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The Influence of Horizontal Equity, Self Efficacy, and Ethical Position on the Creation of Budgetary Slack

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business at Virginia Commonwealth University.

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I dedicate this dissertation to my family, especially to my husband and my son. Their love, patience, tolerance, and faith were my greatest support that allowed me to achieve this academic accomplishment.

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Abstract

THE INFLUENCE OF HORIZONTAL EQUITY, SELF EFFICACY, AND ETHICAL POSITION ONE THE CREATION OF BUDGETARY SLACK

By Ira A. Abdullah, Ph.D.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business at Virginia Commonwealth University.

Virginia Commonwealth University, 2013.

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The budgeting process plays an important role in organizations' planning and controlling functions. Managers often have incentives to misreport their private information and inaccurately set budget targets so that they are easily achievable. Such inaccuracy in budget targets is referred to as budgetary slack. Prior research documents that managers' decisions to create budgetary slack are influenced by both preferences for wealth and non-pecuniary motivations. The objective of this study is to provide a better understanding of how social preferences such as preferences for horizontal equity, self efficacy perceptions, and ethical position influence managers' budgetary slack creation. The results reveal a significant interaction between horizontal equity (equal and unequal compensation relative to a peer) and self efficacy (poor and

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good prior performance) on the intention to create budgetary slack. Further, this research provides evidence regarding the impact of ethical position in the relations among perceived fairness, self efficacy, and budgetary slack creation.

Key words: Budgetary slack, Horizontal equity, Self efficacy, Ethical position

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CHAPTER I

INTRODUCTION

The consequences of unethical behavior pose significant threats for organizations. Therefore, an emergent body of research examines potential motives that influence unethical misconduct. Consistent with agency theory, prior studies assert that self-interested preferences for wealth are a key reason that individuals engage in unethical behavior (Baiman, 1982; 1990; Eisenhardt, 1989). However, other research suggests that non-pecuniary motives also influence individuals' behavior in economically significant ways (Douglas and Wier, 2000; Evans, Hannan, Krishnan, and Moser, 2001; Hannan, 2005; Hartmann and Maas, 2010; Matuszewski, 2010; Merchant, 1985; Sridhar, 1994; Stevens, 2002; Young, 1985). Luft (1997) and Sprinkle (2003) describe the importance of understanding the effects of social preferences on individuals' judgment and decision making and call for additional research in this area. The present study seeks to answer this call for research by examining several non-pecuniary motivational factors which are expected to influence managers' judgment and decision making in participative budgeting settings. Specifically, this study investigates the impact of horizontal equity in peer compensation, perceptions of self efficacy, and ethical position on managers' decisions to create budgetary slack.

The results of this study should be of interest to stakeholders of organizations. Budgets serve an important role in organizational planning and control. They are used for resource allocation decisions, target setting, and subordinates' performance evaluations. Thus, there are incentives for subordinates to engage in unethical misconduct in budgeting settings (i.e. to create

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budgetary slack). Sprinkle (2003) defines budgetary slack as an ethical issue which is present when a subordinate intentionally chooses to misreport their actual information to the superior. The 2008-2009 KPMG Organizational Integrity Survey reports that the prevalence of unethical behavior within organizations is considerably high. Of the employees surveyed, 74 percent reported observing unethical misconduct within their organizations. In addition, 46 percent of employees reported that the nature of the misconduct was severe and could potentially harm the public trust of their organization. Two of the most commonly observed forms of misconduct were wasting or mismanaging organizations' resources and mishandling private information. These two forms of misconduct are present in the creation of budgetary slack.

Prior research indicates that a preference for fairness is an important non-pecuniary motivational factor that can impact managers' decisions to engage in misconduct (Evans et al., 2001; Fehr and Smith, 1999; Luft, 1997). Equity theory suggests that perceptions of the fairness of contributions and compensations exchanged for a specific task will influence individuals' behavior in regard to that task (Adams, 1963). The term "horizontal equity" refers to a situation in which an individual perceives that he or she is treated equally or fairly relative to other peers who have the same responsibility. Prior studies indicate that perceptions of fairness related to horizontal equity can significantly affect individuals' ethical behavior (Kim, Evans, and Moser, 2005; Matuszewski, 2010; Moser, Evans, and Kim, 1995).

A manager's comparisons of his or her own compensation structure relative to peers' compensation structures can strongly influence perceptions of horizontal equity. Companies may have valid reasons to create inequities in compensation structures across departments, divisions or employees. Unequal compensation systems among peers may be unavoidable in order to fulfill specific employment or projects terms. An unintended consequence of such differences

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may be employee feelings of horizontal inequity. Hollinger (1991) suggests that unequal compensation systems are a significant predictor of deviant and counterproductive behaviors. Matuszewski (2001) finds evidence that horizontal equity in compensation and shifts in the levels of horizontal equity are positively related to the degree of managerial honesty in budgeting settings. In an extension of this research, the present study investigates the effects of preferences for fairness on managers' ethical judgment and decision making by focusing on the impact of horizontal equity preferences. Based on equity theory and prior literature I hypothesize that horizontal equity influences the extent to which a manager will create budgetary slack.

A second non-pecuniary motivational factor of interest in this study is self efficacy. Bandura (1995) defines self efficacy as individuals' belief in their ability to perform a specific task. Individuals will be more likely to engage in, and put effort toward, tasks that they believe they are capable of completing. However, when self efficacy is low, individuals may not feel that their effort will result in the successful performance of a task and may look for alternative ways to obtain their desired outcomes. Thus, self efficacy will influence the extent of individuals' decisions to engage in unethical misconduct in order to achieve a desired outcome (Dunn and Schweitzer, 2005). Prior research uses information related to one's prior performance as an effective source of self efficacy perceptions (Bandura, 1995; Lindenmeier, 2008; Whyte, Saks, and Hook, 1997). The current study addresses a gap in the participative budgeting literature by examining the effect of prior performance as a source for self efficacy on budgetary slack creation. Based on self-efficacy theory, I argue that, in general, higher self efficacy lead to less budgetary slack creation. However, I also assert that self efficacy perceptions interact with perceptions of horizontal equity such that individuals with high self efficacy will view horizontal

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inequity as more unfair than individuals with low self efficacy and will therefore be more likely to engage in budgetary slack creation.

The final motivational factor of interest in this study is ethical position. Forsyth's ethical ideology theory (1980) suggests that individuals take particular stances regarding ethics based on two factors, relativism and idealism. The theory suggests that individuals' ethical position will affect their moral judgments and behaviors. Douglas and Wier (2000) find a positive association between budgetary slack and relativism whereas they find a negative association between idealism and budgetary slack creation. The current study extends prior research by examining whether ethical position modifies the influence of horizontal equity and self efficacy on managers' creation of budgetary slack.

In summary, this study addresses the following primary research questions: (1) Does horizontal equity influence budgetary slack decisions? (2) Does self efficacy influence budgetary slack decisions? (3) Does self efficacy interact with perceptions of fairness arising from horizontal equity in influencing budgetary slack decisions? (4) Does ethical position modify the influence of horizontal equity and self efficacy on an individual's decision to create budgetary slack?

A 2x2 between subjects experiment using graduate students as participants was conducted to test the hypotheses and answer the study's research questions. Participants are provided with a hypothetical case in which they are asked to assume the role of a division manager who is responsible for setting budgeted production costs. As manager, they received private information related to their expected costs. While the company desires managers to set their budgets based on their best expectation of actual costs, a manager can profit from misrepresenting their private information. Horizontal equity of compensation structure was

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manipulated between subjects by describing a peer's compensation as either equal to or more favorable than the participant's compensation structure. Self efficacy was manipulated between subjects by a description of the manager's prior performance in setting budgets accurately (poor prior performance or good prior performance). After reading the case, participants were asked to make their decision regarding the budget they will report to the firm. The primary dependent variable of interest, budgetary slack, measured as the difference between their private information of estimated actual costs and their reported budgeted costs. Participants also responded to manipulation check questions, several additional questions about their perceptions of various aspects of the case, an ethical position questionnaire, and demographic questions.

This study contributes to the literature by examining how social motives, such as perceived fairness and self efficacy, influence the decision to create budgetary slack. The results of this study should be of interest to academics and stakeholders of organizations for several reasons. First, the results of this study provide information regarding the extent to which individuals are willing to sacrifice wealth due to non-pecuniary motives such as preferences for fairness. Second, this study examines the unintended consequences of prior performance feedback. The results reveal that such feedback can define perceptions of self efficacy which may lead to a higher propensity for unethical behavior. Third, prior research has documented an association between budgetary slack and ethical position (Douglas and Wier, 2000). The current study seeks to add to our knowledge of this association by examining ethical position as a moderator given the joint effects of horizontal equity and self efficacy. Further, the present study answers calls for research investigating the effects of social preferences on individuals' judgment and decision making (Luft, 1997; Sprinkle, 2003) and research on participative budgeting

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settings examining factors related to multiple subordinate settings (Brink, Coats, and Rankin, 2012).

The results from the hypotheses tests indicate no significant main effect of horizontal equity and self efficacy to the budgetary slack creation behavior. However, the findings affirm a significant interaction between horizontal equity and self efficacy to the intention on creating budget slack. Specifically, under horizontal inequity, the likelihood of deviating from the forecast is *greater* when self efficacy is high than when self efficacy is low. The analyses specify the relation between the ethical position and the decision to create slack. Particularly, the budgetary slack creation has a negative association with idealism and positive association with relativism. Further, the findings show that gender is a significant covariate for budgetary slack creation decision where men are significantly more likely to create slack than women.

The remainder of this study is organized as follows. Chapter 2 reviews the relevant literature on budgetary slack, horizontal equity, self efficacy and ethical position. This chapter elaborates the theoretical basis for the hypotheses development. Chapter 3 describes the research methodology and the research instrument. Chapter 4 elaborates the analyses and reports the results from hypotheses tests. Finally, Chapter 5 summarizes the contributions, implications, limitations of the study, and potential topics for future research.

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CHAPTER II

LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

Budgetary Slack

Budgets serve many important roles as organizational planning and controlling tools. They are used for target setting, resource allocation decisions, and as a common method for evaluating subordinates' performance. In participative budget settings, a subordinate (i.e., an agent) is given some responsibility for setting the budget (Lindquist, 1995; Waller, 1988; Young, 1985). According to agency theory, in such settings there is often information asymmetry between the principal (i.e., the superior) and the agent (Jensen and Meckling, 1976). The existence of information asymmetry gives the subordinate exposure to private information that is not available to the superior. Therefore, subordinates have the opportunity to misrepresent their private information. As budgets are used in a variety of ways, a subordinate may have incentives to set the budget opportunistically through the creation of budgetary slack.

Budgetary slack is the difference between the subordinate's actual information and what the subordinate chooses to reveal to the superior (Sprinkle, 2003). For example, subordinates may claim more resources than their private information indicates are necessary to achieve the desired outcome (Cyert and March, 1963). Budgetary slack could also occur if a subordinate intentionally provides a biased budgetary target in order to increase the likelihood of achieving the budget goal. For example, a subordinate's private information may indicate that a certain level of output is attainable. However, the subordinate may set the budgeted target at a lower output level to ensure that the target is met. Prior research consistently documents the existence of slack creation in practice (Cyert and March, 1963; Dunk and Parera, 1997; Onsi, 1973;

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Merchant, 1985; Merchant and Manzoni, 1989; Van der Stede, 2000). Onsi (1973) conducted an interview with 32 managers and found 80 percent of the managers admitted to budgetary slack creation under favorable and unfavorable business conditions. Firms recognize that the creation of budgetary slack is a common practice and may even serve a purpose. Merchant and Manzoni (1989) find evidence that firms increase managers' discretion to build slack in order to encounter unexpected changes in operational cycle, encourage coordination, motivation, innovation, and induce creative thinking. Dunk and Parera's (1997, p. 658) field study documents a manager who claims that it would be "inhuman if I did not build in some slack."

Slack is considered to be "a multifaceted construct that embodies both negative and positive connotations [for the organization]" (Sprinkle, 2003, p. 291). At times, budgetary slack will lead to favorable outcomes. For example, slack may permit subordinates the resources and flexibility to engage in research and development innovations (Merchant and Manzoni, 1989). Cyert and March (1963) propose that slack absorbs prospective uncertainty in the firm's environment. Van der Stede (2000, p. 619) observes that firms with differentiation competitive strategy[1] utilize flexible budgetary control and "by doing so, indirectly mandate more slack." This is consistent with the use of budgetary slack to facilitate innovation development. In addition, research indicates that budgetary slack is positively associated with business unit growth (Indjejikian and Matejka, 2006) and firms' prior performance (Van der Stede, 2000). However, budgetary slack can also be detrimental to the organization. For instance, slack can lead to inefficient resource allocation, ineffective budgeting functions and deceptive performance measurement. Onsi (1973) argues that the existence of budgetary slack will lead to a less

[1] Porter (1980) defines differentiation competitive strategy as a firm strategy which focuses on innovation processes and emphasizes superior product features, brand image and customer service.

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optimal firm profit due to the costs of overestimation. In addition, Stevens (2002) observes that budgetary slack is negatively associated with reputation and ethical concerns.

Motivations for the Creation of Budgetary Slack

Often, managers create slack in a manner consistent with their economic self interest. For example, slack may be created to improve their performance evaluations so that they can maintain or increase their compensation. Agency theory is often used in research to explain why individuals engage in self-interested opportunistic behavior (Baiman, 1982; 1990; Eisenhardt, 1989). Traditional agency theory assumes that individuals only utilize wealth preference in their decision making function. When a subordinate has both access to private information and the opportunity to obscure it from the organization, agency theory predicts that self interest will motivate the subordinate to engage in slack-building to maximize wealth.

While agency theory suggests that self interest is a primary motivation for subordinates' creation of budgetary slack, prior research also documents additional factors that contribute to the creation of budgetary slack. Such factors include the existence of information asymmetry and risk preferences (Young, 1985), the extent of individuals' involvement in the budgeting process (Hartmaan and Maas, 2010; Merchant, 1985; Young, 1985), the level at which budgeting decisions are made (Kohlmeyer and Hunton, 2004), the type of pay scheme (Waller, 1998), the concern for reputation and variance investigation (Webb, 2002), and the type of performance feedback (Young, Fisher, and Lindquist, 1993). This stream of research indicates that self interest, social preferences, and values interact to influence decision making behavior associated with budgetary practices.

Luft (1997) and Sprinkle (2003) highlight the importance of investigating the impact of non-pecuniary motivations, such as social motivations, on managers' judgment and decision

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making in managerial accounting settings. They suggest that social motives will help to explain the discrepancy between theoretical predictions based on economic self interest and observed behavior. For example, economic self interest is not consistent with an individual willingly ignoring a chance to maximize wealth. A seminal participative budgeting study that demonstrates the existence of non pecuniary motivations is Evans, Hannan, Krishnan, and Moser (2001).

Evans et al. (2001) examine how managers' preferences for honesty affect managerial reporting decisions. Their experiment provides participants with actual costs and requires them to submit a target cost for multiple periods. The participants are compensated based on the difference between the target and the actual cost such that they keep the surplus funds if actual costs are lower than targeted costs. As participants know the actual costs with certainty, their compensation increases with certainty if they set the target cost higher than the actual cost. Economic self interest predicts that participants will maximize their wealth by claiming the highest payoff available (i.e., by setting the target at the highest possible amount allowed every period). However, Evans et al. (2001) find that on average participants willingly forgo maximum payoffs. In fact, 25 percent of the participants chose not to misreport the cost target at all. Therefore, Evans et al. (2001) provide evidence that individuals often sacrifice wealth in order to create an honest managerial report.

Other studies also indicate that individuals' decisions related to budgets incorporate preferences other than wealth maximization, such as reciprocity (Hannan, 2005), trust and reputation (Sridhar, 1994; Stevens, 2002), personality characteristics (Hartmann and Maas, 2010), and ethical ideology (Douglas and Wier, 2000). Studies such as these that investigate how social motives influence managerial accounting decisions can yield extensive details on when,

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why and how social preferences impact managerial accounting conflict (Sprinkle, 2003). Ultimately, including social motives in research will generate alternative explanations and solutions to improve the design of managerial accounting practice (Luft, 1997). The present study extends this research by examining the relation between budgetary slack and two social motives: equity and self efficacy preferences.

Equity

Organizational justice literature identifies three forms of justice related to perceived equity or fairness: procedural justice, interactional justice, and distributive justice (Greenberg, 1987; Starlicki and Folger, 1997).[2] Procedural justice is related to the degree of fairness in the process used to determine an outcome. For example, when budget targets are used for performance evaluations subordinates' perceptions of the fairness of a company's budgeting process would influence their perceptions of procedural justice. Interactional justice refers to subordinates' perceptions of how fair the interactions are between individuals involved in a process. For instance, subordinates' judgment of the fairness of the way they are treated by superiors is a measure of interactional justice. Distributive justice is related to how individuals view the fairness of the distribution of an outcome. For example, employees' perceptions of the fairness of their pay relative to other employees' pay is a measure of distributive justice. This study is primarily interested in the impact of perceived equity of relative pay on subordinate behavior in budgetary slack settings. Thus, distributive justice is the most relevant form of perceived equity for the current study.

[2] In this study the terms "equity," "fairness," and "justice" are considered to have the same underlying definition and are used interchangeably. Specifically, these terms refer to the state, quality, or ideal of being just, impartial, and fair.

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Equity theory

Equity theory, also often referred to as inequity theory, was first proposed by J. S. Adams in 1963. Equity theory describes the process of how an individual will react based on his perceptions of the equity of the contributions and rewards exchanged for a specific job or assignment. This theory can be broken down to three propositions (Huseman, Hatfield, and Miles, 1987). First, individuals desire to maintain an equitable or balanced exchange between the inputs (contributions) that they provide to the job and the outcomes (rewards) that they receive from the job. Inputs in this context consist of employees' characteristics, such as age and ethnicity; professional qualities, such as employees' devoted time to the job, performance, effort, expertise, qualifications, experience; and intangible interpersonal qualities, such as drive, loyalty, tolerance, determination, enthusiasm, ambition, and other interpersonal skills. Outcomes include monetary rewards, such as salary, bonus, perks and benefits; and non monetary rewards, such as recognition, reputation, responsibility, written and verbal appreciation, job security, flexible work arrangements and opportunity for growth. An attribute can be considered an input or outcome as long as the employee perceives it to be relevant to the exchange (Adams, 1963). Therefore, each individual may have different attributes that constitute their perception of inputs and outcomes exchanged.

The second proposition of equity theory suggests that individuals will compare their inputs and outcomes exchanged against a reference person or group to determine whether they are treated equally or not (Huseman et al., 1987).[3] The reference person or groups range from colleagues, peers, and superiors, to family members and relatives. Individuals will view they are

[3] The comparative process between an individual and his reference is aligned with social comparison processes theory as described by Festinger (1954). Social comparison theory states that individuals have the drive to compare themselves to others to evaluate and validate their opinions and or abilities. Furthermore, Homans (1961) asserts that individuals will compare their state to others' to evaluate the existence of distributive justice.

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in an equitable state if they perceive that they receive equal outcomes as an exchange for their inputs relative to their reference person or groups. Further, an inequitable state is present if individuals perceive that their inputs and outcomes exchanged are not equal.

The final proposition of equity theory specifies that inequity in rewards will create a negative state that will motivate behavioral changes designed to negate inequity (Huseman et al., 1987). For an over-rewarded situation, the negative state includes guilt and fear of retaliation. On the other hand, under-rewarded individuals will experience emotional distress. Moreover, individuals who receive an unequal reward are less content and satisfied compared to those who receive an equal reward (Austin and Walster, 1974; Walster, Berscheid, and Walster, 1973). In addition, Hollinger (1991) suggests that rewards perceived to be unequal are a significant predictor of deviant behaviors such as theft and other counterproductive acts. Individuals committing deviant behaviors often intend to restore the state of equality. A meta-analytic review by Colquitt, Conlon, Wesson, Porter, and Ng (2001) provides further evidence that perceived inequity may result in a variety of negative reactions to restore equity. These negative reactions include reducing effort, negotiating rewards, theft, and decisions to transfer to another division or leave the firm (Greenberg, 1990; Hollinger and Clark, 1983; Skarlicki and Folger, 1997).

Equity preferences and economic self-interest

Preferences for, or perceptions of, equity or fairness of relative pay preferences may interact with economic self interest to affect behavior. Fehr and Smith (1999) investigate settings where economic self interest and preferences for equity can conflict. Their results suggest that the economic context or environment influences which motive will be dominant. Equity preferences are found to dominate in ultimatum games, gift exchange games, and public goods

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games with punishment settings, while economic self interest dominates in market games and public goods games without punishment. These results indicate that individuals are inclined to sacrifice material payoffs in exchange for more equitable outcomes in some settings.

Luft (1997) calls for research investigating the influence of economic self interest and equity motives on behavior in managerial accounting settings. She posits that investigating equity preferences will increase the ability to explain management accounting practice. Cohen, Holder-Webb, Sharp, and Pant (2007) find evidence consistent with this assertion. They examine the influence of fairness on individuals' stated intentions to engage in opportunistic action in cost reporting settings. Their experiment analyzes 233 managers' stated intentions to allocate research and development costs to either a nearly complete project or to a future project. The choice to allocate these costs to a future project is an opportunistic action in the experiment. The results show that perceived fairness is a significant determinant of individuals' stated intention to engage in the opportunistic action.[4] In other words, if participants perceive an action to be fair or to lead to a fair outcome, they are more likely to engage in that action. Further, sensitivity analyses indicate that intentions to act opportunistically are not affected by the magnitude of the rewards. Rather, if individuals perceived the outcome from misallocating the cost as fair, they will engage in that action regardless of the magnitude of the reward. Thus, Cohen et al. (2007) affirm that self interest is not the only motive dictating individuals' behavior. Furthermore, this study indicates that perceived equity can alter and influence individuals' decision-making processes.

[4] Cohen et al. (2007) measure the perceptions of outcome fairness based on participant responses to three moral equity items of the Multidimensional Ethics Scale (MES) developed by Reidenbach and Robin (1990). The three equity scales, using seven point Likert scale, measure how fair, how just, and how morally right participants perceive the cost allocation action described in the case to be.

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Equity preferences and budgetary slack

Evans et al. (2001) conducted three experiments to observe how managers' preferences for wealth and honesty affect managerial reporting decisions. In addition to the results discussed in a previous section, they also found that reporting honesty varies based on the distribution of payoffs between the subordinate and the firm. Honesty is higher when managers receive a higher share of profits than when managers receive a lower share of profits. This result is consistent with equity theory as it suggests individuals perceived a certain distribution of profit to be a fair exchange. Thus, the reported level of honesty is influenced by individuals' reactions to the perceived fairness of the payoff distribution.

Several additional studies investigate the influence of equity preferences on budgeting settings (Libby, 2001; 2003; Lindquist, 1995; Little, Magner, and Welker, 2002; Staley and Magner, 2007; Wentzel, 2002; 2004). Evidence from this literature suggests that when managers perceive budgetary procedures to be fair they demonstrate a low propensity to create budgetary slack, high job performance, and high organizational citizenship behavior (Little et al., 2002). Libby (2003) investigates the association between compensation contracts and the creation of budgetary slack. Her results indicate that participants who perceive their compensation contracting process to be fair create less budgetary slack than those who perceive their compensation contracting process to be unfair. In a participative budgeting setting with asymmetric information, Wentzel (2004) examines whether fairness or equity preferences moderate the creation of budgetary slack. In general, her results indicate that budgeting practices that are perceived to be fair result in less budgetary slack.

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Horizontal equity and budgetary slack

The present study extends the prior research investigating the effects of equity preferences on the creation of budgetary slack by focusing on the impact of horizontal equity preferences. The term "horizontal equity" is used to illustrate fair treatment among colleagues or peers and "horizontal inequity" refers to a situation where an individual perceives that he or she is treated inequitably relative to other peers or colleagues with the same responsibility (Kim, Evans, and Moser, 2005; Matuszewski, 2010; Moser, Evans, and Kim, 1995). Thus, an investigation of the impact of horizontal equity on decision making means that the experimental participant can make comparisons between themselves and a referent peer. Most prior experimental research on participative budgeting focuses on situations involving a single superior/subordinate pair where the subordinate has no information about other peer subordinates (Brink, Coats, and Rankin, 2012). However, subordinates faced with budgeting decisions in practice will often have some information regarding their peers, whether it is in the form of inputs (e.g., peer compensation levels, treatment of peers by superiors, peer working conditions, etc.) or peer outputs (e.g., peer choices, behaviors, reputation, productivity levels, etc.). Thus, Brink et al. (2012) call for additional research investigating participative budgeting settings with multiple subordinates. The current study answers that call for research.

In addition, as the previous section illustrates, prior research investigating the impact of equity preferences in managerial accounting settings tends to focus on forms of equity other than horizontal equity, such as the fairness of the contracting process (Libby, 2003; Wentzel, 2004) or distribution of pay between the superior and subordinate (Evans et al., 2001). In areas other than budgeting, however, accounting research finds that horizontal equity concerns have a significant impact on behavior (Fehr and Schmidt, 1999; Ghosh, 2000; Kachelmeier and Towry, 2002; Kim

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et al., 2005; Luft and Libby, 1997; Moser et al., 1995). Kim et al. (2005) and Moser et al. (1995) find that taxpayers' decisions to report taxable income honestly are impacted by economic effects and perceptions of horizontal equity. Luft and Libby (1997) affirm that experienced managers' perceptions of horizontal equity on the relative profit distribution influenced negotiated transfer prices.

Only one study, Matuszewski (2010), directly investigates the impact of horizontal equity in a budgeting setting. She examines whether a manager's honesty in budgetary reporting is influenced by changes in horizontal equity between his own and a peer's salary. In her experiment, participants assume the role of department manager engaged in a multi-period participative budgeting task. Matuszewski's participants submit a cost target after they receive private information regarding the actual costs, their compensation structure, and their peer's compensation structure. Participants were able to retain the difference between the actual cost and the reported cost target, creating an incentive to misreport the cost target. The dependent variable is degree of honesty of the reported cost target. Matuszewski's experiment manipulates changes in horizontal equity (no changes, increased, or decreased) and shifts in relative salary levels (equal, peer's salary is higher, and peer's salary is lower). Her results suggest that honesty increases when shifts in relative salary levels result in a restoration of equity or increase horizontal equity. Further, the increase in honesty is greater when horizontal equity is achieved by increasing the manager's salary so that it is equal to the peer's salary as compared to treatments where horizontal equity is restored through a decrease in the peer's salary. In summary, Matuszewski (2001) finds evidence indicating that changes in horizontal equity in the reward system are positively associated with changes in the degree of honesty in budgeting settings.

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In summary, equity theory and prior literature suggest that individuals' preferences for equity will influence their choices in budgetary settings. Specifically, when individuals experience horizontal equity they will demonstrate higher honesty resulting in less budgetary slack than when they experience horizontal inequity. This leads to the first hypothesis:

> **H1:** Individuals with horizontal equity in compensation will create less budgetary slack than those with horizontal inequity in compensation.

Self Efficacy

Albert Bandura (1995, p. 2) defined self efficacy as "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations." Thus, self efficacy theory relates to an individual's belief regarding whether he or she has the ability to execute or perform a specific act. Self efficacy theory suggests this belief will affect performance both directly and indirectly.

Empirical studies on the effects of perceived self efficacy have been conducted in various research settings. For example, self efficacy influences the decision to volunteer (Lindenmeier, 2008), escalation of commitment decisions (Whyte, Saks, and Hook, 1997), personal and academic goals and performance (Lee, Locke, and Phan, 1997; Wood and Locke, 1987; Zimmerman, Bandura, and Martinez-Pons, 1992), goal orientation (Brown, Cron, and Slocum, 1998; Cumming and Hall, 2004), the ability to adapt to new technology (Hill, Smith, and Mann, 1987), career choices (Lent, Brown, and Hackett, 1994). A meta-analytic review by Stajkovic and Luthans (1998) concludes that self efficacy is positively and significantly related to task performance.

Self efficacy differs from self esteem. Self efficacy relates to an individual's view of his or her personal capability on a specific task. Whereas, self esteem describes an individual's

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exhaustive evaluation of his or her own self worth (Bandura, 1997). Hence, the distinction between self efficacy and self esteem lies in the scope of the evaluation. Self esteem is an overall evaluation of one's self while self efficacy is a task specific evaluation. Bandura (1997) describes three self efficacy dimensions that determine the self efficacy associated with each task. First, efficacy depends on the level of *magnitude* of task difficulty that individuals believe they can overcome. Second, *strength* relates to how convinced one is in their magnitude beliefs. Third, efficacy differs in *generality* or the degree to which expectations can be extended to other situations (Gist, 1987). These dimensions establish a distinct perception of efficacy for each task.

Bandura (1977) also contrasts self efficacy and outcome expectation. Outcome expectation is an individual's estimation that a certain outcome will result from a given behavior. Self efficacy is "the conviction that one can successfully execute the behavior required to produce [that] outcome" (Bandura, 1977, p.193). Outcome expectation and perceived efficacy are both determinants of behavior, and both must be present to encourage a desired behavior. Therefore the present study incorporates both self efficacy, using past performance information, and outcome expectation through reward information.[5]

Information sources influencing self efficacy perceptions

For a given task, individuals may base self efficacy perceptions on four sources of information: (1) mastery experiences, (2) vicarious experiences, (3) verbal persuasion, and (4) psychological and emotional states (Bandura, 1977; 1995). The most influential source of information in developing efficacy perceptions is *mastery experiences.* Such experiences include one's prior performance or accomplishments in similar situation (Bandura, 1982; Bandura, Adams, and Beyer, 1977; Lindenmeier, 2008; Whyte et al., 1997). Prior successes in performing

[5] The focus of this study is how differences in self efficacy influence behavior. Thus, in the experiment self efficacy is manipulated (high and low) while outcome expectation is held constant across treatments.

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a specific task will strengthen individual self efficacy, which contributes to the expectation that future performance will also be successful. In contrast, prior failures will weaken self efficacy, which contributes to the expectation of unsuccessful future performance.

A second source of information contributing to perceived self efficacy is *vicarious experience*. Such experiences are based on the observation of others' performance in similar situations. Observing others' successes will influence individuals to believe that they also have the ability to accomplish a similar task. On the other hand, others' failures related to a task will dampen one's self efficacy and motivation in regard to a similar task (Bandura, 1995; Jacobs, Prentice-Dunn and Rogers, 1984; Stanley and Maddux, 1986).

The third source of information influencing self efficacy is *verbal or social persuasions* received from others. Persuasion can take the form of information from others that provides assurance that one has the capability to perform and master a task. Such persuasion can come from performance feedback or verbal encouragement. Individuals who receive positive persuasion are likely to form strong efficacy beliefs that remove their self doubt about their ability to perform the task successfully and will exert effort toward the task (Block and Keller, 1995; Lindenmeier, 2008)

The final source of self efficacy information includes *psychological and emotional states*. Emotional states such as anxiety, stress, arousal, and other moods, may influence individuals' perceptions of self efficacy in a positive or negative direction (Bodin and Martinsen, 2004; Kavanagh and Bower, 1985).

The impact of self efficacy on behavior

Perceived self efficacy plays an important role on individuals' behavior. Self efficacy affects how individuals assess their ability and influences the actions that they will take in a

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situation. Individuals will perform tasks that they believe they are capable of completing. However, if they believe that they are incompetent in a certain area; they will avoid tasks related to that area.

Zimmerman et al. (1992) examine the causal role of students' self efficacy and academic goals in self-motivated academic settings. Based on path analysis procedures, the study confirms that students' belief in their efficacy for self regulated learning influences their perception of their ability to attain academic achievements. Self efficacy influenced their perceived personal academic goals and their actual academic accomplishments. The findings from Zimmerman et al. (1992) indicate that self efficacy perceptions are important determinants of goals that will be set for a specific task and subsequent performance related to these goals.

Efficacy beliefs also affect individuals' effort and persistence related to specific tasks. Positive self efficacy encourages strong interest and commitment, more challenging goals, and high persistence of effort toward a task (Pajares, 2002). In an experimental setting, Jacobs et al. (1984) assess how persistence is affected by self efficacy, outcome expectation, and self awareness. Of these three variables, results indicate that self efficacy is the best predictor of persistence. Individuals with strong self efficacy perceptions view a task as a challenge to be embrace instead of a threat to be avoided. Positive self efficacy will convey strong interest and commitment, more challenging goals, and high persistence of effort in the task (Pajares, 2002).

Efficacy perceptions also impact individuals' thought patterns and emotional reactions related to a task (Pajares, 2002). Individuals with low self efficacy may believe that the task is too difficult to master and leads to negative emotional states, such as anxiety, stress, or depression. Such negative emotional states may prevent an individual from searching for the best

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approach to solve the task. Thus, emotional reactions will indirectly affect the actual degree of success one experiences in accomplishing a task.

Self efficacy, prior performance, and budgetary slack

The present study will utilize self efficacy theory to delineate the link between individuals' past performance, self efficacy and future performance expectations. As was discussed previously, mastery experiences are the most influential form of information used in developing self efficacy perceptions. Such experiences encompass prior performance on the task or similar tasks (Bandura, 1982; Bandura, Adams, and Beyer, 1977). Bandura (1997) affirms that individuals base their expectations of what they can achieve in the future on their past performance. This is especially true when individuals attribute their past successes or failures to factors within their control, such as ability, competence, or effort. Hence, past performance directly affects individuals' expectations of future performance (Weiner, 1985).

Numerous studies also confirm the relation between past performance and expectations of future performance. For example, Spieker and Hinsz (2004) investigate the role of repeated prior successes and failures on personal goal setting. They find that participants with past successes set their goals significantly higher than those with past failures. Webb, Jeffrey, and Schulz (2010) find evidence suggesting that past performance is positively related to current performance. Further, they find that employees with good prior performance were more likely to set realistic goals than employees with poorer prior performance. Audia, Locke, and Smith (2000) find that prior success creates satisfaction and confidence, and these traits affect individuals' actions and strategies for the future.

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Whyte et al. (1997) examine the role self efficacy plays in influencing individuals' decisions to escalate commitment.[6] The experimental manipulation of self efficacy in Whyte et al. (1997) consists of descriptions of prior performance successes (high self efficacy) and failures (low self efficacy) in prior performance. Their results indicate that self efficacy can exacerbate individuals' decisions to escalate commitment to a failing activity. This occurs because individuals with high self efficacy believe in their ability to successfully perform the task and therefore persist with the investment despite evidence indicating that the project should be discontinued. Consequently, individuals with high self efficacy will invest more resources, exert greater effort, and take greater risks in order to save unprofitable projects. Individuals with low self efficacy, however, will invest fewer resources and less effort due to their belief that they lack competence related to the task.

This literature indicates that prior successes and failures influence self efficacy. In turn, self efficacy affects the decision making process. The current study will investigate the impact of self efficacy on managerial decisions to create budgetary slack. As mastery expectations or prior performance are the most influential information sources in the development of self efficacy perceptions, I will use prior performance information to manipulate self efficacy perceptions (Whyte et al., 1997). Specifically, in this setting, higher budgetary slack will increase the likelihood that participants will benefit monetarily, but it will be at the expense of the company. In contrast, the company desires managers to set budgets accurately. Thus, "good" prior performance will be defined as a history of setting the budget target accurately (i.e., neither too high nor too low).

[6] Staw and Ross (1987, p. 39) define escalation situations as "predicaments where costs are suffered in a course of action and subsequent activities have the potential either to reverse or compound one's initial losses." Escalation of commitment occurs when one continues to invest in an unprofitable project when discontinuing investment is more economically beneficial. Essentially, escalation reflects poor decision making as it indicates that individuals increase investment due to sunk costs, despite evidence suggesting that the investment should be discontinued.

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Higher prior performance should contribute toward the development of high self efficacy. In turn, high self efficacy should contribute toward individuals' beliefs that they have the ability to accomplish the task successfully. Specifically, individuals with high prior performance will feel capable of setting accurate cost targets, which should motivate them to try to maintain efficacy by setting future targets accurately. In other words, high prior performance should decrease the likelihood that individuals will set inaccurate targets or build in budgetary slack. In contrast, poor past performance should contribute toward individuals' belief that they do not have the required ability to master the task. Thus, as compared to individuals with high self efficacy, individuals with low self efficacy will be more likely to create budgetary slack. This leads to the following hypothesis:

> **H2:** Individuals with good prior performance will create less budgetary slack than those with poor prior performance.

The Interaction of Horizontal Equity and Self Efficacy on Budgetary Slack Creation

Hypothesis 1 predicts that horizontal inequity in compensation will increase individuals' propensity to create budgetary slack. Hypothesis 2 draws from efficacy theory to predict that individuals with low self efficacy will be more likely to create slack than individuals with high self efficacy. However, there is reason to predict that perceptions of horizontal equity and self efficacy will interact to influence behavior, such that the main effect of efficacy is modified in the presence of horizontal inequity.

Specifically, ignoring equity concerns, self efficacy theory predicts that individuals with high efficacy will be less likely to create slack due to their confidence in their ability to achieve a high level of performance. Individuals with high self efficacy view themselves as capable. When horizontal equity considerations are introduced, they are likely to be evaluated in reference to

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one's perceptions of efficacy. When there is horizontal inequity such that high efficacy individuals' compensation is lower than peer compensation, high efficacy individuals are likely to feel that such inequity is unjustified and unfair. Thus, when faced with horizontal inequity, high efficacy individuals are likely to have a negative reaction. Recall that self efficacy theory indicates that emotional states related to efficacy perceptions also play a role in determining behavior in response to a task (Pajares, 2002). Further, equity theory indicates that individuals often respond to perceived inequity with negative actions intended to restore equity (Hollinger, 1991). In the budgetary slack setting, slack creation is not the desired action from the perspective of the firm. Thus, slack creation is a tool that individuals can use to retaliate for perceived inequity. Therefore, horizontal inequity should increase the likelihood that high self efficacy individuals will create budgetary slack. This leads to the following hypothesized interaction:

> **H3:** Good prior performance will decrease budgetary slack creation when there is horizontal equity relative to when there is horizontal inequity.

Ethical Ideology

Individuals often differ in perceptions of whether certain practices are ethical or unethical (Schlenker and Forsyth, 1977). Forsyth (1980, p. 183) proposes a typology of ethical ideology to explain variation between individuals' moral judgments based on the assertion that " in general people take particular stances regarding ethics and that the position taken will influence the judgment reached." In Forsyth's typology, individuals' ethical position is based on two factors, *relativism* and *idealism*.

According to Forsyth (1980), relativism relates to the extent one relies on universal moral principles or rules to direct the correct response to ethical issues. Individuals with high relativism reject the idea of relying on universal rules. Rather, the individuals with high relativism believe

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that there are alternative perspectives that can be espoused to reach moral judgment. In other words, individuals high in relativism feel that the correct moral response is context specific. Hence, rather than using a universal rule for every ethical issue, a high relativist will analyze each issue to determine which rule to assume for solving each situation. In contrast, a low relativist believes in the validity of universal rules and believes that such rules should be applied consistently without variation based on specific situational factors. To illustrate, an example of a universal moral rule might be that theft is morally wrong. A high relativist would argue that some contexts justify theft as a morally acceptable action, while a low relativist would argue that theft is wrong in any context.

The second factor in Forsyth's typology is idealism. Idealism relates to one's beliefs in the relation between moral actions and outcomes. An idealist believes that a morally correct action always results in a positive outcome and a morally incorrect action always results in a negative outcome. In contrast, less idealistic individuals believe that moral and immoral actions can result in a combination of positive and negative outcomes. Idealism can also be interpreted relative to the degree of individuals' concern for the welfare of others (Forsyth, 1992). For example, research and development costs may be cut to manage earnings for the period. Idealists would view the earnings management as always resulting in a negative outcome because it would harm others' welfare (e.g., shareholder's long-term wealth will be damaged). Therefore, idealist individuals would always avoid engaging in such earnings management. In contrast, non-idealists perceive that acts may result in both positive and negative outcomes. Thus, a non-idealist may see that although shareholder's long-term wealth may be damaged, short-term profitability goals will be reached, which may have a positive impact on others' welfare such as short-term stock price increases for shareholders because analysts' forecasts were met allowing

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employees evaluated on earnings targets to avoid negative evaluations, receive bonuses, or possibly even retain their jobs. Thus, non-idealist individuals may engage in this form of earnings management if they view it as necessary to achieve a desirable positive outcome.

Forsyth (1980) argues that individuals' ethical position ranges from high to low in the emphasis on principle (relativism) and the emphasis on consequences (idealism). Therefore, one's ethical position exists somewhere on the spectrum between idealistic and relativistic. Forsyth (1980) classifies ethical positions into four types, based on the level of relativism and idealism, which are *situationism*, *absolutism*, *subjectivism*, and *exceptionism* (see Figure 1).

Situationism refers to individuals who score high on relativism and idealism. Situationists reject universal moral principles in ethical issues since they believe that each issue must be analyzed individually. Situationists identify positive outcomes as the only acceptable consequences from moral acts. If an act creates negative or mixed results for others, then the act is immoral and needs to be avoided. *Absolutism* refers to individuals with low relativism and high idealism. Absolutists acknowledge the application of universal moral principles in ethical issues. However, like situationists, absolutists only view an act as moral and acceptable if it only produces positive outcomes.

Subjectivism relates to ethical positions which score high on relativism and low on idealism. A subjectivist rejects the idea of applying a universal moral principle for every ethical issue and feels that "negative consequences do not necessarily make an action immoral" (Barnett, Bass, and Brown, 1994, p.470). *Exceptionism* refers to individuals who score low on both relativism and idealism. Exceptionists recognize that moral acts can result in both positive and negative outcomes. Exceptionists accept the application of universal moral principles in

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analyzing ethical issues but also agree to ignore the universal rule if they consider a different rule to be more applicable (Barnett et al., 1994).

Ethical ideology and budgetary slack creation

Previous studies document that individuals' ethical ideology affects their judgments of ethical and unethical business practices and determines the practices they are willing to engage in (Barnett et al., 1994; Forsyth, 1992). For example, Arrington and Reckers (1985) document significant relations between ethical position and non-economic judgments in tax evasion decisions (e.g., tax evaders' social responsibility, tax evasion seriousness, and taxpayers' perceptions of tax compliance as a social norm). Shaub, Finn and Munter (1993) examine the effects of auditors' ethical ideology on ethical sensitivity and find that auditors scoring high on relativism are less likely to recognize ethical issues in their auditing assignments. In addition, Greenfield, Norman and Wier (2008) find that idealistic individuals are less likely to engage in earnings management practices than relativistic individuals. Elias (2002) finds that absolutists and situationists view earnings managements as a more severe unethical issue than exceptionists and subjectivists.

Recall that budgetary slack occurs when subordinates intentionally choose to withhold accurate information from their superiors (Sprinkle, 2003; Merchant, 1995; Merchant and Manzoni, 1989). Ethical dilemmas exist in decision making processes when the outcome or action may harm others (Velasquez and Rostankowski, 1985). Budgetary slack often poses negative consequences for the organization (Sprinkle, 2003; Merchant, 1995). Merchant (1995, p. 2) states that slack creation violates "role-related norms and desired virtues of professional managers and accountants." Therefore, the creation of budgetary slack is an ethical dilemma, which incorporates individuals' moral judgment (Douglas and Wier, 2000).

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Prior studies verify that ethical ideology influences decisions to create budgetary slack. A seminal study in this area, Douglas and Wier (2000), develops and tests a structural equation model that uses ethical position to explain managers' decisions in creating budgetary slack. In addition to ethical position, the model investigates whether budgetary slack is a function of managers' participation in the budgeting process, the presence of information asymmetry, and incentives to create slack. Based on responses from 688 certified managers, the results indicate that, given the opportunity and incentives to create slack, ethical ideology is a significant explanatory factor of budgetary slack creation. The results indicate that negative relation between idealistic individuals and the decision to create budgetary slack. Conversely, the results affirm positive relation between relativistic individuals and the budgetary slack creation.

Based on the association between ethical ideology and ethical dilemmas observed in various aspect of business practice, individuals' ethical position is expected to influence their decision to engage in the creation of budgetary slack. Hence, ethical ideology is expected to moderate the impact of self efficacy and horizontal equity on slack creation behavior. Further, predictions for each of Forsyth's (1980) four types of ethical positions are described in Figure 1 and in the following paragraphs.

[Insert Figure 1 about here]

In general, high idealism and low relativism are expected to be negatively correlated with budgetary slack creation. Therefore, absolutists (high idealism and low relativism) are expected to create the least amount of budgetary slack relative to situationists, subjectivists, and exceptionists. Absolutists utilize universal moral principles, which would likely rule that opportunism and inaccuracy are wrong. In addition, absolutists would avoid acts which produce negative outcomes, such as the negative outcomes associated with budgetary slack for the firm

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and its stakeholders. Thus, absolutists are postulated to most strongly perceive the creation of budgetary slack to be unethical.

In contrast, subjectivists (low idealism and high relativism) are expected to create the most amount of budgetary slack of the four types of ethical positions. Subjectivists ignore the application of universal moral rules on ethical issues and analyze each ethical issue in a context specific manner. Thus, subjectivists are not expected to consider budgetary slack creation as unethical despite the negative consequences of the act.

Situationists (high idealism and high relativism) and exceptionists (low idealism and low relativism) are expected to demonstrate some intermediate level of budgetary slack creation. Situationists will not honor universal moral principles, but will view budgetary slack creation as unethical due to its negative outcomes. Meanwhile, exceptionists honor universal moral principles, but will be willing to apply alternative rules and not condemn slack creation as immoral due to its potential for positive outcomes along with the negative outcomes.

In summary, this study predicts that subjectivists and exceptionists, who score low in idealism, will less likely to view budgetary slack as unethical. Meanwhile, absolutists and situationists, who score high in idealism, will be more likely to classify budgetary slack creation as an immoral act. Consistent with Douglas and Wier (2000), the creation of budgetary slack is positively associated with relativism and negatively associated with idealism. This leads to the following hypotheses:

H4: Higher idealism results in lower levels of slack creation.

H5: Higher relativism results in higher levels of slack creation.

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CHAPTER III

RESEARCH METHODOLOGY

Experimental Design

The hypotheses were tested using a 2 x 2 between-subjects experiment with ethical position as an additional measured variable. The two manipulated independent variables are horizontal equity (equal or unequal pay rate relative to a peer) and self efficacy (high or low prior performance in budget setting accuracy). Participants are randomly assigned to one of the four conditions. Ethical position is measured using Forsyth's (1980) Ethical Position Questionnaire (EPQ). The experimental instrument is provided in the Appendix.

Experimental Task

All participants received a case with identical background information describing their role as a manager at a hypothetical manufacturing company. The case briefly describes a company that has multiple production lines and production managers. The participants assumed the role of a production manager who is involved in the budgeting process. In particular, one task they are responsible for as manager is setting the target production costs that will be reported to the company each period. The funds transferred to the production department are determined by this target production cost set by the manager. The company expects that all production managers to set the cost target based on their best estimation of the actual cost. The case elaborates the negative consequences for the company if managers set the cost target too high or too low. If the cost target is too low, then the risk of a delay in the production process will emerge because the production line will not have sufficient funds to support the production.

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Conversely, setting the cost target too high will create inefficiency for the company due to misallocation of funds.

The case also explains that the manager has a private forecasting system that predicts the actual costs for the period with 75 percent accuracy (i.e., there is a 75 percent chance that the forecast will be equal to the actual costs and a 25 percent chance that the actual costs will be higher than the forecast). As the forecast is private, only the manager has knowledge of the forecast. The company only knows that the range of actual production costs is between $2,000 and $6,000. Thus, the participant can choose to use the forecast as they wish when setting the production cost target for the period.

Following the background information, participants received information regarding their compensation structure and past performance based on their treatment. These independent variables are described in more detail in a following section. After reading the case, participants answered questions designed to assess their likelihood of creating budgetary slack. They then answer manipulation check questions, additional questions to verify their understanding of the case, and a few additional questions about their perceptions of the issues presented in the case. Finally, they completed the ethical position questionnaire and answered a few demographic questions, such as age, gender, current class level, current GPA, number of years of work experience, employment status, and involvement in budgeting process.

Independent Variables

Horizontal Equity

Prior studies document several alternatives for operationalizing horizontal equity in experimental settings (e.g., Matuszewski, 2010; Moser et al., 1995). In this study, a manager's compensation rate relative to a peer manager's compensation rate will be used to operationalize

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horizontal equity. This operationalization is similar to Matuszewski (2010), which used relative salary levels to manipulate horizontal equity. Specifically, the experimental case will inform participants that production managers are peers and have the same gender, level of experience, job descriptions, responsibility, and work load. The compensation structure for production managers consists of a fixed wage and a share in the cost savings. Cost savings are defined as the excess of targeted production costs over actual production costs.

For the horizontal equity treatment, participants are told that the fixed salary and the share in the cost savings are the same for all production managers. The compensation equation, which is the same for all production managers, is: 50% of cost savings (target cost - actual cost) per production cycle + fixed wage.

In the horizontal inequity treatment, participants are told that the fixed salary is same for all production managers. However, the proportion of cost savings is different from the other production manager. The participants receive 50% share of their cost saving while their peers receive 95% share of cost savings.

Self Efficacy

Bandura (1995) describes four sources of self efficacy which are (1) mastery experiences, (2) vicarious experiences, (3) verbal persuasion, and (4) psychological and emotional states. The most influential source of self efficacy information is mastery experiences through individual's prior performance or accomplishments in similar situation (Bandura, 1982; Bandura, Adams, and Beyer, 1977). Prior studies document methods to manipulate prior performance through information embedded in experimental task design (Lindenmeier, 2008; Whyte, Saks, and Hook, 1997).

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Consistent with Whyte et al. (1997), this study manipulates participants' perception of self efficacy by embedding information regarding participants' prior performance to manage the production department and set accurate budgets. From this information, participants are expected to judge their capabilities in the task. This information is manipulated to provide participants with high self efficacy or low self efficacy.

For the high self efficacy treatment, participants are provided with persuasive encouragement signaling that they possess the required ability to manage their production line. In high self efficacy condition, participants will read the following information:

> "Despite the difficulties of reporting accurate cost targets, you **have** established an **excellent** record for working efficiently and reporting accurate cost targets. Your prior performance in setting accurate cost targets is derived from your exceptional ability as a production manager. This obviously indicates that you have mastered the skills and the knowledge required to effectively and successfully manage your production line."

In the low self efficacy treatment, participants are informed that they did not have a good track record of working efficiently or reporting accurate production cost targets. For this condition the participants will receive information that their ability as a production manager is doubtful. The following statement is provided for the low self efficacy condition:

> "You **have not** established a record for working efficiently and reporting accurate production cost targets. Your **poor** prior performance in setting accurate cost targets makes it questionable whether your skills and knowledge are sufficient to effectively and successfully manage your production line."

Moderating Measured Variable – Ethical Position

The study will use the Ethical Position Questionnaire (EPQ) developed by Forsyth (1980). This questionnaire has been used extensively in prior research to measure participants' ethical position (e.g., Arrington and Reckers, 1985; Douglas and Wier, 2000; Elias, 2002; Greenfield, Norman and Wier, 2008; Shaub, Finn and Munter, 1993). Davis, Andersen, and

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Curtis (2001) evaluate the construct validity of the EPQ and find that the scale shows moderately high internal consistency. Further, Davis et al. note that the EPQ is a useful measure of ethical position and a tool for assessing individual variations in the ethical decision making process.

The EPQ consists of 20 statements, divided into two sets of 10 statements each measuring idealism and relativism. Participants will rate their degree of agreement or disagreement using a 9-point Likert-type scale ranging from 1 which equals "completely agree" to 9 which equals "completely disagree." EPQ will produce two scores, one score for idealism and the other for relativism. Each score is derived from summing the responses from idealism or relativism statements and divided it by 10. Following prior studies (i.e. Barnett et al., 1994; Elias, 2002; Forsyth and Nye, 1990), this study calculated the median scores for relativism and idealism. Further, participants' scores were categorized into high or low relativism and idealism relative to the median.

Manipulation and Understanding Checks

Two manipulation check questions are available to verify that the participants understand the task and the manipulations on the instrument. The first manipulation check question relates to the horizontal equity manipulation. It requests that participants indicate the bonus rate received on their compensation structure. The answer options are either "less than my peer's bonus rate" or "equal to my peer's bonus rate". The second manipulation check question relates to the self efficacy treatment. Participants will indicate, based on the prior performance information provided in the case, whether they lack or have sufficient ability as production manager.

Participants who did not understand the manipulations are expected to fail to provide correct answers for the manipulation checks. Thus, these participants will be excluded from the primary analyses. However, analyses both with and without the participants that fail the

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manipulation checks will be compared to ascertain the impact on the results of omitting these participants.

In addition to the manipulation check questions, participants were asked several questions intended to verify their understanding of important information provided in the case. First, participants were asked to state the level of accuracy of their private forecasting system. The next question asks participants to indicate whether their total compensation would increase if their cost target exceeds actual production costs. Participants provide their answer on an 11-point Likert-type scale ranging from 0 which equals "strongly disagree" to 10 which equals "strongly agree."

Dependent Variables

The dependent variable of interest for this study is the likelihood of budgetary slack creation. Participants are given a forecast of actual production costs. The budgetary slack variable is the difference between the submitted production cost target and the forecasted production costs. Participants were asked a series of questions to obtain information about their intentions to create budgetary slack.

General Propensity to Deviate from the Forecast

First, participants were asked to indicate the likelihood of whether, in general, they would report a cost target that is different than the forecasted amount. Participants responded using a Likert-type scale with endpoints labeled "Extremely likely to report a targeted production cost that is less than the forecast", and "Extremely likely to report a targeted production cost that is higher than the forecast". The midpoint of the scale will be labeled "Will most likely report a targeted production cost equal to the forecast". Reponses from this question are used to test the

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impact of the independent variables on participants' general propensity to deviate from the forecast.

Numerical Point Estimates of Budgetary Slack

Next, participants were asked three questions about the production cost targets they would set in response to three specific forecasts. The questions assume the forecast amount to be $225,000, $400,000 or $575,000. As the range of possible costs is $200,000 to $600,000, these amounts are designed to obtain responses for a low, medium, and high forecast, respectively. In turn, these forecasts provide participants with high, medium, or low opportunity to create slack, respectively. The task requires participants to state the amount that they will report as their budgeted production cost in response to each of these forecasts. Participants indicated their cost target amount using a scale ranging from $200,000 to $600,000. For each of these three questions, the forecast is subtracted from the participant's indicated production cost target to obtain a measure of budgetary slack.

Pilot testing

A pilot test was conducted at a public university. The objective of pilot testing is to ensure the clarity and effectiveness of the instrument in capturing the required responses from the participants. In addition, a pilot test allows for a preliminary evaluation for the manipulations used on the instrument.

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CHAPTER IV

RESULT AND ANALYSIS

Participants and Sample Size

The participants for this experiment consist of 162 graduate business students from a public university in United States. Twenty-eight participants did not pass the manipulation check and were eliminated from the analyses. Thus, the final sample size for this study is 134 participants. The mean grade-point average (GPA) is 3.36 out of 4.00. In addition, the majority of the participants were MBA students (59 percent) while the remaining participants were enrolled in other graduate programs such as Master of Accounting, Master of Science in Global Marketing, Finance, Information System, and Business Analytics.

Demographic Data

Eighty-five participants (63.4 percent) are male and 49 participants (36.6 percent) are female. Participants' average age is 27 years (range of 21 to 63 years). The majority (74 percent) of the participants self report that they are currently employed, and the mean professional employment experience is 5.22 years. Additionally, 42 percent of participants claimed to have been involved in the budgeting process during their professional employment. Moreover, participants indicated their agreement to the statement that it is unethical to intentionally misreport a production cost target or to create budget slack (mean response of 7.69 on a 10 point of scale). Demographic data and correlations of the variables on the sample are summarized in Table 1 and 2, respectively.

[Insert Table 1 and Table 2 about here]

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Manipulation and Understanding Checks

Manipulation Checks

The objective of manipulation checks in an instrument is to assure that the participants understand the task and/or the experimental manipulations. The manipulation check section for this experiment consisted of questions regarding the assigned treatments. The first manipulation check question related to the horizontal equity treatment (equal or unequal). Specifically, participants were asked to identify their bonus rate based on the case that they just read. From the total sample, 80 and 82 participants were assigned to the equal and unequal treatments, respectively. Five participants from the unequal treatment and three participants from the equal treatment answered this manipulation check incorrectly. To further verify the effectiveness of the horizontal equality manipulation, participants were also asked whether they agreed with the following statement: "the compensation structure among the production manager is fair." They responded using a 10-point Likert scale, where 0 indicates that they "strongly disagree", 5 indicates that they are "neutral", and 10 indicates that they "strongly agree". For participants assigned to the unequal treatment, the anticipated response is disagreement (i.e., a scale response from 0 to 4) due to their receipt of a lower bonus rate than their peer. Among the 82 participants assigned to the unequal treatment, 61 indicate their response correctly, and nine respond as neutral (Mean = 2.40, Std. Deviation = 2.512).

The last question in the manipulation check section related to the manipulation of self efficacy (low or high). Based on the task, participants were asked to choose a statement that accurately reflects their ability as production manager as described in the experimental instrument. Seventy-three and 89 participants were assigned to high and low self efficacy treatments, respectively. In the high self efficacy treatment, four participants failed the

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manipulation check. A higher rate of failure was observed in the low self efficacy treatment with 18 out of 89 participants responding incorrectly. The frequency of failure under high and low self efficacy is significantly different (Pearson Chi Square = 7.43, p = 0.006). This higher rate of failure in the low self efficacy treatment is of interest. Low self efficacy is manipulated in the instrument by indicating that the individual had poor prior performance. Participants receive information regarding a prior inability to set the cost target accurately indicating that their skills as production manager are questionable. One plausible explanation for the higher level of manipulation check failure for this treatment is attribution theory[7]. The theory predicts that individuals tend to associate negative outcome to external causes or refuse to assign internal attribution to negative performance. Aligned with the theory, Xu and Tuttle (2005) document the association between poor accounting performance and external attributions. Thus, consistent with attribution theory, it is difficult for participants to internalize low self efficacy information. The poor prior performance information may conflict with participants' existing self-beliefs about their ability. Therefore, by filtering the sample based on the passing of manipulation checks criteria, the study assures that the analyses are derived from participants that understood the task and internalized the experimental treatments.

The 27 participants who incorrectly answered one or both of the manipulation check questions were eliminated from the sample. In addition, one participant who did not respond to the manipulation checks section was also excluded from further analyses. Thus, 134 participant

[7] This theory is first proposed by Heider in 1958. Attribution Theory suggests that individuals perceived, gathered, examined, and combined information in order to be able to create a causal judgment for an event (Fisher and Taylor, 1991). Heider (1958) proposed that in the process of understanding the reasons that caused a behavior, individuals use either internal or external attributions. Internal attributions refer to attitude, character, or personality traits. While external attributions relate to situation or environmental conditions.
Heider (1958) further argues that individuals tend to explain the behavior of others using internal attributions (e.g. personality traits). In other hand, individuals tend to explain their own behavior using external attributions (e.g. situational or environment).

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responses are used for the analyses[8]. The demographic statistics for the 134 participants passing the manipulation checks are approximately identical to those of the full sample including participants who failed the manipulation checks.

Understanding Checks

The instrument contains two questions that test whether participants understand the case and the task assigned. The first question asked participants to indicate the accuracy of the forecast systems. Ninety percent of participants answered this question correctly. Another question elicits information regarding participants' understanding that the budgeting process described in the case results in a slack inducing setting. Specifically, participants were asked to indicate their agreement to the following statement: "My bonus will increase if my production cost target is higher than actual production cost." They responded using a 10-point Likert scale, where 0 indicates that they "strongly disagree", 5 indicates that they are "neutral", and 10 indicates that they "strongly agree". The correct answer for this question, regardless of treatment, is agreement (i.e., a response of 6 to 10 on the scale). Out of 134 participants, 104 provided a correct response, 8 submitted neutral as their response, and 22 answered incorrectly by providing a scale response below 5. Overall, these responses suggest that the participants understand the case and the task required in the experiment.

Descriptive Statistics

Dependent Variables

Table 2 displays the correlation among the dependent variables. The likelihood to deviate from forecast or the intention to create budget slack is significantly positively correlated with the numerical budget slack created in all opportunity. Table 3 summarizes the cell means for the

[8] The hypotheses tests are repeated using the full sample (n = 162). The findings are consistent as those from the analysis using subset of sample of participants who passed the manipulation check (n = 134).

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dependent variables of interest, the likelihood of forecast deviation and point estimates of slack creation in response to specific forecasts providing high, medium, and low opportunity for slack creation. Panel A displays the cell means for the likelihood of deviation from the forecast. The mean deviation likelihood is higher for the horizontal equity treatment as compared to horizontal inequity treatment (Mean = 6.79 vs. 6.74, t = -0.161, two-tailed p value = 0.872). This pattern of mean differences is inconsistent with Hypothesis 1. The mean deviation likelihood is higher for the low self efficacy treatment than the high self efficacy treatment (Mean = 6.82 vs. 6.70, t = 0.387, two-tailed p value = 0.699). Although this difference is statistically insignificant, this pattern of means provides initial support for Hypothesis 2, which predicts that individuals with good prior performance will create less budgetary slack than those with poor prior performance.

Panel B of Table 3 reports the descriptive statistics for the second set of dependent variables – the point estimates of slack creation in response to specific forecasts providing high, medium, and low opportunity for slack creation.[9] The mean slack creation for the horizontal equity treatment is $94.02 (Std. Deviation = 85.49) when there is high opportunity, $60.00 (Std. Deviation = 58.34) when there is medium opportunity, and -$1.06 (Std. Deviation = 45.20) when there is low opportunity. The mean slack creation for the horizontal inequity treatment is $90.96 (Std. Deviation = 79.92) when there is high opportunity, $55.22 (Std. Deviation = 70.76) when there is medium opportunity, and -$3.90 (Std. Deviation = 66.26) when there is low opportunity. However, none of these mean differences are significant. The two tailed p values under high, medium, and low opportunity are 0.831, 0.671, and 0.773, respectively. These means indicate that the mean slack creation was higher under horizontal equity than under horizontal inequity treatment for all opportunity levels. This is not consistent with Hypothesis 1, which predicts that higher slack will be created under horizontal inequity than under horizontal equity.

[9] The unit measurement for the numerical slack is in thousands of dollars.

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Consistent with Hypothesis 2, there is higher mean slack creation across opportunity levels under the low self efficacy treatment than under the high self efficacy treatment. The mean slack created in the low self efficacy treatment is $94.63 (Std. Deviation = 84.40) when there is high opportunity, $58.97 (Std. Deviation = 61.94) when there is medium opportunity, and $1.84 (Std. Deviation = 38.95) when there is low opportunity. The mean slack created in the high self efficacy treatment is $90.23 (Std. Deviation = 80.90) when there is high opportunity, $56.14 (Std. Deviation = 67.94) when there is medium opportunity, and -$6.97 (Std. Deviation = 70.50) when there is low opportunity. However, none of the mean differences in slack creation between high and low self efficacy are statistically significant (*p*-values for high, medium, and low opportunity are 0.758, 0.801, and 0.370, respectively).

[Insert Table 3 about here]

Measure of Ethical Position

Ethical Position is measured using Forsyth's Ethical Positions Questionnaire (EPQ). The EPQ is comprised of two sets of 10 statements to measure idealism and relativism. Participants provided their responses to the EPQ statements on a 9-point Likert scale where 1 represents "completely agree" and 9 represents "completely disagree". The Cronbach's Alpha for the idealism and relativism scales are 0.866 and 0.823, respectively.

Idealism and relativism scores are calculated based on the average of the responses to each of the sets of 10 statements. Two participants were eliminated from the ethical positions analyses due to incomplete responses to the EPQ. The overall mean and median idealism scores are 6.14 and 6.30, respectively. For relativism, overall mean and median scores are 5.11 and 5.00, respectively. Further, participants are classified as having high or low idealism and relativism using median scores as cut-off points (Bartnett et al., 1994; Elias, 2002; Forsyth and

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Nye, 1990). This results in 68 participants classified as low idealists and 64 participants classified as high idealists. Coincidently, there are also 68 participants that classified as low relativists and 64 participants classified as high relativists.

Potential Covariates

Demographic variables (such as age, class level, GPA, gender, employment status, years of professional employment experience, and experience in budgeting setting), risk preference, and perceptions of budget slack creation were evaluated as potential covariates. The evaluation consisted of analyzing the association of the potential variables to the dependent variables. The negative Pearson correlation of 0.217 between gender and the likelihood of forecast deviation is significant with a two-tailed p-value = 0.01. The analyses also suggest significant correlation between gender and slack creation under high and medium opportunity (Pearson correlation of -0.262 and -0.188, respectively) with a two-tailed p-value ≤ 0.05. Because of this significant association, gender is included as a covariate in hypothesis testing. Table 2 summarized the correlations among the dependent variables and the potential covariates.

Tests of Hypotheses

The analyses use the likelihood to deviate from forecast and point estimates of slack creation in response to specific forecasts as dependent variables. Horizontal equity and self efficacy are independent variables with gender as a potential covariate. General Linear Model analysis is employed to test the main effects of horizontal equity (Hypothesis 1), self efficacy (Hypothesis 2), and their interaction effect (Hypothesis 3) on budgetary slack creation. First, an analysis of covariance ANCOVA is used to test the effect of the independent variables on the first dependent variable measure, participants' general likelihood of deviating from the forecast while controlling for gender. Next, repeated measures ANCOVA is used to analyze participants'

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responses to the three specific forecasts. The repeated dependent variable is the three calculated point estimates of budgetary slack obtained from participants' responses to the three specific forecasts.

Hypothesis 4 and 5 predict the association of ethical position on slack creation. Mean analysis and correlation tests are conducted to test these hypotheses. Following Hastings and Finegan (2011), hierarchical regression analyses were employed to analyze the interactions among ethical positions and horizontal equity, and self efficacy.

Likelihood of Forecast Deviation

Panel A of Table 4 presents the results of the ANCOVA used to test the effect of the independent variables on participants' likelihood of deviating from the forecast, while controlling for gender. The ANCOVA results indicate that gender is a statistically significant covariate (p = 0.008). The results indicate no significant main effects for horizontal equity (p = 0.836) or self efficacy (p = 0.859) on the likelihood to deviate from the forecast. However, the results indicate a marginally significant interaction between horizontal equity and self efficacy (p = 0.078), which is consistent with Hypothesis 3. Specifically, under horizontal inequity, the likelihood of deviating from the forecast is *greater* when self efficacy is high than when self efficacy is low. The opposite pattern emerges under horizontal equity, such that the likelihood of deviating from the forecast is *lower* when self efficacy is high than when self efficacy is low. The significance of the interaction between horizontal equity and self efficacy may suppress the individual main effects of the independent variables.

A minority of the experimental participants (25 out of 134) indicated that they would report a cost that was less than the forecast, resulting in the creation of negative slack. Such a response would result in the receipt of less than adequate funds to cover the forecasted costs.

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Such a choice is inconsistent with preferences for wealth or accuracy from the perspective of the incentive structure set up in the experimental design. Thus, similar to prior studies (e.g., Evans et al. 2001), the analyses are also conducted with these observations excluded. Specifically, the ANCOVA analysis was conducted using the subset of observations from the 109 participants who report costs equal to the forecast or greater (i.e., participant who create zero or positive budgetary slack). Panel B of Table 4 presents the results of this additional analysis. The overall results are similar from the prior analysis. Gender is significant (p = 0.003), and the main effects for the independent variables are not significant. However the statistical significance of the interaction is stronger (p = 0.026).

[Insert Table 4 about here]

A simple main effect analysis of differences in the estimated marginal means was performed to examine the reported significant interactions between horizontal equity and self efficacy on the likelihood to deviate from the forecast. Table 5 displays the results from the simple main effects analysis while Figure 2 illustrates the interactions of the estimated marginal means. The level of self efficacy influenced the likelihood to deviate from the forecast when an equal horizontal equity is presence (F = 1.898, p = 0.085). However, the influence of self efficacy is not significant to the intention on slack creation under unequal horizontal equity (F = 1.286, p = 0.129). Therefore, participants with low self efficacy treatment shows a significantly higher intention to create budget slack, as compare to those with high efficacy treatment, when they receive equal horizontal equity. This result provides initial support for Hypothesis 2.

Horizontal equity influenced the likelihood to deviate from forecast under low self efficacy treatment (F = 2.000, p = 0.080), but not under high self efficacy treatment (F = 1.220, p = 0.135). Specifically, under high self efficacy, participants with unequal horizontal equity

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treatment indicate a higher intention to create budget slack, as compare to those with equal horizontal equity. Although the pattern is consistent with the direction of the predicted interaction on Hypothesis 3, however the mean difference is not statistically significant.

Panel B on Table 5 and Figure 2 displays the results of the simple main effects analysis using subset of responses from participants who create a zero and or positive budgetary slack. The level of self efficacy influenced the likelihood to deviate from the forecast under the presence of unequal horizontal equity ($F = 4.223$, $p = 0.021$), but not under equal horizontal equity ($F = 1.314$, $p = 0.127$). Specifically, participants with high self efficacy treatment show a significantly higher intention to create budget slack, as compare to those with low efficacy treatment, when they receive unequal horizontal equity.

Horizontal equity significantly influenced the likelihood to deviate from forecast under high self efficacy ($F = 3.197$, $p = 0.039$) and low self efficacy treatment ($F = 1.990$, $p = 0.081$). The means patterns are consistent with Hypothesis 3. As predicted, participants with unequal horizontal equity treatment indicate a significantly higher intention to create budget slack, as compare to those with equal horizontal equity, when they receive high self efficacy treatment. Therefore, Hypothesis 3 is supported.

[Insert Table 5 and Figure 2 about here]

Repeated Measures Analysis of Slack Creation

Panel A of Table 6 presents the results of the repeated measures ANCOVA used to analyze participants' responses (n = 134) to the three specific forecasts while controlling for gender. The results indicate that gender is a statistically significant covariate ($p = 0.021$), but reveal no significant main effects of horizontal equity ($p = 0.654$) or self efficacy ($p = 0.705$) on budgetary slack creation. The interaction term is also insignificant ($p = 0.827$). Moreover, Panel

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B of Table 6 summarized the results from the analysis using subset of responses from the 109 participants who report costs equal to the forecast or greater. The findings are consistent as the prior analysis. Gender is a statistically significant covariate ($p = 0.009$). There is no significant main effects from horizontal equity ($p = 0.934$), self efficacy ($p = 0.782$), nor significant interaction terms from both variables ($p = 0.480$). Figure 3 illustrates this interaction. Interestingly, the interaction plot from the analysis of subset of responses of participants who create slack (see Panel B of Figure 3) is consistent to the significant interactions which found on the intention to deviate from forecast (see Figure 2). Nevertheless, the results from the analysis of the point estimates of slack creation do not support Hypotheses 1, 2, and 3.

[Insert Table 6 and Figure 3 about here]

Ethical Position

Hypothesis 4 proposes that budgetary slack creation will decrease as idealism increases. Hypothesis 5 predicts that slack creation will increase as relativism score is increases. To test these hypotheses, I examine mean differences and correlation analyses between the dependent variables of interest and the ethical position scores. The results provide partial support for Hypothesis 4 and 5. The results for mean analysis and correlation between the dependent variables and ethical position scores are summarized in Table 7, and the results of the hierarchical regressions are reported in Tables 8, 9, and 10.

Mean and Correlation Analysis

As Panel A of Table 7 reports, the mean likelihood of deviating from the forecast is significantly higher for participants with a low idealism compared to those with a high idealism (Mean = 7.10 vs. 6.40, $t = 2.184$, $p = 0.031$). Consistent with Hypothesis 4, this suggests that individuals with low idealism scores report higher intentions to create slack than high idealism

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individuals. In addition, the likelihood to deviate from the forecast is negatively correlated with the idealism score (Pearson correlation of -0.186). Similar to the intention to create slack, the numerical slack created under all opportunities is negatively correlated with the idealism score. The pattern of mean point estimates of slack in response to the three forecasts is also consistent with Hypothesis 4, especially under high and medium opportunity; however the mean differences are not statistically significant.

As Panel B of Table 7 reports, the mean of likelihood of deviating from the forecast for high relativists is higher than for low relativists. However this difference is not statistically significant (Mean = 6.89 vs. 6.60, t = -0.872, p = 0.385). Consistent with Hypothesis 5, the relativism score is significantly positively correlated with budgetary slack creation under high and medium opportunity. Further, the mean analysis shows that high relativists create significantly higher budgetary slack compared to low relativist under high opportunity (p = 0.025) and medium opportunity (p = 0.023). Thus, the mean patterns and the correlation analysis provide preliminary support for Hypothesis 5.

[Insert Table 7 about here]

Hierarchical Regression Analysis

The hierarchical regressions analyses include two independent variables (horizontal equity and self efficacy), the dependent variables (the likelihood to deviate from forecast and numerical budgetary slack created), ethical position (idealism and relativism), and gender as covariate. The idealism and relativism variables used in the analysis are in the form of categorical variables that classifies the observations to high or low idealism and relativism scores

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based on the median split (Bartnett et al., 1994; Elias, 2002; Forsyth and Nye, 1990)[10]. The first step of the analysis entered gender as a covariate. The second step entered the variables of interest, which are equity, efficacy and ethical positions. The remaining phases of the analysis entered the two, three and four way interactions terms sequentially. Following Hastings and Finegan (2011), higher-order effects were interpreted only if the addition of the variables is significant to the amount of variance accounted for. In other words, the interpretation of the result will be conducted if the change in R^2 is significant. Table 8 summarizes the steps that were taken in the hierarchical analysis.

[Insert Table 8 about here]

Hierarchical Multiple Regression Analysis for Likelihood of Forecast Deviation

Table 9 reports the results of the hierarchical multiple regression analysis for the first dependent variable of interest, the intention to deviate from the forecast. Based on the first step analysis, the result suggest that males reported a higher intention to deviate from the forecast or to create slack than females (β = -0.22, p = 0.01). Thus gender is a statistically significant (F (1, 130) = 6.77, p = 0.01) variable explaining five percent of variance in the intention to deviate from the forecast. The introduction of horizontal equity, self efficacy, idealism, and relativism explained an additional three percent of variance in the intention to create budget slack, after controlling for gender (R^2 Change = 0.03, F (4, 126) = 1.027, p = 0.396). The second model is marginally significant (F = 2.177, p = 0.061). However, Leech, Barret, and Morgan, (2011, p. 125) warned that one cannot use this to interpret whether the second model is better than the prior model. Leech et al. suggest that the second model can still be significant without its advancing to a significant degree on the first model. The results from the second model shows

[10] Additional hierarchical multiple regression analyses are conducted using idealism and relativism as continuous variables as opposed to dichotomous variables. The findings are consistent with those from the analyses using ethical position in the form of categorical variable.

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that idealism is a marginally significant (p = 0.073) predictor for the second model. However, since the changes of R^2 are not significant, one cannot conclude that idealism can be accounted for significant variance over and above gender for the reported intention on slack creation. As displayed in Table 9, there were no significant two, three, or four way interactions among horizontal equity, self efficacy and ethical positions over the intention to create budgetary slack.

[Insert Table 9 about here]

Hierarchical Multiple Regression Analysis for Numerical Estimates of Slack Creation

Table 10 displays the results of the hierarchical multiple regression analysis for the numerical budgetary slack created under high, medium, and low opportunity. Based on the first model of the analysis, gender significantly predicts the budgetary slack created under high opportunity (β = -0.253, p = 0.003) and medium opportunity (β = -0.193, p = 0.027). However as indicated by the R^2, only six percent and three percent of the variance of slack created under high and medium opportunity could be predicted by gender.

Further, the results from the second phase suggest that all the newly entered variables (horizontal equity, self efficacy, and ethical position) are able to increase the R^2; however none of the changes in R^2 are statistically significant. Nevertheless, the second model itself is statistically significant, especially under high (p = 0.019) and medium (p = 0.066) opportunity. In the second model, relativism appears to be a significant predictor of slack created under high (p = 0.028) and medium (p = 0.025) opportunity. However, since the changes of R^2 are not significant under both conditions, then the analysis cannot reasonably determine that relativism can account for significant variance over and above gender for the reported point estimates of slack creation.

In the fourth model including the addition of three way interactions, the coefficient of the

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interaction among equity, idealism, and relativism is significant (p = 0.043) under the medium opportunity condition. However, since the addition of the variables to the new model is not significant, or the changes of R^2 are not significant, then this study will not interpret this interaction. Similar with the intention to deviate from the forecast variable, the analyses indicate that there are no significant two, three, or four way interactions among horizontal equity, self efficacy and ethical position.

[Insert Table 10 about here]

Additional Analyses

Gender Effect

The ANCOVA analyses in the prior discussion indicate that gender is a significant covariate in predicting the likelihood of forecast deviation and numerical estimates of budgetary slack. Table 11 presents mean dependent variable scores by gender. These means reveal that males are consistently more likely to create slack than females. T-tests of mean differences indicate that men report a significantly higher likelihood of forecast deviation in the direction of slack creation than women (p = 0.012). In addition, males create significantly more slack than females when there is a high opportunity (p = 0.033) and medium opportunity (p = 0.030).

[Insert Table 11 about here]

Likelihood of Forecast Deviation based on Peers' Behavior

There are two exit questions in the instrument that asked for participants' intention to create budgetary slack given information about whether their peers would create slack. The first question assumes that the peer always creates budget slack, while the second question assumes that the peer never creates budget slack. The objective for these questions is to examine whether participants' intentions to create budgetary slack is altered given their peers' decisions regarding

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slack creation. It is expected that additional information indicating that a horizontal peer always (or never) creates budgetary slack will provide participants with additional justification to report (or not to report) costs that result in slack creation. In addition, the associations between the responses from these exit questions and the participants' ethical positions were further analyzed. The study examines the responses using repeated measure ANCOVA. Horizontal equity, self efficacy, idealism, and relativism were analyzed as independent variables while holding gender as a control variable. The results from the analysis are displayed in Table 12.

The results provide additional support for Hypotheses 4 and 5. Regardless of the knowledge regarding the horizontal peer, the responses suggest that gender is a significant covariate for the intention to deviate from forecast (p = 0.005). There are no significant main effect of equity (p = 0.328) and efficacy (p = 0.785). Further, idealism (p = 0.012) and relativism (p = 0.045) are significant predictors for the likelihood to deviate from the forecast regardless the information regarding horizontal peer. The analysis reveal no significant interaction terms between equity and efficacy (p = 0.821) nor between idealism and relativism (p = 0.754). Panel B of Table 12 reported the similar results for the same analyses using a subset of observations from participants that create budgetary slack (n = 109).

[Insert Table 12 about here]

Understanding Check – Sensitivity Analysis

The hypothesis testing above was repeated using subset of sample which excludes the 22 participants that fail the understanding check. This additional analysis is conducted to determine the robustness of the results had the analyses were performed using responses from participants that understand the case. Table 13 through 18 summarized the results of the sensitivity analysis. Table 13 displays the results from ANCOVA analysis on the intention to slack creation from

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excluding participants that fail the understanding check (n= 112). The results reveal that gender is significant (p = 0.045) and no main effect from horizontal equity (p = 0.624) and self efficacy (p = 0.563). The significance of the interaction between horizontal equity and self efficacy is not robust (p = 0.117). Panel B of Table 13 shows the result of the ANCOVA analysis using responses from participants who correctly answer the understanding check and create a zero or positive budget slack (n = 96). The analysis reveals that the results are consistent with those from including the participants who failed the understanding checks. Gender is still significant predictor for the likelihood to create budget slack (p = 0.022). No indication of main effects from horizontal equity (p = 0.793) and self efficacy (p = 0.728). However, the interaction between horizontal equity and self efficacy is significant (p = 0.065).

[Insert Table 13 about here]

Table 14 summarized the repeated measures ANCOVA analysis for the numerical budget slack crated. The results indicate that gender is no longer significant (p = 0.208). The remaining results are consistent to those from including participants regardless their answer to the understanding checks (n = 112). The main effects from the horizontal equity (p = 0.727), and self efficacy (p = 0.352), also the interaction from equity and efficacy (p = 0.766) are not statistically significant. Whereas, Panel B of Table 14 reported the result from the participants that decided to create budget slack (n = 96). The results are consistent to the findings displayed on Table 6. Gender is significant at p value of 0.009. No indication of main effects of horizontal equity (p = 0.934), self efficacy (p = 0.782), and interaction (p = 0.480) between equity and efficacy on the numerical budget slack creation.

[Insert Table 14 about here]

Table 15 and 17 reported the results from the hierarchical regression analysis to examine

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the moderator effects from ethical position in the budgetary slack creation using responses from participants that understand the case (n = 112). Whereas Table 16 and 18 summarized the same analysis using responses from participants who decided to create budget slack (n = 96).

Gender is a significant predictor for intention to deviate from forecast on both analyses of subset of participants that understands the case (p = 0.051) and who create budget slack (p = 0.03). As shown on Table 15, on the second model of the analysis, idealism is a marginally significant predictor for the intention to create slack. However, this study would not interpret this result further since the model itself is not significant (p = 0.152). Moreover, interpretable result is presence on the analysis from the subset of participants that create budget slack (see Table 16). The findings suggest that the second model is better than the first model (R^2 Change = 0.091, p = 0.059). Therefore, idealism accounted for significant variance over and above the covariate variable, which is gender, for the intention to create budgetary slack. In addition, as reported on Table 17 and 18, gender is significant for the numerical budgetary slack created under high opportunity on both analyses of subset of participants that understand the case (p = 0.046) and who create budget slack (p = 0.074). Consistent with the prior analysis, there is no indication of any significant interaction among the variables of interest across all analyses.

[Insert Table 15, 16, 17, and 18 about here]

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CHAPTER V

SUMMARY AND CONCLUSIONS

Summary and Discussion

A vast stream of accounting research suggests the importance of incorporating non pecuniary preferences in the analyses of judgment and decision making process. This study contributes to the literature by providing experimental evidence regarding the influence of horizontal equity, self efficacy and ethical position on budgetary slack creation.

Four research questions were analyzed through a 2 x 2 experiment using graduate students as participants. The first research question is whether managers' decision to create budgetary slack is influence by their horizontal equity preferences. This question is examined by testing Hypothesis 1, which consistent with equity theory, predicts individuals who perceive horizontal inequity will create more budgetary slack than those with horizontal equity. Contradictory to Hypothesis 1, the mean for reported intention to create budgetary slack or the likelihood to deviate from the forecast is higher for participants with equal horizontal equity treatment than those with unequal horizontal equity treatment. In addition, the T-test suggests that the mean difference is not statistically significant ($p = 0.699$). Further, a similar mean pattern and insignificant mean differences are also present for the numerical budgetary slack created. The ANCOVA and repeated measure ANCOVA analyses indicate an insignificant main effect of horizontal equity on both the dependent variable of interest likelihood to deviate from the forecast, and the numerical slack created. These results provide evidence that Hypothesis 1 is not supported indicating no significant effect of horizontal equity on budgetary slack creation.

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The second research question purposes whether the decision in creating budgetary slack is affected by managers' self efficacy. As self efficacy theory suggests, this study expects that individuals' poor prior performance will contribute toward their belief that they do not have the required ability to perform the task. Therefore, this will encourage them to create more slack compared to individuals' with good prior performance. The mean for likelihood to deviate from the forecast is higher for individuals who received low self efficacy treatment than those with high self efficacy treatment. However, the result from the T-test analysis suggests that the mean difference is not statistically significant ($p = 0.872$). Further, the similar results emerge from mean analyses for numerical slack created on high, medium, and low opportunity levels. The averages of numerical slack created across all opportunity levels are higher under the low self efficacy compare to high self efficacy treatment. The mean patterns provide an initial support for Hypothesis 2. Nevertheless, none of the mean difference is statistically significant, perhaps attributed to the low power of the test due to a small sample. The ANCOVA and repeated measure ANCOVA analyses also suggest that the main effect of self efficacy on budgetary slack creation is not statistically significant. Accordingly the analyses provide the evidence of self efficacy alone does not significantly influence the decision to create budgetary slack, not supporting Hypothesis 2.

The third research question examines the interaction between horizontal equity and managers' self efficacy on budgetary slack creation decisions. Results indicate that horizontal equity and self efficacy interact to affect the likelihood of deviating from the forecast to create slack as hypothesized. Specifically, under horizontal inequity, the likelihood of deviating from the forecast is *greater* when self efficacy is high than when self efficacy is low. The opposite pattern emerges under horizontal equity, such that the likelihood of deviating from the forecast is

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lower when self efficacy is high than when self efficacy is low. Conversely, the significant interaction between horizontal equity and self efficacy is not presence on the analyses of numerical estimations of slack creation. Thus, Hypothesis 3 is supported; specifically the interaction of horizontal equity and self efficacy significantly influences the reported intention to create budgetary slack.

The final research question relates to the influence of ethical position on the decision to create budgetary slack. Hypothesis 4 predicts the negative association between idealism and budgetary slack creation. Meanwhile, Hypothesis 5 predicts the positive association between relativism and the decision to create slack. The means and correlation analyses provide preliminary supports for both Hypothesis 4 and 5. The study then further examines the involving interactions among ethical positions, horizontal equity, and self efficacy through Hierarchal Multiple Regression analysis. The findings support Hypothesis 4 that idealism is a significant predictor of the reported likelihood to deviate from forecast. Consistent with Douglas and Wier (2000), the result suggest that there is a negative relation between idealism score and reported intention to create slack. This finding is expected given the characteristics of relative idealist would consider budgetary slack creation as an unethical act due to the negative consequences from the decision.

Whereas for the relativism analysis, the results indicate that relativism is a significant predictor for the numerical slack creation under the high and medium opportunity level[11]. The results are aligned with Hypothesis 5 and consistent with Douglas and Wier (2000). Specifically, the analysis suggests the positive relation between relativism and the numerical estimates of the

[11] The study suspects that the probable reason of why the same result is not emerge under the low opportunity is due to the hypothetical cost forecast is too close to the maximum amount of cost estimation. The available hypothetical slack to be created under this setting is approximately $25,000 compared to the medium opportunity $200,000, and the high opportunity $375,000. This setting might cause the study to ineffectively analyze the response for the budget slack created.

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budgetary slack. Further, this study does not find any significant interactions among ethical positions, horizontal equity, and self efficacy. In addition, the results from the additional analysis reveal men are significantly more likely to create budgetary slack than women (p = 0.012).

Contributions and Implications

This study contributes to the literature for several reasons. First, the study examines how social motives, such as perceived fairness and self efficacy, influence the decision to create budgetary slack. The results reveal that the interaction between horizontal equity and self efficacy significantly influence the intention to create budgetary slack. Prior research has documented an association between budgetary slack and ethical position (Douglas and Wier, 2000). The second contribution of the current study seeks to add to our knowledge of this association by examining ethical position as a moderator given the joint effects of horizontal equity and self efficacy. Further, the present study answers calls for research investigating the effects of social preferences on individuals' judgment and decision making (Luft, 1997; Sprinkle, 2003) and research on participative budgeting settings examining factors related to multiple subordinate settings (Brink, Coats, and Rankin, 2012).

The implications of the findings are of interest to practitioners and stakeholders of organizations for numerous reasons. First, the results of this study provide information regarding the extent to which individuals are willing to sacrifice wealth due to non-pecuniary motives such as preferences for horizontal equity. Second, this study examines the unintended consequences of prior performance feedback. The results reveal that such feedback can define perceptions of self efficacy, which may lead to a higher propensity for unethical behavior.

Limitations

This study is subject to the limitations derived from the consequences of experimental

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research. Although experimental research controls extraneous factors in its analyses, it is limited by the generalizability of the results. The study uses a hypothetical case where the information regarding peers' compensation is available and known for the participants. This setting might not be generally applicable in real practice. Furthermore, the results from this study need to be carefully interpreted due to the use of graduate students as a sample and to the specific characteristics of the task.

Another possible limitation is the fact that the experiment did not involved monetary compensation for the participants. It is noteworthy that the study found significant interaction between horizontal equity and self efficacy on the intention to create budget slack. However, this result may possibly differ if the experiment involved economic incentives that relates to the participants' decision to creating budgetary slack.

Future Research

Several avenues for future research are available from this study. This study manipulates the horizontal equity through the fairness of the compensation system. An interesting research area is to examine whether the influence of horizontal equity to individuals' decision will be the same if the manipulation of the treatment is using the fairness of non-monetary reward such as social recognition.

The current study exclusively examines the unequal horizontal equity in that the inequality created disadvantageous situation for the participants when compensation system of the peers is better than the individuals. Equity theory (Adams, 1963) proposes the negative state from the inequality is also present under the condition where the inequality is advantageous to the individual, such as when the individuals have better compensation than their peers. As suggested by Matuszewski (2010), future research could further examine whether the

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advantageous inequality will have the same impact to the decision on budgetary slack creation as disadvantageous inequality.

Finally, following Whyte et al. (1997), this study manipulates self efficacy through hypothetical information regarding participants' prior performances, rather than directly measure participants' self efficacy level. Bandura (1982) states that ones' own mastery experience is the most effective source of information in developing efficacy perceptions. Therefore, future research should consider a laboratory setting that directly measures individuals' self efficacy through task performance.

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APPENDICES

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CASE INSTRUMENT

ABC Inc. produces edible crayons especially made for toddlers through two product lines, the Red Line and the Green Line. Each product line is led by a production manager. Assume you are the production manager for ABC's Red product line.

One of your tasks is to set the production cost target for each production period. The production cost target is reported to the company. Based on the cost target you report, the company transfers funds to your product line at the beginning of each period to cover expected costs. In other words, the funds you receive each period to run your product line will be equal to the production cost target you report.

At the end of the period, the actual production costs can be calculated. Actual costs can range from $200,000 to $600,000 and are not related to the costs of other product lines or to other periods. **The company has hired you with the expectation that you will set the production cost target that is equal to your *best* estimate of the actual cost.**

If the production cost target is set too low, the company will transfer insufficient funds to your division, and you will not have enough cash available to complete production without delays. Delayed production is extremely costly for the company, so they strongly discourage production line managers from setting a production cost target that is too low.

If the production cost target is set too high, the company will transfer an unnecessarily large amount of funds to your division. This will unnecessarily tie up funds with your division that could be used more productively for other business operations. Thus, *it is in the company's best interest for you to set your production cost target as accurately as possible*.

Your Forecasting System:

You have a computerized forecasting system in place that uses select data to generate a private forecast of the actual costs for the period. As manager, you can use the forecast along with your personal experience and expertise to develop your production cost target.

Historically, the raw forecast generated by the system **predicts actual production costs with 75% accuracy**. In other words, there is a 75% chance that the actual costs will be equal to the forecast, and a 25% chance that the actual costs will be different than the forecast. For example, if the forecast is $400,000, then there is 75% chance that the actual costs will be $400,000, and a 25% chance that the actual costs will be different than $400,000.

The forecast you receive is private information that is not reported to the company. Thus, the company will never know what your private forecast predicted. The company only knows that the actual production costs will be between $200,000 and $600,000. Therefore, you can decide whether to submit a production cost target that is equal to the forecast, or you can use your personal skill and expertise to develop a production cost target that is higher or lower than the forecast.

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Your Prior Performance:
Reporting an accurate cost target is not an easy task for production managers as it requires them to have extensive knowledge regarding their production line. In addition, a manager must also have the appropriate skills and abilities to effectively incorporate personal knowledge and information to determine what cost target is most likely to be accurate.

High self-efficacy treatment:
Despite the difficulties of reporting accurate cost targets, you **have** established an **excellent** record for working efficiently and reporting accurate cost targets. Your prior performance in setting accurate cost targets is derived from your exceptional ability as a production manager. This obviously indicates that you have mastered the skills and the knowledge required to effectively and successfully manage your production line.

Low self-efficacy treatment:
You **have not** established a record for working efficiently and reporting accurate production cost targets. Your **poor** prior performance in setting accurate cost targets makes it questionable whether your skills and knowledge are sufficient to effectively and successfully manage your production line.

Compensation system:
You and the manager of the Green line have the same gender, job description, years of experience with the company, and perform the same tasks with the same workload. ABC provides a bonus to each of you based on cost savings. Cost savings are defined as the targeted production costs less the actual production costs for each production line. Your total compensation consists of a fixed salary plus the bonus based on cost savings.

Horizontal equity treatment:
Your bonus rate is the same as your peer's bonus rate. Specifically, your bonus rate is 50%, and the manager of Green Line also has a bonus rate of 50%. Each of you will compute your bonus based on the following formula:

Bonus = 50% (production cost target – actual production costs)

The following examples illustrate the computation of your bonuses:

Example 1: Assume a submitted production cost target of $400,000 and actual costs of $300,000. Based on these numbers,
YOUR Bonus = 50% ($400,000-$300,000) = $50,000
Your PEER's Bonus = 50% ($400,000-$300,000) = $50,000

Example 2: Assume a submitted production cost target of $300,000 and actual costs of $300,000. Based on these numbers,
YOUR Bonus = 50% ($300,000-$300,000) = $0
Your PEER's Bonus = $50% ($300,000-$300,000) = $0

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To make sure you understand, please calculate the bonuses for the third example below before continuing (raise your hand if you need assistance with this calculation):

Example 3: Assume a submitted production cost target of $500,000 and actual costs of $300,000. Based on these numbers,
YOUR Bonus = _____?
Your PEER's Bonus = _____?

Horizontal inequity treatment:
Your bonus rate is <u>different</u> than your peer's bonus rate. Specifically, your bonus rate is 50%, whereas the manager of Green line has a bonus rate of 95%. Each of you will compute your bonus based on the following formulas:

YOUR Bonus = Fixed Salary + 50% (production cost target – actual production costs)
Your PEER's Bonus = Fixed Salary + 95% (production cost target – actual production costs)

The following examples illustrate the computation of your bonuses:

Example 1: Assume a submitted production cost target of $400,000 and actual costs of $300,000. Based on these numbers,
YOUR Bonus = 50% ($400,000-$300,000) = $50,000
Your PEER's Bonus = 95% ($400,000-$300,000) = $95,000

Example 2: Assume a submitted production cost target of $300,000 and actual costs of $300,000. Based on these numbers,
YOUR Bonus = 50% ($300,000-$300,000) = $0
Your PEER's Bonus = 95% ($300,000-$300,000) = $0

To make sure you understand, please calculate the bonuses for the third example below before continuing (raise your hand if you need assistance with this calculation):

Example 3: Assume a submitted production cost target of $500,000 and actual costs of $300,000. Based on these numbers,
YOUR Bonus = _____?
Your PEER's Bonus = ___ _____?

<u>Summary</u>:
- Your job is to set the production cost target for the period.
- Actual product costs will be between $200,000 and $600,000.
- You will receive a private forecast of the estimated actual costs, which is 75% accurate.
- The company expects you to set your production cost target as accurately as possible. Reporting a cost target that is too high or too low will jeopardize company's best interests.
- Your bonus is based on the difference between your reported production cost target and actual costs.

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Part I

1. On the scale below please indicate the number that best represents the ***likelihood*** that you would report a cost target that is **different** than your private forecast.

Extremely likely to report a targeted production cost that is less than the forecast

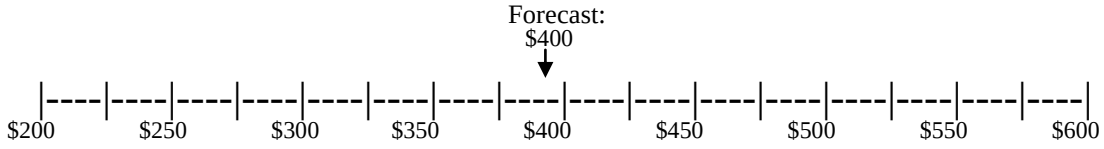
[_____|_____|_____|_____|_____|_____|_____|_____|_____|_____|_____]
0 1 2 3 4 **5** 6 7 8 9 10

Most likely to report a targeted production cost that is equal to the forecast

Extremely likely to report a targeted production cost that is higher than the forecast

2. Assume that you receive a production cost forecast of **$225,000**. Please mark the scale below to indicate the amount that you will submit for your cost target (in thousands). **You may place your mark anywhere on the scale.**

3. Assume that you receive a production cost forecast of **$400,000**. Please mark the scale below to indicate the amount that you will submit for your cost target (in thousands). **You may place your mark anywhere on the scale.**



4. Assume that you receive a production cost forecast of **$575,000**. Please mark the scale below to indicate the amount that you will submit for your cost target (in thousands). **You may place your mark anywhere on the scale.**

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Part II:

1. For the case that you just read, your bonus rate was (check one):

   _____ less than your peer's bonus rate

   _____ equal to your peer's bonus rate

2. For the case that you just read, based on the information given about your prior performance, which of the following statements is more accurate? (check one)

   _____ my prior performance indicates a lack of ability as production manager

   _____ my prior performance indicates sufficient ability as production manager

3. Historically, how accurate is the private forecast? Please respond with a percentage between 0% and 100%.

   _____ % accurate

Please indicate your agreement with each of the following statements:

4. My bonus would increase if my production cost target is higher than actual production costs.

Strongly Disagree [_____|_____|_____|_____|_____|_____|_____|_____|_____|_____|_____] **Strongly Agree**

0 1 2 3 4 5 6 7 8 9 10

Neutral

5. It is unethical to intentionally misreport a production cost target.

Strongly Disagree [_____|_____|_____|_____|_____|_____|_____|_____|_____|_____|_____] **Strongly Agree**

0 1 2 3 4 5 6 7 8 9 10

Neutral

6. I found the compensation structure among the production managers to be fair.

Strongly Disagree [_____|_____|_____|_____|_____|_____|_____|_____|_____|_____|_____] **Strongly Agree**

0 1 2 3 4 5 6 7 8 9 10

Neutral

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7. Assume your peer, the production manager of Green line, discloses that he or she always overstates his or her cost target. On the scale below please indicate the number that best represents the ***likelihood*** that you would choose to overstate your cost target.

Extremely Unlikely [_____] **Extremely Likely**

0 1 2 3 4 5 6 7 8 9 10

Neutral

8. Assume your peer, production manager of Green line, discloses that he or she never overstates his or her cost target. On the scale below please indicate the number that best represents the ***likelihood*** that you would choose to overstate your cost target.

Extremely Unlikely [_____] **Extremely Likely**

0 1 2 3 4 5 6 7 8 9 10

Neutral

9. Assume that you must choose between two options. If you choose Option A, you will receive $5 for certain. If you choose Option B, you will play a lottery where there is a chance you will receive $10 and a chance you will receive $0.

   For each choice below, indicate whether you would pick Option A or Option B:

			Which Option would you pick? Check one box for each Choice.	
	Option A: Certain Payment	**Option B: Lottery**	**Option A**	**Option B**
Choice 1	$5	0% chance of $10; 100% chance of $0		
Choice 2	$5	10% chance of $10; 90% chance of $0		
Choice 3	$5	20% chance of $10; 80% chance of $0		
Choice 4	$5	30% chance of $10; 70% chance of $0		
Choice 5	$5	40% chance of $10; 60% chance of $0		
Choice 6	$5	50% chance of $10; 50% chance of $0		
Choice 7	$5	60% chance of $10; 40% chance of $0		
Choice 8	$5	70% chance of $10; 30% chance of $0		
Choice 9	$5	80% chance of $10; 20% chance of $0		
Choice 10	$5	90% chance of $10; 10% chance of $0		
Choice 11	$5	100% chance of $10; 0% chance of $0		

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Please indicate if you agree or disagree with the following items. Each represents a commonly held opinion and there are no right or wrong answers. We are interested in your reaction to such matters of opinion. Rate your reaction to each statement by checking the box that best reflects your opinion.

	Completely Disagree				Neutral				Completely Agree
	1	2	3	4	5	6	7	8	9
People should make certain that their actions never intentionally harm another even to a small degree.									
Risks to another should never be tolerated, irrespective of how small the risks might be.									
The existence of potential harm to others is always wrong, irrespective of the benefits to be gained.									
One should never psychologically or physically harm another person.									
One should not perform an action which might in any way threaten the dignity and welfare of another individual.									
If an action could harm an innocent other, then it should not be done.									
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.									
The dignity and welfare of the people should be the most important concern in any society.									
It is never necessary to sacrifice the welfare of others.									
Moral behaviors are actions that closely match ideals of the most "perfect" action.									
There are no ethical principles that are so important that they should be a part of any code of ethics.									
What is ethical varies from one situation and society to another.									
Moral standards should be seen as being individualistic; what one person considers to be moral may be judged to be immoral by another person.									
Different types of morality cannot be compared as to "rightness."									

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	Completely Disagree				Neutral				Completely Agree
	1	2	3	4	5	6	7	8	9
Questions of what is ethical for everyone can never be resolved since what is moral or immoral is up to the individual.									
Moral standards are simply personal rules that indicate how a person should behave, and are not to be applied in making judgments of others.									
Ethical considerations in interpersonal relations are so complex that individuals should be allowed to formulate their own individual codes.									
Rigidly codifying an ethical position that prevents certain types of actions could stand in the way of better human relations and adjustment.									
No rule concerning lying can be formulated; whether a lie is permissible or not permissible totally depends upon the situation.									
Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.									

Please answer a few final questions.

1. What is your current class level? ☐ Masters of Accounting student ☐ MBA student
   ☐ Other (Please specify):_____

2. What is your overall GPA (at the start of this semester)? _____

3. What is your age? _____

4. What is your gender? ☐ Male ☐ Female

5. Employment status: ☐ Full-time ☐ Part-time ☐ Not currently employed

6. How many years of professional employment experience do you have: ____ *years*

7. Have you ever been involved in the budgeting process on your job? ☐ Yes ☐ No

Please check that you have answered all the questions.

Thank you for participating!

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TABLES

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TABLE 1
Participants Demographic Information

	Sample * n = 134	Full Sample n = 162
Age		
Mean	27.6	27.39
Std. Dev	6.16	5.85
Gender		
Female	36.60%	35.40%
Male	63.40%	64.60%
Current Class Level		
MBA	59.40%	60.60%
Master of Accounting	26.30%	24.40%
Other Graduate Programs	14.30%	15.00%
GPA		
Mean	3.36	3.31
Std. Dev	0.91	0.92
Employment		
Full Time	51.10%	50.00%
Part Time	23.30%	21.20%
Not Currently Employed	25.60%	28.80%
Years of professional experience		
Mean	5.22	4.93
Std. Dev	5.91	5.65
Have you been involved in the budgeting process in your job?	42%	39%
Is it unethical to intentionally create budget slack? (1 to 10, where 10 = strongly agree)		
Mean	7.69	7.55
Std. Dev	2.62	2.69

* Participants who correctly answered the manipulation checks.

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TABLE 2

Pearson Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Likelihood to deviate from the forecast[a]	1												
2. Slack created under High Opportunity[b]	.420**	1											
3. Slack created under Medium Opportunity[b]	.590**	.539**	1										
4. Slack created under Low Opportunity[b]	.430**	.041	.615**	1									
5. Current class level[c]	.147	-.050	.190*	.226**	1								
6. GPA	-.035	-.145	.026	.104	.182*	1							
7. Age	.092	.235**	.187*	.028	.136	.101	1						
8. Gender[d]	-.217*	-.262**	-.188*	.029	-.130	-.072	-.184*	1					
9. Employment[e]	.069	.009	.068	.013	.377**	.145	.270**	-.196*	1				
10.Years of professional experience	.129	.208*	.231**	.069	.158	.053	.916**	-.124	.332**	1			
11. Have you ever involved in the budgeting process?[f]	.185*	.149	.228**	.115	.182*	-.009	.381**	-.178*	.212*	.491**	1		
12. Creating a slack is unethical?[g]	.026	-.088	-.069	.049	-.055	.149	.027	.185*	-.110	.064	-.016	1	
13. Risk preference[h]	.038	-.015	.042	.057	-.026	.113	.013	-.133	-.013	.013	-.054	.022	1

[a] The likelihood that participants would report a cost target that is different than the private forecast. Measured on an 11 point Likert scale where 0 = "Extremely likely to report a targeted production cost that is less than the forecast", and 10 = "Extremely likely to report a targeted production cost that is higher than the forecast".

[b] Slack created (reported costs less forecasted cost in 000 dollars) across three different hypothetical forecasted cost amount. First, when the forecasted cost is $225,000, representing the high opportunity to maximize slack. Second, when the forecasted cost is $575,000, representing the low opportunity to maximize slack. Last, when the forecasted cost is $575,000, representing the low opportunity to maximize slack.

c Where 2 = MBA Program, 1 = Master of Accountancy, 0 = Others

d Where 0 = Male, and 1 = Female

e Where 2 = Full Time, 1 = Part Time, 0 = Currently Unemployed

f Where 0 = No, and 1 = Yes

[g] Measured on an 11 point Likert scale where 0 = "Strongly Disagree", 5 = " Neutral", and 10 = "Strongly Agree".

[h] Level of risk averse. Measured using a series of questions related to investment decisions on low to high risk investment.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

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TABLE 3

Panel A: Means and Standard Deviation for the Likelihood to Deviate from Forecast[a]

	High Self Efficacy		Low Self Efficacy		Total	
	mean	S.D.	mean	S.D.	mean	S.D.
Equal Horizontal Equity	6.47	1.48	7.09	1.85	6.79	1.70
Unequal Horizontal Equity	6.91	2.15	6.56	1.99	6.74	2.06
Total	6.70	1.86	6.82	1.92	6.76	1.88

Panel B: Means and Standard Deviation for Numerical Budgetary Slack

		High Self Efficacy		Low Self Efficacy		Total	
		mean	S.D.	mean	S.D.	mean	S.D.
Equal Horizontal Equity	High Opportunity[b]	89.69	79.02	98.09	92.17	94.02	85.49
	Medium Opportunity[c]	57.34	62.41	62.50	55.05	60.00	58.34
	Low Opportunity[d]	-2.19	50.48	0.00	40.36	-1.06	45.20
Unequal Horizontal Equity	High Opportunity[b]	90.74	83.81	91.18	77.09	90.96	79.92
	Medium Opportunity[c]	55.00	73.69	55.44	68.80	55.22	70.76
	Low Opportunity[d]	-11.47	85.75	3.68	38.01	-3.90	66.26
Total	High Opportunity[b]	90.23	80.90	94.63	84.40	92.46	82.41
	Medium Opportunity[c]	56.14	67.94	58.97	61.94	57.57	64.74
	Low Opportunity[d]	-6.97	70.50	1.84	38.95	-2.50	56.68

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] The likelihood that participants would report a cost target that is different than the private forecast. Measured on an 11 point Likert scale where 0 = "Extremely likely to report a targeted production cost that is **less** than the forecast", and 10 = "Extremely likely to report a targeted production cost that is **higher** than the forecast".

[b] Slack created (reported costs less forecasted cost in 000 dollars) when the forecasted cost is $225,000, representing the high opportunity to maximize slack.

[c] Slack created (reported costs less forecasted cost in 000 dollars) when the forecasted cost is $400,000, representing the medium opportunity to maximize slack.

[d] Slack created (reported costs less forecasted cost in 000 dollars) when the forecasted cost is $575,000, representing the low opportunity to maximize slack.

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TABLE 4

Results of ANCOVA of the Forecast Deviation Likelihood[a]

Panel A : Sample[b] (n = 134)

Source	df	F	*p*-value
Horizontal Equity	1	0.043	0.836
Self Efficacy	1	0.032	0.859
Gender	1	7.266	0.008
Horizontal Equity*Self Efficacy	1	3.154	0.078
Error	129		

Panel B : Slack Creation[c] (n = 109)

Source	df	F	*p*-value
Horizontal Equity	1	0.074	0.786
Self Efficacy	1	0.392	0.533
Gender	1	9.335	0.003
Horizontal Equity*Self Efficacy	1	5.089	0.026
Error	104		

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] The likelihood that participants would report a cost target that is different than the private forecast. Measured on an 11 point Likert scale where 0 = "Extremely likely to report a targeted production cost that is **less** than the forecast", and 10 = "Extremely likely to report a targeted production cost that is **higher** than the forecast".

[b] Participants that passes the Manipulation Checks

[c] Participants that passes the Manipulation Checks and create a zero and or positive budgetary slack

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TABLE 5

Estimated Marginal Means and Tests of Simple Main Effects for Forecast Deviation Likelihood[a]

Panel A : Estimated Marginal Means (Std. Error) for Sample[b] (n = 134)

	High Efficacy	Low Efficacy	Test of Simple Effects
Equal Horizontal Equity	6.477 (0.326) n = 32	7.103 (0.316) n = 34	F = 1.898 *p* = 0.085
Unequal Horizontal Equity	6.980 (0.317) n = 34	6.468 (0.318) n = 34	F = 1.286 *p* = 0.129
Test of Simple Effects	F = 1.220 *p* = 0.135	F = 2.000 *p* = 0.080	

Panel B : Estimated Marginal Means (Std. Error) for Slack Creation[c] (n = 109)

	High Efficacy	Low Efficacy	Test of Simple Effects
Equal Horizontal Equity	6.663 (0.346) n = 26	7.219 (0.340) n = 27	F = 1.314 *p* = 0.127
Unequal Horizontal Equity	7.524 (0.335) n = 28	6.542 (0.336) n = 28	F = 4.223 *p* = 0.021
Test of Simple Effects	F = 3.197 *p* = 0.039	F = 1.990 *p* = 0.081	

Notes: Each F tests the simple effects of one manipulated variable within the level of the other manipulated variable. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means. The covariate appearing in the model, Gender, is evaluated at 0.37 on Panel A and at 0.38 on Panel B.

Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] The likelihood that participants would report a cost target that is different than the private forecast. Measured on an 11 point Likert scale where 0 = "Extremely likely to report a targeted production cost that is less than the forecast", and 10 = "Extremely likely to report a targeted production cost that is higher than the forecast".

[b] Participants that passes the Manipulation Checks

[c] Participants that passes the Manipulation Checks and create a zero and or positive budgetary slack

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TABLE 6

Results of Repeated Measures Mixed ANCOVA of Slack Creation[a]

Panel A : Sample[b] (n = 134)

Source	df	F	*p*-value
Horizontal Equity	1	0.201	0.654
Self Efficacy	1	0.143	0.705
Gender	1	5.471	0.021
Horizontal Equity*Self Efficacy	1	0.048	0.827
Error	129		

Panel B : Slack Creation[c] (n = 109)

Source	df	F	*p*-value
Horizontal Equity	1	0.007	0.934
Self Efficacy	1	0.077	0.782
Gender	1	7.050	0.009
Horizontal Equity*Self Efficacy	1	0.502	0.480
Error	104		

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] Slack created (reported costs less forecasted cost in 000 dollars) across three different hypothetical forecasted cost amount. First, when the forecasted cost is $225,000, representing the high opportunity to maximize slack. Second, when the forecasted cost is $575,000, representing the low opportunity to maximize slack. Last, when the forecasted cost is $575,000, representing the low opportunity to maximize slack.

[b] Participants that passes the Manipulation Checks

[c] Participants that passes the Manipulation Checks and create a zero and or positive budgetary slack

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TABLE 7

Means and Correlations of Budgetary Slack Creation by Ethical Position

Panel A: Budgetary Slack Creation by Idealism

		N	Mean	S.D.	t	*p*-value (2-tailed)	*Pearson Correlation*
	Low Idealism	68	7.10	1.95			
Deviation Likelihood[a]	High Idealism	64	6.40	1.76	2.184	0.031	-0.186*
	Low Idealism	68	97.03	88.01			
High Opportunity[b]	High Idealism	64	87.62	76.40	0.659	0.511	-0.057
	Low Idealism	68	60.80	68.97			
Medium Opportunity[c]	High Idealism	64	54.15	60.27	0.592	0.555	-0.51
	Low Idealism	68	-4.13	66.08			
Low Opportunity[d]	High Idealism	64	-0.77	45.06	-0.342	0.733	-0.03

Panel B: Budgetary Slack Creation by Relativism

		N	Mean	S.D.	t	*p*-value (2-tailed)	*Pearson Correlation*
	Low Relativism	68	6.60	1.71			
Deviation Likelihood[a]	High Relativism	64	6.89	2.07	-0.872	0.385	0.076
	Low Relativism	68	76.25	72.44			
High Opportunity[b]	High Relativism	64	108.13	89.04	-2.262	0.025	0.195*
	Low Relativism	68	44.49	69.51			
Medium Opportunity[c]	High Relativism	64	70.16	57.49	-2.304	0.023	0.198*
	Low Relativism	68	-2.86	60.22			
Low Opportunity[d]	High Relativism	64	-2.97	53.86	0.01	0.992	-0.001

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] The likelihood that participants would report a cost target that is different than the private forecast. Measured on an 11 point Likert scale where 0 = "Extremely likely to report a targeted production cost that is **less** than the forecast", and 10 = "Extremely likely to report a targeted production cost that is **higher** than the forecast".

[b] Slack created (reported costs less forecasted cost in 000 dollars) when the forecasted cost is $225,000 , representing the high opportunity to maximize slack.

[c] Slack created (reported costs less forecasted cost in 000 dollars) when the forecasted cost is $400,000, representing the medium opportunity to maximize slack.

[d] Slack created (reported costs less forecasted cost in 000 dollars) when the forecasted cost is $575,000, representing the low opportunity to maximize slack.

[*] Correlation is significant at the 0.05 level (2-tailed)

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TABLE 8

Hierarchical Regression Analysis

Step	Variable(s) Entered	Descriptions
Step 1	Covariate	Gender
Step 2	Variables of Interest	EQ
		EFF
		ID
		REL
Step 3	Two Way Interactions	EQ*ID
		EQ*REL
		EQ*EFF
		EFF*ID
		EFF*REL
		ED*REL
Step 4	Three Way Interactions	EQ*EFF*ID
		EQ*EFF*REL
		EQ*ID*REL
		EFF*ID*REL
Step 5	Four Way Interaction	EQ*EFF*ID*REL

Variable Definitions:

EQ = Horizontal Equity, manipulated between subjects at two levels: equal and unequal. This is a categorical variable where 0 = Unequal, and 1 = Equal.

EFF = Self Efficacy, manipulated between subjects at two levels: good prior performance and poor prior performance. This is a categorical variable where 0 = Low Efficacy, and 1 = High Efficacy.

ID = Idealism, measured using Ethical Position Questionnaire (EPQ). The idealism score is classified as: low or high based on the median split. This is a categorical variable where 0 = Low Idealists, and 1 = High Idealists.

REL = Relativism, measured using Ethical Position Questionnaire (EPQ). The relativism score is classified as: low or high based on the median split. This is a categorical variable where 0 = Low Relativists, and 1 = High Relativists.

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TABLE 9

Results of Hierarchical Regression Analysis for Likelihood to Deviate from Forecast

	Likelihood to Deviate from Forecast (β)
Step 1	
Gender	-0.22**
R^2	0.05**
Step 2	
EQ	0.043
EFF	-0.049
ID	-0.160*
REL	0.059
R^2	0.08*
ΔR^2	0.030
Step 3	
EQ*ID	0.081
EQ*REL	-0.057
EQ*EFF	-0.218
EFF*ID	0.055
EFF*REL	0.063
ID*REL	-0.054
R^2	0.105
ΔR^2	0.025
Step 4	
EQ*EFF*ID	-0.025
EQ*EFF*REL	0.048
EQ*ID*REL	0.151
EFF*ID*REL	-0.345
R^2	0.127
ΔR^2	0.220
Step 5	
EQ*EFF*ID*REL	0.184
R^2	0.129
ΔR^2	0.020

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

** $p \leq 0.01$

* $p \leq 0.10$

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TABLE 10

Results of Hierarchical Regression Analysis for Budgetary Slack Creation

	High Opportunity	Medium Opportunity	Low Opportunity
Step 1			
Gender	-0.253***	-0.193**	0.028
R^2	0.064***	0.037**	0.001
Step 2			
EQ	0.047	0.065	0.030
EFF	0.001	-0.018	-0.079
ID	0.017	-0.008	0.010
REL	0.189**	0.195**	0.007
R^2	0.1**	0.078*	0.008
ΔR^2	0.037	0.041	0.008
Step 3			
EQ*ID	0.140	0.075	0.063
EQ*REL	0.143	0.000	-0.132
EQ*EFF	-0.068	-0.043	0.108
EFF*ID	-0.073	0.113	0.102
EFF*REL	0.079	-0.009	-0.092
ID*REL	0.150	0.081	-0.056
R^2	0.127	0.088	0.029
ΔR^2	0.026	0.010	0.020
Step 4			
EQ*EFF*ID	0.081	0.169	0.192
EQ*EFF*REL	-0.017	0.311	0.101
EQ*ID*REL	0.390	0.467**	0.293
EFF*ID*REL	-0.013	-0.181	-0.170
R^2	0.151	0.137	0.052
ΔR^2	0.024	0.049	0.023
Step 5			
EQ*EFF*ID*REL	-0.168	-0.007	0.206
R^2	0.153	0.137	0.055
ΔR^2	0.002	0.000	0.003

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

*** $p \leq 0.01$

** $p \leq 0.05$

* $p \leq 0.10$

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TABLE 11
Budgetary Slack Creation Gender Effects

		N	Mean	S.D.	t	*p*-value
Deviation Likelihood[a]	Male	85	7.07	1.963		
	Female	49	6.22	1.624	2.554	0.012
High Opportunity[b]	Male	85	108.76	92.874		
	Female	49	64.18	49.364	3.113	0.002
Medium Opportunity[c]	Male	85	66.76	65.840		
	Female	49	41.63	60.142	2.195	0.03
Low Opportunity[d]	Male	85	-3.76	60.178		
	Female	49	-0.31	50.564	-0.339	0.735

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] The likelihood that participants would report a cost target that is different than the private forecast. Measured on an 11 point Likert scale where 0 = "Extremely likely to report a targeted production cost that is **less** than the forecast", and 10 = "Extremely likely to report a targeted production cost that is **higher** than the forecast".

[b] Slack created (reported costs less forecasted cost in 000 dollars) when the forecasted cost is $225,000 , representing the low opportunity to maximize slack.

[c] Slack created (reported costs less forecasted cost in 000 dollars) when the forecasted cost is $400,000, representing the medium opportunity to maximize slack.

[d] Slack created (reported costs less forecasted cost in 000 dollars) when the forecasted cost is $575,000, representing the high opportunity to maximize slack.

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TABLE 12

Results of Repeated Measures Mixed ANCOVA of the Forecast Deviation Likelihood given Peers' Behavior[a]

Panel A : Sample[b] (n = 134)

Source	df	F	*p*-value
Horizontal Equity	1	0.963	0.328
Self Efficacy	1	0.075	0.785
Idealism	1	6.436	0.012
Relativism	1	4.114	0.045
Gender	1	8.079	0.005
Horizontal Equity*Self Efficacy	1	0.052	0.821
Idealism*Relativism	1	0.099	0.754
Error	123		

Panel B : Slack Creation[c] (n = 109)

Source	df	F	*p*-value
Horizontal Equity	1	0.460	0.499
Self Efficacy	1	0.024	0.878
Idealism	1	5.371	0.023
Relativism	1	4.188	0.043
Gender	1	5.964	0.016
Horizontal Equity*Self Efficacy	1	0.050	0.824
Idealism*Relativism	1	0.183	0.670
Error	98		

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] The likelihood that participants would report a cost target that is different than the private forecast given horizontal peers always overstate and or never overstate. Measured on an 11 point Likert scale where 0 = "Extremely likely to report a targeted production cost that is **less** than the forecast", and 10 = "Extremely likely to report a targeted production cost that is **higher** than the forecast".

[b] Participants that passes the Manipulation Checks

[c] Participants that passes the Manipulation Checks and create a zero and or positive budgetary slack

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TABLE 13
Sensitivity Analysis
Results of ANCOVA of the Forecast Deviation Likelihood[a]

Panel A : Understands the Case [b] (n = 112)

Source	df	F	*p*-value
Horizontal Equity	1	0.242	0.624
Self Efficacy	1	0.337	0.563
Gender	1	4.110	0.045
Horizontal Equity*Self Efficacy	1	2.497	0.117
Error	107		

Panel B : Slack Creation[c] (n = 96)

Source	df	F	*p*-value
Horizontal Equity	1	0.069	0.793
Self Efficacy	1	0.122	0.728
Gender	1	5.456	0.022
Horizontal Equity*Self Efficacy	1	3.502	0.065
Error	91		

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] The likelihood that participants would report a cost target that is different than the private forecast. Measured on an 11 point Likert scale where 0 = "Extremely likely to report a targeted production cost that is **less** than the forecast", and 10 = "Extremely likely to report a targeted production cost that is **higher** than the forecast".

[b] Participants that passes the Manipulation Checks and Understanding Check

[c] Participants that passes the Manipulation Checks, Understanding Check, and create a zero and or positive budgetary slack

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TABLE 14

Sensitivity Analysis Results of Repeated Measures Mixed ANCOVA of Slack Creation[a]

Panel A: Understand the Case[b] (n = 112)

Source	df	F	*p*-value
Horizontal Equity	1	0.123	0.727
Self Efficacy	1	0.873	0.352
Gender	1	1.605	0.208
Horizontal Equity*Self Efficacy	1	0.089	0.766
Error	107		

Panel B: Slack Creation[c] (n = 96)

Source	df	F	*p*-value
Horizontal Equity	1	0.004	0.949
Self Efficacy	1	0.000	0.994
Gender	1	3.521	0.064
Horizontal Equity*Self Efficacy	1	0.586	0.446
Error	91		

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] Slack created (reported costs less forecasted cost in 000 dollars) across three different hypothetical forecasted cost amount. First, when the forecasted cost is $225,000 , representing the high opportunity to maximize slack. Second, when the forecasted cost is $575,000, representing the low opportunity to maximize slack. Last, when the forecasted cost is $575,000, representing the low opportunity to maximize slack.

[b] Participants that passes the Manipulation Checks and Understanding Check

[c] Participants that passes the Manipulation Checks, Understanding Check, and create a zero and or positive budgetary slack

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TABLE 15

Results of Hierarchical Regression Analysis for Likelihood to Deviate from Forecast for Participants who Understand the Case[a] (n = 112)

	Likelihood to Deviate from Forecast (β)
Step 1	
Gender	-0.186*
R^2	0.035*
Step 2	
EQ	0.054
EFF	-0.063
ID	-0.184*
REL	0.036
R^2	0.073
ΔR^2	0.038
Step 3	
EQ*ID	-0.053
EQ*REL	-0.135
EQ*EFF	-0.218
EFF*ID	0.107
EFF*REL	0.139
ID*REL	-0.094
R^2	0.108
ΔR^2	0.035
Step 4	
EQ*EFF*ID	-0.025
EQ*EFF*REL	-0.033
EQ*ID*REL	0.163
EFF*ID*REL	-0.291
R^2	0.123
ΔR^2	0.016
Step 5	
EQ*EFF*ID*REL	0.320
R^2	0.130
ΔR^2	0.006

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] Participants that passes the Manipulation Checks and Understanding Check

* $p \leq 0.10$

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TABLE 16

Results of Hierarchical Regression Analysis for Likelihood to Deviate from Forecast for Participants who Create Budget Slack[a] (n = 96)

	Likelihood to Deviate from Forecast (β)
Step 1	
Gender	-0.222**
R^2	0.049**
Step 2	
EQ	-0.014
EFF	0.023
ID	-0.305***
REL	-0.014
R^2	0.141**
ΔR^2	0.091*
Step 3	
EQ*ID	0.020
EQ*REL	-0.112
EQ*EFF	-0.224
EFF*ID	0.004
EFF*REL	0.152
ID*REL	-0.081
R^2	0.175
ΔR^2	0.034
Step 4	
EQ*EFF*ID	-0.044
EQ*EFF*REL	-0.030
EQ*ID*REL	0.080
EFF*ID*REL	-0.345
R^2	0.192
ΔR^2	0.017
Step 5	
EQ*EFF*ID*REL	0.268
R^2	0.196
ΔR^2	0.004

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] Participants that passes the Manipulation Checks, Understanding Check, and create a zero and or positive budgetary slack

*** $p \leq 0.01$

** $p \leq 0.05$

* $p \leq 0.10$

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TABLE 17
Results of Hierarchical Regression Analysis for Budgetary Slack Creation for Participants who Understand the Case[a] (n = 112)

	High Opportunity	Medium Opportunity	Low Opportunity
Step 1			
Gender	-0.190**	-0.099	0.061
R^2	0.036**	0.010	0.004
Step 2			
EQ	0.053	0.056	0.011
EFF	-0.009	-0.071	-0.127
ID	0.001	0.040	0.135
REL	0.160	0.163	0.032
R^2	0.063	0.042	0.040
ΔR^2	0.026	0.032	0.036
Step 3			
EQ*ID	0.086	-0.061	-0.102
EQ*REL	0.139	-0.024	-0.253
EQ*EFF	-0.069	-0.096	-0.001
EFF*ID	-0.109	0.093	0.196
EFF*REL	0.100	0.095	0.073
ID*REL	0.138	0.064	-0.072
R^2	0.088	0.052	0.079
ΔR^2	0.025	0.010	0.039
Step 4			
EQ*EFF*ID	0.084	0.159	0.045
EQ*EFF*REL	-0.102	3149.000	-0.182
EQ*ID*REL	0.454*	0.507**	0.190
EFF*ID*REL	-0.027	-0.036	0.083
R^2	0.124	0.097	0.092
ΔR^2	0.037	0.045	0.013
Step 5			
EQ*EFF*ID*REL	-0.307	-0.206	0.085
R^2	0.130	0.100	0.092
ΔR^2	0.006	0.003	0.000

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] Participants that passes the Manipulation Checks and Understanding Check

** $p \leq 0.05$

* $p \leq 0.10$

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TABLE 18
Results of Hierarchical Regression Analysis for Budgetary Slack Creation for Participants who Create Budget Slack[a] (n = 96)

	High Opportunity	Medium Opportunity	Low Opportunity
Step 1			
Gender	-0.184*	-0.160	-0.026
R^2	0.034*	0.026	0.001
Step 2			
EQ	0.017	0.054	-0.090
EFF	0.005	0.007	-0.015
ID	0.031	-0.115	-0.184
REL	0.172	0.122	0.027
R^2	0.063	0.058	0.046
ΔR^2	0.029	0.033	0.045
Step 3			
EQ*ID	0.156	0.003	-0.311
EQ*REL	0.152	0.155	-0.014
EQ*EFF	-0.154	-0.053	-0.104
EFF*ID	-0.144	-0.048	0.496***
EFF*REL	0.090	0.030	0.154
ID*REL	0.167	0.193	0.112
R^2	0.105	0.084	0.160
ΔR^2	0.043	0.026	0.114
Step 4			
EQ*EFF*ID	0.175	-0.019	-0.009
EQ*EFF*REL	-0.057	0.099	0.000
EQ*ID*REL	0.592**	0.531**	0.147
EFF*ID*REL	-0.112	-0.038	0.183
R^2	0.167	0.130	0.169
ΔR^2	0.062	0.045	0.009
Step 5			
EQ*EFF*ID*REL	-0.493	-0.335	0.559
R^2	0.181	0.136	0.187
ΔR^2	0.014	0.007	0.018

Notes: Horizontal Equity was manipulated between subjects at two levels: equal and unequal. Self Efficacy was manipulated between subjects at two levels: good prior performance and poor prior performance.

[a] Participants that passes the Manipulation Checks, Understanding Check, and create a zero and or positive budgetary slack

* $p \leq 0.10$

** $p \leq 0.05$

*** $p \leq 0.01$

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FIGURES

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FIGURE 1
Forsyth's ethical ideologies.

Idealism	Relativism	
	High	**Low**
High	**Situationist:** Rejects application of universal moral principles. Believes that moral acts have positive consequences for all persons affected by an action or a decision. Budgetary Slack Prediction: Situationists will identify slack creation as an unethical act due to the negative outcomes of the act. However, as a consequence of applying subjective moral rules, situationists will decide to engage in budgetary slack creation.	**Absolutist**: Approves actions that result in positive consequences for all individuals. Also, believes that actions should conform to absolute moral principles. Budgetary Slack Prediction: Absolutists apply universal moral principles in analyzing slack creation decisions as morally wrong. They will also consider budgetary slack creation as unethical since it will produce negative outcomes for others. Therefore, absolutists are expected to create the least amount of budgetary slack.
Low	**Subjectivist**: Rejects moral rules and believes that moral decisions are subjective, individualistic judgments. Believes that negative consequences do not necessarily make an action immoral. Budgetary Slack Prediction: Subjectivists will not consider budgetary slack creation to be unethical because they will analyze each ethical issue subjectively and ignore universal moral principles. Therefore, subjectivists will create the highest amount of budgetary slack.	**Exceptionist**: Accepts moral rules in principle, but is willing to violate moral rules in order to circumvent negative consequences. An action is not condemned automatically because the action involves negative outcomes for others. Budgetary Slack Prediction: Although exceptionists adopt universal moral principles, they will be willing to apply alternative rules and not condemn slack creation as immoral due to its potential for positive outcomes along with the negative outcomes.

Adapted from Forsyth (1980) and Bartnett et al. (1994).

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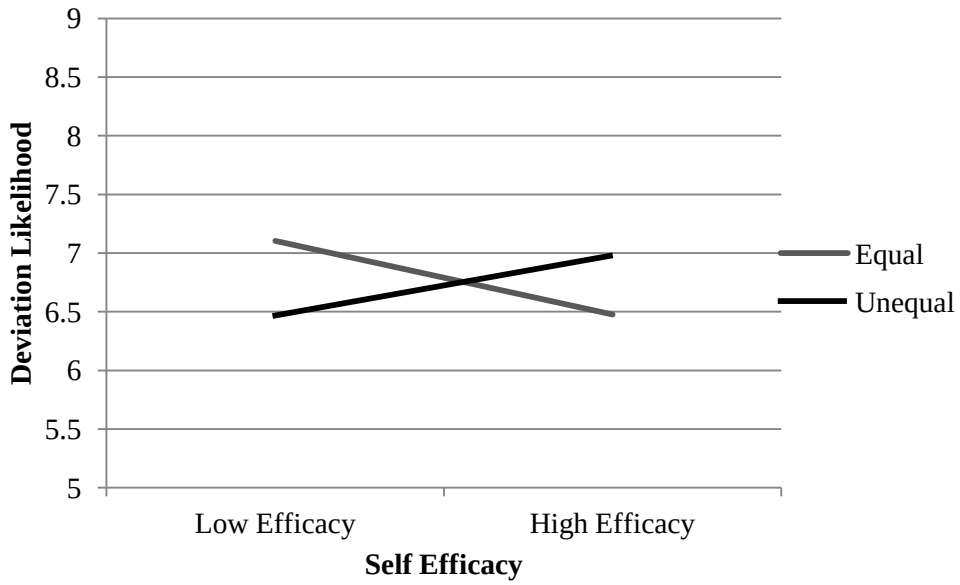
FIGURE 2

Interaction of Self efficacy and Horizontal Equity on Likelihood to Deviate from Forecast[a]

Panel A: Sample (n = 134)



Panel B : Slack Creation (n = 109)

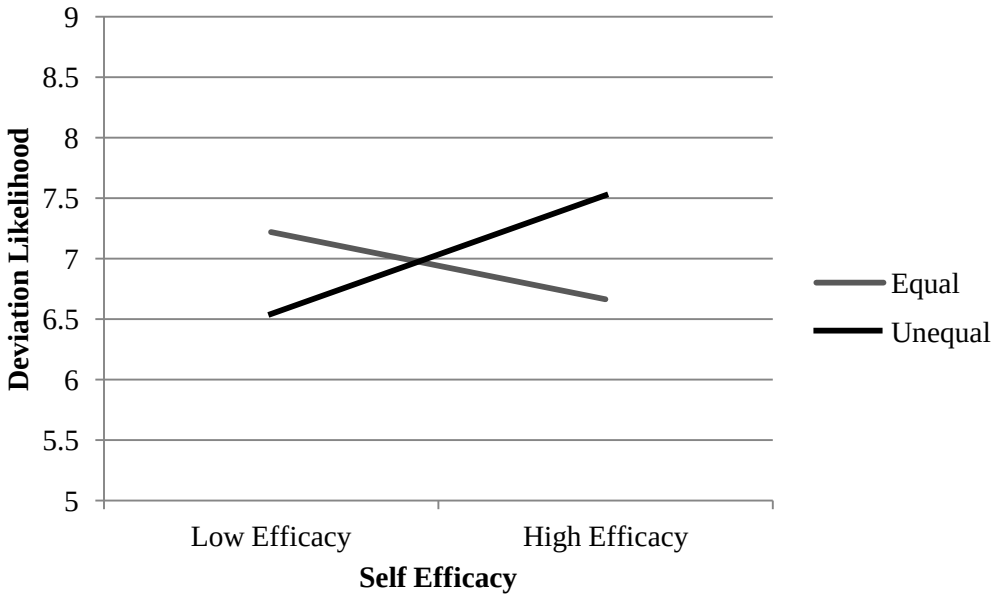


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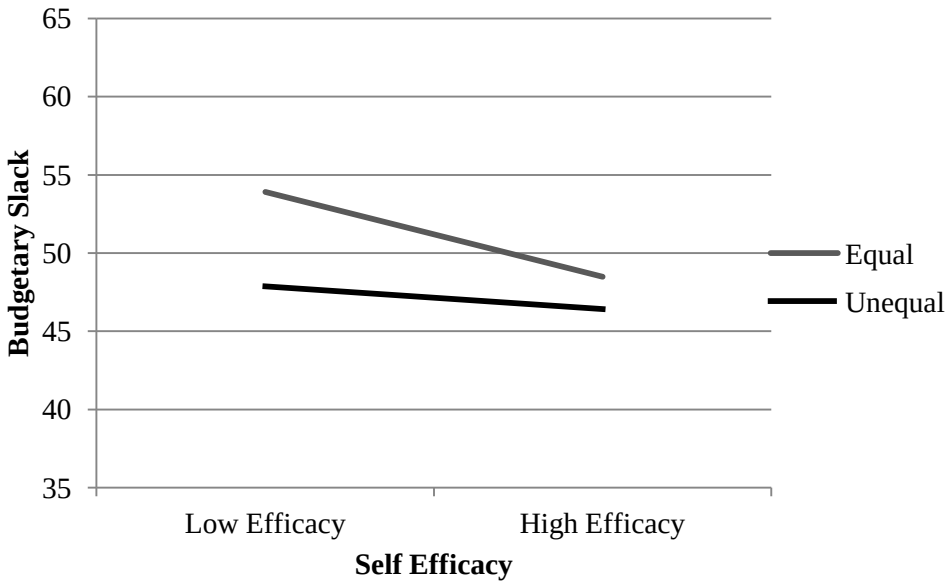
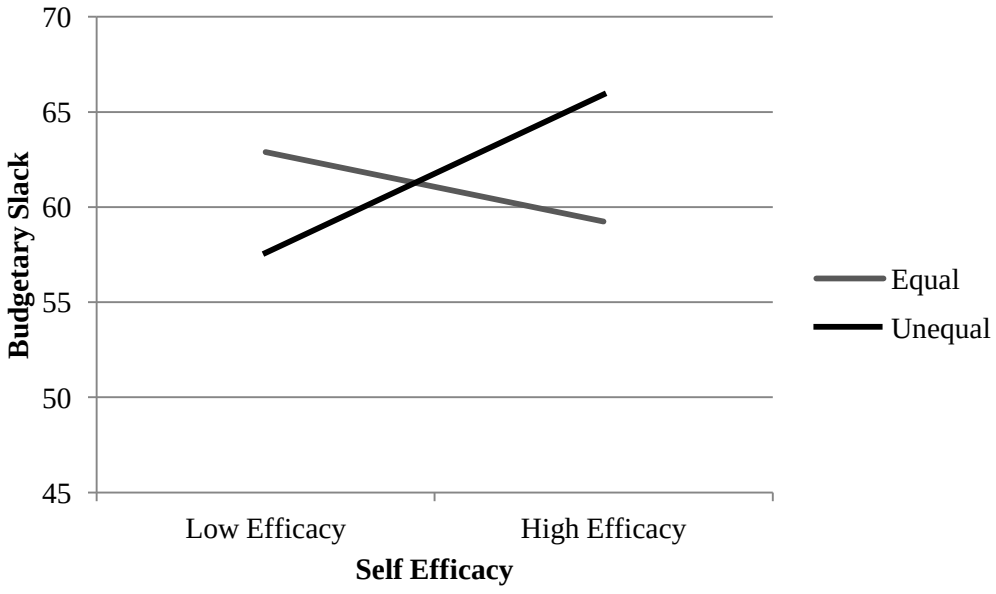
FIGURE 3

Interaction of Self efficacy and Horizontal Equity on Slack Creation[a]

Panel A: Sample (n = 134)



Panel B : Slack Creation (n = 109)



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