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Participative Decision-Making and Informing as Antecedents of Trust through a Hierarchical Layer of Leadership

Ross John Jahnke

A dissertation submitted to the faculty of Bethel University

in partial fulfillment of the requirements for the degree of

Doctor of Education.

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Abstract

This study investigated a potential path to foster trust in two levels of college and university leadership (direct leaders and senior leadership). Two direct leader empowering leadership behaviors (participative decision-making and informing) where explored as antecedents of trust. The population studied was full-time faculty members at mid-sized not-for-profit colleges and universities in the Great Lakes region. Direct leader's participative decision-making related positively with trust in direct leader. Evidence of trust transfer through a hierarchical layer of leadership was also found. Direct leader's participative decision-making related positively to trust in senior leadership, but only when mediated by trust in direct leader. When the mediating effect of trust in direct leader was isolated from the relationship between direct leader's participative decision-making and trust in senior leadership, participative decision-making had a negative relationship with trust in senior leadership. Hypothesized relationships between informing and trust in both levels of leadership were not supported.

Dedication

For Megan.

"Well life is ever changing but I

Can always find a constant and comfort in your love"

The Avett Brothers

Acknowledgements

My wife, Megan, has supported me through eight years of graduate studies. She pushed me to persist when I needed encouragement. She reminded me to step away from the obsession of educational progress when I needed to take in the joy of watching babies grow into young boys. The road has not always been easy, but we have walked it together. The completion of this work is as much an accomplishment of hers as it is of mine.

My parents, Bruce and Nancy Jahnke, have taught me more about leading through trust than any scholar. I will always remember a conversation with my dad during a car ride to a high school event in which he revealed a secret ingredient to their parenting – trust. They trusted me to make good choices and they stood with me when I failed that trust. It was in their approach to leading our family that I learned the empowering nature of trust.

My dissertation committee was remarkable in its mixture of extraordinary support and productive critique. Justin Irving, my adviser, gave wise counsel that helped me design a study that was interesting, meaningful, and viable. Throughout the process he gave me space to lead this as my own project, asked hard and important questions, and gently inquired when my communications fell silent. My readers, Steven Lancaster and Mary Jensen, provided sharp insight and pushed me to think harder and dig deeper, particularly on the soundness of my method and the philosophical coherence of my methodology. They both put more energy, care, and support into my dissertation process than their roles as readers demanded. This dissertation would be far weaker and may have never reached completion without each committee members' unique contributions. I offer a sincere and heartfelt thank you to each of them for pushing me to a higher level and supporting my journey to get there.

In and through everyone mentioned here, along with many others, I recognize the Holy Spirit who empowered the effort and ideas that that have gone into this dissertation by working through the social system of which I am part.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction

Trust matters in the life of organizations. It correlates positively with performance (Dirks, 2000), creativity (Bai, Ping Li, & Xi, 2012; Jo, Lee, Lee, & Hahn, 2015), job satisfaction, and organizational commitment (Dirks & Ferrin, 2002; Gibson & Petrosko, 2014; Xiong, Lin, Li, & Wang, 2016; Yang & Mossholder, 2010). Trust has been defined in different ways, but many scholars continue to use the definition articulated by Mayer, Davis, and Schoorman (1995). They characterized trust as "the willingness of a party to be vulnerable to the actions of another party" (p. 712). Theory based on this definition suggests that trust is associated with a broad set of desirable outcomes because an employee's willingness to be vulnerable allows her or him to focus cognitive and affective resources on the betterment of one's organization rather than self-protection (Mayer & Gavin, 2005).

This trust dynamic could be valuable for colleges and universities. Higher education faces many challenges in this first quarter of the 21st Century. As discussed below, expansion of online education, transformation in demographics, and challenges in financial realities are stressing many college and universities. Trust has potential to foster capabilities that could support success in a disrupted and dynamic era for higher education. Yet it has been studied in higher education contexts in very limited ways.

This study will advance understanding of the antecedents of trust within the context of colleges and universities. It will explore the relationship between faculty trust in senior leadership (e.g. president and her or his cabinet, comparable to "top management" or "organizational leadership" in other studies) and faculty perceptions of two particular types of empowering leadership behaviors in direct leaders (e.g. department chairs or program

directors, comparable to “supervisors” in other studies). The first empowering leadership behavior is participative decision-making. This is the degree to which a follower experiences her or his leader as authentically including the follower in decision-making (Arnold, Arad, Rhoades, & Drasgow, 2000). The second is informing. This is the degree to which a follower experiences her or his leader as explaining decisions, policies, and the role of the work group within the broader organizational context (Arnold, Arad, Rhoades, & Drasgow, 2000). If there is a relationship between trust in senior leadership and direct leaders’ participative decision-making and informing behavior, this may reveal a path for senior leaders to build trust by encouraging certain leadership behaviors among the direct leaders of faculty.

Background of the Study

Among the antecedents that researchers have found to correlate with generally desirable organizational outcomes, trust emerges as an important phenomenon. Though directionality is difficult to demonstrate, and many of the proposed outcomes of trust might interact with trust in a mutually reinforcing manner (Dirks & Ferrin, 2002), researchers have repeatedly found that trust correlates with positive phenomena. As noted above, studies have found relationships between trust and team performance (Dirks, 2000), creativity (Bai, Ping Li, & Xi, 2012; Jo, Lee, Lee, & Hahn, 2015), job satisfaction, and organizational commitment (Dirks & Ferrin, 2002; Gibson & Petrosko, 2014; Xiong, Lin, Li, & Wang, 2016; Yang & Mossholder, 2010).

Some studies have explored trust within the specific context of higher education. Vineburgh (2010) found that organizational trust positively correlated with organizational support for innovation at Historically Black Colleges and Universities (HBCUs). In a study of

organizational climate at an Australian university, McMurray and Scott (2013) found that trust was a determinant of climate. Hoppes and Holley (2014) found that trust was an important aspect in a small American university's recovery from an organizational crisis. These prior findings suggest that trust has significant potential value as higher education institutions navigate a disrupted era. However, research on faculty trust in leaders at colleges and universities has been limited.

An important factor in the study of trust is the referent of trust – the person in whom trust is placed. In their meta-analysis of trust research, Dirks and Ferrin (2002) found that trust in direct leaders had a different relationship with proposed outcomes than did trust in organizational leadership. While job performance and altruistic organizational citizenship behavior (OCB) had stronger correlations with trust in direct leader than trust in organizational leadership, intent to quit and job satisfaction had comparable correlations with both trust referents. Commitment to organization had meaningful positive correlations with both trust referents, but a stronger correlation with trust in organizational leadership. These findings and similar observations in more recent studies (Bai, Ping Li; & Xi, 2012; Yang & Mossholder, 2010) suggest that trust in the senior leadership of an organization is meaningfully related to desirable phenomena within organizations.

Dirks and Ferrin (2002) did find stronger correlations between trust and proposed antecedents when direct leaders were the referent of trust as opposed to organizational leadership. This might suggest that trust is easier to foster between employees and direct leaders than between employees and senior leadership. This could be because direct leaders have more opportunities to interact with and influence employee's levels of trust. If direct

leaders are better positioned to influence trust, a path from their behaviors to trust in senior leadership could present an effective path to building trust in senior leadership.

Problem Statement

The problem this study addressed is the need for effective leadership within colleges and universities as these organizations pursue their missions in a disrupted and dynamic sector of social service. Higher education institutions face an environment with new pressures and new opportunities. Effective leadership that fosters commitment and creativity will be valuable assets for colleges and universities navigating these uncharted seas.

Many factors are disrupting the environment for American colleges and universities. Online education has been expanding at a rapid pace. From 2012 to 2014, the number of students enrolled exclusively in distance education courses increased 23% (National Center for Education Statistics, n.d.). The demographics of college students are expected to shift greatly over the next decade. From 2012 to 2023, post-secondary enrollment of white students is expected to increase 7% while enrollment of Black students increases 25% and the enrollment of Hispanic students increases 34% (Hussar, Bailey, & National Center for Education Statistics, 2016). In addition to these changes in how and whom higher education needs to serve, the cost of higher education has become a point of popular critique (e.g., Hildreth, 2014). More scholarly analysis (e.g. Archibald & Feldman, 2011) suggests that a paradigm shift in the economic model of higher education may be needed to achieve the affordability expectations held by society.

The set of challenges facing colleges and universities is complex and beyond the reach of any single solution. Attention to dynamics of leader-follower relationships within institutions

may offer insight into how higher education leaders might effectively navigate these waters with ships that cannot be rationally controlled. Following other organizational theorists who have rejected the notion that organizations are rational systems, Birnbaum (2004) argued that the informal dynamics of higher education organizations are of more significance than the formal structures. It is the complex world of uncoordinated decisions by faculty members, students, administrators, donors, and legislatures that ultimately steers the ship. That complex world can be influenced, but not controlled (Pascale, Millemann, & Gioja, 2000). In such a complex and uncontrollable world, trust simplifies decision-making by allowing actors to assume that some negative realities will not actualize (Lewis & Weigert, 1985). College and university leaders will position themselves to help their institutions navigate a complex and changing environment if they are able to foster faculty trust in multiple levels of leadership.

One of the distinctive characteristics of colleges and universities is the tradition of shared governance that, in the United States, has emerged over the last century. In 1921, when the American Association of University Professors (AAUP) adopted a series of resolutions related to faculty involvement in governance, principles of shared governance were not practiced widely among American colleges and universities (Gerber, 2015). In 2001, faculty at a majority of the institutions surveyed by the AAUP determined degree requirements and curricular content (Kaplan, 2004). Faculty and administration at over half of the surveyed institutions jointly made decisions on the types of programs offered. This now widespread practice of shared governance provides a formal mechanism for faculty involvement in decision-making, particularly those decisions surrounding educational policy. Despite this mechanism for faculty participation in decision-making, American colleges and universities are

not exempt from low trust. Though no comprehensive study of faculty trust in American colleges and universities was found in an examination of research literature for this study, the need for trust in higher education is evidenced in the experience of many faculty and administrators and in the title of a recent essay in *Education*, "The Need to Trust and to Trust More Wisely in Academe" (Bowman, 2012).

Lack of faculty trust in American colleges and universities is an interesting phenomenon given the presence of formal mechanisms for participative decision-making. Dirks and Ferrin (2002) found a positive correlation between participative decision-making and trust in leader in their meta-analysis of trust studies. More recently, Huang, Iun, Liu, and Gong (2010) found a strong positive correlation between participative decision-making and trust in supervisor (.67 at $p<.001$ for managers and .67 at $p<.01$ for non-managers). While Dirks and Ferrin's (2002) meta-analysis showed a weaker correlation between participative decision-making and trust in organizational leadership as opposed to trust in direct leader, the correlation still existed at a moderately strong coefficient of .25.

Shared governance structures, such as faculty senates, would seem to be an organization level vehicle for participative decision-making. As such, one might expect that faculty involvement in governance increases faculty trust in senior leadership. If that is the case, an explanation for the anecdotal experiences of low faculty trust in administration is warranted. One such explanation might be that distrust is stimulated by a perceived decline in faculty involvement in governance (Burgan, 2004; Bowen & Tobin, 2015).

Another explanation for experiences of low faculty trust in college and university administration is that formal structures alone do not trigger the trust benefits of participative

decision-making. Lam, Huang, and Chan (2015) found that participative decision-making has a threshold at which performance gains are achieved. Lam, Huang, and Chan suggested that this threshold effect is an indicator that participative decision-making must be an authentic commitment by the leader rather than a superficial exercise. If that is the case, formal faculty involvement in governance might be ineffective by itself in engaging faculty and fostering trust in senior leadership.

If faculty do not perceive that senior leadership is genuinely committed to participative decision-making, formal faculty involvement in governance may be perceived as a charade or a site of power struggle. Mayer and Davis (1995) define trust as the willingness to be vulnerable to another party without surveillance or control of that party. Where faculty are formally involved in governance, but do not perceive strong and genuine commitment to participative decision-making on the part of administrators, formal faculty governance structures might work against trust in a couple different ways. In such an environment, faculty might experience faculty governance structures as technologies for senior leadership's surveillance and control in the form of political manipulation. Even if faculty do not experience governance structures in this way, they might experience governance structures as technologies for mitigating the faculty's own vulnerabilities in organizational power structures. If shared governance structures function as a formal way to decrease vulnerability, and so decrease the felt need for trust, those structures might enable distrust rather than foster trust (see discussion of Schoorman, Mayer, and Davis, 2007 under "Trust in Leader in Higher Education" below). In either case, faculty governance structures become sites of power struggle, not willing vulnerability. For this

reason, this study explored the variables of participative decision-making and informing rather than formal faculty governance.

Purpose Statement

The purpose of this study was to investigate a potential path to foster trust in two levels of leadership, direct leaders and senior leadership. Direct leader refers to a faculty member's most immediate leader or supervisor, such as a department chair or program director. Senior leadership refers to the highest executive leaders of the institution, often the president and her or his cabinet. The study tested a hypothesized path in which specific leadership behaviors by direct leaders correlate positively with trust in those direct leaders and then trust in senior leadership. The specific leadership behaviors explored were participative decision-making and informing.

Rationale

The rationale for this study rests on prior research. Researchers have found that trust in leader relates positively to participative decision-making and informing (Gao, Janssen, & Shi, 2011; Huang, Iun, Liu, Gong, 2010). In other studies, researchers have found positive correlations between trust in lower-level leaders and trust in senior leadership (Bai, Ping Li, & Xi, 2012; Mayer & Gavin, 2005; Yang & Mossholder, 2010). However, studies investigating these relationships have not occurred in the context of colleges and universities. Furthermore, only one study found to date has tested hypotheses regarding the relationship between direct leader behaviors and trust in senior leadership (Fulmer & Ostroff, 2017). Current evidence is consistent with what one would expect if such a relationship exists.

Research Questions

Trust in Direct Leader

Researchers have found that trust in direct leader positively correlates with participative decision-making and informing in large telecommunications companies in China (Gao, Janssen, & Shi, 2011; Huang, Iun, Liu, Gong, 2012). However, such a relationship has not been explored within the context of American college and university faculties. This leads us to the first two research questions of this study. Is there a relationship between faculty perceptions of participative decision-making by direct leaders and faculty trust in those leaders? Is there a relationship between faculty perceptions of informing behavior by direct leaders and faculty trust in those leaders?

Trust in Senior Leadership

In order to further understand the relationships between the proposed antecedents of trust and the two levels of leadership, this study also explored a possible path of trust development from the behavior of leaders at one level to trust in leaders at another level. If faculty perceive that direct leaders invite faculty into decision-making and share explanatory information about the direction of the institution, faculty might be more willing to be vulnerable to the institution as a whole. That trust in the institution might be projected onto senior leadership as symbols of the institution's decision-making system. This leads to the third and fourth research questions. Is there a relationship between faculty perceptions of participative decision-making by direct leaders and faculty trust in senior leadership? Is there a relationship between faculty perceptions of informing behavior by direct leaders and faculty trust in senior leadership?

Trust in Direct Leader as a Mediator

The fifth and sixth research questions of this study further explore the potential path from direct leaders' behaviors to trust in senior leadership. If direct leaders' behaviors cause trust in senior leadership, one might expect it to follow a path through trust in direct leader. If trust in direct leader mediates the relationship between specific behaviors of the direct leader and trust in senior leadership, this would be consistent with, though not a demonstration of, the existence of a causal relationship between those behaviors and trust in senior leadership. Does faculty trust in direct leader mediate the relationship between faculty perceptions of participative decision-making of that level of leadership and faculty trust in senior leadership? Does faculty trust in direct leader mediate the relationship between faculty perceptions of the informing behavior of that level of leadership and faculty trust in senior leadership?

Significance of Study

Trust in the Context of Higher Education

This study is significant as a contribution to the scant collection of literature that explores trust in the context of higher education. Shared governance, autonomy of faculty, and the highly specialized knowledge work of faculty differentiate higher education from commercial organizations. While some non-empirical essays (e.g. Bowman, 2012; Migliore, 2012; Pope, 2004) and empirical studies (e.g. Hoppes and Holley, 2014; McMurray & Scott, 2013; Moye, Henkin, & Floyd, 2006; Smith & Shoho, 2007) on trust in higher education have been published, this is a small and limited body of research.

This small body of research has documented the importance of trust. However, the published research is limited in its ability to provide practical advice for higher education

leaders. For example, research suggests that faculty with high degrees of psychological empowerment are more likely to trust leaders (Moye, Henkin, and Floyd, 2006). What empowering behaviors can college and university leaders engage in to promote trust? This study will test the potential of participative decision-making and informing as trust fostering leadership behaviors in colleges and universities.

The Relationship between Trust in Direct Leader and Trust in Senior Leadership

Dirks and Ferrin (2002) found a positive correlation between trust in direct leader and trust in organizational leadership. Based on that observation and the lack of studies exploring that relationship, they identified the need for research into the relationship between trust in direct leader and trust in organizational leadership. Since Dirks and Ferrin's meta-analysis, researchers have conducted studies comparing trust or perceived trustworthiness in different levels of leadership (Bai, Ping Li; & Xi, 2012; Mayer & Gavin, 2005; Yang & Mossholder, 2010). While these studies have yielded important insights, Fulmer and Ostroff (2017) is the only study found to date that has tested hypotheses regarding the direct relationship between trust in direct leader and trust in senior leadership. This study provided an opportunity to further investigate this relationship.

Building Trust in Senior Leadership

Dirks and Ferrin (2002) also recommended further research into practices that might affect trust at different hierarchical leadership levels. Since that call for research, Bai, Ping Li; and Xi (2012) found evidence supporting their hypothesis that top management's transformational leadership behavior positively correlated with perceived organizational support that, in turn, positively correlated with trust in top management. However, research

into potential antecedents of trust in senior leadership continues to be sparse. Examining trust in direct leader, Huang, Iun, Liu, and Gong (2010) and Gao, Janssen, and Shi (2011) found that trust in leader positively correlated with participative decision-making and informing. This study provided an opportunity to investigate participative decision-making and informing at the level of direct leaders as an antecedent of trust in senior leadership.

Definition of Terms

Trust

Trust is "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor irrespective of the ability to monitor or control that other party" (Mayer, Davis, & Schoorman, 1995, p. 712). A person can trust another person, another group of people, or an organization. This study focuses on the trust a faculty member has in two different levels of leadership: their direct leader and the institution's senior leadership as a collective.

Direct leader

Direct leader refers to the most immediate formal leader in the institution's hierarchy. This is the person to whom the faculty member reports. It is often a department chair or program director, but in some cases it may be a dean or other administrative position.

Senior Leadership

Senior leadership refers to the group of highest level executive leaders. At many institutions this is referred to as the president and her or his cabinet. Unlike direct leader, which refers to an individual, senior leadership refers to a collective. Management literature often refers to this highest level of leadership as "top management" or "organizational

leadership." "Senior leadership" is used in this study because it better fits typical organizational structures and cultures in the population under study.

Propensity to Trust

Propensity to trust is the general inclination one has to trust others (Mayer & Davis, 1999). This is not a primary construct under investigation. It will be included in the study's hypothesized structural model since it might account for a portion of the correlation which is anticipated between trust in direct leader and trust in senior leadership. Measuring propensity to trust will allow for the mitigation of a potential source of common method bias.

Participative decision-making

Participative decision-making is "a leader's use of team members' information and input in making decisions" (Arnold, Arad, Rhoades, & Drasgow, 2000, p. 255). In this study, a leader's participative decision-making is defined in terms of the follower's perception of her or his leader's behavior.

It is important to distinguish between participative decision-making and participation in decision-making. The former is a pattern of leadership behavior. The latter is the influence that an employee has on decision-making in the organization (e.g. Harel & Tzafrir, 1999; Wagner, 1994). Participative decision-making practiced by one's leader might influence an employee's participation in decision making, but so might other factors such as organization structure.

Informing

Informing "refers to the leader's dissemination of company wide information such as mission and philosophy as well as other important information" (Arnold, Arad, Rhoades, &

Drasgow, 2000, p. 255). While some recent researchers refer to this as information sharing (e.g. Gao, Janssen, & Shi, 2011; Lam, Huang, & Chan, 2015), the construct is more than passing along pieces of information. Informing, as defined by Arnold, Arad, Rhoades, and Drasgow's (2000) Empowering Leadership Questionnaire, entails explaining the direction of the organization and the role of one's work group in the organization.

Nature of the Study

The study was cross-sectional and quantitative. Data was collected from individual faculty members through an online survey. Structural equation modelling was used to test a model in which the relationships between the exogenous variables (faculty perceptions of their direct leader's participative decision-making and informing behaviors) and faculty trust in senior leadership are mediated by faculty trust in direct leader.

Assumptions and Limitations

An assumption in the study is that instruments developed in business contexts can be used to measure the same variable in higher education contexts. The instruments were slightly modified to use terms more common in higher education organizations. The survey also combines a unique set of instruments. It relies on the assumption that the combination of instruments will not negatively impact the validity and reliability of the instruments. Cronbach's alphas were calculated and a confirmatory factor analysis (CFA) was conducted to provide evidence for the reliability and validity of construct measures (see Chapter 4).

While the statistical analysis used in this study is a form of causal modelling, the cross-sectional nature of the study precludes demonstration of causality. The study tested cross-sectional data for statistical relationships that would be consistent with the causal theory that

supports the model. However, the results of this single study are not able to demonstrate causality.

Organization of the Remainder of the Study

The remainder of the study is divided into four chapters. Chapter two is a review of the research literature on empowering leadership, including participative decision-making and informing, and trust. Chapter three describes the methodology of the study, including theoretical framework and measures. Chapter four reports the study's results. Chapter five draws conclusions, discusses their implications for leadership theory and practice, and identifies avenues for future research.

Chapter 2: Literature Review

Introduction

Trust, at its core, is a matter of vulnerability and power. In performing trusting behavior, one declines a power struggle by refraining from attempts to surveil the other or exercise control over the other. This perspective defines trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor irrespective of the ability to monitor or control that other party" (Mayer, Davis, & Schoorman, 1995, p. 712). This construction of trust creates a conceptual link between trust and how leaders approach power. It also raises an important question for leaders. If leaders engage in the trusting behavior of empowering followers, will followers respond by trusting the leader?

The broad pool of research in the areas of trust and empowering leadership suggest that the answer to this question is "yes." However, questions regarding how trust can be fostered through hierarchical layers of leadership by employing particular empowering leadership behaviors remain. Previous studies found that participative decision-making and informing correlated positively to trust in immediate supervisor (Gao, Janssen, & Shi, 2011). Studies have also found a positive correlation between trust in senior leadership and trust in supervisor (Bai, Ping Li; & Xi, 2012; Fulmer & Ostroff, 2017; Mayer & Gavin, 2005). This invites two practical questions for senior leaders at colleges and universities. Do empowering leadership behaviors and trust relate to each other in a similar way in college and university contexts? Can direct leaders help foster trust in senior leadership by practicing participative decision-making and

informing behavior? While prior research suggested that the answer to both questions might be "yes," this study addressed these questions more directly.

Empowerment

The lack of surveillance and control that characterizes the vulnerability of trusting others creates a conceptual link between trust and power. As Foucault (1977) argued, surveillance, and the knowledge it constructs, is a technology of power. When one surrenders the pursuit of surveillance, one abstains from a means of exercising power over another. When a follower is willing to be vulnerable without attempting to surveil her or his leader or struggle for control, she or he is abstaining from a potential power struggle.

On the other side of the leader-follower relationship, Tzafrir (2005) argued that leaders who trust the employees in their organization "take risks and become vulnerable by sharing their power with their employees" (p. 1603). He found a significant positive relationship between human resource managers' trust in organization and employee participation in decision-making. If a leader takes initiative to distribute power to the follower, the need for power struggle is decreased. Such distribution of power by the leader is also a trusting behavior on the part of the leader; it makes the leader vulnerable to the follower. As discussed in the below subsections on reciprocal trust and leader-member exchange, such trusting behavior from the leader towards the follower can instigate an exchange in which the follower trust's the leader.

Empowerment has been approached in two different categories within the research literature: psychological empowerment and structural empowerment. Psychological empowerment refers to one's sense of self-determination, competence, impact, and

meaningfulness (Spreitzer, 1995; Wallace, Johnson, Mathe, & Paul, 2011). It is a felt empowerment in the internal psyche of a person. Structural empowerment refers to the distribution of power in the environment that is external to the individual. It can be facilitated through leadership behavior, organizing work units as self-managed or empowered teams, or other means of distributing power (Leach, Wall, & Jackson, 2003; Luciano, Mathieu, Ruddy, 2014; Wallace, Johnson, Mathe, & Paul, 2011).

The empowerment variables of interest in this dissertation, participative decision-making and informing, are categorized as empowering leadership behaviors under structural empowerment. This literature review addresses the broader category of empowerment, including psychological empowerment, because these have been closely related in the literature (e.g. Huang, Shi, Zhang, & Cheung, 2006).

Psychological Empowerment

Psychological empowerment is about intrinsic motivation. It is an "active orientation… in which an individual wishes and feels able to shape his or her work role and context" (Spreitzer, 1995, p. 1444). In its now classic and widely accepted formulation, the construct has four dimensions: self-determination, competence, impact, and meaningfulness (Spreitzer, 1995; Thomas & Velthouse, 1990). Self-determination is a sense of autonomy in controlling one's work, including how and when work is done. Competence is the belief that one has the abilities and skills necessary to succeed in a task. Impact is the perception that one has influence to affect outcomes. Meaningfulness is the sense that the work one does has value that is in accord with one's personal values.

Spreitzer (1995) found that access to information positively correlated with all four dimensions of psychological empowerment. Access to information included information needed to do one's job, information regarding management's vision and goals, and information regarding the performance of one's unit. Spreitzer's findings support the treatment of informing as an empowering leadership behavior.

Empowerment has also been conceptualized as a psychological climate (Wallace, Johnson, Mathe, & Paul, 2011). Psychological empowerment climate is the "shared psychological perceptions of empowerment related to meaningfulness, competence, self-determination, and impact" (Wallace, Johnson, Mathe, & Paul, 2011, p. 841). Unlike team empowerment climate, which is categorized as structural empowerment, psychological empowerment climate does not only exist in teams. Psychological empowerment climate can exist among a community that shares an environment.

Structural Empowerment

Structural empowerment "refers to the delegation of authority and responsibility to employees" (Wallace, Johnson, Mathe, & Paul, 2011, p. 840). It is the distribution of power to lower levels of an organizational hierarchy or throughout a flat organizational design. Structural empowerment can entail team-level configurations, such as self-managed or empowered teams (Kirkman and Rosen, 1999; Leach, Wall, & Jackson, 2003; Luciano, Mathieu, & Ruddy, 2014; Mathieu, Gilson, & Ruddy, 2006), individual job design that puts decision-making in the hands of individual employees (Leach, Wall, & Jackson, 2003), and/or leadership behaviors (Arnold, Arad, Rhoades, & Drasgow, 2000, Luciano, Mathieu, & Ruddy, 2014; Wallace, Johnson, Mathe, & Paul, 2011). The latter category, leadership behaviors, is of

primary interest for this study. Two major strands of research seeking to develop nuanced constructs in this category have emerged. One strand is from Manz and Sims' (1989) Self-leadership. The other strand is from Arnold, Arad, Rhoads, and Drasgow's (2000) empowering leadership behaviors.

Researchers have also explored leadership behavior in the context of empowered teams using the broad construct of "external leadership" (e.g. Kirkman and Rosen, 1999; Luciano, Mathieu, & Ruddy, 2014). "External leadership" refers to the presence of active leadership in the context of organizational units that are structured as empowered teams. It is not a construct that discriminates between particular kinds of leadership behaviors. This line of research is noted here, but is not reviewed in depth because the construct is too broad to illuminate nuances of leadership.

Self-leadership

One strand of empowering leadership research builds from the work of Manz and Sims (1989). They constructed empowering leadership as a matter of leading others to exercise effective self-leadership. This body of literature has defined empowering leadership as a style of leadership that "delegate[s] extensive responsibility to followers to create an environment that enables followers to satisfy needs for growth and autonomy by exercising effective self-control and self-direction toward organizational objectives" (Tekleab, Sims, Yun, Tesluk, & Cox, 2008, p. 187).

This line of research has found several positive outcomes from empowering leadership. Pearce and Sims (2002) found a positive correlation between empowering leadership and team effectiveness. Tekleab and colleagues (2008) found a moderately strong correlation between

empowering leadership and satisfaction with employees' supervisors. Tuckey, Bakker, and Dollard (2012) found that empowering leadership behavior of fire brigade captains was positively related to the work engagement of volunteer fire fighters.

Lorinkova, Pearsall, and Sims (2013) demonstrated that empowering leadership is associated with characteristics that suggest this leadership style is more effective than directive leadership (e.g. issuing detailed goals and instructions) for long-term success. The study consisted of ten rounds in a warfare computer simulation. Effectiveness was measured through the allocation of points for successfully protecting team assets and destroying enemy assets. Teams led with directive leadership achieved higher levels of performance in the first five rounds. However, teams led by empowering leadership developed greater team learning, behavioral coordination, team empowerment, and team mental models in the first five rounds. By round ten, teams led by empowering leadership achieved greater levels of performance, but not by a statistically significant margin. The development of these team characteristics and the trajectory of performance improvement at the end of the experiment's timeframe suggest that empowering leadership could lead to greater performance in the long-term.

Empowering Leadership Behaviors

A second strand of research on empowering leadership has emerged from Arnold, Arad, Rhoades, and Drasgow (2000). Researchers in this strand have defined empowering leadership as "leader behaviors whereby authority, autonomy, and responsibility are shared with employees in order to enhance and encourage employees to be more receptive and adaptive to their work environment" (Gao, Janssen, Shi, 2011, p. 788). While this does not directly contradict self-leadership, it does have a different focus. Rather than emphasizing the

development of self-actualization in followers through self-leadership, this line of research has focused more on the relationship between leader and follower.

Arnold, Arad, Rhoades, and Drasgow (2000) studied effective leadership on empowered teams in order to develop the Empowering Leadership Questionnaire (ELQ). While their study was conducted in the context of empowered, autonomous, or self-managed teams, it is more precise than the generic construct of external leadership (e.g. Luciano, Mathieu, & Ruddy, 2014). Arnold and colleagues identified specific leadership behaviors that are empowering.

For the first study in the development of the ELQ, Arnold and colleague's interviewed employees on empowered teams in three different organizations: a clothing retailer, a building product supplier, and a telecommunications company. Empowered teams were teams that had "more autonomy, self-direction, and control over their work environment" (2000, p. 250), such as scheduling, ordering materials, and sometimes hiring, firing and pay raises. Those interviews established an initial set of categories for empowering leadership behavior. The authors then wrote multiple survey items in those areas and conducted the surveys among employees at the telecommunications company and building products supplier. A factor analysis led to five sub-constructs of empowering leadership: leading by example, coaching, participative decision-making, informing, and showing concern. The ELQ was further validated in a third study that found expected correlations with other leadership instruments.

Arnold, Arad, Rhoades, and Drasgow (2000) noted that while "the behavioral requirements of leaders in empowered team environments and traditional environments appears to be quite different, there may be some similarities" (Arnold, Arad, Rhoades, & Drasgow, 2000, p. 251). In fact, studies in conventional work environments have found

relationships between sub-constructs of the ELQ and generally desirable leadership outcomes. These have included psychological empowerment (Huang, 2012; Huang, Iun, Liu, &Gong, 2010; Huang, Shi, Zhang, & Cheung, 2006;), organizational citizenship behavior (Huang, Iun, Liu, & Gong, 2010; Miao, Newman, & Huang, 2014), organizational commitment (Huang, Shi, Zhang, & Cheung, 2006), performance (Huang, 2012; Huang, Iun, Liu, &Gong, 2010; Lam, Huang, & Chan, 2015; Miao, Newman, & Huang, 2014), employee voice (Gao, Janssen, &Shi, 2011), and trust in leader (Gao, Janssen, & Shi, 2011; Huang, Iun, Liu, &Gong, 2010; Miao, Newman, & Huang, 2014).

Participative Decision-Making

Participative decision-making has emerged as the sub-construct of the ELQ that has garnered the most attention from researchers. Arnold, Arad, Rhoades, and Drasgow (2000) described participative decision-making as "a leader's use of team members' information and input in making decisions" (p. 255). Huang, Shi, Zhang, and Cheung (2006) found a positive and significant correlation between participative decision-making and the meaning sub-construct of psychological empowerment. However, in their sample as a whole, there was not a significant relationship with the other three sub-constructs of psychological empowerment: competence, self-determination, and impact. They did find a positive and significant relationship between participative decision-making and the competence aspect of psychological empowerment among those with short organizational tenure, but not for those with long organizational tenure. Huang and colleagues found partial support for the hypothesis that psychological empowerment mediated the relationship between participative decision-making and organizational commitment.

Gao, Janssen, and Shi (2011) conducted a study that provides strong evidence for the existence of a relationship between participative decision-making and trust. They examined participative decision-making and informing as moderators between trust in leader and employee voice among 314 front-line employees in 40 different work groups at a Chinese telecommunications company. They found that both participative decision-making and informing had significant positive correlations with trust in leader. These variables, along with coaching, which is another sub-construct in the ELQ, were also found to have moderating effects on the relationship between trust in leader and employee voice. Employee voice is the employees' willingness to speak out about issues they see and share ideas for improvement. Gao, Janssen, and Shi argued that empowering leadership behavior is critical to generating trust in leaders in a way that fosters employee voice.

Huang, Iun, Liu, and Gong (2010) also provided important evidence for the existence of a relationship between participative decision-making and trust. They found that the relationship between participative decision-making and organizational citizenship behavior (going above and beyond to help the organization) was mediated by psychological empowerment and perceived trustworthiness of one's employer. Huang and colleagues found that, when compared with perceived trustworthiness, psychological empowerment more fully mediated the relationship between participative decision-making and organizational citizenship behavior among managers. However, perceived trustworthiness more fully mediated the relationship between participative decision-making and organizational citizenship behavior among non-managers. Huang and colleagues provided the theoretical explanation that managers place a higher value on autonomy while non-managers place a higher value on trust

due to their greater vulnerability in the power structure of organizations. Huang and colleagues' finding is significant in the theoretical framework used in this dissertation. It suggests that participative decision-making might influence employees by building trust.

Huang (2012) further explored the relationship between participative decision-making and psychological empowerment. He theorized that an employee's controllability attributional style influences the degree to which participative decision-making foster's psychological empowerment. Controllability refers to the degree to which a person views events as within her or his control. It is a characteristic that is developed over time rather than a day-to-day or task-to-task assessment. Huang found that when employees generally view events as within their control, participative decision-making and psychological empowerment have a stronger relationship.

The long-term development of controllability and Huang's (2012) finding points to a complexity in studying leadership behavior. Even if a leadership behavior, like participative decision-making, generally correlates positively with a desired outcome, leaders are wise to take into account the particulars of each given person and situation. The follower is not a tabula rasa. Rather, she or he has been shaped by a history of leaders and other experiences. In some cases, these experiences foster a cynicism that requires a credible demonstration of sincerity.

Lam, Huang, and Chan (2015) made a discovery that highlights the value of such sincerity when leaders seek to influence organizations through participative decision-making. They found that leaders' participative decision-making had a J-shaped curvilinear relationship with the performance of followers when there are higher levels of informing. The researchers

concluded that a threshold of participative decision-making behavior needed to be met before gains in performance were realized. However, the threshold effect was only seen when followers' perceived high informing. The significance of this finding is that participative decision-making needs to be a consistent and, in the eyes of the follower, genuine leadership approach to be effective. It also suggests that participative decision-making needs to be accompanied with informing practices in order to facilitate effective participative decision-making. It may be that participative decision-making does not feel genuine to followers unless leaders also provide the information that followers believe they need to make a meaningful contribution to the decision-making process.

Participative decision-making, as we have defined it here, has also been studied under the nomenclature "consultative leadership." Studies have found a significant positive correlation between consultative leadership and perceived trustworthiness (Gillespie & Mann, 2004; Korsgaard, Schweiger, & Sapienza, 1995). Gillespie & Mann (2004) argued that

> This consultative leadership style is likely to build trust as it provides an opportunity for followers to voice their opinions, needs and concerns, and have greater influence and control over their work environment. This in turn acts to reduce their feelings of risk and uncertainty. (p. 592)

Gillespie and Mann's argument is helpful while also problematic given that they also defined trust as the willingness to be vulnerable. The reduction of "feelings of risk and uncertainty" would not increase trust if trust is the willingness to be vulnerable. Rather, it obviates the need for trust. If risk and uncertainty are mitigated, so is the need for a willingness to be vulnerable.

As argued in this dissertation, a more promising theoretical explanation of the relationship between participative decision-making and trust rests on social exchange. By becoming vulnerable through participative decision-making, leaders initiate the development of higher quality leader-member exchange and invite reciprocal willingness to be vulnerable. Reciprocal trust and social exchange are discussed further in the "Trust" section of this chapter.

Participation in decision-making has been studied in human resource literature as a separate construct from participative decision-making as a leadership behavior (e.g. Harel & Tzafrir, 1999; Pacheco & Webber, 2016; Wagner, 1994). While these two constructs are conceptually related, it is helpful to distinguish participative decision-making as a leadership behavior from participation in the human resource literature. The latter usually refers to the employee's influence on decision making in an organization. Importantly, it is not restricted to participation granted by the behaviors of the leader. Broader influences, such as organizational structures, can influence participation in decision-making as it has been studied in the human resource literature.

Informing

Many leadership scholars who promote empowerment have lauded the value of informing with well-reasoned assertions. Quinn and Spreitzer's (1997) claim that "[h]ighly empowered people feel that they understand top management's vision and strategic direction for the organization" (p. 45). Randolph (2000) noted the value of informing in culture changes that he witnessed as a consultant. Reflecting on the experience of a cable television company, he found that informing was critical for employees to "participate effectively in clarifying the vision and to give it meaning related to their jobs" (Randolph, 2000, p. 101). Randolph went on

to argue that “opening up the books signaled to people that they were trusted and valued colleagues with management…. Informing kick-started the rebuilding and enhancing of trust throughout the organization” (2000, p. 101). Despite such claims regarding informing, peer reviewed empirical research on informing in the context of leader-follower relationships has been limited.

The Informing sub-construct developed by Arnold, Arad, Rhoades, and Drasgow (2000) “refers to the leader’s dissemination of company wide information such as mission and philosophy as well as other important information” (p. 255). This includes not only providing information regarding what a decision is, but also an explanation of the decision. Drawing on the work of Arnold and colleagues, Lam, Huang, and Chan (2015) conceptualized informing “as the degree to which leaders openly share, discuss, and communicate important information needed to make decisions and form judgments” (p. 839).

Researchers have found that informing relates to participative decision-making and trust in leader (Gao, Janssen, & Shi, 2011; Lam, Huang, & Chan, 2015). Informing not only correlates with these two variables, but also appears to influence how they interact with each other and employee voice. As discussed above, informing is needed in order for participative decision-making to correlate with positive performance outcomes (Lam, Huang, & Chan, 2015). Studies have also explored informing as a moderating variable between employee voice and other variables (Chan, 2014; Gao, Janssen, & Shi, 2011). Gao, Janssen, and Shi (2011) found that informing, along with participative decision-making and coaching, moderated the relationship between trust in leader and employee voice.

In their development of an authentic leadership model, Avolio, Gardner, Walumbwa, Luthans, and May (2004) theorized that leaders build what Mayer and colleagues (1995) called the benevolence and integrity aspects of trustworthiness by engaging in, among other things, open communication and the sharing of critical information. Avolio and colleagues drew on social exchange theory to suggest that reciprocation of goodwill gestures contribute to the emergence of a "realistic social relationship" (2004, p. 810), similar to a high-quality leader-member exchange relationship. According to their model, sharing information leads to a reciprocation of trust.

Burke, Sims, Lazzara, and Salas (2007) included a concept very similar to informing in their integrated model of trust in leader. They proposed that "the setting of clear, compelling, direction will influence trust in leadership as it will be seen by subordinates as an indicator of leader ability" (2007, p. 615). Informing is a necessary component of direction setting as it entails offering explanations of institutional decisions. The informing sub-construct within the ELQ includes questions such as "explains company decisions," "explains company goals," and "explains how my work group fits into the company" (Arnold, Arad, Rhoades, & Drasgow, 2000).

Empowering Leadership Behavior and Cultural Context

Calls to value empowerment and democratization in the workplace arose out of American management scholars in the 1990s (e.g. Quinn & Spreitzer, 1997; Shipper & Manz, 1992; Spreitzer, 1995; Manz & Sims, 1989). Since then, a considerable amount of research making use of the constructs of psychological empowerment and structural empowerment has been conducted in American contexts. However, nearly all of the empirical studies using

Arnold, Arad, Rhoades, and Drasgow's (2000) ELQ to measure participative decision-making and informing sub-constructs of empowering leadership behaviors have been conducted in Chinese contexts. With historical retrospection, it is somewhat ironic that there was initial skepticism about the use of empowering leadership behaviors in China's high power-distance culture (Huang, Shi, Zhang, & Cheung, 2006; Robert, Probst, Martocchio, Drasgow, & Lawler, 2000). While the development of the ELQ was based on initial studies in American contexts, peer reviewed literature on participative decision-making and informing using the ELQ in Western contexts is scant. Huang, Shi, Zhang, and Cheung (2006) suggested that generational shifts might explain why participative decision-making appears to be effective in Chinese contexts. Huang and colleagues cited Liu (2003) and King and Bu (2005) to argue that younger generations of Chinese workers "are as receptive to Western management practices as employees in the West" (2006, p. 346).

While the use of the ELQ in western contexts is scant, Robert, Probst, Martocchio, Drasgow, and Lawler's (2000) study of empowering leadership using the ELQ among samples of employees in the United States, Mexico, Poland, and India suggested that empowering leadership behaviors are effective in low power distance cultures, such as that of the United States. In fact, they found a negative relationship between empowering leadership behaviors and employee outcomes among the Indian sample while finding a positive relationship among the Western samples. Robert and colleagues reported aggregate empowerment scores and did not report on the sub-constructs within the ELQ.

Shared Governance in Higher Education

Shared governance is a form of structural empowerment. More specifically, it is a formal structure that facilitates participation in decision-making. Due to the important difference between a formal structural mechanism (e.g. faculty senate) and leadership behaviors, studies of shared governance provide very limited insight into how participative decision-making as an empowering leadership behavior might influence faculty as followers. While shared governance creates an opportunity for participation in decision-making, it might also present a challenge to the development of trust. This last point is discussed in the sub-section on "trust in higher education."

The strongest research on shared governance has taken a historical perspective. As such, this review of shared governance literature will begin with a cursory summary of the history of shared governance in American colleges and universities. This helps to illuminate an important feature of the context in which this dissertation is exploring empowering leadership and trust.

While faculty governance over universities has been the norm in much of Europe for centuries, strong de jure faculty involvement in college and university governance did not arise in the United States until the 1960s (Bowen & Tobin, 2015). This "Golden Age" was facilitated by the increased power of faculty generated by an increased demand in the academic labor market. Prior to this time period, faculty often exercised de facto control over matters such as curriculum and student discipline. From 1945 to1970, the market demand allowed many faculties to negotiate greater formal participation in institutional decision making (Thelin, 2004). By the late 1960's, the American Association of University Professors "had begun to

assert the faculty's consultative rights in all matters affecting college and university decision making" (Bowen & Tobin, 2015, p. 86).

In the late 20th century, the formal power of faculty in institutional governance began to weaken while faculty control over courses remained "almost inviolate" (Burgan, 2004). While financial pressures, excess supply in the academic labor market, and the rise of online learning may also be influencing shared governance in these first decades of the 21st century (Bowen & Tobin, 2015), we are still too close to this emerging history to identify a clear historical narrative at this point. If broader trends in higher education are indeed weakening shared governance as an edifice of structural empowerment, participative decision-making as an empowering leadership behavior could play a valuable role for effective academic leadership in the coming years and decades.

The inherent limitation of using shared governance as a window into empowering leadership behavior is further limited by the body of literature on the topic. Literature on shared governance has lacked significant amounts of empirical research (Kaplan, 2004). Broad studies drawing on pre-existing data sets have presented relatively weak and sometimes contradictory evidence correlating faculty governance with measurable outcomes (Brown, 2001; Kaplan, 2004; McCormick & Meiners, 1988). The contradictory evidence might suggest that the formal structures of shared governance are not in themselves key drivers for success. Leadership behaviors that foster a genuine sense of participative decision-making could be a more salient factor. As Bowen and Tobin (2015) asserted, "[a] good governance structure is no substitute for having excellent leadership in key positions" (p. 8).

In a more narrow investigation, Lawrence and Ott (2013) studied faculty perceptions of organizational politics in regards to the governance of university athletics at universities in the NCAA Football Bowl Subdivision (Division 1-A). They found that faculty who served on athletics governance bodies were less likely to perceive in-group politics regarding the governance of athletics. Faculty perceptions that their campus valued shared governance and that the campus had centralized decision-making were also negatively correlated with perceptions of in-group politics. Ill-defined faculty governance roles regarding athletics, which was only measured with one item, was found to positively correlate with perceptions of in-group politics. Lawrence and Ott also found that perception of organizational politics in general negatively correlated with faculty satisfaction with governance. While perception of organizational politics cannot be treated as a direct proxy for faculty trust in leaders, one might reasonably argue that perceptions of unfair social influence on institutional decision making could decrease trust in organization and trust in senior leadership. Given that Lawrence and Ott (2013) did not directly study trust and that their sample represented Division 1-A schools, transferability to questions regarding faculty trust in leader must be done cautiously. Nonetheless, the study could suggest that faculty involvement in governance, as a form of participation in decision-making, might positively influence faculty trust in senior leadership. However, as discussed in the sub-section below regarding trust in higher education, there is a theoretical reason for believing this might not always be the case.

The current literature on shared governance does not provide strong evidence regarding the relationship between empowering leadership behaviors and trust in the context of higher education. Limited as it is, the extant literature weakly supports the possibility that

empowering leadership, and participative decision-making more specifically, might play a role in effective academic leadership. Further investigation of empowering leadership behaviors in the context of higher education is warranted.

Trust

According to Mayer, Davis, and Schoorman (1995), trust is "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor irrespective of the ability to monitor or control that other party" (p. 712). A willingness to be vulnerable with a lack of surveillance and control are key features of Mayer and colleagues' definition. The concept of vulnerability in defining trust cuts across multiple disciplines and authors, even when the term "vulnerability" is not employed (Rousseau, Sitkin, Burt, & Camerer, 1998).

In addition to the common use of vulnerability in defining trust (Fulmer & Gelfand, 2012; Nienaber, Hofeditz, Romeike, 2015), and in using Mayer, Davis, and Schoorman's (1995) definition in particular (e.g. Colquitt, Scott, & Lepine, 2007; Frazier, Tupper, & Fainshmidt, 2016; Gupta, Ho, Pollack, & Lai, 2016), defining trust around vulnerability is also supported by empirical studies. Colquitt and colleagues (2007) conducted a meta-analysis of 119 articles that studied trust using Mayer and colleague's definition. They found a significant positive correlation between trust and risk taking. Colquitt and colleagues found that trust correlated with trusting behavior when trust is defined as a willingness to be vulnerable and trusting behavior is defined as a decision to become vulnerable. Serva, Fuller, and Mayer (2005) provided support for the role of vulnerability in trust through a longitudinal study. They found that when one team avoided vulnerability, a second team perceived lower levels of

trustworthiness in the first team. Such findings demonstrate a coherency in this construction of trust.

Trust is distinguished from perceived trustworthiness and trusting behavior (Colquitt, Scott, & LePine, 2007; Gillespie, 2012; Lewis & Weigert, 1985; Mayer, Davis, & Schoorman, 1995). While trust is a willingness to be vulnerable, perceived trustworthiness is an assessment upon which that willingness is purportedly based. Trusting behavior is the act that is done out of one's willingness to be vulnerable to another party. As Lewis and Weigert (1985) argued, the knowledge and familiarity of another person (i.e. perceived trustworthiness) "opens the door to trust without actually constituting it" (p. 970).

The cognitive and affective bases of trust developed by McAllister (1995) are more precisely categorized as constructs of perceived trustworthiness, though researchers working from McAllister's framework usually report these as constructs of trust. Cognitive and affective bases of trust are usually measured with questions regarding the confidence one has in the intentions, ability, and benevolence of leaders (e.g. Yang & Mossholder, 2010). Confidence in how a leader will act is related to trust, but it is more accurately categorized as perceived trustworthiness and an antecedent of trust (Mayer & Davis, 1995). In contrast, instruments that measure trust as the willingness to be vulnerable ask questions regarding whether or not the respondent would put themselves in vulnerable positions with leaders (e.g. Mayer & Gavin, 2005).

Trust research has examined trust in and perceived trustworthiness of different trust referents. Trust referents have included leaders (e.g. Gibson & Petrosko, 2014), followers (e.g. Kim, Wang, & Chen, 2016), peers (e.g. Selmer, Jonasson, & Lauring, 2013), students (e.g. Smith

& Shoho, 2007), and one's organization as a collective (e.g. Jo, Lee, Lee & Hahn, 2015). Within the category of trust in leader, studies typically target either trust in direct supervisor (e.g. Miao, Newman, & Huang, 2014) or trust in an organization's top leadership collective (e.g. Mayer & Davis, 1999). Since this dissertation explores potential pathways for trust development from the behavior of direct leaders to senior leadership, literature regarding trust in direct leader and trust in senior leadership (sometimes referred to as top management or organizational leadership) are reviewed below.

Measuring Trust

Studies of trust in leader frequently use the trust measures developed by McAllister (1995) or Mayer and Davis (1999). As discussed above, McAllister's instrument measures perceived trustworthiness rather than trust itself. Gillespie (2012) argued against the use of perceived trustworthiness as a proxy for trust. Her argument rested on three points. First, vulnerability is a key discriminating feature of trust. Believing that another person is good and competent does not necessarily relate to vulnerability in the mind of a research participant. Second, researchers have found that perceived trustworthiness and trust relate to other constructs in different ways (e.g. Mayer & Davis, 1999). Third, trust has more practical value than perceived trustworthiness because it is closer to trusting behavior than is perceived trustworthiness. It is the difference between being willing to engage in trusting behavior vis-à-vis the trust referent and believing that the trust referent is worthy of one's willingness to engage in trusting behavior.

Mayer and Davis' (1999) trust measure emerged from a model of trust that distinguished between perceived trustworthiness and trust (Mayer, Davis, & Schoorman, 1995).

The most appealing feature of this instrument relative to McAllister's (1995) is its strong face validity in measuring willingness to be vulnerable. The McAllister instrument asks the respondent questions regarding the beliefs she or he holds regarding the trust referent. For example, "This person approaches his/her job with professionalism and dedication" (McAllister, 1995, p. 37). The Mayer and Davis (1999) instrument asks questions about how the respondent would be willing to behave relative to the trust referent. For example, "If I had my way, I wouldn't let ___ have any influence over issues that are important to me" (Mayer & Davis, 1999, p. 885).

Development of the Mayer and Davis (1999) 4-item instrument was initially reported by Schoorman, Mayer, and Davis in a 1996 Society for Industrial and Organizational Psychology paper presentation. Due to its importance in trust research, that paper was recently published in the *Journal of Trust Research* (Schoorman, Mayer, & Davis, 2016). The trust measure was validated with confirmatory factor analysis and in its initial deployment had a Cronbach's alpha of .82 and .75 (Mayer & Davis, 1999; Schoorman, Mayer, & Davis, 2016). However, Mayer and Davis (1999) found alphas of .59 and .66 in their study. Schoorman, Mayer, and Davis (2007) noted that lower alphas are generally expected in scales with few items. Nonetheless, in an effort to improve reliability, Mayer and Gavin (2005) added an extra item to the scale. They found alphas of .81 when measuring trust in plant manager and .72 when measuring trust in top management team. Using Mayer and Gavin's 5-item scale, Colquitt and Rodell (2011) found alphas of .82 and .84 while Frazier, Tupper, and Fainshmidt (2016) found an alpha of .90.

Gillespie (2012) developed the ten-item Behavioral Trust Inventory (BTI). Like the Mayer and Davis (1999) and Mayer and Gavin (2005) instruments, the BTI has strong face

validity. The scale asks participants to indicate their willingness to engage in behaviors that would make them vulnerable to the trust referent. The scale also had strong alphas at .90 and .93. Despite the merits of this trust measure, the Mayer and Gavin instrument had three important advantages for this study. First, it and its predecessor have been used in several other studies, giving it a breadth of evidence for reliability and validity. Second, both the Mayer and Gavin and Mayer and Davis versions of the instrument have been used to measure trust in leader with top management and lower levels of leadership as referents of trust. Third, the BTI has twice as many items. Since the survey for this study included three iterations of the trust measure, the brevity of the Mayer and Gavin (2005) instrument was beneficial.

Dirks and Ferrin's (2002) Meta-analysis

Dirks and Ferrin (2002) provided an influential and often cited meta-analysis of research on trust in leader. They analyzed 106 independent samples in both published and unpublished studies, including data on 27,103 individuals. The variables included 11 outcomes (e.g. job performance, organizational commitment, and job satisfaction) and 10 antecedents (e.g. transformational leadership, participative decision-making, and procedural justice). In addition, they also examined the difference between trust in direct leader and trust in organizational leadership.

It is important to note that Dirks and Ferrin (2002) appear to have operationalized a broad definition of participative decision-making. Some of the studies referenced in their meta-analysis measured the participation that employees exercise in the organization's decision-making (e.g. Magner, Welker, & Johnson, 1996). As discussed above, this is distinct from participative decision-making as an empowering leadership behavior. The former is about

the employee's opportunity for participation that is not limited to leader's behaviors, such as structural mechanisms. The latter is about a leader's behaviors that invite participation. While Dirks and Ferrin did not address this distinction, it appears that both are included among the studies in their meta-analysis.

The meta-analysis affirmed the general construct of trust. Dirks and Ferrin (2002) found significant relationships with all hypothesized outcomes and nearly all hypothesized antecedents. The exception was the lack of statistical significance in the relationship between trust in leader and length of relationship. In response to their finding that many leadership behaviors related to trust, the authors suggested that future research might focus on behaviors and practices thought to build trust. Noting differences in findings between trust in direct leader and trust in organizational leadership, Dirks and Ferrin also recommended additional research into how trust might be fostered at these two different levels.

Dirks and Ferrin (2002) used Rousseau, Sitkin, Burt, and Camerer's definition of trust (1998): "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another" (p. 395). This is very similar to the Mayer, Davis, and Schoorman's (1995) definition. Despite using this as their stated definition, Dirks and Ferrin's meta-analysis also included studies that used other definitions, such as McAllister's (1995) definition, which, as argued above, is more accurately categorized as perceived trustworthiness (Colquitt, Scott, & LePine, 2007). Dirks and Ferrin acknowledged this limitation while also noting that "research has provided almost no evidence on the implications of using alternative definitions" (p. 616). The value of their meta-analysis relative to its

weakness in definitional precision continues to make it an important contribution to trust research.

Trust in Direct Leader

Proposed antecedents of trust in direct leader and perceived trustworthiness of direct leader have been examined in multiple studies. Mayer, Davis, and Schoorman (1995) developed and tested a model of trust in which three aspects of perceived trustworthiness function as antecedents: benevolence, integrity, and ability. This model has been affirmed by subsequent studies (e.g. Colquitt, Scott, & LePine, 2007; Frazier, Tupper, & Fainshmidt, 2016). Researchers have also found that trust and perceived trustworthiness in direct leader significantly relate to interactional justice (Dirks & Ferrin, 2002), procedural justice (Dirks & Ferrin, 2002), informational justice (Colquitt & Rodell, 2011), transformational leadership (Nasra & Heilbrunn, 2016; Wang et al., 2016), authentic leadership (Agote, Aramburu, Lines, 2016; Xiong, Lin, Li, & Wang, 2016), ethical leadership (Lee, 2016) and participative decision-making (Dirks & Ferrin, 2002; Gao, Janssen, & Shi, 2011; Huang, Iun, Liu, & Gong, 2010; Miao, Newman, & Huang, 2014).

In their longitudinal study, Colquitt and Rodell (2011) found that informational justice at the beginning of the study predicted trust in supervisor four months later. This study is helpful not only for its longitudinal approach, but also because it measured trust using the Mayer and Gavin (2005) instrument, which measures willingness to be vulnerable. Informational justice was operationalized with questions regarding supervisor's candor, explanation of decision-making procedures, timely communication, and individualization of communication. As such,

informational justice as a construct has similarities with the informing construct examined in this study.

Researchers have also found relationships between trust in leader and several desirable outcomes. Researchers have found that perceived trustworthiness of direct leader and trust in direct leader correlate significantly with performance (Brower, Lester, Korsgaard, & Dineen, 2009; Dirks, 2000; Dirks & Ferrin, 2002; Jaramillo, Bande, & Varela, 2015; Kim, Wang, & Chen, 2016), dysfunctional behavior in sales employees (negative correlation) (Choi, Dixon, & Jung, 2004), job satisfaction (Dirks & Ferrin, 2002; Gibson & Petrosko, 2014; Nasra & Heilbrunn, 2016), intention to quit (Dirks & Ferrin, 2002; Brower, Lester, Korsgaard, & Dineen,, 2009; Gibson & Petrosko, 2014), organizational citizenship behavior (Brower, Lester, Korsgaard, & Dineen,, 2009; Dirks & Ferrin, 2002; Nasra & Heilbrunn, 2016), and organizational commitment (Dirks & Ferrin, 2002; Xiong, Lin, Li, & Wang, 2016). Trust in leader also relates to ethical decision-making in a V-shaped manner. Zanin, Bisel, and Adame (2016) found that both high-trust and low-trust in leader positively related to an increased likelihood of objecting to unethical requests from leaders relative to a control group.

Trust in Senior Leadership

Proposed antecedents of trust in senior leadership have also been studied, but to a lesser degree. Mayer and Davis (1999) found that employees' perceptions of the accuracy and usefulness of an employee appraisal system influenced trust in top management through three factors of perceived trustworthiness: ability, benevolence, and integrity. Dirks and Ferrin's (2002) meta-analysis found correlations between trust in and perceived trustworthiness of

organizational leadership and interactional justice, procedural justice, distributive justice, participative decision-making, and perceived organizational support.

Researchers have also found that trust in senior leadership is associated with desirable outcomes, especially broader outcomes that relate to the organization rather than particular task or affective experiences. Perceived trustworthiness of senior leadership has correlated with job satisfaction and organizational commitment (Dirks & Ferrin, 2002; Yang & Mossholder, 2010), as well as creativity (Bai, Ping Li, & Xi, 2012). Chughtai and Buckley (2013) also found a significant positive relationship between perceived trustworthiness of top management and organizational identification. The latter mediated the relationship between perceived trustworthiness of top management and work engagement. Mayer & Gavin (2005) found evidence that trust in top management related to organizational citizenship behavior indirectly by way of a positive relationship with ability to focus.

The Mayer and Gavin (2005) study is the only one of these that can be confidently said to have measured trust as the willingness to be vulnerable. Dirks and Ferrin's (2002) meta-analysis combined data from studies that examined both trust and perceived trustworthiness while Yang and Mossholder (2011) and Chughtai and Buckley (2013) used instruments that measure perceived trustworthiness. Despite this limitation of the Dirks and Ferrin and Yang and Mossholder and Chughtai and Buckley studies, they still might indicate a connection between trust in senior leadership and organizational commitment and job satisfaction.

Comparing and Relating Trust in Direct Leader with Trust in Senior Leadership

Studies that have compared trust in direct leader with trust in senior leadership (or their perceived trustworthiness corollaries) have yielded consistent differences in these two levels of

leadership (Bai, Ping Li; & Xi, 2012; Dirks & Ferrin, 2002; Dirks & Skarlicki, 2004; Mayer & Gavin, 2005; Yang & Mossholder, 2010). Trust in direct leader tends to have stronger relationships with proposed antecedents and outcomes that are closer to the day-to-day experience of followers, such as in-role and extra-role behavior. In contrast, trust in senior leadership tends to have stronger relationships with proposed antecedents and outcomes more closely related to the broader organizational environment, such as perceived organizational support and organizational commitment. Though Chughtai and Buckley (2013) did not measure perceived trustworthiness of direct leader and perceived trustworthiness of top management in the same study, their finding that organizational identity mediated the relationship between perceived trustworthiness of top management and work engagement is consistent with the claim that trust in senior leadership influences employee outcomes conceptually related to the organization.

Dirks and Ferrin's (2002) meta-analysis supports this observation. They found that interactional justice, procedural justice, and distributive justice more strongly predicted trust in direct leader than they predicted trust in organizational leadership. Perceived organizational support was a stronger predictor of trust in organizational leadership than trust in direct leader.

In a study of trust in plant managers and trust in top management, Mayer and Gavin (2005) adapted the Mayer and Davis (1999) measurements of trust and perceived trustworthiness to measure perceptions of ability, benevolence, and integrity. While all three of these trustworthiness factors predicted trust in both trust referents, ability and benevolence differed in their correlational strengths for trust in plant manager and trust in top management.

Ability had a stronger correlation with trust in plant managers than did benevolence. However, benevolence had a stronger correlation with trust in top management than did ability.

The plant manager's proximal influence on the work of an employee might make perceived ability a more salient factor for trust in mid-level leaders. The distance from the day-to-day work of top management might make assessment of top management's ability less salient. Lower level employees might also put less stock in their own assessments of top management's ability when it comes to attributing trust. However, the influence that top management wields over the transactional aspect of an employee's relationship with an organization (i.e. having income generating employment) might make perceived benevolence particularly important for one's trust in top management.

Yang and Mossholder (2010) explored perceived trustworthiness of leaders with two different referents of trust (direct supervisor and top management) and two different bases of trust (cognitive trust and affective trust). They found that different bases and referents of trust predicted different outcomes. The affective base of trust in supervisor positively correlated with in-role and extra-role behavior of followers. The affective base of trust in top management and affective basis of trust in supervisor were positively correlated with affective organizational commitment. Interestingly, the cognitive base of trust in management and affective base of trust in supervisor predicted job satisfaction.

Bai, Ping Li, and Xi (2012) compared the outcomes of trust in supervisor and trust in top management among Chinese Executive MBA students and those students' subordinates. While the study is limited by the potential bias that exists when one's supervisor asks her or him to participate in a study for the supervisor's class, it supports general conclusions drawn from

other dual-referent studies. That is trust in direct leader and trust in senior leadership are distinct phenomena with distinct dynamics.

Bai, Ping Li, and Xi (2012) found that both trust in supervisor and trust in top management were positively related with organizational citizenship behavior. However, trust in supervisor significantly correlated with in-role performance of employees while trust in top management did not. Trust in top management significantly correlated with creativity while trust in supervisor did not. Similar to Mayer and Gavin's (2005) findings, top management's distance from day-to-day work might give trust in top management less influence on the day-to-day realities of in-role performance. However, as Bai, Ping Li, and Xi suggested, the role of top management in the larger picture of an organization might foster a context where creativity is facilitated. This latter suggestion is supported by Jo, Lee, Lee, and Hahn (2015) who found a positive and significant correlation between trust in organization and creativity, but not trust in direct leader and creativity.

Fulmer and Ostroff (2017) theorized and studied a trickle-up model in which trust transfers from direct leader to top leader. Their argument drew on Stewart's (2003) study of trust transfer between organizations connected through hyperlinks on the World Wide Web to establish that trust can transfer from one referent to another. Since direct leaders can serve as representatives of the organization in the minds of their followers (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002; Eisenberger et al., 2010), Fulmer and Ostroff expected trust in direct leader to transfer from direct leader to organizations' top leaders. Fulmer and Ostroff argued that "the greater familiarity and more frequent interactions

employees have with the direct leader are more salient in forming trust, which can then be transferred upward onto the less familiar top leader." (p. 650).

In their cross-sectional survey study among 336 officers-in-training at a United States military academy, Fulmer and Ostroff (2017) found that trust in direct leader and trust in top leader positively related to each other. They also used structural equation modeling to test a causal model with procedural justice as a mediator between trust in direct leader and trust in senior leadership. The results of their structural equation modelling were consistent with their theoretical causal structure.

Fulmer and Ostroff's (2017) study supported their trickle-up model of trust transfer, but also had an important weakness. Their argument to model trust in direct leader as a cause of procedural justice perception was not strongly stated given the more common assumption that procedural justice would be the cause of trust. The studies they cited (Holtz, 2013 & Holtz, 2015) addressed procedural justice related to a particular event whereas Fulmer and Ostroff investigated general perceptions of a leader's procedural justice. While Fulmer and Ostroff used temporal separation to reduce common-method bias, their study was cross-sectional and did not provide empirical evidence of causality. It is possible that their statistical analysis would have produced similar results if procedural justice had been modeled as the cause of trust in direct leader (Kline, 2016). Regardless of whether procedural justice caused trust in direct leader or trust in direct leader caused procedural justice, the correlational evidence of their study was consistent with the theory of trickle-up trust transfer in which trust in direct leader can transfer up to senior leadership.

Studies exploring trust in direct leader and trust in senior leadership at the same time have demonstrated unique characteristics of trust in each referent. These studies have also found significant positive correlations between trust in lower-level leaders and trust in senior leadership (Bai, Ping Li, & Xi, 2012; Fulmer & Ostroff, 2017; Mayer & Gavin, 2005; Yang & Mossholder, 2010). Such correlation would be consistent with the existence of a relationship between the two types of trust. The relationship between trust in direct leader and trust in senior leadership has not been explored extensively, but Fulmer and Ostroff (2017) found support for their theory that trust can transfer from direct leader to senior leadership.

Perceiving and Reciprocating Trust

Lewis and Weigert (1985) argued that trust is a social reality that exists in social relations, not merely within the psyche of an individual. While Brower, Schoorman, and Tan (2000) argued against a location of trust purely in social relations instead of individual perceptions, the relational nature of trust is a helpful contribution to trust research (Nienaber, Hofeditz, & Romeike, 2015). This has been empirically observed in studies of felt trust and mutual trust (e.g. Kim, Wang, & Chen, 2016; Meyer, Le Fevre, & Robinson, 2017; Salamon & Robinson, 2008; Serva, Fuller, & Mayer, 2005). It is also supported by trust theorists who have drawn a distinction between character-based and relationship-based perceptions of trust (Dirks & Ferrin, 2002; Dirks & Skarlicki, 2004).

Felt trust is the degree to which one perceives that they are trusted by another. Researchers have observed positive correlations between felt trust from supervisors and performance (Kim, Wang, & Chen, 2016; Salamon & Robinson, 2008). Brower, Lester, Korsgaard, and Dineen (2009) put forth a compelling logical argument to explain this

relationship. They suggested that a "manager's trust in the subordinate is likely to influence the way the manager treats the subordinate, which in turn is likely to affect the subordinate's behavior" (p.330). However, disconnect between supervisor trust in follower and follower's felt trust might prevent the realization of the benefits of felt trust in some cases. Kim, Wang, and Chen (2016) found only a weak positive correlation between followers' felt trust and the degree to which their supervisors reported trust in the follower. Followers often did not perceive that their supervisors trusted them even when their supervisors did trust them. Kim, Wang, and Chen suggested that leaders could engage in empowering behaviors to increase felt trust and so realize the benefits from followers' perceiving that their supervisor trusts them.

A longitudinal study conducted by Serva, Fuller, and Mayer (2005) provides additional insight into how trust between two parties interacts. The study divided a sample of 94 advanced-level undergraduate students into 24 teams. Each team functioned as a management team in relationship to one team and a development team in relationship to another team. Management and development dyads worked together to create a website over the course of 40 days. Those 40 days were divided into four 10-day phases. At the end of each phase, a deliverable was handed-off and the members of each team completed a survey. At T1, the management team gave the developer team a document identifying the project requirements. At T2, the developer team submitted a prototype to the management team. At T3, the management team provided feedback. At T4, the developer team submitted the final product.

The longitudinal design of the study allowed for a cycle of trust reciprocation to develop over a 40 day period. A limitation of the study was that the researchers did not employ

traditional levels of control associated with laboratory experiments. However, they were able to observe a reciprocal dynamic over time in a context where the participants had a sincere interest in the quality of the final product as reflected in their grades.

Serva, Fuller, and Mayer (2005) found that risk-mitigation techniques (formalizing and scoping for developers and delegating and monitoring for managers) conducted by one team negatively related to the other team's perception of that first team's trustworthiness. This finding supported the theoretical argument that if team A engaged in risk-mitigation, and so demonstrated a lack of trust in team B, team B would respond by trusting team A less by perceiving team A to be less trustworthy. This suggests that one party's trusting or distrusting behavior can directionally influence the other party's degree of trust.

Serva, Fuller, and Mayer's (2005) finding is important for the theoretical framework of this study. A central component of that framework is the theoretical claim that a leader's participative decision-making and informing behaviors are vulnerable actions. When perceived by the follower, those vulnerable actions are expected to positively influence the follower's willingness to be vulnerable to the leader's actions.

Trust and Leader-Member Exchange

The reciprocal dynamic of trust has led many researchers who take a relationship-based perspective of trust to situate trust within the frameworks of social exchange and leader-member exchange (LMX). Prior research in this area provides a theoretical link between trust and empowering leadership behaviors, such as participative decision-making and informing. LMX suggests that as a leader manifests trust through participative decision-making and informing, followers reciprocate with their own trust in that leader.

Overview of Leader-Member Exchange

Social exchange is a transaction rooted in implicit relational reciprocity rather than explicit economic transactions (Cropanzano & Mitchell, 2005). Unlike economic exchanges, social exchanges do not explicitly set a specified obligation, such as a dollar amount, owed to one party (Blau, 1964). The unspecified nature of social exchange creates a snowball effect for trust. Blau (1964) argued that "by discharging their obligations for services rendered, if only to provide inducements for the supply of more assistance, individuals demonstrate their trustworthiness, and the gradual expansion of mutual services is accompanied by a parallel growth of mutual trust" (p. 94).

LMX draws on social exchange theory and applies it to the leader-member relationship. Whereas other leadership theories focus on the leader or the follower, LMX focuses on the relationship between the leader and the follower (Graen & Uhl-Bien, 1995). Early LMX research established that different followers who reported to the same leader described that leader in very different ways (Graen, Liden, & Hoel, 1982; Graen & Schiemann, 1978; Graen & Uhl-Bien, 1995). This has also been affirmed in more recent studies of LMX (dis)similarity (Sherony & Green, 2002; Tse, Lam, Lawrence, & Huang, 2013).

Tse and colleagues (2013) found no significant correlation between the LMX scores of coworker A and coworker B who reported to the same supervisor. Tse and colleague's sample was young (mean age of 25), had fairly short organizational tenure (mean tenure of 1.2 years) and short lengths of time on the same team (mean dyadic relationship of 5 months). These factors, particularly the short amount of time sharing the same supervisor, might have influenced the very weak and statistically insignificant correlation among their sample.

Nonetheless, it demonstrated that coworkers experience different qualities of exchange with the same leader in a short duration. Sherony and Green (2002) did find a significant correlation (.20, $p<.05$) in LMX among coworkers in their sample of older (mean age of 36.7) and longer tenured (mean tenure of 4.24 years) employees. While this correlation suggests that many coworkers have similarities in how they experience their leader, the relatively modest magnitude of the correlation suggests that there are also many dissimilarities.

The foundational tenant of LMX theory is that "effective leadership processes occur when leaders and followers develop and maintain high-quality social exchange relationships" (Graen & Uhl-Bien, 1995, p. 229). Trust, respect, and obligation characterize "high-quality exchanges" versus "low-quality exchanges." Leader-follower relationships can move from basic employer-employee transactions (low-quality exchanges) to partnerships with emotional bonds (high-quality exchanges). In those cases, "formalized hierarchical relationships are no longer emphasized by the partners and the relationship becomes one more like peers than superior-subordinate" (Graen & Uhl-Bien, 1995, p. 233).

LMX as A Theoretical Link between Empowerment and Trust

According to LMX theory, "leaders provide the first signal of a desire for a closer relationship to subordinates" (Cropanzano & Mitchell, 2005, p. 888). A leaders' empowering behaviors of participative decision-making and informing could serve as that first signal. To invite followers into decision-making and to share information with followers is trusting behavior. It provides a first signal of vulnerability and so a first signal of trust. It provides a first signal that the leader-follower relationship is something more than a hierarchically ordered economic transaction. In fact, prior research has found a positive relationship between LMX

and leader's trust in followers (Gomez & Rosen, 2001). After leaders effectively send a first signal of trust, such as behaving in a way that generates an experience of participative decision-making and informing on the part of followers, LMX, and Social Exchange theory more broadly, suggest that followers reciprocate with trust in leader. Serva, Fuller, and Mayer (2005), discussed above, provided longitudinal support for such a cause and effect relationship.

Brower, Schoorman, and Tan (2000) argued that the findings of LMX research support an argument that the quality of leader and follower relationships is better represented as a dual-construct of leader trust in follower and follower trust in leader. The strongest empirical evidence used in their argument was that trust was not equally reciprocated between followers and leaders (see also the more recent study by Kim, Wang, & Chen, 2016). In a later study, Brower and colleagues (2009) found that only 26% of leader-follower dyads in a hotel and resort company had high mutual trust. High mutual trust was defined as both leader and follower having trust scores above the median. While studies such as Serva, Fuller, and Mayer (2005) indicate there is a reciprocal dynamic in trust, it might not be a dynamic of equal reciprocity.

Brower, Schoorman, and Tan (2000) drew on trust theory to shift from the leader-follower relationship itself to the leader's and follower's perception of the relationship. They suggested a trust-oriented construct with four sub-constructs: leader's perception of follower's trustworthiness, follower's felt trust, leader's felt trust, and follower's perception of leader's trustworthiness. Brower, Schoorman, and Tan's model did not negate LMX. Rather, it extended LMX through integration with trust theory. It importantly pointed to the perception of each dyadic member as the locus of social relationships. Even if one argues the ontological

veracity of this claim à la Lewis and Weigert (1985), it clarifies a practical reality. Leader-follower relationships are almost always observed at the point of an individuals' perceptions, even in LMX research.

LMX research has also drawn a connection between trust and empowerment. In their meta-analysis of LMX literature, Dulebohn, Bommer, Liden, Brouer and Ferris (2012) found a significant and positive relationship between LMX and follower's psychological empowerment. Dulebohn and colleagues argued that the relationship between LMX and empowerment exists because "followers in high quality relationships have leaders who provide them support, challenging assignments, increased responsibility, decision-making capabilities, and access to information, all of which should increase perceptions of meaning, competence, self-determination, and impact" (2012, p. 1729). Furthermore, they cited Aryee and Chen (2006) to argue that information access granted to followers in high quality LMX relationships should increase followers' sense of meaningfulness in their work. In this conceptual framework, trust, as an aspect of LMX, and information access, as an aspect of LMX, interact with the follower's experience of empowerment.

While not measuring LMX, this dissertation further explores the Leader-Member Exchange dynamic. LMX suggests that as leaders initiate trust and act more like partners than superiors, followers reciprocate with trust. The hypothesized relationships between empowering leadership behaviors and trust are examples of high quality exchanges. Furthermore, this dissertation's examination of trust-building through hierarchical layers of leadership contributes to understanding of the LMX relationships within the interdependent networks of organizations (Graen & Uhl-Bien, 1995).

Trust in Leader in Higher Education

While much of the research on trust has been conducted in business settings, trust in the context of higher education has been explored to some extent. The literature on trust in the context of higher education suggests that faculty trust in leader might be influenced by organizational support for innovation (Vineburgh, 2010), faculty rank (negative correlation) (Smith & Shoho, 2007), and psychological empowerment (Moye, Henkin, & Floyd, 2006). These antecedents of trust are consistent with trust research conducted in other organizational contexts.

In addition, Moye, Henkin, and Floyd's (2006) finding that psychological empowerment positively correlated with faculty perceptions of the trustworthiness of department chairs is consistent with the theoretical argument that empowering leadership increases trust. Though psychological empowerment is a distinct construct from empowering leadership behaviors, psychological empowerment has been found to partially mediate the relationship between participative decision-making and organizational citizenship behavior (Huang, Iun, Liu, & Gong, 2010). If participative decision-making positively correlates with psychological empowerment and psychological empowerment positively correlates with faculty trust in leaders, it would be reasonable to expect participative decision-making to correlate positively with faculty trust in leaders.

Studies of trust within colleges and universities have also suggested that trust in leader leads to desirable outcomes among faculty. McMurray and Scott (2013) found that trust was a determinant in organizational climate in their study of an Australian university. In a case study of a small American university, Hoppes and Holley (2014) found that the rebuilding of trust

played an important role in the institution's recovery from a crisis that entailed the resignation of the former president and chair of the board (see also Hoppes, 2009).

Jiang and Probst (2015) investigated several outcomes of trust in administration and trust climate in a public university in the northwest region of the United States. Unlike trust in direct leader or trust in senior leadership, trust in administration measured trust in all levels of administration as a collective, from department chairs to the president. Trust climate aggregated individual trust scores at the department level. Jiang and Probst found that both individual faculty member trust in administration and department trust climate positively and significantly related to job satisfaction, affective commitment, job security, motivation to provide service, and work engagement. Trust in administration and trust climate negatively and significantly related to turnover intentions and burn out. Though Jiang and Probst were investigating a leadership collective that spanned multiple hierarchical levels, their findings suggest that faculty trust in leader relates similarly to similar outcomes as trust in leader in other types of organizations.

While available evidence suggests that trust in leader within the higher education context is very similar to trust in leader in other contexts, there are unique factors in higher education. Leaders of colleges and universities may face a counterintuitive challenge in developing trust. Shared governance might actually inhibit trust in leader. If shared governance functions as a control mechanism to mitigate risk for faculty, it might prevent the development of trust. Schoorman, Mayer, & Davis (2007) made the following argument in regards to the impact of control systems on trust.

> If there is a very strong system of controls in an organization, it will inhibit the development of trust. Not only will there be few situations where there is any remaining perceived risk but trustworthy actions will be attributed to the existence of the control system rather than to the trustee (cf. Strickland, 1958). Thus, a trustee's actions that should be interpreted as driven by benevolence or by integrity may be viewed simply as responses to the control systems. (p. 357).

If shared governance does indeed inhibit the development of trust, this increases the challenge of building trust for college and university leaders. While the existence of shared governance might work against trust, dismantling shared governance structures would likely do even more damage to trust, at least in the near term. Such a dismantling would take control from faculty and move it to the leaders, likely signaling a lack of trust from senior leaders and decreasing the reciprocation of trust from faculty. This dilemma reinforces the value of employing leadership behavior strategies to develop trust in leader. This might be especially true for trust in senior leadership at institutions in which shared governance plays a larger role in the relationship between faculty and senior leadership than it does in the relationship between faculty and direct leaders, such as department chairs.

Summary

Empowering leadership and trust are conceptually linked by vulnerability. LMX theory and the research literature on trust and empowering leadership suggest that leaders might be able foster trust from followers by demonstrating their own willingness to be vulnerable through empowering leadership behaviors. Participative decision-making and informing in particular are empowering and trusting behaviors that might instigate a trust exchange. While

prior studies have demonstrated that trust in leader has relationships with participative decision-making and informing, most of those studies have been conducted in contexts of Chinese companies. Research into these relationships in the context of American higher education has been lacking.

Trust research has demonstrated a distinction between trust in direct leaders and trust in senior leadership. Research has also suggested that a relationship exists between trust in direct leaders and trust in senior leadership. However, that relationship has not been thoroughly explored. If organizations can foster trust in senior leadership by encouraging empowering leadership behaviors among direct leaders, this could improve organizational health and capacity.

Chapter 3: Methodology

Introduction

This study explored relationships between two empowering leadership behaviors (participative decision-making and informing) and faculty trust in leader. The purpose of the study was to test a relational path from direct leaders' empowering leadership behaviors through trust in direct leader to trust in senior leadership. More specifically, the study used structural equation modelling to test for statistical associations among those variables that would be theoretically consistent with a path from direct leader behaviors to trust in senior leadership.

Research Design Strategy

This was a correlational study with a cross-sectional survey design. The unit of analysis was individual faculty members. The researcher sent a link for an online survey directly to individual faculty members by email. Participating faculty members provided data regarding their perceptions of direct leaders and senior leadership and their own trust in those leaders. The study employed validated instruments that were developed by other researchers and used in multiple studies. Hypotheses regarding the relationships between variables were tested using structural equation modelling.

Philosophy and Justification

Why a Quantitative Method?

The methodology employed in this study uses a pragmatic epistemology. At its core, pragmatism is focused on intended consequences (Creswell, 2014). This influences both the

types of methods employed in research and the questions which the researcher asks. As Cherryholmes (1992) stated:

> For pragmatists, values and visions of human action and interaction precede a search for descriptions, theories, explanations, and narratives. Pragmatic choices about what to research and how to go about it are conditioned by where we want to go in the broadest senses. Values, aesthetics, politics, and social and normative preferences are integral to pragmatic research, its interpretation and utilization. (p. 13)

Pragmatism assumes the existence of a reality external to the mind. However, it is skeptical of our ability to distinguish between that external reality and one's own reading of that external reality (Cherryholmes, 1992). The historical, social, cultural, and political context of the researcher gives shape to her or his perception of the world. As such, the questions a researcher asks and the interpretation of data are shaped by the values and other contextual factors of the researcher. For example, the interest in empowering leadership expressed through this dissertation is influenced by the researcher's highly egalitarian home culture of Minnesota and attitudes towards power rooted in Christian theology (e.g. Philippians 2:5-11). Those values shape the way this study pursued the desired consequence outlined in the problem statement of this dissertation, i.e. effective leadership in a disrupted higher education landscape.

The values of the researcher shaped the questions investigated in this study. The questions investigated have, in turn, shaped the methods used in the study. Since pragmatists "do not see the world as an absolute unity" (Creswell, 2014, p. 11), they consider neither qualitative nor quantitative methods as absolutely superior to the other. External reality and

realities constructed within the mind both play an important role in the creation of knowledge. The epistemological complexity created by the relationship between external and internal realities precludes the pragmatist from putting absolute faith in any single methodology. From this vantage point, selecting quantitative or qualitative methods becomes a practical rather than philosophical issue. Pragmatists seek to select the method that will best serve the research question(s) (Creswell, 2014; Orcher, 2014).

There were two primary drivers in selecting a quantitative method for this study. First, the research question regarding a relationship between variables is an inherently quantitative question (Creswell, 2014; Orcher, 2014). Second, a quantitative study trades off depth for breadth (Orcher, 2014). Even if the findings of a single survey study are limited in their statistical generalizability (see discussion below in "Limitations and Delimitations"), it allows for an examination of a larger sample. As such, it provides a larger scale view of the human experience than most qualitative methods afford.

Why a Survey Design?

A survey design allows researchers to gain insight into actual relationships between followers and leaders that have developed over time in a natural organizational setting. Leader-member exchange (LMX) theory suggests that relationships marked by high-quality exchanges move through developmental stages (Graen & Uhl-Bien, 1995). It is difficult to recreate this relational development in an experimental design. This would have been particularly challenging in this study given the intention to investigate how perceived behavior at one level of leadership relates to trust at another level of leadership.

This study was also suited to survey design because surveys create the ability to collect data from large samples in a cost effective manner (Muijs, 2011). The data analysis method for this study was structural equation modelling (SEM). This statistical method requires large sample sizes (Kline, 2016). Given resourcing constraints for this study, a survey was the most efficient way to collect data from a sufficiently sized sample for SEM.

Theoretical Framework

The theoretical framework for this study draws on trust theory (Colquitt, Scott, & LePine, 2007; Dirks & Ferrin, 2002; Mayer, Davis, & Schoorman, 1995) and LMX theory (Cropanzano & Mitchell, 2005; Graen & Uhl-Bien, 1995). The study is anchored in the often cited Mayer, Davis, and Schoorman (1995) definition of trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor irrespective of the ability to monitor or control that other party" (p. 712). Defining trust as a willingness to be *vulnerable* is central to this study's theoretical framework. Vulnerability is included in many definitions of trust (Fulmer & Gelfand, 2012; Nienaber, Hofeditz, Romeike, 2015; Rousseau, Sitkin, Burt, & Camerer, 1998). It has also been affirmed as an important aspect of trust in empirical studies (Colquitt, Scott, & LePine, 2007; Serva, Fuller, & Mayer, 2005).

LMX theory draws on social exchange theory to focus on the leader-member relationship. Unlike economic exchanges in which an explicit and specific obligation (e.g., a dollar amount) is owed by one party to the other, social exchanges are rooted in relational reciprocity (Blau, 1964; Cropanzano & Mitchell, 2005). Person A does a favor for person B. Person B is not under an explicit obligation to return a favor of a specific value. However, out of

a sense of reciprocity, person B does an act in kind for person A, building a relationship that is rooted in implicit reciprocation and grows into mutual trust. Relationships that develop into high-quality exchanges are characterized by emotional bonds and collegiality.

LMX applies social exchange to leader-follower relationships, positing that the emotional bonds of high-quality social exchange facilitate effective leadership as leader and follower develop mutual trust, obligation, and respect (Graen & Uhl-Bien, 1995). Furthermore, "leaders provide the first signal of a desire for a closer relationship to subordinates" (Cropanzano & Mitchell, 2005, p. 888). As leaders demonstrate trust in followers, followers often reciprocate with trust in return (Kim, Wang, & Chen, 2016; Serva, Fuller, & Mayer, 2005).

Empowering leadership behaviors, such as participative decision-making and informing, serve as a first signal of trust. These behaviors are demonstrations of the leader's willingness to be vulnerable in the context of the leader-member relationship. In prior studies, researchers have found evidence that participative decision-making and informing relate positively with trust (Gao, Janssen, & Shi, 2011; Gillespie & Mann, 2004; Korsgaard, Schweiger, & Sapienza, 1995). Hypotheses 1 and 3 below predicted that participative decision-making and informing would have positive relationships with faculty trust in direct leader.

PDDL and IDL were also expected to relate positively with trust in senior leadership (H_2 and H_4). Direct leaders function as representatives of the organization (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002; Eisenberger et al., 2010; Fulmer & Ostroff, 2017). By engaging in PDDL and IDL, the direct leader is vulnerable not only on her or his own behalf, but also on behalf of the organization. As such, it was expected that trust fostered through PDDL and IDL would transfer from direct leader to senior leadership, who

function as the primary representatives of the organization at a macro-level of social exchange (Bai, Li, & Xi, 2012).

The path of trust transfer was expected to place FTDL in a mediating role between FTSL and PDDL and IDL (H_8 and H_9). The follower-direct leader relationship is the first relational location for any trust building from PDDL and IDL. PDDL and IDL provide an opportunity for the follower to make sense of the organization, and so its senior leadership, in the context of mutual trust that begins in the follower-direct leader relationship. If trust is not fostered in FTDL, it cannot be transferred to FTSL.

In addition to these main components of the hypothesized structural model, three additional hypothesized relationships are included in this study. These additional hypotheses do not directly address the purpose of the study. However, as discussed below, inclusion of propensity to trust's relationship with participative decision-making and informing was expected to increase the accuracy of the structural model. The inclusion of the relationship between participative decision-making and informing represents a previously observed correlation between key variables in this study.

The degree to which a faculty member is inclined to trust others is a potential source of common method bias. Mayer and Davis (1999) found a significant positive relationship between propensity to trust and trust in leadership. Given this correlation, if a positive relationship is found between trust in direct leader and trust in senior leadership, propensity to trust might explain part of that relationship. By accounting for propensity to trust in the model, the analysis more accurately reveals the amount of correlation between trust in senior leadership and trust in direct leader which could potentially be caused by the direct leader's

participative decision-making and informing. The potential role of propensity to trust in the structural model is expressed in hypotheses 5 and 6.

Researchers have found that participative decision-making and informing correlate positively with each other (Gao, Janssen, & Shi, 2011; Lam, Huang, & Chan, 2015). This anticipated relationship is articulated in hypothesis 7.

Research Questions

Is there a relationship between faculty perceptions of participative decision-making by direct leaders and faculty trust in those leaders?

Is there a relationship between faculty perceptions of informing behavior by direct leaders and faculty trust in those leaders?

Is there a relationship between faculty perceptions of participative decision-making by direct leaders and faculty trust in senior leadership?

Is there a relationship between faculty perceptions of the informing behavior by direct leaders and faculty trust in senior leadership?

Does faculty trust in direct leader mediate the relationship between faculty perceptions of participative decision-making by that level of leadership and faculty trust in senior leadership?

Does faculty trust in direct leader mediate the relationship between faculty perceptions of the informing behavior by that level of leadership and faculty trust in senior leadership?

Variables

Exogenous Variables

Participative decision-making

Participative decision-making is “a leader's use of team members' information and input in making decisions” (Arnold, Arad, Rhoades, & Drasgow, p. 2000, p. 255). It has also been studied under the nomenclature of “consultative leadership” (e.g. Gillespie & Mann, 2004).

Informing

Informing, also called informing leadership or information sharing, “refers to the leader’s dissemination of company wide information such as mission and philosophy as well as other important information” (Arnold, Arad, Rhoades, & Drasgow, p. 2000, p. 255). This includes providing explanations of decisions made by the organization as well as the goals of the organization and the way in which the employee’s work group fits into the organization. Arnold, Arad, Rhoades, and Drasgow (2000) treated informing and participative decision-making as sub-constructs of empowering leadership behavior.

Propensity to Trust

Propensity to trust is the general inclination one has to trust others (Mayer & Davis, 1999). For all trust variables in this study, trust is defined as “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor irrespective of the ability to monitor or control that other party” (Mayer, Davis, & Schoorman, 1995, p. 712). This variable is included in this study because a faculty member’s propensity to trust could account for correlation between trust in direct leader and trust in senior leadership. Including propensity to trust as an exogenous

variable in the model will mitigate what is expected to be the most significant potential source of common method bias.

Endogenous Variables

Trust in Direct leader

Trust in direct leader is the degree to which a faculty member trusts her or his most immediate leader in the academic hierarchy. Direct leaders will usually be a department chair or program director. In some cases direct leaders might hold other titles such as dean. In research in other organizational contexts, this is often referred to as "trust in supervisor."

Trust in Senior Leadership

Trust in senior leadership is the degree to which a faculty member trusts the senior leadership of her or his institution. Senior leadership is the cabinet level leadership collective, the highest executive position and the executive team that reports directly to that position. In research in other organizational contexts, this is often referred to as "trust in top management."

Hypotheses

H_1 Participative decision-making by direct leaders (PDDL) has a positive relationship with faculty trust in direct leader (FTDL).

H_2 PDDL has a positive relationship with faculty trust in senior leadership (FTSL).

H_3 Informing by direct leader (IDL) has a positive relationship with FTDL.

H_4 IDL has a positive relationship with FTSL.

H_5 Propensity to trust has a positive relationship with FTDL.

H_6 Propensity to trust has a positive relationship with FTSL.

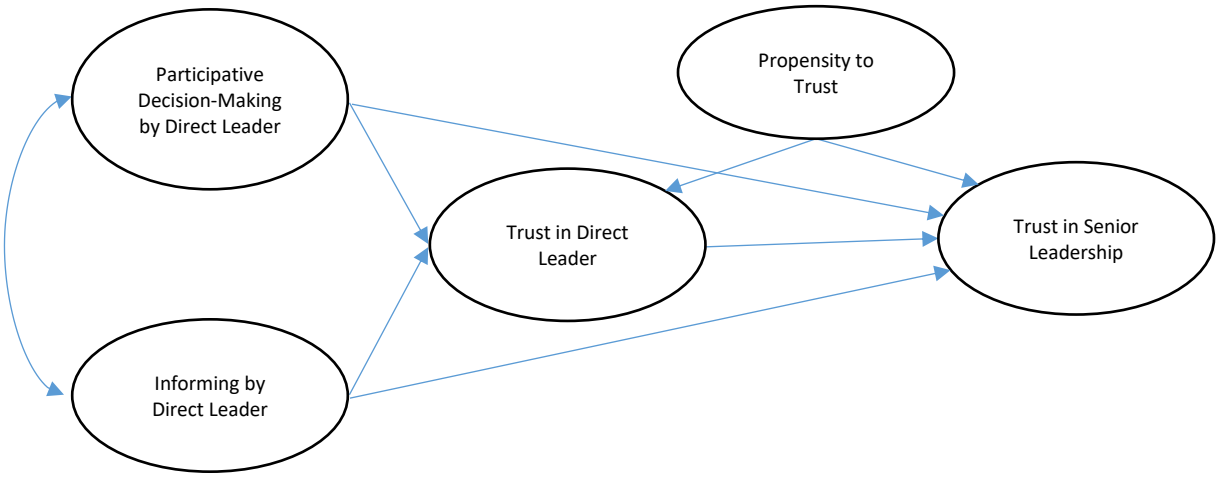
H_7 IDL has a positive relationship with PDDL.

H_8 The relationship between PDDL and FTSL is mediated by FTDL.

H_9 The relationship between IDL and FTSL is mediated by FTDL.

Figure 1 provides a simplified depiction of the hypothesized structural model. Each latent variable, depicted by an oval, was indirectly measured by 5-7 survey items that were treated as indicators in the SEM. All relationships among exogenous variables were free parameters.

Figure 1 *Simplified Visualization of Hypothesized Model*



Setting

The unit of analysis was individual persons. The study was conducted among faculty members at private colleges and universities in the United States. The population under investigation was full-time faculty members at Title IV participating private not-for-profit, 4-year or above institutions in the Integrated Postsecondary Education Data System's (IPEDS) Great Lakes region (Illinois, Indiana, Michigan, Ohio, and Wisconsin) with annual student headcounts of 3,000 – 5,000 based on 2014 IPEDS data. This included 39 institutions and a total estimated population of 6,382 full-time faculty. The study was limited to full-time faculty

since adjunct faculty have limited exposure to organizational leadership, which could make the relationships between variables weaker and or altogether different. The limitations in institution type were designed to demarcate a population that is large enough so most institutions would only have a small portion of their faculty (less than 15% on average) invited to participate in the study. At the same time, the population was not so large that it would have made assembly of the sampling frame unreasonable given available resources.

Sampling Design

The researcher obtained a complete list of Title IV participating private not-for-profit, 4-year or above institutions in the Great Lakes region with annual enrollment headcounts of 3,000-5,000 students from IPEDS. A sample frame was developed by retrieving faculty email addresses from publically available directories on these institution's websites. Lawrence and Ott (2013) provided precedence for developing a sample frame of faculty members and their email addresses from university websites.

The researcher randomly selected 1800 faculty members from the sampling frame. The sampling frame was randomized using the RAND formula in Excel which generates a random number between 0 and 1. The 1800 individuals with the lowest numbers were selected for the sample.

Recent survey studies of faculty members have achieved response rates near 25% after eliminating unusable responses (Jiang & Probst, 2015; Lawrence & Ott, 2013). A 25% response rate would have yielded a sample of 450, assuming all 1800 randomly selected invitees were eligible. Participation was incentivized with an opportunity to enter a drawing for one of five $50 Amazaon.com gift cards. Participants also had the opportunity to request an executive

summary of the study's findings. Emails to faculty were personalized with the invitees' names. Three follow-up emails were sent over the course of a month.

The target sample size for this study was based on the needs of the analysis plan rather than a targeted percentage of the population (Fowler, 2014). The hypothesized structural model had 67 free parameters. While the common guideline of 20 cases per parameter for SEM would call for a sample size of 1340, such a large sample was not necessary in this study. While such guidelines have value, they oversimplify the network of factors that influence needed sample size. Jackson (2003) tested sample to parameter ratios and found that the practically significant effects were only on fit indexes. However, power analysis allows for a more precise determination of the sample size needed for model fitting.

A power analysis was conducted using the root mean square error of approximation (RMSEA) technique developed by MacCallum, Browne, and Sugawara's (1996). This analysis determines the sample size needed to reject a poorly fitting model using the RMSEA fit index. Preacher & Coffman's (2006) online utility was used to calculate a minimum sample size of 62 to achieve the conventional minimum power of .8. This analysis used MacCallum, Browne, and Sugawara's recommended null hypothesis RMSEA of .05 and alternative hypothesis RMSEA of .08. By convention, alpha was set at .05. Degrees of freedom were calculated to be 339 using AMOS 24.

Kline (2016) noted that power analysis can calculate the need for a very small sample for model fitting when models have large degrees of freedom, such as the hypothesized model in this study. However, there can be challenges in estimating parameters with such small

samples. Kline suggested that even if a power analysis indicates the need for only a small sample, samples should never be smaller than 100.

In a mediation study using the same trust measure used in this study, Mayer and Gavin (2005) had an extremely low sample to parameter ratio (less than 2:1) and a sample size of 247. They cited MacCallum, Browne, and Sugawara (1996) who suggested that studies can approach a 1:1 parameter to case ratio in the following conditions: a high number of indicators for each latent variable, strong factor loadings, and strong effect sizes in the relationships between latent variables. Mayer and Gavin further justified their sample size by arguing that their analysis did not reveal any issues related to sample size (e.g. non-convergence or unreasonable standard errors).

Mayer and Gavin's (2005) model was more complex than the model analyzed in this study. Furthermore, factor loadings and effect sizes in this study were expected to be comparable to those of the Mayer and Gavin study due to similarities in subject matter and methodology. In light of Mayer and Gavin's findings, a sample size of 250 was expected to be sufficiently large. Kline's (2016) recommendation to have a sample size of at least 100 suggests that an even smaller sample size might have yielded sufficient data for SEM.

Measures

Subscales of the Empowering Leadership Questionnaire (Arnold, Arad, Rhoades, & Drasgow, 2000) were used to measure participative decision-making and informing. Items in these subscales were modified slightly to better fit higher education contexts. For example, "company" was changed to "institution." Precedence for making minor modifications to instruments to fit the context of higher education is found in Jiang and Probst (2015),

McMurray and Scott (2013), and Moye, Henkin, and Floyd (2006). The contexts of faculty departments in higher education have important differences from the empowered teams in the clothing retailer, building product supplier, and telecommunications company in which the ELQ was developed. However, faculty departments often exercise greater degrees of "autonomy, self-direction, and control over their work environment" (Arnold, Arad, Rhoades, & Drasgow, 2000, p. 250) than conventional commercial and industrial settings.

Each subscale of the Empowering Leadership Questionnaire consists of six questions. Arnold and colleagues (2000) developed the Empowering Leadership Questionnaire out of interviews with employees who worked on self-managed teams. These employees were asked to identify effective and ineffective behaviors of direct supervisors. In Arnold and colleagues' scale development studies on employees of self-managed teams, the participative decision-making subscale had Cronbach's alphas of .86 and .92. The subscale also appears to have strong reliability and validity when used in conventional organizational settings. Other studies have had similar Cronbach's alpha scores and results that align with the construct of participative decision-making when using this subscale in contexts without self-managed teams (Lam, Huang, & Chan, 2015; Miao, Newman, & Huang, 2014; Huang, Iun, Liu, & Gong, 2010). The informing subscale had Cronbach's alphas of .85 and .91 in Arnold and colleagues' (2000) scale development studies. Lam, Huang, and Chan (2015) found Cronbach's alphas of .80 and .93 when this scale was used in a context without self-managed teams. They also found results that aligned with the construct of informing as a leadership behavior.

Mayer and Gavin's (2005) trust instrument was used to measure trust in leader. This is a 5-item measure based on the instrument developed by Schoorman, Mayer and Davis (2016) for

a paper presented at the 1996 meeting of the Society for Industrial and Organizational Psychology and first published by Mayer and Davis (1999). The original version suffered from lower than desirable reliability evidence. Mayer and Gavin (2005) developed six questions from employee focus groups that were added to the original four items developed by Mayer and Davis (1999). Out of that 10, an exploratory factor analysis led to the retention of 5 items. Mayer and Gavin found Cronbach's alphas of .81 when measuring trust in plant managers and .72 when measuring trust in a top management using the 5-item scale. The survey for this study included three iterations of the trust instrument. One iteration asked participants to consider their direct leader. Another referred to the senior leadership of their institution. The third iteration asked participants to respond based on their perception of their direct leader's attitudes towards senior leadership. This was included to measure the faculty member's perception of their direct leader's trust in senior leadership. This third iteration was included to gather data on this variable, but direct leader's trust in senior leadership was not included in the hypothesized model.

Propensity to trust was measured using the 7-item trust scale of the Propensity to Trust Survey (PTS) developed by Evans and Revelle (2008). Unlike other measures of general trust (e.g. Mooijman, van Dijk, Ellemers, & van Dijk, 2015), the PTS operationalizes the conceptual definition of trust as willingness to be vulnerable. Participants were asked to rate how accurately statements describe them on a six-point Likert scale from "strongly inaccurate" to "strongly accurate." Items include "avoid contacts with others" and "find it hard to forgive others." In the scale development studies, the trust scale had a Cronbach's alpha of .73. In support of construct validity, the trust scale correlated positively with agreeableness and

extraversion. It correlated negatively with neuroticism. The trust scale of the PTS also predicted trusting behavior in the Investment Game.

The PTS was used rather than Schoorman, Mayer, and Davis' (1996) propensity to trust scale because the Schoorman, Mayer, and Davis scale has weak evidence for internal reliability (Schoorman, Mayer, & Davis, 2007). Alphas recorded for Schoorman, Mayer, and Davis' propensity to trust scale have varied across studies (.87 in Alarcon, Lyons, & Christensen, 2016; .64 in Gill, Boies, Finegan, & McNally, 2005; .55 and .66 in Mayer & Davis, 1999; .71 in Schoorman, Mayer, & Davis, 2016).

Neither the Mayer and Gavin (2005) trust measure nor the Arnold and colleagues (2000) ELQ were developed in the context of higher education. However, the constructs they measure are general phenomena that are not specific to a single organization type. The items in the scales are relevant to the higher education context and possess face validity when read from the perspective of a faculty member. R. C. Mayer (personal communication, December 6, 2016) expressed confidence that the Mayer and Gavin (2005) trust measure would be valid in a faculty sample. The ELQ was developed in contexts where work groups had more autonomy than is typical in conventional business settings. In that way, these contexts shared an important similarity with higher education. Cronbach's alphas and the results of a confirmatory factor analysis for the data collected in this study are discussed in chapter four.

Shoho and Smith (2004) developed a trust instrument in the higher education context, however, it has several weaknesses relative to Mayer and Gavin's (2005) trust instrument. First, the items in Shoho and Smith's instrument do not have strong face validity given the definition of trust used in this study. The items ask questions regarding perceived

trustworthiness, not willingness to be vulnerable. Second, Mayer and Gavin's measure and its predecessor (Mayer & Davis, 1999) have been used in multiple studies. As such, it has a stronger track record of validity and reliability. Third, Shoho and Smith's measure is specifically tailored to trust in dean, not direct leader or senior leadership. Mayer and Gavin's measure has been used to study both trust in direct leader and trust in top management.

The survey for this study included the following demographic variables: gender, age, ethnicity, education, rank, discipline area, years employed at current institution, years employed as a full-time faculty member, tenure status, administrative title (if applicable), title of direct leader, primary teaching level (undergraduate, mix of undergraduate and graduate or graduate), primary delivery method (online, face-to-face, even mix of online and face-to-face) and primary student type (traditional undergraduate students or adult/post-traditional students).

In addition to these measures, the survey also included a job satisfaction measure. Job satisfaction was measured using the three-item Job Satisfaction Scale (Messersmith, Patel, Lepak, & Gould-Williams, 2011). Messersmith, Patel, Lepak, and Gould-Williams (2011) found a Cronbach's alpha of .83.

In order to reduce the impact of order effect, invited participants were randomly split into two groups. Each group received the survey with a different order of questions (Dillman, Smyth, & Christian, 2014). The first group's survey ordered the instruments in the following manner: job satisfaction, direct leader's participative decision-making, direct leader's informing, trust in direct leader, trust in senior leadership, perception of direct leader's trust in senior leadership, propensity to trust, and demographics. The second group's survey presented the

instruments in a different order: job satisfaction, propensity to trust, trust in senior leadership, trust in direct leader, perception of direct leader's trust in senior leadership, direct leader's informing, direct leader's participative decision-making, and demographics. For both groups, the iterations of the trust instrument occurred together and the ELQ sub-scales occurred together. This was done to avoid a difficulty for participants that could arise if they had to change back-and-forth between the different instruments. The job satisfaction measure was included at the beginning of each survey because general satisfaction questions can be particularly susceptible to order effect (Bowman & Schuldt, 2014; Dillman, Smyth, & Christian, 2014).

Data Collection Procedures

Data was collected through an online survey using Qualtrics. An initial email with a brief description of the study and a link to the survey was sent to participants. This initial email to selected faculty members was brief, with more detailed disclosure information provided at the beginning of the survey. The beginning of the survey also provided brief definitions for "direct leader" and "senior leadership." Since some participants might have been faculty members with administrative roles, the survey instructions asked participants to think of the direct leader of their faculty role when answering questions regarding perceptions of her or his direct leader.

Studies have found that lottery incentives and language that appeals to ego are effective in improving response rates for online surveys (e.g. Laguilles, Williams, & Saunders, 2011; Pedersen & Nielsen, 2016). To appeal to ego, the initial email notified the recipient that they had been selected to provide their perspective on college and university leadership. It also noted that, as a thank you, they had the option to enter their name to win one of five $50 gift

cards to Amazon.com. Three reminder emails were sent over the course of four weeks after the initial email. After the survey closed, data were exported from Qualtrics to SPSS and an Excel file.

Field Test

After the survey was created in Qualtrics, a small field test was conducted. This was done to ensure the survey was setup and recording responses properly. Testers were asked to send an email to the researcher to note any issues they experienced with the survey. The data collected during the field test were also examined to ensure data collection in Qualtrics functioned correctly. Data from the field test were discarded and not used in the data analysis.

Data Analysis

This study employed structural equation modeling (SEM) using SPSS 24 with AMOS 24. More specifically, it used structural regression. Structural regression combines path analysis and confirmatory factor analysis (CFA) (Kline, 2016). In this way, it tests a causal structure comprised of latent variables that are measured by multiple indicators. Each oval in the structural model in Figure 1 represents a latent variable constructed from 5-7 indicators, depending on the number of items in each instrument.

There were two significant benefits of using structural regression in this study. First, since it overlaps significantly with CFA techniques, the statistical analysis facilitated confirmation of the construct validity of the survey instruments. Second, this strategy avoided the problem of low statistical power that would be expected from a path analysis with low degrees of freedom (*df)* (Kenny, Kaniskan, & McCoach, 2015). With a strictly path analysis technique, in which the variables in the structural model (Figure 1) would be treated as

observed variables, a sample size over 700 might be needed to meet conventional standards of power analysis using RMSEA (MacCallum, Browne, & Sugawara's, 1996).

Response rate calculation only included those who were full-time faculty members and did not possess titles with the words "dean" or "provost" (Fowler, 2014). Respondents who possessed an ineligible title or did not identify as being full-time faculty members were removed from the sample. In order to remove an estimate of ineligible participants from the total number of invitees, the percentage of respondents who were ineligible was calculated. That percentage was then applied to and subtracted from the total number of invitees in calculating the response rate. This is expected to be a conservative method since adjunct faculty have a part-time relationship with the institution, which could decrease their response rate. If this is the case, the percentage removed from the total number of invitees was lower than the actual number of adjunct faculty incorrectly included in the sampling frame, making the calculated response rate lower than the actual response rate of eligible participants.

Limitations and Delimitations

Causality

This study's cross-sectional design and correlational method of analysis precludes demonstration of causality. Importantly, this study did not facilitate observation of the chronological relationships between variables. As a field study, there was also limited control over potentially confounding variables. As a form of causal modeling, structural regression can provide statistical evidence that one would expect to find if there are causal relationships. However, structural regression on its own does not demonstrate causality (Kline, 2016).

Sample Bias

This study design had two points at which the sample could have become biased. First, construction of the sampling frame depended on the availability of full-time faculty email addresses on institutions' websites. It is not known if or how this would bias the sample in a systematic way.

The second opportunity for bias in the sample is in the willingness among randomly selected individuals to participate. The likelihood of achieving a relatively low response rate in a survey of faculty was a significant limitation in this study. Based on other survey studies of faculty, a response rate near 25% was expected (Jiang & Probst, 2015; Lawrence & Ott, 2013). Vogt (2007) rightly challenged the use of surveys when low response rates are expected because they can only be technically generalized to the sub-sample that actually responded. Due to the bias introduced as respondents self-select into the sub-sample, that sub-sample is not truly random.

Broad statistical generalizability is rare since many studies are limited by low response rates and/or a narrow population. Given limited generalizability, it is best to follow the lead of qualitative methodologists and cautiously assess transferability when interpreting results (Merriam, 2009). This approach places onus on the reader to assess the degree to which a given study's findings are transferrable to another specific context. A population limited to those who are likely to respond to a survey could have broader transferability than a population that is limited to a single or a few organizations with the complex system(s) of idiosyncrasies of that single or the few organizations.

To aid in transferability considerations while also providing perspective on the potential impact of non-response bias, chapter four compares the demographics of the sample to the demographics of the population (Fowler, 2014). Descriptive statistics regarding gender, ethnicity, tenure status, rank, and geography of the sample are compared to the same demographic variables for the population. Population demographics were obtained through IPEDS.

Ethical Considerations

This study presented no more than a minimal risk to participants (Hicks, 2014). Though the risk to participants was very low, it still existed. The instruments used in the study possess items that might have been perceived as negative evaluative judgments about the participant or the participant's supervisor or the senior leadership of the participant's employer. This presented a minimal risk to participants' psychological comfort. Participation also posed a risk to participants' reputation and relationships with supervisors and the senior leadership of their institutions if confidentiality were to be breached.

In order to mitigate risks regarding confidentiality, steps were taken to ensure participant confidentiality. After data was exported from Qualtrics, the data in Qualtrics was anonymized. This reduced the risk of a confidentiality breach if the data in Qualtrics was compromised. Respondent identifier codes and institutional identifier codes were added to the Excel and SPSS data files exported from Qualtrics. Keys for respondent identifier codes were stored in a password protected file on a flash drive that does not contain response data. The flash drive was stored in a locked filing cabinet in the researcher's office. This identifying data was destroyed at the conclusion of the study. Respondent names, email addresses and

institution names were removed from the Excel and SPSS data files. Participants were also informed of the potential risk related to confidentiality.

Risks related to psychological discomfort were addressed in three ways. First, participants were informed of the risk in simple and straightforward language prior to completing the survey. Second, participants were told that they can skip any question on the survey that they did not wish to answer. Third, participants were told that they could quit the survey at any point after beginning it. These steps facilitated informed consent as required under the Belmont Report (Department of Health, Education, and Welfare, 1979).

In order to provide a benefit to participants, they had the opportunity to request a 3-5 page executive summary of the findings of the study. Participants were able to request this summary at the end of the survey through a link that led to a separate form to submit their name and email address. In the estimation of the researcher, the benefit of the information provided in that report outweighs the minimal risk of participating in this study (Department of Health, Education, and Welfare, 1979).

Overall, the risks to participants of this study were minimal. In accordance with the Belmont Report (Department of Health, Education, and Welfare, 1979), steps were taken to ensure participants received information regarding those risks in a comprehensible manner and had the opportunity to freely volunteer at the beginning of the study and freely conclude their participation at any point while completing the survey. Furthermore, the opportunity to receive a summary of the study's findings presented a benefit to participants.

Chapter 4: Results

Introduction

This chapter reports on the analysis of the data collected through the survey of 437 full-time faculty members. The survey obtained a successful sample in terms of size and general demographic representation of the population. The statistical analysis of the survey data supported six out of the nine hypotheses. Most importantly, participative decision-making by direct leaders (PDDL) had a positive relationship with faculty trust in senior leadership (FTSL) when mediated by faculty trust in direct leaders (FTDL). However, informing behavior by direct leaders (IDL) did not have a statistically significant relationship with either FTDL or FTSL when the analysis controlled for the relationships which PDDL and faculty members' propensity to trust (PT) had with FTDL and FTSL. These results are described in this chapter and discussed in chapter five.

Sample

The survey had 618 respondents out of 1800 invitees. From those 618 respondents, 181 cases were removed. Cases were removed from the sample for three reasons: lack of confirmation that the participant was a full-time faculty member (67 cases), identified with an administrative title of "dean" or "provost" (nine cases), or left 50% or more of the instrument items unanswered (105 cases). These case removals resulted in a sample size of 437.

Despite efforts to limit invitees to only eligible population members, 12% of the respondents were determined to be ineligible (i.e. not a full-time faculty member or held a disqualifying administrative title). Generalizing that 12% to the invitee list, it is estimated that 1584 out of the 1800 invitees were eligible members of the population. This is expected to be a

conservative estimate under the assumption that part-time faculty are less likely to respond due to their limited engagement with their institution. Taking the estimated number of eligible participants in the invitee list into account, the response rate is calculated at 28% (437 eligible participants out of 1584 eligible invitees). This is consistent with the response rates in other studies of college and university faculty members (Jiang & Probst, 2015; Lawrence & Ott, 2013).

Faculty members from 30 out of the 39 eligible institutions were represented in the sample. Faculty from the nine unrepresented institutions were not included in the sampling frame because sufficient and useable directory information was not available. The sample was mostly white with a nearly even split between male and female (see Table 1). The median age of the sample was 51 years (see Table 2). Median years employed at the institution was 12 and median years employed as a full-time faculty was 15.

The sample demographics were generally representative of the population demographics. Table 1 presents population data retrieved from IPEDS for full-time faculty members at the 39 institutions that meet the population criteria (National Center for Education Statistics, n.d.). Asian, Black or African American, and Hispanic populations were slightly under-represented. However, persons who identified with two or more ethnic categories were slightly over-represented. It might be the case that members of under-represented populations provided more nuanced answers regarding multiple ethnic identities when responding to this study's survey.

Table 1 *Comparison of Population and Sample Demographics*

Demographic Variable	Population (N=6382)	Sample (n=437)
Sex		
Male	52%	47%
Female	48%	51%
Unknown sex	no data	2%
Ethnicity/Race		
American Indian or Alaska Native	0%	0%
Asian	8%	5%
Black or African American	4%	1%
Hispanic or Latino	3%	1%
Middle Eastern or North African	no data	0%
Native Hawaiian or Other Pacific Islander	0%	0%
White total	83%	86%
Two or more races	1%	2%
Unknown race/ethnicity	1%	3%
Other	no data	2%
Tenure Status		
Tenured	44%	54%
Tenure Track (not tenured)	28%	22%
Not on tenure track	28%	23%
Unknown tenure status	no data	1%
Faculty Rank		
Professor	28%	33%
Associate Professor	29%	32%
Assistant Professor	35%	30%
Instructor	6%	3%
Lecturer	2%	1%
Other	no data	2%
Unknown rank	no data	1%
Institution's Location		
Illinois	40%	30%
Indiana	4%	3%
Michigan	17%	25%
Ohio	28%	32%
Wisconsin	12%	10%

Note. Population data was retrieved from the Integrated Postsecondary Education Data System (National Center for Education Statistics, n.d.).

Table 2 *Years of Service and Age*

	Years Employed at Institution	Years Employed as Full-time Faculty	Age (years)
n	437	437	437
Mean	14.51	16.71	50.45
Median	12.00	15.00	50.45
Std. Deviation	10.843	10.958	11.215

The over-representation of tenured faculty members is noteworthy. This demographic variable had the largest gap between population and sample and it could influence trust in direct leader. Faculty trust in direct leader had a modest, but statistically significant, negative correlation with years employed as a full-time faculty member and years employed at the faculty member's present institution (see Table 7 and Table 8). Since tenured faculty had higher mean and median years employed as a full-time faculty member and year's employed at their institution (see Table 3), the over-representation of tenured faculty members is a potential source of sample bias. Years employed at the faculty member's current institution was included in the structural model to control for this potential source of bias.

Missing Data

Values for missing data were imputed using full information maximum likelihood (Byrne, 2010). All variables were placed in a confirmatory factor model in AMOS 24 and values were calculated using a single regression imputation. This created a new data file which was used in all subsequent analysis.

Table 3 *Average Years of Service by Tenure Status*

Tenure Track		Years Employed at Institution	Years Employed as Full-time Faculty
Unknown	n	5	5
	Mean	14.65	16.57
	Median	14.83	16.42
Tenure Track	n	96	96
	Mean	7.11	7.60
	Median	5.00	6.00
Not Tenure Track	n	102	102
	Mean	10.35	12.32
	Median	7.00	10.00
Tenured	n	234	234
	Mean	19.36	22.35
	Median	17.61	21.00
All	n	437	437
	Mean	14.51	16.71
	Median	12.00	15.00

Descriptive Statistics

Means and standard deviations for each instrument item are provided in Table 4. A Kolmogorov-Smirnov test for normal distribution was conducted for each item in SPSS 24. The null hypothesis of normal distribution was rejected for each item. Since structural equation modelling assumes normal distribution of data, bootstrapping was used in the confirmatory factor analysis and structural regression to simulate normal distribution (Byrne, 2010).

Values for the latent variables (PT, PDDL, IDL, FTDL, and FTSL) were computed in AMOS 24. The descriptive statistics for the latent variables (see Table 5) were calculated in SPSS 24 using values that were imputed by AMOS 24 based on the confirmatory factor model discussed below. The latent variable values used in the Common Method Bias-adjusted descriptive statistics (see Table 6) were calculated based on the same confirmatory factor model with an

added common method factor with factor loadings to each item of each scale. This method of correcting for common method bias is discussed in the Common Method Bias subsection below.

Table 4 *Descriptive Statistics for Scale Items*

	n	Minimum	Maximum	Mean	Std. Deviation
Participative Decision-making 1	437	1	5	4.06	.978
Participative Decision-making 2	437	1	5	4.06	1.003
Participative Decision-making 3	437	1	5	3.80	1.022
Participative Decision-making 4	437	1	5	4.07	.998
Participative Decision-making 5	437	1	5	3.81	1.050
Participative Decision-making 6R	437	1	5	3.54	1.157
Informing 1	437	1	5	3.71	.925
Informing 2	437	1	5	3.64	.965
Informing 3	437	1	5	3.42	1.076
Informing 4	437	1	5	3.44	.996
Informing 5	437	1	5	3.61	1.043
Informing 6	437	1	5	3.73	1.020
Trust in Direct Leader 1R	437	1	5	3.87	1.117
Trust in Direct Leader 2	437	1	5	2.06	1.098
Trust in Direct Leader 3R	437	1	5	3.61	1.046
Trust in Direct Leader 4	437	1	5	3.48	1.188
Trust in Direct Leader 5	437	1	5	3.86	1.001
Trust in Senior Leadership 1R	437	1	5	3.55	1.060
Trust in Senior Leadership 2	437	1	5	1.83	.913
Trust in Senior Leadership 3R	437	1	5	2.96	1.117
Trust in Senior Leadership 4	437	1	5	2.93	1.120
Trust in Senior Leadership 5	437	1	5	3.31	.985

Table 5 *Descriptive Statistics for Latent Variables*

	n	Minimum	Maximum	Mean	Std. Deviation
PT	437	1.08	4.20	3.0704	.56005
FTSL	437	1.05	4.58	2.8694	.70255
FTDL	437	1.13	4.82	3.5194	.79229
IDL	437	1.06	4.54	3.2573	.77949
PDDL	437	.86	4.05	3.1422	.71051

PT = Propensity to Trust, FTSL = Faculty Trust in Senior Leadership, FTDL = Faculty Trust in Direct Leader, IDL = Informing by Direct Leader, PDDL = Participative Decision-making by Direct Leader

Table 6 *Common Method Bias-adjusted Descriptive Statistics for Latent Variables*

	n	Minimum	Maximum	Mean	Std. Deviation
PT	437	.65	3.33	2.4014	.49781
FTSL	437	.34	3.56	2.1060	.63135
FTDL	437	.59	3.98	2.7759	.72296
IDL	437	.53	3.76	2.5081	.70515
PDDL	437	.39	3.41	2.4887	.64531

The values for latent variables were imputed by AMOS 24 using a factor model that included a latent common method factor to control for common method bias.

PT = Propensity to Trust, FTSL = Faculty Trust in Senior Leadership, FTDL = Faculty Trust in Direct Leader, IDL = Informing by Direct Leader, PDDL = Participative Decision-making by Direct Leader

Reliability

Cronbach's alphas for all scales were calculated in SPSS 24. Alpha's for each scale are indicated in parenthesis in Table 7 and Table 8. Table 7 provides a Spearman's rho correlation matrix using latent values that were not adjusted for common method bias. Table 8 provides a Spearman's rho correlation matrix with latent values that were adjusted for common method bias using a single common method factor with factor loadings to each scale item. Cronbach's alphas are identical in the two tables because the alphas were calculated outside of the

common method bias adjustment procedure. The Cronbach's alpha for each scale was above the conventional threshold of .7, providing evidence of internal reliability for each scale.

Table 7 *Unadjusted Correlations (Spearman's rho)*

	PT	FTSL	FTDL	IDL	PDDL	Age (yrs)	YEI
PT	(.786)						
FTSL	.438**	(.782)					
FTDL	.423**	.406**	(.850)				
IDL	.433**	.228**	.655**	(.934)			
PDDL	.413**	.241**	.852**	.785**	(.933)		
Age (yrs)	.093	.096*	.005	.059	.016		
YEI	-.021	-.079	-.122*	-.099*	-.088	.629**	
YEI	-.005	-.022	-.119*	-.070	-.072	.731**	.805**

PT = Propensity to Trust, FTSL = Faculty Trust in Senior Leadership, FTDL = Faculty Trust in Direct Leader, IDL = Informing by Direct Leader, PDDL = Participative Decision-making by Direct Leader, YEI = Years Employed at Institution

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

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

Cronbach's alphas for multi-item scales are in parentheses.

Validity

Internal validity of the instruments was investigated using confirmatory factor analysis. In order to address the non-normal distribution of data, maximum likelihood bootstrapping was used with 1000 bootstrap samples (Byre, 2010). The hypothesized model (Figure 2) did not fit the data well according to goodness-of fit-indexes. RMSEA had a 90% confidence interval of .062-.072, which would be acceptably below the conventional <.08 cutoff. However the PCLOSE (probability that the fit is <.05 in the population) of .000 was below the >.5 cutoff. The Comparative Fit Index (CFI) of .909 also gives reason to question the goodness of fit since it was lower than the >.95 cutoff value.

Table 8 *Common Method Bias-adjusted Correlations (Spearman's rho)*

	PT	FTSL	FTDL	IDL	PDDL	Age (yrs)	YEI
PT	(.786)						
FTSL	.304**	(.782)					
FTDL	.298**	.283**	(.850)				
IDL	.314**	.074	.580**	(.934)			
PDDL	.280**	.075	.818**	.736**	(.933)		
Age (yrs)	.082	.089	-.014	.052	.006		
YEI	-.011	-.075	-.128**	-.097*	-.080	.629**	
YEI	.003	-.018	-.127**	-.066	-.065	.731**	.805**

The values for latent variables (PT, FTSL, FTDL, IDL, and PDDL) were imputed by AMOS 24 using a factor model that included a latent common method factor to control for common method bias.

PT = Propensity to Trust, FTSL = Faculty Trust in Senior Leadership, FTDL = Faculty Trust in Direct Leader, IDL = Informing by Direct Leader, PDDL = Participative Decision-making by Direct Leader, YEI = Years Employed at Institution

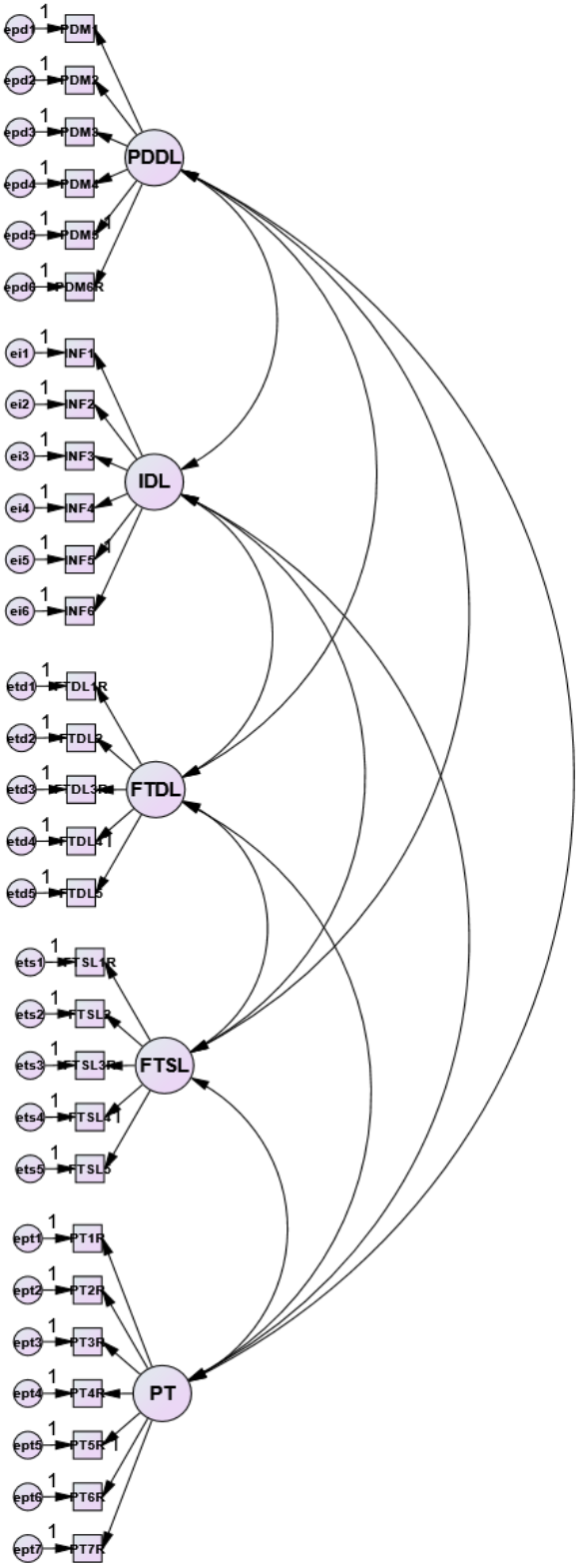
** Correlation is significant at the 0.01 level (2-tailed).

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

Cronbach's alphas for multi-item scales are in parentheses.

Modification indices (MI) for fixed parameters in the hypothesized CFA model were examined for potential covariances which were large and theoretically reasonable. The MI's indicate how much the χ^2 value for the model would decrease if the fixed parameter was free. In other words, a high MI is indicative of a relationship that exists in the data and its constraint within the model weakens the models fit with the data. Parameters with high MI's should only be freed if the covariance is theoretically reasonable, otherwise there is a risk of specifying the model in a way that represents idiosyncrasies of the sample (Byrne, 2010).

Figure 2 *Hypothesized Model for Confirmatory Factor Analysis*



PT = Propensity to Trust, FTSL = Faculty Trust in Senior Leadership, FTDL = Faculty Trust in Direct Leader, IDL = Informing by Direct Leader, PDDL = Participative Decision-making by Direct Leader

Several parameters among error terms in the hypothesized model had high MI's and a reasonable explanation for the covariance. Table 9 identifies the parameters that were allowed to covary after review of the MI's. In some cases the covariances were between error terms of items that were repeated in the survey with different referents (i.e. trust in direct leader and trust in senior leadership). The error terms represent the variance in the item that is not explained by the factor on which it is specified to load (Kline, 2016). The parallel nature of the repeated items presents a logical explanation for covariance among these error terms. Some of the item's variance not explained by the referent-specific factor is explained by something apart from the referent. This might be a general proclivity to describe one's view of others in the way the item is describing the particular referent. While this could establish a rationale for allowing covariance between the error terms of all parallel items in FTDL and FTSL, the covariance among error terms was kept to a minimum in the interest of model parsimony (Byrne, 2010; Kline, 2016).

In other cases, the parameters allowed to covary were among the error terms of similar items within a scale (e.g. "retreats from others" and "avoids contacts with others"). Such similarity presents a rationale for covariance. For example, retreating from others and avoiding contacts with others have commonality beyond the construct of propensity to trust.

After the selected error terms were freed to covary, the goodness of fit indexes were within conventional thresholds. The RMSEA 90% confidence interval was .042-.052 with PCLOSE at .847. The CFI was .956.

Table 9 *Error Terms Allowed to Covary*

Freed Parameter		MI	Rationale for Allowing Covariance
Error Term of FTDL1	Error Term of FTSL1	27.47	FTDL1 (If I had my way, I wouldn't let my direct leader have any influence over issues that are important to me) and FTSL1 (If I had my way, I wouldn't let senior leadership have any influence over issues that are important to me) are parallel items with different referents.
Error Term of FTDL2	Error Term of FTSL2	79.17	FTDL2 (I would be willing to let my direct leader have complete control over my future in this institution) and FTSL2 (I would be willing to let senior leadership have complete control over my future in this institution) are parallel items with different referents.
Error Term of FTDL3	Error Term of FTSL3	54.32	FTDL 3 (I really wish I had a good way to keep an eye on my direct leader) and FTSL3 (I really wish I had a good way to keep an eye on senior leadership) are parallel items with different referents.
Error Term of INF1	Error Term of INF2	36.70	INF2 (Explains the institution's goals) and INF1 (Explains the institution's decisions) have a commonality that extends beyond informing. Setting a goal is a decision and explanations of decisions are often done in the context of the goals those decisions are intended to achieve.
Error Term of PT1	Error Term of PT4	87.75	PT1 (retreat from others) and PT4 (avoid contact with others) have a commonality beyond propensity to trust. They both refer to willingness to socially engage.
Error Term of PT2	Error Term of PT3	37.65	PT3 (Feel short-changed in life) and PT2 (Am filled with doubts about things) have a commonality that goes beyond propensity to trust. They both refer to a negative outlook on life.

PT = Items from the Propensity to Trust scale, FTDL = Items from the Faculty Trust in Direct Leader scale, FTSL = Items from the Faculty Trust in Senior Leadership scale, IDF = Items from the Informing by Direct Leader scale

Residual covariances are differences between the sample covariances and the covariances implied by the model. The existence of many large residual covariances would indicate that the data do not fit the model well. Byrne (2010) suggested using 2.58 as a threshold for considering a residual covariance to be large. The hypothesized CFA model has

only two standardized residual covariances above 2.58. PT2R (Am filled with doubts about things) to PT1R (Retreat from others) had a standardized residual covariance of 4.096. PT4R (Avoid contacts with others) to PT2R (Am filled with doubts about things) had a standardized residual covariance of 3.583. The presence of only two large residuals is not concerning. Nearly all residuals were well below 2.58. This provides another indicator that the factor model fits the data well.

Finally the regression weights were reviewed. All regression weights had a critical ratio (C.R.) above the >1.96 cutoff value. This indicated statistical significance for each specified parameter in the factor model.

The results of the confirmatory factor analysis support the internal validity of the instruments. The factor model hypothesized from the instruments used in the study fits the data well. Even though the instruments used in the study were not developed in the context of higher education, they appear to hold internal validity when measuring their targeted variables among full-time faculty members.

Common Method Bias

One of the limitations of this study is that it measured the variables using a common method. The variables for each case were measured by having one member of the leader-follower relationship answer Likert scale questions at a single point in time. The use of a single method creates the opportunity for common method bias (CMB). Bias associated with common method can stem from many different sources, such as yea-saying, mood state, consistency motif, and social desirability (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In this study, one likely source of CMB was propensity to trust. This potential source of bias was

controlled by the inclusion of propensity to trust as an endogenous variable in the structural model. Order effect is another form of CMB. This was mitigated by having half the respondents take surveys with the instruments in one order and half the respondents take surveys with the instruments in a different order.

Despite the efforts to mitigate two high risk sources of CMB, other sources of CMB might have influenced the data. The Harman Single-factor procedure was conducted to check for CMB. In SPSS 24, a factor analysis limited to 1 factor and no rotation was conducted. That single factor explained 33% of variance in the variables, which is below the conventional 50% threshold. Based on this test, CMB does not appear to be a problem. However, the Harman Single-factor procedure is regarded by some as lacking sufficient sensitivity (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

To further address CMB, a latent common method factor was added to the structural equation model (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). That single factor loaded each item from all instruments as indicators. This was used to control for the covariance across all the instruments due to common method variance. If respondents' answers across all instruments covaried due to common method effects like social desirability or yea-saying, the model accounted for that broad covariance in the latent common method factor. The factor loadings from the indicators to the common method factor were constrained to be equal and the factor variance was constrained to 1. While it is preferred to leave the factor loadings unconstrained (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), AMOS 24 was not able to produce bootstrapped estimates under that condition.

The latent common method factor did not adjust the results of the SEM analysis in a meaningful way. CMB-adjusted scores did influence the magnitude of Spearman's rho correlations (compare Table 3 and Table 4). The CMB-adjustment increased some significance values for direct effects, indirect effects, and total effects within the accepted structural model discussed below (see Table 10). None of those adjustments to significance values for effects within the structural model influenced whether or not a p value was above the <.05 cutoff for significance. The CMB adjustment resulted in no change to the values of direct, indirect, or total effects within the accepted structural model. CMB adjustment was also inconsequential in evaluating model fit.

Table 10 *Comparison of P Values (two-tailed) for CMB-adjusted and Unadjusted Effects in Accepted Structural Model*

		Years Employed at Institution		PT		PDDL		FTDL	
		unadj	CMB-adj	unadj	CMB-adj	unadj	CMB-adj	unadj	CMB-adj
Total Effect	FTDL	.014	.012	.005	.017	.003	.002	-	-
	FTSL	.374	.314	.002	.004	.062	.086	.002	.001
Direct Effect	FTDL	.014	.012	.005	.018	.003	.002	-	-
	FTSL	.761	.843	.002	.007	.010	.020	.002	.001
Indirect Effect	FTDL	-	-	-	-	-	-	-	-
	FTSL	.100	.004	.004	.009	.002	.001	-	-

PT = Propensity to Trust, FTSL = Faculty Trust in Senior Leadership, FTDL = Faculty Trust in Direct Leader, IDL = Informing by Direct Leader, PDDL = Participative Decision-making by Direct Leader, CMB-adj= Common Method Bias-adjusted using a latent common method factor, unadj = not adjusted for Common Method Bias

Structural Model Fit

In assessing the model fit, the hypothesized model (see Figure 3) was specified to include the same error term covariances which were allowed in the accepted CFA model (see

Table 9). The hypothesized model with CMB adjustment had acceptable goodness-of-fit index scores (CFI .951, RMSEA 90% confidence interval .043-.053, PCLOSE .773). However, IDL did not have statistically significant relationships with FTDL (p = .614) or FTSL (p = .957). In the interest of parsimony (Kline, 2016), the model was respecified without IDL as a variable. The model without IDL had stronger CMB-adjusted goodness-of-fit index scores (CFI .963, RMSEA 90% confidence interval .037-.050, PCLOSE .940, see Table 11). Without IDL, all regression weights were statistically significant, except the relationship between years employed at institution and FTSL (see Table 12).

The respecified model without IDL had only three residual covariances above the <2.58 cutoff (PT1R – PT2R at 4.281, PT2R – PT4R at 3.763, and PT5R – FTDL2 at -2.588). The residual covariances for the CMB-adjusted and unadjusted versions of this model had no difference. The lack of large residual covariances are indicative of similarity between the covariances implied by the model and the covariances in the sample. This provides further evidence of good model fit. A path diagram with unstandardized regression weights is provided in Figure 4 and standardized regression weights in Figure 5. Figures 4 and 5 represent CMB-adjusted regression weights. While the CMB-adjusted model is less parsimonious than the unadjusted model, the CMB adjustment increased some p values and, as such, is a more conservative analysis than the unadjusted scores. Table 13 provides the standardized direct, indirect, and total effects.

Figure 3 *Simplified Visualization of Hypothesized Model* (Duplicate of Figure 1)

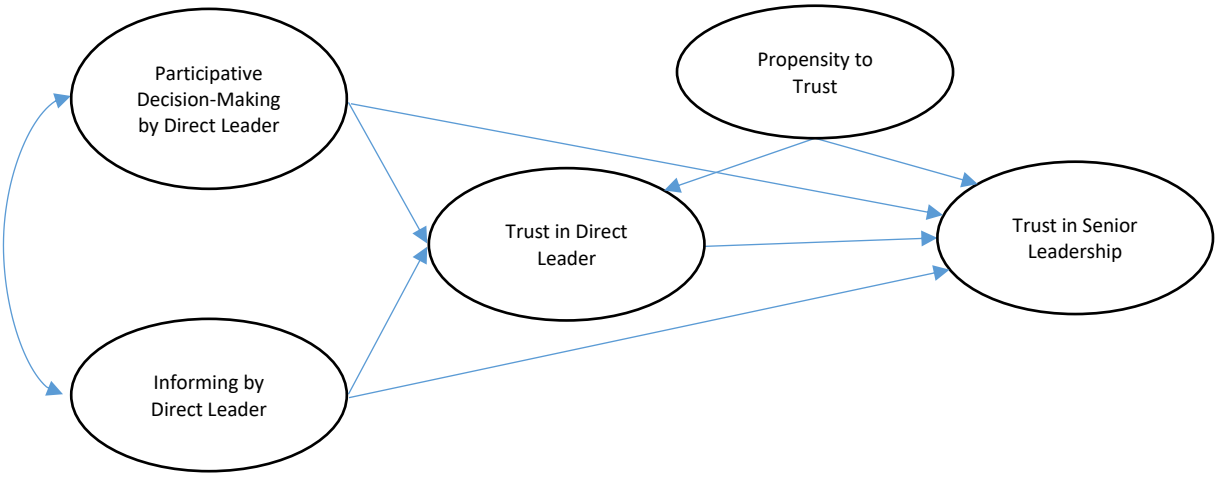


Table 11 *Goodness-of-Fit Indexes for Hypothesized Model and Accepted Model (CMB-adjusted)*

Description	CFI	RMSEA Lo 90% Conf.	RMSEA Hi 90% Conf.	PCLOSE	ECVI	df	X^2	$\Delta\chi^2$
Hypothesized Model	0.951	0.043	0.053	0.773	2.127	386	769.31	
Accepted Model: IDL removed	0.963	0.037	0.050	0.940	1.290	237	436.39	-332.92

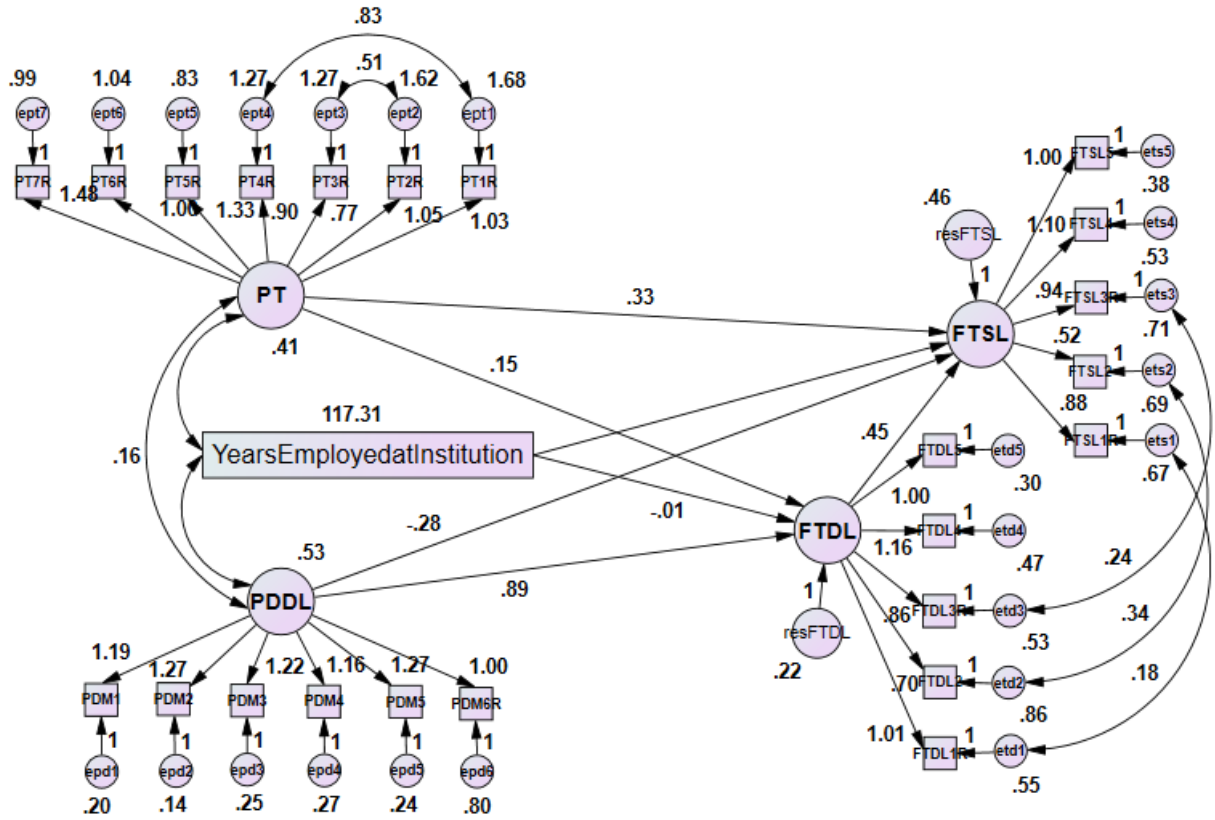
CMB-adjusted = Common Method Bias-adjusted using a latent common method factor, IDL = Informing by Direct Leader, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, PCLOSE = Probability of a Close fit in the population, ECVI = Expected Cross-Validation Index, df = degrees of freedom

Table 12 Unstandardized Regression Weights for Accepted Structural Model

				CMB-adjusted			Unadjusted	
Parameter			Estimate	S.E.	C.R.	*p*	S.E.	C.R.	*p*
FTDL	-	PT	0.146	0.058	2.519	0.012	0.057	2.547	0.011
FTDL	-	PDDL	0.885	0.073	12.209	***	0.072	12.227	***
FTDL	-	YEI	-0.006	0.003	-2.163	0.031	0.003	-2.164	0.030
FTSL	-	PT	0.327	0.087	3.735	***	0.082	3.975	***
FTSL	-	FTDL	0.453	0.102	4.434	***	0.101	4.501	***
FTSL	-	PDDL	-0.276	0.108	-2.545	0.011	0.108	-2.564	0.010
FTSL	-	YEI	-0.001	0.004	-0.285	0.775	0.004	-0.285	0.775
PDM6R	-	PDDL	1.000						
PDM5	-	PDDL	1.266	0.085	14.864	***	0.083	15.224	***
PDM4	-	PDDL	1.162	0.079	14.698	***	0.078	14.847	***
PDM3	-	PDDL	1.217	0.082	14.832	***	0.081	15.086	***
PDM2	-	PDDL	1.275	0.083	15.361	***	0.081	15.786	***
PDM1	-	PDDL	1.192	0.079	15.121	***	0.078	15.339	***
FTDL5	-	FTDL	1.000						
FTDL4	-	FTDL	1.159	0.060	19.288	***	0.059	19.668	***
FTDL3R	-	FTDL	0.860	0.052	16.384	***	0.052	16.628	***
FTDL2	-	FTDL	0.697	0.058	12.015	***	0.057	12.225	***
FTDL1R	-	FTDL	1.009	0.057	17.830	***	0.057	17.835	***
FTSL5	-	FTSL	1.000						
FTSL4	-	FTSL	1.104	0.077	14.416	***	0.076	14.537	***
FTSL3R	-	FTSL	0.936	0.072	13.062	***	0.072	13.069	***
FTSL2	-	FTSL	0.518	0.066	7.886	***	0.058	8.934	***
FTSL1R	-	FTSL	0.879	0.071	12.465	***	0.070	12.599	***
PT6R	-	PT	1.000						
PT5R	-	PT	1.331	0.155	8.570	***	0.151	8.802	***
PT4R	-	PT	0.895	0.130	6.899	***	0.129	6.921	***
PT3R	-	PT	0.767	0.124	6.182	***	0.122	6.293	***
PT2R	-	PT	1.053	0.149	7.076	***	0.149	7.081	***
PT1R	-	PT	1.026	0.149	6.907	***	0.149	6.908	***
PT7R	-	PT	1.484	0.177	8.394	***	0.168	8.837	***

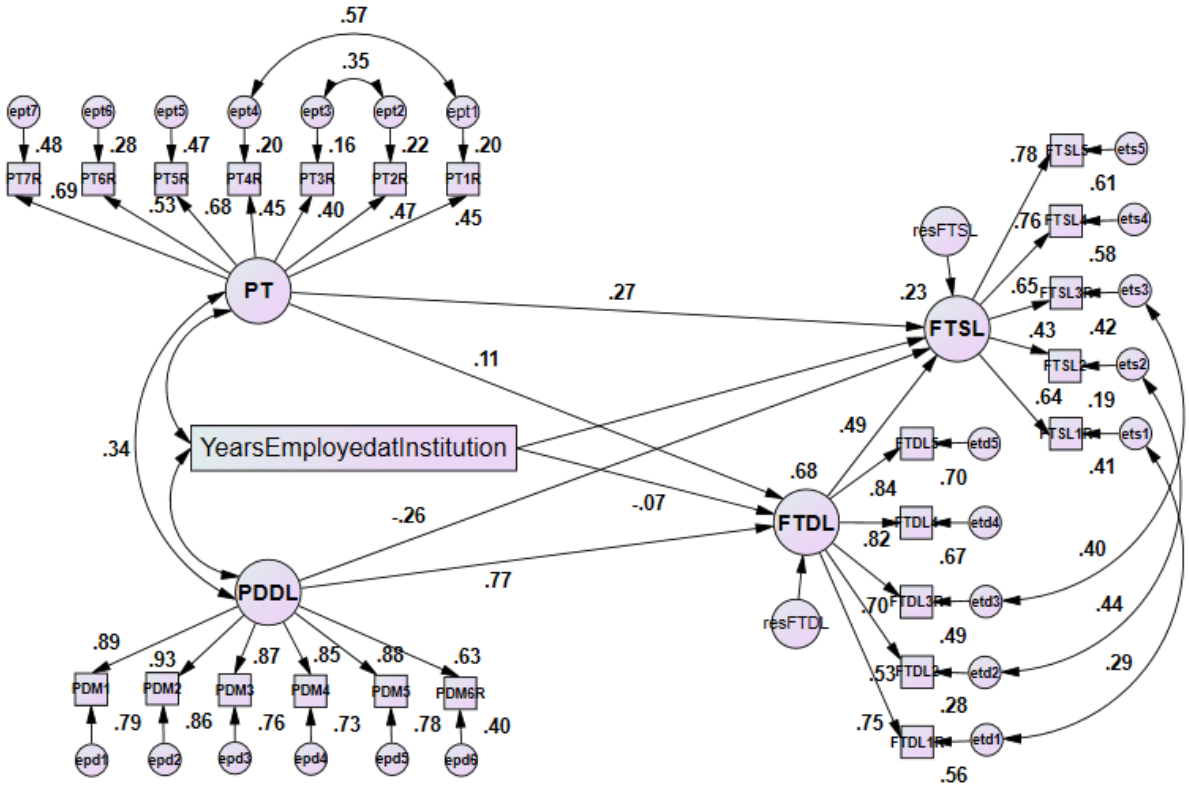
PT = Propensity to Trust, FTSL = Faculty Trust in Senior Leadership, FTDL = Faculty Trust in Direct Leader, PDDL = Participative Decision-making by Direct Leader, YEI = Years Employed at Institution, CMB-adjusted = Common Method Bias-adjusted using a latent common method factor, PDM = Item from the PDDL scale, S.E. = standard error, C.R. = critical ratio,
***p<.001

Figure *4 Accepted Model with Unstandardized Regression Weights (CMB-adjusted)*



Only statistically significant (p<.05) parameter estimates are provided.
PT = Propensity to Trust, FTSL = Faculty Trust in Senior Leadership, FTDL = Faculty Trust in Direct Leader, PDDL = Participative Decision-making by Direct Leader, CMB-adjusted = Common Method Bias-adjusted using a latent common method factor, PDM = Item from the PDDL scale, ept = error term for a PT scale item, epd = error term for a PDDL scale item, ets = error term for a FTSL scale item, etd = error term for a FTDL scale item, resFTSL = residual term for FTSL, resFTDL = residual term for FTDL

Figure *5 Accepted Model with Standardized Regression Weights (CMB-adjusted)*



Only statistically significant (p<.05) parameter estimates are provided.
PT = Propensity to Trust, FTSL = Faculty Trust in Senior Leadership, FTDL = Faculty Trust in Direct Leader, PDDL = Participative Decision-making by Direct Leader, CMB-adjusted = Common Method Bias-adjusted using a latent common method factor, PDM = Item from the PDDL scale, ept = error term for a PT scale item, epd = error term for a PDDL scale item, ets = error term for a FTSL scale item, etd = error term for a FTDL scale item, resFTSL = residual term for FTSL, resFTDL = residual term for FTDL

Table 13 Standardized Effect Sizes in Accepted Model

		Yrs Employed at Institution	PT	PDDL	FTDL
Total Effect	FTDL	-.073*	.112*	.774**	-
	FTSL	-.050	.326**	.119	.491**
Direct Effect	FTDL	-.073*	.112*	.774**	-
	FTSL	-.014	.271**	-.262*	.491**
Indirect Effect	FTDL	-	-	-	-
	FTSL	-.036**	.055*	.380**	-

PT = Propensity to Trust, FTSL = Faculty Trust in Senior Leadership, FTDL = Faculty Trust in Direct Leader, PDDL = Participative Decision-making by Direct Leader

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

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

Hypotheses

H_1 PDDL has a positive relationship with FTDL.

H_1 was supported. PDDL had a significant positive relationship with FTDL within the accepted structural model (Table 13). Furthermore the standardized effect size of the relationship was large at .774.

H_2 PDDL has a positive relationship with FTSL.

H_2 was supported. The total relationship between PDDL and FTSL in the accepted structural model had a *p* value that was .086 when adjusted for CMB. This is close to, but above, the <.05 cutoff for statistical significance. The direct relationship between PDDL and FTSL was statistically significant, but it was a negative relationship with an effect size of -.262. The indirect relationship between PDDL and FTSL was statistically significant and positive with an effect size of .380. PDDL had a positive relationship with FTSL when mediated by FTDL.

H_3 IDL has a positive relationship with FTDL.

H_3 was not supported. IDL and FTDL had a statistically significant Spearman's rho correlation of .580. However, the relationship between these two variables was statistically insignificant (p = .614) within the hypothesized structural model in which PDDL, PT and years employed at institution were taken into account. Furthermore, when the model was respecified without IDL, the goodness-of-fit index values improved.

H_4 IDL has a positive relationship with FTSL.

H_4 was not supported. IDL and FTSL did not have a statistically significant Spearman's rho correlation (see Table 8). The relationship between these two variables was also statistically insignificant (p = .957) within the hypothesized structural model in which PDDL, PT, and years employed at institution were taken into account. Furthermore, when the model was respecified without IDL, the goodness-of-fit index values improved.

H_5 PT has a positive relationship with FTDL.

H_5 was supported. The direct relationship between PT and FTDL was relatively modest (.112) within the accepted structural model. Though the effect size was small, it was statistically significant (p = .018).

H_6 PT has a positive relationship with FTSL.

H_6 was supported. Both the direct relationship (p = .007) and indirect relationship (p = .009) between PT and FTSL were statistically significant within the accepted structural model. The direct relationship between PT and FTSL had a moderate effect size of .271. The indirect relationship, with FTDL as a mediator, had a very modest effect size of .055.

H_7 IDL has a positive relationship with PDDL.

H_7 was supported. PDDL and IDL had a strong Spearman's rho (.736) that was statistically significant at the .01 level. Within the hypothesized structural model, IDL and PDDL had a correlation estimate of .742 that was statistically significant (p = .001).

H_8 The relationship between PDDL and FTSL is mediated by FTDL.

H_8 was supported. The indirect relationship between PDDL and FTSL, with FTDL as the only mediator in the model, was statistically significant (p = .001) with an effect size of .380. The direct relationship between PDDL and FTSL, in which the relationship between FTDL and FTSL is controlled, is significant (p = .020), but negative (-.262). There was only a positive relationship between PDDL and FTSL when it was mediated by FTDL.

Baron and Kenny (1986) popularized the belief that the total effect (direct relationship between the independent variable [IV] and dependent variable [DV], without controlling for the mediating variable) must be significant to support a hypothesis of mediation. Under such a criterion, the data for this study would not support mediation because the total effect from PDDL to FTSL has a p value greater than .05. However, this criterion of significant total effect has come under criticism (Zhao, Lynch, & Chen, 2010).

Most relevant for this study is that Baron and Kenny's criterion of significant total effect can mask theoretically meaningful mediation (Zhao, Lynch, & Chen, 2010). Total effect is the sum of the indirect relationship through the mediating variable and the direct relationship between IV and DV with the influence of the mediating variable excluded. In cases where the indirect relationship and the direct relationship are of the same direction (e.g. both are positive) and significant, the total effect will be significant. However, in cases where the

indirect and direct relationships are of opposite directions (e.g. one is positive and one is negative), the total effect can be insignificant even when the indirect and direct relationships are each significant. Zhao, Lynch, and Chen call this later scenario competitive mediation. In competitive mediation, Baron and Kenny's criterion can hide the anticipated mediation and stunt growth in theory building. Competitive mediation may indicate the presence of another mediating variable not observed in a study, but important for understanding a phenomenon. Zhao, Lynch, and Chen assert, "[t]here should only be one requirement to establish mediation, that the indirect effect… be significant" (p. 198). The role of FTDL in the relationship between PDDL and FTSL meets this requirement.

H_9 The relationship between IDL and FTSL is mediated by FTDL.

H_9 was not supported. In the hypothesized structural model, IDL did not have a statistically significant indirect relationship with FTSL. The indirect effect size between IDL and FTSL in the hypothesized model was very small (.014) and statistically insignificant (p = .510). Furthermore, the hypothesized structural model was rejected because of IDL's statistical insignificance in the model. The accepted model without IDL had improved goodness-of-fit index values compared to the hypothesized model with IDL.

Conclusion

The study used a strong sample and reliable and valid instruments. The sample was generally representative of the population, with the exception of a moderate over-representation of tenured faculty members. The potential sample bias from an over-representation of tenured faculty was mitigated by controlling for years worked at the institution. While the response rate of 28% opens the sample to the possibility of sample bias

(Vogt, 2007), it was consistent with other survey studies of faculty members. Both the Cronbach's alphas and CFA evidenced the reliability and internal validity of the instruments.

The statistical analysis supported six out of the nine hypotheses. All hypotheses regarding PDDL's and PT's relationships with FTDL and FTSL were supported. PDDL and PT both have positive relationships with FTDL and FTSL. However, the direct relationship between PDDL and FTSL was negative. The relationship between PDDL and FTSL was positive and significant when mediated by FTDL. The study did not support the hypotheses that IDL would positively relate to FTDL and FTSL. It also did not support the hypothesis that FTDL would mediate the relationship between IDL and FTSL.

Chapter 5: Discussion

Overview of the Study

This study addressed the need for effective leadership within colleges and universities as these organizations pursue their missions in a disrupted and dynamic sector of social service. More specifically, it focused on the need to develop trust as an aspect of effective leadership. The purpose of this study was to investigate a potential path to foster trust in two levels of leadership, direct leaders and senior leadership. To this end, six research questions were articulated:

1) Is there a relationship between faculty perceptions of participative decision-making by direct leaders (PDDL) and faculty trust in direct leaders (FTDL)?
2) Is there a relationship between faculty perceptions of informing behavior by direct leaders (IDL) and FTDL?
3) Is there a relationship between PDDL and faculty trust in senior leadership (FTSL)?
4) Is there a relationship between IDL and FTSL?
5) Does FTDL mediate the relationship between PDDL and FTSL?
6) Does FTDL mediate the relationship between IDL and FTSL?

These six research questions were pursued by testing nine hypotheses (see Table 14). Data were collected through a survey of 437 full-time faculty members at private mid-sized colleges and universities in the Great Lakes region. An analysis using structural equation modeling supported all hypothesized relationships between PDDL and both FTDL and FTSL. However, the analysis did not support any of the hypothesized relationships between IDL and either FTDL or FTSL.

Table 14 *Hypotheses and Results*

Hypothesis	*Result*
H_1 PDDL has a positive relationship with FTDL.	Supported
H_2 PDDL has a positive relationship with FTSL.	Supported
H_3 IDL has a positive relationship with FTDL.	Not Supported
H_4 IDL has a positive relationship with FTSL.	Not Supported
H_5 PT has a positive relationship with FTDL.	Supported
H_6 PT has a positive relationship with FTSL.	Supported
H_7 IDL has a positive relationship with PDDL.	Supported
H_8 The relationship between PDDL and FTSL is mediated by FTDL.	Supported
H_9 The relationship between IDL and FTSL is mediated by FTDL.	Not Supported

Conclusions

Empowering Leadership Behaviors and Trust in Direct Leader

PDDL had a strong positive relationship with FTDL. The data collected and analyzed in the study provides empirical evidence of a correlation between these two variables, but not causation. However, a causal relationship between PDDL and FTDL is a strong theoretical explanation of that correlation. Serva, Fuller, and Mayer's (2005) longitudinal study demonstrated that team A's distrusting behavior in team B negatively predicted team B's perception of team A's trustworthiness. As an act of vulnerability, participative decision-making is a trusting behavior, which would be expected to have the opposite effect. The positive relationship between PDDL and FTDL found in this study is consistent with the relationship which Serva, Fuller, and Mayer observed in their longitudinal study.

The very strong effect sizes between PDDL and FTDL are important to note. These two variables had a Spearman's rho of .818 when adjusted for CMB (see Table 8). Such a strong correlation could raise the question of whether or not PDDL and FTDL are actually measuring the same construct. A CFA with a latent variable that combined the PDDL and FTDL indicators

was conducted to see if such a construct would have internal validity. The results did not support treating PDDL and FTDL as a single construct. While the RMSEA was moderate at .60 and a 90% confidence interval of .055-.065, a PCLOSE of .000 indicated a near impossibility of a good fit (<.05) in the population. The CFI was .928, which is below the >.95 cutoff.

Using the same participative decision-making instrument, but a different trust in leader instrument, Gao, Janssen, and Shi (2011) and Huang, Iun, Liu, and Gong (2010) found correlation coefficients of .66 and .67 respectively between participative decision-making and trust in direct leader. Those previous results are strong, but weaker than the correlation found in this study. While that difference in effect size could be due to the use of a different trust instrument, the stronger correlation between PDDL and FTDL in this study could also be due to unique characteristics of a full-time faculty population. Anecdotally, it seems common for faculty cultures to place a very high value on participative decision-making. Faculty might be more inclined than other employee populations to view participative decision-making as a right or an assumed practice. If that is the case, PDDL could be a near necessity for FTDL.

Unexpectedly, the SEM analysis did not support the existence of a significant relationship between IDL and FTDL. However, IDL appears to have some kind of relationship with FTDL. The Spearman's rho for IDL-FTDL was strong (.580) and significant at the .01 level (see Table 8). It is interesting that the relationship between IDL and FTDL diminished when the PDDL-FTDL and PT-FTDL relationships were taken into account in the structural model. It might be that IDL has a moderating effect on the relationship between PDDL and FTDL. Previous studies have found IDL to moderate participative decision-making's relationships with work performance (Lam, Huang, & Chan, 2015) and employee voice (Gao, Janssen, & Shi, 2011).

Direct Leaders' Empowering Leadership Behaviors and Trust in Senior Leadership

Participative decision-making has potential to foster trust in leader across hierarchical layers of leadership. As hypothesized, PDDL had a positive relationship with FTSL when mediated by FTDL. The relationship between PDDL and FTSL appears to be highly dependent on FTDL. The direct relationship between PDDL and FTSL was negative when isolated from the mediating effect of FTDL.

The observed negative direct relationship between PDDL and FTSL might indicate the presence of an unobserved negative mediator between PDDL and FTSL (Zhao, Lynch, & Chen, 2010). If that is the case, PDDL and FTSL could have an actual positive direct relationship. That positive direct relationship might have been hidden by an unobserved mediator exerting a suppression effect that flipped the sign of the direct relationship to negative.

It is also possible that the direct relationship between PDDL and FTSL is truly negative. That could mean that PDDL fosters distrust in senior leadership when it fails to foster trust in the direct leader. A potential explanation is that PDDL is viewed as a disingenuous technology of manipulation when other factors prevent PDDL from fostering trust in direct leader. That sense of manipulation could then transfer distrust up to senior leadership.

While PDDL had a meaningful relationship with FTSL, IDL did not. IDL and FTSL did not have a statistically significant relationship in the structural model, either directly or indirectly. As discussed above in regards to FTDL, IDL might function as a moderator of the relationship between PDDL and FTSL. However, the Spearman's rho for IDL and FTSL was weak (.074) and statistically insignificant when adjusted for CMB (see Table 8).

Implications

The results of this study support the usefulness of LMX theory in understanding trust. The observed correlations between PDDL and FTDL are consistent with the theoretical argument that a direct leader's vulnerable behavior (i.e. participative decision-making) results in a reciprocal willingness to be vulnerable on the part of the follower. Trusting behavior from the leader begets trust in the leader.

Though counter to the hypotheses, the lack of a relationship between IDL and FTDL within the structural model has a potential theoretical explanation. Participative decision-making might be experienced as a more vulnerable action than informing. Explaining decisions might be less vulnerable than inviting followers to help shape decisions. If that is the case, informing would be less influential than participative decision-making in fostering high quality LMX relationships.

The results of the study are consistent with the theoretical argument that PDDL creates an opportunity for followers to make sense of the organization in a way that builds trust in senior leadership as the ultimate symbols of organizational decision-making. The negative direct relationship between PDDL and FTSL is consistent with the theoretical argument behind the hypothesized mediating role of FTDL in the relationship between PDDL and FTSL. Lack of FTDL in a trust-building chain through hierarchical layers does not only prevent PDDL from fostering FTSL, it actually appears to have a negative influence on FTSL. When unknown moderating variables, or possibly the lack of achieving a threshold level of PDDL, prevent PDDL from increasing FTDL, it appears that faculty are likely to have less trust in the administrative decision-making system of the institution, which is symbolized in senior leadership. This could

be because the participative decision-making to which their untrusted direct leader invites them is perceived as disingenuous or impotent.

While this study was conducted in the context of college and university faculty, the theory upon which it is based has been developed through studies conducted in a variety of organizational contexts. Researchers and practitioners should be careful in applying these implications to other contexts. However, the breadth of contexts upon which the theory has been built suggest that participative decision-making, informing, trust in direct leader, and trust in senior leadership relate to each other similarly in different organizational contexts.

Limitations

The most meaningful limitation of this study is the lack of control and lack of time delay between collecting data on the exogenous and endogenous variables. These features of the study design preclude empirically-based conclusions regarding causal relationships. It is possible that unobserved confounding variables or causal relationships opposite of the theorized directions explain the observed statistical relationships.

Another limitation is the reliance on statistical procedures to test for and control for common method bias. Collecting data from multiple sources and at different times is the preferred way to avoid common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). It is possible that the use of a common method for collecting data introduced bias which was neither discovered nor corrected by the statistical procedures.

The particular make-up of the sample also creates a limitation for the study. While the sample closely represents the demographics of the identified population, practitioners and researchers may seek to apply the findings in contexts which are not representative of the

identified population for this study. For example, the sample, like the population, is predominantly white. It is possible that the relationships among variables would be different at an institution that is not predominantly white.

The study is also limited by the bias which occurs as invited members from the population choose to participate or not. It is possible that individuals inclined to participate in the study respond to participative decision-making and informing differently than individuals not inclined to participate in the study. Controlling for propensity to trust might have mitigated such bias. However, we do not know how individuals who did not respond would have responded. As such, the potential for response bias cannot be fully mitigated with certainty.

As a quantitative study aimed at generalization, the findings may be limited in their applicability to any given individual. Individuals might respond to participative decision-making and informing in ways that are different from the general population. Leaders serve their followers best by attending to the unique characteristics of those whom they lead.

Recommendations for Practitioners

Senior leadership teams are wise to encourage participative decision-making by direct leaders. The conclusions of this study, combined with the theory upon which it is based, suggest that participative decision-making by direct leaders fosters trust in direct leaders. Participative decision-making by direct leaders not only impacts trust in direct leader, but also has potential to impact trust in senior leadership. Participative decision-making gives employees an opportunity to make sense of the organization's decision-making system as one that shares power with them and, as such, is willing to be vulnerable to them. Trust in direct

leader developed this way could increase trust in the level of leadership that represents the organization as a whole – senior leadership.

Senior leaders should also consider the risk of encouraging participative decision-making among direct leaders. PDDL might decrease trust in senior leadership if faculty members' lack of trust in their direct leaders cannot be helped by participative decision-making. Participative decision-making by direct leaders may yield the best results if there are also mechanisms in place to select direct leaders who have other trust-building qualities. Encouraging otherwise distrusted direct leaders to engage in participative decision-making has potential to create an adverse effect on employee's trust in senior leadership. The results of this study point to the value of both selecting leaders with capacity to build trust and encouraging those leaders to engage in participative decision-making.

Recommendations for Future Research

By advancing trust theory, this study has revealed paths forward for additional research. One of the most practically important avenues for future research is the relationship between participative decision-making and trust in direct leader. Greater understanding of when and how participative decision-making fosters trust in direct leader will help leaders at higher levels select and train direct leaders who will be able to foster follower trust in the direct leader through participative decision-making and, in turn, foster trust in senior leadership rather than harm trust in senior leadership.

Informing behavior by direct leaders is one potential variable for investigation as a moderator of the relationship between participative decision-making and trust in direct leader. Though informing was not statistically significant in the structural model, it did have statistically

significant spearman's rho correlation coefficients with PDDL and FTDL (see Table 8). This could indicate the potential for some form of meaningful relationship between IDL, PDDL, and FTDL. Since Lam, Huang, and Chan (2015) found that informing was necessary for participative decision-making to have a positive relationship with performance, it is possible that informing is also necessary for PDDL to have a positive relationship with FTDL.

Additional research into the relationship between participative decision-making and senior leadership could also further advance trust theory. Zhao, Lynch, and Chen (2010) suggested that direct effects in path models often represent a total effect which include unobserved mediating relationships. This study revealed a negative direct relationship between PDDL and FTSL that was in competition with the positive indirect relationship through FTDL. The PDDL to FTSL negative direct relationship could be the result of an unobserved variable suppressing a positive direct relationship between PDDL and FTSL. Research into possible negative mediators in the relationship between PDDL and FTSL could advance understanding of how PDDL relates to FTSL.

Researchers might also consider exploring how follower perceptions of senior leaders' participative decision making relates to trust in senior leadership. A study design that allows for comparison of the PDDL to FTSL relationship and the participative decision-making by senior leadership to FTSL relationship could be beneficial in helping institutions determine where to focus resources for participative decision-making. Because the social relationship between employee and senior leadership is generally more distant, it might be helpful to also investigate what variables influence perceptions of senior leadership's participative decision-making.

As researchers probe participative decision-making's relationships with trust in direct leader and trust in senior leadership, it could be beneficial to heed earlier researchers' calls to distinguish between trust and trustworthiness (Colquitt, Scott, & LePine, 2007; Gillespie, 2012; Lewis & Weigert, 1985; Mayer, Davis, & Schoorman, 1995). Certain factors of trustworthiness (e.g. integrity) might prove to be moderators of the relationship between participative decision-making and trust in direct leader. Factors of trustworthiness might also be mediators in the negative direct relationship between direct leader's participative decision-making and trust in senior leadership.

Future research could also seek to overcome some of the limitations of this study. Much of the research on trust, empowering leadership behaviors, and LMX is cross-sectional and non-experimental, like this study. Longitudinal and experimental studies are needed to continue to advance knowledge in these theory bases. Experimental or quasi-experimental studies investigating contextual factors which might reverse causal direction could nuance understanding of trust. For example, does organizational trauma perceived to result from senior leadership's decision-making cause followers to attach to and trust their direct leaders more?

Future studies of the relationship between PDDL and FTDL in particular could seek to use a department level unit of analysis. This would decrease the risk of common method bias by allowing for multiple faculty members to rate the same leader. A department level quasi-experimental study that involves a training intervention could be helpful in testing the theoretical argument of causality.

Concluding Comments

As senior leaders of colleges and universities seek to develop their organizations' capacities to successfully adapt to a changing environment, they would do well to prioritize selection and training of lower and middle levels of leadership. The relationship between PDDL, FTDL, and FTSL observed in this study is very possibly just one example of many avenues for direct leaders to impact the ways that faculty are willing to follow senior leadership. Senior leaders lead the organization through the leaders below them. Lower and middle level leaders are the gatekeepers between the people of the organization and senior leadership. Cultivating and developing lower and middle level leaders may make the difference between an institution trusting and moving with senior leadership into a new reality or resisting senior leadership as the world around the institution transforms.

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Appendix: Survey

Note: Text in brackets is not included in actual survey. Text in blue indicate display logic for certain demographic questions and is not included in the actual survey.

Higher Education Leadership Survey

Thank you for participating in this study on faculty perceptions of institutional leaders. The survey will take most participants less than 10 minutes. Your honest perspective will help improve understanding of leadership in academic settings.

After completing this survey, you will have an opportunity to enter into a drawing for one of five **$50 Amazon.com gift cards**.

The survey will ask you to provide your perception of the senior leadership team at your institution and your direct leader.

> **Senior leadership** refers to the highest level of executive leaders in your institution. At many institutions, this is the president and her or his cabinet, but your institution might use different terms. This is **not** the governing board which provides oversight for your institution.
>
> **Direct leader** refers to the person to whom you report in your institution's organization structure. This is often a department chair, program director, or dean, but your institution might have a different title for this role.

Your individual responses and your identity as a participant will be **confidential**.

Informed Consent

Topic and Purpose
This survey is part of a research project for a dissertation in Bethel University's Doctor of Education in Higher Education Leadership program. You will be asked to answer questions about your perception of the senior leadership of your institution and your direct leader.

The purpose of this study is to examine faculty perceptions of their direct and senior leaders.

Participants
You have been invited to participate in this study because public directory information indicates you are a faculty member at a 4-year private not-for-profit college or university which meets certain criteria including geography and institution size. There will be an estimated 250-450 participants in this study.

Voluntary Participation
Participation in this study is voluntary. You may skip any question on the survey or discontinue participation at any time.

The researcher may remove participants from the study if survey data is incomplete or it is discovered that a participant is not a member of the population under study.

Survey Protocol
The survey will take most participants less than 10 minutes to complete. It consists of 32 multiple choice questions with answers on Likert scales, plus demographic questions.

Confidentiality
Participants' identities will be kept confidential. Identifying information will be removed from response data and replaced with an identifier code as one of the first steps in data processing. The key for the identifier codes will be stored on a flash drive and kept in a locked location. The flash drive containing the code key will be physically destroyed at the conclusion of the study. Neither individual responses nor participant identities will ever be included in written reports or publications, data will only be reported in aggregate form.

Participant Risks
The risks to survey participants are minimal. Some questions may make some participants experience discomfort. If you are uncomfortable answering any question, you can skip it. You may also withdraw from the study after beginning the survey by closing your web browser window and emailing the researcher with a request to have your responses removed from the study.

Since the survey asks participants to provide their honest perceptions of others, a breach of participant confidentiality could pose a risk to participants' relationships and reputation. As discussed above, the researcher will follow a protocol to maintain participant confidentiality.

Significant new findings developed during the course of the study which might relate to a person's willingness to continue participation will be provided to the participant.

Benefits to Participants
Participants may elect to receive a 3-5 page executive summary of the findings of this study. If you wish to receive this summary, you may request one through a form at the conclusion of the survey or by emailing ross-jahnke@bethel.edu.

Participants may also elect to have their name entered into a drawing to win one of five $50 Aamzon.com gift cards.

Future Use of Data
Response data collected through this survey may be used in future studies. However, participant names and email addresses will not be maintained in the response data. Identifying information will be destroyed at the conclusion of this study.

Contact Information
If you have any questions regarding this study, participants' rights, and/or to report a research-related injury, please contact the researcher (Ross Jahnke | ross-jahnke@bethel.edu | 651-635-8548) or the researcher's faculty advisor (Justin Irving | j-irving@bethel.edu | 651-638-7039).

If you would like a copy of this form, please save or print this page from your web browser.

This research has been approved in accordance with Bethel University's Levels of Review for Research with Humans.

You are making a decision whether or not to participate in this study. If you do not wish to participate, you may close the browser window.

❍ I have read the informed consent page and I agree to participate in this study. I understand that I may skip any question in the survey and I may withdraw or discontinue participation before submitting the completed survey.

Are you a full-time faculty member at a college or university?

- ❍ Yes
- ❍ No

Display This Question:
If Are you a full-time faculty member at a college or university No Is Selected

Thank you for your time and willingness to participate in this study. Unfortunately, you are not an eligible participant for this study.

[Job Satisfaction Scale (Messersmith, Patel, Lepak, & Gould-Williams, 2011)]
Respond to the below statements based on how you are feeling today.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
In general, I like working here.	❍	❍	❍	❍	❍	❍	❍
In general, I don't like my job.	❍	❍	❍	❍	❍	❍	❍
All things considered, I feel pretty good about this job.	❍	❍	❍	❍	❍	❍	❍

[Participative Decision-Making & Informing (Arnold, Arad, Rhoades, & Drasgow, 2000) – italicized items indicate the informing subscale for purposes of clarity here and are not italicized in the actual survey]
Think about your **direct leader** (the person to whom you report, e.g. department chair or program director). For each statement, select the answer that best describes how frequently or infrequently your direct academic leader exhibits the behavior described in the statement.

	Never	Rarely	Sometimes	Often	Always
Encourages work group members to express ideas/suggestions	❍	❍	❍	❍	❍
Listens to my work group's ideas and suggestions	❍	❍	❍	❍	❍

Uses my work group's suggestions to make decisions that affect us	❍	❍	❍	❍	❍
Gives all work group members a chance to voice their opinions	❍	❍	❍	❍	❍
Considers my work group's ideas when he/she disagrees with them	❍	❍	❍	❍	❍
Makes decisions that are based only on his/her own ideas	❍	❍	❍	❍	❍
Explains the institution's decisions	❍	❍	❍	❍	❍
Explains the institution's goals	❍	❍	❍	❍	❍
Explains how my work group fits into the institution	❍	❍	❍	❍	❍
Explains the purpose of the institution's policies to my work group	❍	❍	❍	❍	❍
Explains rules and expectations to my work group	❍	❍	❍	❍	❍
Explains his/her decisions and actions to my work group	❍	❍	❍	❍	❍

If you have an administrative role with a different supervisor, think of the direct leader for your faculty role when answering these items.

[Trust in Direct Leader (Mayer & Gavin, 2005)]
Think about your **direct leader** (the person to whom you report, e.g. department chair or program director). For each statement, select the number that best describes how much you agree or disagree with each statement.

If you have an administrative role with a different supervisor, think of the direct leader for your faculty role when answering these items.

	1 Disagree Strongly	2 Disagree	3 Neither Agree nor Disagree	4 Agree	5 Strongly Agree
If I had my way, I wouldn't let my direct leader have any influence over issues that are important to me.	❍	❍	❍	❍	❍
I would be willing to let my direct leader have complete control over my future in this institution.	❍	❍	❍	❍	❍
I really wish I had a good way to keep an eye on my direct leader.	❍	❍	❍	❍	❍
I would be comfortable giving my direct leader a task or problem which was critical to me, even if I could not monitor her/his actions.	❍	❍	❍	❍	❍
If someone questioned my direct leader's motives, I would give my direct leader the benefit of the doubt.	❍	❍	❍	❍	❍

[Trust in Senior Leadership (Mayer & Gavin, 2005)]
Think about your institution's **senior leadership** team (e.g. President and Cabinet). For each statement, select the number that best describes how much you agree or disagree with each statement.

	1 Disagree Strongly	2 Disagree	3 Neither Agree nor Disagree	4 Agree	5 Strongly Agree
If I had my way, I wouldn't let senior leadership have any influence over issues that are important to me.	❍	❍	❍	❍	❍
I would be willing to let senior leadership have complete control over my future in this institution.	❍	❍	❍	❍	❍
I really wish I had a good way to keep an eye on senior leadership.	❍	❍	❍	❍	❍
I would be comfortable giving senior leadership a task or problem which was critical to me, even if I could not monitor their actions.	❍	❍	❍	❍	❍
If someone questioned senior leadership's motives, I would give senior leadership the benefit of the doubt.	❍	❍	❍	❍	❍

[Perception of Direct Leader's Trust in Senior Leadership (adapted from Mayer & Gavin, 2005)]

Think about your **direct leader's attitude towards senior leadership**. For each statement, select the number that best describes how much you agree or disagree with each statement.

You may not know how your direct leader would respond to these statements. Please answer based on your perception of your direct leader's attitude towards senior leadership.

If you have an administrative role with a different supervisor, think of the direct leader for your faculty role when answering these items.

	1 Disagree Strongly	2 Disagree	3 Neither Agree nor Disagree	4 Agree	5 Strongly Agree
If my direct leader had her/his way, he/she wouldn't let senior leadership have any influence over issues that are important to her/him.	❍	❍	❍	❍	❍
My direct leader would be willing to let senior leadership have complete control over her/his future in this institution.	❍	❍	❍	❍	❍
My direct leader really wishes he/she had a good way to keep an eye on senior leadership.	❍	❍	❍	❍	❍
My direct leader would be comfortable giving senior leadership a task or problem which was critical to her/him, even if she/he could	❍	❍	❍	❍	❍

not monitor their actions. If someone questioned senior leadership's motives, my direct leader would give senior leadership the benefit of the doubt.	❍	❍	❍	❍	❍

[Propensity to Trust Survey (Evans & Revelle, 2008)]
Please rate the extent that each of the following statements describes **you**.

	Strongly inaccurate	Moderately inaccurate	Slightly inaccurate	Slightly accurate	Moderately accurate	Strongly accurate
Retreat from others	❍	❍	❍	❍	❍	❍
Am filled with doubts about things	❍	❍	❍	❍	❍	❍
Feel short-changed in life	❍	❍	❍	❍	❍	❍
Avoid contacts with others	❍	❍	❍	❍	❍	❍
Believe that most people would lie to get ahead	❍	❍	❍	❍	❍	❍
Find it hard to forgive others	❍	❍	❍	❍	❍	❍
Believe that people seldom tell you the whole story	❍	❍	❍	❍	❍	❍

Thank you for taking the time to participate in this study. After the following demographic questions, you will have an opportunity to enter your name into a drawing for one of five **$50 Amazon.com gift cards**.

Please indicate your sex

- ❍ Male
- ❍ Female

Please indicate your age (number of years).

Which categories describe you? Select all boxes that apply. Note, you may select more than one group.

- ❑ American Indian or Alaska Native For example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.
- ❑ Asian For example, Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese, etc.
- ❑ Black or African American For example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.
- ❑ Hispanic, Latino, or Spanish origin For example, Mexican or Mexican American, Puerto Rican, Cuban, Salvadoran, Dominican, Colombian, etc.
- ❑ Middle Eastern or North African For example, Lebanese, Iranian, Egyptian, Syrian, Moroccan, Algerian, etc.
- ❑ Native Hawaiian or other Pacific Islander For example, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese, etc.
- ❑ White For example, German, Irish, English, Italian, Polish, French, etc.
- ❑ Some other race, ethnicity, or origin

Display This Question:
If Please indicate your ethnicity (select all that apply). Other Is Selected

You indicated "Some other race, ethnicity, or origin." Please briefly describe this.

Display This Question:
If Are you a full-time faculty member at a college or university? Yes Is Selected

Do you have tenure?

- ❍ Yes
- ❍ No

Display This Question:
If Do you have tenure? No Is Selected

Is your position tenure track?

- ❍ Yes
- ❍ No

Display This Question:
If Are you a full-time faculty member at a college or university? Yes Is Selected

What is your rank?

- ❍ Professor
- ❍ Associate Professor
- ❍ Assistant Professor
- ❍ Instructor
- ❍ Lecturer
- ❍ Other

Display This Question:
If What is your rank? Other Is Selected

You indicated "Other" for your rank. Please enter your rank.

Please indicate your primary discipline area

- ❍ Humanities
- ❍ Fine Arts
- ❍ Professional Studies
- ❍ Social Sciences
- ❍ Natural Sciences
- ❍ Other

Display This Question:
If Please indicate your primary discipline area Other Is Selected

You indicated "Other" as your primary discipline area. Please briefly describe your primary discipline area.

Do you hold an administrative role (e.g. assistant dean, department chair, or program director)?

- ❍ No
- ❍ Yes

Display This Question:
If Do you hold an administrative role (e.g. assistant dean or department chair)? Yes Is Selected

What is the title for your administrative role?

- ❍ Program Director
- ❍ Department Chair
- ❍ Assistant or Associate Dean
- ❍ Dean
- ❍ Assistant or Associate Provost
- ❍ Provost
- ❍ Other

Display This Question:
If What is the title for your administrative role? Other Is Selected

You indicated "Other" for the title for your administrative role. Please provide the title of your administrative role below.

Do you supervise or oversee full-time faculty members?

- ❍ No
- ❍ Yes

Do you supervise or oversee part-time faculty members?

- ❍ No
- ❍ Yes

How many years have you been employed at your current institution?

Display This Question:
If Are you a full-time faculty member at a college or university? Yes Is Selected

How many years have you been employed as a full-time faculty member in higher education?

Please indicate the student types which you primarily teach. Select all that apply.

- ❑ Traditional Undergraduate
- ❑ Adult Undergraduate
- ❑ Graduate

Please indicate the format in which you primarily teach

- ❍ Face-to-face
- ❍ Online
- ❍ Evenly face-to-face and online

What is the title of your direct academic leader (the person to whom you report)?

- ❍ Department Chair
- ❍ Program Director
- ❍ Assistant or Associate Dean
- ❍ Dean
- ❍ Assistant or Associate Provost
- ❍ Provost
- ❍ Other

Display This Question:
If What is the title of your immediate academic leader? Assistant or Associate Provost Is Selected

You indicated "Other" for the title of your direct academic leader. Please provide her or his title.