	Mean	Std Dev	Minimum	Median	Maximum
Salary*(¥)	2,786	577	223	2,704	6,996
Paid_Bonus*(¥)	6,802	3,538	0	6,246	42,859
Equal_Bonus*(¥)	7,466	2,889	134	7,186	26,382
Paid_Bonus_Slice(%)	5.65	4.66	0.00	4.35	64.50
Salary_Slice(%)	5.98	5.01	0.17	4.52	52.26
Equal_Slice(%)	6.36	5.19	2.44	4.76	50.00
Discretionary_Slice (%)	-0.33	2.13	-25.71	-0.25	23.53
Unequal_Slice (%)	-0.71	2.37	-27.62	-0.67	22.22

*The numbers of Salary, Paid_Bonus and Equal_Bonus have been rescaled because of confidentiality.

Variable Definitions:

Salary	=the individual's monthly salary
Paid_Bonus	=the individual's received monthly bonus
Equal_Bonus	=bonus pool/number of all individuals in the department
Max_Head_Bonus	=the maximum bonus the head is entitled to receive
	=3.5* the average of subordinates' bonus
Paid_Bonus_Slice	= the ratio of each individual's bonus to the sum of all individuals' bonus in the same department
	=Paid_Bonus/the department bonus pool
Equal_Slice	=1/number of individuals in the department
Salary_Slice	=each individual's salary/the sum of the all individual's salary in the same department
Max_Head_Slice	=Max_Head_Bonus/the department bonus pool
Unequal_slice	=Paid_Bonus_Slice-Equal_Slice
Discretionary_Slice	=Paid_Bonus_Slice-Salary_Slice
OverCap_Slice	=Paid_Bonus_Slice-Max_Head_Slice

Table 6 Pearson Correlation Table (N=1422)

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
(a)Dep_Profit	1																		
(b)Dep_Revenue	0.72 (0.00)	1																	
(c)Dep_Bonus_Pool	0.78 (0.00)	0.75 (0.00)	1																
(d)Paid_Bonus	0.60 (0.00)	0.47 (0.00)	0.63 (0.00)	1															
(e)Salary	0.29 (0.00)	0.36 (0.00)	0.28 (0.00)	0.24 (0.00)	1														
(f)N	0.57 (0.00)	0.65 (0.00)	0.82 (0.00)	0.20 (0.00)	0.31 (0.00)	1													
(g)N_physician	0.62 (0.00)	0.50 (0.00)	0.67 (0.00)	0.19 (0.00)	0.27 (0.00)	0.79 (0.00)	1												
(h)N_nurse	0.44 (0.00)	0.60 (0.00)	0.74 (0.00)	0.17 (0.00)	0.27 (0.00)	0.93 (0.00)	0.50 (0.00)	1											
(i)Paid_Bonus_Slice	-0.41 (0.00)	-0.57 (0.00)	-0.57 (0.00)	-0.06 (0.02)	-0.37 (0.00)	-0.76 (0.00)	-0.63 (0.00)	-0.68 (0.00)	1										
(j)Head_Dis	-0.22 (0.00)	-0.34 (0.00)	-0.30 (0.00)	0.14 (0.00)	-0.65 (0.00)	-0.48 (0.00)	-0.42 (0.00)	-0.42 (0.00)	0.73 (0.00)	1									
(k)Sub_Dis	-0.36 (0.00)	-0.38 (0.00)	-0.40 (0.00)	-0.10 (0.00)	-0.28 (0.00)	-0.52 (0.00)	-0.42 (0.00)	-0.47 (0.00)	0.50 (0.00)	0.31 (0.00)	1								
(l)Head_Prestige	0.30 (0.00)	0.28 (0.00)	0.21 (0.00)	0.25 (0.00)	0.52 (0.00)	0.15 (0.00)	0.31 (0.00)	0.02 (0.37)	-0.18 (0.00)	-0.37 (0.00)	-0.19 (0.00)	1							
(m)Head_Experience	0.00 (0.85)	-0.04 (0.12)	-0.04 (0.13)	0.05 (0.08)	0.16 (0.00)	-0.07 (0.01)	0.01 (0.66)	-0.10 (0.00)	0.00 (0.88)	-0.07 (0.01)	0.07 (0.01)	0.05 (0.04)	1						
(m)Head_Education	0.05 (0.05)	0.17 (0.00)	0.02 (0.38)	0.09 (0.00)	0.40 (0.00)	0.07 (0.01)	-0.09 (0.00)	0.15 (0.00)	-0.22 (0.00)	-0.25 (0.00)	-0.38 (0.00)	0.23 (0.00)	-0.19 (0.00)	1					
(o)Sub_Prestige	-0.14 (0.00)	-0.24 (0.00)	-0.17 (0.00)	-0.01 (0.66)	0.09 (0.00)	-0.18 (0.00)	-0.12 (0.00)	-0.17 (0.00)	0.07 (0.01)	-0.07 (0.01)	0.02 (0.48)	0.29 (0.00)	0.44 (0.00)	-0.01 (0.85)	1				
(p)Sub_Experience	0.23 (0.00)	0.15 (0.00)	0.27 (0.00)	0.16 (0.00)	0.05 (0.09)	0.22 (0.00)	0.32 (0.00)	0.12 (0.00)	-0.24 (0.00)	-0.08 (0.00)	-0.18 (0.00)	0.22 (0.00)	0.28 (0.00)	0.03 (0.20)	0.21 (0.00)	1			
(q)Sub_Education	0.35 (0.00)	0.43 (0.00)	0.36 (0.00)	0.27 (0.00)	0.24 (0.00)	0.37 (0.00)	0.33 (0.00)	0.33 (0.00)	-0.38 (0.00)	-0.20 (0.00)	-0.28 (0.00)	0.33 (0.00)	-0.15 (0.00)	0.18 (0.00)	-0.09 (0.00)	-0.13 (0.00)	1		
(r)Head_Status	0.27 (0.00)	0.29 (0.00)	0.18 (0.00)	0.25 (0.00)	0.61 (0.00)	0.14 (0.00)	0.24 (0.00)	0.05 (0.08)	-0.22 (0.00)	-0.41 (0.00)	-0.27 (0.00)	0.94 (0.00)	0.20 (0.00)	0.48 (0.00)	0.34 (0.00)	0.26 (0.00)	0.30 (0.00)	1	
(s)Sub_Status	0.36 (0.00)	0.33 (0.00)	0.38 (0.00)	0.30 (0.00)	0.24 (0.00)	0.35 (0.00)	0.40 (0.00)	0.25 (0.00)	-0.41 (0.00)	-0.23 (0.00)	-0.32 (0.00)	0.48 (0.00)	0.22 (0.00)	0.16 (0.00)	0.42 (0.00)	0.60 (0.00)	0.63 (0.00)	0.51 (0.00)	1

*The subordinate's score is the maximum score on each factor. The scores may not be from the same subordinates. P-values are in parentheses.

Table 7 Regressions of two types of discretionary bonus on status

Pane A Regression of the head's discretionary bonus on status

$Head\_Dis_{jt}=\alpha_0 + \alpha_1\ Status_{ijt}+ \alpha_2 Dep\_Profit_{jt}+ \alpha_3 N\_physician_{jt}+ \alpha_4\ N\_nurse_{jt}+ \alpha_5\ Dep\_Medicine_j+ \alpha_6\ Dep\_Surgery_j + \varepsilon_{jt}$ (4.1)

Robust standard error is clustered at the department level and reported in parenthesis. We construct the subordinate's status by taking the maximum score on each factor among the subordinates. *,**,*** Indicate statistical significance at the 10 percent, 5 percent and 1 percent levels, respectively.

	Head_Dis (1)			Head_Dis (2)			Head_Dis (3)		
Status_Gap_Prestige[a]	-0.0102	(0.0023)	***						
Status_Gap_Experience[a]	-0.0241	(0.0074)	***						
Status_Gap_Education[a]	-0.0135	(0.0050)	**						
Head_Status				-0.0112	(0.0019)	***			
Sub_Status[a]				0.0112	(0.0040)	***			
Head_Prestige							-0.0099	(0.0023)	***
Head_Experience							-0.0286	(0.0102)	***
Head_Education							-0.0131	(0.0076)	*
Sub_Prestige[a]							0.0034	(0.0107)	
Sub_Experience[a]							0.0212	(0.0080)	**
Sub_Education[a]							0.0127	(0.0074)	*
Dep_Profit	0.0308	(0.0224)		0.0441	(0.0241)	*	0.0261	(0.0219)	
N_physician	-0.0067	(0.0016)	***	-0.0058	(0.0015)	***	-0.0064	(0.0015)	***
N_nurse	-0.0015	(0.0009)		-0.0017	(0.0009)	*	-0.0016	(0.0009)	*
Dep_Medicine	-0.0466	(0.0221)	**	-0.0433	(0.0251)	*	-0.0466	(0.0280)	
Dep_Surgery	-0.0530	(0.0211)	**	-0.0404	(0.0234)	*	-0.0526	(0.0238)	**
Constant	0.1480	(0.0234)	***	0.1410	(0.0218)	***	0.1540	(0.0257)	***
Number of Observations	1422			1422			1422		
R-squared	0.46			0.44			0.47		
Year Dummies	Yes			Yes			Yes		

[a]The subordinate's score is the maximum score on each factor. The scores may not be from the same subordinates.

Table 7 (continued)

Panel B Regression of subordinates' discretionary differential bonus on status

$$Sub\_Dis_{jt}= \alpha_0 + \alpha_1 \, Status_{ijt}+ \alpha_2 Dep\_Profit_{jt}+ \alpha_3 N\_physician_{jt}+ \alpha_4 \, N\_nurse_{jt}+ \alpha_5 \, Dep\_Medicine_{j}+ \alpha_6 \, Dep\_Surgery_{j} + \varepsilon_{jt} \qquad (4.2)$$

Robust standard error is clustered at the department level and reported in parenthesis. We construct the subordinate's status by taking the maximum score on each factor among the subordinates. *,**,*** Indicate statistical significance at the 10 percent, 5 percent and 1 percent levels, respectively.

	Sub_Dis (1)			Sub_Dis (2)			Sub_Dis (3)		
Status_Gap_Prestige[a]	-0.0014	(0.0006)	**						
Status_Gap_Experience[a]	-0.0012	(0.0014)							
Status_Gap_Education[a]	-0.0043	(0.0013)	***						
Head_Status				-0.0019	(0.0007)	***			
Sub_Status[a]				0.0008	(0.0009)				
Head_Prestige							-0.0004	(0.0006)	
Head_Experience							-0.0017	(0.0023)	
Head_Education							-0.0075	(0.0016)	***
Sub_Prestige[a]							-0.0027	(0.0041)	
Sub_Experience[a]							0.0002	(0.0011)	
Sub_Education[a]							0.0012	(0.0010)	
Dep_Profit	-0.0128	(0.0046)	***	-0.0086	(0.0047)	*	-0.0106	(0.0041)	**
N_physician	-0.0022	(0.0006)	***	-0.0018	(0.0006)	***	-0.0021	(0.0005)	***
N_nurse	-0.0001	(0.0003)		-0.0002	(0.0003)		-0.0002	(0.0002)	
Dep_Medicine	-0.0272	(0.0110)	**	-0.0263	(0.0116)	**	-0.0202	(0.0075)	**
Dep_Surgery	-0.0238	(0.0107)	**	-0.0228	(0.0110)	**	-0.0185	(0.0073)	**
Constant	0.0602	(0.0115)	***	0.0618	(0.0126)	***	0.0588	(0.0086)	***
Number of Observations	1375			1375			1375		
R-squared	0.46			0.44			0.50		
Year Dummies	Yes			Yes			Yes		

[a]The subordinate's score is the maximum score on each factor. The scores may not be from the same subordinate.

Table 8 Regression of performance on the heads' and subordinates' discretionary bonus

$\Delta Performance_{jt}=\gamma_0+\gamma_1 Head\_Dis_{jt}+ \gamma_2 Sub\_Dis_{jt} + \gamma_3\ Status_{ijt}+ \gamma_4\Delta N\_physician_{jt}+ \gamma_5\ \Delta N\_nurse_{jt}+ \gamma_6\ Dep\_Medicine_j + \gamma_7\ Dep\_Surgery_j + \varepsilon_{jt}$ (5)

Robust standard error is clustered at the department level and reported in parenthesis. We construct the subordinate's status by taking the maximum score on each factor among the subordinates. *,**,*** Indicate statistical significance at the 10 percent, 5 percent and 1 percent levels, respectively.

	ΔPerformance			ΔPerformance			ΔPerformance		
	(1)			(2)			(3)		
Head_Dis	-0.4800	(0.1370)	***	-0.5150	(0.1430)	***	-0.5130	(0.1580)	***
Sub_Dis	0.7360	(0.2920)	**	1.0240	(0.2370)	***	0.8530	(0.3060)	***
Status_Gap_Prestige[a]	-0.0039	(0.0029)							
Status_Gap_Experience[a]	-0.0135	(0.0049)	***						
Status_Gap_Education[a]	0.0077	(0.0047)							
Head_Statu[a]				-0.0018	(0.0030)				
Sub_Status[a]				-0.0079	(0.0068)				
Head_Prestige							-0.0008	(0.0025)	
Head_Experience							-0.0122	(0.0112)	
Head_Education							-0.0027	(0.0081)	
Sub_Prestige[a]							-0.0138	(0.0139)	
Sub_Experience[a]							0.0107	(0.0058)	*
Sub_Education[a]							-0.0170	(0.0083)	**
ΔN_physician	0.0509	(0.0265)	*	0.0490	(0.0273)	*	0.0498	(0.0274)	*
ΔN_nurse	0.0091	(0.0096)		0.0090	(0.0095)		0.0090	(0.0097)	
Dep_Medicine	-0.0124	(0.0128)		-0.0080	(0.0125)		0.0047	(0.0134)	
Dep_Surgery	-0.0072	(0.0150)		0.0079	(0.0142)		0.0059	(0.0122)	
Constant	0.0579	(0.0227)	**	0.0675	(0.0296)	**	0.0590	(0.0348)	*
Number of Observations	1342			1342			1342		
R-squared	0.02			0.01			0.02		
Year Dummies	Yes			Yes			Yes		

[a]The subordinate's score is the maximum score on each factor. The scores may not be from the same subordinate.

Table 9 Regressions of both types of discretion with changes in bonus pool

$Discretion_{jt} = \alpha_0 + \alpha_1\,Status_{ijt} + \alpha_2 Up\_BP_{ijt} + \alpha_3 Status_{ijt}*Up\_BP_{ijt} + \alpha_4 Dep\_Profit_{jt} +$
$\qquad \alpha_5 N\_physician_{jt} + \alpha_6\,N\_nurse_{jt} + \alpha_7\,Dep\_Medicine_j + \alpha_8\,Dep\_Surgery_j + \varepsilon_{jt}$ (4)

Robust standard error is clustered at the department level and reported in parenthesis. We construct the subordinate's status by taking the maximum score on each dimension among the subordinates. The null hypothesis of this F-test is that the sum of all coefficients for *Up_Prestige*, *Up_Experience*, and *Up_Education* equal zero. *,**,*** Indicate statistical significance at the 10 percent, 5 percent and 1 percent levels, respectively. The dependent variables, *Head_Dis* and *Sub_Dis*, are in column (1) and (2), respectively.

	Head_Dis (1)			Sub_Dis (2)		
Status_Gap_Prestige[a]	-0.0092	(0.0023)	***	-0.0014	(0.0006)	**
Status_Gap_Experience[a]	-0.0244	(0.0064)	***	-0.0020	(0.0015)	
Status_Gap_Education[a]	-0.0166	(0.0050)	***	-0.0045	(0.0014)	***
Up_BP	0.0199	(0.0058)	***	0.0023	(0.0012)	*
Up_BP*Status_Gap_Prestige[a]	-0.0017	(0.0012)		0.0001	(0.0002)	
Up_BP*Status_Gap_Experience[a]	0.0004	(0.0039)		0.0015	(0.0006)	**
Up_BP*Status_Gap_Education[a]	0.0055	(0.0033)		0.0003	(0.0007)	
Dep_Profit	0.0226	(0.0210)		-0.0137	(0.0050)	***
N_physician	-0.0066	(0.0016)	***	-0.0022	(0.0006)	***
N_nurse	-0.0015	(0.0009)		-0.0001	(0.0003)	
Dep_Medicine	-0.0474	(0.0215)	**	-0.0272	(0.0110)	**
Dep_Surgery	-0.0542	(0.0205)	**	-0.0239	(0.0106)	**
Constant	0.1380	(0.0227)	***	0.0590	(0.0117)	***
Number of Observations	1392			1346		
F-test	0.52			3.54	*	
R-squared	0.48			0.47		
Year Dummies	Yes			Yes		

[a]The subordinate's score is the maximum score on each factor. The scores may not be from the same subordinate.

Table 10 Regressions with alternative measures of subordinate's status score

Panel A Head's discretion bonus

Robust standard error is clustered at the department level and reported in parenthesis. *,**,*** Indicate statistical significance at the 10 percent, 5 percent and 1 percent levels, respectively. The dependent variable is *Head_Dis*. In column (1), the score is from the subordinate physician who has the highest prestigious score in the department. In column (2), the subordinate's score is all from the subordinate who has the highest aggregate status, the sum of the scores across three status factors. In column (3), the subordinate's score is the average score on each factor of all subordinate physicians.

	Head_Dis (1)			Head_Dis (2)			Head_Dis (3)		
Status_Gap_Prestige	-0.0072	(0.0037)	*	-0.0087	(0.0032)	***	-0.0083	(0.0030)	***
Status_Gap_Experience	-0.0090	(0.0111)		-0.0167	(0.0118)		-0.0251	(0.0138)	*
Status_Gap_Education	-0.0099	(0.0059)	*	-0.0084	(0.0103)		-0.0184	(0.0099)	*
Dep_Profit	0.0662	(0.0286)	**	0.0644	(0.0289)	**	0.0635	(0.0288)	**
N_physician	-0.0045	(0.0029)		-0.0049	(0.0026)	*	-0.0031	(0.0021)	
N_nurse	-0.0039	(0.0019)	**	-0.0033	(0.0017)	**	-0.0033	(0.0015)	**
Dep_Medicine	-0.0271	(0.0331)		-0.0341	(0.0280)		-0.0352	(0.0307)	
Dep_Surgery	-0.0317	(0.0288)		-0.0399	(0.0247)		-0.0425	(0.0267)	
Constant	0.1450	(0.0342)	***	0.1500	(0.0270)	***	0.1580	(0.0316)	***
Observations	1422			1422			1422		
Year Dummies	Yes			Yes			Yes		

Panel B Subordinates' differential bonus

Robust standard error is clustered at the department level and reported in parenthesis. *,**,*** Indicate statistical significance at the 10 percent, 5 percent and 1 percent levels, respectively. The dependent variable is *Sub_Dis*. In column (1), the score is from the subordinate physician who has the highest prestigious score in the department. In column (2), the subordinate's score is all from the subordinate who has the highest aggregate status, the sum of the scores across three status factors. In column (3), the subordinate's score is the average score on each factor of all subordinate physicians.

	Sub_Dis (1)			Sub_Dis (2)			Sub_Dis (3)		
Status_Gap_Prestige	-0.0013	(0.0008)		-0.0014	(0.0008)	*	-0.0014	(0.0008)	*
Status_Gap_Experience	-0.0006	(0.0017)		-0.0004	(0.0012)		-0.0039	(0.0030)	
Status_Gap_Education	-0.0010	(0.0012)		-0.0016	(0.0011)		-0.0022	(0.0014)	
Dep_Profit	0.0014	(0.0029)		0.0006	(0.0028)		0.0007	(0.0029)	
N_physician	-0.0009	(0.0007)		-0.0012	(0.0007)	*	-0.0009	(0.0006)	
N_nurse	-0.0009	(0.0003)	**	-0.0008	(0.0003)	**	-0.0007	(0.0003)	**
Dep_Medicine	-0.0147	(0.0137)		-0.0169	(0.0130)		-0.0177	(0.0132)	
Dep_Surgery	-0.0137	(0.0136)		-0.0152	(0.0124)		-0.0175	(0.0130)	
Constant	0.0483	(0.0154)	***	0.0502	(0.0142)	***	0.0536	(0.0154)	***
Observations	1375			1375			1375		
Year Dummies	Yes			Yes			Yes		

Table 10 (continued)

Panel C Performance effect of two types of discretion in bonus decisions

Robust standard error is clustered at the department level and reported in parenthesis. *,**,*** Indicate statistical significance at the 10 percent, 5 percent and 1 percent levels, respectively. The dependent variable is $\Delta Performance$. In column (1), the score is from the subordinate physician who has the highest prestigious score in the department. In column (2), the subordinate's score is all from the subordinate who has the highest aggregate status, the sum of the scores across three status factors. In column (3), the subordinate's score is the average score on each factor of all subordinate physicians.

	ΔPerformance (1)			ΔPerformance (2)			ΔPerformance (3)		
Head_Dis	-0.5350	(0.1700)	***	-0.5180	(0.1600)	***	-0.5630	(0.2000)	***
Sub_Dis	0.8230	(0.2800)	***	0.8750	(0.2600)	***	0.8750	(0.3000)	***
Status_Gap_Prestige	-0.0053	(0.0000)		-0.0034	(0.0000)		-0.0053	(0.0000)	
Status_Gap_Experience	-0.0103	(0.0100)		-0.0093	(0.0100)		-0.0151	(0.0200)	
Status_Gap_Education	-0.0003	(0.0100)		0.0043	(0.0100)		0.0043	(0.0100)	
ΔN_physician	0.0505	(0.0300)	*	0.0502	(0.0300)	*	0.0502	(0.0300)	*
ΔN_nurse	0.0088	(0.0100)		0.0091	(0.0100)		0.0090	(0.0100)	
Dep_Medicine	-0.0175	(0.0200)		-0.0122	(0.0200)		-0.0283	(0.0200)	
Dep_Surgery	-0.0112	(0.0200)		-0.0051	(0.0200)		-0.0170	(0.0300)	
Constant	0.0726	(0.0400)	**	0.0646	(0.0300)	**	0.0839	(0.0500)	
Observations	1342			1342			1342		
Year Dummines	Yes			Yes			Yes		