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The Behavioral Effects of Social Distance and Residual Claim Distribution on Budget Reporting in Hierarchical Organizations

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ABSTRACT: We experimentally investigate how subordinates' budget reporting in hierarchical organizations is influenced by social distance between subordinates and their direct manager. Although prior research promotes reducing this social distance to improve cooperation and efficiency, we contend that reduced social distance can differentially influence budget reporting, conditional on the manager's stake in the residual claim. As predicted, we find through two studies that the effect of reduced social distance changes from increasing subordinates' honesty to decreasing subordinates' honesty as the manager's stake in the residual claim decreases. We also find that subordinates' concern for the manager's economic well-being and concern about the manager's impression of their reporting behavior mediate these results. The implications of our findings for management accounting theory and practice are discussed.

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Keywords: social distance; residual claim; hierarchical organizations; managerial reporting.

I. INTRODUCTION

In this paper, we investigate how subordinates' budget reporting in hierarchical organizations is influenced by their perceived social distance (i.e., psychological proximity or closeness) from their direct manager, which can vary depending on the structure and culture of the organization.[1] This research question is important because the relationship between subordinates and their direct manager "is a foundational aspect of organizational dynamics" that has an important impact on subordinates' behavior (Napier and Ferris 1993, 322; Brandes, Dharwadkar, and Wheatley 2004).

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[1] Given the nature of hierarchical roles, subordinates, in general, are socially distant from upper management including higher-level executives and owners (Davis and Gardner 2004). Thus, we only evaluate the more malleable social distance pertaining to the direct manager.

In particular, the direct manager has more influence on the subordinate than higher-level executives and owners (Mayer, Kuenzi, Greenbaum, Bardes, and Salvador 2009).

Prior research calls for reducing social distance between the subordinate and manager because it has been shown to have positive effects on organizational outcomes. For example, reduced social distance increases the effectiveness of managerial leadership and improves the subordinate's work efficiency (Yagil 1998; Li and Chen 2019). Additionally, reduced social distance enables managers to gain subordinates' trust (Shamir 1995), provides effective role modeling and shapes behavioral norms (Cole, Bruch, and Shamir 2009), and establishes good rapport with subordinates (Oc and Bashshur 2013). However, we contend that reducing social distance between the subordinate and the direct manager can *positively* or *negatively* influence the subordinate's budget reporting behavior, conditional on the manager's stake in the residual claim to the surplus produced by the subordinate.

Specifically, when subordinates make budget reports, despite the economic incentive to misreport, they are likely concerned about the effect of budget reports on the manager's wealth and about the manager's impression of their reporting behavior (Hannan, Rankin, and Towry 2006; Rankin, Schwartz, and Young 2008). We contend that, *ceteris paribus*, reducing social distance between the subordinate and manager differentially impacts these two concerns. On one hand, as social distance is reduced, the subordinate cares more about the manager's wealth. As such, the reduction of social distance has an "other-regarding" effect that potentially increases the honesty of the subordinate's reporting. On the other hand, although concerns about others' impression self-regulate one's behavior, such self-regulation can be dampened by the reduction of social distance. This is because people are more likely to believe that others share their own preference when the two parties are psychologically closer (Robbins and Krueger 2005; Vorauer and Sucharyna 2013). Thus, as social distance is reduced, the subordinate is more likely to feel the manager is an advocate for his or her own welfare and assume that the manager desires the close other (i.e., the subordinate) to be better off. As a result, the subordinate will be less concerned about a negative impression from the manager. In this case, the reduction of social distance has a "self-justification" effect that potentially decreases the honesty of the subordinate's reporting. Ultimately, the net effect of reduced social distance on the subordinate's reporting behavior depends on the relative impact of these two effects.

We further argue that the relative importance of the other-regarding versus self-justification effects is influenced by the manager' stake in the production surplus, which is part of the structured compensation established by the organization (Baiman 1990; Baker 2000). Prior accounting literature has examined subordinates' budget reporting behavior under a two-level agency relationship whereby a subordinate reports to a superior who is the only residual claimant affected by misreporting (e.g., Brown, Evans, and Moser 2009). However, in modern organizations, administrative hierarchies often consist of more than two agency levels (Anderson and Brown 2010). For example, subordinates likely report to their direct manager, who in turn reports to upper management along the hierarchy, with the highest level being the owners of the organization. Although owners are the rightful residual claimant, for control purposes, they often tie a portion of local managers' compensation to the surplus produced by subordinates (Alchian and Demsetz 1972; Eisenhardt 1989). As a result, "few decision makers in organizations are one hundred percent owners of the residual claims" and, thus, subordinates typically have multiple claimants who are affected by their misreporting (Baker, Jensen, and Murphy 1988, 594).

We focus on organizations in which the subordinate's direct manager has a stake in the residual claim to the surplus produced by the subordinate. The size of the manager's stake is determined based on the manager's operating environment (Banker and Datar 1989). As the manager's stake in the surplus decreases, misreporting causes less harm to the manager. Consequently, the subordinate will have less reason to be concerned about the manager's wealth, which offsets the other-regarding effect of reduced social distance on the subordinate's honesty. The subordinate will also be less concerned about the manager's impression of their behavior, which exacerbates the self-justification effect of reduced social distance on the subordinate's honesty. Overall, we predict that, as the manager's share of the residual claim decreases, the net effect of reduced social distance on subordinates' reporting behavior will be less positive (from the organization's perspective).

Our hypothesis cannot be addressed in the two-level setting used by prior research because, although perceptions of social distance can vary regardless of the size of the organization, a dyadic relationship with the sole superior receiving the entire production surplus is not suited for examining control problems in multitiered organizations where stakes in the production surplus vary across individuals (Baker et al. 1988). In the current paper, we use a generic three-level hierarchy (subordinate, manager, and owner) to represent our setting of interest.[2] To test our prediction, we conduct a

[2] Although some organizations are more than three-tiered, in our study, we limit the number of roles to three (owner, manager, and subordinate) because this assignment effectively captures all necessary context. Specifically, the owner represents higher-level residual claimants, who are more socially distant from subordinates and are less likely than the direct manager to influence subordinates' behavior. Hence, the three-tier structure provides a parsimonious setup for examining our primary relationship of interest (manager-subordinate).

2 × 3 experimental study using student-participants where we manipulate between-participants (1) the social distance between the subordinate and manager and (2) the surplus split between the manager and owner. We adapt the basic trust contract setting from Evans, Hannan, Krishnan, and Moser (2001) widely used in the literature to include two residual claimants (the manager and owner) to the surplus produced by the subordinate. The subordinate is provided with the actual cost of production but is free to report any cost within a predetermined range known by the manager and owner. Our primary dependent variable is the level of slack created by the subordinate. Prior to performing the reporting task, in order to manipulate social distance, we have all participants compete in contests, where the subordinate is either paired with the manager (low social distance) or works alone while the manager and owner are paired together (high social distance).

We further manipulate the surplus split at three levels. The highest share is an equal split between the manager and owner. At the lowest level of surplus split, the manager is only a claimant over 5 percent of any surplus, compared to the 95 percent claim of the owner. Between these two levels, the manager has a one-third stake and the owner a two-thirds stake. Establishing these three levels of surplus split allows us to systematically compare how reduced social distance influences subordinates' honesty as the manager's stake in the surplus decreases, thus providing a parsimonious test of our theory.

Consistent with our prediction, we find a significant interaction for honesty between social distance and the surplus split between the manager and owner. Specifically, when the residual surplus is equally split between the manager and owner, reducing social distance between the subordinate and manager leads to significantly *less* slack in subordinates' reports. By comparison, when the manager receives 5 percent of the surplus, reducing social distance between the subordinate and manager leads to significantly *more* slack in subordinates' reports. We also find that under the equal split the effect of reduced social distance on honesty is mediated by subordinates' heightened concern about the manager's economic well-being and that under the 5-percent split the effect of reduced social distance on honesty is mediated by subordinates' diminished concern about the manager's impression. Finally, when the manager receives one-third of the surplus, the level of slack in subordinates' reports is not significantly influenced by their social distance from the manager.

To shed further light on the role of the manager's impression in the self-justification effect of reduced social distance on subordinates' honesty, we conduct a supplemental study using experienced employees recruited through the online research platform Prolific. We first measure, rather than manipulate, participants' perceived social distance from their direct manager in their current employment. Then, we provide participants with a vignette assuming that, within their current employment environment, they have means to incorporate slack into a project budget, whereby the slack benefits themselves at the cost of the organization but has little impact on their direct manager. For our dependent measure, we ask participants to indicate the extent to which they think their direct manager would view their slack-creation behavior as acceptable. In line with our theory, we find a significantly negative association between participants' perceived social distance from the direct manager and their belief about the direct manager's attitude toward their slack creation. That is, participants feel their direct manager will consider slack creation more acceptable the lower the social distance between the two parties.

Overall, the results of the two studies provide consistent support for our theory, suggesting that the net effect of reducing social distance between the subordinate and manager on the honesty of budget reporting in hierarchical organizations is conditional on the manager's stake in the production surplus produced by the subordinate. Importantly, the triangulation of multiple studies (a controlled laboratory experiment and an online study using experienced employees) lends further credence to our theory and enhances the generalizability of our findings (Asay, Guggenmos, Kadous, Koonce, and Libby 2022).

This paper makes significant contributions to management accounting theory and practice. Given the widespread use of participative budgeting (Libby and Lindsay 2010) and the lack of consensus regarding control mechanisms, understanding how the dynamics within organizations affects reporting behavior is important. Before making the investment in a management control system to attempt to curb opportunistic behavior in the participative budgeting setting, companies need to be aware of the environment (such as perceptions of social distance and distribution of production surplus) and how the environment can affect employees' reporting behavior. We introduce an understanding of social distance and distributional effects into the participative budgeting literature. As these two factors may vary by organization and have behavioral effects on budget reporting, knowledge of these behavioral effects associated with participative budgeting can assist companies in designing and successfully implementing management control systems to minimize agency costs.

Furthermore, prior research has endorsed reducing social distance between subordinates and managers as a facilitator of interpersonal cooperation and operating efficiency, but our findings provide important caveats regarding the role of reduced social distance in control practices. To the extent that the reduction of social distance generates benefits in

some task settings but causes problems in other settings, companies need to carefully consider these cross-functional externalities and adjust control policies accordingly in order to maximize the likelihood of achieving their overall strategic objectives.

II. THEORY AND HYPOTHESIS

Background

Organizations rely on participative budgeting to induce private information from employees (Baiman and Evans 1983). However, due to the conflict of interest between employees and management, agency costs (e.g., opportunistic behavior and information distortion) can arise (Jensen and Meckling 1998). Although standard agency theory suggests that employees will misreport to maximize personal economic interests, prior management accounting research finds that employees often deviate from full economic rationality, making honest or partially honest reports (Brown et al. 2009). Such behavior is attributed to employees' tradeoff between the following two conflicting motives: wealth maximization and social preferences for being, or appearing, honest (Luft 1997; Mittendorf 2006). Prior studies have examined important contextual factors that increase or decrease employees' honesty preferences, including the precision of information systems (Hannan et al. 2006; Abdel-Rahim and Stevens 2018), superiors' authorities (Rankin et al. 2008; Douthit and Stevens 2015), the span of control (Hannan, Rankin, and Towry 2010), and shared interest in budgetary slack (Church, Hannan, and Kuang 2012). Our study extends this literature by investigating whether social distance, an organizational attribute that is found to facilitate intrafirm cooperation and efficiency, affects the honesty of budget reporting in hierarchical organizations.

Social distance refers to the level of psychological proximity, intimacy, and closeness between individuals (Antonakis and Atwater 2002). In hierarchical organizations, due to the administrative structure, subordinates generally have limited interaction with higher-level roles like executives and owners and, therefore, are socially distant from higher-level management (Roethlisberger and Dickson 2003; Hill, Seo, Kang, and Taylor 2012). On the other hand, subordinates interact more frequently with their direct manager, who has greater influences on subordinates' behavior than higher-level management (Becker, Billings, Eveleth, and Gilbert 1996; Mayer et al. 2009).

Although subordinates have more interactions with their direct manager than with higher-level management, their perceived social distance from the direct manager can vary, depending on contextual factors including the span of management (i.e., size), physical structure, and the organizational culture (Napier and Ferris 1993; Antonakis and Atwater 2002). People generally have a positive attitude (e.g., more altruistic, reciprocal, and cooperative) toward others when social distance is reduced (Buchan, Johnson, and Croson 2006; Charness and Gneezy 2008; Charness, Haruvy, and Sonsino 2007a; Charness, Rigotti, and Rustichini 2007b; Ben-Ner, McCall, Stephane, and Wang 2009). Researchers have called for reducing social distance among organizational members because it has been shown to lead to favorable organizational outcomes such as better superior-subordinate relationships (Boyd and Taylor 1998), stronger group identity (Ashforth and Mael 1989), greater team cooperation (Cha, Park, and Lee 2014), and higher subordinate performance and satisfaction (Napier and Ferris 1993). In particular, it is argued that reducing social distance between the subordinate and manager enhances the manager's leader effectiveness, motivates the subordinate's effort, and increases the likelihood of achieving organizational objectives (Antonakis and Atwater 2002).[3] However, as elaborated next, we suggest that reducing social distance between the subordinate and manager can *positively* or *negatively* influence the subordinate's budget reporting behavior.

The Dual Effects of Reduced Social Distance

When subordinates in hierarchical organizations decide what budget to report, they are likely to consider how their report affects the manager's wealth and these other-regarding preferences can curb their slack creation (Rankin et al. 2008). As social distance is reduced, the subordinate will care more about the manager's economic well-being (Bohnet and Frey 1999a). The heightened concern for the manager's economic well-being, in turn, will prompt the subordinate to report more honestly. In this case, the reduction of social distance has an "other-regarding" effect that potentially increases subordinates' honesty.

[3] We note that some organizations might desire to keep subordinates socially distant from their superior. For example, in organizations with a culture of high power distance (i.e., people's willingness to accept unequal, role-based power distribution), subordinates tend to be highly compliant and loyal toward authority and, indeed, may "prefer to keep social distance from their superiors" (Lee, Scandura, and Sharif 2014, 695).

Additionally, in social interactions, people care about others' impression of them and do not want to be seen by others in a negative light (Schlenker 1980). Such impression concerns potentially have a self-regulatory effect, prompting people to avoid appearing unethical (Hannan et al. 2006). However, moral disengagement theory suggests that people can deactivate self-regulation by opportunistically rationalizing their unethical behavior (Bandura 1990, 1999, 2002). The reduction of social distance between the subordinate and manager indeed provides such a deactivation mechanism. Specifically, people are favorably disposed toward those who they feel psychologically close to and would like those close others to be better off (Small and Simonsohn 2008). To the extent that subordinates perceive this to be the case, they may believe that the manager sees it the same way because people's projection of others' attitude tends to be egocentric and overly anchored on their own attitude (Loewenstein 1996; Epley, Keysar, Boven, and Gilovich 2004).[4] For example, Church et al. (2012) find that employees who build slack in budget proposals unilaterally believe that their coworker favors slack creation if the coworker also benefits from the slack. Therefore, as social distance is reduced, subordinates are more likely to project onto the manager a belief that the subordinate is entitled to claiming a share of the surplus from the owner and, thus, are less concerned about the manager having a negative impression about misreporting. In this case, the reduction of social distance has a "self-justification" effect that potentially decreases subordinates' honesty.

To summarize, other things being equal, reducing social distance between the subordinate and manager will increase the subordinate's concern about the manager's wealth but decrease the subordinate's concern about the manager's impression. Ultimately, the net effect of reduced social distance on the subordinate's reporting behavior will depend on which of these two effects is stronger. We argue that the relative importance of these two effects is affected by the manager's stake in the divisional surplus, which we discuss next.

The Moderating Effect of Managerial Residual Claim on Social Distance and Reporting

A manager's claim to the production surplus is determined by the company's incentive and responsibility systems. Specifically, owners often delegate decision rights to managers, due to managers' informational advantage over owners (Fama and Jensen 1983). However, agency problems (e.g., moral hazard) can arise if effort- and risk-averse managers exploit their informational advantage to advance self-interests at the cost of owners (Baker et al. 1988). To address these agency problems, owners design compensation contracts to provide managers with appropriate incentives and efficient risk sharing (Baiman 1990). The resultant optimal contract typically pays managers a share of production output (to overcome effort aversion) and a risk premium (to overcome risk aversion) (Shavell 1979; Lambert 2001). From the agency theory perspective, managers' stake in production output should depend on the sensitivity of output to managers' effort and the precision (i.e., noisiness) of output as a measure of managers' effort (Banker and Datar 1989).

To the extent that the sensitivity and precision of performance measures vary with the operating environment, managers' stake in local output differs considerably across organizations (Keating 1997; Aggarwal and Samwick 2003). For example, in organizations with decentralized decision systems, managers are given considerable discretionary authority, and therefore, they have important influence on local output (Blackwell, Brickley, and Weisback 1994). In these situations, the level of local output is highly sensitive to the manager's effort, and as discussed earlier, owners are likely to link a significant portion of the manager's compensation to the production surplus produced by subordinates. Additionally, decentralized organizations tend to be flatter (Johnson 2022), which inherently reduces the number of residual claimants to the surplus, allowing for more significant portions to be distributed to managers. Conversely, in organizations where decision making is centralized, middle managers act more as a decision implementer or facilitator (Wooldridge, Schmid, and Floyd 2008). In these situations, production output is not a sensitive or precise measure of the manager's effort and, therefore, should not be weighted as a primary determinant of the manager's compensation (Banker and Datar 1989). Moreover, according to the controllability principle, if the manager has limited discretion in resource allocation and usage, he or she should not hold the primary responsibility for the surplus or deficiency of resource deployment (Burkert, Fischer, and Schäffer 2011).[5]

We contend that differences in the manager's stake in the production surplus will moderate the net effect of reducing social distance between the subordinate and manager on the subordinate's reporting behavior. To facilitate our discussion, we focus on how this moderation plays out as the manager's share of the surplus decreases. As discussed earlier, reduced social distance, *ceteris paribus*, increases the subordinate's concern for the manager's economic well-being.

[4] Relatedly, research suggests that people tend to overestimate the likelihood that others agree with their own attitudes, beliefs, or behavior, a bias referred to as "false consensus" (Marks and Miller 1987).

[5] Both decentralized and centralized decision systems are common in practice, and the degree of centralization is contingent on a variety of considerations, such as the company's business strategy, market environments, and technological needs (Brickley, Smith, and Zimmerman 1997; Acemoglu et al. 2007).

However, as the manager's share of the surplus decreases, slack creation will be less harmful to the manager, and therefore, the subordinate will have less reason to be concerned about misreporting affecting the manager's economic well-being. Consequently, the other-regarding effect of reduced social distance on the subordinate's behavior will be dampened.

On the other hand, as the manager's share of the surplus decreases, the self-justification effect of reduced social distance on the subordinate's behavior will be exacerbated. Specifically, when misreporting causes less damage to the manager, the subordinate is more likely to believe that the manager is willing to make a small sacrifice to substantially benefit a close other (Sonsino and Sirota 2003). In particular, the subordinate may feel that the manager is supportive of the close other (i.e., subordinate) being better off (Bohnet and Frey 1999b; Charness and Rabin 2002). As a result, the subordinate will be further "relieved" from impression concerns.

In summary, our discussion suggests that reducing social distance between the subordinate and manager can have an other-regarding effect or a self-justification effect on the subordinate's reporting behavior. Importantly, as the manager's stake in the surplus decreases, the other-regarding effect will be weakened, and the self-justification effect will be amplified. The end result is that, overall, the beneficial effect of reducing social distance between the subordinate and manager will dissipate. We formally state this prediction in the following hypothesis.

H: As a manager's stake in the residual surplus of the division decreases, the effect of reducing social distance between the subordinate and manager on the subordinate's reporting behavior will be less positive.

III. METHOD

Experimental Task and Design

We design a two-stage laboratory experiment to test our hypothesis. Participants are randomly assigned into three-person groups, with each consisting of a subordinate, a manager, and an owner.[6] Participants remain in the same group and the same role throughout the experiment. In stage one, all participants perform a real-effort slider task (Chan 2018). Participants view a series of sliders initially positioned at 0 along a scrollbar from 0 to 100. For each slider, participants are required to first solve a math problem and then adjust the slider to the number position that matches the answer to the problem. The slider task is used to manipulate the social distance between the subordinate and manager, details of which are provided below.

In stage two, subordinates are grouped with the same manager and owner as in stage one and perform a budget-reporting task adapted from Evans et al. (2001) to our multitier setting. The subordinate submits a budget report for production cost to the manager and owner. The subordinate knows the actual production cost for certain before submitting the budget report, whereas the manager and owner know only that the distribution of the production cost is between 4,000 and 6,000 Lira (an experimental currency that is later converted to cash). The subordinate's budget is always approved as long as it falls within the possible range.[7] The production generates a fixed revenue and the productive surplus (i.e., the fixed revenue minus the budgeted cost) is shared by the manager and owner. The subordinate receives a base salary of 500 Lira, and the manager and owner each receive a base salary of 700 Lira.[8] In addition, any difference between the budgeted cost and the actual cost (i.e., slack) is kept by the subordinate, at the expense of the manager and owner. That is, if the subordinate overstates the budget, the subordinate's payoff increases, but the payoffs of the manager and owner as residual claimants decrease.

We use a 2 × 3 between-participants design, with two manipulated factors. The first manipulated factor is the social distance between the subordinate and manager. In the low-distance condition (hereinafter referred to as the LD condition), subordinates and managers are seated together. The subordinate and manager in the same group compete against all other pairs of subordinates and managers on the slider task in stage one. The pair that correctly adjusted most sliders wins a prize of 1,000 Lira, and the prize is equally split between the wining subordinate and manager. Owners are seated by themselves and compete among themselves on the slider task. The owner who correctly adjusted most sliders wins a prize of 500 Lira. In the high-distance condition (hereinafter referred to as the HD condition), subordinates are seated

[6] Following recent experimental research in this area (Brink, Coats, and Rankin 2018), we use a participative budgeting context because this context "clarifies the meaning of the task in a way that is more easily interpreted" (Haynes and Kachelmeier 1998, 104). Although it is possible that participants might perceive inflating budgets to be justifiable within this context, such perceptions (if existent) would likely attenuate the behavioral effects examined in this study and, thus, work against finding support for our hypothesis.

[7] We do not allow the manager and owner to use economic controls (e.g., production hurdles or audits) because using these controls would make it difficult to tell whether subordinates' reporting decisions are driven by an economic cost-and-benefit analysis or by the psychological effects that we aim to examine.

[8] Subordinates are not informed of other roles' base salary. We made this design choice to minimize the possibility for subordinates to achieve a specific payoff distribution (Douthit and Stevens 2015).

by themselves and compete among themselves on the slider task. The subordinate who correctly adjusted most sliders wins a prize of 500 Lira. Managers and owners are seated together. The manager and owner in the same group compete against all other pairs of managers and owners on the slider task in stage one. The pair that correctly adjusted most sliders wins a prize of 1,000 Lira, and the prize is equally split between the winning manager and owner.

The second manipulated factor is the impact of slack on the manager's and the owner's payoffs. In one condition, the manager's and the owner's payoffs are both reduced by 50 percent of the slack created by the subordinate (referred to as the 50/50 condition). In the second condition, the manager's payoff is reduced by 5 percent of the slack and the owner's payoff is reduced by 95 percent of the slack created by the subordinate (referred to as the 5/95 condition). In addition, to shed light on how the effect of reduced social distance directionally changes with the manager's share in the surplus, we include a third condition where the manager's payoff is reduced by 33 percent of the slack and the owner's payoff is reduced by 67 percent of the slack created by the subordinate (referred to as the 33/67 condition). Payoff formulas for the three conditions are summarized in Table 1.

We highlight two important design choices regarding our manipulation of the manager's stake in the production surplus. First, as discussed earlier, agency theory suggests that the manager's stake should be endogenously determined based on their operating environment. We choose to exogenously manipulate the manager's stake because it would significantly complicate the experimental setting to create the operating environments leading the owner to select a specific level of stake for the manager. Additionally, giving the owner this discretion might give rise to confounding factors such as perceived unfairness or distrust, which could interfere with our social distance manipulation to affect subordinates' behavior (e.g., through third-party reciprocity).[9]

Second, although in practice the manager's stake varies continuously across firms, we manipulate it as a discrete variable (50/50 versus 33/67 versus 5/95) to provide a parsimonious test of the hypothesis while capturing the substance of our construct of interest. That is, by creating these distinct residual claim distributions, we can feasibly observe how subordinates' behavior systematically changes as the manager's stake in the residual claim decreases. In the 50/50 condition, we operationalize the manager's stake as 50 percent of the surplus of a production project rather than the surplus of the entire organization because a nonowner stakeholder is not likely to have claim to one-half of the organization-wide residual surplus. We use a relatively high percentage to ensure a strong manipulation of the independent variable (Libby, Bloomfield, and Nelson 2002).

Participants and Experimental Procedures

Three hundred twenty-one undergraduate and graduate students were recruited to participate in our experiment.[10] Participants' average age was 22 years and 45 percent were male. The experiment task was computerized using the z-Tree software (Fischbacher 2007). Upon entering the lab, participants received a copy of the general instructions with a colored number at the bottom. This number served as the participant identifier (ID) and was also part of the social distance manipulation. In the LD conditions, participants who received instructions with *red* participant ID numbers were assigned the roles of subordinate and manager and sat in the same row, whereas participants who received instructions with *blue* participant ID numbers were assigned the role of owner and sat in another row, back facing subordinates and managers.[11] In the HD conditions, participants who received instructions with *blue* participant ID numbers were assigned the roles of manager and owner and sat in the same row, whereas participants who received instructions with *red* participant ID numbers were assigned the role of subordinate and sat in another row, back facing managers and owners.

Experimental procedures were similar across the six conditions, except for the variations necessitated by our experimental manipulation. After taking their seats in the lab, participants signed the informed consent form and then read stage one instructions on the computer. Participants took a short quiz to ensure that they understood the tournament in stage one before proceeding to the slider task. After completing the slider task and before receiving stage two instructions, subordinates answered a question, "Within the organization, who did you feel closer to?" on an 11-point scale where 1 = "closer to manager" and 11 = "closer to owner." This question is designed to measure the perceived social distance between the subordinate and the manager. Participants did not receive feedback about their or others'

[9] Although the exogenous determination of the manager's stake facilitates experimental control and execution, we acknowledge that this design choice is inconsistent with standard agency theory and discuss it as a limitation of our study in the Discussion and Conclusion section.

[10] We obtained ethics approvals for conducting the studies reported in this paper.

[11] To ensure anonymity, subordinate-participants did not know the personal identities of the manager- and owner-participants they were grouped with, but they knew that they were grouped with the same manager- and owner-participants in both stages of the experiment. Throughout the experiment, there was no communication allowed among different roles.

TABLE 1

Payoff Formulas

Panel A: Payoff Formulas in the 5/95 Conditions

Subordinate's payoff = 500 + (Budget – Actual cost)
Manager's payoff = 700 + 5% × [(Fixed revenue – Actual cost) – (Budget – Actual Cost)]
Owner's payoff = 700 + 95% × [(Fixed revenue – Actual cost) – (Budget – Actual Cost)]

Panel B: Payoff Formulas in the 33/67 Conditions

Subordinate's payoff = 500 + (Budget – Actual cost)
Manager's payoff = 700 + 33% × [(Fixed revenue – Actual cost) – (Budget – Actual Cost)]
Owner's payoff = 700 + 67% × [(Fixed revenue – Actual cost) – (Budget – Actual Cost)]

Panel C: Payoff Formulas in the 50/50 Conditions

Subordinate's payoff = 500 + (Budget – Actual cost)
Manager's payoff = 700 + 50% × [(Fixed revenue – Actual cost) – (Budget – Actual Cost)]
Owner's payoff = 700 + 50% × [(Fixed revenue – Actual cost) – (Budget – Actual Cost)]

performance in the slider task to avoid any confounding effect of stage one performance on perceived social distance and subsequent reporting choices.

Participants then read stage two instructions on the computer. After reading the instructions, participants answered another quiz to ensure that they fully understood the instructions and were not able to proceed until all questions were answered correctly. Then, subordinates performed the budget reporting task for ten periods. At the end of the tenth period, participants answered a postexperimental questionnaire. One period was randomly selected for payment, and participants received information about their stage one and two payoffs. Participants were paid in private in cash before leaving.

IV. RESULTS

Variable Measurement and Manipulation Check

We have two main independent variables. The first independent variable, labeled *Distance*, is a dummy variable that equals 1 for the HD condition and 0 for the LD condition. The second independent variable, labeled *Split*, is a categorical variable that equals 0 for the 50/50 condition, 1 for the 5/95 condition, and 2 for the 33/67 condition. Our main dependent variable, which is adopted from prior accounting literature (e.g., Evans et al. 2001), is computed as 1 – [(budgeted cost – actual cost)/(6,000 – actual cost)]. This measure, labeled *Honesty*, takes a value from 0 to 1, as follows: if a subordinate behaves fully honestly by reporting the actual cost, the value is 1; and if a subordinate maximizes self-interest by reporting the maximum possible amount of 6,000, the value is 0. Values between 0 and 1 represent subordinates who report an amount higher than the actual cost but lower than the maximum possible amount (i.e., partially honest). The means of *Honesty* across the ten periods for the six experimental conditions are presented in Table 2, Panel A and depicted in Figure 1.

At the end of stage one of the experiment, we measure the subordinate's perception of the social distance between self and the manager by asking the question, "Within the organization, who did you feel closer to?" Responses are given on an 11-point scale where 1 = "closer to manager" and 11 = "closer to owner." We find that subordinates' rating is significantly lower ($t_{105} = 4.80$, $p < 0.001$) in the LD condition (3.09) than that in the HD condition (5.28). This result indicates that our manipulation of the contests to generate low versus high social distance is successful.

Tests of Hypothesis

Our hypothesis predicts an interaction effect of reduced social distance and residual claim distribution on subordinates' honesty. To test our hypothesis, we conduct a full factorial ANOVA. In the test model, the dependent measure is the participant's average *Honesty* over the ten periods and the independent measures are *Distance*, *Split*, and the interaction between *Distance* and *Split*.

As reported in Table 2, Panel B the ANOVA results reveal a statistically significant interaction effect ($p = 0.045$), suggesting that reduced social distance and residual claim distribution jointly influence the honesty of subordinates'

TABLE 2

Tests of Hypothesis

Panel A: Descriptive Statistics: The Mean and [Std. Dev.] of *Honesty*

	High Social Distance	Low Social Distance
50/50 Split	0.25	0.39
	[0.23]	[0.22]
	n = 16	n = 16
33/67 Split	0.36	0.28
	[0.33]	[0.32]
	n = 19	n = 21
5/95 Split	0.37	0.17
	[0.27]	[0.25]
	n = 18	n = 17

Panel B: ANOVA (DV = The Participant's Average *Honesty* Over the Ten Periods)

Variables	Partial SS	df	MS	F-statistic	p-value
Distance	0.06	1	0.06	0.75	0.389
Split	0.06	2	0.03	0.36	0.696
Distance × *Split*	0.50	2	0.25	3.20	0.045
Residual	7.82	101	0.08		

	df	t-statistic	p-value
For the 50/50 split:			
High versus low social distance	30	1.77	0.087
For the 33/67 split:			
High versus low social distance	38	0.83	0.413
For the 5/95 split:			
High versus low social distance	33	2.20	0.035
For the high social distance:			
50/50 split versus 5/95 split	32	1.40	0.171
For the low social distance:			
50/50 split versus 5/95 split	31	2.60	0.014

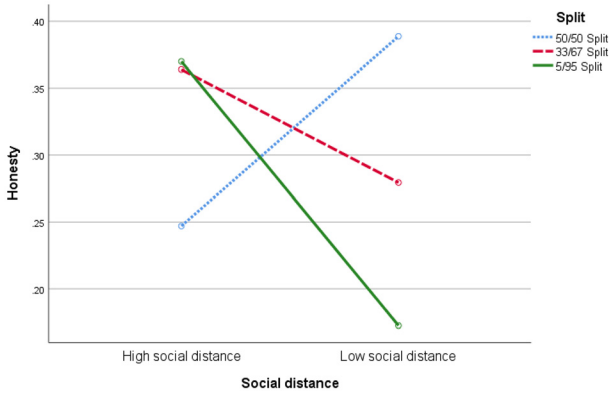
p-values are two-tailed.

Variable Definitions:
Honesty = 1 – [(budgeted cost – actual cost)/(6,000 – actual cost)];
Distance = 0 for the low social distance (LD) condition and 1 for the high social distance (HD) condition; and
Split = 0 for the 50/50 condition, 1 for the 5/95 condition, and 2 for the 33/67 condition.

budget reporting. To understand the nature of the interaction, we conduct simple-effect tests. As shown in Table 2, Panel B under the 50/50 split, subordinates report marginally more honestly (p = 0.087) in the LD condition (0.39) than in the HD condition (0.25). By comparison, under the 5/95 split, subordinates report significantly less honestly (p = 0.035) in the LD condition (0.17) than in the HD condition (0.37). These results support our hypothesis, suggesting that the net effect of reduced social distance on subordinates' honesty changes from positive to negative (from the organization's standpoint) as the manager's share of residual claim decreases. Finally, under the 33/67 split, the level of honesty does not significantly differ (p = 0.413) between the LD condition (0.28) and the HD condition (0.36). This result suggests that, when misreporting has a moderate impact on the manager, such an impact may not be big enough to boost subordinates' other-regarding concerns and also may not be trivial enough for subordinates to self-justify the harm caused by misreporting to the manager. Overall, the test results are consistent with our theory and prediction.[12]

[12] For completeness, we also tested the simple effects of *Split* (50/50 versus 5/95) in the HD and LD conditions. When subordinates perceive high social distance from the manager, honesty is not affected by the manager's stake in the residual claim (p = 0.171). When subordinates perceive low social distance from the manager, they report more honestly in the 50/50 condition than in the 5/95 condition (p = 0.014).

FIGURE 1
The Mean *Honesty* by Condition



This figure depicts the mean *Honesty* level across the ten periods in the six experimental conditions.
Honesty = 1 – [(budgeted cost – actual cost) / (6,000 – actual cost)].
(The full-color version is available online.)

Mediation Analysis

To shed light on the psychological mechanism underlying subordinates' reporting behavior, we conduct a mediation analysis. Our theory suggests that a decrease in the manager's stake in the residual surplus will attenuate subordinates' concern about the manager's economic well-being. In the postexperimental questionnaire, we measure subordinates' concern about the manager's economic well-being by asking them to answer the question, "In deciding the budget, to what extent did you consider the manager's payoff?" on an 11-point scale (1 = "not at all" and 11 = "very much"), labeled *Manager_Payoff*. Our theory also suggests that a decrease in the manager's stake will deactivate subordinates' concern about the manager's impression of misreporting. We measure subordinates' concern about the manager's impression by asking them to answer the postexperimental question, "In deciding the budget, to what extent did you consider the manager's overall impression about the way you make the budget?" on an 11-point scale (1 = "not at all" and 11 = "very much"), labeled *Manager_Impression*.

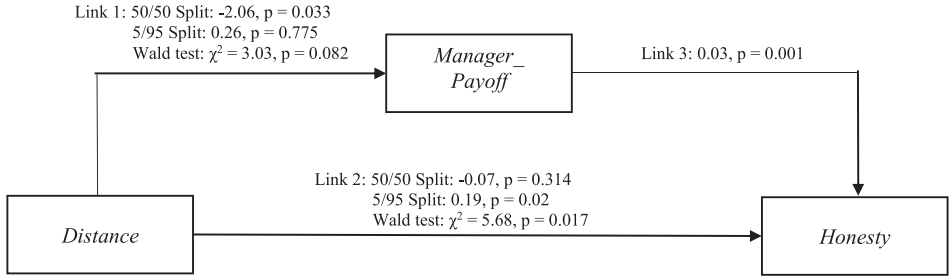
We conduct structural equation modeling (SEM)-based path analyses to test the role of *Manager_Payoff* and *Manager_Impression* in the impact of reduced social distance on subordinates' reporting behavior conditional on the residual claim distribution. Given the nature of our prediction and the pattern of our experimental results, we exclude the 33/67 condition from the analyses. The results are reported in Figure 2. The path models provide a good fit for our data, as evidenced by nonsignificant chi-squared statistics ($p > 0.20$), comparative fix index (CFI) above 0.94, and standardized root mean square residuals (SRMR) below 0.07 (Hu and Bentler 1999; Kline 2016).

First, we focus on the mediation effect of *Manager_Payoff*. As shown in Figure 2, Panel A, reduced social distance significantly increases *Manager_Payoff* in the 50/50 condition (Link 1: $p = 0.033$), but this effect becomes nonsignificant in the 5/95 condition ($p = 0.775$). A Wald test reveals that this difference is marginally significant ($p = 0.082$), indicating that a decrease in the manager's stake dampens the other-regarding effect of reduced social distance on honesty by weakening the subordinate's concern for the manager's economic well-being. After controlling for *Manager_Payoff*, the direct effect of reduced social distance on honesty becomes nonsignificant in the 50/50 condition (Link 2: $p = 0.314$) but remains significant in the 5/95 condition ($p = 0.02$), and a Wald test shows that this difference is statistically significant ($p = 0.017$).[13] These results suggest that the effect of reduced social distance on subordinates' honesty in the 50/50 condition is fully mediated by subordinates' concern about the manager's economic well-being, and yet this mediation effect does not exist in the 5/95 condition.

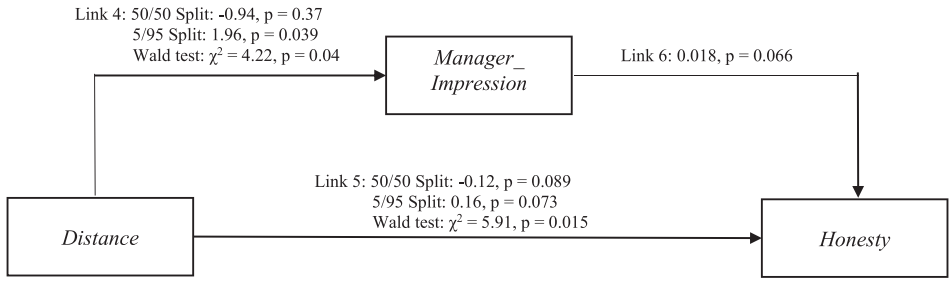
[13] The path model in Figure 2, Panel A allows us to test specifically whether the direct effect for *Manager_Payoff* differs between 50/50 and 5/95 conditions, and the model in Figure 2, Panel B allows us to do so for *Manager_Impression*. We also ran a model with both *Manager_Payoff* and *Manager_Impression* included; the omnibus direct effect is not significant in the 50/50 condition ($p = 0.199$) and is significant in the 5/95 condition ($p = 0.06$; Wald test: $p = 0.026$); statistical inferences for other links are similar to those reported in Figure 2.

FIGURE 2
Mediation Analysis

Panel A: The Other-Regarding Effect of Reduced Social Distance on Honesty



Panel B: The Self-Justification Effect of Reduced Social Distance on Honesty



The models test the mediation effects of subordinates' concern about the manager's payoff and concern about the manager's impression on the impact of reduced social distance on honesty, conditional on the 50/50 versus 5/95 split. Data from the 33/67 condition are excluded from the analysis. Path coefficients and two-tailed p-values are reported.

Variable Definitions:
Distance = 0 for the low social distance (LD) condition and 1 for the high social distance (HD) condition;
Manager_Payoff = Subordinate-participants' rating on the postexperimental question, "In deciding the budget, to what extent did you consider the manager's payoff?" on an 11-point scale where 1 = "not at all" and 11 = "very much;"
Manager_Impression = Subordinate-participants' rating on the postexperimental question, "In deciding the budget, to what extent did you consider the manager's overall impression about the way you make the budget?" on an 11-point scale where 1 = "not at all" and 11 = "very much;" and
Honesty = 1 – [(budgeted cost – actual cost)/(6,000 – actual cost)]. The participant's average *Honesty* over the ten periods is used in the analysis.

Next, we examine the mediating role of *Manager_Impression*. As presented in Figure 2, Panel B, reduced social distance does not have a significant effect on *Manager_Impression* in the 50/50 condition (Link 4: p = 0.37) but significantly decreases *Manager_Impression* in the 5/95 condition (p = 0.039). A Wald test shows that this difference is statistically significant (p = 0.04), suggesting that a decrease in the manager's stake amplifies the self-justification effect of reduced social distance on honesty by tempering the subordinate's concern about the manager's impression. After controlling for *Manager_Impression*, the direct effect of reduced social distance on honesty becomes less significant in the 5/95 condition (Link 5: p = 0.073), indicating that the effect of reduced social distance on honesty in the 5/95 condition is partially mediated by subordinates' impression concern. Conversely, this mediation does not hold in the 50/50 condition due to the nonsignificance of Link 4 and the lack of change in the direct effect. Overall, the results of the path analyses are consistent with our theory.[14]

Supplemental Study

Our experimental results show that reduced social distance decreases subordinates' honesty in the 5/95 condition. This finding is consistent with our theory that, as the manager's share of residual claim decreases, subordinates will be

[14] As our mediators are measured via the postexperimental questionnaire after the main dependent variable, the measurement is subject to the carryover effect (i.e., it might be influenced by participants' reporting decision) discussed in Asay et al. (2022). We acknowledge this as a limitation of the study. As discussed in the next section, we conduct a supplemental study to provide additional evidence about the theorized thought process underlying subordinates' decisions.

less concerned about managers' negative impression of misreporting because they assume that managers view slack creation as an acceptable means to make the close other (i.e., subordinates themselves) better off. Consistently, the mediation analysis presented above suggests that subordinates' impression concerns mediate the effect of reduced social distance on honesty in the 5/95 condition. We design a supplemental study to further examine the underlying psychological process.

We conduct the supplemental study through Prolific, an online platform for academic research (Palan and Schitter 2018; Sherf and Morrison 2020; Stuppy, Mead, and Osselaer 2020). A total of 60 participants took part in the study. Participants' average age was 36 and 38 percent were male. On average, participants had 14 years' full-time work experience, had been with their current employer for 3.8 years, and had worked under their direct supervisor for 2.6 years. Participants received a fixed compensation of $2 for completing the study.

We first measure participants' perceived social distance from their direct supervisor in their current employment by asking them to indicate their agreement with the four statements "My direct supervisor is like a friend to me," "I have a good relationship with my direct supervisor," "I feel that my direct supervisor is an advocate for me," and "I am comfortable interacting with my direct supervisor," on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The Cronbach's alpha of these four items is 0.90, and a factor analysis shows that the four items load on a single factor (eigenvalue = 3.16; proportion of variance explained = 79.07 percent). We create a variable, labeled *Social_distance*, using the mean of these four ratings (reverse coded to match the concept of social distance). Then, participants read a vignette that asks them to assume that they have an opportunity to create slack in a project budget in their current employment environment. The slack benefits the participant at the cost of the organization but has little impact on his or her direct supervisor. After reading the vignette, participants answer a question, "If you submit a budget that contains slack, to what extent do you think your direct supervisor would view it as acceptable?" (1 = "not acceptable at all" and 7 = "very acceptable"), labeled *Acceptable*.

An untabulated OLS regression of *Acceptable* on *Social_distance* finds that the coefficient on *Social_distance* is significantly negative ($p = 0.008$). The regression result remains significant (1) after controlling for participants' number of years working with the current employer, number of years working under their direct supervisor, and their full-time work experience ($p = 0.002$) and (2) when an alternative independent measure, the factor score extrapolated from the four social distance items, is used in the regression, with or without the above control variables ($p < 0.007$). These results provide further support to our theoretical prediction, suggesting that participants who feel lower social distance from their direct supervisor believe the supervisor will view slack creation as more acceptable.[15]

V. DISCUSSION AND CONCLUSION

In this paper, we conduct a laboratory experiment to investigate how the honesty of subordinates' budget reporting in hierarchical organizations is jointly influenced by two important contextual attributes: social distance between subordinates and their direct manager and the direct manager's stake in the surplus produced by subordinates. We find that social distance and residual claimant rights have a significant interactive effect on subordinates' reporting behavior, in that, as the manager's stake in the residual claim decreases, the effect of reduced social distance on subordinates' honesty deteriorates. Consistent with our theory, SEM-based mediation analyses provide evidence that a decrease in the manager's share of the residual surplus negatively affects the effect of reduced social distance on subordinates' honesty by undermining subordinates' other-regarding concern and exacerbating subordinates' self-justification for misreporting. The supplemental study provides evidence from experienced employees that, when the manager is essentially unaffected by subordinates' slack creation, subordinates are more likely to believe that the manager views slack creation as acceptable when social distance is reduced. These supplemental findings lend additional credence to our theory.

Our findings have important theoretical and practical implications. The reduction of social distance between the subordinate and manager is found to lubricate the leader-follower relationships, enhance interpersonal cooperation, and improve subordinates' morale and performance (Napier and Ferris 1993; Cha et al. 2014). However, our study provides an important caveat about prior findings by suggesting that the effect of reduced social distance on subordinate's reporting behavior and, in turn, on the efficiency of organizational resource allocation can be moderated by the manager's

[15] We also ask participants how many levels of upper management their direct supervisor reports to. Twenty-two participants (36.67 percent) indicated that they do not know. For those who provided a response, we include the response in the regression of *Acceptable* on *Social_distance* and find that *Social_distance* remains significant ($p = 0.038$). That is, the effect of reduced social distance on subordinates' perception of the manager's attitude is robust to the size of the organization's hierarchy. This result provides some reassurance for the validity of using the three-tier structure to test our theory. Interestingly, the fact that a noticeable portion of participants do not have a clear idea about the levels of upper management beyond their direct supervisor is consistent with our earlier discussion that subordinates generally have limited interaction and high social distance with upper management beyond their direct supervisor. However, this result should be interpreted with caution due to the missing data.

stake in the residual claim. Although residual claim distribution may be dependent on other organizational factors, including the level of flatness or centralization, companies need to be aware of these effects when designing their responsibility and accountability systems in order to maximize the overall effectiveness of management control.

Our study is subject to several limitations, which provide ample avenues for future research. As discussed earlier, we exogenously manipulate managers' stake in the production surplus to simplify experimental design and eliminate potential confounds. In practice, managers' stake may be endogenous to the operating environment and the way in which managers' stake is determined could have an impact on their behavior. We note that this design choice is not likely to play a big role in our study because manager-participants do not make any decision or interact with subordinate-participants in the budget reporting task. However, this design choice might affect the generalizability of our findings to naturally occurring settings where managers are more actively involved in the budgeting process. Future research can systematically investigate managers' behavior in these settings and whether managers' behavior has a cascading effect on subordinates' reporting decisions.

We use a trust contract setting where the manager and owner do not impose any control over the quality of the subordinate's report. We made this design choice in order to preclude any confounding effect caused by the subordinate's consideration of economic costs of misreporting. Our setting is analogous to incomplete contracting environments in organizational practices (Aghion, Bloom, and Van Reenen 2014). Importantly, our findings also have implications for organizational settings where economic controls are available. Although economic controls can curb misreporting, they are costly and sometimes affect subordinates' morale (Baker et al. 1988; Kramer 1999). Thus, incorporating behavioral effects such as those documented in this paper into the control system can help lower control costs and, thereby, maximize the total control efficiency. In our experiment, subordinates know the actual cost for certain, whereas in practice, their private information regarding the actual state for future periods may contain noise (i.e., uncertainty). Subordinates could exploit the uncertainty to self-servingly justify misreporting. It would be interesting to investigate whether subordinates' reporting behavior differs when such environmental uncertainty is present.

Moreover, in our study, the subordinate makes the reporting decision individually, whereas in practice, multiple subordinates may jointly provide inputs in the preparation of budget reports. In such a group decision setting, the subordinate may perceive a low social distance from the manager as well as from peers. Therefore, peers' preferences can have an important impact (e.g., development of group norm; diffusion of responsibility) on the subordinate's decision making. It would be intriguing to investigate how factors related to group decision settings may change the effect of the manager's characteristics on the subordinate's reporting behavior.

REFERENCES

Abdel-Rahim, H. Y., and D. E. Stevens. 2018. Information system precision and honesty in managerial reporting: A re-examination of information asymmetry effects. *Accounting, Organizations and Society* 64: 31–43. https://doi.org/10.1016/j.aos.2017.12.004

Acemoglu, D., P. Aghion, C. Lelarge, J. van Reenen, and F. Zilibotti. 2007. Technology, information, and the decentralization of the firm. *The Quarterly Journal of Economics* 122 (4): 1759–1799. https://doi.org/10.1162/qjec.2007.122.4.1759

Aggarwal, R. K., and A. A. Samwick. 2003. Performance incentives within firms: The effect of managerial responsibility. *The Journal of Finance* 58 (4): 1613–1650. https://doi.org/10.1111/1540-6261.00579

Aghion, P., N. Bloom, and J. Van Reenen. 2014. Incomplete contracts and the internal organization of firms. *Journal of Law, Economics, and Organization* 30 (suppl 1): i37–i63. https://doi.org/10.1093/jleo/ewt003

Alchian, A. A., and H. Demsetz. 1972. Production, information costs, and economic organization. *American Economic Review* 62 (5): 777–795.

Anderson, C., and C. E. Brown. 2010. The functions and dysfunctions of hierarchy. *Research in Organizational Behavior* 30: 55–89. https://doi.org/10.1016/j.riob.2010.08.002

Antonakis, J., and L. Atwater. 2002. Leader distance: A review and a proposed theory. *The Leadership Quarterly* 13 (6): 673–704. https://doi.org/10.1016/S1048-9843(02)00155-8

Asay, H. S., R. D. Guggenmos, K. Kadous, L. Koonce, and R. Libby. 2022. Theory testing and process evidence in accounting experiments. *The Accounting Review* 97 (6): 23–43. https://doi.org/10.2308/TAR-2019-1001

Ashforth, B. E., and F. Mael. 1989. Social identity theory and the organization. *The Academy of Management Review* 14 (1): 20–39. https://doi.org/10.2307/258189

Baiman, S. 1990. Agency research in managerial accounting: A second look. *Accounting, Organizations and Society* 15 (4): 341–371. https://doi.org/10.1016/0361-3682(90)90023-N

Baiman, S., and J. H. Evans. 1983. Pre-decision information and participative management control systems. *Journal of Accounting Research* 21 (2): 371–395. https://doi.org/10.2307/2490780

Baker, G. P. 2000. The use of performance measures in incentive contracting. *American Economic Review* 90 (2): 415–420. https://doi.org/10.1257/aer.90.2.415

Baker, G. P., M. C. Jensen, and K. J. Murphy. 1988. Compensation and incentives: Practice versus theory. *The Journal of Finance* 43 (3): 593–616. https://doi.org/10.1111/j.1540-6261.1988.tb04593.x

Bandura, A. 1990. Selective activation and disengagement of moral control. *Journal of Social Issues* 46 (1): 27–46. https://doi.org/10.1111/j.1540-4560.1990.tb00270.x

Bandura, A. 1999. Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review* 3 (3): 193–209. https://doi.org/10.1207/s15327957pspr0303_3

Bandura, A. 2002. Selective moral disengagement in the exercise of moral agency. *Journal of Moral Education* 31 (2): 101–119. https://doi.org/10.1080/0305724022014322

Banker, R. D., and S. M. Datar. 1989. Sensitivity, precision, and linear aggregation of signals for performance evaluation. *Journal of Accounting Research* 27 (1): 21–39. https://doi.org/10.2307/2491205

Becker, T. E., R. S. Billings, D. M. Eveleth, and N. L. Gilbert. 1996. Foci and bases of employee commitment: Implications for job performance. *Academy of Management Journal* 39 (2): 464–482. https://doi.org/10.2307/256788

Ben-Ner, A., B. P. McCall, M. Stephane, and H. Wang. 2009. Identity and in-group/out-group differentiation in work and giving behaviors: Experimental evidence. *Journal of Economic Behavior & Organization* 72 (1): 153–170. https://doi.org/10.1016/j.jebo.2009.05.007

Blackwell, D. W., J. A. Brickley, and M. S. Weisback. 1994. Accounting information and internal performance evaluation: Evidence from Texas banks. *Journal of Accounting and Economics* 17 (3): 331–358. https://doi.org/10.1016/0165-4101(94)90032-9

Bohnet, I., and B. S. Frey. 1999a. Social distance and other-regarding behavior in dictator games: Comment. *American Economic Review* 89 (1): 335–339. https://doi.org/10.1257/aer.89.1.335

Bohnet, I., and B. S. Frey. 1999b. The sound of silence in prisoner's dilemma and dictator games. *Journal of Economic Behavior & Organization* 38 (1): 43–57. https://doi.org/10.1016/S0167-2681(98)00121-8

Boyd, N. G., and R. R. Taylor. 1998. A developmental approach to the examination of friendship in leader-follower relationships. *The Leadership Quarterly* 9 (1): 1–25. https://doi.org/10.1016/S1048-9843(98)90040-6

Brandes, P., R. Dharwadkar, and K. Wheatley. 2004. Social exchanges within organizations and work outcomes. *Group & Organization Management* 29 (3): 276–301. https://doi.org/10.1177/1059601103257405

Brickley, J. A., C. W. Smith, and J. L. Zimmerman. 1997. *Managerial Economics and Organizational Architecture*. New York, NY: The McGraw-Hill Companies, Inc.

Brink, A. G., J. C. Coats, and F. W. Rankin. 2018. Who's the boss? The economic and behavioral implications of various characterizations of the superior in participative budgeting research. *Journal of Accounting Literature* 41 (1): 89–105. https://doi.org/10.1016/j.acclit.2018.03.004

Brown, J. L., J. H. Evans, and D. V. Moser. 2009. Agency theory and participative budgeting experiments. *Journal of Management Accounting Research* 21 (1): 317–345. https://doi.org/10.2308/jmar.2009.21.1.317

Buchan, N. R., E. J. Johnson, and R. T. A. Croson. 2006. Let's get personal: An international examination of the influence of communication, culture, and social distance on other regarding preferences. *Journal of Economic Behavior & Organization* 60 (3): 373–398. https://doi.org/10.1016/j.jebo.2004.03.017

Burkert, M., F. M. Fischer, and U. Schäffer. 2011. Application of the controllability principle and managerial performance: The role of role perceptions. *Management Accounting Research* 22 (3): 143–159. https://doi.org/10.1016/j.mar.2011.03.002

Cha, M., J. Park, and J. Lee. 2014. Effects of team member psychological proximity on teamwork performance. *Team Performance Management* 20 (1/2): 81–96. https://doi.org/10.1108/TPM-03-2013-0007

Chan, E. W. 2018. Promotion, relative performance information, and the peter principle. *The Accounting Review* 93 (3): 83–103. https://doi.org/10.2308/accr-51890

Charness, G., and U. Gneezy. 2008. What's in a name? Anonymity and social distance in dictator and ultimatum games. *Journal of Economic Behavior & Organization* 68 (1): 29–35. https://doi.org/10.1016/j.jebo.2008.03.001

Charness, G., and M. Rabin. 2002. Understanding social preferences with simple tests. *The Quarterly Journal of Economics* 117 (3): 817–869. https://doi.org/10.1162/003355302760193904

Charness, G., E. Haruvy, and D. Sonsino. 2007a. Social distance and reciprocity: An internet experiment. *Journal of Economic Behavior & Organization* 63 (1): 88–103. https://doi.org/10.1016/j.jebo.2005.04.021

Charness, G., L. Rigotti, and A. Rustichini. 2007b. Individual behavior and group membership. *American Economic Review* 97 (4): 1340–1352. https://doi.org/10.1257/aer.97.4.1340

Church, B. K., R. L. Hannan, and X. J. Kuang. 2012. Shared interest and honesty in budget reporting. *Accounting, Organizations and Society* 37 (3): 155–167. https://doi.org/10.1016/j.aos.2012.01.002

Cole, M. S., H. Bruch, and B. Shamir. 2009. Social distance as a moderator of the effects of transformational leadership: Both neutralizer and enhancer. *Human Relations* 62 (11): 1697–1733. https://doi.org/10.1177/0018726709346377

Davis, W. D., and W. L. Gardner. 2004. Perceptions of politics and organizational cynicism: An attributional and leader-member exchange perspective. *The Leadership Quarterly* 15 (4): 439–465. https://doi.org/10.1016/j.leaqua.2004.05.002

Douthit, J. D., and D. E. Stevens. 2015. The robustness of honesty effects on budget proposals when the superior has rejection authority. *The Accounting Review* 90 (2): 467–493. https://doi.org/10.2308/accr-50937

Eisenhardt, K. M. 1989. Agency theory: An assessment and review. *The Academy of Management Review* 14 (1): 57–74. https://doi.org/10.2307/258191

Epley, N., B. Keysar, L. V. Boven, and T. Gilovich. 2004. Perspective taking as egocentric anchoring and adjustment. *Journal of Personality and Social Psychology* 87 (3): 327–339. https://doi.org/10.1037/0022-3514.87.3.327

Evans, J. H., III, R. L. Hannan, R. Krishnan, and D. V. Moser. 2001. Honesty in managerial reporting. *The Accounting Review* 76 (4): 537–559. https://doi.org/10.2308/accr.2001.76.4.537

Fama, E. F., and M. C. Jensen. 1983. Separation of ownership and control. *The Journal of Law and Economics* 26 (2): 301–325. https://doi.org/10.1086/467037

Fischbacher, U. 2007. z-Tree: Zurich toolbox for ready-made economic experiments. *Experimental Economics* 10 (2): 171–178. https://doi.org/10.1007/s10683-006-9159-4

Hannan, R. L., F. W. Rankin, and K. L. Towry. 2006. The effect of information systems on honesty in managerial reporting: A behavioral perspective. *Contemporary Accounting Research* 23 (4): 885–918. https://doi.org/10.1506/8274-J871-2JTT-5210

Hannan, R. L., F. W. Rankin, and K. L. Towry. 2010. Flattening the organization: The effect of organizational reporting structure on budgeting effectiveness. *Review of Accounting Studies* 15 (3): 503–536. https://doi.org/10.1007/s11142-010-9132-5

Haynes, C. M., and S. J. Kachelmeier. 1998. The effects of accounting contexts on accounting decisions: A synthesis of cognitive and economic perspectives in accounting experimentation. *Journal of Accounting Literature* 17: 97–136.

Hill, N. S., M. G. Seo, J. H. Kang, and M. S. Taylor. 2012. Building employee commitment to change across organizational levels: The influence of hierarchical distance and direct managers' transformational leadership. *Organization Science* 23 (3): 758–777. https://doi.org/10.1287/orsc.1110.0662

Hu, L. T., and P. M. Bentler. 1999. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal* 6 (1): 1–55. https://doi.org/10.1080/10705519909540118

Jensen, M. C., and W. H. Meckling. 1998. Divisional performance measurement. In *Foundations of Organizational Strategy*, edited by M. C. Jensen, 345–362. Cambridge, MA: Harvard University Press.

Johnson, S. 2022. Disadvantages of a strong matrix of organizational structure. https://smallbusiness.chron.com/disadvantages-strong-matrix-organizational-structure-59207.html

Keating, A. S. 1997. Determinants of divisional performance evaluation practices. *Journal of Accounting and Economics* 24 (3): 243–273. https://doi.org/10.1016/S0165-4101(98)00008-1

Kline, R. B. 2016. *Principles and Practice of Structural Equation Modeling*, 4th edition. New York, NY: The Guilford Press.

Kramer, R. M. 1999. Trust and distrust in organizations: Emerging perspectives, enduring questions. *Annual Review of Psychology* 50 (1): 569–598. https://doi.org/10.1146/annurev.psych.50.1.569

Lambert, R. A. 2001. Contracting theory and accounting. *Journal of Accounting and Economics* 32 (1–3): 3–87. https://doi.org/10.1016/S0165-4101(01)00037-4

Lee, K., T. A. Scandura, and M. M. Sharif. 2014. Cultures have consequences: A configural approach to leadership across two cultures. *The Leadership Quarterly* 25 (4): 692–710. https://doi.org/10.1016/j.leaqua.2014.03.003

Li, S., and H. Chen. 2019. Closeness or distance? An investigation of employee-organization relationships: From a psychological distance perspective. *Frontiers in Psychology* 9: 1–15. https://doi.org/10.3389/fpsyg.2018.02765

Libby, R., R. Bloomfield, and M. W. Nelson. 2002. Experimental research in financial accounting. *Accounting, Organizations and Society* 27 (8): 775–810. https://doi.org/10.1016/S0361-3682(01)00011-3

Libby, T., and R. M. Lindsay. 2010. Beyond budgeting or budgeting reconsidered? A survey of North-American budgeting practice. *Management Accounting Research* 21 (1): 56–75. https://doi.org/10.1016/j.mar.2009.10.003

Loewenstein, G. F. 1996. Behavioral decision theory and business ethics: Skewed trade-offs between self and other. In *Codes of Conduct: Behavioral Research into Business Ethics*, edited by D. M. Messick and A. E. Tenbrunsel, 214–227. New York, NY: Russell Sage Foundation.

Luft, J. L. 1997. Fairness, ethics and the effect of management accounting on transaction costs. *Journal of Management Accounting Research* 9: 199–216.

Marks, G., and N. Miller. 1987. Ten years of research on the false-consensus effect: An empirical and theoretical review. *Psychological Bulletin* 102 (1): 72–90. https://doi.org/10.1037/0033-2909.102.1.72

Mayer, D. M., M. Kuenzi, R. Greenbaum, M. Bardes, and R. Salvador. 2009. How low does ethical leadership flow? Test of a trickle-down model. *Organizational Behavior and Human Decision Processes* 108 (1): 1–13. https://doi.org/10.1016/j.obhdp.2008.04.002

Mittendorf, B. 2006. Capital budgeting when managers value both honesty and perquisites. *Journal of Management Accounting Research* 18 (1): 77–95. https://doi.org/10.2308/jmar.2006.18.1.77

Napier, B. J., and G. R. Ferris. 1993. Distance in organizations. *Human Resource Management Review* 3 (4): 321–357. https://doi.org/10.1016/1053-4822(93)90004-N

Oc, B., and M. R. Bashshur. 2013. Followership, leadership and social influence. *The Leadership Quarterly* 24 (6): 919–934. https://doi.org/10.1016/j.leaqua.2013.10.006

Palan, S., and C. Schitter. 2018. Prolific.ac—A subject pool for online experiments. *Journal of Behavioral and Experimental Finance* 17: 22–27. https://doi.org/10.1016/j.jbef.2017.12.004

Rankin, F. W., S. T. Schwartz, and R. A. Young. 2008. The effect of honesty and superior authority on budget proposals. *The Accounting Review* 83 (4): 1083–1099. https://doi.org/10.2308/accr.2008.83.4.1083

Robbins, J. M., and J. I. Krueger. 2005. Social projection to ingroups and outgroups: A review and meta-analysis. *Personality and Social Psychology Review* 9 (1): 32–47. https://doi.org/10.1207/s15327957pspr0901_3

Roethlisberger, F. J., and W. J. Dickson. 2003. Management and the worker. In *The Early Sociology of Management and Organizations*, vol. 5, edited by K. Thompson. New York, NY: Routledge.

Shamir, B. 1995. Social distance and charisma: Theoretical note sand an exploratory study. *The Leadership Quarterly* 6 (1): 19–47. https://doi.org/10.1016/1048-9843(95)90003-9

Schlenker, B. R. 1980. *Impression Management: The Self-Concept, Social Identity, and Interpersonal Relations*. Belmont, CA: Wadsworth, Inc.

Shavell, S. 1979. Risk sharing and incentives in the principal and agent relationship. *The Bell Journal of Economics* 10 (1): 55–73. https://doi.org/10.2307/3003319

Sherf, E. N., and E. W. Morrison. 2020. I do not need feedback! Or do I? Self-efficacy, perspective taking, and feedback seeking. *Journal of Applied Psychology* 105 (2): 146–165. https://doi.org/10.1037/apl0000432

Small, D. A., and U. Simonsohn. 2008. Friends of victims: Personal experience and prosocial behavior. *Journal of Consumer Research* 35 (3): 532–542. https://doi.org/10.1086/527268

Sonsino, D., and J. Sirota. 2003. Strategic pattern recognition—Experimental evidence. *Games and Economic Behavior* 44 (2): 390–411. https://doi.org/10.1016/S0899-8256(03)00040-X

Stuppy, A., N. L. Mead, and S. M. J. V. Osselaer. 2020. I am, therefore I buy: Low self-esteem and the pursuit of self-verifying consumption. *Journal of Consumer Research* 46 (5): 956–973. https://doi.org/10.1093/jcr/ucz029

Vorauer, J. D., and T. A. Sucharyna. 2013. Potential negative effects of perspective-taking efforts in the context of close relationships: Increased bias and reduced satisfaction. *Journal of Personality and Social Psychology* 104 (1): 70–86. https://doi.org/10.1037/a0030184

Wooldridge, B., T. Schmid, and S. W. Floyd. 2008. The middle management perspective on strategy process: Contributions, synthesis, and future research. *Journal of Management* 34 (6): 1190–1221. https://doi.org/10.1177/0149206308324326

Yagil, D. 1998. Charismatic leadership and organizational hierarchy: Attribution of charisma to close and distant leaders. *The Leadership Quarterly* 9 (2): 161–176. https://doi.org/10.1016/S1048-9843(98)90003-0