The Buck Stops Where? Examining Leader and Collective Accountability in Teams

by

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ABSTRACT

Accountability has been commonly referred to in the literature as a person's expectation about others' evaluations. However, in this study, I develop an alternative perspective of leader accountability by defining it as an individual's degree of ownership regarding good or poor performance and acceptance of associated rewards or disciplinary actions. Based on attribution theory, leaders can have internal and external ownership regarding good and poor performance. I propose that accountability can be categorized into two correlated but distinct aspects: self-benefitting and other-benefitting. Leader self-benefitting accountability refers to leaders' attributions towards their own benefits (i.e., internal attribution of good performance and external attribution of poor performance). Leader other-benefitting accountability reflects leaders' attributions towards others' interests (i.e., internal attribution of poor performance and external attribution of good performance). Using multiple samples, I develop and validate a leader accountability scale, and then test a theoretical model with a focus on leader accountability and collective accountability (i.e., a group of individuals' degree of ownership) by collecting data from 57 leaders and 162 followers in three Chinese companies. The findings show that leader humility is positively related to leader other-benefitting accountability. Both leader self-benefitting and other-benefitting accountability are associated with collective self-benefitting and other-benefitting accountability, respectively. Moreover, the relationship between leader self-benefitting and collective self-benefitting accountability is enhanced when the leader has high organization prototypicality. Furthermore, collective self-benefitting accountability

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decreases leader effectiveness and team effectiveness, while collective other-benefitting

accountability increases leader effectiveness.

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CHAPTER 1

INTRODUCTION

*The Buck Stops Here*

*~ U.S. President Harry S. Truman, 1945*

"The buck stops here" is a famous quote from U.S. President Harry Truman (May 8, 1884 - December 26, 1972, the thirty-third President of the United States: 1945-1953). It derives from the slang expression "pass the buck". By taking the buck (so to speak), rather than passing it on, President Truman claimed to take accountability as a leader. He indicated that a leader with accountability should not pass the responsibility for actions and outcomes to someone else; instead, the leader should associate him/herself with decisions and be accountable for the decisions' outcomes.

Accountability, in general, is an important principle serving as a bond to maintain our social systems (Frink & Klimoski, 1998). In a discussion of justice and punishment, early Greek philosophers, such as Aristotle raised the notion of misconduct accountability (Schlenker, Britt, Pennington, Murphy, & Doherty, 1994). In recent times, Adserà, Boix and Payne (2003) also posited that decision makers such as politicians should fulfill their obligations by being accountable for their actions. Moreover, popular media have called for accountability in business, given the increasing accountability-related scandals of our business leaders. For example, Leader-Chivée (2014) emphasized that leaders should own the crisis and be willing to take accountability. Furthermore, Cavuto (2014) noted that leaders should take accountability by admitting the mistakes that they have made and accepting blame, rather than hiding mistakes. In fact, these scandals have made President Truman's desk sign more relevant than ever before.

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Existing literature suggests that leader accountability reflects the extent to which leaders meet expectations from external forces (Ferris, Mitchell, Canavan, Drink, & Hopper, 1995; Frink & Klimoski, 1998; Tetlock, 1983). If leaders are held accountable by others (e.g., followers or superiors), they are more likely to become vigilant information processors to provide detailed justifications to satisfy others' expectations (Tetlock, 1983). Given this perspective, researchers have defined accountability as "an implicit or explicit expectation that one may be called on to justify one's beliefs, feelings and actions to others" (Lerner & Tetlock, 1999, p. 255). Others similarly posit that leader accountability involves leaders' expectations that there are potential rewards or sanctions based on evaluations from others (Hall, 2005; Hochwarter, Kacmar, & Ferris, 2003). Much of the leader accountability research conducted to date has been based primarily on this definition. For example, Hall and her colleagues (2004) found that accountability, conceived as external expectations that are placed on leaders, relates positively to followers' trust in leaders.

It is certainly reasonable and informative to approach accountability from a perspective of external expectations and the potential rewards or sanctions resulting from those expectations (Ferris et al., 1995; Frink & Klimoski, 1998; Hochwarter, Kacmar, & Ferris, 2003). However, this definition largely ignores leaders' ownership of accountability and the personal acceptance of associated punishment and rewards. In addition, under this definition, it is not clear that whether the rewards or punishment are commensurate with the performance. Researchers have shown that intrinsic ownership is more important than external forces regarding their relationship with performance, and one's intrinsic ownership of tasks can independently contribute to personal achievement,

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even without extrinsic forces (Cerasoli, Nicklin, & Ford, 2014). I argue that leader accountability goes beyond merely reacting to others' expectations by emphasizing that leaders can proactively take ownership of performance and associated outcomes. I propose that if leaders accept no personal consequences (e.g., disciplinary actions) when things go wrong, they are not displaying a sense of ownership of poor performance, and thus, not being accountable. In the case of good performance, personal ownership of accountability entails accepting credit or rewards. Therefore, I define leader accountability as a leader's degree of ownership regarding good or poor performance and acceptance of associated rewards or disciplinary actions.

Furthermore, taking into consideration both good and poor performance, I contend that it is possible for leaders to have strong internal and strong external attributions regarding both good and poor performance. Thus, leader accountability can be categorized into two aspects: (1) self-benefitting, and (2) other-benefitting. As shown in Table 1, leader self-benefitting accountability refers to leaders' attribution towards securing their own personal benefits (i.e., internal attribution of good performance and external attribution of poor performance). Leader other-benefitting accountability reflects leaders' attributions toward enhancing the benefits of other organizational members (i.e., internal attributions of poor performance and external attribution of good performance). Moreover, I conceive self-benefitting accountability and other-benefitting accountability as not representing two opposite ends of the same continuum. Instead, I argue that while these two aspects of leader accountability are likely to be negatively correlated, they nevertheless are distinct from each other. As argued by Smith and Lewis (2011), leaders' behaviors may include a blend of both positive and negative qualities. Zhang, Waldman,

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Han, and Li (2014) have also argued conceptually, and found empirically, that leaders could display two competing, yet correlated, behaviors (e.g., concern for self and concern for others). Therefore, I propose that self-benefitting and other-benefitting accountability are negatively correlated, but still separate, and a leader can potentially be high on both aspects of accountability. As an example, a leader might take credit for a team's good performance, but also share the limelight with followers (Zhang et al., 2014). He/she might also assume internal ownership, rather than blaming team members, when things go wrong.

In addition to advancing the accountability literature by providing a new definition of leader accountability, I seek to explore its antecedents and effects. I develop and test a theoretical model with a focus on accountability that considers internal and external predictors of leader accountability, and how followers can learn from a leader's accountability and form a collective accountability in a team. Collective accountability refers to a group of individuals' degree of ownership regarding good or poor performance and acceptance of associated rewards or disciplinary actions. Moreover, I suggest that the learning process tends to be stronger if a focal leader represents the organization's values and goals. Furthermore, collective accountability further relates to team-level outcomes. Specifically, my dissertation research attempts to make the following contributions to the literature.

First, in line with social cognitive theory (Bandura, 1997, 1999), by examining both personal and environmental factors, this study contributes to an understanding of the factors promoting leaders' acceptance and ownership of performance. Social cognitive theory suggests that internal values can regulate behaviors in addition to external forces

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(Bandura, 1999). Understanding how or why leaders derive their sense of accountability is essential to developing a theory on leader accountability and its effects. Internal characterstics such as humility may closely relate to a leader's accountability and its associated results because humility describes how one perceives oneself in relation to others (Owens, Johnson, & Mitchell, 2013). Moreover, departing from the current literature that conceives a leader's expectation about others' evaluations as the accountability construct, I label that conceptualization as "external expectations" and explicitly model it as an externally-derived antecedent of leader accountability. In short, by unpacking the antecedents of leader accountability into internal forces (humility) and external pressures (external expectations), we can better understand why leaders might or might not accept ownership of performance, and associated repercussions or personal outcomes, and thus possess accountability.

The second contribution of my study is to expand our knowledge of the consequences of leader accountability in teams. In other words, leader accountability cascades to connect with followers' collective accountability. Social learning theory suggests that individuals can learn through observing and modeling (Bandura, 1977, 1986). Followers can learn from their leaders by observing the extent of their accountability actions. More specifically, if a leader only holds followers (not him or herself) accountable for bad outcomes and blames others for mistakes, followers are inclined to learn to display self-benefitting accountability in similar ways. If a leader holds him/herself personally accountable for the team's actions and accepts personal sanctions for a team's wrongdoings or poor performance, followers tend to learn and reciprocate by themselves displaying other-benefitting accountability. Therefore,

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accountable leaders might increase the collective level of similar accountability behaviors by followers.

Furthermore, I contribute to the social learning literature by exploring circumstances under which the learning process might be more effective. I suggest that being a leader who represents the organization's values and goals (i.e., leader prototypicality; Hains, Hogg, & Duck, 1997; Hogg, 2001) can enhance the social learning process. If a leader is prototypical of the organization, followers are more likely to imitate similar accountable behaviors displayed by the leader. If a leader is not prototypical, followers may be less likely to imitate his/her self-benefitting or other-benefitting behaviors.

A further contribution of this dissertation is to examine consequences of accountability at a collective level. Collective accountability could be considered to be negative in relation to performance because if members share accountability in a team, the accountability may get diffused, and members may not make personal efforts to the team (Whyte, 1991). However, previous research has only focused on the collective *self-benefitting* accountability (e.g., Forsyth, Zyzniewski, Giammanco, 2002) and ignored the *other-benefitting* aspect of collective accountability. Collective other-benefitting accountability could result in positive team effectiveness because team members take personal blame regarding poor performance and give each other credit for favorable performance. Thus, team members are taking charge of their actions and make contributions to enhance team outcomes. Figure 1 summarizes the theoretical model, which I will discuss in more detail below. Although specific to leader accountability, this model is in line with a generic framework for considering leader effectiveness as outlined

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by Yukl (2010), which includes personal predictors of leader behavior, as well as contextual moderators of the effect of behavior on outcomes.

In the following chapters, I first review the accountability literature and compare my definition of leader accountability with similar constructs. Building on my definition, I develop my theory and hypotheses about leader and collective accountability (an overall model is shown in Figure 1). In addition, I develop a new measure of accountability and validate the measure. Then I discuss the implications of my results, study limitations and propose future research directions.

CHAPTER 2

LITERATURE REVIEW

This dissertation aims to articulate what leader accountability is, to understand what factors promote leader accountability, and to delineate its relationship with followers' collective accountability, which may in turn relate to team outcomes. In this chapter, I review the theoretical and empirical research pertaining to accountability based on the external expectation-based definition that was overviewed in the prior chapter, and provide justification for the alternative conceptualization that I propose in this study. Then I compare my ownership-based definition of accountability with other constructs that appear to be similar.

**Review of Accountability Literature**

In the management field, accountability has been examined at both the firm and individual levels. Models of accountability at the firm level are based on agency theory (Eisenhardt, 1989). Shareholders' agents, such as CEOs and managers, are monitored with accountability systems, including formal mechanisms (e.g., accounting procedures, rules/policies, behavioral clauses in executive contracts), as well as informal mechanisms such as organizational norms and cultures (Frink & Klimoski, 1998, 2004). For example, Castilla (2015) argued that organizational accountability includes a set of procedures to make people responsible for fair rewards distribution in the performance-reward system. At the individual level, the majority of work on accountability can be traced to the work of Tetlock's (1992) social contingency model of accountability. In his model, Tetlock (1992) articulated that accountability, as one social contingency, could drive individuals' behaviors and judgments.

I refer to the predominant, existing conceptualization of accountability as "external expectation" because Lerner and Tetlock (1999) defined this perspective of accountability as an individual's expectation that others could evaluate him/her, and thus, he/she needs to justify his/her actions to other people. In other words, accountability as an expectation is an internal state of mind (Frink & Klimoski, 1998), although it is based on one's social context and the extent to which an individual feels that others are holding him/her accountable. A leader's external evaluation expectation is the leader's subjective perception about how various external forces (e.g., top level managers, co-workers, or subordinates) hold him/her accountable. Based on Lerner and Tetlock's (1999) argument, a leader is held accountable because top managers, co-workers and followers can potentially observe and identify the focal leader's actions. In addition, superiors or team members can evaluate the leader's performance, and the leader needs to provide the justification and reasons for why he/she makes certain decisions. There are potential rewards or sanctions based on those evaluations (Hall, 2005; Hochwarter, Kacmar, & Ferris, 2003). A more detailed summary of the literature about external expectation-based accountability is presented in Table 2.

Based on Lerner and Tetlock's work, Hochwarter et al. (2003) developed an eight-item measure of an individual's external expectations. In line with the above discussion, it reflects one's own perception of the extent to which others hold one accountable. Examples items are "I often have to explain to others (e.g., followers or supervisors) why I do certain things at work" and "top management holds me accountable for all of my decisions". Hall (2005) further validated the construct with the same eight items developed by Hochwarter et al. (2003) and examined several

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antecedents of external expectations. She found that if individuals feel that there are higher informal norms regarding accountability in organizations (e.g., norms that people should be accountable to their own actions), they would have stronger external expectations. Moreover, personality traits also relate to an individual's external expectations. For example, individuals who are high on agreeableness care more about others and are more cooperative, so they might also perceive stronger external expectations from others (Hall, 2005).

**Toward a New Conceptualization of Leader Accountability**

Although some studies have been building on Tetlock's social contingency model of accountability, I maintain that our current understanding of accountability is incomplete. Defining accountability as perceived expectations and justifications for one's actions largely ignores the ownership aspect of accountability. Hall (2005) proposed that external expectations could come from self and others. In other words, the audience of a leader's actions can include him/herself (Frink & Klimoski, 1998). However, her definition mixes self and others' expectations together without distinguishing how one's internal motive or sense of ownership is different from external expectations. Moreover, while some researchers even referred to external evaluation expectations as "willingness to accept responsibilities" (Wood & Winston, 2005, p. 87), the literature still mostly focuses on external expectations. For example, Wood and Winston (2007) developed their scale of leader accountability with three dimensions: (1) responsibility (e.g., sense of obligations and avoid making excuses), (2) openness (e.g., open to communication), and (3) answerability (e.g., answer questions from others). They mixed acceptance of responsibility with obligations and external expectations and did not distinguish how

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acceptance of responsibility is different from external expectations. In addition, the rewards and punishments associated with external expectations are contingent upon others' evaluations (Ferris et al., 1995; Frink & Klimoski, 1998). In other words, external expectations do not involve leaders' actual acceptance of rewards and disciplinary actions. In a nutshell, researchers still largely ignore the extent to which people accept and take ownership of responsibility (i.e., "the buck stops here"), as well as associated rewards or disciplinary actions in their discussion of external expectations. As such, my definition of accountability emphasizes a leader's ownership of good or poor performance and acceptance of associated rewards or disciplinary actions. Below, I propose that it is the actual ownership of responsibility that is key in terms of relating directly to followers and team outcomes.

Attribution theory pertains to the intrinsic ownership of accountability because accountability can be viewed as involving how leaders themselves make attributions regarding performance. Cumming and Anton (1990) specified that accountability involves accepting responsibility, both cognitively and emotionally. If a leader accepts the ownership of the team's actions or performance, he/she makes internal attributions. Ferris et al. (1995) articulated that the internal part of accountability relies largely on the acceptance of accountability, while external accountability involves whether external forces hold people accountable for performance. Even if a leader is held accountable by others when there is poor performance in a team, the leader may not really accept or take the ownership of that performance. For example, the leader can still make external attributions (e.g., blame other members or the outside environment) when it comes to poor team performance.

Moreover, leaders can take ownership regarding both good and poor performance. Leader accountability, conceived in terms of ownership of performance, is increasingly important because organizational leaders oftentimes do not take ownership with regard to poor performance. For example, managers may not receive any disciplinary actions, despite being associated with wrongdoings (Gibson & Schroeder, 2003). They may blame others (e.g., followers) and even force others to assume accountability. On the other hand, leaders can also assume accountability by taking excessive ownership of good performance, thus not giving enough credit to others (e.g., followers). Either way, negative outcomes could result. I consider both of these forms of accountability as self-benefitting in that leaders act towards their own personal benefit (i.e., internal attribution of good performance and external attribution of poor performance). In contrast, if leaders blame themselves for poor performance and let others take the credit for good performance, these leaders are considered as having other-benefitting accountability that acts toward the interests of other organizational members (i.e., internal attribution of poor performance and external attribution of good performance).

Further, I conceive self-benefitting accountability and other-benefitting accountability as not representing two opposite ends of the same continuum. Although some researchers have suggested that being self-benefitting is strongly negatively correlated with being other-benefitting (Meglino & Korsgaard, 2004), I argue that these two aspects of leader accountability may be moderately negatively correlated, but nevertheless, distinctive from each other. Unlike self-interested culture and altruistic culture that are the opposite ends of one continuum (Jones, Felps, & Bigley, 2007), positive and negative individual qualities can coexist (Smith & Lewis, 2011). For

example, leaders can simultaneously display two competing, even seemingly paradoxical, behaviors such as concern for self and concern for others (Zhang et al., 2014). In addition, empirical evidence has shown that what might appear to be irreconcilable poles of a paradox can actually complement each other (Chen, Xie, & Chang, 2011; De Dreu, 2006; De Dreu & Nauta, 2009). For example, Owens, Wallace, and Waldman (2015) also found that leaders could be both narcissistic and humble. The negative influence of leaders' narcissistic traits such as being extremely confident can be tempered by also acknowledging their own limitations. In a similar manner, I propose that it is possible for leaders to display both high self-benefitting and high other-benefitting accountability.

**Comparing Leader Accountability with Other Similar Constructs**

To better characterize my definition of accountability, I will develop a nomological network of how this ownership-based leader accountability relates to other constructs. I frame leader accountability as a leader's tendency towards ownership rooted in attribution theory (Weiner, 1985). As a construct, accountability has been used interchangeable with responsibility by some researchers (Hall, 2005). In addition, this acceptance of personal ownership of performance might to some degree, coincide with some existing models of effective leadership behaviors such as ethical leadership. However, existing leadership constructs do not directly take into consideration leaders' attributions and ownership of performance. For example, accountability may be perceived as an ethical behavior displayed by leaders because it may be appropriate for leaders to take accountability based on existing norms (Brown, Trevino, & Harrison, 2005). Nevertheless, ethical leadership differs from leader accountability in that the latter focuses more specifically on ownership of performance issues.

**Comparison between accountability and responsibility**. Responsibility has been considered as a synonym of accountability (e.g., Hackman & Oldham, 1975). However, responsibility is different from accountability as defined in my research. Responsibility has been defined as "the personal causal influence on an event" (Cumming & Anton, 1990, p. 626). Responsibility focuses more on the targets or events; leaders can have responsibility towards multiple objects including people, organizations and the physical environment (Winter, 1991). For example, leaders can have responsibility towards different constituents, including shareholders or broader stakeholders groups (e.g., customers, the greater communities and the nature environment) (Pless et al. 2012). In other words, responsibility deals with *to whom* a leader should have obligations – by either the leader's own admonition or in the eyes of others. However, leader accountability emphasizes *how* leaders should assume their responsibility, especially in terms of ownership or acceptance of personal outcomes based on performance. That is, leader accountability describes leaders' internal and external attributions regarding performance pertaining to their responsibilities. Such performance could be based on a narrow characterization of performance (e.g., productivity or financial performance), or the needs of stakeholders more broadly conceived (i.e., social performance), subject to leaders' own interpretations of responsibility, or to whom they have obligations. Therefore, leader accountability is based on leader responsibility, but goes further by focusing on leaders' personal ownership regarding performance and personal outcomes (e.g., rewards and punishments).

**Comparison between accountability and ethical leadership.** Another relevant concept in existing literature is ethical leadership. Ethical leadership refers to "the

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demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (Brown, Treviño, & Harrison, 2005, p.120). Based on this definition, a leader is considered as ethical if he/she has followers' best interests in mind, makes fair and balanced decisions, and follows ethical values (Brown et al., 2005). My definitions of leader accountability and ethical leadership overlap in their focus on the extent of caring about others. For example, if a leader makes internal attributions and accepts the ownership of poor team performance, rather than blaming followers for mistakes, the leader is demonstrating concern about the benefits of followers. In this way, accountable leaders are likely to be considered as more ethical. However, leader accountability is also different from ethical leadership. Leader accountability focuses more specifically on leaders' attributions about performance without actively promoting ethics among team members, while ethical leadership is more about being an ethical role model and communicating ethical standards to followers.

In the next section, I will introduce hypotheses that build on this new definition of accountability.

CHAPTER 3

THEORY AND HYPOTHESES

In this chapter, I will develop my theory and hypotheses regarding antecedents and outcomes of leader accountability. Drawing from social cognitive theory (Bandura, 1997, 1999), I argue that leaders' personal traits and leaders' perceptions towards the external environment can associate with their own accountability behaviors. In addition, followers can learn from leaders' accountability behaviors and form collective accountability in teams. This process is stronger if those leaders represent organizations' values and goals. Furthermore, followers' collective self-benefitting and other-benefitting accountability relate to subsequent team outcomes such as leader effectiveness and team effectiveness.

**Antecedents of Leader Accountability**

Social cognitive theory suggests that leaders' personal traits could contribute to their behaviors (Bandura, 1997; 1999). One key personal characteristic that is relevant to leader accountability is humility. Humility is a positive trait describing a leader's willingness to see him/herself more accurately, appreciate other people's strengths and be open to feedback from others (Owens, Johnson, & Mitchell, 2013). Humility reflects not only how one perceives his/her own roles, but also how one interacts with others in general. Humility differs from accountability because humility is a broader personal characteristic that could affect various aspects of an individual's behavior, and it does not involve how leaders accept ownership of performance per se. However, humility could be related to leader accountability because how a leader perceives him/herself in relation to others may associate with how the leader attributes his/her performance (or lack thereof).

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Specifically, I expect that less humble leaders are more likely to display self-benefitting accountability. For example, Owens et al. (2013) indicated that less humble leaders would behave in a more self-interested way. Less humble leaders see themselves as closer to being perfect and do not admit their mistakes. Thus, they tend not to acknowledge their own weaknesses, and they blame others when things go wrong. In addition, less humble leaders consider others' contributions to the group as threats to their own status and are less likely to acknowledge other people's strengths (Exline & Geyer, 2004). Thus, less humble leaders are more likely to take credit for good performance and consider good performance as a result of their own contributions, rather than others' efforts (e.g., followers' contributions).

In addition, more humble leaders are likely to exhibit more other-benefitting accountability. Humble leaders can recognize not only their strengths, but also weaknesses. For example, Ou et al. (2014) found that more humble leaders empower their followers because these leaders can acknowledge their own limitations in achieving outcomes. Thus, leaders with high levels of humility tend to blame themselves when there are bad outcomes because they may perceive their weaknesses as main reasons for the bad outcomes. In addition, Owens and Hekman (2012) implied that more humble leaders would appreciate others' efforts in achieving favorable outcomes and are more likely to provide more rewards to others (e.g., followers) when such outcomes occur. Therefore, I propose that,

> *Hypothesis 1*: Leader humility is negatively related to leader self-benefitting accountability.

*Hypothesis 2*: Leader humility is positively related to leader other-benefitting accountability.

As mentioned earlier, a leader's external expectation is the leader's perception about the extent to which various external forces (e.g., top level managers, co-workers, or subordinates) hold him/her accountable (Hochwarter et al., 2003). While that conceptualization of accountability has been predominant in the literature, I view it as an externally-based antecedent of my own conceptualization of accountability, which is based on ownership. In line with social cognitive theory (Bandura, 1999), I consider external expectations as a contextual factor influencing leader self-benefitting accountability. In particular, I argue that external expectations could decrease leaders' self-benefitting accountability. First, researchers have shown that leaders who are held accountable realize that others (e.g., superiors or co-workers) can identify and evaluate their behaviors (Lerner & Tetlock, 1999). More specifically, if performance in the team does not go well, the results can be linked to leaders personally. Thus, leaders with stronger external evaluation expectations are less likely to let others (e.g., followers) take all the blame when there are bad outcomes in teams.

Second, evaluation expectations from others can increase leaders' complexity of thinking (Tetlock, 1983). Because multiple stakeholders (e.g., subordinates and top managers) are involved in the evaluation process, a leader who expects that he/she is held accountable tends to not only consider his/her own benefits but also pay more attention to balance different stakeholders' benefits. For example, leaders with stronger evaluation expectations from others are less self-focused and show more respect to the efforts of others (Sedikides, Herbst, Hardin, Dardis, 2002). Therefore, leaders with strong external

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expectations are less likely to claim rewards only for themselves when there are good

outcomes. Taken together, external expectations reduce leaders' self-benefitting

accountability behaviors. Thus, I propose:

*Hypothesis 3*: A leader's external expectations are negatively related to his/her

self-benefitting accountability.

With that said, there is not sufficient evidence to show that external expectations

may predict leaders' other-benefitting accountability. When Tetlock (1985) proposed the

role of evaluation expectations, he asserted that the pressure to justify one's decisions to

others could reduce individuals' tendency to attribute other people's dispositional traits as

reasons for poor performance. In other words, the impetus to exert external expectations

on leaders is to reduce their attribution errors associated with self-benefitting

accountability. Accordingly, I argue that a leader's external expectations are more

relevant to leaders' self-benefitting accountability, as compared to other-benefitting

accountability. Moreover, leaders with other-benefitting accountability are by definition

other-focused. They intrinsically accept the ownership of poor performance and let others

take the credit for good performance. External factors such as evaluation expectations do

not necessarily increase leaders' other-focused behaviors. Instead, researchers have

provided examples that leaders' internal factors, such as their humility and personal

values, play leading roles in explaining their other-oriented behaviors (e.g., Le, Fuller,

Muriithi, & Walters, 2013). Thus, rather than hypothesizing the relationship between

external expectations and other-benefitting accountability, I maintain it as a research

question to be explored.

**Leader Accountability and Followers' Collective Accountability**

Social learning theory suggests that individuals can learn through observing and modeling (Bandura, 1977, 1986). In organizations, formal leaders are frequent social contacts whose actions are visible to followers. Formal leaders can exert influence on lower-level employees (Yukl, 2010). Thus, leaders' behaviors become an effective source of observing and modeling. Because of their higher status, they are in control of important resources in teams, and followers rely more on leaders for behavioral guidance, as compared to other individuals in the team. Therefore, as compared to peers or people at a lower level hierarchy, leaders with higher status trigger more emulating behaviors from their subordinates. This process has also been referred to as the cascading effect in the leadership literature (Bass, 1990; Bass, Waldman, & Avolio, 1987). By observing and emulating the behaviors conveyed by leaders, individuals can get social cues about how to interpret and respond to the environment in the workplace, thus avoiding needless mistakes (Bandura, 1971).

Researchers have shown that followers can imitate either positive or negative leadership behaviors (e.g., Liu et al., 2011; Mayer et al., 2009). Specifically, Mayer et al. (2009) found that ethical leadership could flow down to lower level employees' ethical behaviors. Similarly, Liu et al. (2012) argued that negative leader behaviors such as abusive supervision would also flow down to lower-level employees' abusive actions. However, previous research has not examined the influence of complex leader behaviors simultaneously. Smith and Lewis (2011) contended that leaders' behaviors might include a complex blend of both positive and negative qualities. In addition, they suggested that

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the same paradoxical tensions (e.g., self-interest and other-interest) could cascade across levels (Smith & Lewis, 2011).

In the context of accountability, as a leader can be both self-benefitting and other-benefitting in their accountability, followers' emulating of self-benefitting and other-benefitting behaviors may be parallel. Extending the current literature, which has typically only examined either the positive side or the negative side of leader behaviors, I explore the influencing roles of leaders' self-benefitting and other-benefitting accountability behaviors simultaneously. I propose that leaders' contradictory, yet interrelated, self-benefitting and other-benefitting accountability behaviors can both be learned by followers. Specifically, leaders' self-benefitting accountability can lead to followers' collective self-benefitting accountability, while leaders' other-benefitting accountability results in followers' collective other-benefitting accountability.

Social learning theory can help explain why leader accountability can result in two seemingly contradictory, forms of collective accountability: (1) self-benefitting accountability, and (2) other-benefitting accountability. Specifically, consistent with other leadership behaviors that can influence followers (e.g., Liu et al., 2012; Mayer et al., 2009), leaders' accountability behaviors are visible to employees. By virtue of their position, leaders serve as possible models of both accountability behaviors (i.e., self-benefitting or other-benefitting accountability) to followers. By frequently observing leaders' accountability behaviors, both self-benefitting and other-benefitting accountability behaviors can be learned by followers. For example, leaders who always take personal credit for good team performance, while blaming subordinates for team mistakes, will tend to have employees engaging in similar self-benefitting behaviors,

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such as taking personal credit for achievement and blaming co-workers for mistakes. The more frequently leaders display self-benefitting accountability behaviors, the more likely followers learn to display self-benefitting accountability. Likewise, leaders who hold followers accountable for good team performance provide examples of other-benefitting behaviors that subordinates could emulate. Thus, employees are likely to learn to give others (e.g., leaders or peers) credit for positive performance, rather than taking credit themselves. In this way, employees also develop other-benefitting accountability behaviors overtime.

Moreover, consistent with social learning theory, the social exchange theory of reciprocity (Blau, 1964) suggests that people respond to others in similar ways. Accountability behaviors displayed by leaders and followers involve exchange of rewards and punishment in teams. According to Cropanzano and Mitchell (2005), people can reciprocate based on what they get from others. Thus, followers reciprocate in relation to what they receive from leaders. There are positive and negative ways of reciprocity. A positive reciprocity is to return positive treatment for positive treatment, while a negative reciprocity is to return negative treatment for negative treatment (Cropanzano & Mitchell, 2005). In the context of accountability, leaders with self-benefitting accountability (negative treatment to followers) receive negative reciprocity from followers. For example, if leaders reward themselves for good team performance and blame followers for bad team outcomes, followers may reciprocate negatively by also blaming leaders for team mistakes and taking personal credit for good team outcomes. In contrast, leaders who show other-benefitting accountability acknowledge followers for achievement, while blaming themselves for mistakes (positive treatment to followers). In return, followers

reciprocate positively by holding themselves accountable for mistakes and crediting leaders or co-workers for good team performance.

In short, both social learning and social exchange theories would suggest a cascading of accountability, both self-benefitting and other-benefitting, from leaders to followers. Thus, I propose that:

*Hypothesis 4a*: Leader self-benefitting accountability is positively related to collective self-benefitting accountability;

*Hypothesis 4b*: Leader other-benefitting accountability is positively related to collective other-benefitting accountability.

**The Moderation Role of Leader Organization Prototypicality**

As argued above, followers could learn from their leaders and display similar accountable behaviors; this imitation process is parallel for both self-benefitting and other-benefitting accountability. However, accountability behaviors that are displayed by various leaders do not receive the same level of attention from followers. The motivation component of social learning indicates that certain characteristics of leaders may determine whether the learning process could be strengthened by altering people's motivation to mimic (Bandura, 1977). One key leader characteristic that has been examined to distinguish leaders from one another regarding their influential effectiveness is leader organization prototypicality (van Knippenberg & Hogg, 2003). A leader is perceived as prototypical of an organization if he or she represents the organization's collective goals and values (Hains, Hogg, & Duck, 1997; Hogg, 2001). Leader prototypicality is context-specific because different organizations may have alternative

values and norms; one prototypical leader may be considered as non-prototypical in another organization (van Knippenberg & Hogg, 2003).

The social identity model of leadership effectiveness (van Knippenberg & Hogg, 2003) proposes that prototypical leaders' behaviors provide information about specific in-group norms and values, and these messages are more persuasive and influential if they come from more prototypical leaders (van Knippenberg, Lossie, &Wilke, 1994). That is, prototypical leaders are supported and trusted more by the members of the unit that they lead (Hogg & van Knippenberg, 2003). Moreover, if one leader is collectively endorsed as a prototypical leader, followers are more vulnerable to grant his/her behaviors as legitimate and more likely to internalize those behaviors (DeRue & Ashford, 2010). Leader prototypicality is more influential to followers because they represent unit norms and values (Ullrich, Christ, & van Dick, 2009). In addition, based on social identity theory, individuals in the workplace are motivated to be in-group members so that they might be able to get certain valuable and favorable consequences (van Knippenberg & Hogg, 2003).

For example, being in-group members can enhance individuals' perceptions of themselves (Hogg, 2003) and help build good relationships with other people within the larger collectives (Graen & Scandura, 1987). Driven by the motivation to be in-group members to get associated valuable resources and support, individuals tend to behave more consistently with more prototypical leaders who represent collective values and goals. Therefore, the social learning or imitation that occurs between leaders and followers could be strengthened/weakened by alternative levels of leader prototypicality.

Both self-benefitting and other-benefitting accountability behaviors can be displayed by prototypical leaders or non-prototypical leaders. When individuals encounter leaders' self-benefitting and other-benefitting accountability behaviors, whether they are more motivated to follow/imitate or neglect certain types of behaviors depends on their perceptions of whether those leader behaviors represent the organization's norms and values. That is, group members' motivation to enhance/reduce their reproduction of leaders' accountability behaviors depends on whether they perceive the leaders as prototypical of the organization. If the leader is considered as prototypical, his/her behaviors are considered to be benchmarks, and followers are more motivated to perceive him/her as a role model and do what the leader does. Given that followers are likely to want to be in line with the organization's values and norms, they tend to model the most prototypical leaders' behaviors (van Knippenberg, 2011). Therefore, in this study, I examine the contingent role of leader organization prototypicality in qualifying the trickle-down effect of leader accountability on followers' accountability behaviors.

Specifically, self-benefitting accountability behaviors that are displayed by a prototypical leader will receive more attention and be modeled more by followers than similar treatment by a non-prototypical leader (De Cremer, van Dijke, Mayer, 2010; Hogg, 2001). Self-benefitting accountability behaviors from a prototypical leader signal followers that these self-benefitting behaviors are representative of their organizational values. For example, a prototypical leader's self-benefitting accountability behaviors may imply that his or her organization emphasizes individual goal-achievement and self-fulfillment. Being motivated to be consistent with this organization's values and norms, followers will then tend to display more self-benefitting accountability behaviors.

In a similar vein, even though some prototypical leaders' self-benefitting accountability behaviors may suggest concern only with regard to those leaders' own benefits without concern for followers' welfare, followers may perceive those behaviors are legitimate in the organization (Ullrich et al., 2009), and thus mimic the self-benefitting behaviors. Consequently, followers may be more likely to absorb those self-benefitting accountability behaviors (e.g., discipline others for bad outcomes and take personal credits for achievements) to be consistent with the organization's instrumental values. In contrast, if a non-prototypical leader displays self-benefitting behaviors, followers may perceive that those accountability behaviors are not part of the organization's values and norms. Thus, followers may not consider these behaviors as legitimate conduct in the organization and do not mimic the self-benefitting accountability of the leader.

Similarly, other-benefitting accountability behaviors from a prototypical leader signal to followers that these behaviors characterize their organization's values as altruistic and other-benefitting. Those individuals who rely on prototypical leaders for behavior guidance are more motivated to display similar behaviors by showing more concern for others and putting others' interests before their own. In this way, group members tend to blame themselves first for the team's mistakes and reward each other for achievements. In contrast, if a non-prototypical leader displays some other-benefitting accountability behaviors, followers might consider those behaviors as not representing organization values and have less motivation to imitate them. Even though the leader may bring some benefits to followers by blaming him/herself for mistakes and rewarding followers for achievement, followers consider those behaviors as illegitimate in this

organization and a violation of the organization's norms and values. Therefore, they are less motivated to reproduce those other-benefitting behaviors. Thus, individuals may neglect or be unwilling to imitate what the non-prototypical leader presents. In sum, I propose the moderation role of leader prototypicality as follows:

> *Hypothesis 5a*: The positive relationship between leader self-benefitting accountability and collective self-benefitting accountability is strengthened when a leader is high in organization prototypicality, as compared to low in organization prototypicality.

> *Hypothesis 5b*: The positive relationship between leader other-benefitting accountability and collective other-benefitting accountability is strengthened when a leader is high in organization prototypicality, as compared to low in organization prototypicality.

**The Links between Collective Accountability and Team Outcomes**

Next, I consider the relationship between followers' collective accountability and two aspects of team-level outcomes: team leaders' own effectiveness and the overall effectiveness of teams. Leader effectiveness is about a leader's individual performance, while team effectiveness is about the whole team (including the leader and followers)'s efficiency and performance. These two outcomes are related to each other. For instance, an effective leader may enhance the overall team effectiveness by coaching and supervising (Wageman, 2001), and team effectiveness may be part of the criteria to evaluate a leader's own job performance. However, how two types of collective accountability relate to these two outcomes might be different, although the directions of

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the relationships could be the same. Next, I will talk about the connection of collective accountability with leader and team effectiveness respectively.

**Leader effectiveness**. Followers' collect accountability relates the team leader's effectiveness in two ways. On one hand, followers' collective self-benefitting accountability may decrease the team leader's effectiveness. If everyone in the team always blames others for mistakes when something goes poor and takes personal credits when something goes well, this team does not have a friendly environment and followers may not get along well with each other. This may also decrease the team leader's effectiveness because the team leader may be perceived as a person who does not perform his/her duty to help build good relationships among followers and achieve higher outcomes. The leader may be perceived as incompetent in the eyes of others. On the other hand, followers' collective other-benefitting may increase the leader's effectiveness, especially in the eyes of others. If followers are giving others credits to each other's efforts or admit personal mistakes, everyone in the team trusts each other and develops better relationships with each other. Thus, this leader may be perceived as an effective performer in building a cohesive team and play his/her role as a team leader (Morgeson, DeRue, & Karam, 2009)**.** Thus, I propose that,

> *Hypothesis 6a*: Collective self-benefitting accountability is negatively related to leader effectiveness.
>
> *Hypothesis 6b*: Collective other-benefitting accountability is positively related to leader effectiveness.

**Team effectiveness**. Previous literature has indicated that if accountability is shared among team members, it may get diffused and individuals feel less accountable

for team performance (e.g., Forsyth et al., 2002). For example, team members sharing collective accountability are less likely to make efforts to increase performance because they may not get personal recognition for good performance. Moreover, if things go wrong, members sharing collective accountability may not take personal ownership, but instead, blame each other for mistakes (Whyte, 1991). As a result, team effectiveness could be decreased because members do not feel motivated to contribute to the overall team effectiveness. However, previous research does not distinguish collective self-benefitting accountability from collective other-benefitting accountability. Moreover, previous literature (e.g., Forsyth et al., 2002; Moore, Detert, Treviño, Baker, & Mayer, 2012) mostly emphasizes how collective self-benefitting accountability negatively relates to performance, while ignoring the potential positive relationship of collective other-benefitting accountability.

If members have collective other-benefitting accountability, the team result should be positive. For example, sharing collective other-benefitting accountability means that members blame themselves first rather than others when things go wrong. Thus, team members feel safe to take risks to improve team performance because members do not hold mistakes against each other (Edmondson, 1999). Moreover, every team member accounts for the mistakes that they make, rather than avoiding and rejecting the mistakes. By assuming personal ownership for poor performance, team members may collectively take action to make improvements, rather than ignoring problems or waiting for others to take action. In addition, in a team with high collective other-benefitting accountability, members are not likely to steal others' credits; instead, they value each other's inputs. They reinforce each other's contributions to performance, and thus those

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who make contributions are likely to get recognized. In this way, team members are inclined to exert more effort to achieve better group performance. As a result, high collective other-benefitting accountability can increase team effectiveness.

In sum, at the team level, I argue that followers' collective accountability relates to team effectiveness in two ways. On the one hand, as indicated in prior literature (e.g., Forsyth et al., 2002; Moore et al., 2012), collective self-benefitting accountability is negatively related to team effectiveness. On the other hand, as illustrated in the above arguments, followers' collective other-benefitting accountability is positively related to team effectiveness. This is also consistent with shared leadership literature that if team members share a more negative form of leadership (e.g., shared aversive leadership), shared leadership would engender negative performance outcomes (Pearce & Sims, 2002). If a positive form of leadership is shared (e.g., shared transformational leadership), shared leadership increases team effectiveness (Wang, Waldman, & Zhang, 2014). Thus, I propose that:

*Hypothesis 7a*: Collective self-benefitting accountability is negatively related to team effectiveness.

*Hypothesis 7b*: Collective other-benefitting accountability is positively related to team effectiveness.

CHAPTER 4

METHODS

I conducted two studies to develop a new measure of leader accountability (based on multiple samples) and to test the hypotheses in my theoretical model of leader accountability. Study 1 was used to develop and validate the measures with multiple samples. In study 2, I tested the hypotheses with a separate sample of employees and supervisors.

**Study 1: Leader Accountability Scale Development and Validation**

To develop a new measure of leader accountability, I applied a three-phase approach that was originally developed by Hinkin (1998). At phase 1, I generated items based on my definition of leader accountability. At phase 2, I assessed the basic psychometric properties of the accountability scale through exploratory factor analysis based on an undergraduate student sample. At phase 3, I conducted confirmatory factor analysis and examined the scale's discriminant validity with people with more work experience.

**Phase 1: Item Development**

First, based on the existing scales from Hall (2005) and Wood and Winston (2005) and the theoretical discussions about accountability (e.g., Wood & Winston, 2005), I generated 55 items of accountability using a deductive approach. I then invited 6 business experts who are higher-level leaders in their companies to describe what they considered as accountability through in-depth face-to-face interviews (The interview protocol is in Appendix A). Five of them were male, ranging from 35-55 years old. They were from various industries including banking, venture capital, and technology services. Informants

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talked about ownership of team performance such as "I blame myself first if something

goes wrong", and "I got your back!" Based on their comments, I eliminated a total of 30

items (28 items about external expectations, and two items with overlapped meanings) to

improve the clarity of the accountability measure. This process yielded a total of 25 items.

Next, I invited 45 senior management undergraduate students to sort each item

into one of the four categories of accountability (based on Table 1) (Schriesheim, Powers,

Scandura, Gardiner, & Lankau, 1993). Research has indicated that undergraduate

students could be used for content validity purposes (Colquitt, Baer, Long, & Halvorsen-

Ganepola, 2014; Schriesheim et al., 1993). Items could fall into none of those categories.

If more than 75% of the judges correctly categorized the items into their respective

dimensions (Hinkin, 1998), those items were retained. A total of 17 items were kept in

this process. A list of these items is provided in Table 3.

**Phase 2: Scale Refinement through Exploratory Factor Analysis**

The purpose of the EFA was to explore the factor structure of the accountability

construct. This sample comprised 183 students from 6 undergraduate business classes (a

potential total of 255 students in the pool) at a large southwest university (with response

rate of 71.8%). Most of the students were junior and senior students majoring in business.

These students participated voluntarily in the on-line survey, which included a drawing to

get gift cards. I asked them to think about a leader with whom they have had contact in

recent times. They rated the level of agreement in terms of the 17 items accountability

when thinking of their leaders, from 1 = ''strongly disagree'' to 7 = ''strongly agree''.

Responses were excluded from analyses when students did not have any work experience

(full time or part time), although they were asked to rate a sports or business leader that

they knew from the media. The final sample for the EFA analysis was 160. Because the EFA data followed normal distribution, Maximum likelihood and an oblique rotation (direct oblimin) to allow correlations among factors were conducted (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Costello & Osborne, 2005). I did not specify the number of factors, but determined the factors based on Eigen values (i.e., with Eigen values larger than 1).

This EFA yields four factors (as shown at Table 3), which explains 69.84% of the variance. I kept items with loadings larger than .40 in Table 4. Item 6 with a lower than .40 loading was deleted (i.e., the loading of item 6 is .35). All of the other 16 items were kept because they did not have low loadings or cross-loadings on multiple factors. The findings indicate a four-factor structure of leader accountability (i.e., internal attribution for good performance, internal attribution for bad performance, external attribution for good performance, and external attribution for bad performance), with four items in each factor, which is consistent with what have been proposed in Table 1.

**Phase 2: Confirmatory Factor Analysis and Discriminant Validity**

**Confirmatory factor analysis**. I conducted confirmatory factor analyses to refine the measure of leader accountability. A sample of 230 people participated in this study. I included 222 individuals who had work experience, including 49 employees from companies, 102 MBA students (20 full-time MBA and 82 on-line MBA), and 71 undergraduate students. The survey was conducted on-line through Qualtrics. I asked the participants to think about a leader with whom they have had contact in recent times. Each individual evaluated his or her leader's accountability, as well as ethical leadership

and humility. All measures (see Appendix B) were obtained on a 7-point Likert scale with 1 "strongly disagree" to 7 "strongly agree".

As shown in Table 4, I specified alternative models. Specifically, I specified items loading on a four-factor structure (model 1), two three-factor structure (models 2 and 3), one two-factor structure with self-benefitting and other-benefitting accountability (model 4), as well a one-factor accountability model (model 5), and checked the model fit indices (Bollen, 1989). In addition, I included a second-order factor model (model 6, self-benefitting and other-benefitting as two second-order factors with two first-order factors respectively), as well a one-factor model with accountability as one higher-order model (model 7, one second-order factor with four first-order factors), to see which model was better. Based on Hu and Bentler (1998), I selected the root-mean-square error of approximation (RMSEA), comparative fit index (CFI) and standardized root mean square residual (SRMR) as fit indices. Cut-off values of 0.05 for RMSEA, 0.90 for CFI, and .08 for SRMR were applied (Hu & Bentler, 1999). The results show that model 1 (four-factor model) and model 6 (two higher-order factor model) fit better than all the other models. I chose model 6 over model 1 in my next step, as both the hierarchical model (model 6) and four-factor model fit the data well, but model 6 fits better with my theory of two higher-order constructs of accountability (Judge, LePine, & Rich, 2006).

**Discriminant validity**. To assess the convergent and discriminant validity of leader accountability, I examined the degree to which leader accountability differed from other constructs (Bagozzi, Li, & Phillips, 1991). Variables were collected in the same survey from the group of 222 people in the CFA.

***Leader self- and other-benefitting accountability***. I used the 16 items that were developed from the exploratory factor analysis, with 8-items for self-benefitting and 8 items for other-benefitting accountability. The Cronbach's alpha of self-benefitting and other-benefitting accountability are .92 and .90 respectively.

***Ethical leadership***. Ethical leadership was measured with 10 items from Brown et al. (2005). A sample item is "This person conducts his/her personal life in an ethical manner". Cronbach's alpha is .95.

***Humility.*** I used the 9-item measure from Owens et al. (2013). An example item is "This person actively seeks feedback, even if it is critical." Cronbach's alpha is .96.

***Discriminant validity of the accountability measure versus other related measures.*** I ran a four-factor model with self-benefitting and other-benefitting as two second order factors, and ethical leadership and humility as two separate factors as the baseline model (Model 1 in Table 5, with four items for each first-order factor of accountability and two first-order factors for each second-order factor of accountability, 10 items for ethical leadership, and 9 items for humility). I used MLR (maximum likelihood estimates with robust standard errors to correct for non-normality, Chou, Bentler, & Satorra, 1991; Yuan & Bentler, 2000) in the model comparisons, because the ethical leadership variable is not normally distributed (items have skewness value larger than the absolute value of 1). The baseline model has good model fit: CFI = 0.91, TLI = 0.90 and RMSEA = 0.07, SRMR= .05. As shown in Table 5, the baseline model with three factors represents the best fitting model, as compared with the other four three-factor models. Results demonstrate that each accountability factor is distinct from other similar constructs and should not be combined with other constructs.

**Study 2: Model Testing Study**

**Sample and Data Collection**

Because this study was conducted in China, I translated the surveys into Chinese following the translation-back translation procedures (Brislin, 1980). Two people involved in the translation process were both native Chinese speakers with solid backgrounds in English. One person translated all the items into Chinese using practical language for the audience in the companies. The other person then translated the items back into English. Discrepancies were discussed with me until a satisfactory result was reached.

To avoid common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), I collected data from multiple sources at multiple times using paper and pencil surveys. All participants were asked to provide the last four digits of work phone numbers to match their data over time. In addition, followers were also asked to provide the last four digits of their direct supervisors' work phone numbers to identity their group membership. I asked one higher-level manager from each company to fill out the outcomes variables for middle level managers in their own companies. Participants read the consent letter before they started the survey. The confidentiality and purposes of the research were clearly stated in the consent form. At time 1, I asked followers to evaluate their leaders' humility, and leaders rated their own external expectations. At time 2 (two weeks later), I asked followers to rate their leaders' accountability. At time 3 (another two weeks later), I asked followers to rate their team members' collective accountability and their leaders' prototypicality. Leader and team effectiveness measures were obtained from higher-level

managers two weeks afterwards. All response options ranged from (1) ''strongly disagree'' to (7) ''strongly agree''.

I collected data from three companies in China: (1) a beauty-salon chain store (multiple stores in the chain), (2) a non-profit public service organization, and (3) the head office of a health insurance company. A total of 60 leaders and their followers were invited to participate voluntarily. Fifty-seven of them completed the surveys. Higher-level managers evaluated those who completed the surveys. On average, the middle level managers are 38.2 years old, working in their company for 11 years. 57.4% are male, 66% of them have some college education or above. There are 174 followers who were invited to participate, 162 of them responded in this sample, including 54.1% males, 80.9% have college degree and above. The average age is 34.1 years old.

**Measures (see Appendix B for details)**

**Humility.** The same measure from study 1 was used in study 2. Cronbach's alpha is .95.

**External expectations.** I used the items from Hochwarter, Kacmar & Ferris (2003) about leaders' perceived external expectations. A sample item is "If things at work do not go the way that they should, I will hear about it from top management." The Cronbach's alpha is .79.

**Leader self- and other- benefitting accountability**. The 16-item scale of accountability from study 1 were used in this study. Eight items were used for self-benefitting, and 8-items were used for other-benefitting, accountability. The reliability for self-benefitting accountability is .87, and .91 for other-benefitting accountability.

**Leader organization prototypicality**. I used five items from van Knippenberg & van Knippenberg (2005). An example item is "This person is a good example of the kind of people in our organization." The Cronbach's alpha of this variable is .89.

**Collective self- and other-benefitting accountability.** I used the items developed for leader accountability and changed the referent from "a leader" to "team members as a whole". All of the scores were aggregated to the group level. A sample item is "Team members hold themselves responsible for the team's performance." The alpha is .82 for both types of collective accountability.

**Team outcomes.** Two outcomes measures were used: (1) leader effectiveness, and (2) team effectiveness. I asked higher-level superiors to rate leader effectiveness for each team that he/she supervised, using a 4-item measure adapted from Nahrgang, Morgeson, & Ilies (2009). A sample item of leader effectiveness is "This manager performs very well". The Cronbach's alpha was .91 for leader effectiveness. The higher-level superiors also rated each team's overall team effectiveness, with measures adapted from Edmonson (1999)'s 4-item team effectiveness measure. A sample item is "This team keeps getting better and better". The Cronbach's alpha was .73. To distinguish these two outcome variables, I did a discriminant validity test. Due to the sample size limit, I randomly combined two items in each variable and created one parcel for leader effectiveness and team effectiveness (Little, Rhemtulla, Gibson, & Schoemann, 2013), so each construct has three indicators (one parcel and two items). The model with two distinct outcome constructs has a better fit ($\chi^2$ (8) = 14.36, CFI =0.96; TLI = 0.93, RMSEA = 0.12, and SRMR=. 05), as compared to the model with one construct ($\chi^2$ (9) =

33.20, CFI =0.85; TLI = 0.75, RMSEA = 0.23, and SRMR=. 07, $\Delta df = 1$, $\Delta \chi^2 = 18.84$, $p$

< .01).

**Control variables**. Because humility is related to collective self and other

benefitting accountability, I controlled for the main effects of leader humility in

predicting outcomes.

**Analyses**

**Discriminant validity of follower-rated constructs.** To examine the

distinctiveness of my constructs, I did an omnibus confirmatory factor analysis with all

the follower-rated variables in my model. I had six variables that were rated by followers,

including leader humility (9 items), leader self- and other-benefitting accountability (16

items), leader prototypicality (5 items), and collective self- and other-benefitting

accountability (16 items). I used the six-factor model as the baseline model and compared

the other 15 models (combing any of the two factors) with the baseline model. Due to the

limit of my sample size at the follower level, I created three parcels (Little et al., 2013)

for the 9-item leader humility based on internal dimensional structure shown in Owen et

al. (2013), and two parcels for leader prototypicality (5 items combined by random with

2-item and 3-item for two parcels). Moreover, based on my conceptualization of

accountability in Table 1, I created two observed components for each accountability

construct (e.g., 8 items for "internal attribution of poor performance" and for "external

attribution of good performance" were averaged to represent other-benefitting

accountability). Table 6 shows the statistical results of the models. The baseline model

with six distinctive factors had satisfactory fit: $\chi 2$ (50) = 80.11, CFI =0.97; TLI = 0.95,

RMSEA = 0.06, and SRMR=. 05, and are significantly better than other models in terms

of model fit, which supported the distinctiveness of follower-rated constructs in my model.

**Aggregation statistics**. Data aggregation statistics were evaluated before I aggregated the follower-rated variables: leader humility, leader accountability, leader organization prototypicality, and collective accountability. As shown in Table 7, the median Rwg(j)s for all the follower-rated variables are larger than .90, with significant F-tests and relatively high ICC(1) values (Bliese, 2000; James, Demaree, & Wolf, 1984). The aggregation statistics provided support for aggregating follower ratings to the leader level.

**Analytical strategy**. I used Mplus 7.3 (Muthén & Muthén, 2014) to test hypotheses with single-level path modeling. Because the leaders and their teams are nested within higher-level leaders who rated the team outcomes, I used the MLR estimator (maximum likelihood estimation with robust standard errors) with clusters (type=complex) to adjust the standard errors of clustering under higher-level leaders (Asparouhov, & Muthén, 2006).

**Hypothesis Testing**

Means and standard deviations, correlations, and reliabilities are shown in Table 8. To assess each hypothesis, I examined the overall model fit indices and the significance and direction of each path coefficient. The path model with all the main effects has acceptable fit: $\chi^2$ (11) = 14.15; CFI =0.98; TLI = 0.94; RMSEA = 0.07, SRMR=. 08. To test hypothesis 1-2, I used leader humility to predict leader self-benefitting and other-benefitting accountability. As shown in Figure 2, leader humility is not significantly related to leader self-benefitting accountability. Hypothesis 1 is not supported. However,

leader humility is positively related to leader other-benefitting accountability ($\beta = 0.44$,

$p < 0.01$). Hypothesis 2 is supported.

To test hypothesis 3, I used leader external expectations to predict leader other-benefitting accountability. External expectations is not related to leader self-benefitting accountability; hypothesis 3 was not supported. Moreover, I added one more path from external expectation to predict leader other-benefitting accountability to answer the research question I proposed. The mode fit becomes worse ($\chi^2$ (10) = 15.16; CFI =0.97; TLI = 0.89; RMSEA = 0.10, SRMR =. 08; $\Delta df = 1$, $\Delta\chi^2 = 0.174$, $p > .10$), and the more parsimonious model without this additional path was chosen. In addition, external expectations is not significantly related to leader other-benefitting accountability, although the simple correlation indicated a potential positive relationship between the two ($r = 0.18$, $p > 0.10$).

As shown in Figure 2, leader self-benefitting accountability is related to collective self-benefitting accountability ($\beta = 0.62$, $p < 0.01$) and leader other-benefitting accountability is related to collective other-benefitting accountability ($\beta = 0.40$, $p < 0.05$). Thus, hypothesis 4 is supported. Collective self-benefitting is negatively related to leader effectiveness ($\beta = -0.49$, $p < 0.01$) and collective other-benefitting accountability is positively related to leader effectiveness ($\beta = 0.64$, $p < 0.01$). Thus, hypothesis 6a and 6b are supported. Collective self-benefitting is negatively related to leader effectiveness ($\beta = -0.18$, $p < 0.05$) and collective other-benefitting accountability is positively related to leader effectiveness ($\beta = 0.26$, $p > 0.10$). Thus, hypothesis 7a is supported, while hypothesis 7b is not supported.

Hypothesis 5 was tested by first centering the two leader accountability variables

and leader organization prototypicality, then creating two interaction terms in the path model. The model with the interaction terms also has acceptable fit: $\chi^2$ (11) = 14.74; CFI =0.96; TLI = 0.88; RMSEA = 0.07, SRMR=. 05. Leader organization prototypicality moderates the relationship between collective self-benefitting accountability and collective self-benefitting accountability ($\beta = 0.29$, $p < 0.05$). I also tested the simple slopes of the interaction. When the leader has high organization prototypicality, leader self-benefitting accountability is more related to collective self-benefitting accountability ($\beta = 0.77$, $p < 0.01$); while this relationship is less positive when the leader has low organization prototypicality ($\beta = 0.25$, $p < 0.01$). The difference between the two condition is also significant ($\beta = 0.52$, $p < 0.05$). The simple slope plot is shown in Figure 3. In contrast, leader organization prototypicality does not moderate the relationship between leader self-benefitting accountability and collective self-benefitting accountability. Therefore, hypothesis 5a is supported, while hypothesis 5b is not supported.

**Post Hoc Analysis for External Expectation**

To further explore the research question about the relationship between external expectation and leader other-benefitting accountability, I did a post-hoc analysis to see whether there is a curvilinear relationship. I added a quadratic term of external expectation (after centering), along with the linear term of external expectation to predict leader other-benefitting accountability. Although the signs of the coefficients indicates an inverted-U shaped relationship (the quadratic term is -.13 and the linear term is .10), the p-value of the quadratic term is not significant.

**Post Hoc Analysis for Indirect Effects**

I further examined some mediation mechanisms and moderated mediation effects using 10,000 times bootstrapping (without cluster correction). As shown in Table 9, the mediation tests of the main effects were tested from path 1 to path 6. As shown, the connection between humility to leader effectiveness via leader and collective self-benefitting is marginally significant (path 1, 95% CI is -.00 to .26; 90% CI is .00 to .21), while the connection via leader and collective other-benefitting was significant (path 3, 95% CI is .02 to .42). Collective self-benefitting accountability is a significant mediator in the relationship between leader self-benefitting accountability and leader effectiveness (path 2, 95% CI is -.65 to -.04), while collective other-benefitting accountability is a significant mediator to the relationship between leader other-benefitting accountability and leader effectiveness (path 4, 95% CI is .03 to .83). The connection between humility to team effectiveness via leader and collective self-benefitting is not significant (path 5, 95% CI is -.42 to .22), and collective self-benefitting accountability is not a significant mediator to the relationship between leader self-benefitting accountability and team effectiveness (path 6, 95% CI is -.02 to .18).

Moreover, the moderated mediation effects under high and low leader organization prototypicality via self-benefitting accountability were tested from path 7 to path 10 (see Table 10). Leader organization prototypicality is a marginally significant moderator to the relationship between leader self-benefitting accountability and leader effectiveness via collective self-benefitting accountability (path 7, 95% CI of the difference test is -.97 to .03; 90% CI of the difference test is -.84 to -.01), while leader organization prototypicality is a marginally significant moderator to the relationship

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between humility and leader effectiveness via leader and collective self-benefitting (path 8, 95% CI of the difference test is -.01 to .33; 90% CI of the difference test is .00 to .26).

Leader organization prototypicality is not a significant moderator to the relationship between leader self-benefitting accountability and team effectiveness via collective self-benefitting accountability (path 9, 95% CI of the difference test is -.66 to .08), while leader organization prototypicality is a marginally significant moderator to the relationship between humility and team effectiveness via leader and collective self-benefitting (path 10, 95% CI of the difference test is -.01 to .21).

CHAPTER 5

DISCUSSION

My dissertation focused on the role of accountability in teams. First, I proposed

an alternative definition of accountability, which was largely not considered in previous

accountability literature. Second, I examined antecedents of leader accountability by

connecting the existing, expectation-based accountability construct and leader humility

with ownership-based accountability. Third, I studied how accountability could be

transmitted from leaders to followers. That is, leader accountability may lead to collective

accountability. Lastly, I examined how collective accountability could be associated with

team outcomes.

**Summary of Results**

   **Ownership-based accountability as a new construct**. This study introduced an

ownership-based accountability to study leader and follower actions. The scale

development and model testing studies supported the strong construct validity of this type

of accountability. In addition, the two aspects of individual accountability, self-

benefitting and other-benefitting, are not two ends of the same continuum. Instead,

although they are negatively correlated, they nevertheless can coexist as distinctive

constructs. The results show that the negative correlations between two aspects of leader

accountability and collective accountability are at a moderate level. The main study with

middle level managers and their followers supported most of the hypotheses by

considering self-benefitting and other-benefitting accountability as distinctive constructs.

Future research may examine the joint effects of these two aspects of accountability.

   **Predictors of leader accountability**. This study discussed two different

predictors of leader accountability: leader humility and leader external expectations. The results suggested that humility is a significant predictor of leader other-benefitting accountability. Humble leaders who think more of others will be more likely to take accountability actions that benefit others. However, the post hoc analysis only found marginal support for humility as an independent variable linking leader and collect accountability to effectiveness. This may due to the multiple theoretical and empirical linkages separating humility from effectiveness. The role of leader humility as a distal predictor of team outcomes further confirms what Ou, Waldman, and Peterson (2015) has suggested in their article. In addition, besides humility, future research may examine other individual characteristics, such as one's moral values in relation to accountability.

However, external expectation has no relationship with either type of accountability. That may indicate that external accountability does not necessarily lead to leaders' ownership of team performance. Having external expectations on leaders may not motivate their ownership of performance. Moreover, there may be several reasons for the insignificant linear results. For example, some items of the external expectation measure do not really reflect external expectations about accountability (e.g., in the grand scheme of things, my efforts at work are very important). In addition, although the definition of external expectation includes potential rewards and punishments, the items are not tied into any rewards and punishments, so they do not reflect the real levels of external expectations about potential rewards and punishments. Future research may develop a more refined measure of external evaluation expectation.

The post hoc analysis revealed a potential inverted U-shape relationship between external expectations and leader other-benefitting accountability. That is, an intermediate

level of external expectation may motivate leaders to display high leader other-benefitting accountability. Too much or too little external expectations may decrease leaders' other-benefitting accountability. Pokorny (2008) has suggested that paying too much or too little may both decrease the amount of efforts. Similarly, having too much expectations on leaders may also decrease their motivations to behave in an other-benefitting way, while imposing too little expectation may not be enough to direct leaders' actions. Future research may examine mechanisms through which external expectation links to accountability. For example, external expectations about rewards and punishments may influence individuals' accountability by altering their distributive justice perceptions (Castilla, 2015). In addition, future research may consider the influence of culture and norms in relation to external expectations. That is, people may have different expectations towards leaders under alternative organizational cultures or industry norms.

**Leader Accountability to Collective Accountability**

I found that followers might model both other-benefitting and self-benefitting accountability behaviors from leaders. Future research might study the detailed mechanisms through which leader accountability relates to collective accountability. For example, followers may experience more procedural justice if their leader displays more other-benefitting accountability, and high procedural justice perceptions may increase followers' own other-benefitting accountability behaviors. In addition, the ways or mechanisms through which self-benefitting and other-benefitting accountability influence outcomes may differ, and thus, future research might examine these potentially different mechanisms.

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Moreover, the learning process of self-benefitting accountability can be enhanced when leaders have high organization prototypicality. That is, when a leader represents the organization's values and is a good example of the kind of people in this organization, he/she is highly trusted by people in the same organization (Giessner, Van Knippenberg, & Sleebos, 2009). Therefore, his/her self-benefitting accountability could especially lead to higher collective self-benefitting accountability by followers. If this leader does not represent what the organization stands for (i.e., low organization prototypicality), then his/her self-benefitting accountability actions will be less imitated by followers. This suggests that organization prototypicality may serve as a legitimacy for followers to learn leaders' self-benefitting actions and behave similarly. In contrast, leaders' organization prototypicality did not moderate the other-benefitting accountability relationship. That is, as long as leaders are displaying other-benefitting accountability actions, even if they do not represent the organizations' values, their actions will still be recognized and learned by followers. This indicates that the other-benefitting accountability may act as a substitute for organization prototypicality because it largely serves the followers' interests. Followers do not need the legitimacy from prototypicality to imitate other-benefitting accountability. Future research may examine other possible moderators that may alter the social learning process.

**Collective Accountability to Team Outcomes**

The relationships between collective accountability and team outcomes are different. Collective other-benefitting accountability can increase leader effectiveness, while collective self-benefitting accountability may decrease leader effectiveness. This indicates that leader effectiveness, as perceived by higher-level managers, may be largely

determined by how leaders encourage team members to take accountability. If leaders themselves behave based on their self-interests and have self-benefitting accountability, followers may behave in the same way. This may hurt leaders' own effectiveness as perceived by higher level managers. In contrast, if leaders display other-benefitting accountability, this may not only motivate followers, but also increase leaders' own performance in the eyes of higher level managers. Accordingly, leaders may need to encourage collective accountability in teams to increase their own effectiveness.

However, I found support for the negative relationship between collective self-benefitting accountability and team effectiveness, but no significant positive relationship between collective other-benefitting accountability and team effectiveness. This may indicate that if follower all behave based on their self-interests and have self-benefitting accountability, the overall team effectiveness may suffer. Because members do not care about other people's efforts and benefits in this team and have little motivation to contribute to the overall team performance. However, the relationship between collective other-benefitting accountability and team effectiveness may deserve more future research. It is possible that there are other mechanisms that connect the relationship between collective other-benefitting accountability and team effectiveness. Additional research can address these linkages between collective accountability and team effectiveness.

**Theoretical Implications**

**Leadership theory**. This study contributes significantly to the leadership literature by introducing an underexplored component of leader characteristics---an ownership-based accountability. Recent leadership theories (e.g., empowering leadership, servant leadership, Hu & Liden, 2011; Ou et al., 2014) have encouraged leaders to let

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followers take more responsibilities to handle tasks, and to motivate followers to become informal leaders (Wang et al., 2014). Formal leaders may play supporting roles rather than dominating the whole team process. However, the question of who will take the final accountability for related team outcomes is not clear. For example, if followers are empowered and they do not do well, does that mean followers are completely accountable for the bad results that they produce, and their leader is not accountable? Given the cascading effect of accountability, this study suggests that it is important for team leaders to take the ultimate ownership of the team results; no matter which follower is taking charge of executing the relevant tasks. Additional research is needed to explore how empowering leadership and leader accountability work together to generate better team outcomes.

This study also contributes to the social identity theory of leadership (Hogg, 2001; Hogg & van Knippenberg, 2003) by examining the role of leader prototypicality in adjusting followers' behaviors. The findings suggest that organization prototypicality may not always be positive because it may induce more self-benefitting accountability behaviors from followers. This is similar to what previous has suggested that prototypicality may provide a license for leaders to be ineffective or unfair (Giessner et al., 2009; Ullrich, Christ, & van Dick, 2009). Future research may examine how to reduce the negative role of leader organization prototypicality, for instance, by building other-oriented organization values.

**Attribution theory**. By examining the connections between leader and collective accountability, this research also contributes to the attribution theory by applying the attribution theory at not only the individual level, but also collective level. Moreover,

researchers (e.g., Harvey et al., 2014) have indicated that it is important to reveal what factors may contribute to members in a team to blame themselves for mistakes or take personal credits. This study provides one explanation of followers' accountability actions—followers may learn from their leaders' accountability actions. Future research may study other factors that relate to followers' collective accountability. Nevertheless, this study focused on followers' collective accountability, under the assumption that all members have a consensus on the team's overall accountability. However, team members may not always display similar types of accountability actions. It is possible that some members may have more self-benefitting accountability, while others may display more other-benefitting accountability. Future research can address this concern by examining when team members have disagreement on team's accountability actions, and then determine how this disagreement may associate with team processes.

**Work relationship theory**. This study also contributes to the work relationship literature by examining how to build better leader-follower and follower-follower relationships through accountability. People in a team are connected not only by trust or respect, but also by the accountability actions they take (Ferris et al., 2009). Whether leaders take ownership of team outcomes may connect their relationships with their followers.  In addition, how team members take ownership of the overall team outcomes may influence their relationships with each other. Future research may integrate ownership-based accountability into work relationship literature by incorporating accountability to study broader types of relationship such as stakeholder-employee relationships. In addition, how accountability relationships may relate to other types of relationships such as trust and loyalty also deserves more research.

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**Limitations**

This study has several limitations. First, although I tried to have multiple ratings across time and from different sources, it is still difficult to make causal arguments. Some experimental research is needed in order to make more definitive statements regarding causal relationships. In addition, leader accountability and collective accountability are from the same source, although I measured those variables two weeks apart, thus lessening concerns regarding single-source biases (Podsakoff et al., 2003). Future research may replicate the findings by measuring those variables from different sources (e.g., peers and followers).

Second, there are some limitations with my samples. Although the scale validation samples were all in the U.S., the model-testing sample was collected in China, which could have affected some of the findings. For example, the collectivist nature of China could help explain how collective (or team) accountability fully mediated the relationship between leader accountability and leader effectiveness. In a more individualistic culture, one might expect partial mediation, whereby the direct effect of leader accountability on leader effectiveness remains significant, even after controlling collective (or team) accountability. Thus, future research might include U.S. data collection to help compare and generalize the findings. Moreover, the model testing sample consists of 57 middle-level managers from three organizations. Future research might examine leaders and teams at other levels (e.g., CEOs and top management teams), as well as other types of organizations and industries.

Third, my study did not address the detailed mechanisms through which leader accountability relates to collective accountability, other than the moderating effects of

leader organization prototypicality. Future research may try to explore why leader

accountability may increase collective accountability via other mechanisms. Moreover,

this study focused on limited team-level outcomes – specifically, leader and team

effectiveness, as perceived by the higher-level managers. Future research might study

other outcomes such as team cohesion as perceived by team members, objectively

measured leader and team outcomes, and individual-level outcomes such as job

satisfaction and turnover.

**Managerial Implications**

The current study has several essential implications for managers and

organizations. First, scholars have promoted to impose high expectations on leaders for

them to succeed (Hall, Frink, & Buckley, in press). However, this high expectation may

not be effective, because it may not motivate leaders to take internal accountability for

bad performance and external accountability for good performance. Moreover, based on

the post hoc analysis on external expectations, there can be diminishing, or no returns by

building very strong external expectations of accountability in the company. Building an

intermediate level of external expectation may be more effective to promote

accountability. Because external expectation is largely based on an organization's

performance appraisal system, having an intermediate level of punishment policies or

incentive plans may be more effective.

The findings related to ownership-based accountability provide new directions to

how to develop leaders in the organization. Because managers need to hold themselves

accountable, or assume ownership, to be effective, organizations should have leadership

development programs to emphasize the ownership of their performance. Higher-level

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managers should select/promote more accountable leaders or provide accountability-related trainings to increase other-benefitting accountability and reduce self-benefitting accountability among managers.

The current study also provides new insights about how to develop collective accountability among employees. Role modeling is an important source to develop collective accountability on the part of followers. By developing accountable managers, organizations can also increase the collective accountability among followers and form an accountability culture in teams. Moreover, building organizational values that are consistent with accountability is also important. If an organization has a culture that is self-interest oriented, managers who display self-benefitting accountability actions will be considered as more prototypical by followers. This may increase followers' tendencies to blame others for mistakes and take personal credits for good performance. These actions are detrimental to the subsequent organization performance.

**Conclusion**

I examined the ownership-based accountability and its two interdependent components: (1) self-benefitting, and (2) other-benefitting accountability. I integrated attribution and social learning theories to explore the connection between leader accountability and follower accountability in teams. My study showed that humility is a predictor of other-benefitting accountability, and external expectations is not linearly related to either component of accountability. My study also reveals that leader accountability is associated with followers' collective accountability, which further predicts team outcomes. In addition, the relationship of self-benefitting accountability to collective self-benefitting accountability is stronger when there are high prototypical

leaders who exhibit those self-benefitting actions. I hope that this study can stimulate

more interest in examining accountability from an ownership perspective, and more

research on exploring the role of this ownership-based accountability in organizations.

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APPENDIX A

LEADER ACCOUNTABILITY INTERVIEW QUESTIONS

**Initial Open-ended Questions**

1. Could you tell me about what your role is about as a leader?
2. Could you tell me about your team and how you work together?

**Intermediate Questions**

1. Do you know a saying "the buck stops here" by U.S. president Harry S. Truman?
2. [If you do], what do you think this sentence means? Do you believe that?
3. Why do you think we need leader accountability in organizations?
4. What will happen if leaders don't have accountability?
5. Have you faced accountability issues?
6. [If so], to whom should you be accountable for as a leader? (Superiors, followers, customers or communities?)
7. What do you mean by being accountable for your superior/followers or customers?
8. How does leader accountability manifest in your entity?
9. How do you think leader accountability **should** manifest in your organization?
10. What factors might you take into consider when you judge accountabilities?
11. Do your employees have any excuses for the wrong doing behaviors which lead to group failure?
12. Did you team ever experience any outcomes that were worse than expected?
13. [If so], what was it like? What did you think then? Who was held accountable for that?
14. Did you team ever experience any outcomes that were better than expected?
15. [If so], what was it like? What did you think then? Who was held accountable for that?
16. How to judge whether a person is held accountable for your group performance?
17. Who should take accountability if the cause of the outcome is directly pointed to a person (such as a follower of yours)?

APPENDIX B

SURVEY ITEMS AND INSTRUCTIONS

**Leader Accountability Scale Validation Survey (EFA Survey)**

| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
|---|---|---|---|---|---|---|
| **Strongly disagree** | **Disagree** | **Slightly disagree** | **Neither Agree or Disagree** | **Slightly agree** | **Agree** | **Strongly agree** |

| Other-rating Items |
|---|
| Please think of a leader with whom you have had contact in recent times**.** Next, you will see questions that describe an individual's actions. For each item, please rate your level of agreement when thinking of this leader you have mentioned above. When you see "his/her team", think about the team that the leader supervises, which may include you and his/her other subordinates. |
| **Leader accountability** (17 items) includes: <br> 1. This person looks to himself/herself first when his/her team's results are disappointing <br> 2. When performance in this person team does not go favorably, he/she holds him or herself to account, for example, by receiving disciplinary actions. <br> 3. When performance in this person team does not go favorably, he/she identifies him/herself as the reason. <br> 4. This person apologizes to constituents (e.g., superiors, followers or customers) for his/her team's mistakes. <br> 5. When performance in this person team does not go favorably, he/she identifies others (e.g., his/her subordinates) as the reason. <br> 6. When performance in this person team does not go favorably, he/she makes sure that his/her subordinates receive disciplinary actions. <br> 7. This person identifies others (e.g., his/her subordinates) to apologize to constituents (e.g., superiors, followers or customers) for his/her team's mistakes. <br> 8. This person makes excuses for his/her mistakes at work. <br> 9. This person blames others (e.g., his/her subordinates) for his/her mistakes at work. <br> 10. This person personally takes credit when his/her team performs well. <br> 11. This person rewards him/herself, or accepts rewards from others, when his/her team performs well. <br> 12. When performance in this person's team goes well, he/she ensures that he/she receives recognition or rewards. <br> 13. This person personally takes credit when his/her subordinates contribute to good team performance. <br> 14. This person makes sure that his/her subordinates get recognized for good team performance. <br> 15. When performance in this person's team goes well, he/she identifies others (e.g., his /her subordinates) rather than him/her as the reason. <br> 16. When performance in this person's team goes well, he/she ensures that his/her subordinates rather than he/she receive recognition or rewards. <br> 17. This person makes sure that his/her subordinates get recognized if they contribute to good team performance. |

**Leader Accountability Scale Validation Survey (CFA Survey)**

| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
|---|---|---|---|---|---|---|
| **Strongly disagree** | **Disagree** | **Slightly disagree** | **Neither Agree or Disagree** | **Slightly agree** | **Agree** | **Strongly agree** |

| Other-rating Items |
|---|
| Please think of a leader with whom you have had contact in recent times**.** Next, you will see questions that describe an individual's actions. For each item, please rate your level of agreement when thinking of this leader you have mentioned above. When you see "his/her team", think about the team that the leader supervises, which may include you and his/her other subordinates. |
| **Leader accountability** (16 items) includes: <br> 1. This person looks to himself/herself first when his/her team's results are disappointing <br> 2. When performance in this person team does not go favorably, he/she holds him or herself to account, for example, by receiving disciplinary actions. <br> 3. When performance in this person team does not go favorably, he/she identifies him/herself as the reason. <br> 4. This person apologizes to constituents (e.g., superiors, followers or customers) for his/her team's mistakes. <br> 5. When performance in this person team does not go favorably, he/she makes sure that his/her subordinates receive disciplinary actions. <br> 6. This person identifies others (e.g., his/her subordinates) to apologize to constituents (e.g., superiors, followers or customers) for his/her team's mistakes. <br> 7. This person makes excuses for his/her mistakes at work. <br> 8. This person blames others (e.g., his/her subordinates) for his/her mistakes at work. <br> 9. This person personally takes credit when his/her team performs well. <br> 10. This person rewards him/herself, or accepts rewards from others, when his/her team performs well. <br> 11. When performance in this person's team goes well, he/she ensures that he/she receives recognition or rewards. <br> 12. This person personally takes credit when his/her subordinates contribute to good team performance. <br> 13. This person makes sure that his/her subordinates get recognized for good team performance. <br> 14. When performance in this person's team goes well, he/she identifies others (e.g., his /her subordinates) rather than him/her as the reason. <br> 15. When performance in this person's team goes well, he/she ensures that his/her subordinates rather than he/she receive recognition or rewards. <br> 16. This person makes sure that his/her subordinates get recognized if they contribute to good team performance. |

**Ethical leadership (10 items)**
1. This person listens to what employees have to say.
2 .He/she disciplines employees who violate ethical standards.
3. This person conducts his/her personal life in an ethical manner.
4. He/she has the best interests of employees in mind.
5. This person makes fair and balanced decisions.
6. This person can be trusted.
7. This person discusses business ethics or values with employees.
8. This person sets an example of how to do things the right way in terms of ethics.
9. This person defines success not just by results but also the way that they are obtained.
10. This person, when making decisions, asks "what is the right thing to do?"

**Humility (9 items)**
1. This person actively seeks feedback, even if it is critical.
2. He/she admits it when he/she doesn't know how to do something.
3. He/she acknowledges when others have more knowledge and skills than him/her.
4. This person takes notice of others' strengths.
5. He/she often compliments others on their strengths.
6. He/she shows appreciation for the unique contributions of others.
7. This person is willing to learn from others.
8. He/she is open to the ideas of others.
9. This person is open to the advice of others.

# Model Testing Survey

| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
|---|---|---|---|---|---|---|
| **Strongly disagree** | **Disagree** | **Slightly disagree** | **Neither Agree or Disagree** | **Slightly agree** | **Agree** | **Strongly agree** |

| | |
|---|---|
| **Time 1** | **Part 1: Leader self-rating:** <br> **Demographic information:** <br> Q1: What is your gender? <br> Q2: Your age? <br> Q3: What is the highest level of education you have completed? <br> Q4: How long have you worked in this company? <br> **Leader's external expectations  (8 items)** <br> 1.  I am held accountable for my actions at work. <br> 2.  I often have to explain to others (e.g., followers or supervisors) why I do certain things at work. <br> 3.  Top management holds me accountable for all of my decisions. <br> 4.  If things at work do not go the way that they should, I will hear about it from top management. <br> 5.  To a great extent, the success of my immediate work group rests on my shoulders. <br> 6.  The jobs of many people at work depend on my success or failures. <br> 7.  In the grand scheme of things, my efforts at work are very important. <br> 8.  Co-workers, subordinates, and bosses closely scrutinize my efforts at work. <br><br> **Part 2:** For each item, please rate your level of agreement with the following statements when thinking of this individual who asked you to complete this questionnaire displays the behavior. When you see "his/her team", think about the team that this individual supervises, which includes you and him/her other subordinates: <br> **Humility (9 items)-Follower rating** <br> 1. My manager actively seeks feedback, even if it is critical. <br> 2. He/she admits it when he/she doesn't know how to do something. <br> 3. He/she acknowledges when others have more knowledge and skills than him/her. <br> 4. My manager takes notice of others' strengths. <br> 5. He/she often compliments others on their strengths. <br> 6. He/she shows appreciation for the unique contributions of others. <br> 7. My manager is willing to learn from others. <br> 8. He/she is open to the ideas of others. <br> 9. My manager is open to the advice of others. |
| **Time 2** | **Leader accountability (16 items) -Follower rating** <br> 1. My manager looks to himself/herself first when his/her team's results are disappointing. |

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| | |
|---|---|
| | 2. When performance in this team does not go favorably, he/she holds him or herself to account, for example, by receiving disciplinary actions. |
| | 3. When performance in this team does not go favorably, my manager identifies him/herself as the reason. |
| | 4. My manager apologizes to constituents (e.g., superiors, followers or customers) for his/her team's mistakes. |
| | 5. My manager blames others (e.g., his/her subordinates) for his/her mistakes at work. |
| | 6. When performance in this team does not go favorably, my manager identifies others (e.g., his/her subordinates) as the reason. |
| | 7. My manager identifies others (e.g., his/her subordinates) to apologize to constituents (e.g., superiors, subordinates or customers) for the team's mistakes. |
| | 8. My manager makes excuses for his/her mistakes at work. |
| | 9. When performance in this team goes well, my manager identifies others (e.g., his /her subordinates) rather than him/her as the reason. |
| | 10. My manager ensures that his/her subordinates get recognized for good team performance. |
| | 11. When performance in this team goes well, my manager ensures that his/her subordinates rather than he/she receives recognition or rewards. |
| | 12. My manager makes sure that his/her subordinates get recognized if they contribute to good team performance. |
| | 13. My manager personally takes credit when his/her subordinates contribute to good team performance. |
| | 14. When performance in this team goes well, my manager ensures that he/she receives recognition or rewards. |
| | 15. My manager personally takes credit when his/her team performs well. |
| | 16. My manager rewards him/herself, or accepts rewards from others, when the team performs well. |
| | **Leader prototypicality (5 items) -Follower rating** |
| | 1.  My manager is a good example of the kind of people in our company. |
| | 2.  My manager has a lot in common with the members of our company. |
| | 3.  My manager represents what is characteristic about our company. |
| | 4.  My manager is very similar to what the members of the company's value. |
| | 5.  My manager represents what the company stands for. |
| **Time 3** | For each item, please rate your level of agreement with the following statements when thinking of your team members as a whole display these behaviors. |
| | **Team members' collective accountability** (16 items)-follower ratings |
| | 1. My team members look to themselves first when my team's results are disappointing. |
| | 2. When performance in my team does not go favorably, my team members hold themselves to account, for example, by receiving disciplinary actions. |
| | 3. When performance in my team does not go favorably, my team members |

| | |
|---|---|
| | identifies themselves as the reason.<br>4. My team members apologize to constituents (e.g., superiors, followers or customers) for my team's mistakes.<br>5. My team members blame others (e.g., peers) for their mistakes at work.<br>6. When performance in my team does not go favorably, my team members identify others (e.g., his/her coworkers) as the reason.<br>7. My team members identify others (e.g., his/her coworkers) to apologize to constituents (e.g., superiors, subordinates or customers) for the team's mistakes.<br>8. My team members make excuses for their mistakes at work.<br>9. When performance in my team goes well, my team members identify others (e.g., their coworkers) rather than themselves as the reason.<br>10. My team members ensure that their coworkers get recognized for good team performance.<br>11. When performance in my team goes well, team members ensure that other people in the team rather than themselves receives recognition or rewards.<br>12. My team members make sure that members in the team get recognized if they contribute to good team performance.<br>13. Members in this team personally take credit when others in this team contribute to good team performance.<br>14. When performance of this team goes well, members in this team ensure that they themselves receive recognition or rewards.<br>15. Members in this team personally take credit when the team performs well.<br>16. Members reward themselves, or accept rewards from others, when the team performs well. |
| Time 4 | **Higher level managers' rating**<br>**Leader effectiveness (4 items)**<br>1. This manager's performance is very high.<br>2. This manager is very effective.<br>3. This manager performs very well.<br>4. This manager's overall effectiveness is excellent.<br>**Team effectiveness (4 items)**<br>1. This team meets or exceeds its customers' expectations.<br>2. This team does superb work.<br>3. Critical quality errors occur frequently in this team's work.<br>4. This team keeps getting better and better. |

APPENDIX C

IRB APPROVAL

EXEMPTION GRANTED

Zhen Zhang
WPC - Management
480/965-5560
Zhen.Zhang@asu.edu

Dear Zhen Zhang:

On 4/1/2014 the ASU IRB reviewed the following protocol:

| | |
|---|---|
| Type of Review: | Initial Study |
| Title: | Exploring Leader Accountability |
| Investigator: | Zhen Zhang |
| IRB ID: | STUDY00000902 |
| Funding: | None |
| Grant Title: | None |
| Grant ID: | None |
| Documents Reviewed: | • Informed Consent_final_Interview.pdf, Category: Consent Form; <br> • PROTOCOLSOCIAL BEHAVIORAL Protocol Form.docx, Category: IRB Protocol; <br> • interview questions .pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); <br> • Recruitment.pdf, Category: Recruitment Materials; |

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 4/1/2014.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

**ASU** | Knowledge Enterprise Development

## EXEMPTION GRANTED

Zhen Zhang
Management
480/965-5560
Zhen.Zhang@asu.edu

Dear Zhen Zhang:

On 10/23/2014 the ASU IRB reviewed the following protocol:

| | |
|---:|:---|
| Type of Review: | Initial Study |
| Title: | Leader Accountability Scale Validation |
| Investigator: | Zhen Zhang |
| IRB ID: | STUDY00001730 |
| Funding: | None |
| Grant Title: | None |
| Grant ID: | None |
| Documents Reviewed: | • Informed Consent_Accountability -Oct.23.pdf, Category: Consent Form;<br>• IRB protocol-Oct.23.docx, Category: IRB Protocol;<br>• Leader accountability-Oct 23.pdf, Category: Recruitment Materials; |

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 10/23/2014.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,


IRB Administrator

cc:     Danni Wang

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**ASU Knowledge Enterprise Development**

## EXEMPTION GRANTED

Zhen Zhang
Management
480/965-5560
Zhen.Zhang@asu.edu

Dear Zhen Zhang:

On 11/24/2015 the ASU IRB reviewed the following protocol:

| | |
|---|---|
| Type of Review: | Modification |
| Title: | Leader Accountability Model Testing |
| Investigator: | Zhen Zhang |
| IRB ID: | STUDY00003467 |
| Funding: | None |
| Grant Title: | None |
| Grant ID: | None |
| Documents Reviewed: | • follower Surveys-Chinese version.pdf, Category: Recruitment Materials;<br>• Consent Letter for leaders-update.pdf, Category: Consent Form;<br>• Higher level leaders survey-update.pdf, Category: Recruitment Materials;<br>• follower Surveys-update.pdf, Category: Recruitment Materials;<br>• Consent Letter for leaders-Chinese version.pdf, Category: Consent Form;<br>• Consent Letter-higher leaders.pdf, Category: Consent Form;<br>• Higher level leaders survey-Chinese version.pdf, Category: Recruitment Materials;<br>• Leader Surveys-update.pdf, Category: Recruitment Materials;<br>• Leader Surveys-Chinese version.pdf, Category: Recruitment Materials;<br>• Translate certificate.pdf, Category: Translations;<br>• Consent Letter for followers-Chinese version.pdf, |

| | Category: Consent Form;<br>• Consent Letter-higher leaders-Chinese version.pdf, Category: Consent Form;<br>• HRP-503a-TEMPLATE_PROTOCOL_SocialBehavioralV02-10-15-new-with Chinese version.docx, Category: IRB Protocol;<br>• Consent Letter for followers-update.pdf, Category: Consent Form; |
|---|---|

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 11/24/2015.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,


IRB Administrator

cc:    Danni Wang

Table 1

Categorization of Leader Accountability

| | Internal Attribution | External Attribution |
|---|---|---|
| **Good Performance** | **Self-benefitting accountability** | **Other-benefitting accountability** |
| **Poor Performance** | **Other-benefitting accountability** | **Self-benefitting accountability** |

Table 2

Summary of Representative Studies about Accountability

| Scale development paper | | | | | | |
|---|---|---|---|---|---|---|
| **Study** | **Definitions of accountability** | **Sample item (# of items )** | **Sample features** | **Results** | **Focus on External expectations/ ownership** | **Acceptance of rewards or punishments (Yes or no)** |
| Hall, 2005 | An implicit or explicit expectation that one's decisions or actions will be subject to evaluation by some salient audience(s) with the belief that there exists the potential for one to receive either rewards or sanctions based on the expected evaluation | Top management holds me accountable for all of my decisions. (8 items) | 224 Employees from a large public university and a medium-sized, family-owned business | Informal norms, achievement striving, conscientiousness and agreeableness are positively related to felt accountability | External expectations | No |
| Wood & Winston, 2007, | The leader's implicit or explicit expectation that he/she will be publicly linked to his/her actions, words, or reactions; the expectation that the leader may be called on to explain his or her beliefs, decisions, commitments, or actions to constituents; | The leader fulfills the commitments he/she makes to constituents (30 items) | 148 employees from diverse jobs | Developed a scale of leader accountability | External expectations/ ownership | No |

| | | | | | | |
|---|---|---|---|---|---|---|
| | and the willing acceptance of the responsibilities inherent in the leadership position to serve the well-being of the organization | | | | | |

**Empirical study**

**Field Study**

| Study | Definitions of accountability | Sample item | Sample features | Results | Role of accountability | Similar studies |
|---|---|---|---|---|---|---|
| Hochwarter et al., 2007 | An implicit or explicit expectation that one's decisions or actions will be subject to evaluation by some salient audience(s) with the belief that there exists the potential for one to receive either rewards or sanctions based on this expected evaluation. (Hall et al., 2003, p.23) | I often have to explain why I do certain things at work (Hochwarter et al. 2003) | 220 employees of a financial management firm located in the Southeastern United States | felt accountability would lead to higher job performance ratings when coupled with high levels of political skill | independent variable | Hall, Zinko, Perryman,& Ferris, 2009); Wikhamn & Hall., 2014; Laird et al., 2009; Hall et al., 2006; Hochwarter et al., 2005; Breaux et al., 2009 |
| Wallace et al., 2011 | an implicit or explicit expectation that one's decisions or actions will be subject to evaluation by some salient audience(s) with the belief that there exists the | "I am held very accountable for my actions in my store" and "I often have to explain why I do certain things | 539 managers with at least two assistant managers and one store | psychological empowerment climate relates to performance only under conditions of high-felt | moderator | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | potential for one to receive either rewards or sanctions based on the expected evaluation" (Hall et al., 2003, p. 33) | at work. (Hochwarter et al. 2003) | manager responding from each store. | accountability | | |
| Tetlock et al., 2013 | Process accountability, employees expect to justify efforts and strategies used to generate results. The focus is on inputs, not outcomes. Under pure outcome accountability, the focus flips: employees expect to deliver tangible, end-state results, with little interest in explanations of how they did it (Beach & Mitchell, 1978; Curley, Yates, & Abrams, 1986). | Two 9-point Likert-type unipolar scales, measuring preferences for weak or strong forms of process and outcome accountability, separately. | Seventy-five MBA students and executives (study 1) and Seventy-two executive MBA (study 2) | conservatives prefer outcome accountability and liberals prefer process accountability in an unspecified policy domain | dependent variable | |
| **Lab Study** | | | | | | |
| **Study** | **Definitions of accountability** | **Manipulation** | **Sample features** | **Results** | **Role of accountability** | **Similar studies** |
| Castilla, 2015 | A set of procedures making certain individuals (or a group of individuals) responsible for ensuring the fair compensation and | The organization adopted accountability into its performance- | U.S. service organization | Accountability reduced the pay gap | independent variable | |

| | | reward system | | | | |
|---|---|---|---|---|---|---|
| | distribution of rewards among employees inside their organization (p.351). | reward system | | | | |
| Sedikides et al., 2002 | Expectation that they will be called on to explain, justify, and defend their self- evaluations to one or more others. | You will be asked to fully *explain*, *justify*, and *defend* the grades you assigned yourself on each and every dimension. | 77, 82, 150, and 115 university students in four studies | accountability curtails self-enhancement | independent variable | Tetlock, 1985; Giessner et al., 2013; Morris & Moore, 2000; Paolini et al., 2009; Palmer et al., 2005; Pretsch et al., 2014; Pinter et al., 2007; Mero et al., 2006. |
| Peng, Dunn, & Conlon, 2015 | Answerable for conducting oneself in a manner that is consistent with relevant prescriptions for how things should be (Schlenker & Weigold, 1989, p. 24). | High accountability was manipulated by either telling the negotiators that their direct supervisor set the performance expectations and would | 228 students (study 1) and 170 students (study 2) from a public university | Prevention-focused dyads achieved better joint financial outcomes than promotion-focused dyads in situations where there is high accountability. | moderator | Converse et al., 2014; Rus, van Knippenberg, & Wisse, 2012; Pitesa & Thau, 2013; Blader & Rothman, 2014. |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | administer the rewards. | | | | |

Table 3

Exploratory Factor Analysis

| | | Factor | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| 1. | This person looks to himself/herself first when his/her team's results are disappointing | | .74 | | |
| 2. | When performance in this person team does not go favorably, he/she holds him or herself to account, for example, by receiving disciplinary actions. | | .75 | | |
| 3. | When performance in this person team does not go favorably, he/she identifies him/herself as the reason. | | .81 | | |
| 4. | This person apologizes to constituents (e.g., superiors, followers or customers) for his/her team's mistakes. | | .48 | | |
| 5. | When performance in this person team does not go favorably, he/she identifies others (e.g., his/her subordinates) as the reason. | | | | .50 |
| 6. | When performance in this person team does not go favorably, he/she makes sure that his/her subordinates receive disciplinary actions. | | | | |
| 7. | This person identifies others (e.g., his/her subordinates) to apologize to constituents (e.g., superiors, followers or customers) for his/her team's mistakes. | | | | .49 |
| 8. | This person makes excuses for his/her mistakes at work. | | | | .83 |
| 9. | This person blames others (e.g., his/her subordinates) for his/her mistakes at work. | | | | .77 |
| 10. | This person personally takes credit when his/her team performs well. | .70 | | | |
| 11. | This person rewards him/herself, or accepts rewards from others, when his/her team performs well. | .87 | | | |
| 12. | When performance in this person's team goes well, he/she ensures that he/she receives recognition or rewards. | .66 | | | |
| 13. | This person personally takes credit when his/her subordinates contribute to good team performance. | .69 | | | |
| 14. | This person makes sure that his/her subordinates get recognized for good team performance. | | | .75 | |
| 15. | When performance in this person's team goes well, he/she identifies others (e.g., his /her subordinates) rather than him/her as the reason. | | | .75 | |
| 16. | When performance in this person's team goes well, he/she ensures that his/her subordinates rather than he/she receive recognition or rewards. | | | .90 | |

| | |
|---|---|
| 17. This person makes sure that his/her subordinates get recognized if they contribute to good team performance. | .81 |

Note. N=160. Factor Loadings from Maximum Likelihood with Oblimin Rotation of 17 Items of Accountability.

Table 4

Confirmatory Factor Analysis

| Model Comparison | CFI | TLI | RMSEA | SRMR | AIC |
|---|---|---|---|---|---|
| Model 1: four factors | .96 | .96 | .06 | .05 | 11111.92 |
| Model 2: three factor model: combine internal for good and external for bad | .86 | .84 | .12 | .08 | 11387.08 |
| Model 3: three factor model: combine internal for bad and external for good | .87 | .84 | .12 | .07 | 11369.46 |
| Model 4: two factor model –self-benefitting and other-benefitting | .76 | .72 | .14 | .10 | 11625.31 |
| Model 5: one factor model-accountability as one factor | .65 | .60 | .19 | .10 | 12778.24 |
| Model 6: self-benefitting and other-benefitting as two higher-order factors | .96 | .95 | .06 | .05 | 11122.94 |
| Model 7: accountability as one higher-order factor | .93 | .91 | .09 | .12 | 12018.23 |

Note: N= 222. Confirmatory factor analysis with only accountability Items. $\chi^2$ = Chi-square test of model fit; CFI = Comparative Fit Index; TLI = Tucker-Lewis index; RMSEA = Root-Mean-Square Error of Approximation; SRMR = Standardized Root Mean Square Residual; AIC= Akaike's Information Criterion.

Table 5

Discriminant Validity: Accountability with Ethical Leadership and Humility

| Model | CFI | TLI | RMSEA | SRMR | $\chi^2$ | Df | $\Delta df$ | $\Delta\chi^2$ | S-B factor |
|---|---|---|---|---|---|---|---|---|---|
| Model 1 (baseline model): 4-factor model including leader self-benefitting and other-benefitting accountability as one higher-order factor with two first-order factors, ethical leadership and humility as two separate factors. | .91 | .90 | .08 | .05 | 1105.20** | 550 | | | 1.23 |
| Model 2: 3-factor model with leader self-benefitting accountability as one second-order factor, combining with ethical leadership and other-benefitting accountability as one factor, and humility as one factor. | .85 | .84 | .08 | .06 | 1439.66** | 555 | 5 | 226.70** | 1.24 |
| Model 3: 3-factor model with leader self-benefitting accountability as one second-order factor, combining with humility and other-benefitting accountability as one factor, and ethical leadership as one factor. | .85 | .84 | .09 | .06 | 1435.47** | 555 | 5 | 175.31** | 1.24 |
| Model 4: 3-factor model with leader other-benefitting accountability as one second-order factor, combining with ethical leadership and self-benefitting accountability as one factor, and humility as one factor. | .81 | .80 | .10 | .07 | 1664.24** | 555 | 5 | 215.04** | 1.25 |
| Model 5: 2-factor model with leader other-benefitting accountability as one second-order factor, combining with humility and self- | .80 | .79 | .10 | .08 | 1725.18** | 555 | 5 | 228.62** | 1.25 |

| Model | CFI | TLI | RMSEA | SRMR | $\chi^2$ | d.f. | $\Delta df$ | $\Delta \chi^2$ | S-B factor |
|---|---|---|---|---|---|---|---|---|---|
| benefitting accountability as one factor, and ethical leadership as one factor. | | | | | | | | | |
| Model 6: 2-factor model including leader self-benefitting and other-benefitting accountability as one-second order factor, combining with ethical leadership and humility as one factor. | .86 | .85 | .08 | .06 | 1407.46[**] | 553 | 3 | 214.87[**] | 1.23 |
| Model 7: 1-factor model including leader self-benefitting, other-benefitting accountability combining with ethical leadership and humility. | .72 | .70 | .12 | .08 | 2248.22[**] | 560 | 10 | 449.87[**] | 1.26 |

Notes: N=222. CFI = Comparative Fit Index; TLI = Tucker-Lewis index. RMSEA = Root-Mean-Square Error of Approximation; SRMR = Standardized Root Mean Square Residual; $\chi^2$ = Satorra-Bentler scaled Chi-square test of model fit; d.f. = degree of freedom; $\Delta\chi^2$ = Difference in Chi-Square with Satorra-Bentler scaled adjusted; $\Delta df$ = Difference in degrees of freedom compared with Model 1. S-B factor= Satorra-Bentler Scaling Correction Factor. ** p < 0.01.

Table 6

Accountability Discriminant Validity with Other Follower-Report Constructs

| Model Comparison | CFI | TLI | RMSEA | *SRMR* | $\chi^2$ | *Df* | $\Delta df$ | $\Delta\chi^2$ |
|---|---|---|---|---|---|---|---|---|
| Model 1 (Baseline model): Six-factor model | .97 | .95 | .06 | .05 | 80.11 | 50 | | |
| Model 2: Combine leader self-benefitting and collect self-benefitting | .95 | .93 | .08 | .07 | 103.31 | 55 | 5 | 23.2[**] |
| Model 3: Combine leader other-benefitting and collect other-benefitting | .94 | .92 | .08 | .06 | 111.17 | 55 | 5 | 31.06[**] |
| Model 4: Combine leader self-benefitting and leader other-benefitting | .89 | .85 | .11 | .09 | 151.84 | 55 | 5 | 71.73[**] |
| Model 5: Combine collect self-benefitting and collect other-benefitting | .88 | .83 | .12 | .11 | 165.46 | 55 | 5 | 85.35[**] |
| Model 6: Combine leader self-benefitting and collect other-benefitting | .88 | .83 | .12 | .09 | 166.56 | 55 | 5 | 86.45[**] |
| Model 7: Combine leader other-benefitting and collect self-benefitting | .91 | .87 | .10 | .08 | 143.45 | 55 | 5 | 63.34[**] |
| Model 8: Combine leader self-benefitting and humility | .88 | .83 | .12 | .10 | 169.71 | 55 | 5 | 89.60[**] |
| Model 9: Combine leader self-benefitting and prototypicality | .87 | .81 | .12 | .12 | 180.99 | 55 | 5 | 100.88[**] |
| Model 10: Combine leader other-benefitting and humility | .88 | .82 | .12 | .09 | 171.88 | 55 | 5 | 91.77[**] |
| Model 11: Combine leader other-benefitting and prototypicality | .91 | .87 | .10 | .07 | 142.60 | 55 | 5 | 62.49[**] |
| Model 12: Combine collect self-benefitting and humility | .90 | .85 | .11 | .09 | 153.37 | 55 | 5 | 73.26[**] |
| Model 13: Combine collect self-benefitting and prototypicality | .87 | .81 | .12 | .13 | 178.60 | 55 | 5 | 98.49[**] |
| Model 14: Combine collect other-benefitting and humility | .88 | .83 | .12 | .09 | 166.35 | 55 | 5 | 86.24[**] |
| Model 15: Combine collect other-benefitting and prototypicality | .91 | .88 | .10 | .07 | 137.07 | 55 | 5 | 56.96[**] |
| Model 16: Combine humility and prototypicality | .86 | .80 | .13 | .09 | 185.44 | 55 | 5 | 105.33[**] |

90

Note. CFI = Comparative Fit Index; TLI = Tucker-Lewis index. RMSEA = Root-Mean-Square Error of Approximation; SRMR = Standardized Root Mean Square Residual; $\chi^2$ = Chi-Square Test of Model Fit; d.f. = degree of freedom; $\Delta\chi^2$ = Difference in Chi-Square; $\Delta df$ = Difference in degrees of freedom compared with the baseline Model.

Table 7

Rwg and ICCs for follower-rated variables

|  | Rwg-Median | ICC(1) | ICC(2) |
|---|---|---|---|
| 1. Leader humility | .96 | .18[*] | .39 |
| 2. Leader self-benefitting accountability | .93 | .23[*] | .40 |
| 3. Leader other-benefitting accountability | .93 | .54[**] | .72 |
| 4. Leader organization prototypicality | .93 | .22[*] | .37 |
| 5. Collective self-benefitting accountability | .96 | .41[*] | .59 |
| 6. Collective other-benefitting accountability | .92 | .29[*] | .46 |

[**] $p < .01$, [*] $p < .05$.

Table 8

Means, Standard Deviations and Correlations

| Variables | Mean | S.D. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Leader external expectations | 4.94 | 0.88 | .79 | | | | | | | | |
| 2. Leader humility | 5.63 | 1.03 | .21 | .95 | | | | | | | |
| 3. Leader self-benefitting accountability | 3.07 | 0.71 | .05 | -.20 | .87 | | | | | | |
| 4. Leader other-benefitting accountability | 5.06 | 0.82 | .18 | .56** | -.29 | .91 | | | | | |
| 5. Leader organization prototypicality | 4.93 | 0.89 | -.06 | .59** | -.15 | .55** | .89 | | | | |
| 6. Collective self-benefitting accountability | 3.51 | 0.78 | -.13 | -.39* | .63** | -.39* | -.19 | .82 | | | |
| 7. Collective other-benefitting accountability | 4.68 | 0.69 | .09 | .43** | -.16 | .55** | .36* | -.23 | .82 | | |
| 8. Leader effectiveness | 5.13 | 0.94 | -.06 | .16 | -.22 | .33* | .12 | -.35* | .33* | .91 | |
| 9. Team effectiveness | 5.08 | 0.93 | -.06 | .14 | .05 | .19 | -.08 | -.08 | .13 | .56** | .73 |

Note: ** $p < .01$, * $p < .05$ (2-tailed). N=57.

Table 9

Mediation effects and Bootstrapping Tests

| | Path a | Path b | Path c | Indirect effect (95% CI) |
|---|---|---|---|---|
| **Main Effect Mediation Model** | | | | |
| Path 1. Humility → leader self-benefiting accountability→ collect self-benefiting accountability →leader effectiveness | -.14 | .62$^{**}$ | -.49$^{*}$ | .04$^{+}$(-.00, .26) |
| Path 2. Leader self-benefitting accountability → collect self-benefitting accountability →  leader effectiveness | | .62$^{**}$ | -.49$^{*}$ | -.30$^{*}$(-.65, -.04) |
| Path 3. Humility → leader other-benefitting accountability→ collect other-benefitting accountability → leader effectiveness | .44$^{**}$ | .40$^{*}$ | .64$^{*}$ | .11$^{*}$(.02, .42) |
| Path 4. Leader other-benefitting accountability → collect other-benefitting accountability → leader effectiveness | | .40$^{*}$ | .64$^{*}$ | .26$^{*}$(.03, .83) |
| Path 5. Humility → leader self-benefiting accountability→ collect self-benefiting accountability →team effectiveness | -.14 | .62$^{**}$ | -.16$^{*}$ | .01(-.02, .18) |
| Path 6. Leader self-benefitting accountability → collect self-benefitting accountability → team effectiveness | | .62$^{**}$ | -.16$^{*}$ | -.10 (-.42, .22) |

*Note:* +$p< .10$, $^{**} p < .01$, $^{*} p < .05$. Bootstrapping = 10,000 times.

Table 10

Moderated Mediation effects and Bootstrapping Tests

| | Path a | Path b | Path c | Indirect effect (95% CI) | Difference in indirect effects (95% CI) |
|---|---|---|---|---|---|
| **Moderated Mediation Model** | | | | | |
| Path 7. Leader self-benefitting accountability→collect self-benefitting accountability →leader effectiveness | | | | | |
| Under high organization prototypicality | | .77** | -.49* | -.38*(-.85, -.05) | -.25+(-.97, .03) |
| Under low organization prototypicality | | .25** | -.49* | -.12 (-.63, .10) | |
| Path 8. Humility→ leader self-benefitting accountability→collect self-benefitting accountability →leader effectiveness | | | | | |
| Under high organization prototypicality | -.14 | .77** | -.49* | .06+ (-.01, .31) | .04+ (-.01, .33) |
| Under low organization prototypicality | -.14 | .25** | -.49* | .02 (-.01, .25) | |
| | | | | | |
| Path 9. Leader self-benefitting accountability→collect self-benefitting accountability →team effectiveness | | | | | |
| Under high organization prototypicality | | .77** | -.16* | -.13(-.51, .17) | |
| Under low organization prototypicality | | .25** | -.16* | -.04 (-.39, .06) | -.09(-.66, .08) |
| Path 10. Humility→ leader self-benefitting accountability→collect self-benefitting accountability →team effectiveness | | | | | |
| Under high organization prototypicality | -.14 | .77** | -.16* | .02 (-.02, .20) | |
| Under low organization prototypicality | -.14 | .25** | -.16* | .01 (-.01, .13 ) | .01(-.01, .21) |

*Note: +p< .10, ** p < .01, * p < .05. Bootstrapping = 10,000 times.*

Figure 1

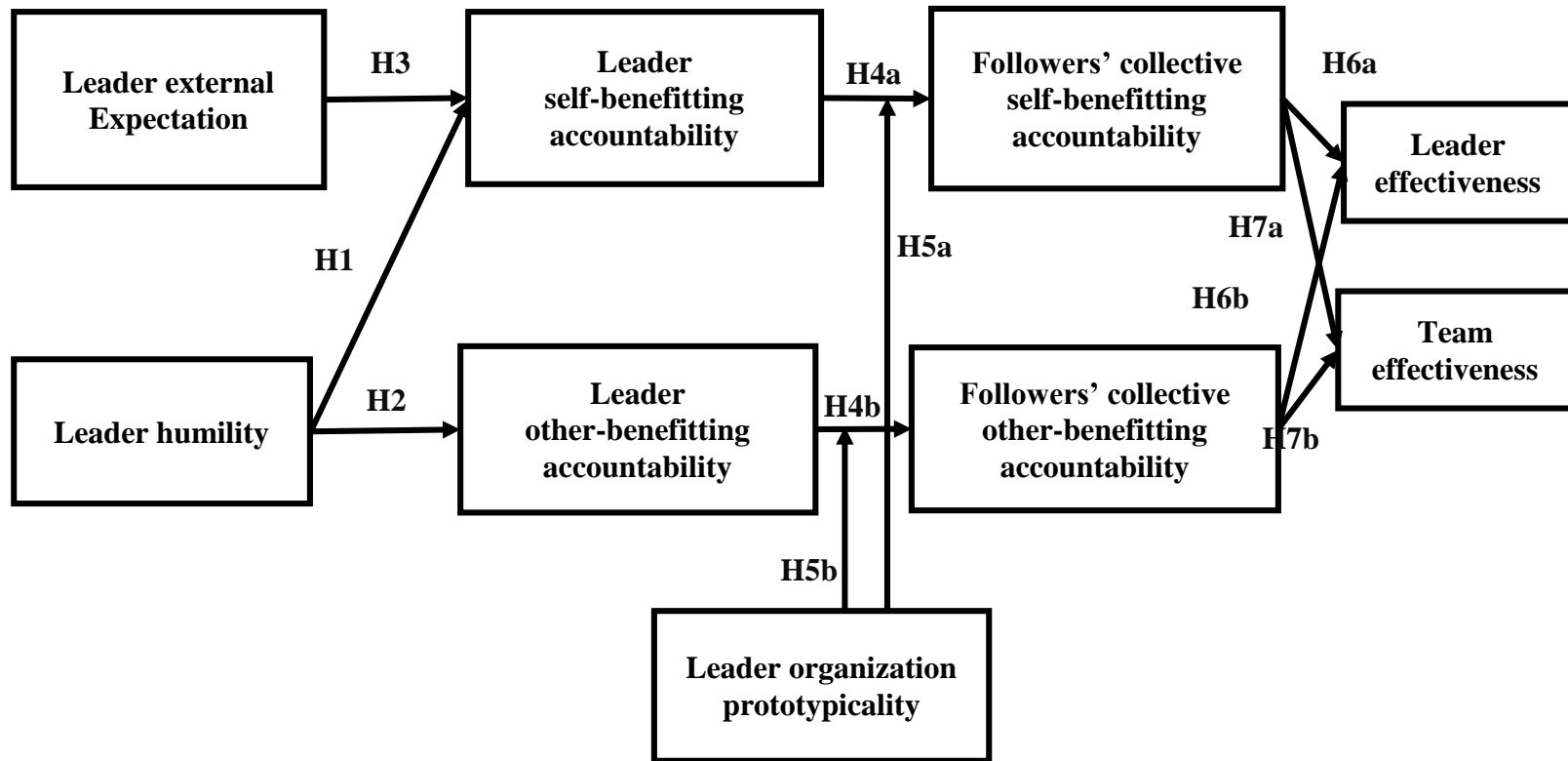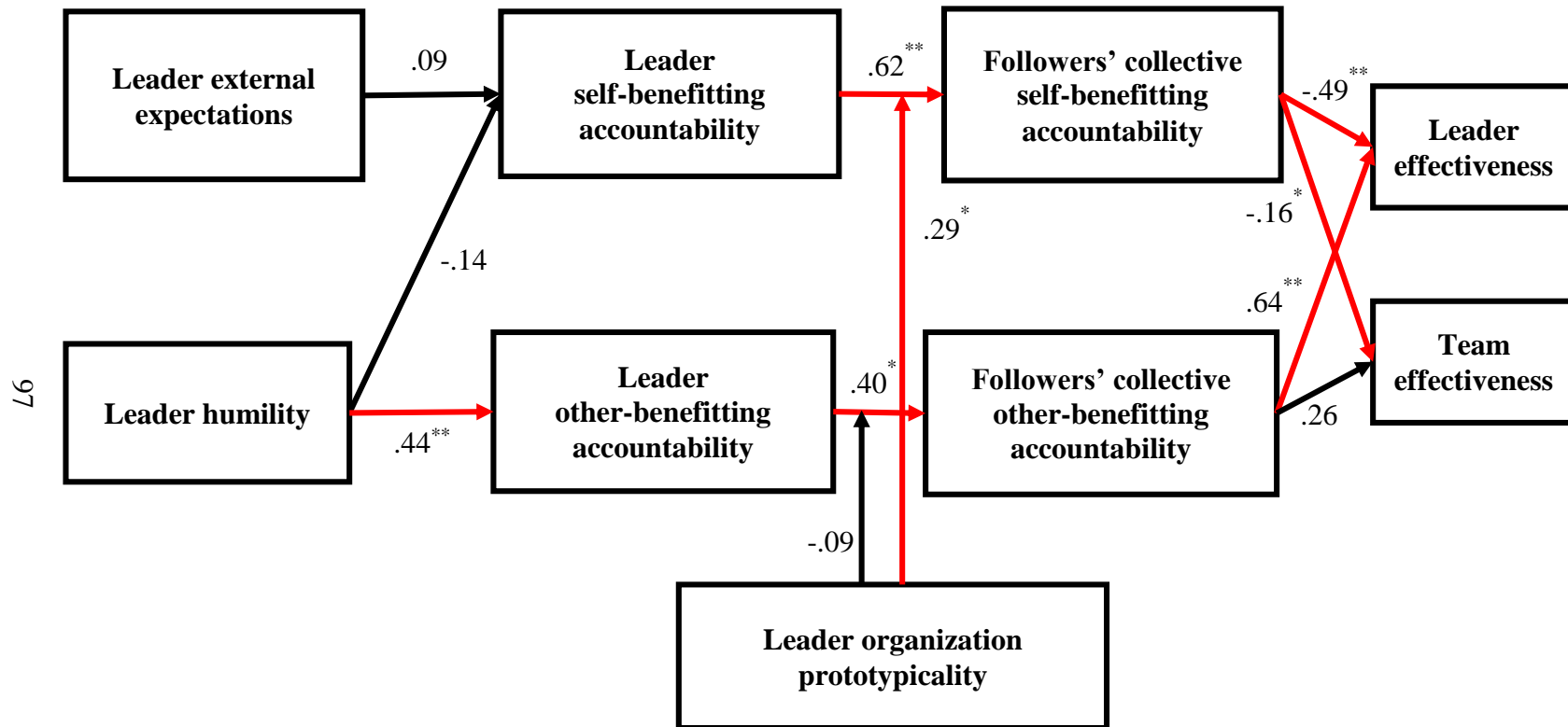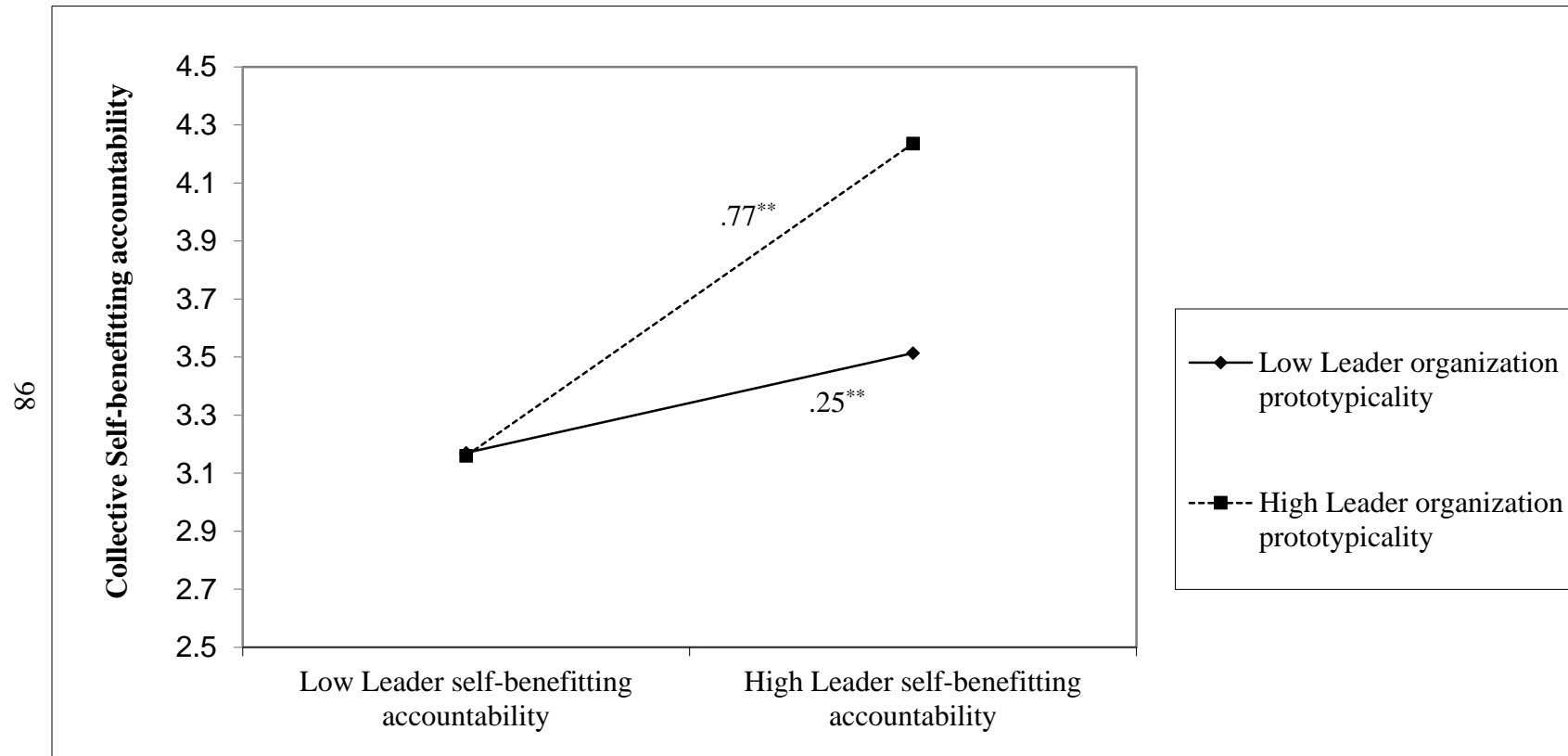Theoretical Model of Accountability in Teams

Figure 2

Path Coefficients of the Theoretical Model (Unstandardized coefficients are shown, and red arrows are paths that are significant)



$^{**} p < .01, \, ^{*} p < .05$

Figure 3

Simple Slope of the Interaction

** *p* < .01.