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The Effect of Horizontal Inequity, Capacity for Budget Slack, and Severity of Peer Overstatement on Managerial Reporting Behavior

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THE EFFECT OF HORIZONTAL INEQUITY, CAPACITY FOR BUDGET SLACK, AND SEVERITY OF PEER OVERSTATEMENT ON MANAGERIAL REPORTING BEHAVIOR

by

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ABSTRACT

An ongoing stream of accounting research indicates that non-pecuniary factors significantly affect employees' reporting behavior. This study investigates the behavioral effects of three non-pecuniary factors - horizontal pay inequity, capacity for budget slack, and severity of peer overstatement. The behaviors of interest are the employees' level of honesty and whether or not they report a peer that is overstating.

In the experiment, participants acted as division managers who request funding from the owner of a fictitious company to produce certain parts. In each period, participants were paired with a different fictitious peer and were required to make two decisions under a peer reporting system: (1) how much funding to request from the owner to complete the production task, and (2) whether to report their peers, who overstate their funding needs, to the owner. Participants' total compensation was determined by their own decisions and the decisions made by their peers.

The results suggest that employees are most honest about their funding requests when they are paid more than their peers and are least honest when they are paid less than their peers. Additionally, employees are most likely to blow the whistle on their peers who overstate their funding requests when they are paid less than their peers and are least likely to do so when they are paid the same as their peers. Furthermore, employees tend to create more budget slack when they have greater capacity for overstating their funding

requests. Also, employees' propensity to blow the whistle is positively associated with the severity of their peers' overstatement.

The results add to the stream of accounting research that integrates both economic and psychological theories to examine employees' decision making in a multi-agent setting. More importantly, this study makes a contribution by testing the overpayment effect of horizontal inequity in an accounting setting. Also, the results enhance our understanding of the unintentional consequences of implementing a pay transparency policy.

Key Words: horizontal inequity; peer reporting; honesty; budget slack; whistleblowing; internal control.

DEDICATION

To Mom and Dad, I couldn't have done this without you.

Thank you for your endless love, support, encouragement, and sacrifices.

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CHAPTER 1

INTRODUCTION

Management delegates decision rights to lower-level employees because such employees can use their unique and timely information regarding a firm's daily operations to improve the profitability of the company as a whole (Campbell, Epstein, and Martinez-Jerez 2011). However, extrapolating from agency theory (Jensen and Meckling 1976; Baiman 1990), agents may use their private information to maximize their personal welfare when their actions are not perfectly observed by the principal. For example, if an agent has private information regarding the cost of producing a product, he/she may choose to exploit this information to the detriment of the principal. Accordingly, companies need formal control systems to both mitigate potential problems caused by information asymmetry as well as motivate employees to act in the organizations' best interest.

Many prior studies examine how various pecuniary and non-pecuniary factors influence employees' reporting honesty in a single-agent, single-principal setting with the presence of information asymmetry (Evans, Hannan, Krishnan, and Moser 2001; Stevens 2002; Rankin, Schwartz, and Young 2003, 2008; Hobson, Mellon, and Stevens 2011). However, team work and collaborative projects that require multiple employees to work together are becoming increasingly common. In such multi-agent settings, each employee's private information may be observed or inferred by his/her coworkers and/or

employees from other departments due to job rotation, similar job duties, and collaboration in interdependent tasks (Zhang 2008). While it is typically difficult for a principal to observe an employee's private information directly, the principal can elicit such information from that employee's peers through a peer reporting system. A peer reporting system allows employees to report misconduct in the workplace to the principal – that is, it allows employees to "blow the whistle". Additionally, Zhang (2008) noted that although a principal can elicit employees' private information by establishing other formal controls (e.g., implementing an information system that reveals employees' private information), the cost of employing such monitoring systems might be very high. Therefore, a peer reporting system can be employed to serve as an effective supplemental tool to control employees' opportunistic behavior with lower cost.

Previous research indicates that a preference for equity serves as an important psychological factor that impacts employees' decision making (Luft 1997; Fehr and Schmidt 1999; Evans et al. 2001; Drake and Haka 2008; Zhang 2008; Matuszewski 2010). However, few studies (Moser, Evans, and Kim 1995; Matuszewski 2010) have focused on the impact of horizontal inequity on reporting honesty in accounting. A number of studies (Clark 1958; Homans 1953; Lawler and O'Gara 1967; Scholl, Cooper, and McKenna 1987; Moser et al. 1995) on equity theory have documented how individuals resolve horizontal inequity when they are in a disadvantageous position while individuals' reactions to horizontal inequity when they are in an advantageous position have not yet been addressed sufficiently. Specifically, most studies (Adams and Rosenbaum 1962; Adams and Jacobsen 1964; Friedman and Goodman 1967; Lawler, Koplin, Young, and Fadem 1968; Goodman and Friedman 1968) on the overpayment

effect manipulate horizontal inequity by challenging participants' ability to perform certain tasks in experiments. However, this way of manipulation does not purely evoke the feeling of being over-rewarded as expected in such studies. Instead, it leads to the feeling of devalued self-esteem and job insecurity, which threatens the internal validity of those studies (Goodman and Friedman 1971; Carrell and Dittrich 1978; Sweeney 1990; Mowday 1991). Therefore, more research on the impacts of horizontal inequity, especially the overpayment effect, on employees' decision making is needed.

Using a multi-agent, single-principal setting, the primary goal of my study is to investigate how three non-pecuniary factors - horizontal inequity, capacity for budget slack, and severity of peer overstatement - influence employees' degree of honesty in reporting and willingness to blow the whistle on peers given a peer reporting system. Horizontal inequity refers to a situation where the reward an individual receives is different from that received by a comparable referent (i.e., a fellow employee who performs the same work task) when they contribute the same level of input into their work (Adams 1963, 1965). For purposes of this study, capacity for budget refers to the maximum amount of budget slack an employee can create in a given situation. Severity of peer overstatement represents the severity of the budget slack created by an employee's peer.

First, my study is motivated by the need to explore the effect of horizontal inequity on employees' reporting honesty in response to the call for more research on horizontal inequity mentioned above and the rising interest in pay transparency policies. Pay transparency policies could bring many benefits to firms, including closing the gender pay gap (Croson and Gneezy 2009; Eisenberg 2011; Chamberlain 2015), increasing work

effort and productivity (Clark, Masclet, and Villeval 2010; Blanes i Vidal and Nossol 2011; Huet-Vaughn 2014), and achieving a higher level of job satisfaction (Lawler 1967). However, the adoption of a pay transparency policy may lead to unintentional negative consequences when a company pays employees who have the same job title and the same job responsibilities differently. Companies create inequity in employee payments to reduce salary expenses or to fulfill special contract terms. Concerns about horizontal inequity are raised when employees are aware of the differences between the payments received by them and their peers (Martin and Peterson 1987). Given the recent trends towards pay transparency, the effect of both underpayment and overpayment on employee behavior is of high research interest (Chamberlain 2015; Clabaugh 2017; Loudenback 2017). Based on Adams' (1963, 1965) equity theory, employees are hypothesized to report their budgeted production cost most honestly when they are paid more than their peers and least honestly when they are paid less than their peers. Also, it is hypothesized that employees are more likely to blow the whistle on misreporting peers when they are paid less than when they are paid the same as their peers. No directional hypothesis regarding the overpayment effect of horizontal inequity on employees' willingness to blow the whistle is proposed due to conflicting theories (Adams 1963, 1965; Pritchard 1969; Turnley et al. 2003).

Second, my study is motivated to evaluate how employees' capacity for budget slack affects their honesty in budget reporting in a peer reporting context. The presence of horizontal inequity and information asymmetry introduces the incentive and opportunity for employees to engage in opportunistic behavior. In my study, the opportunistic behavior is overstating their budgeted production cost. Accordingly, controlling

employees' capacity for budget slack is critical because employees are hardly able to engage in opportunistic activities (i.e., creating budget slack) when their ability to do so is constrained (Wolfe and Hermanson 2004). I predict that employees create more budget slack as their capacity for budget slack increases.

Last, my study is motivated to evaluate how severity of peer overstatement affects employees' willingness to blow the whistle. It is hypothesized that employees are more likely to blow the whistle when the budget slack created by their peer is severe than not severe. The examination of the effect of severity of peer overstatement on employee's whistleblowing behavior is important because internal whistleblowing serves an important mechanism for principals to detect or prevent opportunistic behavior.

A 3 × 2 × 2 (Horizontal Inequity × Capacity for Budget Slack × Severity of Peer Overstatement) experiment was conducted to test the behavioral effects of horizontal inequity, capacity for budget slack, and severity of peer overstatement on employees' reporting behavior in a peer reporting context. The experiment lasted for ten periods. Participants acted as division managers who request funding from the owner/principal of the fictitious company to produce certain parts. In each of the ten periods, they were required to make two decisions under a peer reporting system: (1) how much funding to request from the owner to complete the production task, and (2) whether to report their peers, who overstate their production cost, to the owner. Their total compensation was determined by their own decisions and the decisions made by their peers[1]. Horizontal equity existed when participants and their fictitious peers received the same amount of base salary. Horizontal inequity was introduced by offering different amounts of base

[1] Fictitious peers were used in this experiment to strengthen the experimental manipulation.

salary to participants and their peers. Capacity for budget slack was manipulated by varying the amount of funding each participant needed to produce the assigned parts each period. This information was known by the participant, but not the owner/principal. Severity of peer overstatement was manipulated by varying the amounts of budget slack created by participants' peers in each period.

The experimental results suggest that horizontal inequity significantly affects employees' reporting behavior. Specifically, employees who are paid more than their peers are most honest with their funding requests and employees who are paid less than their peers are the least honest. Furthermore, employees are most likely to blow the whistle when they are paid less than their peers and are least likely to blow the whistle when they are paid the same as their peers. Additionally, employees tend to create more budget slack when they have greater capacity for overstating their funding requests. Also, employees' propensity to blow the whistle is positively associated with the severity of their peers' overstatement.

My study contributes to the management control literatures in three broad ways. First, it adds to the stream of accounting research that integrates both economic and psychological theories to examine employees' decision making in a multi-agent setting (Luft 1997; Fisher, Maines, Peffer, and Sprinkle 2002; Sprinkle 2003; Towry 2003; Zhang 2008; Matuszewski 2010). Specifically, my study shows the importance of the behavioral role of horizontal inequity, capacity for budget slack, and severity of peer overstatement on employees' honesty in budget reporting and their willingness to blow the whistle on misreporting peers in a peer reporting setting.

Second, my study adds to the growing literature on Adams' (1963, 1965) equity theory by comparing the different impacts horizontal inequity has on employees' reporting behavior when they are paid more than their peers and when they are paid less than their peers in an accounting setting. More importantly, my study answers the call for more research on testing the overpayment effect on employees' actions (Pritchard 1969; Sweeney 1990). My study is the first that I am aware of to test Adams' (1963, 1965) equity theory in the area of the overpayment effect in accounting.

Third, my study provides insights to possible unintended consequences of implementing a pay transparency policy in companies where employees with the same job title and job duty are paid differently. Horizontal inequity may result in opportunistic behaviors when peer reporting is not available. Results show that when the compensation of all individuals is visible throughout the company, employees who are paid less than their peers have strong incentives to restore a sense of equity by overstating their budget requests. Additionally, my study points out that a peer reporting system can serve as an effective tool for such companies that adopts a pay transparency policy to control employees' opportunistic behavior. Specifically, employees tend to report opportunistic activities to the principal through the peer reporting system, especially for those who are paid less than their peers. Thus, a company having or planning to adopt a pay transparency policy should consider building an internal whistleblowing system if employees within the company are able to observe each other's actions. Also, given that employees tend to create more budget slack when their capacity for budget slack increases, principals should implement tighter controls and broader oversight when information asymmetry is high.

The remainder of my study is organized as follows. Chapter 2 summarizes relevant literature on reporting honesty in managerial reporting, whistleblowing, and horizontal inequity. Hypotheses are developed in Chapter 3 and the research methodology is described in Chapter 4. Chapter 5 presents data analyses and experimental results. Chapter 6 discusses conclusions, contributions, and potential directions for future research. For convenience, a list of definitions common to my study is provided below.

Definitions Used in this Study

1. Absolute Fairness Perception – an employee's/agent's overall perceived fairness regarding the base salary he/she received. This construct was developed for purposes of this study.
2. Absolute Pay Satisfaction – an employee's/agent's overall satisfaction regarding the base salary they received. This construct was developed for purposes of this study.
3. Budget Slack – the difference between the actual funding needed for producing a product and the funding requested by an agent/employee to produce it. Agents/Employees may create budget slack by overstating their funding needs (Nikias, Schwartz, Spires, Wollscheid, and Young 2010).
4. Budgeted Production Cost – the estimated amount of production cost predicted by a division's prediction (forecasting) system. Production cost is assumed to be the budgeted/estimated production cost unless indicated otherwise.

5. Capacity for Budget Slack – the maximum amount of budget slack an agent/employee can create in a given situation. This construct was developed for purposes of this study.
6. Conventional Economic Theory/Model (also called wealth-maximizing assumption) – an assumption that individuals are wealth-maximizers and they receive no disutility from overstating their budget reports (Evans et al. 2001).
7. Distributional Fairness – the perceived fairness of the relative distribution of wealth between a principal and an agent/employee (Fehr and Schmidt 1999; Falk, Fehr, and Fischbacher 2003; Douthit and Stevens 2015).
8. Distributive Justice – the perceived fairness of the distribution of reward outcomes (e.g., salary) across agents (Cohen-Charash and Spector 2001).
9. Honesty Effect – the effect of agents' intrinsic motivation/preference to report their private information honesty on their reporting behavior (Douthit and Stevens 2015).
10. Horizontal Inequity – a situation where the reward an individual receives is different from that received by a referent (i.e., a fellow employee who performs the same work task) when they contribute the same level of input into their work (Adams 1963, 1965).
11. Input – the "investment" (e.g., work effort and education) an individual put into his/her job in exchange for a reward (Adams 1963, 1965).
12. Interactional Justice – the fairness perception regarding the interpersonal treatment employees receive during the enforcement of organizational procedures (Bies and Moag 1986; Cohen-Charash and Spector 2001).

13. Misreporting Peer – a peer/co-worker who overstates his/her funding needs or budget reports. This construct was developed for purposes of this study.
14. Opportunistic Behavior – an act or behavior where agents/employees take advantage of information asymmetry to pursue their self-interest at the expense of the principals/firms (Cohen, Holder-Webb, Sharp, and Pant 2007).
15. Outcome – the reward an individual receives by performing his/her job (Adams 1963, 1965).
16. Peer Apparent Budget Slack – the amount of budget slack created by a fictitious peer. This construct was developed for purposes of this study.
17. Peer Reporting System – an internal whistleblowing system that enables and encourages agents/employees to pass on information on peer misconduct to the principal (Zhang 2008).
18. Procedural Justice – the perceived fairness of the criteria principals used to determine the distribution of wealth among agents and/or between principals and agents (Cohen-Charash and Spector 2001).
19. Reciprocity – a preference that causes individuals to repay kind acts with kindness and harmful acts with retribution (Falk and Fischbacher 2006; Christ 2013; Douthit and Stevens 2015).
20. Relative Fairness Perception – an employee's/agent's perceived fairness regarding his/her base salary when the base salary is compared to that of his/her peer. This construct was developed for purposes of this study.

21. Relative Pay Satisfaction – an employee's/agent's satisfaction regarding his/her base salary when the base salary is compared to that of his/her peer. This construct was developed for purposes of this study.
22. Reporting Honesty (also called degree of honesty in reporting) – the degree of truthfulness in an employee's/agent's budget reports or funding requests. A higher level of reporting honesty indicates less budget slack and less overstatement of funding requests.
23. Severity of Peer Overstatement - the seriousness of the budget slack created by a participant's fictitious peer. This construct was developed for purposes of this study.
24. Social Norms – unwritten and informal standards that regulate social behavior (Hechter and Opp 2001).

CHAPTER 2

LITERATURE REVIEW

This chapter reviews studies in the managerial control literature as well as the psychology literature relevant to my study. In this regard, the chapter is organized as follows. First, the advantages and disadvantages of a pay transparency policy are described. Next, the degree of honesty in managerial reporting is discussed in terms of single-agent and multi-agent settings. Thereafter, the willingness of employees to blow the whistle on fellow employees in a peer reporting environment is delineated. Finally, the underpayment and overpayment effects relating to horizontal inequity are differentiated.

Pay Transparency Policy

The increasing trend of pay transparency policies has raised great attention from researchers (Chamberlain 2015; Clabaugh 2017; Loudenback 2017). Prior studies suggest that pay transparency policies help to close the gender pay gap by providing useful information about job positions and mitigating gender discriminations in pay (Croson and Gneezy 2009; Eisenberg 2011; Chamberlain 2015). Additionally, employees under a more transparent pay regime contribute more effort to work and achieve greater productivity compared to employees under a pay "secrecy" regime (Clark et al. 2010; Blanes i Vidal and Nossol 2011; Huet-Vaughn 2014). Also, Lawler (1967) suggest that

pay transparency policies may alleviate job dissatisfaction since employees tend to overestimate their coworker's pay when employees have no access to their coworker's pay information.

However, implementing a pay transparency policy may cause unintentional negative consequences when some employees suddenly realize that they are paid less than their peers and/or coworkers. Under such circumstances, a pay transparency policy may lead to a sense of inequity (Zenger 2016). The feeling of inequity could result in greater job dissatisfaction, increased turnover, and reduced productivity (Zenger 2016).

Degree of Honesty in Managerial Reporting

Single-Agent Setting

Many studies to date focus on a one-principal, one-agent setting in which the agent possesses more private information than the principal. For example, Evans et al. (2001) employ three experiments to examine individuals' preferences for wealth and honesty in a budgeting setting. Their findings reveal a greater level of reporting honesty than the extent of reporting honesty predicted by conventional economic models. That is, individuals are willing to sacrifice part of their wealth to be honest or partially honest, even without contracts designed to induce reporting honesty. Furthermore, this greater level of reporting honesty is not affected by the size of the potential benefits that individuals can obtain by misreporting their private information. They also investigate factors that influence agents' level of honesty. Specifically, they conclude that the distribution of the total profit between an agent and a firm affects an agent's level of

reporting honesty. Agents report less honestly as their share of total profit reduces. Briefly, the results imply that agents care not only about their absolute payoff but also their payoff in comparison to a referent (i.e., the firm).

Hannan, Rankin, and Towry (2006) explore the behavioral role of information systems on managerial reporting in an internal reporting environment. Specifically, they investigate how the availability and the precision of an information system influence agents' trade-off between gaining social approval and increasing personal welfare by misreporting their private information. The results show that agents report more honestly when an information system that discloses an agent's local information is available than when no such information system exists. Even though there is no direct monetary reward for agents to create less budget slack, agents choose to do so because they want to gain the potential benefits associated with appearing honest. That is, when the cost of appearing honest is relatively small, agents are willing to give up part of their economic benefits of misrepresenting their private information in order to create a positive impression and gain social approval. However, agents' reporting honesty decreases as the information system becomes more precise. As the level of information asymmetry decreases, the marginal cost of appearing honest to the same extent increases. Under such circumstances, agents are less willing to give up the benefits of misreport. As a result, their reporting honesty is higher under a coarse information system than under a precise information system. This study suggests that the effectiveness of a firm's information system in encouraging managerial honesty is sensitive to the precision of the information system. In other words, agents report more (less) honestly when the control/information system allows them to create more (less) budget slack.

Douthit and Stevens (2015) examine how distributional affect honesty effects[2] in a participative budgeting setting. The results show that honesty effect on budgetary slack diminishes when the effect of distribution fairness gets stronger. Specifically, an agent report less honestly to achieve an equitable allocation of payoffs between the agent and the principal. This study suggests that agents' fairness perception regarding their payoff in comparison to that of their referent (i.e., the principal/firm) has a strong impact on reporting honesty in managerial reporting.

Multi-Agent Setting

In practice, incentive systems and participative budgeting always involve multiple agents/groups. In turn, there has been an increase in accounting research regarding decision-makings in multi-agent environments. For example, Towry (2003) investigates the effectiveness of two financial incentive systems on controlling agents' opportunistic behavior in the context of joint production of a single product. One of the incentive systems is a vertical incentive system, which relies on the assumption that members on the same team can observe each other's actions. Under the vertical incentive scheme, agents report their peers' performance directly to the principal, and they are paid based on their own performance and the report filed by their teammate. The vertical incentive system is essentially a peer reporting system. The results demonstrate that the effectiveness of the vertical incentive system is determined by the level of team identity, which is positively associated with team cooperation. Specifically, a high level of team identity degrades the effectiveness of the vertical incentive scheme because team

[2] Honesty effects refer to the effect of individuals' intrinsic motivation to be honest/ truthful on their budgeting reports (Douthit and Stevens 2015)

members could engage in collusive behavior by covering up for each other, which in turn leads to a low level of work effort. The results indicate that psychological factors (e.g., team identity) can influence the effectiveness of a peer reporting system in controlling team performance and agents' opportunistic behavior.

Zhang (2008) tests how fairness perception and inter-agent communication influence employees' reporting behavior and collusion under a peer reporting system. The results suggest that agents reveal their private cost information more honestly and are more likely to blow the whistle on misreporting peers when their wage is perceived as fair compared to when their wage is perceived as unfair[3]. Additional analyses suggest that communication among agents significantly affects agents' reporting behaviors only when the wage they received from the principal is perceived as unfair. Specifically, agents increase their engagement in collusion, overstate their budgeted production cost to a greater extent, and blow the whistle less frequently when their wage is perceived as unfair. Inter-agent communication does not have significant effect on agents' reporting honesty or whistleblowing behavior when their wage is perceived as fair[4]. Overall, the results demonstrate that fairness perception regarding agents' absolute wage can greatly influence the effect of a peer reporting system on honesty and collusion in managerial reporting.

[3] In Zhang's (2008) experiment, agents perceive their wage to be fair when they receive a higher amount of wage (1,000 Lira) from the principal and unfair when they receive a lower amount of wage (500 Lira) from the principal. Participants and their peers receive the same amount of wage from the principal in each period.

[4] In Zhang's (2008) research setting, the principal is perceived to be fair if he/she choose to pay the agents 1000 Lira instead of 500 Lira. The principal is perceived to be unfair if he/she choose to pay the agents 500 Lira instead of 1000 Lira.

Matuszewski (2010) examines whether changes in salary and horizontal equity affect individuals' trade-off between wealth and honesty. She finds that change in perceived horizontal equity of salary affect agents' reporting behavior in budget reporting. Agents' reactions to restoration of horizontal equity are different when horizontal equity is rebuilt by increasing their own salaries than by decreasing their peers' salaries. Specifically, restoring horizontal equity by increasing one's own salary leads to significantly greater change in honesty than restoring horizontal equity by decreasing the salary of his/her peer. However, agents' responses to the introduction of horizontal inequity are almost the same no matter if horizontal equity is decreased through reducing their own salaries or through increasing their peers' salaries.

Carpenter, Robbett, and Akbar (in press) examine the complementary effect of peer reporting and profit sharing on agents' opportunistic behaviors. Their experimental evidence shows that peer reporting alone does not greatly motivate agents to work harder. However, agents' productivity increases when a profit sharing pay scheme is combined with the peer reporting system. Although the reward obtained from profit sharing may not be sufficient for agents to highly increase their productivity, a profit sharing incentive scheme is strong enough to motivate them to increase their wealth by reporting free riders to the principal when peer reporting is possible. Under such circumstances, rational agents would choose to devote more effort to their work to avoid being reported or punished. Overall, the results demonstrate that financial incentive schemes (e.g. profit-sharing) can affect employees' wiliness to blow the whistle and the effectiveness of a peer reporting system.

Willingness to Blow the Whistle

Internal misconduct could cause a firm to experience serious economic losses and continues to be a major concern for employers. In contrast, internal whistle blowing serves as an important mechanism for employers to detect or prevent fraud and/or other misconduct within an organization (Stikeleather 2016). However, employees' willingness to report wrongdoing within an organization is somewhat regulated by group norms (Feldman 1984). Peer reporting is discouraged in groups with strong cohesion because it could be treated as a violation of social norms that support in-group loyalty. As a result, a peer reporter might receive some form of group punishment such as ostracism and expulsion (Greenberger, Miceli, and Cohen 1987; McCabe, Trevino, and Butterfield 2001). Although group loyalty might constrain individuals' willingness to blow the whistle, there are various factors that could increase their inclinations to report their peers' misconduct.

First, perception of fairness influences employees' willingness to report others' wrongdoing to the principal (Victor et al. 1993; Seifert, Sweeney, Joireman, and Thornton 2010; Seifert, Stammerjohan, and Martin 2014). Peer reporting is generally treated as an extra-role behavior when it is not mandatory. When employees feel exploited by the organization, they may consider their relationship with the organization as a pure economic exchange relationship. In this case, employees would be reluctant to offer additional assistance to the organization. On the contrary, when employees think the organization is being fair, they are more likely to perceive themselves and the organization in a social exchange relationship. Accordingly, employees would reciprocate this perceived fairness by taking extra-role responsibilities such as reporting

others' misconduct to the organization (Victor et al. 1993; Seifert et al. 2010; Seifert et al. 2014). Research results (Trevino and Victor 1992; Victor, Trevino, and Shapiro 1993; McCabe, Trevino, and Butterfield 2001) show that when employees believe that it is their responsibility to monitor and report misconduct, they are more inclined to blow the whistle on their peers. Furthermore, previous research (Greenberg 1990; Miceli and Near 1992; Near, Dworkin, and Miceli 1993; Trevino and Weaver 2001; Scott, Colquitt, and Zapata-Phelan 2007; Zhang 2008; Seifert et al. 2010; Seifert et al. 2014) demonstrates that distributive justice, procedural justice, and interactional justice[5] with respect to the whistleblowing process are positively associated with employees' propensity to report their supervisor's misconduct. Similarly, Victor et al. (1993) concludes that one's willingness to engage in peer reporting increases as distributive justice (pay equity) and/or procedural justice increase. Also, they suggest that an employee with stronger desire for retributive justice[6] is more likely to report his/her peer's misconduct.

Second, individuals are more likely to report opportunistic behavior in the workplace when rewards are provided (McCabe et al. 2001). Rewards for whistleblowing could signal the employees that whistleblowing is expected and motivate employees to report workplace issues (Xu and Ziegenfuss 2008). Additionally, Dyck, Morse, and Zingales (2010) conduct an archival study on corporate fraud, and they suggest that monetary rewards could be a strong incentive for employees to blow the whistle on corporate fraud.

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[5] Distributive justice refers to the perceived fairness of the distribution of reward outcomes (e.g., salary) across agents, procedural justice emphasizes the perceived fairness of the criteria principals used to determine the distribution of wealth among agents and/or between principals and agents, and interactional justice reflects the fairness perception regarding the interpersonal treatment employees receive during the enforcement of organizational procedures (Bies and Moag 1986; Cohen-Charash and Spector 2001).

[6] Retributive justice reflects the perceived fairness of punishment for misconduct in the workplace (Victor et al. 1993).

Third, employees are more likely to report their peers' wrongdoing when they benefit from blowing the whistle financially. Under these circumstances, group members may consider peer reporting as a way of protecting their own interest and they are more likely to engage in mutual monitoring and peer reporting (Trevino and Victor 1992; Victor et al. 1993; Welbourne, Balkin, and Gomez-Mejia 1995). For example, Carpenter et al. (in press) demonstrate that team members working under a profit-sharing incentive scheme are more likely to report their peers' wrongdoing than team members working without a profit-sharing plan.

Finally, whistleblowing is more likely to occur when the misconduct is severe (Miceli and Near 1985). The more serious the misconduct is, the more likely such act is to be judged as wrongful. Also, whistleblowers are more likely to gain support from senior managers when the reported misconduct is more severe.

Horizontal Inequity

People have a preference for equity (Adams 1963, 1965; Austin and Walster 1974; Loewenstein, Thompson, and Bazerman 1989). As previously suggested, the study of justice or equity categorizes organizational justice into three groups: (1) distributive justice, (2) procedural justice, and (3) interactional justice. Specifically, distributive justice refers to the perceived fairness of the distribution of reward outcomes (e.g., salary) across agents (Cohen-Charash and Spector 2001). Procedural justice emphasizes the perceived fairness of the criteria principals used to determine the distribution of wealth among agents and/or between principals and agents (Colquitt, Conlon, Wesson, Porter,

and Ng 2001). Interactional justice refers to the fairness perception regarding the interpersonal treatment employees receive during the enforcement of organizational procedures (Bies and Moag 1986). My study only focuses on the effects of distributive justice.

Adams (1963, 1965) uses social exchange theory to define inequity. He (1965, p. 280) asserts that inequity exists when an individual "perceives that the ratio of his outcome to inputs and the ratio of Other's outcome to Other's inputs are unequal." Outcomes represent the reward an individual receives by performing a job, such as wages and fringe benefits. Inputs refer to the contribution an individual contributes to the job, such as education and physical effort. Other (a referent) could be any person or group that an individual chooses to compare his/her own outcome-to-input ratio with. Generally, an individual and his/her referent have one or more comparable attributes. Individuals usually compare themselves with their co-workers or peers (Adams 1963, 1965). Following prior research (Moser et al. 1995; Kim, Evans, and Moser 2005; Matuszewski 2010), I use the term horizontal inequity to describe the inequitable scenarios defined by Adams (1963, 1965) and horizontal inequity is summarized in the next paragraph.

Horizontal inequity may occur when an individual and his/her referent are in a direct exchange relationship as well as when both the individual and the referent are in a direct exchange relationship with a third party (Adams 1963, 1965). Horizontal inequity exists not only when an individual is relatively underpaid[7] than his/her peers, but also when he/she is relatively overpaid then his/her peers. However, the threshold for

[7] In my study, an individual/employee is said to be underpaid (overpaid) when he/she receives lower (higher) payment compared to his/her peer who contributes similar level of input into work.

perceptions of horizontal inequity is higher when an individual is relatively over-rewarded than under-rewarded because overpayment could be rationalized as good fortune (Adams 1963, 1965). The presence of horizontal inequity leads to unpleasant emotional states including dissatisfaction, anger, and guilt (Adams 1963, 1965). Additionally, the presence of horizontal inequity creates tension in an individual that drives him/her to take actions to reduce the feeling of inequity and/or to reestablish the feeling of equity. The motivation to reduce inequity gets stronger when the magnitude of inequity gets larger. An individual can reduce the feeling of inequity by (1) changing his/her own inputs or outcomes, (2) altering the referent's inputs and outcomes, (3) cognitively distorting his/her or the referent's inputs and outcomes, (4) changing the referent, and/or (5) leaving the field or forcing the referent to leave the field.

Underpayment Effect

The predictions derived from equity theory in the area of the underpayment effect have received substantial support from previous studies. For example, Homans (1953) interviews two types of clerical workers, cash posters and ledger clerks, in a utility company. The job of a cash poster is simple and repetitive, while ledger clerks have to perform multiple complicated tasks and put more time and effort into their jobs. Although the ledger clerks contribute more inputs than the cash posters, their weekly pay (outcome) is identical. That is, compared to the cash posters, the ledger clerks are being underpaid. The results show that 75% of ledger clerks express a feeling of inequity and an expectation of increasing their weekly salary. However, the ledger clerks do not take real actions to reduce inequity.

Clark (1958) interviews cashiers and bundlers (who help customers to put groceries into shopping bags) in grocery stores. Cashiers generally get higher salaries, enjoy higher status, but have a lower education level. On the contrary, bundlers are those with higher educational background but are paid less. When the bundlers perceive that they are underpaid, they reduce inequity by reducing their inputs in the form of slowing up the bundling process.

Lawler and O'Gara (1967) provide another test on Adams' (1963, 1965) equity theory. In their experiment, subjects are hired as interviewers and are paid 10¢ (underpaid) or 25¢ (equitably paid) for each interview. According to the results, subjects who are paid 10¢ per interview think their outcome-to-input ratio is lower than that of the equitably paid subjects, and they are inclined to conduct more interviews but spend less time on each interview. That is, underpaid subjects reduce inequity by increasing outcomes (total pay) without increasing inputs (time).

Scholl et al. (1987) tests individuals' behavioral responses to the presence of inequity. Perceptions of inequity are measured by participants' self-reported information. The results show that job equity[8] could influence employees' willingness to engage in extra-role behaviors that could bring benefits to an organization. Specifically, underpaid employees are less likely to help others with problems or give employers suggestions for improvement. That is, an individual will reduce his or her inputs when his/her co-worker earns more.

[8] Job equity measures an individual's equity perception driven by the comparison with other individuals doing the same job in the same organization (Scholl et al. 1987).

Moser et al. (1995) examines how the underpayment effect of horizontal inequity affects individuals' decision-making in a tax reporting context. Participants in the horizontal equity (inequity) condition face the same (a higher) tax rate as (than) other taxpayers. Based on the experimental results, disadvantageous horizontal inequity results in decreased level of honesty in tax reporting.

Overpayment Effect

Although the underpayment aspect of Adams' (1963, 1965) equity theory has received a good deal of support, the research results regarding the predictions of the overpayment effect are unclear. Adams and Rosenbaum (1962) conduct two experiments to test the overpayment effect. In the first experiment, subjects were hired as temporary interviewers, and they were paid $3.5 per hour. Half of the subjects were told that they were not qualified for performing the interviewing task but they were still paid at a rate a qualified interviewer would be paid. Accordingly, those subjects were assumed to be overpaid. The other half of the subjects was told that they were qualified for the job and were paid equitably. As predicted, overpaid subjects increased their productivity (input) by conducting more interviews than equitably paid subjects as a means of reducing inequity. In the second experiment, subjects were paid on a piece-rate basis. In this case, overpaid subjects decreased their productivity (output) in order to achieve a feeling of equity.

However, the difference in subjects' behaviors can be interpreted by alternative explanations (Pritchard 1969; Andrews and Valenzi 1970; Wiener 1970; Goodman and Friedman 1971; Carrell and Dittrich 1978; Mowday 1991). First, the perception of

overcompensation is induced by challenging subjects' qualification for the job. Therefore, it is highly possible that subjects who were told that they were unqualified for the job improve their job performance in order to prove that they are capable of doing this job rather than to reduce the feeling of inequity. To illustrate in detail, in the first experiment, given that subjects are compensated on a per hour basis, "conducing a large number of interviews could be seen as doing a good job" (Pritchard 1969, p. 187). Therefore, overpaid subjects might increase their productivity to convince themselves that they are not poor interviewers. In the second experiment, since subjects are paid on a piece-rate basis, conducting a small number of completed interviews could be considered as an effort subjects take to do a good job. That is, an overpaid subject might spend more time on each interview task to show he "conducted the interviews with a great deal of care and hence would not bias his employer's data" (Pritchard 1969, p. 187). Second, since overpaid subjects are told they are unqualified for the job, they have strong incentives to work harder to secure their job rather than to reduce the feeling of inequity (Pritchard 1969; Wiener 1970; Goodman and Friedman 1971; Carrell and Dittrich 1978; Mowday 1991).

A variety of studies on the overpayment effect (Adams and Jacobsen 1964; Friedman and Goodman 1967; Lawler et al. 1968; Goodman and Friedman 1968) use similar methods to investigate the relationship between horizontal inequity and job performance. The overpayment manipulation is similar to that used in Adams and Rosenbaum's (1962) study. Although the results seemingly support the prediction that overpaid subjects raise their inputs and/or reduce their outputs to reduce the feeling of inequity, the validity of the conclusions are impaired by the contaminating effects of

lowered self-esteem and perceived job insecurity (Pritchard 1969; Wiener 1970; Goodman and Friedman 1971; Carrell and Dittrich 1978; Mowday 1991). Therefore, it is possible that overpaid subjects in those experiments modify their inputs and/or outputs to obtain confidence in their own ability rather than to restore equity.

Andrews (1967) examines Adams' (1963, 1965) theory of inequity in a different way. Subjects are hired to interview students or check data. Perceived inequity is induced by varying the level of pay (low vs. equitable vs. high) each subject receives. In this way, the potential contaminant effect of self-esteem is excluded. Based on the predictions of Adams' (1963, 1965) equity theory, underpaid (overpaid) subjects should be more (less) productive compared to equitably paid subjects. However, the results only show strong support for the underpayment effect. There is no significant difference in the level of work output achieved by the overpaid group and the equitably paid group. In other words, overpaid subjects do not behave consistently with the Adams' (1963, 1965) predictions. Similarly, other studies (Evan and Simmons 1969; Valenzi and Andrews 1971) that operationalize inequity by means other than challenging subjects' competence only support the predictions of equity theory on the underpayment effect but fail to support the overpayment effect.

Sweeney (1990) tests the overpayment and the underpayment effect on pay satisfaction by conducting three surveys. Horizontal inequity is measured by directly asking participants to make a fairness judgment regarding their income relative to the referents. The results suggest that people are most satisfied when horizontal equity is achieved and that people are significantly less satisfied when they are underpaid.

Although overpaid participants report a lower level of satisfaction compared to equitably paid participants, the difference is not significant.

Gino and Pierce (2009) conduct two experiments to investigate how perceptions of horizontal inequity influence individuals' likelihood of dishonestly helping or hurting others. Participants were randomly assigned the role of a grader or a solver. Solvers were required to complete an anagram task and graders are required to grade their paired solver's task[9]. Horizontal inequity was manipulated by varying the initial compensation each participant receives. Specifically, each participant's initial compensation is determined by flipping a coin. In the first experiment, a solver receives additional compensation by achieving the goal of creating 10 words from series of letters provided in each round, and a grader receives additional compensation if the paired solver reaches the goal. In the second experiment, a grader will lose part of the additional compensation if the paired solver reaches the goal in each round. The results show that underpaid graders are more likely to underreport solvers' performance intentionally, even when such hurting behavior requires personal financial cost. On the contrary, overpaid graders tend to engage in more helping behavior by overstating graders' performance, even if the helping behavior demands additional cost. Although the overall result is consistent with Adams' (1963, 1965) propositions, the conclusion cannot be generalized to my study because the underpaid participants and the overpaid participants in this study Gino and Pierce (2009) did not perform the same type of task.

[9] Unlike other studies, underpaid participants and overpaid participants in this study did not perform the same type of task.

To summarize, although the hypotheses developed from the underpayment effect of Adams' (1963, 1965) equity theory are supported by various studies, the research results regarding the prediction derived from the overpayment effect are controversial due to the serious criticism most studies received regarding their way of manipulation the overpayment effect. Therefore, further study is needed to obtain a better understanding of the effect of horizontal inequity, especially the overpayment effect. In response to the call for more research in this area, my study examines the effect of horizontal inequity on employees' reporting behavior in a common context of interest to accountants - a budgetary reporting context where information asymmetry exists.

CHAPTER 3

HYPOTHESES DEVELOPMENT

Several prior studies (Moser et al. 1995; Zhang 2008; Matuszewski 2010; Seifert et al. 2010; Seifert et al. 2014; Douthit and Stevens 2015) demonstrate that psychological factors such as equity and fairness perceptions could affect employees' reporting behavior in different accounting settings. However, only a few studies (Moser et al. 1995; Matuszewski 2010) have focused on the impact of horizontal inequity on reporting honesty in accounting. Research in the area of horizontal inequity typically concentrates on exploring the behavior of employees that are paid less than comparable peers (Clark 1958; Homans 1953; Lawler and O'Gara 1967; Scholl et al. 1987; Moser et al. 1995). Given that research on the behavior of employees that are paid more than comparable peers has received less attention (Pritchard 1969; Sweeney 1990), further study is needed to better understand how horizontal inequity, in the form of overpaid employees, influences reporting behavior in a peer reporting context. In this regard, my study investigates how horizontal inequity, capacity for budget slack, and severity of peer overstatement influence employees' degree of honesty and their willingness to report misreporting peers when a peer reporting system is employed. My experiment is conducted in a budgeting context, a common context of interest to accountants. Thus, my study provides additional insights regarding the overpayment effect in an accounting setting. This chapter starts with an overview of the peer reporting system employed in

this study and, thereafter, the hypothesized predictions regarding employees' decision making under this peer reporting system are presented.

Peer Reporting in a Budgeting Reporting Context

The experiment employed in my study is developed from the peer reporting system research design employed in Zhang (2008). In particular, participants assumed the role of a division manager. In this regard, they were responsible for producing parts in each period and were told that another division manager within the same company was doing the same job. Additionally, participants were required to make two sequential decisions. In the first stage, participants needed to request funding from the owner to produce a certain amount of a part. Due to information asymmetry, the owner only knew the distribution of each division's production cost but didn't know the actual amount of the production cost. Participants might receive additional compensation by overstating their production cost (which created budget slack). In the second stage, after submitting their funding request to the owner, participants were shown the amount of funding requested by the other division manager. Since participants and their peers were producing the same part, their actual production costs were very similar. Participants were required to indicate whether their peers overstated the production cost or not. If participants blow the whistle on their peers who were guilty of overstating the production cost, they received a reporting reward. However, if participants falsely accused their peers, the participants received nothing in that period. As for the division managers whose overstatement was reported by their peers, they were charged a penalty and they cannot keep the additional compensation obtained by overstating their production cost.

Hypotheses

Based on conventional economic models (Jensen and Meckling 1976; Baiman 1990), individuals make reporting decisions to maximize their own wealth. Since no communication between division managers is allowed under the peer reporting system employed in my study, it is unlikely for managers to increase their total compensation by overstating their funding needs and then covering for each other. In such circumstances, a wealth-maximizer should always be willing to turn in his/her misreporting peers to obtain the reporting reward. Assuming that the other manager will behave in a similar manner (i.e., report a misreporting peer), a "rational" manager would choose to report honestly in the first stage to avoid the potential penalty associated with being reported. Given the limited ability to collude, rational managers will always report their budgeted production cost honestly to the owner in the first stage and truthfully inform the owner that their peers did not overstate the budgeted production cost in the second stage, regardless of their preferences for horizontal equity. This wealth-maximizing assumption suggests that whether a manager's relative compensation is equitable to that of his/her peer is not relevant to either of their two decisions (Zhang 2008). Thus, the conventional economic model predicts complete honesty given the context of a peer reporting system that includes a reward for whistleblowing and a penalty for being "caught" misreporting. However, previous research (e.g., Evans et al. 2001; Rankin et al. 2003; Hobson et al. 2011; Fisher et al. 2002; Stevens 2002; Zhang 2008; Matuszewski 2010; Douthit and Stevens 2015) has documented that various non-pecuniary factors (e.g., perception of pay equity) other than conventional pecuniary incentives significantly affect employees' reporting behavior and the effectiveness of managerial control systems.

To gain additional insights in these areas, my study investigates how three non-pecuniary factors – horizontal inequity, capacity for budget slack, and severity of peer overstatement – affect employees managerial reporting under the peer reporting system[10] described above. To begin with, I address the hypotheses related to the impact of horizontal inequity on honesty in budget reports, which are stated in H1a and H1b. Thereafter, the hypothesis related to the impact of the underpayment effect of horizontal inequity on employees' whistleblowing decisions is stated in H2a and the impact of the overpayment effect on employees' whistleblowing decisions is stated in H2b. Finally, H3a is based on the notion that employees' opportunistic behavior can be controlled by limiting their ability to commit such actions and H3b is motivated by the notion that employees' willingness to blow the whistle on misreporting peer is associated with the severity of their peers' overstatement of budgeted production cost.

The Effect of Horizontal Inequity on Reporting Honesty

As noted earlier, Adams' (1963, 1965) equity theory suggests that individuals compare their outcome[11] to input[12] ratio to that of a referent person or group to determine whether they are treated equitably. An equitable state is present when individuals perceive that their own outcome-to-input ratio is the same that of their referents – typically, their co-workers. Following prior studies (Moser et al. 1995; Kim et al. 2005; Matuszewski 2010), I call this equitable state "horizontal equity". In contrast, horizontal inequity exists when an individual's outcome-to-input ratio is different from that of the

[10] Specific descriptions of the peer reporting system in my experiment is discussed in Chapter 4.
[11] Outcome refers to the reward an individual receives by performing his/her job (Adams 1963, 1965).
[12] Input refers to the "investment" (e.g., work effort and education) an individual put into his/her job in exchange for a reward (Adams 1963, 1965).

referent, no matter whether the individual is in an advantageous position (paid more than his/her peer) or in a disadvantageous position (paid less than his/her peer). In my research design, participants were told that they have the same level of work experience and educational background, as well as the same job description and workload as their peers. Therefore, in my study, the inputs that participants and their peers allocate to their tasks were set at the same level across all conditions. In contrast, the base outcomes (i.e., base salary) they received were different. Specifically, horizontal inequity is introduced by providing different levels of base salary to participants and their peers.

Assuming that pay transparency exists, those who are paid more than their comparable peers and those who are paid less than their comparable peers may both have a feeling of inequity. In turn, the presence of horizontal inequity results in emotional distress and dissatisfaction, which motivates individuals in an inequitable state to take actions to reestablish the state of equity by: (1) changing their own inputs or outcomes, (2) altering the referents' input or outcome, and/or (3) quitting the job (Adams 1963, 1965). For example, employees who receive a relatively lower base salary are in a disadvantaged position that urges them to engage in opportunistic behaviors such as reducing effort (decreasing personal input) and stealing from the company (increasing personal outcome) (Scholl et al. 1987; Greenberg 1990). Furthermore, employees who feel underpaid might justify opportunistic behaviors (for instance, misreporting their private information) as less unethical (Greenberger et al.1987; Greenberg 1990). Moreover, when employees feel they are being exploited by the principal, they tend to consider their relationship with the organization as a pure economic exchange relationship. Under such circumstances, they are strongly influenced by pecuniary

incentives and thus are more likely to engage in short-term behaviors that jeopardizes a company's wealth (Shore and Tetrick 1994; Victor et al. 1993; Seifert et al. 2010; Seifert et al. 2014). Taken together, employees who are in a disadvantaged position could choose to alleviate their feeling of inequity by increasing their personal welfare, even at the expense of the firm. With respect to my research setting, employees who are paid less than their peers are more likely to take risks to overstate their budgeted production costs to increase their total compensation.

Employees are most comfortable when they are paid the same as their peers (Austin and Walster 1974; Sweeney 1990). Employees perceive a principal as fair when they receive equitable payments, which could encourage them to reciprocate the principal by being honest (Zhang 2008). Additionally, when employees are treated fairly by an organization, they are more likely to define their relationship with the organization as a social exchange relationship rather than an economic exchange relationship (Seifert et al. 2010; Seifert et al. 2014). Taken together, employees who are paid the same as their peers are more inclined to exhibit a higher level of honesty compared to those who are paid less than their peers, as there is no need to try to "establish" equity. That is, in my experiment, participants who are paid the same as their peers are expected to report their budgeted production cost to the principal more honestly than participants who are paid less than their peers. Thus, the following hypothesis is proposed:

H1a: Employees who are paid the same as their peers will report their budgeted production cost more honestly than employees who are paid less than their peers.

As for employees who are paid more than their peers, they may choose not to obtain any additional compensation (such as by creating budget slack) as a means of mitigating the feeling of inequity. In addition, based on psychological contract theory (Shore and Tetrick 1994; Kickul and Lester 2001; Coyle-Shapiro and Kessler 2002), employees perceive that there is a reciprocal obligation between their employer and themselves, and they attempt to keep an equitable balance between the reward they receive from the organization and the contributions they devote to the company. Therefore, employees try their best to avoid a feeling of indebtedness to their exchange partner (Coyle-Shapiro and Kessler 2002; Turnley, Bolino, Lester, and Bloodgood 2003). That is, when employees think that the organization provides more rewards or salary than expected, they might treat the overpayment as a future obligation and try to reciprocate by bringing future benefits to the firm to repay the psychological debt. To summarize, employees receiving a greater amount of base salary than their peers may have much stronger incentives to report their budgeted production cost honestly to avoid inequity or psychological indebtedness. Thus, the following hypothesis is proposed:

H1b: Employees who are paid more than their peers will report their budgeted production cost more honestly than employees who are paid the same as their peers.

The Effect of Horizontal Inequity on Whistleblowing Behavior

For employees who are paid the same as their peers, their willingness to blow the whistle may be constrained by group norms and the threat of retaliation (Feldman 1984; Greenberger et al. 1987; McCabe et al. 2001). On the other hand, Adams' (1963, 1965) equity theory suggests that when negative horizontal inequity occurs, attempts such as

increasing one's own outcome or reducing the referents' outcome will be made to achieve a sense of equity. Under the peer reporting system in my experimental setting, employees who are paid less than their peers can chose to blow the whistle on their misreporting peers to restore a feeling of equity. Specifically, by doing so, they can increase their final compensation through the reporting reward and reduce their peers' final compensation through the penalty system. Also, a strong perception of inequity is associated with anger, dissatisfaction, and resentment (Adams 1963, 1965; Austin and Walster 1974; Sweeney 1990), which in turn could reduce an employee's in-group loyalty and increase his/her desire for revenge by reporting their peers' wrongdoing to the principal. Taken as a whole, employees who are paid less than their peers have both psychological and economic motivations to blow the whistle on their misreporting peers. It is predicted that employees are more willing to blow the whistle when they are paid less than their peers compared to when they are paid the same as their peers. Thus, the following hypothesis is proposed:

H2a: Employees who are paid less than their peers are more likely to blow the whistle on their misreporting peers compared to employees who are paid the same as their peers.

With regard to employees who are paid more than their peers, the perception of inequity could produce feelings of guilt, and they might feel sorry for their peers (Austin and Walster 1974; Gino and Pierce 2009). Gino and Pierce (2009) suggest that the distressed mental states caused by horizontal inequity drives employees who are paid more to dishonestly help their peers who are paid less to get more reward, even at their own financial cost. Hence, combining their propositions (Gina and Pierce 2009) with

Adams' (1963, 1965) equity theory, employees who are paid more tend to cover up their peers' wrongdoing, even if they will lose the reporting reward by doing this.

However, Pritchard (1969) proposes different predictions from Adams' (1963, 1965) equity theory regarding the overpayment effect. Specifically, if an individual feels relatively over-rewarded by a third party, "he should make no attempts to change his own inputs or outcomes, nor feel dissatisfied when comparing his ratio with someone has the same inputs as he does, but lower outcomes" (Pritchard 1969, p. 209). That is, when the reward each employee receives is determined by a third party (the principal), an employee who receives more payment than his/her peer does not need to be dissatisfied. More importantly, although employees who are paid more than their peers may feel the distribution of the payment is unfair, they may not engage in any behavior that changes the situation because they are not responsible for it.

Pritchard's (1969) propositions are also consistent with the self-serving bias theory (Miller and Ross 1975; Bradley 1978; Mezulis, Abramson, Hyde, and Hankin 2004) that individuals tend to attribute positive outcomes to their own ability while attribute negative outcomes to external factors (such as the principal and/or the organization). Accordingly, when an employee receives a higher amount of base salary than his/her referent, he/she may find reasons to justify the overpayment. Employees who are paid more could attribute the overpayment to good fortune and/or a reward to their superior ability. One of Pritchard's (1969) propositions is supported by a field study suggesting that the level of satisfaction reported by employees who are paid more is not significantly different from employees who are paid equitably (Sweeney 1990). Besides, when employees receive more rewards than expected, they may feel they owe future

obligations to the organization in return (Turnley et al. 2003). Therefore, they are more likely to take on extra responsibilities to support the organization, such as informing the principal of any misconduct identified within the organization.

To summarize, there are competing predictions on the whistleblowing decisions of employees who are paid more than their peers. Thus, a non-directional hypothesis is proposed:

H2b: There is a difference in willingness to blow the whistle on misreporting peers between employees who are paid more than their peers and employees who are paid the same as their peers.

The Effect of Capacity for Budget Slack on Reporting Honesty

I now address how capacity for budget slack affects the level of honesty in employees' budget reports. In my experimental setting, the possibility of increasing personal income provides employees financial incentives to misreport their private information (e.g., overstating their funding needs). Furthermore, employees, especially those who are paid less than their peers, may not view the overstatement of their funding needs as unethical (Greenberger et al. 1987; Greenberg 1990). In addition, the presence of information asymmetry provides employees the opportunity to increase their financial gains by overstating their funding needs without being discovered (that is, if not reported by their peers). In other words, employees could increase their final compensation by overstating more funding needs (if not reported by their peers). Also, employees can overstate their funding needs to a greater extent as their capacity for budget slack increases. In summary, employees' motivation and ability to overstate their funding

needs increases as they have greater capacity to create budget slack. Thus, the following hypothesis is proposed:

H3a: Employees tend to create more budget slack as their capacity for overstating budgeted production cost increases.

The Effect of Severity of Peer Overstatement on Whistleblowing Behavior

Then I address how severity of peer overstatement affects employees' willingness to blow the whistle on misreporting peers. Dyck et al. (2010) conduct an archival study to investigate the key incentives for employees to blow the whistle on opportunistic activities in the workplace and suggest that monetary incentives serve as a strong motivation for "people with information to come forward" (Dyck et al. 2010, p. 2215). In my experimental design, the monetary reward for blowing the whistle is higher when the perceived severity of peer's overstatement is greater. Miceli and Near (1985) also document that organization members are more likely to blow the whistle if the wrongdoing is obvious and that opportunistic behaviors are more likely to be judged as wrongful when they are severe. Additionally, companies and principals are more likely to support their employees who blow the whistle if the opportunistic behaviors they reported are severe. Thus, the following hypothesis is proposed:

H3b: Employees are more likely to blow the whistle as the severity of their peer's overstatement of budgeted production cost increases.

Summary

To summarize, I predict that employees are most honest when they are paid more than their peers and are least honest when they are paid less than their peers. Additionally, employees who are paid less than their peers are more likely to blow the whistle when those who are paid the same as their peers. Furthermore, employees are expected to create more budget slack when they have greater capacity for overstating their budgeted production cost. Also, employees' propensity to blow the whistle is expected to be positively associated with the severity of their peers' overstatement. The methodology employed to address the hypotheses proposed in this chapter is provided in the next chapter.

CHAPTER 4

METHODOLOGY

Overview

I conducted a mixed 3 x 2 x 2 experiment to test my hypotheses. Each experimental session consisted of ten periods. The first factor, horizontal inequity, is a between-subjects factor with three levels. It was manipulated by varying the amounts of base salary participants and their peers received. Three scenarios were used to operationalize horizontal inequity: an overpaid scenario, an equitably paid scenario, and an underpaid scenario[13]. Participants were randomly assigned to one of these three scenarios.

The second factor, capacity for budget slack, is a within-subjects factor and has two levels, large and small. It was manipulated by providing different amounts of actual production cost to participants in each of the ten periods.

The third factor, severity of peer overstatement[14], is a within-subjects factor and has two levels, severe and not severe. It was manipulated by varying the amounts of budget slack created by participants' peers in the ten periods. To summarize, each participant was assigned to only one of the three horizontal inequity scenarios, but each

[13] In my study, overpaid (underpaid) denotes that employees are paid more (less) than their peers. Similarly, equitably paid denotes that employees are paid the same as their peers.
[14] Capacity for budget slack is paired with horizontal inequity to test H3a, and severity of peer overstatement is paired with horizontal inequity to test H3b.

participant was exposed to every condition of capacity for budget slack and severity of peer overstatement. The main dependent variables include participants' level of honesty in reporting production costs and their propensity to blow the whistle on peers that overstated their production costs.

Participants were students primarily recruited from upper level business undergraduate courses from a public university in the United States. Since no special accounting knowledge or experience is required to complete the experimental tasks, this subject pool is considered appropriate for this study. Participants were paired with different fictitious peers in each of the ten periods. The purpose of using different fictitious peers in each period is to strengthen the experimental manipulation of severity of peer overstatement and reduce carry over effects[15]. To avoid deception, participants were informed that the experiment used a scenario and at no time were the participants led to believe their peers were other participants.

In each period, participants learned their own funding needs[16] and requested funding from the owner. They also learned the amount of funding requested by their peer after they had submitted their funding request for the period. Based on the information they were given, they were required to make two reporting decisions: (1) how much funding to request from the owner, and (2) whether or not to report that their peer had overstated their funding needs.

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[15] To ensure that participants experience the same amounts of misreporting over the 10 periods, fictitious peer managers are used. Also, matching participants with a new fictitious peer in each period minimizes the possibility that participants' decisions are affected by the decisions made by themselves and their peers in prior periods.

[16] To enhance clarity and minimize complexity, the term "funding needs" was used in lieu of "production cost" in the experimental instrument. Production cost is assumed to be the budgeted/estimated production cost unless indicated otherwise.

Experimental Task

Participants acted as the manager of Division A of a fictitious company (Beta Company). The company produces multiple parts for the auto industry and has multiple divisions. Participants and a fictitious division manager[17] within the same company were responsible for producing the same part in each of the ten periods. In each period, participants were paired with a different fictitious manager and were required to produce a different part with a different production cost. The managers of each division knew the actual amount of their own production cost[18] through a private forecasting system while the owner of the company only knew the possible range of the production cost, which lay between 3,000 Lira[19] and 4,000 Lira, in increments of 50 Lira. Upon learning their true production cost, participants' first task was to request funding from the owner to produce the part. In the scenario, participants were told that the owner did not know the actual production cost, and as described below, they can increase their personal compensation by overstating their production cost.

The company had a peer reporting system that aimed to control division managers' overstatement of their true production cost. Since both the participant and the other peer manager were responsible for producing the same part in each period, the actual production cost of these two divisions was very similar. That is to say, participants

[17] The fictitious division manager(s) is denoted as (fictitious) peer(s).
[18] For experimental control and data analysis purposes, participants were told to assume that the estimated/budgeted production cost (a.k.a., "funding needs") provided by the production cost prediction (forecasting) system was the same as the actual production cost (i.e., the actual funding needs). Admittedly, in practice, the predicted production cost is usually different from the actual production cost. However, the assumption that the predicted and the actual production cost were the same was necessary to enhance internal validity and enable data analysis. Specifically, overstatement of production cost is used to measure reporting honesty.
[19] Lira is the currency used in the experiment.

can use the information regarding their own production cost to determine if their peer was overstating his/her true production cost. After independently requesting funding from the owner, each division manager was shown the amount of funding his/her peer requested to produce the same part. In the peer reporting system, each participant was required to inform the owner whether the other manager overstated his/her production costs or not.

In each period, managers received a fixed base salary for performing their tasks. If a division manager overstated the production cost and was not reported by his/her peer, he/she would get the requested amount of funding from the owner and keep the overstatement as additional compensation. However, if the participant overstated the production cost and was reported by his/her peer[20], the owner would only provide funding that is sufficient for making the product to the overstating manager. Additionally, the misreporting manager reported by his/her peer was charged a penalty for misreporting and the manager who blew the whistle on his/her misreporting peer received a reporting reward. Unlike Zhang's (2008) design, the incentive system in this experimental design set both the reporting reward and the penalty as 20% of the overstatement of the misreporting manager rather than a fixed amount. In summary, a manager' final payment was based (1) on his/her own decisions and (2) potentially on the decision of his/her peer. In addition, participants who falsely accused their peers receive no payment in that period.

[20] If a participant overstated his/her funding needs, there was a 20% chance that the participant would be "reported" by his/her fictitious peer. Participants were not told that there was specifically a 20% chance of being reported by the fictitious peer. This experimental design choice was made to induce a context where participants were not sure of the exact odds of being reported by a peer.

Experimental Procedures

This experiment was conducted via computer with the use of z-Tree software (Fischbacher 2007). Participants were randomly assigned to one of the three horizontal inequity treatments: the overpaid treatment, the equitably paid treatment, and the underpaid treatment. Multiple experimental sessions that took 60 – 90 minutes were conducted for each treatment. Upon arriving at the experimental session, each participant was randomly assigned to a computer and asked to read and sign a consent form (Appendix B). At the start of each session, participants were asked to assume the role of a division manager and were told all the information collected during the session would be kept confidential. The program displayed a set of instructions (Appendix D) that explained their tasks and how they would be compensated on the screen. A printed version of the instructions was provided as well. To help participants understand the procedures and the pay calculations, several examples (Appendix E) and practice questions (Appendix F) were provided. After reading the examples and completing the practice questions, participants took a quiz (Appendix H) to test their understanding of the experimental context. Participants could not proceed to the next stage unless they answered all the questions correctly.

After successfully completing the quiz, participants received a summary of the key information related to the task and the amount of base salary the participant and his/her peer were received (Appendix I). To further evaluate participants' comprehension of the task and the compensation system, several manipulation check questions and comment sections were included in the post-experiment questionnaire (Appendix N). Participants then performed one practice round to get familiar with the task. Specifically,

the program explained the numbers on the Private Forecasting Information Form (Appendix J) and the other division's (peer's) Funding Request Form (Appendix L) and how to use their own division's Funding Request Form (Appendix K) and the Peer Reporting Form (Appendix M).

The experiment lasted for 10 periods and each participant can proceed at his/her own pace. At the beginning of each period, participants were informed that they would produce a different part and the actual production cost of the new part would be different compared to the actual production cost in other periods. Also, they would be matched with a different manager (peer) from another division within the same company in the new period. Additionally, at the beginning of each period, participants were required to type in the amount of base salary they and their peer received. Next, they checked the private forecasting information form to determine the actual production cost and then chose the amount of funding to request from the owner. The program then displayed the other manager's funding request form. At this point, participants learned the amount of funding requested by their peer and decided whether or not to report the other manager's overstatement to the owner. The next period began after a 5-second waiting phase. To conclude the experiment, participants were required to complete a post-experiment questionnaire, which collected demographic information, measured their personality traits (i.e., vertical individualism, horizontal collectivism, risk aversion, and idealism) and their fairness perception and satisfaction toward their base salary.

Participants were not allowed to talk with each other during the experiment at any time. An experimenter was available to answer any questions they had during the

experiment. The screen of each participant displayed his/her final payment after the post-experiment questionnaire was completed. Participants were paid in cash.

Independent Variables

The three independent variables in this study are horizontal inequity, capacity for budget slack, and severity of peer overstatement. Similar to Matuszewski (2010), horizontal inequity was operationalized by varying the difference between a manager's base salary and his/her peer's base salary. Participants in all conditions were informed that they and their peers had the same level of work experience, educational background, job description and workload. In the overpaid condition, participants were told that their base salary was higher than their peers' base salary. Specifically, while their peers received a base salary of 400 Lira, participants received a base salary of 800 Lira, which was twice as high as their peer's base salary. In the equitably paid condition, participants were told that their base salary was the same as their peers' base salary, which was 600 Lira. In the underpaid condition, participants were told that their base salary was lower than their peers' base salary. Specifically, while their peers received a base salary of 800 Lira, they received a base salary of 400 Lira, which was only half of their peer's base salary. To solidify the manipulation, participants in the overpaid and underpaid treatments were required to calculate their final payment when their base salary was 400 Lira and when was 800 Lira before they learned their base salary (Appendix F)[21]. In that way, participants got a clear understanding of how different amount of base salary

[21] In the equitably paid condition, participants learned their base salary before reading the examples. In contrast, in the overpaid and underpaid conditions, participants learned their base salary (Appendix G) after completing the practice questions.

affected their final payment. Those participants could only learn their and the other manager's base salary after they correctly answered all the practice questions.

Capacity for creating budget slack is defined as the maximum amount of budget slack an employee can create by requesting more funding than needed. Since the owner only knew the range of each division's production cost was between 3,000 Lira and 4,000 Lira, participants had the opportunity to obtain more income by misreporting their funding needs (if they are not reported by the other manager). In each period, the level of capacity for budget slack was manipulated by altering the amount of actual production cost showed to participants through the private forecasting system. Table 1 summarizes the combinations of the actual production cost and the amount of funding requested by the fictitious peer throughout the ten periods. The sequence of the ten combinations for each participant was randomized to control for order effects. Given that capacity for budget slack is a within-subjects variable, each participant made decisions in both conditions (large capacity vs. small capacity). In the large capacity condition, the actual production cost for each division ranged from 3,050 Lira to 3,250 Lira, which left plenty of room for participants to overstate their funding needs. In the small capacity condition, the actual production cost ranged from 3,650 Lira to 3,850 Lira, which left little room for creating budget slack.

Table 1: Manipulation of Capacity for Budget Slack

Capacity for Budget Slack	Actual Production Cost	Capacity for Budget Slack[a]	Peer's Reported Production Cost[b]	Peer's Apparent Budget Slack[c]	Severity of Peer Overstatement[d]
Large	3,050	950	3,850	800	High
Large	3,150	850	3,150	0	N/A
Large	3,200	800	3,350	150	Low
Large	3,100	900	3,900	800	High
Large	3,250	750	3,400	150	Low
Small	3,700	300	4,000	300	High
Small	3,650	350	3,950	300	High
Small	3,850	150	3,850	0	N/A
Small	3,750	250	3,900	150	Low
Small	3,800	200	3,950	150	Low

a. Capacity for Budget Slack = 4,000 Lira – Actual Production Cost
b. The amount of funding requested by the fictitious peer.
c. Budget slack created by the fictitious peer = funding requested by the fictitious peer minus actual production cost.
d. Peer overstatement is denoted as not severe when the budget slack created by the fictitious peer is 150, severe otherwise.

In this experiment, the severity of peer overstatement is determined by the amount of budget slack created by each participant's fictitious peers. Specifically, it is calculated as the difference between the amount of actual production cost and the amount of funding requested by the fictitious peer. Peer overstatement is not severe when the budget slack created by the fictitious peer is less than 300 Lira, and severe otherwise (Table 1)[22].

Dependent Variables

The first main dependent variable is the degree of reporting honesty, and it is measured in two ways. The first measure is simply the budget slack, which is the

[22] Based on participants' comments, budget slack greater than or equal to 300 Lira is considered severe, not severe otherwise.

difference between the amount of funding requested by the participant and the actual amount of funding needed. A higher amount of budget slack indicates a lower degree of reporting honesty. The second measure, used by Evans et al. (2001), is percentage of honesty. It is calculated as 1 – budget slack/slack available, where slack available is the difference between the maximum amount of production cost and the actual amount of funding needed. A higher percentage represents a greater level of reporting honesty.

The second main dependent variable is employees' willingness to blow the whistle. Following Towry (2003) and Zhang (2008), it is measured as the percentage of whistleblowing. Specifically, it is calculated as the number of times a participant blew the whistle divided by the number of times the participant was paired with a misreporting peer. A higher percentage of whistleblowing indicates greater willingness to blow the whistle.

Control Variables

Previous research (Ford and Richardson 1994) indicates that an individual's decision-making is affected by his/her innate personality traits. Accordingly, I put a series of questions in the post-experiment questionnaire (Appendix N) to measure each participant's personality traits that might affect participants' behavior in my experimental context. First, I followed Singelis, Triandis, Bhawuk, and Gelfand (1995) to measure vertical individualism and horizontal collectivism. Vertical individualism emphasizes self-interests while horizontal collectivism focuses on group harmony (Singelis et al. 1995). Employees with a high level of individualism are expected to be more likely to

overstate their budgeted production cost and blow the whistle in order to obtain more wealth. On the contrary, employees with a high level of horizontal collectivism are expected to be less likely to overstate their budgeted production cost because they prioritize group goals over personal goals. Second, I used Mandrik and Bao's (2005) scale to assess risk aversion, which stands for individuals' preference for riskless outcomes. Individuals who tend to be risk averse are expected to be less likely to overstate their budgeted production cost for fear of being caught. Third, idealism that stands for one's "sensitivity to wrongdoing" and "attitudes toward peer reporting as an appropriate response to the unethical behavior of peers (Barnett, Bass, and Brown 1996, p. 1164)" is expected to be positively associated with employee' reporting honesty. I followed Forsyth's (1980) scale to measure ethical ideology.

Based on prior literature (Zhang 2008; Seifert et al. 2010; Seifert et al. 2014), employees' fairness perception and satisfaction may affect their decisions (i.e., how much funding to request from the owner and whether or not to blow the whistle). Also, individuals in a positive mood are more likely to engage in cooperative behaviors than those in a negative mood (Isen and Levin 1972; Miceli and Near 1988). Therefore, I developed three items to measure participants' perceived fairness regarding the base salary they received in the experiment and three items to measure their satisfaction regarding their base salary (Appendix N).

Payments to Participants

One of the 10 periods was randomly selected to be the payment period. Participants received a cash payment at the rate of one dollar for each 100 Lira they earned. Participant's total payoff ranged from $3.00 to $19.00. On average, participants received a cash payment of $7.

CHAPTER 5

EXPERIMENTAL RESULTS

This chapter presents the experimental results. First, an overview of the sample/participants is provided. The next section presents the main analyses of the hypotheses. The final section discusses the control variables and the ANCOVA tests.

Participants

Participants were 120 students primarily recruited from upper level business undergraduate courses from a public university in the United States[23]. This subject pool is judged appropriate for this study, given that no special accounting knowledge or experience is required to complete the task. On average, participants spent 60 – 90 minutes on completing the study and earned $7. Seventy-seven participants (64%) were male and forty-three participants were female (36%). The participants had an average age of 21 and their mean work experience was 1.8 years. The majority of the participants (82%) were business students and the remaining participants came from other majors such as aviation management and engineering. Thirty-nine participants were in the

[23] A total of 148 students participated in the study. Twenty-eight participants who did not pass the manipulation check or indicated they did not understand the compensation system or the task were removed from the analyses. Participants who requested funding that was lower than the actual cost were kept if they stated a very specific strategy in the post-experiment questionnaire. Deleted participants were not concentrated in one treatment.

overpaid treatment, forty-one participants were in the underpaid treatment, and forty participants were in the equitably paid treatment.

Table 2 shows that no participant created budget slack to the maximum amount constantly throughout the experiment. In the underpaid condition, there were three (7.32%) participants who never created any budget slack, one (2.44%) participant who blew the whistle on their misreporting peers persistently, and no participant who never blew the whistle. In the overpaid condition, there were seven (17.95%) participants who never created any budget slack, two (5.13%) participants who blew the whistle on their misreporting peers persistently, and one (2.56%) participant who never blew the whistle. In the equitably paid condition, there were six (15.00%) participants who never created any budget slack, three (7.50%) participants who persistently blew the whistle on their misreporting peers, and one (2.50%) participant who never blew the whistle.

Table 2: Frequency Table

Horizontal Inequity	Never Create Budget Slack	Create Budget Slack to the Maximum Amount	Blow the Whistle All the Time	Never Blow the Whistle
Underpaid	3 (7.32%)	0 (0.00%)	1 (2.44%)	0 (0.00%)
Overpaid	7 (17.95%)	0 (0.00%)	2 (5.13%)	1 (2.56%)
Equitably Paid	6 (15.00%)	0 (0.00%)	3 (7.50%)	1 (2.50%)

This table shows the number (percentage) of participants who create no budget slack, who create budget slack to the maximum amount, who always blow the whistle on lying peers, and who never blow the whistle over the 10 periods in each horizontal inequity condition.

Tests of Hypotheses

The Effects of Horizontal Inequity on Budget Slack (H1a and H1b)

H1a predicts that employees report their budgeted production cost more honestly when they are paid the same as their peers than when they are paid less than their peers. Table 3 and Figure 1 summarize the descriptive statistics for budget slack by each horizontal inequity condition. Consistent with H1a, average budget slack was lower when participants received the same amount of base salary as their peers (99.38) than when participants received less base salary (119.63). H1b predicts that employees report their cost more honestly when they receive more base salary than when they receive the same base salary as their peers. Table 3 and Figure 1 also show that, on average, budget slack was lower when participants were paid more (83.21) compared to when they were paid the same as their peers (99.38). In total, average budget slack was lowest in the overpaid condition and was highest in the underpaid condition, which is consistent with the predictions.

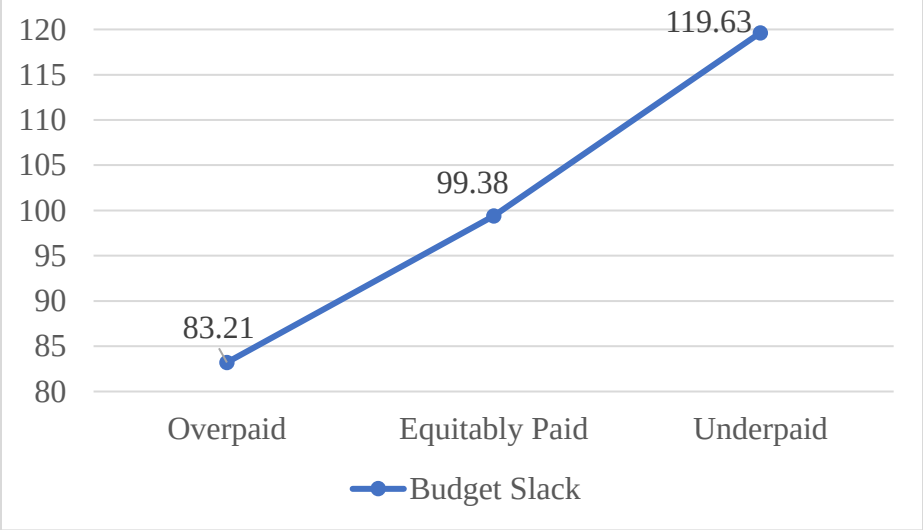


Figure 1: Budget Slack by Horizontal Inequity Manipulation

Table 3: Descriptive Statistics (Mean, {Standard Deviation}, n) of Budget Slack

		Capacity for Budget Slack		
		Large	**Small**	**Total**
Horizontal Inequity	**Overpaid**	107.69 {145.17} n = 195	58.72 {77.00} n = 195	83.21 {118.61} n = 390
	Equitably Paid	122.50 {143.08} n = 200	76.25 {78.61} n = 200	99.38 {117.60} n = 400
	Underpaid	157.07 {202.95} n = 205	82.20 {88.63} n = 205	119.63 {160.83} n = 410
	Total	129.50 {167.59} n = 600	72.58 {82.14} n = 600	101.04 {134.95} n = 1,200

Budget slack = the amount of funding requested by an employee minus the actual amount of funding needed.

Table 4 reports the conventional analysis of variance (ANAVA) results with Horizontal Inequity and Capacity for Budget Slack as independent variables and Budget Slack as the dependent variable. Panel A of Table 4 shows that the amount of budget slack was significantly influenced by horizontal inequity ($F = 7.76$, $p < 0.01$, two-tailed). The interaction effect between horizontal inequity and capacity for budget slack was insignificant ($F = 1.47$, $p = 0.23$, two-tailed). Panel B of Table 4 reports comparisons of each horizontal inequity condition. Specifically, budget slack was significantly lower in the equitably paid condition than the underpaid condition ($p = 0.01$, one-tailed). Also, participants created significantly less amount of budget slack in the overpaid condition than the equitably paid condition ($p = 0.04$, one-tailed). Therefore, both H1a and H1b are supported.

Table 4: Effects of Horizontal Inequity and Capacity for Budget Slack on Budget Slack (ANOVA)

Dependent Variable = Budget Slack (n = 1,200)

Panel A: Main Effects

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	7.76	0.00
Capacity for Budget Slack	1	56.03	0.00
Horizontal Inequity × Capacity for Budget Slack	2	1.47	0.23

Panel B: Hypothesis Tests

Hypothesis	Prediction	p-value (one-tailed)	Conclusion
H_{1a}	Equitably Paid < Underpaid	0.01	Supported
H_{1b}	Overpaid < Equitably Paid	0.04	Supported
H_{3a}	Small Capacity < Large Capacity	0.00	Supported

Budget slack = the amount of funding requested by an employee minus the actual amount of funding needed.

I used a linear mixed model to test the effect of horizontal inequity on the amount of budget slack created by employees as a robust test. The linear mixed model controls for the random effect varies across different participants due to repeated observations. Precisely, the random effect is associated with the special characteristics related to each participant that cannot be explained by the manipulated treatments (Majors 2016). Panel A of Table 5 shows the results. The main effect of horizontal inequity on the amount of budget slack participants created was significant ($F = 2.53$, $p = 0.05$, one-tailed) and the interaction effect between horizontal inequity and capacity for budget slack was not significant ($F = 1.25$, $p = 0.13$, one-tailed). Combining the statistical results with the

descriptive statistics, participants were most likely to report their budgets honestly when they were paid more than their peers and were least likely to do so when they were paid less than their peers. Taken together, both H1a and H1b are supported.

Table 5: Effects of Horizontal Inequity and Capacity for Budget Slack on Reporting Honesty (Linear Mix Model)

Panel A: Dependent Variable = Budget Slack (n = 1,200)

Source	F-Value	p-value (one-tailed)
Horizontal Inequity	2.53	0.05
Capacity for Budget Slack	21.90	0.00
Horizontal Inequity × Capacity for Budget Slack	1.25	0.13

Panel B: Dependent Variable = Percentage of Honesty (n = 1,200)

Source	F-Value	p-value (one-tailed)
Horizontal Inequity	2.53	0.05
Capacity for Budget Slack	35.40	0.00
Horizontal Inequity × Capacity for Budget Slack	0.67	0.20

Budget slack = the amount of funding requested by an employee minus the actual amount of funding needed.
Percentage of Honesty = 1 – Budget Slack/Slack Available, where Slack Available is the difference between the maximum amount of production cost and the actual amount of funding needed.

To further demonstrate robustness, contrast coding was employed to test H1a and H1b. Contrast weights were +1 in the underpaid condition, -1 in the overpaid condition, and 0 in the equitably paid condition. The planned contrast was significant (Panel A of Table 6, $F = 13.38$, $p < 0.01$, two-tailed). This finding suggests that employees create the

most amount of budget slack when they are paid more than their peers and the least amount of budget slack when they are paid less than their peers, supporting H1a and H1b.

Table 6: Effects of Horizontal Inequity on Reporting Honesty (Contrast Model)

Panel A: Dependent Variable = Budget Slack		
Source	**F-Value**	**p-value (two-tailed)**
Horizontal Inequity	13.38	0.00
Panel B: Dependent Variable = Percentage of Honesty		
Source	**F-Value**	**p-value (two-tailed)**
Horizontal Inequity	14.15	0.00

Budget slack = the amount of funding requested by an employee minus the actual amount of funding needed. Contrast weights are +1 in the underpaid condition, -1 in the overpaid condition, and 0 in the equitably paid condition.
Percentage of Honesty = 1 – Budget Slack/Slack Available, where Slack Available is the difference between the maximum amount of production cost and the actual amount of funding needed. Contrast weights are -1 in the underpaid condition, +1 in the overpaid condition, and 0 in the equitably paid condition.

The Effects of Horizontal Inequity on Percentage of Honesty (H1a and H1b)

As a robustness check, I used the percentage of honesty as a different measure for employees' reporting honesty to test the hypotheses as well. H1a and H1b predict that employees are most honest when they are paid more than their peers and least honest when they are paid less than their peers. Table 7 and Figure 2 report descriptive statistics and Table 8 shows the results of the ANOVA analysis (with Percentage of Honesty as the dependent variable) and the post hoc analysis. Table 8, Panel A shows that horizontal

inequity significantly affected participants' reporting honesty ($F = 7.88$, $p < 0.01$, two-tailed). No significant interaction effect between horizontal inequity and capacity for budget slack was identified ($F = 0.80$, $p = 0.45$, two-tailed).

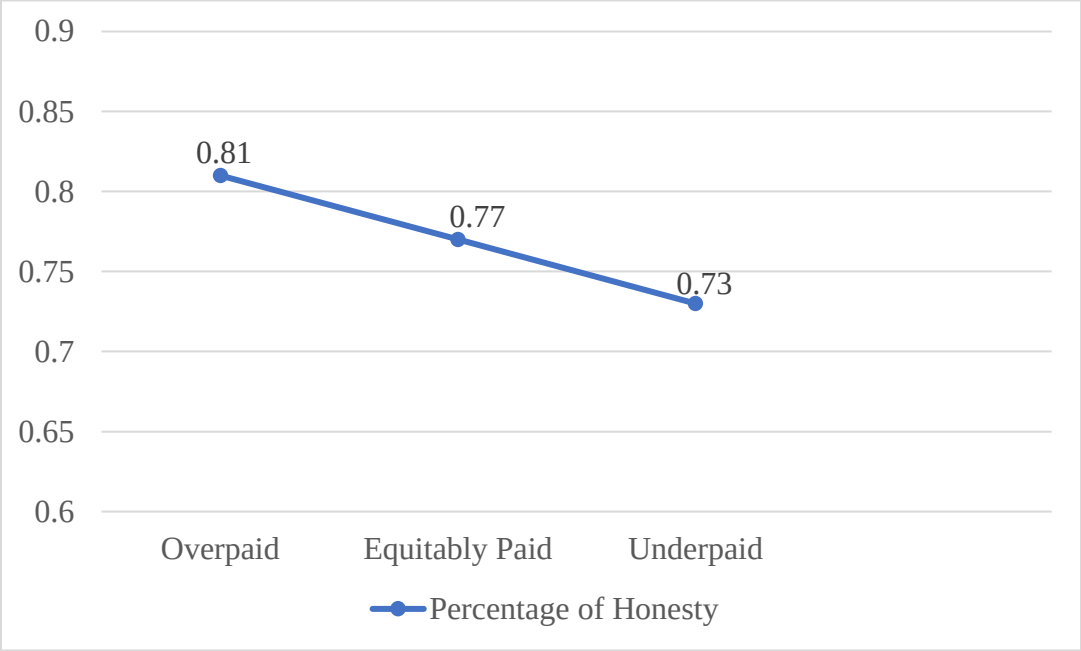


Figure 2: Percentage of Honesty by Horizontal Inequity Manipulation

Table 7: Descriptive Statistics (Mean, {Standard Deviation}, n) of Percentage of Honesty

		Capacity for Budget Slack		
		Large	**Small**	**Total**
Horizontal Inequity	**Overpaid**	0.87 {0.17} n = 195	0.75 {0.32} n = 195	0.81 {0.27} n = 390
	Equitably Paid	0.85 {0.17} n = 200	0.68 {0.33} n = 200	0.77 {0.28} n = 400
	Underpaid	0.81 {0.24} n = 205	0.65 {0.37} n = 205	0.73 {0.32} n = 410
	Total	0.85 {0.20} n = 600	0.70 {0.34} n = 600	0.77 {0.29} n = 1,200

Percentage of Honesty = 1 – Budget Slack/Slack Available, where Slack Available is the difference between the maximum amount of production cost and the actual amount of funding needed.

Table 8: Effects of Horizontal Inequity and Capacity for Budget Slack on Percentage of Honesty (ANOVA)

Dependent Variable = Percentage of Honesty (n = 1,200)

Panel A: Main Effects

Source	**df**	**F-Value**	**p-value (two-tailed)**
Horizontal Inequity	2	7.88	0.00
Capacity for Budget Slack	1	89.19	0.00
Horizontal Inequity × Capacity for Budget Slack	2	0.80	0.45

Panel B: Hypothesis Tests

Hypothesis	**Prediction**	**p-value (one-tailed)**	**Conclusion**
H_{1a}	Underpaid < Equitably Paid	0.03	Supported
H_{1b}	Equitably Paid < Overpaid	0.01	Supported
H_{3a}	Small Capacity > Large Capacity	0.00	Not supported

Percentage of Honesty = 1 – Budget Slack/Slack Available, where Slack Available is the difference between the maximum amount of production cost and the actual amount of funding needed.

Individual comparisons among the three conditions (overpaid, equitably paid, and underpaid) are presented in Panel B of Table 4. Specifically, participants' percentage of honesty was significantly higher when they were paid the same as their peers compared

to when they were paid less than their peers (0.77 vs. 0.73, p = 0.03, one-tailed). Also, their percentage of honesty was significantly lower when they were paid the same as their peers compared to when they were paid more than their peers (0.77 vs. 0.81, p = 0.01, one-tailed). Taken together, H1a and H1b are supported.

The results of a linear mix model test (see Panel B of Table 5) provide additional support for my hypotheses. Consistent with the results of the ANOVA test, participants' degree of reporting honesty was significantly affected by horizontal inequity (F = 2.53, p = 0.05, one-tailed). Additionally, the interaction effect between horizontal inequity and capacity for budget slack was not significant (F = 0.67, p = 0.20, one-tailed). Combined with the descriptive statistics, the results suggest that employees are most honest when they are paid more than their peers and are least honest when they are paid less than their peers.

Table 6 provides the results of the planned contrast analyses to test H1a and H1b when percentage of honesty was used to measure participants' degree of honesty. Contrast weights were +1 for the underpaid condition, -1 for the overpaid condition, and 0 for the equitably paid condition. As shown in Panel B, the planned contrast was significant (F = 14.15, p < 0.01, two-tailed), indicating that employees are most honesty in the overpaid condition and least honest in the underpaid condition, which is consistent with H1a and H1b.

The Effects of Horizontal Inequity on Willingness to Blow the Whistle (H2a and H2b)

H2a predicts that employees who are paid less than their peers are more likely to blow the whistle than employees who are paid equitably. Following Zhang (2008) and

Towry (2003), I used the percentage of whistleblowing as the dependent variable to test H2a. Table 9 and Figure 3 reports the average percentage of whistleblowing for each horizontal inequity condition, suggesting the average percentage of whistleblowing is higher in the underpaid condition (0.62) than the equitably paid condition (0.56).

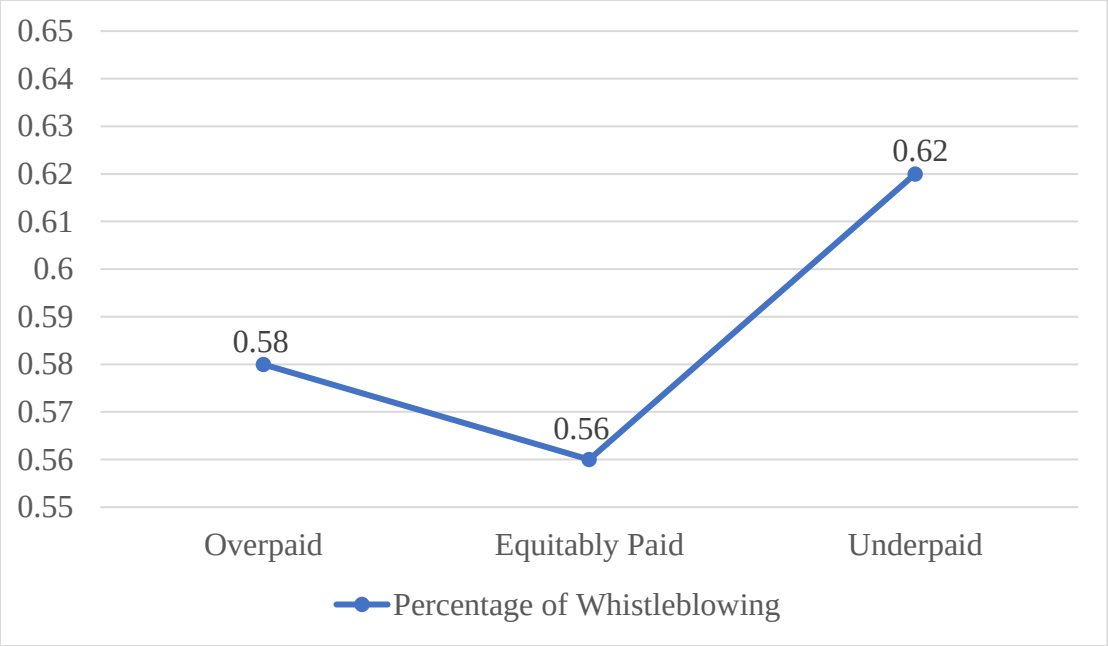


Figure 3: Percentage of Whistleblowing by Horizontal Inequity Manipulation

Table 9: Descriptive Statistics (Mean, {Standard Deviation}, n) of Willingness to blow the whistle (Percentage of Whistleblowing)

		Severity of Peer Overstatement		
		Severe	**Not Severe**	**Total**
Horizontal Inequity	**Overpaid**	0.85	0.31	0.58
		{0.23}	{0.28}	{0.37}
		n = 39	n = 39	n = 78
	Equitably Paid	0.82	0.29	0.56
		{0.25}	{0.30}	{0.38}
		n = 40	n = 40	n = 80
	Underpaid	0.87	0.37	0.62
		{0.17}	{0.29}	{0.35}
		n = 41	n = 41	n = 82
	Total	0.85	0.33	0.59
		{0.22}	{0.29}	{0.37}
		n = 120	n = 120	n = 240

Percentage of Whistleblowing = the percentage of truthful whistleblowing on lying peers.

Panel A of Table 10 provides the results of an ANOVA test on Individual Whistleblowing Percentage as dependent variable and Horizontal Inequity and Severity of Peer Overstatement as independent variables. No significant main effect of horizontal inequity on individual whistleblowing percentage was detected ($F = 1.36$, $p = 0.26$, two-tailed). Given that ANOVA is less powerful for testing the effect of a treatment when the treatment has more than two levels (Buckless and Ravenscroft 1990; Drake, Haka, and Ravenscroft 1999), a post hoc analysis was conducted. Based on the individual comparison analyses provided by Panel B of Table 10, participants' willingness to blow the whistle on their misreporting peers was significantly greater when they were paid less than their peers compared to when they were paid the same as their peers, which is consistent with H2a.

Table 10: Effects of Horizontal Inequity and Severity of Peer Overstatement on Whistleblowing Behavior (ANOVA)

Dependent Variable = Individual Whistleblowing Percentage (n = 240)

Panel A: Main Effects

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	1.36	0.26
Severity of Peer Overstatement	1	249.35	0.00
Horizontal Inequity × Severity of Peer Overstatement	2	0.15	0.86

Panel B: Hypothesis Tests

Hypothesis	Prediction	p-value (one-tailed)	Conclusion
H_{2a}	Underpaid > Equitably Paid	0.05	Supported
H_{3b}	Not Severe < Severe	0.00	Supported
H_{2b}	Equitably Paid vs. Overpaid	0.28	

Percentage of Whistleblowing = the percentage of truthful whistleblowing on lying peers.

H2b considers whether employees are more or less likely to blow the whistle on opportunistic behavior when they are paid more than their peers compared to when they are paid the same as their peers. Descriptive statistics in Table 9 suggest that participants who were paid more than their peers were more likely to blow the whistle than those who were paid the same as their peers (0.58 vs. 0.56). However, the percentage of whistleblowing in the overpaid treatment was not significantly different than that in the equitably paid treatment (Table 10, $p = 0.28$, one-tailed).

I also ran a repeated-measure ANOVA[24] with Whistleblowing Percentage as the dependent variable, Horizontal Inequity as the between-subject independent variable, and Severity of Peer Overstatement as the within-subject independent variable. Similar to the main result, the main effect of horizontal inequity on participants' whistleblowing behavior was insignificant (Table 11, Panel A, $p = 0.33$, two-tailed). Further analysis conducted by the post hoc tests reveal that participants' willingness to blow the whistle on their misreporting peers was significantly higher in the underpaid condition than the equitably paid condition (Table 11, Panel B, $p = 0.07$, one-tailed). That is, H2a is supported. Nevertheless, as for H2b, no significant differences between participants who were paid more and those who were paid the same was detected (Table 11, Panel B, $p = 0.30$, one-tailed). H2b is not supported by the repeated-measure ANOVA test.

[24] A repeated-measure ANOVA helps to control individual differences among subjects (Howell 2012).

Table 11: Effects of Horizontal Inequity and Severity of Peer Overstatement on Whistleblowing Behavior (repeated-ANOVA)

Dependent Variable = Individual Whistleblowing Percentage (n = 240)

Panel A: Main Effects

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	1.11	0.33
Severity of Peer Overstatement	1	321.35	0.00
Horizontal Inequity × Severity of Peer Overstatement	2	.198	0.82

Panel B: Hypothesis Tests

Hypothesis	Prediction	p-value (one-tailed)	Conclusion
H_{2a}	Underpaid > Equitably Paid	0.07	Supported
H_{3b}	Severe < Not Severe	0.00	Supported
H_{2b}	Equitably Paid vs. Overpaid	0.30	

A repeated ANOVA test is conducted with Individual Whistleblowing Percentage as the dependent variable, Horizontal Inequity as the between-subject independent variable, and Severity of Peer Overstatement as the within-subject independent variable.

Given that ANOVA only detects significant differences among treatments rather than significant patterns within different treatments, prior research (Buckless and Ravenscroft 1990; Drake et al. 1999) suggests that ANOVA is more powerful for testing hypotheses when the independent variables has no more than two levels. Since Horizontal Inequity is a three-level variable and no significant main effect of horizontal inequity on individual whistleblowing percentage was detected, contrast coding is more appropriate to test the ordinal effect of horizontal inequity. Specifically, contrast weights were +1 in the underpaid condition, 0 in the overpaid condition, and -1 in the equitably paid condition. As shown in Table 12, the planned contrast was insignificant (F = 1.48, p

= 0.11, one-tailed). Follow-up simple effects tests show that the planed contrast was insignificant (F = 1.41, p = 0.12, one-tailed) when the misreporting peer's overstatement was severe or when the overstatement was not severe.

Table 12: Effects of Horizontal Inequity on Whistleblowing Behavior (Contrast Model)

Panel A: Dependent Variable = Individual Whistleblowing Percentage		
Source	**F-Value**	**p-value (one-tailed)**
Horizontal Inequity	1.30	0.13
Panel B: Simple Effect when Peer Overstatement is Not Severe		
Source	**F-Value**	**p-value (one-tailed)**
Horizontal Inequity	1.46	0.12
Panel C: Simple Effect When Peer Overstatement is Severe		
Source	**F-Value**	**p-value (one-tailed)**
Horizontal Inequity	1.22	0.14

Percentage of Whistleblowing = the percentage of truthful whistleblowing on lying peers. Contrast weights are +1 in the underpaid condition, 0 in the overpaid condition, and -1 in the equitably paid condition.

I ran a cross-tabulation test as additional analysis. Based on the statistical results in Panel A of Table 13, no significant association between horizontal inequity and participants' whistleblowing decision was identified (chi-square = 2.08, p = 0.35, two-tailed). Similarly, no significant simple effect of horizontal inequity on participants' whistleblowing decisions was detected when peer overstatement was not severe (Panel B

of Table 13, chi-square = 2.13, p = 0.34, two-tailed) or when peer overstatement was severe (Panel C of Table 13, chi-square = 1.76, p = 0.42, two-tailed).

Table 13: Cross-Tabulation Analysis

Panel A: Effects of Horizontal Inequity on Whistleblowing Behavior				
	Whistleblowing Decision		χ^2	**p-value (two-tailed)**
	Yes	No		
Overpaid	182 (46.7%)	208 (53.3%)	2.08	0.35
Equitably Paid	179 (44.8%)	221 (55.2%)		
Underpaid	204 (49.8%)	206 (50.2%)		
Panel B: Effects of Horizontal Inequity when Peer Overstatement is Not Severe				
	Whistleblowing Decision		χ^2	**p-value (two-tailed)**
	Yes	No		
Overpaid	48 (20.6%)	185 (79.4%)	2.13	0.34
Equitably Paid	47 (19.7%)	192 (80.3%)		
Underpaid	61 (24.8%)	185 (75.2%)		
Panel C: Effects of Horizontal Inequity when Peer Overstatement is Severe				
	Whistleblowing Decision		χ^2	**p-value (two-tailed)**
	Yes	No		
Overpaid	134 (85.4%)	23 (14.6%)	1.76	0.42
Equitably Paid	132 (82.0%)	29 (18.0%)		
Underpaid	143 (87.2%)	21 (12.8%)		

Table 13: (Continued)

Panel D: Effects of Severity of Peer Overstatement on Whistleblowing Behavior				
	Whistleblowing Decision		**χ^2**	**p-value (two-tailed)**
	Yes	No		
Not Severe	156 (21.7%)	562 (78.3%)	461.29	0.00
Severe	409 (84.9%)	73 (15.1%)		

The percentage in the parentheses is the percentage of participants' whistleblowing decisions within each horizontal inequity condition.

The Effects of Capacity for Budget Slack on Budget Slack (H3a)

H3a predicts that employees create more budget slack as their capacity for overstating budgeted production cost increases. As shown in Table 7, the mean budget slack was 129.50 in the large capacity for budget slack condition and was 72.58 in the small capacity for budget slack condition. This difference in budget slack was statistically significant (Table 8, $F = 56.03$, $p < 0.01$, two-tailed). Thus, H3a is supported.

A linear mixed model was used in order to control for the heteroscedasticity within participants due to repeated measurements. The results in Panel A of Table 5 show a significant impact of capacity for budget slack on budget slack ($F = 21.90$, $p < 0.01$), supporting H3a. That is, participants who possessed large capacity for budget slack generated significantly more slack than those who only had small capacity for budget slack.

The Effects of Capacity for Budget Slack on Percentage of Honesty (H3a)

Another ANOVA test with percentage of honesty as the dependent variable was conducted. Table 8 reports that capacity for budget slack had a significant main effect on participants' percentage of honesty ($F = 89.19$, $p < 0.01$, two-tailed). However, the descriptive statistics shown in Table 7 suggest that the percentage of honesty increased as the capacity for overstating production cost increased (0.70 vs. 0.85). This trend can be explained by two reasons. First, it is consistent with Hannan et al. (2006) that employees tend to report less honestly when an information system that discloses their private information becomes more precise[25] to forgo the benefits of appearing honest. Second, using percentage of honesty to measure the degree of honesty in reporting may lead to biased results. Specifically, the percentage of honesty is lower (higher) when an employee's capacity for budget slack is smaller (larger), even if the employee creates the same amount of budget slack in both conditions[26].

Panel B of Table 5 reports the effects of capacity for budget slack on percentage of honesty by using a linear mix model to adjust for heteroscedasticity within participants. As shown, participants' capacity for budget slack was significantly associated with their percentage of honesty ($F = 35.40$, $p < 0.01$, one-tailed). However, percentage of honesty was higher in the large capacity condition than in the small capacity condition.

[25] The maximum amount of budget slack an employee can create is less under a precise information system than under a coarse information system. That is, an employee's capacity for budget slack decreases as an information system becomes more precise.

[26] For instance, if an employee overstates the production cost by 200, his/her percentage of honesty is 0.75 (0.5) when the capacity for budget slack is 800 (400).

The Effects of Severity of Peer Overstatement on Willingness to Blow the Whistle (H3b)

H3b predicts that employees are more likely to blow the whistle when the budget slack created by their peers is severe. Results of Table 9 show that the average percentage of whistleblowing on misreporting peers was higher when peer overstatement was severe compared to when peer overstatement was not severe (0.85 vs. 0.33), and the difference was significant (Table 10, $F = 249.35$, $p < 0.01$, two-tailed). Therefore, H3b is supported, suggesting that employees are more willing to blow the whistle when their peers overstate their budgets to a greater extent.

A repeated-measure ANOVA was conducted as well. As reported in Panel A of Table 11, the severity of peer overstatement was significantly associated with participants' whistleblowing decisions ($F = 321.35$, $p < 0.01$). Specifically, participants' willingness to blow the whistle increased as their peers' wrongdoing became severe, which provides support for H3b.

Cross-tabulation analysis was conducted as an additional analysis. As indicated in Panel B and Panel C of Table 13, participants were less likely to blow the whistle on their misreporting peers when severity of peer overstatement was not severe (21.7% vs. 78.3%) and were more likely to do so when severity of peer overstatement was severe (84.9% vs. 15.1%). The main effect of severity of peer overstatement on employees' whistleblowing decisions was significant (chi-square = 461.29, $p < 0.01$). In other words, H3b is supported.

Control Variables and ANCOVA Tests

Fairness Perception and Pay Satisfaction

Participants were asked to assess their relative fairness perception, that is, their perceived fairness regarding their base salary when the base salary was compared to that of their peers. Specifically, they were required to rate their agreement on a 7-point rating scale "How fair did you think your base salary was compared to the base salary of the other manager" in the post-experiment questionnaire. Table 14 reports means for participants' relative fairness perception in the three conditions and Figure 4 graphs those means. The data reveal that participants' relative fairness perception was significantly higher when they were paid equitably than when they were paid more than their peers (6.50 vs. 2.79, $p < 0.01$, two-tailed). Also, participants enjoyed a significantly higher level of relative fairness perception when they were paid relatively higher than when they were paid relatively lower (2.79 vs. 1.85, $p < 0.01$, two-tailed). Relative fairness perception was highest when horizontal equity existed and was lowest when participants were paid less than their peers.

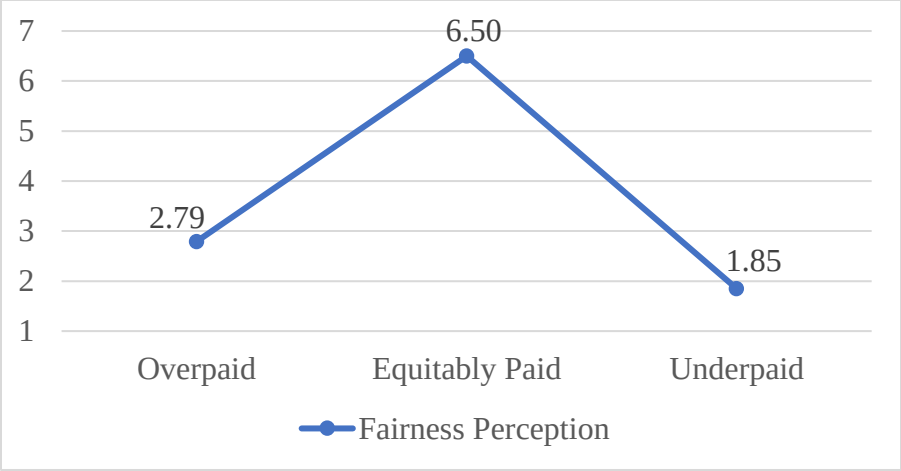


Figure 4: Relative Fairness Perception by Horizontal Inequity Manipulation

Table 14: Relative Fairness Perception by Horizontal Inequity Manipulation

Panel A: Mean (Standard Deviation)

	Horizontal Equity		
Reactions	**Overpaid (n = 39)**	**Equitably Paid (n = 40)**	**Underpaid (n = 41)**
Fairness	2.79	6.50	1.85
	(1.24)	(0.60)	(0.85)

Panel B: Statistical Tests

	Mean Difference	**p-value (two-tailed)**
Fairness:		
Overpaid vs. Equitably Paid	3.71	0.00
Underpaid vs. Equitably Paid	4.65	0.00
Overpaid vs. Underpaid	0.94	0.00

The means represent the average of the relative fairness perception item listed in Appendix N.

Participants were asked to assess their absolute fairness perception, that is, their overall perceived fairness regarding their base salary, in the post-experiment questionnaire as well. Specifically, they were required to indicate their agreements on two items: “The amount of base salary I received was fair” and “Considering the effort I put into my work, my base salary was fair”. The two items were summed to construct participants’ absolute fairness perception. Both Table 15 and Figure 5 show that absolute fairness perception was highest (11.08) when participants were paid the same as their peers and was lowest (4.71) when participants were paid less than their peers.

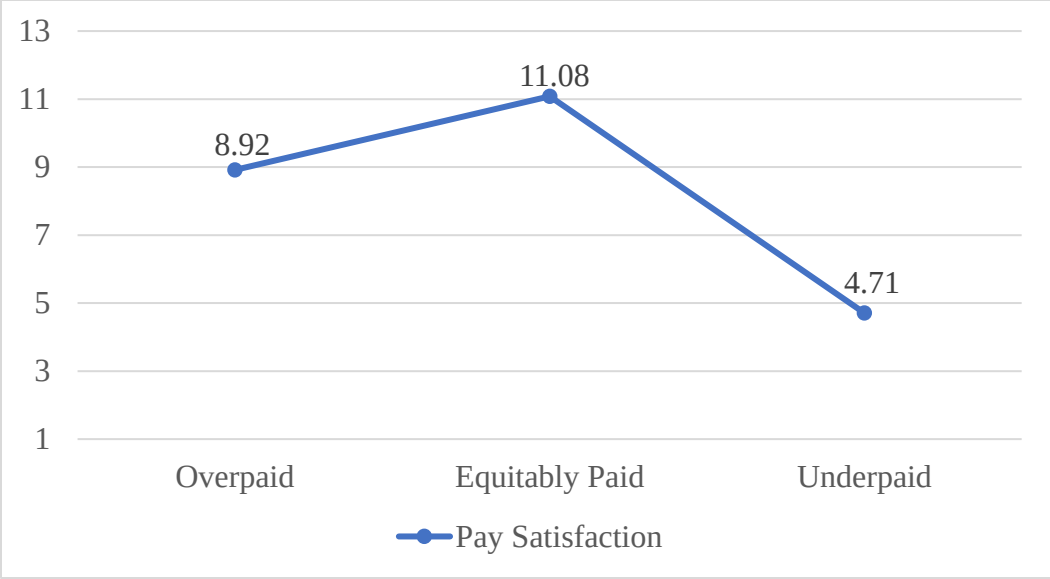


Figure 5: Absolute Fairness Perception by Horizontal Inequity Manipulation

Table 15: Absolute Fairness Perception by Horizontal Inequity Manipulation

Panel A: Mean (Standard Deviation)

	Horizontal Equity		
Reactions	**Overpaid (n = 39)**	**Equitably Paid (n = 40)**	**Underpaid (n = 41)**
Fairness	8.92	11.08	4.71
	(2.37)	(1.94)	(2.24)

Panel B: Statistical Tests

	Mean Difference	**p-value (two-tailed)**
Fairness:		
Overpaid vs. Equitably Paid	2.16	0.00
Underpaid vs. Equitably Paid	6.37	0.00
Overpaid vs. Underpaid	4.21	0.00

The means represent the average of the absolute fairness perception items listed in Appendix N.

The post-experiment questionnaire included one scale to measure participants' relative pay satisfaction, that is, their satisfaction regarding their base salary when the base salary was compared to that of their peers. Specifically, participants were asked to show their agreement on a statement "I am satisfied with my base salary compared to that of the other manager". As indicated in Table 16 and Figure 6, relative pay satisfaction was highest (6.05) when participants were paid the same as their peers and was lowest when participants were paid less than their peers (1.66).

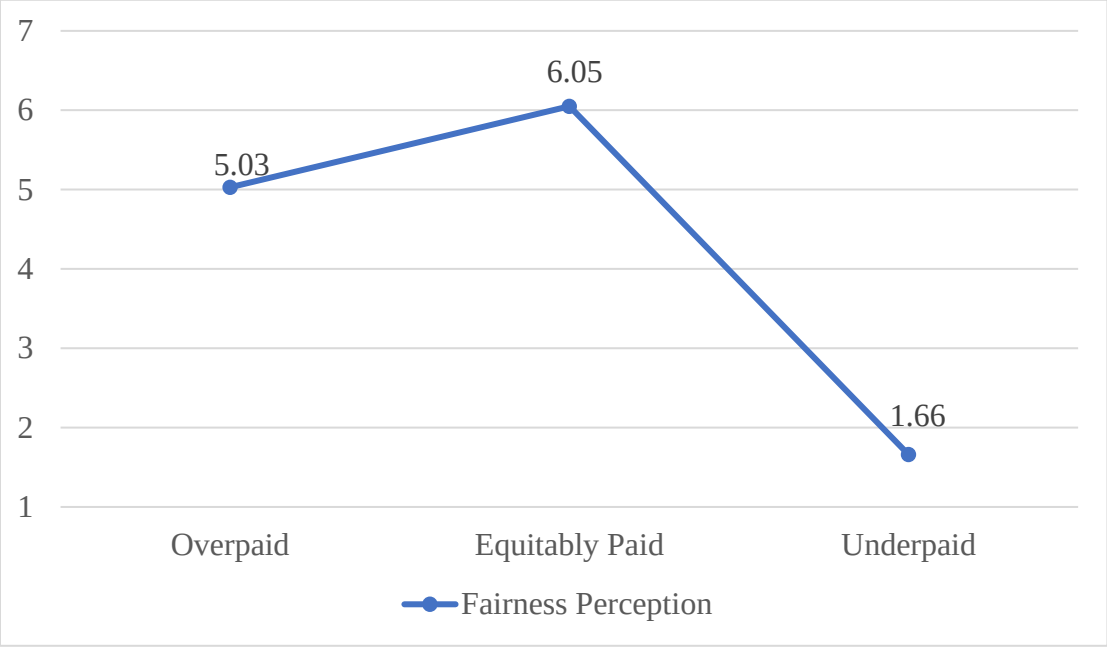


Figure 6: Relative Pay Satisfaction by Horizontal Inequity Manipulation

Table 16: Relative Pay Satisfaction by Horizontal Inequity Manipulation

Panel A: Mean (Standard Deviation)

	Horizontal Equity		
Reactions	**Overpaid (n = 39)**	**Equitably Paid (n = 40)**	**Underpaid (n = 41)**
Fairness	5.03	6.05	1.66
	(1.60)	(0.93)	(0.79)

Panel B: Statistical Tests

	Mean Difference	**p-value (two-tailed)**
Fairness:		
Overpaid vs. Equitably Paid	1.02	0.00
Underpaid vs. Equitably Paid	4.39	0.00
Overpaid vs. Underpaid	3.37	0.00

The means represent the average of the relative pay satisfaction item listed in Appendix N.

I also put two questions in the post-experiment questionnaire to measure participants' absolute pay satisfaction, that is, their overall satisfaction regarding the base salary they received. Specifically, participants were asked to indicate their agreements on two items: "I am satisfied with my base salary" and "Considering the effort I put into my work, I am satisfied with my base salary". The two items were summed to construct absolute pay satisfaction. Table 17 and Figure 7 present the means for their absolute pay satisfaction in the three conditions. Precisely, participants were less satisfied when they were paid less than their peers compared to when they were paid equitably (5.39 vs. 11.13, $p < 0.01$, one-tailed). Contrary to Adams' (1963, 1965) proposition, participants were more satisfied with their base salary in the overpaid condition compared to the

equitably paid condition (11.69 vs. 11.13, p = 0.10, one-tailed), even though their relative fairness perception and absolute fairness perception were significantly lower when they were paid more than their peers. To summarize, absolute pay satisfaction was highest when participants were paid more than their peers and was lowest when participants were paid less than their peers.

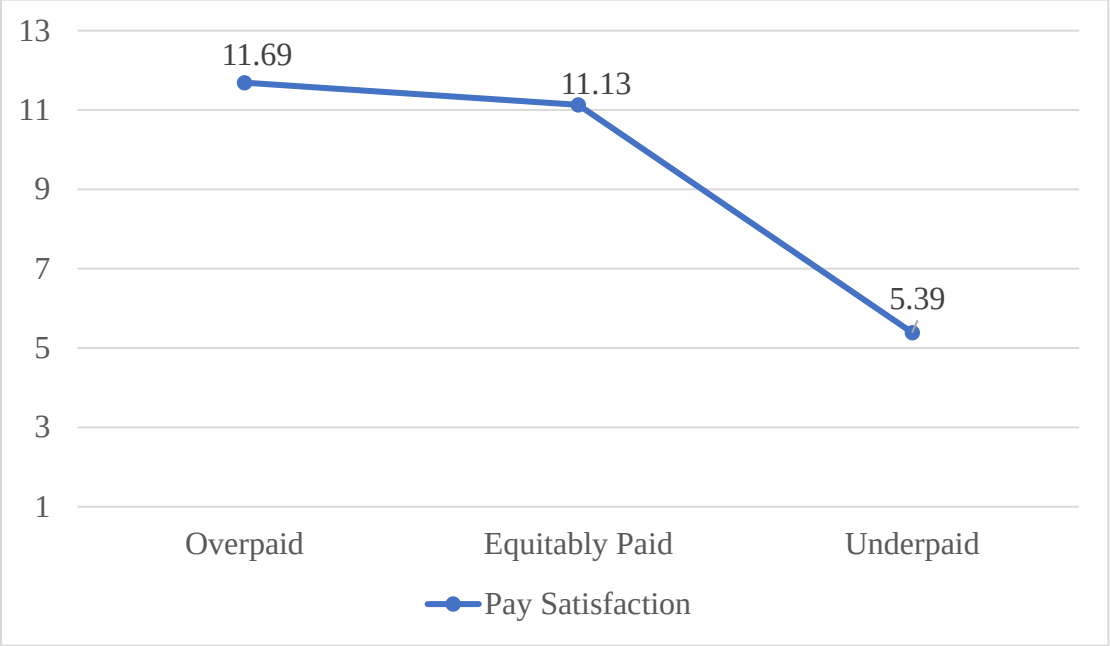


Figure 7: Absolute Pay Satisfaction by Horizontal Inequity Manipulation

Table 17: Absolute Pay Satisfaction by Horizontal Inequity Manipulation

Panel A: Mean (Standard Deviation)

	Horizontal Equity		
Reactions	**Overpaid (n = 39)**	**Equitably Paid (n = 40)**	**Underpaid (n = 41)**
Fairness	11.69	11.13	5.39
	(1.51)	(2.13)	(2.18)

Panel B: Statistical Tests

	Mean Difference	**p-value (one-tailed)**
Fairness:		
Overpaid vs. Equitably Paid	0.56	0.00
Underpaid vs. Equitably Paid	5.74	0.00
Overpaid vs. Underpaid	6.30	0.10

The means represent the average of the absolute pay satisfaction items listed in Appendix N.

Gender Effect

Prior studies (Childs 2012; Muehlheusser, Roider, and Wallmeier 2015) suggest that males have a greater tendency to engage in opportunistic behavior in the form of lying for small monetary gain and that lying is more prevalent in male-dominated groups than female groups. Therefore, to control for the potential impact gender has on honesty, I added Gender[27] as a covariate into my main analyses. The results of the ANCOVA tests are presented in Table 18 and Table 19. As illustrated, the main statistical results are consistent with prior results after adjusting for gender effect. Gender only had a

[27] Gender equals 1 if the participant is male, 0 otherwise (female).

significant effect on reporting honesty when it was measured by the amount of budget slack overstated by participants (Panel A of Table 18, F = 3.84, p = 0.05, two-tailed). Specifically, male participants built a greater amount of budget slack (107.01 vs. 90.35, F = 4.22, p = 0.04, two tailed, untabulated) than female participants. However, gender did not significantly affect participants' whistleblowing decisions (Table 19, F = 0.05, p = 0.83, two-tailed).

Table 18: Effects of Horizontal Inequity and Capacity for Budget Slack on Reporting Behavior (Gender Effect)

Panel A: Dependent Variable = Budget Slack (n = 1,200)

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	7.46	0.00
Capacity for Budget Slack	1	56.16	0.00
Horizontal Inequity × Capacity for Budget Slack	2	1.47	0.23
Gender	1	3.84	0.05

Panel B: Dependent Variable = Percentage of Honesty (n = 1,200)

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	7.83	0.00
Capacity for Budget Slack	1	89.15	0.00
Horizontal Inequity × Capacity for Budget Slack	2	0.80	0.45
Gender	1	0.41	0.52

Budget slack = the amount of funding requested by an employee minus the actual amount of funding needed.
Percentage of Honesty = 1 – Budget Slack/Slack Available, where Slack Available is the difference between the maximum amount of production cost and the actual amount of funding needed.
Gender = 1 if the participant is male, 0 otherwise.

Table 19: Effects of Horizontal Inequity and Severity of Peer Overstatement on Whistleblowing Behavior (Gender Effect)

Dependent Variable = Individual Whistleblowing Percentage (n = 240)			
Source	**df**	**F-Value**	**p-value (two-tailed)**
Horizontal Inequity	2	1.37	0.26
Severity of Peer Overstatement	1	248.33	0.00
Horizontal Inequity × Severity of Peer Overstatement	2	0.15	0.86
Gender	1	0.05	0.83

Percentage of Whistleblowing = the percentage of truthful whistleblowing on lying peers.
Gender = 1 if the participant is male, 0 otherwise.

Personality Traits

Further analyses indicated that male participants and female participants differ in certain personality traits. In order to measure participants' personality traits, I asked them to indicate their degree of agreement on several statements on several 7-point rating scales[28] in the post-experiment questionnaire (Appendix N). The scales includes eight questions to measure vertical individualism (Singelis et al. 1995), eight questions to measure horizontal collectivism (Singelis et al. 1995), six questions to measure risk aversion (Mandrik and Bao 2005), and ten questions to measure idealism (Forsyth 1980). I conducted an exploratory factor analysis with factors rotated using varimax. Given the sample size of 120, the threshold for factor loadings was set to be 0.5 (Hair, Black, Babin, Anderson, and Tatham 2005). As shown in Table 20, all the eight items of

[28] The scales were labeled from strongly disagree to strongly agree.

Vertical Individualism were loaded at acceptable levels (cronbach's alpha[29] = 0.60, untabulated). However, four items were deleted because of low factor loadings. Table 21 shows that removal of the four items resulted in stronger loadings and higher cronbach's alphas. Specifically, after deleting item HC7 ("My happiness depends very much on the happiness of those around me"), most of the factor loadings of the remaining items of Horizontal Collectivism were higher and the cronbach's alpha increased from 0.81 to 0.83. Similarly, after deleting item RA5 ("I feel comfortable improvising in new situations"), most of the factor loadings of the remaining items of Risk Aversion were higher and the cronbach's alpha increased from 0.62 to 0.81. The removal of item I7 ("Deciding whether or not to perform an act by balancing the positive consequences of the act against the negative consequences of the act is immoral") and item I10 ("Moral actions are those which closely match ideals of the most "perfect" action") led to a higher cronbach's alpha (0.88) of Idealism. That is, after deleting the four items, the modified scales could represent horizontal collectivism, risk aversion, and idealism more accurately in this study. The remaining items within each scale were summed to construct vertical individualism, horizontal collectivism, risk aversion, and idealism individually.

[29] Cronbach's alpha was utilized to determine reliability. A cronbach's alpha between 0.60 and 0.70 is considered to have a fair reliability, and a cronbach's alpha between 0.80 and 0.96 is considered to have a very good reliability (Babin and Zikmund 2015).

Table 20: Exploratory Factor Analysis

	Factor Loadings (n = 120)			
	Vertical Individualism	Horizontal Collectivism	Risk Aversion	Idealism
Item				
VI1	**0.73**	-0.14	0.05	0.09
VI2	**0.56**	0.21	0.11	-0.21
VI3	**0.63**	-0.01	0.10	0.24
VI4	**0.52**	0.21	-0.03	-0.35
VI5	**0.69**	-0.08	-0.03	-0.11
VI6	**0.72**	-0.03	0.03	0.03
VI7	**0.67**	0.04	-0.27	-0.10
VI8	**-0.63**	0.23	0.19	0.10
HC1	-0.01	**0.54**	-0.10	0.42
HC2	-0.09	**0.74**	-0.03	0.24
HC3	0.02	**0.63**	0.00	0.13
HC4	0.08	**0.70**	0.01	0.23
HC5	-0.18	**0.59**	-0.07	0.26
HC6	0.08	**0.72**	0.03	0.16
HC7	-0.18	0.39	0.34	0.11
HC8	0.00	**0.65**	0.07	0.25
RA1	-0.14	-0.09	**0.79**	0.04
RA2	0.07	0.16	**0.68**	-0.12
RA3	0.00	0.10	**0.77**	-0.04
RA4	0.13	0.00	**0.73**	0.06
RA5	0.11	0.25	-0.46	-0.19
RA6	-0.05	-0.01	**0.69**	0.16
I1	-0.03	0.29	0.09	**0.66**
I2	0.05	0.17	0.18	**0.75**
I3	-0.09	0.31	0.09	**0.77**
I4	-0.24	0.25	-0.10	**0.68**
I5	0.03	0.10	-0.04	**0.72**
I6	-0.14	0.10	-0.01	**0.71**
I7	-0.04	0.30	0.11	0.43
I8	0.01	0.30	0.06	**0.52**
I9	0.02	0.13	0.08	**0.69**
I10	0.25	0.22	-0.02	0.30

The items of each personality trait scale are shown in Appendix O.
The exploratory factor analysis was conducted with varimax factor rotation.
The threshold for factor loadings is set to be 0.5 due to the sample size of 120.

Table 21: Personality Traits Factor Analysis – Factor Loadings

Panel A: Horizontal Collectivism – Factor Loadings		
	With All 8 Items	With 7 Items
Item		
HC1	0.54	0.57
HC2	0.74	0.74
HC3	0.63	0.66
HC4	0.70	0.72
HC5	0.59	0.63
HC6	0.72	0.74
HC7	0.39	-
HC8	0.65	0.65
Cronbach's Alpha	0.81	0.83
Panel B: Risk Aversion – Factor Loadings		
	With All 6 Items	With 5 Items
RA1	0.79	0.78
RA2	0.68	0.73
RA3	0.77	0.79
RA4	0.73	0.74
RA5	-0.46	-
RA6	0.69	0.68
Cronbach's Alpha	0.62	0.81
Panel C: Idealism – Factor Loadings		
	With All 10 Items	With 8 Items
I1	0.66	0.65
I2	0.75	0.74
I3	0.77	0.76
I4	0.68	0.67
I5	0.72	0.73
I6	0.71	0.72
I7	0.43	-
I8	0.52	0.52
I9	0.69	0.69
I10	0.30	-
Cronbach's Alpha	0.86	0.88

The items of each personality trait scale are shown in Appendix O.
The exploratory factor analysis was conducted with varimax factor rotation.

Table 22 presents the correlations of items within each personality trait scale. Panel A shows strong correlations range from -0.47 to 0.6 among all eight items (VI1 - VI8) within Vertical Individualism[30]. Panel B shows that all items within Horizontal Collectivism were significantly correlated with each other except for item HC7. Panel C shows strong correlations among most of the items within Risk Aversion. No significant correlation between item RA2 and RA5 was detected. Similarly, Panel D shows strong correlations among most items within Idealism except for item I10. Specifically, item I10 was not significantly correlated with item I4, I5, I6, or I7. Also, item I7 was only significantly correlated with I5 with a Pearson correlation of 0.2 at the 5% level.

[30] Negative correlations existed because item VI8 was reverse coded.

Table 22: Personality Traits Correlations

Panel A: Vertical Individualism (n = 120)								
Items	VI1	VI2	VI3	VI4	VI5	VI6	VI7	VI8
VI1	**1.00**							
VI2	**0.29****	**1.00**						
VI3	**0.60****	**0.24****	**1.00**					
VI4	**0.27****	**0.47****	0.13	**1.00**				
VI5	**0.40****	**0.24****	**0.33****	**0.30****	**1.00**			
VI6	**0.49****	**0.26****	**0.40****	**0.31****	**0.43****	**1.00**		
VI7	**0.28****	**0.44****	0.21*	**0.35****	**0.41****	**0.42****	**1.00**	
VI8	**-0.43****	-0.20*	**-0.28****	-0.19*	**-0.47****	**-0.36****	**-0.46****	**1.00**

Panel B: Horizontal Collectivism (n = 120)								
Items	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8
HC1	**1.00**							
HC2	**0.59****	**1.00**						
HC3	**0.33****	**0.43****	**1.00**					
HC4	**0.43****	**0.45****	**0.60****	**1.00**				
HC5	**0.35****	**0.47****	**0.35****	**0.33****	**1.00**			
HC6	**0.42****	**0.45****	**0.33****	**0.55****	**0.50****	**1.00**		
HC7	0.21*	**0.27****	0.13	0.17	0.17	0.19*	**1.00**	
HC8	**0.30****	**0.43****	**0.33****	**0.40****	**0.51****	**0.50****	**0.41****	**1.00**

Panel C: Risk Aversion (n = 120)						
Items	RA1	RA2	RA3	RA4	RA5	RA6
RA1	**1.00**					
RA2	**0.53****	**1.00**				
RA3	**0.49****	**0.48****	**1.00**			
RA4	**0.51****	**0.41****	**0.49****	**1.00**		
RA5	**-0.37****	-0.11	**-0.25****	**-0.25****	**1.00**	
RA6	**0.41****	**0.31****	**0.50****	**0.41****	**-0.29****	**1.00**

Table 22: (Continued)

Panel D: Idealism (n = 120)										
Items	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
I1	**1.00**									
I2	**0.57****	**1.00**								
I3	**0.62****	**0.66****	**1.00**							
I4	**0.50****	**0.47****	**0.52****	**1.00**						
I5	**0.49****	**0.38****	**0.55****	**0.53****	**1.00**					
I6	**0.44****	**0.52****	**0.47****	**0.49****	**0.46****	**1.00**				
I7	**0.24****	**0.39****	**0.34****	**0.38****	0.20*	**0.34****	**1.00**			
I8	**0.34****	**0.33****	**0.50****	**0.36****	**0.41****	**0.32****	**0.35****	**1.00**		
I9	**0.36****	**0.57****	**0.58****	**0.39****	**0.46****	**0.48****	**0.35****	**0.41****	**1.00**	
I10	**0.39****	**0.28****	0.23*	0.13	0.15	0.16	0.05	0.20*	**0.29****	**1.00**

*, **, Denote significance at the 5 percent and 1 percent levels, respectively (two-tailed).
The items of each personality trait scale are shown in Appendix O.

Descriptive Statistics of Control Variables

Table 23 provides the descriptive statistics of the scales[31]. The mean (standard deviation) of relative fairness perception was 3.71 (2.22), and the mean (standard deviation) of absolute fairness perception was 8.20 (3.44). Relative pay satisfaction had a mean (standard deviation) of 4.22 (2.22), and absolute pay satisfaction had a mean (standard deviation) of 9.35 (3.47). The mean (standard deviation) of vertical individualism was 34.68 (7.88), and the mean (standard deviation) of horizontal collectivism was 40.34 (5.41). Risk aversion had a mean (standard deviation) of 21.59 (5.29), and idealism had a mean (standard deviation) of 41.04 (8.23).

[31] After the removal of the four items with low factor loadings, the remaining items within each personality trait scale were summed to construct vertical individualism, horizontal collectivism, risk aversion, and idealism individually.

Table 23: Descriptive Statistics of Fairness Perception, Pay Satisfaction, and Personality Traits

Scales	Mean	Standard Deviation	Minimum	Maximum
Relative Fairness Perception	3.71	2.22	1	7
Absolute Fairness Perception	8.20	3.44	2	14
Relative Pay Satisfaction	4.22	2.22	1	7
Absolute Pay Satisfaction	9.35	3.47	2	14
Vertical Individualism	34.68	7.88	14	52
Horizontal Collectivism	40.34	5.41	20	49
Risk Aversion	21.59	5.29	7	34
Idealism	41.04	8.23	13	56

The items of each fairness perception and pay satisfaction scale are shown in Appendix N.
The items of each personality trait scale are shown in Appendix O. Items are summed to construct each scale. The last item of vertical individualism (VI8) is reverse coded.

Panel A of Table 24 shows the overall correlations among the scales. Horizontal inequity, relative fairness perception, absolute fairness perception, absolute fairness perception, and relative pay satisfaction were significantly correlated with each other. In addition, absolute pay satisfaction was negatively correlated with total budget slack, indicating that participants who are not satisfied with their overall base salary created more budget slack. Further, gender[32] and relative fairness perception had a negative correlation of -0.24, suggesting that male participants were more sensitive to the fairness of their base salary when their base salary is compared to that of their peers. Besides, gender was positively correlated with vertical individualism and negatively correlated

[32] Gender = 1 if the participant is male, 0 otherwise.

with horizontal collectivism and idealism, indicating that male participants exhibited a higher level of vertical individualism and lower levels of horizontal collectivism and idealism than females. Also, horizontal collectivism was significantly correlated with idealism with a Pearson correlation of 0.55, which is reasonable given that both scales emphasize the importance of group harmony. Specifically, as shown in Table 25, most of the items of horizontal collectivism and idealism were significantly positively correlated. Panel B and Panel C of Table 24 show consistent results when peer overstatement was not severe and when peer overstatement was severe, respectively.

Table 24: Correlation Table

Panel A: Overall Correlations	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Horizontal Inequity	**1.00**											
2. Total Budget Slack	-0.09	**1.00**										
3. Percentage of Whistleblowing	-0.13	-0.15	**1.00**									
4. Gender	-0.20*	0.08	0.02	**1.00**								
5. Relative Fairness Perception	**0.86****	-0.08	-0.05	**-0.24****	**1.00**							
6. Absolute Fairness Perception	**0.76****	-0.09	-0.04	-0.15	**0.70****	**1.00**						
7. Relative Pay Satisfaction	**0.82****	-0.17	0.00	-0.17	**0.69****	**0.75****	**1.00**					
8. Absolute Pay Satisfaction	**0.68****	-0.20*	-0.06	-0.10	**0.49****	**0.79****	**0.80****	**1.00**				
9. Vertical Individualism	0.02	0.12	0.08	**0.24****	-0.10	0.00	0.08	0.00	**1.00**			
10. Horizontal Collectivism	-0.07	-0.03	0.07	**-0.25****	-0.12	0.01	-0.07	-0.06	-0.07	**1.00**		
11. Risk Aversion	0.08	0.00	0.11	-0.16	0.04	0.06	0.04	0.11	-0.06	0.02	**1.00**	
12. Idealism	0.03	-0.10	0.04	**-0.27****	0.02	0.12	0.08	0.04	-0.16	**0.55****	0.11	**1.00**

Table 24: (Continued)

Panel B: Correlations when Peer Overstatement is Not Severe	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Horizontal Inequity	**1.00**										
2. Percentage of Whistleblowing	-0.11	**1.00**									
3. Gender	-0.20*	0.09	**1.00**								
4. Relative Fairness Perception	**0.86****	-0.06	**-0.24****	**1.00**							
5. Absolute Fairness Perception	**0.76****	-0.05	-0.15	**0.70****	**1.00**						
6. Relative Pay Satisfaction	**0.82****	-0.06	-0.17	**0.69****	**0.75****	**1.00**					
7. Absolute Pay Satisfaction	**0.68****	-0.10	-0.10	**0.49****	**0.79****	**0.80****	**1.00**				
8. Vertical Individualism	0.02	0.03	**0.24****	-0.10	0.00	0.08	0.00	**1.00**			
9. Horizontal Collectivism	-0.07	0.02	**-0.25****	-0.12	0.01	-0.07	-0.06	-0.07	**1.00**		
10. Risk Aversion	0.08	0.09	-0.16	0.04	0.06	0.04	0.11	-0.06	0.02	**1.00**	
11. Idealism	0.03	0.05	**-0.27****	0.02	0.12	0.08	0.04	-0.16	**0.55****	0.11	**1.00**

Table 24: (Continued)

Panel C: Correlations when Peer Overstatement is Severe	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Horizontal Inequity	**1.00**										
2. Percentage of Whistleblowing	-0.10	**1.00**									
3. Gender	-0.20*	-0.10	**1.00**								
4. Relative Fairness Perception	**0.86****	-0.03	**-0.24****	**1.00**							
5. Absolute Fairness Perception	**0.76****	-0.01	-0.15	**0.70****	**1.00**						
6. Relative Pay Satisfaction	**0.82****	0.06	-0.17	**0.69****	**0.75****	**1.00**					
7. Absolute Pay Satisfaction	**0.68****	0.01	-0.10	**0.49****	**0.79****	**0.80****	**1.00**				
8. Vertical Individualism	0.02	0.09	**0.24****	-0.10	0.00	0.08	0.00	**1.00**			
9. Horizontal Collectivism	-0.07	0.11	**-0.25****	-0.12	0.01	-0.07	-0.06	-0.07	**1.00**		
10. Risk Aversion	0.08	0.10	-0.16	0.04	0.06	0.04	0.11	-0.06	0.02	1.00	
11. Idealism	0.03	0.01	**-0.27****	0.02	0.12	0.08	0.04	-0.16	**0.55****	0.11	**1.00**

*, **, Denote significance at the 5 percent and 1 percent levels, respectively (two-tailed).
Total Budget Slack = the total amount of the budget slack a manager created in the ten periods.
Percentage of Whistleblowing = the percentage of truthful whistleblowing on lying peers.
Gender = 1 if the participant is male, 0 otherwise.
The items of each fairness perception and pay satisfaction scale are shown in Appendix N.
The items of each personality trait scale are shown in Appendix O. Items are summed to construct each scale. The last item of vertical individualism (VI8) is reverse coded.

Table 25: Correlations between Horizontal Collectivism and Idealism

Items	HC1	HC2	HC3	HC4	HC5	HC6	HC8	I1	I2	I3	I4	I5	I6	I8	I9
HC1	**1.00**														
HC2	**0.59****	**1.00**													
HC3	**0.33****	**0.43****	**1.00**												
HC4	**0.43****	**0.45****	**0.60****	**1.00**											
HC5	**0.35****	**0.47****	**0.35****	**0.33****	**1.00**										
HC6	**0.42****	**0.45****	**0.33****	**0.55****	**0.50****	**1.00**									
HC8	**0.30****	**0.43****	**0.33****	**0.40****	**0.51****	**0.50****	**1.00**								
I1	**0.43****	**0.42****	**0.30****	**0.29****	**0.28****	**0.30****	**0.28****	**1.00**							
I2	**0.29****	**0.32****	0.18	**0.25****	**0.35****	0.19*	**0.33****	**0.57****	**1.00**						
I3	**0.42****	**0.40****	**0.31****	**0.38****	**0.45****	**0.32****	**0.36****	**0.62****	**0.66****	**1.00**					
I4	**0.52****	**0.30****	0.16	**0.27****	**0.37****	**0.35****	**0.29****	**0.50****	**0.47****	**0.52****	**1.00**				
I5	**0.38****	0.17	0.21*	**0.32****	0.19*	0.23*	0.23*	**0.49****	**0.38****	**0.55****	**0.53****	**1.00**			
I6	**0.38****	**0.35****	0.22*	**0.24****	0.18	0.09	0.17	**0.44****	**0.52****	**0.47****	**0.49****	**0.46****	**1.00**		
I8	**0.32****	**0.28****	0.23*	**0.41****	0.19*	**0.26****	**0.30****	**0.34****	**0.33****	**0.50****	**0.36****	**0.41****	**0.32****	**1.00**	
I9	**0.24****	**0.25****	0.06	.22*	**0.24****	**0.25****	**0.29****	**0.35****	**0.57****	**0.58****	**0.39****	**0.46****	**0.48****	**0.41****	**1.00**

*, **, Denote significance at the 5 percent and 1 percent levels, respectively (two-tailed).
The items of each personality trait scale are shown in Appendix O.

ANCOVA Results

ANCOVA tests were conducted to test the effects of horizontal inequity and severity of peer overstatement on employees' reporting honesty by including the control variables. Panel A of Table 26 shows the effect of horizontal inequity on the total amount of budget slack created by participants when all the control variables were included in the model. None of the control variables or horizontal inequity had significant effect on total budget slack. Panel B of Table 26 shows the ANCOVA results when only the reasonable control variables[33] were kept in the model. Still, no significant effect was detected. Since none of the control variables was significant, a one-way contrast analysis of horizontal inequity on total budget slack was employed. Contrast weights were +1 for the underpaid condition, -1 for the overpaid condition, and 0 for the equitably paid condition. The planned contrast was significant (Table 27, $p = 0.09$, two-tailed), supporting H1a and H1b that employees are most honest when they are paid more than their peers and are least honest when they are paid less than their peers.

[33] Absolute pay satisfaction was kept because it showed a higher level of significance than other fairness perception and pay satisfaction variables, and vertical individualism was kept because it showed a higher level of significance than other personality trait variables.

Table 26: Effects of Horizontal Inequity on Total Budget Slack (ANCOVA)

Dependent Variable = Total Budget Slack (n = 120)

Panel A: All Control Variables Included

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	0.44	0.64
Gender	1	0.06	0.81
Relative Fairness Perception	1	0.49	0.49
Absolute Fairness Perception	1	1.94	0.17
Relative Pay Satisfaction	1	0.54	0.47
Absolute Pay Satisfaction	1	2.48	0.12
Vertical Individualism	1	0.91	0.34
Horizontal Collectivism	1	0.03	0.86
Risk Aversion	1	0.14	0.71
Idealism	1	0.44	0.51

Panel B: Absolute Pay Satisfaction and Vertical Individualism Included

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	0.32	0.73
Absolute Pay Satisfaction	1	2.40	0.12
Vertical Individualism	1	1.72	0.19

Total Budget Slack = the total amount of the budget slack a manager created in the ten periods.
Gender = 1 if the participant is male, 0 otherwise.
The items of each fairness perception and pay satisfaction scale are shown in Appendix N.
The items of each personality trait scale are shown in Appendix O. Items are summed to construct each scale. The last item of vertical individualism (VI8) is reverse coded.

Table 27: Effects of Horizontal Inequity on Total Budget Slack (Contrast Model)

Dependent Variable = Budget Slack (n = 120)		
Source	**F-Value**	**p-value (two-tailed)**
Horizontal Inequity	2.83	0.09

Total Budget Slack = the total amount of the budget slack a manager created in the ten periods. Contrast weights are +1 in the underpaid condition, -1 in the overpaid condition, and 0 in the equitably paid condition.

Panel A of Table 28 shows the effects of horizontal inequity and severity of peer overstatement on participants' whistleblowing behavior when all control variables were included in the model. Both horizontal inequity and severity of peer overstatement significantly affected whistleblowing percentage, supporting H2a, H2b, and H3b. Specifically, participants who were paid less than their peers were most likely to blow the whistle while participants who were paid equitable were least likely to blow the whistle. Additionally, participants were more likely to blow the whistle when the overstatement of their peer was severe. Also, control variables Relative Pay Satisfaction and Risk Aversion were significantly correlated with whistleblowing percentage. As shown in Panel B of Table 28, the results are consistent when only the reasonable control variables[34] were kept in the model.

[34] Relative pay satisfaction and risk aversion were kept because they have significant effects on whistleblowing percentage.

Table 28: Effects of Horizontal Inequity and Severity of Peer Overstatement on Whistleblowing Behavior (ANCOVA)

Dependent Variable = Individual Whistleblowing Percentage (n = 240)

Panel A: All Control Variables Included

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	4.91	0.01
Severity of Peer Overstatement	1	254.15	0.00
Horizontal Inequity × Severity of Peer Overstatement	2	0.16	0.86
Gender	1	0.14	0.71
Relative Fairness Perception	1	1.76	0.19
Absolute Fairness Perception	1	0.32	0.57
Relative Pay Satisfaction	1	4.13	0.04
Absolute Pay Satisfaction	1	0.52	0.47
Vertical Individualism	1	0.87	0.35
Horizontal Collectivism	1	1.22	0.27
Risk Aversion	1	3.97	0.05
Idealism	1	0.18	0.67

Panel B: Relative Pay Satisfaction and Risk Aversion Included

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	4.99	0.01
Severity of Peer Overstatement	1	257.23	0.00
Horizontal Inequity × Severity of Peer Overstatement	2	0.16	0.85
Relative Pay Satisfaction	1	6.72	0.01
Risk Aversion	1	3.30	0.07

Percentage of Whistleblowing = the percentage of truthful whistleblowing on lying peers.
Gender = 1 if the participant is male, 0 otherwise.
The items of each fairness perception and pay satisfaction scale are shown in Appendix N.
The items of each personality trait scale are shown in Appendix O. Items are summed to construct each scale. The last item of vertical individualism (VI8) is reverse coded.

Table 29 shows the simple effect of horizontal inequity on whistleblowing percentage when peer overstatement was not severe. However, none of the control variables or horizontal inequity had significant effect on whistleblowing percentage. Table 30 shows the simple effect of horizontal inequity on whistleblowing percentage when peer overstatement was severe. Panel A of Table 30 shows that horizontal inequity and relative pay satisfaction significantly affected whistleblowing percentage, supporting H2a and H2b. Consistent results were found when only the reasonable control variables were kept in the model (Panel B of Table 30).

Table 29: Effects of Horizontal Inequity on Whistleblowing Behavior When the Peer Overstatement is Not Severe (ANCOVA)

Dependent Variable = Individual Whistleblowing Percentage (n = 120)

Panel A: All Control Variables Included

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	0.95	0.39
Gender	1	1.37	0.24
Relative Fairness Perception	1	0.25	0.62
Absolute Fairness Perception	1	0.57	0.45
Relative Pay Satisfaction	1	0.95	0.33
Absolute Pay Satisfaction	1	0.95	0.33
Vertical Individualism	1	0.03	0.85
Horizontal Collectivism	1	0.03	0.86
Risk Aversion	1	2.03	0.16
Idealism	1	0.13	0.72

Panel B: Relative Pay Satisfaction and Risk Aversion Included

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	1.24	0.30
Relative Pay Satisfaction	1	0.99	0.32
Risk Aversion	1	1.45	0.23

Percentage of Whistleblowing = the percentage of truthful whistleblowing on lying peers.
Gender = 1 if the participant is male, 0 otherwise.
The items of each fairness perception and pay satisfaction scale are shown in Appendix N.
The items of each personality trait scale are shown in Appendix O. Items are summed to construct each scale. The last item of vertical individualism (VI8) is reverse coded.

Table 30: Effects of Horizontal Inequity on Whistleblowing Behavior When the Peer Overstatement is Severe (ANCOVA)

Dependent Variable = Individual Whistleblowing Percentage (n = 120)

Panel A: All Control Variables Included

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	5.92	0.00
Gender	1	1.02	0.32
Relative Fairness Perception	1	2.48	0.12
Absolute Fairness Perception	1	0.01	0.92
Relative Pay Satisfaction	1	4.51	0.04
Absolute Pay Satisfaction	1	0.02	0.89
Vertical Individualism	1	1.80	0.18
Horizontal Collectivism	1	2.70	0.10
Risk Aversion	1	1.99	0.16
Idealism	1	1.55	0.22

Panel B: Relative Pay Satisfaction and Risk Aversion Included

Source	df	F-Value	p-value (two-tailed)
Horizontal Inequity	2	5.27	0.00
Relative Pay Satisfaction	1	9.32	0.00
Risk Aversion	1	2.04	0.16

Percentage of Whistleblowing = the percentage of truthful whistleblowing on lying peers.
Gender = 1 if the participant is male, 0 otherwise.
The items of each fairness perception and pay satisfaction scale are shown in Appendix N.
The items of each personality trait scale are shown in Appendix O. Items are summed to construct each scale. The last item of vertical individualism (VI8) is reverse coded.

CHAPTER 6

DISCUSSION

This chapter begins with a summary of the findings from the data analyses presented in the previous chapter. Theoretical and practical implications of this study are then delineated. A discussion of the limitations of this study and the potential directions for future research concludes this chapter.

Summary of Findings

My study investigates the effect of horizontal inequity, capacity for budget slack, and severity of peer overstatement on employees' reporting honesty and their willingness to blow the whistle on misreporting peers in a peer reporting context. The results indicate that employees report their budgets most honestly when they are paid more than their peers and report least honestly when they are paid less than their peers. In addition, employees are most likely to blow the whistle when they are paid less than their peers and are least likely to do so when they are paid the same as their peers[35]. Further, the results suggest that employees create more budget slack as their capacity for creating budget slack increases. Also, employees' willingness to blow the

[35] Both ANOVA tests and ANCOVA tests suggest that employees who are paid less than their their peers are more likely to blow the whistle on misreporting peers compared to employees who are paid the same as their peers. Further, ANCOVA tests suggest that employees who are paid more than their peers are more likely to blow the whistle compared to employees who are paid the same as their peers. ANCOVA tests also suggest that employees who are paid less than their peers are more likely to blow the whistle compared to employees who are paid more than their peers. Taken together, employees are most likely to blow the whistle when they are paid less than their peers and are least likely to blow the whistle when they are paid the same as their peers.

whistle on misreporting peers is positively associated with the severity of their peer's overstatement of budgeted production cost.

Contributions and Implications

My study contributes to theory and practice on multiple dimensions. First, it adds to the growing literature (Luft 1997; Fisher et al. 2002; Sprinkle 2003; Towry 2003; Zhang 2008; Matuszewski 2010) that consolidates theories from both economics and psychology to examine accounting issues in a multi-agent setting. Specifically, the results provide insights to how horizontal inequity, capacity for budget slack, and severity of peer overstatement influence the effectiveness of a peer reporting system in eliciting employees' private information and controlling their opportunistic behavior.

Second, my study seeks to answer the call for more research on the overpayment effect of horizontal inequity on employees' reactions by providing an experimental test of how horizontal inequity, including both the underpayment effect and the overpayment effect, affect employees' degree of honesty in managerial reporting. Although the predictions derived from the underpayment effect of Adams' (1963, 1965) equity theory are supported by various studies (Clark 1958; Homans 1953; Lawler and O'Gara 1967; Scholl et al. 1987; Moser et al. 1995), such research results regarding the overpayment effect of horizontal inequity are controversial due to the serious criticism (Goodman and Friedman 1971; Carrell and Dittrich 1978; Sweeney 1990; Mowday 1991) most studies received regarding their way of manipulation the overpayment effect. I use a different method, that is, paying participants more base salary than their comparable peers, to operationalize the overpayment effect in my

experiment. To my knowledge, this study is the first one to test the overpayment effect of horizontal inequity on employees' decision making in an accounting setting.

Third, my findings could be useful to companies that are using and/or are considering adopting a pay transparency policy. Whereas the pay transparency policy is likely to bring benefits such as increased productivity and job satisfaction (Lawler 1967; Blanes i Vidal and Nossol 2011) to a firm, it may have negative consequences when horizontal inequity exists. My findings provide evidence that, when the salary information of all employees is visible throughout the company, employees who are paid less than their peers may take risks to reduce feelings of inequity by committing opportunistic acts against their companies. My study also provides a solution to control such opportunistic behaviors if peer monitoring is available. Specifically, principals can monitor and control employees' opportunistic behavior by building a peer reporting system that enables employees to blow the whistle on their misreporting peers. Additionally, since employees are more likely to create more budget slack as their capacity for overstating their production cost increases, companies should pay particular attention on restraining employees' opportunistic behaviors when high information asymmetry exists.

Limitations and Future Research

Despite its theoretical and practical implications, the results of my study are subject to various limitations, which provide opportunities for future research. For example, in my research design, participants were prohibited from communicating with each other during the experiment. However, in practice, employees working in the same team or performing the same task communicate with each other frequently,

which facilitates collusion. The possibility that employees can maximize their final compensation by overstating their budgets to the highest amount and covering up for each other may seriously threaten the effectiveness of the peer reporting system on controlling employees' opportunistic behaviors. Future studies should identify and explore other possible factors that help to improve the effectiveness of a peer reporting system in monitoring employees' opportunistic behavior when participants in similar experiments are allowed to communicate with each other.

Second, my study only tests the effect of horizontal inequity, capacity for budget slack, and severity of peer overstatement on employees' reporting honesty using a repeated measures design. Specifically, participants in my experiment did not know if their peers reported them for overstating production cost until they had completed the post-experiment questionnaire. Participants may be less likely to create budget slack if they know they were reported by their peers in the previous period, regardless of whether they are paid more or less than their peers. That is, my study does not examine the long-term effect of implementing a peer reporting system. Future studies could test the effect of the peer reporting system in a multi-period setting where participants are informed whether or not they are reported by their peer for overstating production cost at the end of each period.

Finally, experiments "control for threats for valid inference" and allow researchers to "study cause-effect relations under pure and uncontaminated conditions" (Sprinkle 2003, p. 289). Specifically, in my study, participants were told to assume that the estimated/budgeted production cost provided by the forecasting system was the same as the actual production cost. That is, under my experimental design, the creation of budget slack represents opportunistic behavior. Admittedly, in

practice, the predicted production cost is usually different from the actual production cost. Employees may create budget slack due to uncertainty. Therefore, the results of my study may subject to concerns of external validity (Sprinkle 2003).

APPENDIX A

HUMAN USE APPROVAL LETTER

LOUISIANA TECH
UNIVERSITY

OFFICE OF UNIVERSITY RESEARCH

MEMORANDUM

TO: Ms. Yiwen Li and Dr. Andrea Drake

FROM: Dr. Stan Napper, Vice President Research & Development

SUBJECT: HUMAN USE COMMITTEE REVIEW

DATE: May 19, 2017

In order to facilitate your project, an EXPEDITED REVIEW has been done for your proposed study entitled:

"The Effect of Horizontal Inequality and Opportunity for Budget Slack on Managerial Reporting Behavior"

HUC 17-111

The proposed study's revised procedures were found to provide reasonable and adequate safeguards against possible risks involving human subjects. The information to be collected may be personal in nature or implication. Therefore, diligent care needs to be taken to protect the privacy of the participants and to assure that the data are kept confidential. Informed consent is a critical part of the research process. The subjects must be informed that their participation is voluntary. It is important that consent materials be presented in a language understandable to every participant. If you have participants in your study whose first language is not English, be sure that informed consent materials are adequately explained or translated. Since your reviewed project appears to do no damage to the participants, the Human Use Committee grants approval of the involvement of human subjects as outlined.

Projects should be renewed annually. ***This approval was finalized on May 18, 2017 and this project will need to receive a continuation review by the IRB if the project, including data analysis, continues beyond May 18, 2018.*** Any discrepancies in procedure or changes that have been made including approved changes should be noted in the review application. Projects involving NIH funds require annual education training to be documented. For more information regarding this, contact the Office of University Research.

You are requested to maintain written records of your procedures, data collected, and subjects involved. These records will need to be available upon request during the conduct of the study and retained by the university for three years after the conclusion of the study. If changes occur in recruiting of subjects, informed consent process or in your research protocol, or if unanticipated problems should arise it is the Researchers responsibility to notify the Office of Research or IRB in writing. The project should be discontinued until modifications can be reviewed and approved.

Please be aware that you are responsible for reporting any adverse events or unanticipated problems.

If you have any questions, please contact Dr. Mary Livingston at 257-2292 or 257-5066.

APPENDIX B

HUMAN SUBJECTS CONSENT FORM

HUMAN SUBJECTS CONSENT FORM

The following is a brief summary of the project in which you are asked to participate. Please read this information before signing the statement below. You must be of legal age or must be co-signed by parent or guardian to participate in this study. Pregnant women are not eligible to participate in this study.

TITLE OF PROJECT: Decision Making in Accounting.

PURPOSE OF STUDY/PROJECT: To gather information about how business students think and make decisions.

PROCEDURE: You will be given instructions on how to complete a simple task and how to fill various forms. You will be given an anonymous participant ID number to place on all forms so there will be no way to tie your responses to you specifically. All the information you supply will be kept confidential by the researchers and will be seen only by them. You do not give your name on any form containing research results. The only place you write your name is on a sheet verifying receipt of your pay and possibly on a sign-up sheet if you would like to receive the results of the experiment when it is completed. Once you complete the task, you will also be asked for demographic data and to answer a questionnaire at the end of the session. Then your compensation will be calculated and you will be paid.

INSTRUMENTS: You will be given a computer-based task to make reporting decisions based on information provided during the experiment.

RISKS/ALTERNATIVE TREATMENTS: The participant understands that Louisiana Tech is not able to offer financial compensation nor to absorb the costs of medical treatment should you be injured as a result of participating in this research.

The following disclosure applies to all participants using online survey tools: This server may collect information and your IP address indirectly and automatically via "cookies".

EXTRA CREDIT: If extra credit is offered to students participating in research, an alternative extra credit that requires a similar investment of time and energy will also be offered to those students who do not choose to volunteer as research subjects.

BENEFITS/COMPENSATION: At the beginning of the session you will be told how you will be paid for your participation. Your pay will range from $3 to $20.

I, _____, attest with my signature that I have read and understood the following description of the study, "Decision Making in Accounting", and its purposes and methods. I understand that my participation in this research is strictly voluntary and my participation or refusal to participate in this study will not affect my relationship with Louisiana Tech University or my grades in any way. Further, I understand that I may withdraw at any time or refuse to answer any questions without penalty. Upon completion of the study, I understand that the results will be freely available to me upon request. I understand that the results of my survey will be confidential, accessible only to the principal investigators, myself, or a legally appointed representative. I have not been requested to waive nor do I waive any of my rights related to participating in this study. I am over 18 years of age, and I am not pregnant.

_____ _____

Signature of Participant or Guardian **Date**

CONTACT INFORMATION: The principal experimenters listed below may be reached to answer questions about the research, subjects' rights, or related matters.

Yiwen Li, Email: yli022@latech.edu, Phone: (318) 257-2822

Members of the Human Use Committee of Louisiana Tech University may also be contacted if a problem cannot be discussed with the experimenters:

Dr. Stan Napper (257-3056)
Dr. Mary M. Livingston (257-2292 or 257-5066)

APPENDIX C

INTRODUCTION SCRIPT

<As participants come in, give them a Human Subjects Consent Form, a pen, and a calculator>
<Collect consent forms from participants>

Good afternoon! Thank you for coming!

You will assume the role of a division manager of Beta Company. This simulation has to do with requesting funding and reporting, and you will be paid real cash after completing the study. The amount of cash you can earn is decided by the decision you and the other manager made. The computer will show you the instructions later.

The instruction contains descriptions of the jobs you are required to do and how you will be compensated, as well as some questions for you to answer about your given task. Please read all information carefully and follow the instructions. If you are not comfortable with reading the instructions on the screen, I will also give you part of the instructions printed on the paper.

After the instruction, you will be required to do some decision-making for **several** periods! Please remember that there is no right or wrong answer for the decisions you made. It's totally up to you, so just follow your heart! All your information will be kept confidential.

Also, I'll randomly distribute a manager ID to you. Please write your manager ID number whenever you are asked for it. Please note there is no way for me to connect your name with your manager ID. Anyway, all your information will be confidential.

<Stop>

Do you have any questions so far?

<Answer questions>

OK, now I'm going to give you the paper-based instructions and your manager ID.

<Distribute instructions and manager IDs>
<Start experiment>

Now you can start to read the instruction and answer the questions on the computer. The instruction contains a lot of information, so please be patient and read all the information carefully. Please do not play with your cell phone or talk with each other after this point. If you have any questions, please raise your hand.

APPENDIX D

EXPERIMENT INSTRUCTIONS

SCREEN 1 [SAME FOR ALL CONDITIONS]

Instructions

Welcome to Beta Company! I'm happy to inform you that you are hired as the manager of Beta Company Division A. Beta Company produces parts for the auto industry. Your job is to produce 500 parts in each period. You need to request funding from the owner of Beta Company to produce the parts.

As the Division A manager, you have a **private** forecasting system that tells you the actual amount of funding you need to produce 500 units of the parts. However, **the owner ONLY knows that your funding needs are between 3,000 and 4,000 Lira, in increments of 50 Lira**. Since Beta is a large company, there is another division (e.g., Division B) that also produces 500 units of the same part in each period. **You know Division B's funding needs will be very similar to your funding needs.** The manager of Division B has the same private forecasting system that reveals the actual amount of funding Division B needs. Likewise, the manager of Division B knows that his/her funding needs are very similar to your funding needs.

You will be asked to make decisions for **several** periods, and your compensation will be based on the decisions made by you and the manager of Division B. To determine the amount of rewards you earn, one of the periods will be randomly selected to determine your compensation. **You will be compensated at the rate of $1.00 for each 100 Lira you earn in that period.** The following instructions describe what you will be doing in more detail.

If you have any questions during the study, please raise your hand and the administrator will answer your question. **Please do not talk with each other after this point.**

SCREEN 2 [SAME FOR CONDITIONS]

Requesting Funding

You need to complete a Funding Request Form for your division (Division A) to get funding for producing 500 units of a part (e.g., Part X) from the owner in each period. Because the owner does NOT know your division's actual funding needs, **you can request any amount of funding between the actual amount of funding you need and 4,000 Lira to the owner.** You will receive the funding you requested as long as the request is between 3,000 Lira and 4,000 Lira **(in increments of 50 Lira)**.

The manager of Division B will request funding for his/her division as well. After you and the manager of Division B make funding requests, **you will be shown Division B's Funding Request Form that documents how much funding Division B's manager requested from the owner.**

Reporting

Then you will submit a Peer Reporting Form where you will decide whether to report that Division B's manager requested more funding than you think it took to produce 500 units of Part X. Note that while you may be fairly sure whether the manager of Division B overstated or not, you are not required to report it. **You can choose to report either "Overstated" or "Not Overstated," regardless of what you think the manager of Division B actually did.**

The manager of Division B will complete the same reporting form.

- When you think that the manager of Division B has overstated the amount of funding needed:
    - You can choose not to notify the owner of this overstatement. In this case, the manager of Division B can keep the overstatement as additional compensation.
    - You can choose to report it to the owner. In this case, the manager of Division B *cannot* keep the overstatement and you can receive 20% of the other manager's overstatement as a reward if he/she did in fact overstate.

- If you *falsely accuse* Division B's manager of overstating when in fact he/she did not, you will lose your entire compensation including your base salary *in that period*.

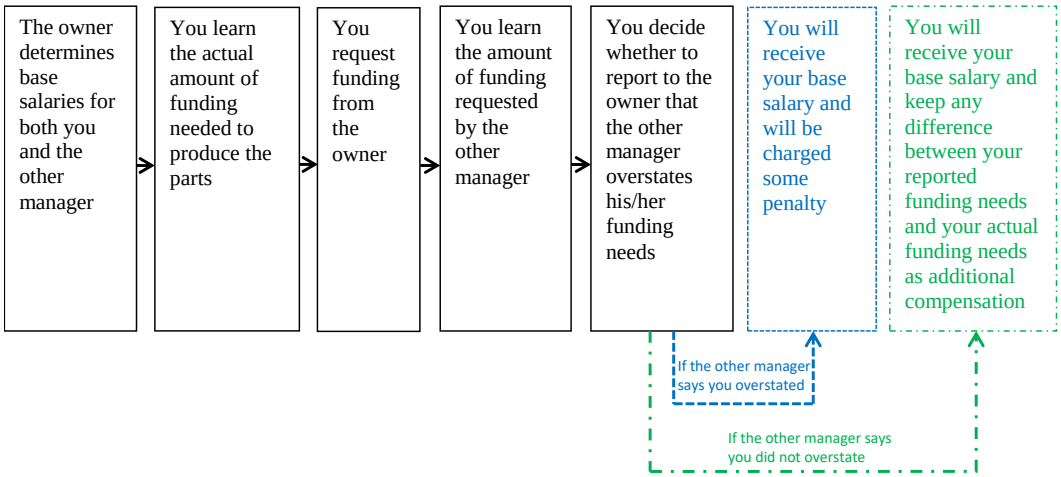
- Additionally, if you overstate the amount of funding you need and:

- If you are not reported by the manager of Division B as having overstated your funding needs, you will receive any difference between your requested funding needs and the actual funding needs as additional overstatement compensation. For example, if your actual funding needs are 3,500 Lira and you request 3,700 Lira, you could earn additional compensation of 200 Lira.
- If you are reported by the manager of Division B as having overstated your funding needs, you *cannot* keep the overstatement compensation and you will be assessed a penalty equal to 20% of your overstatement.

The same reporting rewards and penalties apply to the other manager.

SCREEN 3 [SAME FOR ALL CONDITIONS]

A diagram is provided to help you get a better understanding of the process in each period:



- *If you think the other manager overstated his/her funding needs and you choose to report it to the owner, you can get a reporting reward.*
- *The same reporting rewards and penalties apply to the other manager.*

SCREEN 4 [DIFFERENT ACROSS CONDITIONS]

[Overpaid and Underpaid Conditions]

Compensation

The owner will pay you a base salary for doing this job. **Although you have the same level of work experience, educational background, job description and workload, your salaries are NOT the same**. Your total compensation in each period may be greater than, equal to, or less than your base salary based on the decisions made by both you and the other manager.

You can use the following form to calculate your compensation:

a. Base Salary[1]			=	_____ Lira
b. Your **potential** overstatement compensation[2]	Requested amount of funding – Actual funding needs		=	_____ Lira
c. Your **potential** reporting compensation (if you report the other manager's overstatement to the owner)	The other manager's overstatement	× 0.2	=	_____ Lira
d. Your **potential** overstatement penalty (if you are reported by the other manager)	Your overstatement	× 0.2	=	_____ Lira
e. Total Lira	a + b + c - d		=	_____ Lira
f. Compensation ($1.00 for each 100 Lira)	Total Lira	$\times \frac{1}{100}$	=	$ _____

*Note that if you falsely accuse the other manager of overstating his/her funding needs when in fact he/she did not, you will receive **no payment** in that period.*

1. You will be informed of your and the other manager's base salaries later.
2. Overstatement is different from overstatement compensation. Your (The other manager's) **overstatement** exists if you (he/she) overstate your (his/her) funding needs. However, your **overstatement compensation** is the amount of Lira you can get as additional compensation by overstating. You can only get your overstatement compensation if you are not reported by the other manager.

SCREEN 4 [DIFFERENT ACROSS CONDITIONS]

[Equitably Paid condition]

Compensation

The owner will pay you a base salary for doing this job. Since you have the same level of work experience, educational background, job description and workload, your salaries are the same. Your base salary is **600** Lira, and the base salary of the other manager is **600** Lira. Your total compensation in each period may be greater than, equal to, or less than your base salary based on the decisions made by both you and the other manager.

You can use the following form to calculate your compensation:

a. Base Salary			=	_____ Lira
b. Your **potential** overstatement compensation[1]	Requested amount of funding – Actual funding needs		=	_____ Lira
c. Your **potential** reporting compensation (if you report the other manager's overstatement to the owner)	The other manager's overstatement	× 0.2	=	_____ Lira
d. Your **potential** overstatement penalty (if you are reported by the other manager)	Your overstatement	× 0.2	=	_____ Lira
e. Total Lira	a + b + c - d		=	_____ Lira
f. Compensation ($1.00 for each 100 Lira)	Total Lira	$\times \frac{1}{100}$	=	$ _____

*Note that if you falsely accuse the other manager of overstating his/her funding needs when in fact he/she did not, you will receive **no payment** in that period.*

1. Overstatement is different from overstatement compensation. Your (The other manager's) **overstatement** exists if you (he/she) overstate your (his/her) funding needs. However, your **overstatement compensation** is the amount of Lira you can get as additional compensation by overstating. You can only get your overstatement compensation if you are not reported by the other manager.

APPENDIX E

EXPERIMENT EXAMPLES

[Overpaid and Underpaid Conditions]

Here are some **examples** that will help you to understand how to calculate your compensation.

Case 1. In the current period, assume the actual amount of funding your division (Division A) needs is *3,300* Lira and the actual amount of funding Division B needs is *3,350* Lira. Assume your Base Salary is *800* Lira. Assume you requested *3,800* Lira from the owner, and the manager of Division B requested *3,850* Lira from the owner. If you informed the owner that the manager of Division B overstated and if the manager of Division B informed the owner that you did not overstate, how much Lira can you get?

1. Your overstatement compensation
   = Your Requested amount of funding - Your actual funding needs
   = 3,800 - 3,300 Lira
   = 500 Lira

<Since in this case, you are not reported by Division B's manager, you can keep this potential overstatement compensation>

2. Your reporting compensation
   = The other manager's overstatement × 0.2
   = (3,850 - 3,350) × 0.2
   = 100 Lira

<Because you inform the owner of the other manager's overstatement, so you receive this compensation>

3. Your overstatement penalty
   = 0 Lira

<In this case, you are not reported by the other manager, so no penalty charge>

4. Total Lira you can earn
   = Base salary + Your overstatement compensation + Your reporting compensation - Your overstatement penalty
   = 800 + 500 + 100 - 0 = 1,400 Lira

What if your base salary is 400 Lira? How much Lira can you get?

5. Total Lira you can earn = Base salary + Your potential overstatement compensation + Your potential reporting compensation - Your potential overstatement penalty
   = 400 + 500 + 100 - 0 = 1,000 Lira

[Equitably Paid Condition]

Here are some **examples** that will help you to understand how to calculate your compensation.

Case 1. In the current period, assume the actual amount of funding your division (Division A) needs is *3,300* Lira and the actual amount of funding Division B needs is *3,350* Lira. Assume your Base Salary is *600* Lira. Assume you requested *3,800* Lira from the owner, and the manager of Division B requested *3,850* Lira from the owner. If you informed the owner that the manager of Division B overstated and if the manager of Division B informed the owner that you did not overstate, how much Lira can you get?

1. Your overstatement compensation
   = Your Requested amount of funding - Your actual funding needs
   = 3,800 - 3,300 Lira
   = 500 Lira

<Since in this case, you are not reported by Division B's manager, you can keep this potential overstatement compensation>

2. Your reporting compensation
   = The other manager's overstatement × 0.2
   = (3,850 - 3,350) × 0.2
   = 100 Lira

< Because you inform the owner of the other manager's overstatement, so you receive this compensation>

3. Your overstatement penalty
   = 0 Lira

<In this case, you are not reported by the other manager, so no penalty charge>

4. Total Lira you can earn = Base salary + Your overstatement compensation + Your reporting compensation - Your overstatement penalty
   = 600 + 500 + 100 - 0
   = 1,200 Lira

APPENDIX F

EXPERIMENT PRACTICE QUESTIONS

[Overpaid and Underpaid Conditions]

Please answer the following questions to assess your understanding of the compensation.

Case 2. In the current period, assume the actual amount of funding your division (Division A) needs is *3,300* Lira and the actual amount of funding Division B needs is *3,350* Lira. Assume your Base Salary is *800* Lira. Assume you requested *3,800* Lira from the owner, and the manager of Division B requested *3,850* Lira from the owner. If you informed the owner that the manager of Division B did not overstate and if the manager of Division B informed the owner that you overstated, how much Lira can you get?

1. Your overstatement compensation
   =

[Correct Answer: 0 Lira]

2. Your reporting compensation
   =

[Correct Answer: 0 Lira]

3. Your overstatement penalty
   =

[Correct Answer: 100 Lira]

4. Total Lira you can earn
   = Base salary + Your overstatement compensation + Your reporting compensation - Your overstatement penalty
   =

[Correct Answer: 700 Lira]

What if your base salary is 400 Lira? How much Lira can you get?

5. Total Lira you can earn
   = Base salary + Your overstatement compensation + Your reporting compensation - Your overstatement penalty
   =

[Correct Answer: 300 Lira]

[Equitably Paid Condition]

Please answer the following questions to assess your understanding of the compensation.

Case 2. In the current period, assume the actual amount of funding your division (Division A) needs is *3,300* Lira and the actual amount of funding Division B needs is *3,350* Lira. Assume your Base Salary is *600* Lira. Assume you requested *3,800* Lira from the owner, and the manager of Division B requested *3,850* Lira from the owner. If you informed the owner that the manager of Division B did not overstate and if the manager of Division B informed the owner that you overstated, how much Lira can you get?

1. Your overstatement compensation
   =

[Correct Answer: 0 Lira]

2. Your reporting compensation
   =

[Correct Answer: 0 Lira]

3. Your overstatement penalty (if you are reported by Division B's manager)
   =

[Correct Answer: 100 Lira]

4. Total Lira you can earn
   =

[Correct Answer: 500 Lira]

APPENDIX G

EXPERIMENT BASE SALARY ANNOUNCEMENT

[Overpaid Condition]

Now the owner has decided your and the other manager's base salary!

Although you have the same level of work experience, educational background, job description and workload, your salaries are not the same. Your base salary is 800 Lira, and the base salary of the other manager is 400 Lira. That is, your base salary is twice as high as the other manager's base salary. Your total compensation in each period may be greater than, equal to, or less than your base salary based on the decisions made by both your and the other manager.

[Underpaid Condition]

Now the owner has decided your and the other manager's base salary!

Although you have the same level of work experience, educational background, job description and workload, your salaries are not the same. Your base salary is 400 Lira, and the base salary of the other manager is 800 Lira. That is, your base salary is only half of the other manager's base salary. Your total compensation in each period may be greater than, equal to, or less than your base salary based on the decisions made by both your and the other manager.

APPENDIX H

EXPERIMENT QUIZ

Please answer the following questions based on what you were told and/or read during the study. All information will be kept confidential.

1. Each period, I could ask for any amount of funding between my actual funding needs and 4,000 Lira (in increments of 50 Lira) from the owner.

   Yes No

[Correct answer: Yes]

2. The other manager and I work for the same company (Beta Company).

   Yes No

[Correct answer: Yes]

3. My base salary is higher than the base salary of the other manager.

   Yes No

[Correct answer in the overpaid condition: Yes]
[Correct answer in the underpaid and the equitably paid conditions: No]

4. Each period, I knew the actual amount of funding needed by my division (Division A) to produce 500 units of parts.

   Yes No

[Correct answer: Yes]

5. Each period, the actual amount of funding needed by my division (Division A) and the other division is very similar.

   Yes No

[Correct answer: Yes]

6. If I falsely accuse the other manager of overstating, I can keep my base salary.

   Yes No

[Correct answer: No]

7. The owner would never know my funding needs if the other manager does not report on me.

   Yes No

[Correct answer: Yes]

8. I can keep the amount of funding I overstated if the other manager does not report on me.

   Yes No

[Correct answer: Yes]

9. I can get a reporting reward if I think the other manager overstated his/her funding needs and I report it to the owner.

Yes No

[Correct answer: Yes]

10. Even if I am pretty sure the other manager overstated his/her funding needs, I can choose not to inform the owner of the overstatement.

Yes No

[Correct answer: Yes]

APPENDIX I

EXPERIMENT SUMMARY

[Overpaid Condition]

Summary

1. The owner will pay you a base salary for doing this job. **Although you have the same level of work experience, educational background, job description and workload, your salaries are NOT the same.** Your base salary is **800 Lira**, and the base salary of the other manager is **400 Lira**. That is, **your base salary is twice as high as the other manager's base salary**. Your total compensation in each period may be greater than, equal to, or less than your base salary based on the decisions made by both you and the other manager.
2. Your private forecasting system will tell you the actual amount of funding your division needs to produce 500 units of parts. However, the owner only knows that your funding needs are between 3,000 Lira and 4,000 Lira, in increments of 50 Lira.
3. You can request **any amount of funding** between your actual funding needs and 4,000 Lira from the owner.
4. Since the other division is producing 500 units of the same part in each period, the other division's funding needs will be very similar to your funding needs.
5. If you find that the other manager of Division B overstated his/her funding needs, you can choose whether to inform the owner or not by choosing one of the two choices on the Peer Reporting Form. Note that although you may be fairly sure whether the manager of Division B overstated his/her funding needs or not, you can either choose "Overstated" or "Not Overstated," regardless of what you think the manager of Division B actually did.
6. You will have one practice round to help you better understand these instructions.
7. When a new period starts, the amount of funding each division needs may change. In the new period, you and a new manager from another division of Beta Company will produce 500 units of other parts individually.
8. Your cash payment will be determined by a randomly selected period. Your will receive $1.00 for every 100 Lira you earn in that period.

[Underpaid Condition]

Summary

1. The owner will pay you a base salary for doing this job. **Although you have the same level of work experience, educational background, job description and workload, your salaries are NOT the same.** Your base salary is **400 Lira**, and the base salary of the other manager is **800 Lira**. That is, **your base salary is only half of the other manager's base salary**. Your total compensation in each period may be greater than, equal to, or less than your base salary based on the decisions made by both you and the other manager.
2. Your private forecasting system will tell you the actual amount of funding your division needs to produce 500 units of parts. However, the owner only knows that your funding needs are between 3,000 Lira and 4,000 Lira, in increments of 50 Lira.
3. You can request **any amount of funding** between your actual funding needs and 4,000 Lira from the owner.
4. Since the other division is producing 500 units of the same part in each period, the other division's funding needs will be very similar to your funding needs.
5. If you find that the other manager of Division B overstated his/her funding needs, you can choose whether to inform the owner or not by choosing one of the two choices on the Peer Reporting Form. Note that although you may be fairly sure whether the manager of Division B overstated his/her funding needs or not, you can either choose "Overstated" or "Not Overstated," regardless of what you think the manager of Division B actually did.
6. You will have one practice round to help you better understand these instructions.
7. When a new period starts, the amount of funding each division needs may change. In the new period, you and a new manager from another division of Beta Company will produce 500 units of other parts individually.
8. Your cash payment will be determined by a randomly selected period. Your will receive $1.00 for every 100 Lira you earn in that period.

[Equitably Paid Condition]

Summary

1. The owner will pay you a base salary for doing this job. **Since you have the same level of work experience, educational background, job description and workload, your salaries are the same.** Your base salary is **600 Lira**, and the base salary of the other manager is **600 Lira**. Your total compensation in each period may be greater than, equal to, or less than your base salary based on the decisions made by both you and the other manager.
2. Your private forecasting system will tell you the actual amount of funding your division needs to produce 500 units of parts. However, the owner only knows that your funding needs are between 3,000 Lira and 4,000 Lira, in increments of 50 Lira.
3. You can request **any amount of funding** between your actual funding needs and 4,000 Lira from the owner.
4. Since the other division is producing 500 units of the same part in each period, the other division's funding needs will be very similar to your funding needs.
5. If you find that the other manager of Division B overstated his/her funding needs, you can choose whether to inform the owner or not by choosing one of the two choices on the Peer Reporting Form. Note that although you may be fairly sure whether the manager of Division B overstated his/her funding needs or not, you can either choose "Overstated" or "Not Overstated," regardless of what you think the manager of Division B actually did.
6. You will have one practice round to help you better understand these instructions.
7. When a new period starts, the amount of funding each division needs may change. In the new period, you and a new manager from another division of Beta Company will produce 500 units of other parts individually.
8. Your cash payment will be determined by a randomly selected period. Your will receive $1.00 for every 100 Lira you earn in that period.

APPENDIX J

PRIVATE FORECASTING INFORMATION FORM

PRIVATE FORECASTING INFORMATION FORM

Manager ID: _____

My Base Salary: _____

The Other Manager's Base Salary: _____

The total amount of funding needed to produce 500 units of Part X for your division (**Division A**) is _____ Lira.

APPENDIX K

BETA COMPANY DIVISION A FUNDING REQUEST FORM

BETA COMPANY DIVISION A FUNDING REQUEST FORM

Manager ID: _____

My Base Salary: _____

The Other Manager's Base Salary: _____

The total amount of funding I am requesting to produce 500 units of Part X is (please choose):

- 3,000 Lira
- 3,050 Lira
- 3,100 Lira
- 3,150 Lira
- 3,200 Lira
- 3,250 Lira
- 3,300 Lira
- 3,350 Lira
- 3,400 Lira
- 3,450 Lira
- 3,500 Lira
- 3,550 Lira
- 3,600 Lira
- 3,650 Lira
- 3,700 Lira
- 3,750 Lira
- 3,800 Lira
- 3,850 Lira
- 3,900 Lira
- 3,950 Lira
- 4,000 Lira

APPENDIX L

BETA COMPANY DIVISION B FUNDING REQUEST FORM

BETA COMPANY DIVISION B FUNDING REQUEST FORM

Manager ID: _____

My Base Salary: _____

The Other Manager's Base Salary: _____

The total amount of funding Division B requested to produce 500 units of Part X is _____ Lira.

APPENDIX M

PEER REPORTING FORM

PEER REPORTING FORM

Manager ID: _____

My Base Salary: _____

The Other Manager's Base Salary: _____

What report would you like to make regarding the amount of funding Division B requested (Please choose)?

Overstated Not Overstated

APPENDIX N

POST-EXPERIMENT QUESTIONNAIR

Please rate your degree of agreement with the following statements. All information will be kept confidential.

1. Compared to the amount of base salary received by the other manager, my base salary was
   A. Higher B. the same C. lower

2. The amount of base salary I received was fair. [Absolute fairness perception1]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

3. How fair did you think your base salary was compared to the base salary of the other manager? [Relative fairness perception]

1	2	3	4	5	6	7
It was very **unfair**	Unfair	Somewhat unfair	It was neither fair nor unfair	Somewhat fair	Fair	It was very **fair**

4. Considering the effort I put into my work, my base salary was fair. [Absolute fairness perception3]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

5. People on the same job should be paid equally.

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

6. I am satisfied with my base salary. [Absolute pay satisfaction1]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

7. I am satisfied with my base salary compared to that of the other manager. [Relative pay satisfaction]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

8. Considering the effort I put into my work, I am satisfied with my base salary. [Absolute pay satisfaction3]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

9. In different periods, I was matched with managers from different divisions.

Yes No

10. I think overstating the amount of funding my division needs is unethical.

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

11. When making decisions, I considered how my decisions would affect my final payment.

Yes No

12. When making decisions, I considered how my decisions would affect Beta Company's overall profit.

Yes No

13. During the study, did you ever **NOT** inform the owner that the other manager had overstated the amount of funding he/she needed?

Yes No

If "Yes", why did you **NOT** inform the owner that the other manager had overstated his/her budget (you can choose **more than one item**)?

☐ I felt sorry for the other manager because of his/her low base salary.

☐ I was not sure if the other manager overstated or not.

☐ The amount of funding the other manger overstated is not very much.

☐ I did not inform the owner because I thought the other manager would act the same for me.

☐ I did not care.

☐ I just don't want to report others.

Other reason: _____

14. During the study, did you ever **inform** the owner that the other manager had overstated the amount of funding he/she needed?

Yes No

If "Yes", why did you **inform** the owner that the other manager had overstated his/her budget (you can choose **more than one item**)?

☐ I wanted to get the reporting reward.

☐ It is the right thing to do.

☐ The other manager overstated too much.

☐ The other manager overstated more than I did.

☐ Overstating funding needs is not ethical.

☐ If I did not choose to tell the owner, the company will lose money.

Other reason: _____

15. Please note any parts of the instructions you found confusing.

_____
_____
_____

16. Briefly describe the strategy you used in your reporting decisions.

_____
_____
_____

For each of the following statements, please indicate your degree of agreement with the following statements. There is no right or wrong answers. All information will be kept confidential.

17. It annoys me when other people perform better than I do. [Vertical individualism1]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

18. Competition is the law of nature. [Vertical individualism2]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

19. When another person does better than I do, I get tense and aroused. [Vertical individualism3]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

20. Without competition, it is not possible to have a good society. [Vertical individualism4]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

21. Winning is everything. [Vertical individualism5]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

22. It is important that I do my job better than others. [Vertical individualism6]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

23. I enjoy working in situations involving competition with others. [Vertical individualism7]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

24. Some people emphasize winning; I’m not one of them. [Vertical individualism8]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

25. The well-being of my co-workers is important to me. [Horizontal collectivism1]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

26. If a co-worker gets a prize, I would feel proud. [Horizontal collectivism2]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

27. If a relative were in financial difficulty, I would help within my means. [Horizontal collectivism3]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

28. It is important to maintain harmony within my group. [Horizontal collectivism4]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

29. I like sharing little things with my neighbors. [Horizontal collectivism5]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

30. I feel good when I cooperate with others. [Horizontal collectivism6]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

31. My happiness depends very much on the happiness of those around me. [Horizontal collectivism7]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

32. To me, pleasure is spending time with others. [Horizontal collectivism8]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

33. I do not feel comfortable about taking chances. [Risk aversion1].

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

34. I prefer situations that have foreseeable outcomes. [Risk aversion2].

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

35. Before I make a decision, I like to be absolutely sure how things will turn out. [Risk aversion3].

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

36. I avoid situations that have uncertain outcomes. [Risk aversion4].

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

37. I feel comfortable improvising in new situations. [Risk aversion5].

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

38. I feel nervous when I have to make decisions in uncertain situations. [Risk aversion6].

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

39. A person should make certain that their actions never intentionally harm another even to a small degree. [Idealism1]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

40. Risks to another should never be tolerated, irrespective of how small the risks might be. [Idealism2]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

41. The existence of potential harm to others is always wrong, irrespective of the benefits to be gained. [Idealism3]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

42. One should never psychologically or physically harm another person. [Idealism4]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

43. One should not perform an action which might in any way threaten the dignity and welfare of another individual. [Idealism5]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

44. If an action could harm an innocent other, then it should not be done. [Idealism6]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

45. Deciding whether or not to perform an act by balancing the positive consequences of the act against the negative consequences of the act is immoral. [Idealism7]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

46. The dignity and welfare of people should be the most important concern in any society. [Idealism8]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

47. It is never necessary to sacrifice the welfare of others. [Idealism9]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

48. Moral actions are those which closely match ideals of the most "perfect" action. [Idealism10]

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

Please answer the following questions. If not applicable, please indicate as "N/A". All information will be kept confidential.

49. Gender (Male or Female): _____ Other: Please specify _____

50. Age: _____

51. Race (circle one):

White Black Hispanic Asian

Other: Please specify _____

52. What is your current class level?

Freshman Sophomore Junior Senior

Masters student Ph.D. student Other: Please specify _____

53. GMAT score _____ SAT or ACT score _____

54. Overall Undergraduate GPA: _____

55. Overall Graduate GPA: _____

56. Your Undergraduate Degree Major (Concentration): _____

57. Your Graduate Degree Major (Concentration): _____

58. How many months of paid **internship** work experience do you have? _____

59. How many months of **full-time** work experience do you have? _____

60. When you signed up to participate in today's study, what is the approximate amount you expected to receive as payment? $ _____

APPENDIX O

MULTI-ITEM MEASURES

VERTICAL INDIVIDUALISM

(Singelis et al. 1995)

All items are measured using a 7-point Likert-type response format anchored at 1 = *Strongly disagree* and 7 = *Strongly agree.*

VI1. It annoys me when other people perform better than I do.

VI2. Competition is the law of nature.

VI3. When another person does better than I do, I get tense and aroused.

VI4. Without competition, it is not possible to have a good society.

VI5. Winning is everything.

VI6. It is important that I do my job better than others.

VI7. I enjoy working in situations involving competition with others.

VI8. Some people emphasize winning; I'm not one of them [R].

HORIZONTAL COLLECTIVISM

(Singelis et al. 1995)

All items are measured using a 7-point Likert-type response format anchored at 1 = *Strongly disagree* and 7 = *Strongly agree*.

HC1. The well-being of my co-workers is important to me.

HC2. If a co-worker gets a prize, I would feel proud.

HC3. If a relative were in financial difficulty, I would help within my means.

HC4. It is important to maintain harmony within my group.

HC5. I like sharing little things with my neighbors.

HC6. I feel good when I cooperate with others.

HC7. My happiness depends very much on the happiness of those around me.

HC8. To me, pleasure is spending time with others.

RISK AVERSION

(Mandrik and Bao's 2005)

All items are measured using a 7-point Likert-type response format anchored at 1 = *Strongly disagree* and 7 = *Strongly agree*.

RC1. I do not feel comfortable about taking chances.

RC2. I prefer situations that have foreseeable outcomes.

RC3Before I make a decision, I like to be absolutely sure how things will turn out.

RC4. I avoid situations that have uncertain outcomes.

RC5. I feel comfortable improvising in new situations [R].

RC6. I feel nervous when I have to make decisions in uncertain situations.

IDEALISM

(Forsyth 1980)

All items are measured using a 7-point Likert-type response format anchored at 1 = *Strongly disagree* and 7 = *Strongly agree*.

I1.A person should make certain that their actions never intentionally harm another even to a small degree.

I2. Risks to another should never be tolerated, irrespective of how small the risks might be.

I3. The existence of potential harm to others is always wrong, irrespective of the benefits to be gained.

I4. One should never psychologically or physically harm another person.

I5. One should not perform an action which might in any way threaten the dignity and welfare of another individual.

I6. If an action could harm an innocent other, then it should not be done.

I7. Deciding whether or not to perform an act by balancing the positive consequences of the act against the negative consequences of the act is immoral.

I8. The dignity and welfare of people should be the most important concern in any society.

I9. It is never necessary to sacrifice the welfare of others.

I10. Moral actions are those which closely match ideals of the most “perfect” action.

APPENDIX P

SUMMARY OF HYPOTHESES

Table 31: Summary of Hypotheses Tests

Panel A: H1a & H1b

Table	Description	Support
Table 3	The effect of horizontal inequity on budget slack - descriptive statistics	Yes
Table 4	The effect of horizontal inequity on budget slack - ANOVA	Yes
Table 5 (Panel A)	The effect of horizontal inequity on budget slack - linear mix model	Yes
Table 6 (Panel A)	The effect of horizontal inequity on budget slack - contrast model	Yes
Table 18 (Panel A)	The effect of horizontal inequity on budget slack - gender effect	Yes
Table 7	The effect of horizontal inequity on percentage of honesty - descriptive statistics	Yes
Table 8	The effect of horizontal inequity on percentage of honesty - ANOVA	Yes
Table 5 (Panel B)	The effect of horizontal inequity on percentage of honesty - linear mix model	Yes
Table 6 (Panel B)	The effect of horizontal inequity on percentage of honesty - contrast model	Yes
Table 18 (Panel B)	The effect of horizontal inequity on percentage of honesty - gender effect	Yes
Table 26	The effect of horizontal inequity on total budget slack - ANCOVA	No
Table 27	The effect of horizontal inequity on total budget slack - contrast model	Yes

Panel B: H2a

Table	Description	Support
Table 9	The effect of horizontal inequity on whistleblowing percentage - descriptive statistics	Yes
Table 10	The effect of horizontal inequity on whistleblowing percentage - ANOVA	Yes
Table 11	The effect of horizontal inequity on whistleblowing percentage - repeated ANOVA	Yes
Table 12	The effect of horizontal inequity on whistleblowing percentage - contrast model	No
Table 13	The effect of horizontal inequity on whistleblowing decision - cross-tab analysis	No
Table 19	The effect of horizontal inequity on whistleblowing decision - gender effect	Yes

Table 31: (Continued)

Table 28	The effect of horizontal inequity on whistleblowing decision - ANCOVA	Yes
Table 29	The effect of horizontal inequity on whistleblowing decision - ANCOVA (when peer overstatement is not severe)	No
Table 30	The effect of horizontal inequity on whistleblowing decision - ANCOVA (when peer overstatement is severe)	Yes

Panel C: H2b

Table	Description	Support
Table 9	The effect of horizontal inequity on whistleblowing percentage - descriptive statistics	No
Table 10	The effect of horizontal inequity on whistleblowing percentage - ANOVA	No
Table 11	The effect of horizontal inequity on whistleblowing percentage - repeated ANOVA	No
Table 12	The effect of horizontal inequity on whistleblowing percentage - contrast model	No
Table 13	The effect of horizontal inequity on whistleblowing percentage - cross-tab analysis	No
Table 19	The effect of horizontal inequity on whistleblowing percentage - gender effect	No
Table 28	The effect of horizontal inequity on whistleblowing decision - ANCOVA	Yes
Table 29	The effect of horizontal inequity on whistleblowing decision - ANCOVA when peer overstatement is NOT severe	No
Table 30	The effect of horizontal inequity on whistleblowing decision - ANCOVA when peer overstatement is severe	Yes

Panel D: H3a

Table	Description	Support
Table 3	The effect of capacity for budget slack on budget slack - descriptive statistics	Yes
Table 4	The effect of capacity for budget slack on budget slack - ANOVA	Yes
Table 5 (Panel A)	The effect of capacity for budget slack on budget slack - linear mix model	Yes
Table 18 (Panel A)	The effect of capacity for budget slack on budget slack – gender effect	Yes
Table 7	The effect of capacity for budget slack on percentage of honesty - descriptive statistics	No

Table 31: (Continued)

Table 8	The effect of capacity for budget slack on percentage of honesty - ANOVA	No
Table 5 (Panel B)	The effect of capacity for budget slack on percentage of honesty - linear mix model	No
Table 18 (Panel B)	The effect of capacity for budget slack on percentage of honesty - gender effect	Yes

Panel E: H3b

Table	Description	Support
Table 9	The effect of severity of peer overstatement on whistleblowing percentage - descriptive statistics	Yes
Table 10	The effect of severity of peer overstatement on whistleblowing percentage - ANOVA	Yes
Table 11	The effect of severity of peer overstatement on whistleblowing percentage - repeated ANOVA	Yes
Table 13 (Panel D)	The effect of severity of peer overstatement on whistleblowing decision - cross- tab analysis	Yes
Table 28	The effect of severity of peer overstatement on whistleblowing decision - ANCOVA	Yes

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