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Servant Leadership and Affective Commitment to Change in Manufacturing Organizations

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This is to certify that the doctoral study by

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Abstract

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by

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MBA, South University, 2012

BA, University of Minnesota – Twin Cities, 2005

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Organizational change initiatives in the United States frequently fail with estimated failure rates as high as 90%. Change failure rates resulting from underused and poorly trained front-line managers (FLMs) remained high, with no signs of improvement in the past 2 decades. The purpose of the correlational study, grounded in servant leadership theory, was to examine the relationship between employee perceptions of their FLM's servant leadership dimensions and employee affective commitment to change. A purposive, nonprobability sample of 107 employees of a U.S. manufacturing organization that had recently undergone organizational change completed a questionnaire for the study. Results of the multiple linear regression analysis were not significant, $F(7, 107) = .714$, $p = .660$, $R^2 = 0.045$. Though results were not statistically significant, the beta weights for creating value for the community ($\beta = .165$) and behaving ethically ($\beta = .168$) indicated that creating value for the community and behaving ethically were potentially the most important variables in accounting for variance in the model. The beta weights for emotional healing ($\beta = -.048$) and conceptual skills ($\beta = -.047$) indicated that emotional healing and conceptual skills were potentially the least important variables in accounting for variance in the model. The findings may be of value to manufacturing leaders developing initiatives to improve change initiative success rates. Support for servant leadership during periods of organizational change has positive social change implications for employees. The practice of servant leadership reduces employee uncertainty and anxiety incurred during periods of change by resolving uncertainties and sustaining employee motivation for supporting organizational change.

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Dedication

I dedicate this study to my son, Thomas, to my mother, Joan, and to my father, Jerry. To my son, Thomas, there is nothing you can't achieve, and I will move heaven and earth to support you through this life. Words can't express how much I love you. I hope your natural curiosity and love of learning continues and that you pass these onto future generations of Schulkers. To my mother, thank you for always believing in me and for your continuous support. Your accomplishments in life set the bar high for your children and taught us hard work pays off. You should be extremely proud to have two children earning their doctorates in the same month! Lastly, I dedicate this study to my late father whom I was too young to know when he passed. I think of you when I look at my son and hope I have made you proud.

Acknowledgments

I want to thank my professors at Walden University for their support and encouragement throughout the program. Specifically, I want to thank my committee chair, Dr. Michael Lavelle. You are a true mentor, and I couldn't have done this without you. I thank you not just for being my chair, but for your dedication and encouragement for all your students. I would also like to thank my second committee member, Dr. Janet Booker. Thank you for your timely feedback and guidance throughout this journey. Lastly, I want to thank Dr. Gergana Velkova. When I look back at this program, I will remember your expert reviews as most instrumental to my academic growth.

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Section 1: Foundation of the Study

Organizational change affects all organizations without exception. The ability to change is necessary for organizational survival and to remain competitive (Holt & Vardaman, 2013). Employers must initiate frequent change and employees must commit to organizational changes to enable adaptability within their markets (Dermol & Cater, 2013). Despite the need for continual change, change initiative failure rates remain high with no signs of improvement (Maurer, 2011). Strong, ethical leadership is even more important during change initiatives as leaders face moral compromises that potentially damage employee perceptions of leader credibility (Sharif & Scandura, 2014). Researchers are increasingly interested in how front-line managers (FLMs), who spend the most time with employees, influence employees to engage in positive change behaviors (Evans, 2015).

FLMs both positively and negatively influence their followers. As economic and environmental uncertainty increases, scholars theorize that servant leadership is an increasingly effective leadership style that positively influences employee change behaviors, such as commitment to change (de Sousa & van Dierendonck, 2014). Commitment to change is significantly related to change success, as it is a strong indicator of the employee support needed for organizational changes to work (Abrell-Vogel & Rowold, 2014; Herscovitch & Meyer, 2002). In this study, I examined the relationship between employee perception of their FLM's servant leadership dimensions and employee affective commitment to change (ACC).

Background of the Problem

Despite advancements in change management theory, a proliferation of consultants, and increased access to literature, change initiative failure rates have consistently remained near 70% for decades with no clear model on how to avoid failure (Decker et al., 2012; Maurer, 2011). While organizations continue to experience high change initiative failure rates, business leaders must remain adaptive through systematically managed change in hyper-competitive environments (Klarner & Raisch, 2013). A knowing-doing gap is growing as business leaders become increasingly knowledgeable in change management techniques and principles while their ability to manage change successfully remains unchanged (Maurer, 2011).

Both researchers and business leaders historically underemphasized the importance of FLMs in delivering change (Nielsen, 2013). FLMs receive little to no training in how to manage change, nor receive opportunities to contribute input to change strategy formulation (Nielsen, 2013). The net result is that FLMs are less efficient in managing change (Nielsen, 2013). FLMs can become more effective in managing change and facilitate change implementation through their interactions and relationships with employees (Shin, Taylor, & Seo, 2012). FLMs can (a) implement servant leadership to meet the psychological needs of employees during periods of change, (b) drive positive change behaviors, and (c) encourage engagement in the change process (de Sousa & van Dierendonck, 2014).

Problem Statement

Organizational change initiatives in the United States frequently fail with estimated failure rates as high as 90% (Cândido & Santos, 2015). Improved change leadership is especially needed in the manufacturing industry, as large-scale organizational changes evidenced by 3,944 mass manufacturing layoff actions in the last year of available data represent nearly a third of all mass layoffs throughout the United States (Bureau of Labor Statistics, 2013). The general business problem that I addressed in this study is that high organizational change failure rates negatively affect business organizations. The specific business problem that I addressed in this study is that some manufacturing leaders do not know the relationship between employee perception of their FLM's servant leadership dimensions and employee ACC.

Purpose Statement

The purpose of this quantitative study was to examine the relationship between employee perceptions of their FLM's servant leadership dimensions and employee ACC. The independent variables were employee perceptions of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, and (g) creating value for the community. The dependent variable was employee ACC. The targeted population was manufacturing firms located in the United States. This study promoted positive social change and the potential to improve business practices by providing information manufacturing leaders might use to increase the probability of change success and reduce change implementation costs. Increased change success rates might benefit communities

through access to more affordable, higher quality goods and services. The implications for positive social change also include the potential to decrease employee anxiety and uncertainty during organizational change.

Nature of the Study

I used a quantitative method, as it was the appropriate method to examine the relationship between independent and dependent variables in this study. Researchers use quantitative methods to test a theory objectively using numerically measured independent and dependent variables, as well as mathematical methods (Yilmaz, 2013). Conversely, researchers use qualitative methodologies to explore or develop a better understanding of the context or meaning behind phenomena such as human experiences, reactions, and emotions (Arghode, 2012). In a mixed-methods approach, researchers combine quantitative and qualitative methodologies to generate new hypotheses or theories or triangulate previous research findings (Leedy & Ormrod, 2013).

I used a correlational design using multiple linear regression (MLR) to address the research question for this study. Quantitative research designs include experimental, quasiexperimental, and nonexperimental correlational designs (Castillo-Page, Bodilly, & Bunton, 2012). Researchers use correlational designs to identify and examine relationships between variables in nonexperimental research when the sample is of sufficient size (Castillo-Page et al., 2012). Researchers use MLR in a correlational design to model the relationship between a set of independent variables and a dependent variable (Nimon & Oswald, 2013). I used MLR to assess the role multiple employee-perceived servant leadership dimensions played in accounting for variance in ACC. I chose not to

use an experimental or quasiexperimental design. In an experimental design, researchers randomly assign participants to experimental and control groups to determine the degree and nature of causality (Castillo-Page et al., 2012). In quasiexperimental designs, researchers examine the relationships between experimental variables among nonrandom populations (Castillo-Page et al., 2012).

Research Question

I used the following research question in my study: What is the relationship between employee perception of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, (g) creating value for the community, and employee ACC?

Hypotheses

The null and alternative hypotheses were:

$H_0$1: There is no statistically significant relationship between employee perception of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, (g) creating value for the community, and employee ACC.

H_a1: There is a statistically significant relationship between employee perception of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, (g) creating value for the community, and employee ACC.

Theoretical Framework

The servant leadership theory served as the foundation for this study. Greenleaf (1977) developed the servant leadership theory. Greenleaf based servant leadership theory on the premise that one should be a servant first and place follower needs above those of the leader, thereby creating strong relationships within an organization. Liden, Wayne, Zhao, and Henderson (2008) furthered this theory and developed a multifactorial servant leadership construct capturing seven distinct servant leadership dimensions. The seven servant leadership dimensions Liden et al. identified were (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, and (g) creating value for the community.

Researchers have used servant leadership theory to explain leadership based on the premise that leaders can inspire positive employee behaviors such as commitment to change (Kool & van Dierendonck, 2012). Servant leaders focus on satisfying the needs of their followers, thereby encouraging a reciprocal relationship where employees then feel obligated to commit to leader requests (Kool & van Dierendonck, 2012). As applied to this study, servant leadership theory supported that I would expect employee-perceived FLM servant leadership dimensions to influence or partially explain ACC.

Operational Definitions

The operational definitions listed in this section provide definitions for technical language or special words found in this study.

Affective commitment to change: Affective commitment to change (ACC) is the commitment to change via internalization of and positive emotional engagement with the

change initiative, influencing increased individual effort to ensure change success (Herscovitch & Meyer, 2002).

Front-line manager: Front-line managers (FLMs) are individuals with supervisory or management responsibilities working at the operational level of an organization including team leaders, supervisors, front-line supervisors, FLMs, first-line supervisors, and first-line managers (Townsend & Russell, 2013).

Servant leadership: Leaders demonstrate servant leadership by serving the needs of others and placing follower needs above those of the leader, thereby creating strong relationships within an organization (Greenleaf, 1977).

Assumptions, Limitations, and Delimitations

Researchers discuss the assumptions, limitations, and delimitations of a study to identify unverified statements or beliefs, potential limitations to analysis techniques or findings, and any potential boundaries for the research project or research constructs (Keller, 2009). The following is a discussion of assumptions, limitations, and delimitations of this study.

Assumptions

Assumptions are unverified statements or beliefs researchers assume to be true (Bower & Maxham, 2012). I made two assumptions for this study. The first assumption was that participants would answer all survey questions truthfully. The second assumption was that the questions in both data collection instruments were clear and easy to understand.

Limitations

Limitations are possible restrictions with analysis, including threats to internal and external validity (Keller, 2009). The first limitation was that I included only participants from a single occupational group and single organization. Collecting data from a single occupational group and single organization may limit the generalizability of results (Herscovitch & Meyer, 2002). Second, I invited only hourly employees to participate in the study, and I did not measure FLMs' perceptions. Third, I did not measure FLMs' ACC as a control variable. FLMs exhibiting high levels of commitment to change may influence their employees to show high levels of commitment to change (Bouckenooghe, de Clercq, & Deprez, 2014). Fourth, I administered both data collection instruments at the same time. Study findings may, as a result, contain common method bias. Researchers may introduce common method bias when participants self-report measures for both independent and dependent variables with no time separation between data collection (de Clercq, Bouckenooghe, Raja, & Matsyborska, 2014). Last, researchers cannot determine causality when using nonexperiental correlational designs (Herscovitch & Meyer, 2002).

Delimitations

Delimitations are the boundaries set by a construct, area, idea, or a research proposal (Gabriele & Chiaravalloti, 2013). I limited the scope of this study to examining the relationship between employee perception of their FLM's servant leadership dimensions and employee ACC. The participating organization could only be a manufacturing organization within the United States. Study participants comprised solely

of hourly manufacturing employees in operations or support roles. No salaried employees or FLMs participated in this study.

Significance of the Study

The significance of this study was the potential to improve business practices by providing information manufacturing leaders might use regarding how employee-perceived FLM servant leadership dimensions correlate with the employee commitment to change needed for change success. Change failure rates remain high with no signs of improvement in the past 2 decades (Maurer, 2011). Manufacturing leaders often underuse and poorly train FLMs to lead during periods of change, which contributes to high change failure rates (Semper, 2011). Manufacturing leaders may use my findings to improve the probability of organizational change initiative success through improved FLM change leadership. Manufacturing leaders can also use information that resulted from this study to encourage FLMs to exhibit servant leadership dimensions that positively correlated with the employee ACC needed for change initiatives to succeed.

The implications for positive social change include the potential to enhance manufacturing leaders' understanding of and support for servant leadership, which could lead to reduced employee anxiety and uncertainty during periods of change. Employees often incur adverse psychological impacts such as increased anxiety and uncertainty during organizational change (Michela & Vena, 2012). FLMs can engage in servant leadership behaviors to positively affect the lives of their employees during periods of change by sustaining motivations and reducing anxieties associated with change (de Sousa & van Dierendonck, 2014). The implications for positive social change also

include decreased product costs and improved quality of goods and services offered to people. Communities may benefit from more affordable, higher quality goods and services resulting from reduced change failure rates.

A Review of the Professional and Academic Literature

The literature review includes current research from peer-reviewed journal articles, non-peer-reviewed journal articles, seminal works, and scholarly books. The literature review consists primarily of peer-reviewed journal articles published from 2012 to 2015. The literature review includes research conducted in the areas of servant leadership theory, rival leadership theories, organizational change, change management, front-line management, and commitment to change.

The literature review contains three main sections (see Figure 1) including (a) servant leadership, (b) commitment to change, and (c) front-line management during organizational change. In the first section, I discuss (a) servant leadership theory, (b) rival theories, (c) measurement, and (d) servant leadership. In the second section, I discuss (a) ACC, (b) measurement, and (c) methodologies. The third section includes supporting discussions on (a) organizational change and (b) front-line management in manufacturing.

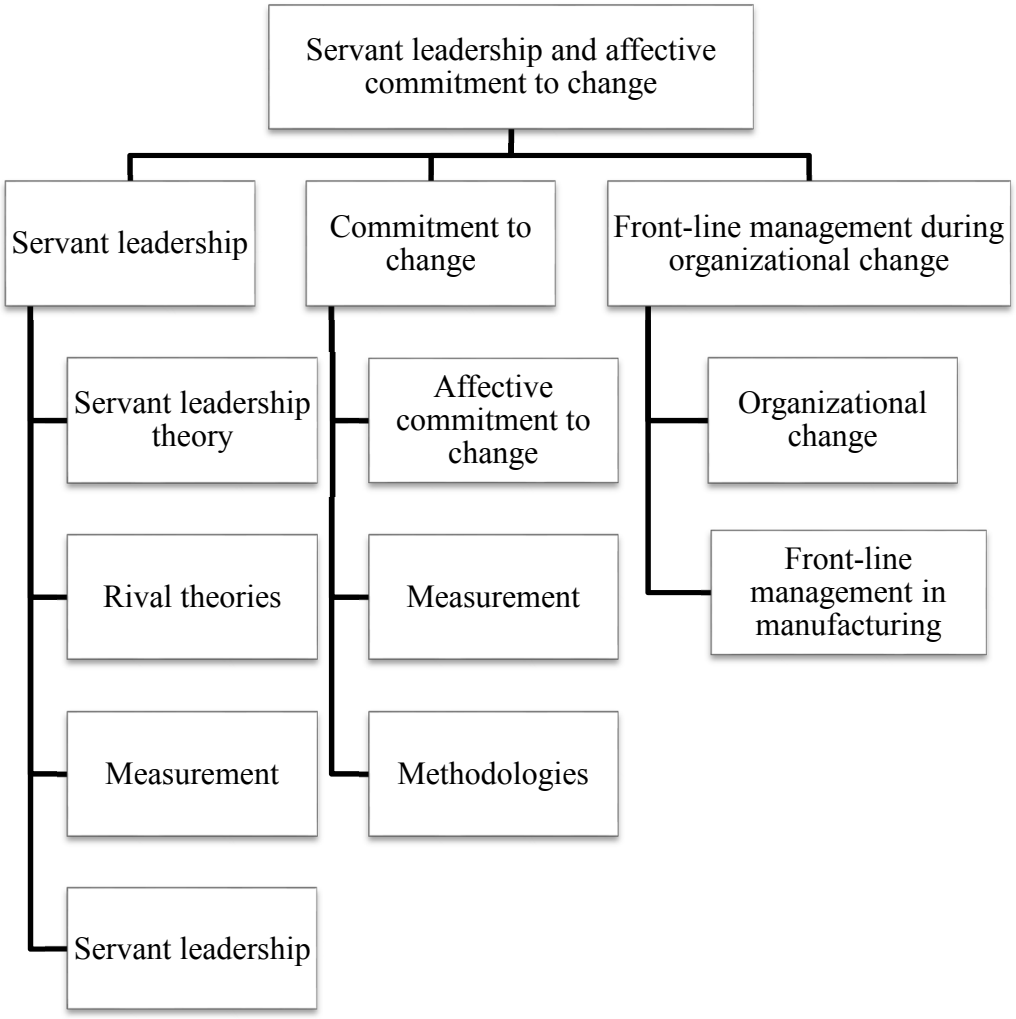

Figure 1. Organization of the literature review.

The literature review resulted from my search for scholarly, peer-reviewed journal articles published in 2012 or later. I primarily used Walden University's Online Library and Google Scholar. Specific databases that I used were ABI/INFORM Complete, Business Source Complete, Dissertations and Theses at Walden University, Emerald Management Journals, ProQuest Central, and SAGE Premier. Keywords that I used were *servant leader*, *change management*, *middle manager*, *front-line leader*, *front-line manager*, *supervisor*, *manufacturing*, *quantitative*, *qualitative*, and *commitment to*

change. After evaluating more than 400 resources, I used 121 resources with 88% of these resources published in the last 5 years (2012–2015), and 86% of these resources were peer-reviewed (see Table 1).

Table 1

Synopsis of Literature Review Sources

Reference type	Total	>5 years	<5 years
Research-based peer-reviewed journals	105	10	95
Research-based non-peer-reviewed	16	4	12
Summary totals	121	14	107

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Servant Leadership Theory

This study was grounded in servant leadership theory. Scholars borrow definitions for servant leadership theory from Greenleaf's (1977) seminal work that described servant leaders as those who place the needs of their followers above their own. According to Liden et al. (2015), researchers discuss servant leadership as a people-focused approach associated with positive individual and organizational outcomes by promoting integrity, helping others, and prioritizing follower well-being. Servant leadership theory was an appropriate theoretical framework for this study.

Many businesses succeed because of skilled leadership. Organizational failure, success, and sustainability result from leadership (Harper, 2012). Scholars and business leaders turned attention to servant leadership as a potential leadership theory that may improve organizational success and sustainability through employee needs satisfaction. Greenleaf (1977) founded servant leadership theory on the premise that one should be a servant first and place follower needs ahead of self-desires. The concept of fulfilling the needs of others is a central theme to servant leadership.

Inherent in Greenleaf's (1977) theory is the call to place follower needs above those of the leader, creating strong, trusting relationships within an organization. Servant leaders motivate followers to perform at full potential by understanding follower desires and goals. Servant leaders use this knowledge to assist employees in achieving their potential by providing resources, information, and feedback (Bambale, 2014; Boone & Makhami, 2013). Researchers postulate that when servant leaders focus on fulfilling employee needs, employees positively reciprocate by exhibiting desirable work behaviors (Chan & Mak, 2014; Hunter et al., 2013). Servant leader leaders focus on fulfilling subordinate needs. Employees reciprocate by supporting their leader's objectives.

Servant leaders also act as role models. Employees model their servant leader's behavior and demonstrate supportive coworker interactions (Liden et al., 2014). Researchers believe servant leadership has the potential to contribute toward ethical behaviors and social responsibility, as servant leaders tend to influence others to lead as servant leaders (Liden et al., 2014). As servant leadership theory grows in popularity,

researchers are increasingly interested in identifying characteristics or traits that may identify potential servant leaders.

Servant leaders tend to have characteristics consistent with fulfilling follower needs. Though researchers note a lack of a predictive framework to identify who will become servant leaders (Barbuto, Gottfredson, & Searle, 2014), employees perceive servant leaders as having personality traits of high agreeability and low extraversion (Hunter et al., 2013). Beck (2014) found that predictors of servant leadership behaviors included longevity in a leadership role, volunteerism of at least an hour a week, ability to create trusting relationships, and an altruistic mindset. Servant leaders lead through stewardship and empowering behaviors.

The word *servant* misconstrues the intent of servant leadership. Servant leaders are servants in nature, but this does not represent a balance where subordinates are free to direct their leadership. Instead, servant leaders serve by acting as stewards and empowering subordinates through support and autonomy (Rachmawati & Lantu, 2014), and through building a culture of appreciation and recognition (Umlas, 2013). Servant leadership may manifest in ways not yet operationalized or understood though many consultants suggest a 2:1 ratio of soliciting questions to giving directives (Boone & Makhami, 2013). This lack of operational understanding of how servant leadership manifests within organizations is consistent with the current state of servant leadership theory.

Servant leadership in business practice has no religious affiliation or connotations. The example of Jesus Christ as a servant leader, however, served as one of the main

philosophical bases that Greenleaf (1977) used to guide theory creation. Consistent with the teachings of Jesus Christ, servant leaders seek to move beyond exercising power and expertise for their gain, but they do so selflessly in the best interests of their followers (Rachmawati & Lantu, 2014). Servant leaders are not motivated by power but by serving others and using their influence to better the lives of those around them (Rachmawati & Lantu, 2014). This motivation to serve others makes the duality of both serving and leading the same, where no clear boundary exists anymore.

Furthermore, servant leaders act selflessly. Rather than use people to achieve organizational health and stability, servant leaders obtain motivation by focusing on their follower's personal growth, which by extension leads to organizational health and stability (Rachmawati & Lantu, 2014). Servant leaders act selflessly and beyond self-interests by maintaining focus on identifying and fulfilling follower needs (Rachmawati & Lantu, 2014). The motivational difference between servant leadership and other leadership theories is the intention to serve follower needs before those of the leader or the organization.

As applied to this study, servant leadership theory supported my expectation that employee-perceived FLM servant leadership dimensions would influence or partially explain ACC. I expected this influence because servant leaders focus on satisfying employee needs, and employees may reciprocate this support by supporting the leader's change initiatives. According to servant leadership theory, employee-perceived FLM servant leadership dimensions may influence or partially explain employee ACC if employees desire to support their servant leader during periods of change.

Rival Theories

Rival theories include transactional leadership theory and transformational leadership theory. Transactional leadership theory is a practical leadership theory where leaders meet follower needs by giving rewards for fulfilling leader work objectives (Gelaidan & Ahmad, 2013). Transformational leadership theory is more researched than servant leadership, with the latter having only recently gained scholarly interest (van Dierendonck et al., 2014). Both theories share similarities. In transformational leadership theory, leaders focus on inspiring followers to achieve organizational goals (van Dierendonck et al., 2014). In servant leadership theory, servant leaders focus on satisfying follower needs (van Dierendonck et al., 2014). Researchers have used both leadership theories to investigate correlates with employee outcomes, including commitment to change.

Transactional leadership theory is a modern leadership theory to examine organizational and employee outcomes. Recently, Gelaidan and Ahmad (2013) examined the relationship between transactional leadership and normative commitment to change (NCC), one of three components of Herscovitch and Meyer's (2002) commitment to change model. Gelaidan and Ahmad found a positive relationship mediated by organizational culture. Gelaidan and Ahmad suggested that future research should examine the relationship between transactional leadership and both normative and ACC. Additional research may increase understanding of how transactional leadership affects the construct of commitment to change.

Additional research has added clarity to how both transactional and transformational leadership related to commitment to change. Tyssen, Wald, and Heidenreich (2014) found a positive relationship between both transactional and transformational leadership, and ACC. Tyssen et al. also theorized that transactional leadership forms the basis for most organizational leadership with the goal to maximize efficiency and consistency through transactional behaviors. The authors postulated that transactional leadership formed a basis for transformational leadership, but that transformational leadership was ultimately more effective in influencing ACC. Transactional leadership theory did not appear to be the appropriate leadership theory for this study.

Transformational leadership theory is also an effective leadership theory that explains many positive organizational and employee outcomes. In their review of the literature, van Dierendonck et al. (2014) noticed that both transformational and servant leadership theories positively related to similar outcomes and the research team showed interest in exploring how and why. The authors found that each leadership style differed in the mechanism that drove correlations. Employees viewed transformational leaders as more effective but considered servant leaders as better at fulfilling employee needs, consistent with the tenants of each theory (van Dierendonck et al., 2014). Both leadership styles positively influence outcome variables but through different mechanisms.

There exists a positive relationship between transformational leadership and ACC. Scholars investigated this relationship in numerous studies within the past 5 years. Abrell-Vogel and Rowold (2014); Seo et al. (2012); Shin, Seo, Shapiro, and Taylor

(2015); and Tyssen et al. (2014) recently confirmed that a positive relationship exists between transformational leadership and ACC across diverse populations. Abrell-Vogel and Rowold are the only researchers found to have examined how the individual dimensions of transformational leadership contributed to this relationship, as no previous researchers explored this aspect. Additional research is needed to clarify this relationship.

Initial findings regarding the relationship between a multifactorial construct of transformational leadership and ACC provided an interesting correlation. Abrell-Vogel and Rowold (2014) found that only one of six dimensions in a six-factor construct of transformational leadership showed significant positive correlation with ACC. The single dimension was "individual support." I found this finding interesting because, in transformational leadership theory, leaders emphasize inspiring followers to achieve organizational goals (Abrell-Vogel & Rowold, 2014). In servant leadership theory, leaders focus on the individual and satisfying individual needs (Parris & Peachey, 2013). I chose to use servant leadership theory instead of transformational leadership theory as the theoretical framework for this study for three primary reasons. First, the relationship between servant leadership and ACC is significantly under-researched in comparison to transformational leadership and ACC. Second, initial evidence suggests the transformational leadership dimension most closely related to servant leadership, individual support, has the highest influence on ACC. Last, initial evidence suggests that servant leadership is positively related to commitment to change, but no apparent studies have examined the how individual dimensions of servant leadership contribute to this model.

Measurement

No consensus exists among scholars on how to measure servant leadership. Researchers agree that servant leadership is multidimensional (Parris & Peachey, 2013; Rachmawati & Lantu, 2014; van Dierndonck, 2011). Greenleaf's (1977) original conceptualization of servant leadership as a way of life makes empirically testing the theory difficult (Parris & Peachey, 2013). Greenleaf did not discuss dimensions of servant leadership nor create an instrument to capture the domain of servant leadership theory. Greenleaf primarily focused on advancing the principles of wanting to serve others and helping others grow, succeed, gain autonomy, and become healthier in their lives from a more spiritual perspective (Rachmawati & Lantu, 2014). Researchers responded to the lack of a servant leadership instrument by developing their own.

Numerous researchers developed servant leadership instruments. In their review of the literature, Parris and Peachey (2013) identified 14 unique measurement instruments purporting to measure servant leadership across 27 correlational studies. Liden et al. (2008) developed one of the few multifactorial instruments that measured seven dimensions of servant leadership for both individual-level and group-level outcomes while controlling for transformational leadership. Liden et al.'s seven-factor, 28-item servant leadership instrument named the is among the most frequently used to measure servant leadership. In the past 5 years, Chan and Mak (2014), Chiniara and Bentein (2016), de Clercq et al. (2014), Liden et al. (2014), Liden et al. (2015), and Peterson et al. (2012) are among researchers who used SL-28 to inform their quantitative studies.

Though researchers use numerous instruments to measure servant leadership, the SL-28 is among the most popular.

The SL-28 is a valid and reliable scale. Liden et al.'s (2008) servant leadership instrument contains 28 items using a 7-point Likert-type ordinal scale. I chose to use this instrument owing to its multidimensional framework, scale reliability, and validity. Liden et al.'s SL-28 demonstrated a stable factor structure across multiple samples and is a valid instrument owing to the rigorous procedure used in development (van Dierndonck, 2011). To create an efficient and reliable scale, Liden et al. used the four highest loading factors with a loading factor of at least 0.4 for each of the seven dimensions. Scale reliabilities for the seven dimensions ranged from ($\alpha = .76$) to ($\alpha = .86$), indicating high reliability (Liden et al., 2008). Liden et al. (2008) tested the instrument for (a) content validity, (b) external validity, (c) discriminate validity, and (d) predictive validity. The instrument is, therefore, both reliable and valid.

The SL-28 is a multifactorial scale that researchers may use to measure multiple dimensions of servant leadership. Liden et al.'s (2008) intent were that researchers would use the SL-28 as a multifactorial, or multidimensional model. In subsequent research conducted, the researchers used the instrument as a global construct of servant leadership, ignoring the contribution of each dimension toward variance in a dependent variable (Liden et al., 2015). I used the instrument to its full potential by using each dimension as an independent variable.

Servant Leadership

Scholars research servant leadership, most often as a global construct, to gain a better understanding of how servant leadership affects employees and organizations. Servant leadership is popular leadership style among business executives though remains under-researched as a construct (van Dierendonck, 2011). Researchers increasingly study servant leadership because evidence suggests that servant leaders positively influence a multitude of employee behaviors (de Sousa & van Dierendonck, 2014). Researchers found that servant leaders inspire positive employee behaviors by satisfying follower needs, thereby encouraging reciprocal relationships where employees feel obligated to commit to leader requests (Chan & Mak, 2014; Hunter et al., 2013). Leader requests may include committing to organizational changes.

Servant leadership benefits both employees and the organization during periods of change. During periods of change, employees often incur adverse psychological impacts that harm employee well-being (Michela & Vena, 2012). FLMs can utilize servant leadership to improve employee conditions during periods of change by focusing on employee needs such as sustaining motivations and reducing anxieties (de Sousa & van Dierendonck, 2014). As the rates of organizational change increase, servant leadership becomes increasingly relevant as a leadership style that can not only improve employee well-being but elicit the employee change behaviors needed for change success.

Empirical reviews of the servant leadership literature exist as of recent. Parris and Peachey (2013) and van Dierendonck (2011) performed empirical reviews of the servant leadership literature. Both research teams found strong evidence that servant leadership

influenced both leader-follower relationships and the general psychological environment of their workplace (Parris & Peachey, 2013; van Dierendonck, 2011). Van Dierendonck found that servant leaders influenced followers on three levels: (a) individual level positive outcomes such as increased job performance, (b) the team level such as increased team effectiveness, and (c) the organizational level such as increased corporate social responsibility. Parris and Peachey similarly found that servant leaders influenced followers on two levels: (a) follower's well-being, and (b) team effectiveness. Both Parris and Peachey and van Dierendonck noted a lack of empirically accepted outcomes associated with servant leadership. Additional research is needed to understand better how servant leadership influences outcomes.

Evidence exists that servant leadership practiced by FLMs positively correlates with desirable outcomes at both the employee and organizational level. In their reviews of the extant literature, Parris and Peachey (2013) and van Dierendonck (2011) identified numerous positive employee and organizational outcomes associated with servant leadership at the FLM level. These outcomes included increased organizational trust, team and employee effectiveness, organizational citizenship behavior, collaboration, follower well-being, organizational commitment, positive work climate, job satisfaction, and decreased turnover. More recent findings include Chan and Mak's (2014) findings of a positive relationship between servant leadership and both trust in leader and job satisfaction. Peterson, Galvin, and Lange (2012) additionally found a positive correlation between CEO servant leadership and firm performance. This finding suggests that servant leadership may positively affect organizations at many levels.

Servant leadership may also positively correlate with employee servant leadership behaviors. Liden et al. (2014) sought to understand better how servant leadership promotes follower outcomes by asking employees to rate their FLMs for servant leadership behaviors and self-rating for the behavior of serving others. The authors found a positive relationship between perceived FLM servant leadership behaviors and employees serving others (Liden et al., 2014). These results indicated that FLMs who engage in servant leadership behaviors might also influence their employees to act in similar supportive ways with coworkers. Researchers know less about the efficacy of servant leadership theory in high-paced environments such as manufacturing.

Leaders in manufacturing could use servant leadership to help employees feel valued. In one of the few qualitative studies conducted on servant leadership in the past 5 years, Claxton (2014) described how servant leadership in a manufacturing facility helped workers feel valued, enabled pride, and fostered a shared purpose. Claxton explained that FLMs in manufacturing influenced these positive outcomes through supporting and listening to employees, feeling responsible for employee livelihoods, and involving employees in decision-making and idea development (Claxton, 2014). In this context, the application of servant leadership behaviors may benefit manufacturing environments. However, empirical evidence does not yet exist on the efficacy of servant leadership theory in fast-paced or uncertain conditions.

Concerns exist regarding the practicality of servant leadership in uncertain or fast-paced environments. Boone and Makhani (2013) postulated that servant leadership might work better in static environments where leaders can take their time to solicit feedback

from followers. In three separate studies, van Dierendonck, Stam, Boersma, de Windt, and Alkema (2014) reported mixed findings of the effectiveness of servant leadership during organizational change. One study suggested servant leadership was most effective during stable times but published inconclusive results for two additional studies. Sterling and Boxall (2013) discussed that the benefits of servant leadership might diminish in high-pressure, fast-paced settings accompanied by low employee literacy rates. These scholars believed additional research was needed to understand better the efficacy of servant leadership in similar environments. Contrary to these concerns, other researchers found evidence that suggests servant leadership may be increasingly useful in uncertain environments.

Though scholars are not yet in agreement on the efficacy of servant leadership in uncertain, high-paced environments, evidence exists that servant leadership is increasingly useful in uncertain environments such as during significant organizational change. De Sousa and van Dierendonck (2014) found that servant leadership positively affected employee engagement during a turbulent, large-scale organizational change accompanied by mass layoffs though the context was in a European service organization. De Sousa and van Dierendonck postulated that servant leadership was increasingly more useful as environmental and economic uncertainty increased by sustaining motivations, reducing anxieties, and encouraging employee engagement during the large-scale organizational change. Though this evidence suggests that servant leadership may be an effective leadership style during organizational change, researchers have not yet

examined how servant leadership correlates with the employee ACC needed for change to succeed.

One study exists where the researchers examined the relationship between employee-perceived FLM servant leadership and employee commitment to change. Kool and van Dierendonck (2012) conducted the study and prefaced their research hypothesis by proclaiming that to date there is no best leadership style identified to maximize commitment to change during change initiatives (Kool & van Dierendonck, 2012). Kool and van Dierendonck sought to investigate the relationship between employee-perceived FLM servant leadership and employee commitment to change but did so in a European service organization context. Their results indicated a positive correlation between employee-perceived FLM servant leadership and employee commitment to change, mediated by organizational justice and optimism. This study contained numerous limitations that reduced generalizability to a manufacturing context within the United States.

Limitations included both the independent and dependent variables used, and the population sampled. Kool and van Dierendonck (2012) used a global construct and instrument to measure servant leadership, as opposed to a multifactorial construct and instrument like the SL-28 developed by Liden et al. (2008). Liden et al. (2015) found that scholars consistently measured servant leadership as a global measurement, or single factor, in most all servant leadership research to date. Researchers who used multifactorial instruments still measured servant leadership as a single factor, and ignored the contribution of each factor towards a predictive model. A limitation of Kool and van

Dierendonck's study was the absence of using a multifactorial instrument. Researchers may use multifactorial instruments to understand better the role each servant leadership factor or dimension contributes to variation in commitment to change.

An additional limitation was the lack of focus on the three-component model of commitment to change. Kool and van Dierendonck (2012) did not distinguish between which of three components of commitment to change they used despite using Herscovitch and Meyer's (2002) three-component model. Interestingly, Herscovitch and Meyer's (2002) three-component model contained 18 survey items with each component containing six survey items each. Kool and van Dierendonck reported using six items from Herscovitch and Meyer's three-component model but did not distinguish which component of commitment to change they measured. It is unknown which component of commitment to change was the outcome variable.

The third limitation was the population sampled. Kool and van Dierendonck (2012) sampled 135 participants in a European service organization undergoing a significant organizational change. The authors stated that both a small sample size and a limited setting were limitations to generalizing results across populations. Last, the authors suggested using a multifactorial or multidimensional construct of servant leadership in different organizational settings to allow deeper insight into the relationship between employee-perceived FLM servant leadership and employee commitment to change. I responded to this suggestion by using a multidimensional servant leadership instrument with seven dimensions to measure servant leadership.

The seven dimensions of servant leadership were the independent variables in this study. The seven dimensions of servant leadership are: (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, and (g) creating value for the community (Liden et al., 2008). Both Liden et al. (2008) and van Dierndonck (2011) argued and demonstrated that servant leadership covers the domain of multiple dimensions and researchers should use a multifactorial instrument designed to test the claimed strengths of servant leadership. To develop each dimension within the SL-28, Liden et al. initially identified 85 items across nine servant leadership dimensions. The research team searched for servant leadership scales used in prior research and found nine potential dimensions of servant leadership. Liden et al. subsequently eliminated the two dimensions of (a) servanthood and (b) relationships after conducting an exploratory factor analysis, and confirmed subsequently using confirmatory factor analysis, hierarchical linear modeling, and pilot testing. The net result was seven remaining servant leadership dimensions.

Few researchers utilized multifactorial instruments to measure servant leadership. Counter to Liden et al.'s (2008) original intent in subsequent research, the researchers ignored the seven dimensions as independent variables and used the SL-28 as a global construct of servant leadership and a singular independent variable. The only research that used these dimensions as a set of independent variables occurred during testing of the instrument. During this testing, Liden et al. (2008) found support for the validity of the scale, as individual servant leadership dimensions helped explain the incremental

variance in employee outcomes of organizational commitment, community citizenship behavior, and in-role performance. Though little research exists where the researchers used each servant leadership dimension as independent variables, each variable is relevant to the theme of servant leadership.

The first dimension is emotional healing. Emotional healing is the action of expressing sensitivity to the concerns of others (Liden et al., 2008). The dimension of emotional healing is an important theme to the construct of servant leadership because servant leaders must attend to the emotional needs of their subordinates (Liden et al., 2008). During testing of the instrument, Liden et al. (2008) found that emotional healing significantly helped explain the incremental variance in employee outcomes of organizational commitment, community citizenship behavior, and in-role performance. Specifically, emotional healing related positively to in-role performance and related negatively to both organizational commitment and community citizenship behavior (Liden et al., 2008). No further research exists using emotional healing as an independent variable.

The second dimension is creating value for the community. Creating value for the community is the level of both leader community involvement and support for employee involvement in the community (Liden et al., 2015). The dimension of creating value for the community is central to the theme of servant leadership because servant leaders should instill confidence in their followers and communities to serve the needs others (Greenleaf, 1977). During testing of the instrument, Liden et al. (2008) found that creating value for the community significantly helped explain the incremental variance in

outcome variables. Specifically, creating value for the community positively related to organizational commitment and community citizenship behavior, though showed no relationship to in-role performance (Liden et al., 2008). No further research exists using creating value for the community as an independent variable.

The third dimension is conceptual skills. Conceptual skills are the leader's ability to understand organizational goals and solve work problems (Liden et al., 2015). The dimension of conceptual skills is important to the theme of servant leadership, as servant leaders must be skilled to empower and support employee performance (Rachmawati & Lantu, 2014). During testing of the instrument, Liden et al. (2008) found that conceptual skills significantly helped explain the incremental variance in outcome variables. Specifically, conceptual skills related negatively to in-role performance though showed no relationship with organizational commitment and community citizenship behavior (Liden et al., 2008). No further research exists using conceptual skills as a separate independent variable.

The fourth dimension is empowering. Empowering is entrusting subordinates with responsibility and autonomy to make decisions (Liden et al., 2015). The dimension of empowering is significant to the theme of servant leadership because servant leaders empower followers through support and autonomy, focusing on employee growth (Rachmawati & Lantu, 2014). During testing of the instrument, Liden et al. (2008) found that empowering helped explain the incremental variance in outcome variables. Specifically, empowering related positively to community citizenship behavior, negatively related to organizational commitment, and showed no relationship with in-role

performance (Liden et al., 2008). No further research exists using empowering as a separate independent variable.

The fifth dimension is helping subordinates grow and succeed. Helping subordinates grow and succeed is the extent to which the leader helps subordinates realize their potential and achieve career success (Liden et al., 2015). The dimension of helping subordinates grow and succeed is important to the theme of servant leadership because servant leaders help employees to achieve their potential by providing resources, information, and feedback (Bambale, 2014). During testing of the instrument, Liden et al. (2008) found that helping subordinates grow and succeed significantly helped explain the incremental variance in outcome variables. Specifically, helping subordinates grow and succeed related positively to organizational commitment, negatively related to community citizenship behavior, and showed no relationship with in-role performance (Liden et al., 2008). No further research exists using helping subordinates grow and succeed as a separate independent variable.

The sixth dimension is putting subordinates first. Putting subordinates first measures the degree to which the leader places follower needs above their own (Liden et al., 2015). The dimension of putting subordinates first is meaningful to the theme of servant leadership because Greenleaf (1977) founded servant leadership theory on the premise that leaders should place employee needs above their own. During testing of the instrument, Liden et al. (2008) found that putting subordinates first significantly helped explain the incremental variance in outcome variables. Specifically, putting subordinates first related positively to community citizenship behavior, but there was no significant

relationship with organizational commitment or in-role performance (Liden et al., 2008). No further research exists using putting subordinates first as an independent variable.

The seventh and last dimension is behaving ethically. Behaving ethically is the degree to which the leader is honest, trustworthy, and acts with integrity (Liden et al., 2015). The dimension of behaving ethically is relevant to the theme of servant leadership because servant leaders must act as role models and contribute towards ethical behaviors and social responsibility (Liden et al., 2014). During testing of the instrument, Liden et al. (2008) found that behaving ethically significantly helped explain the incremental variance in outcome variables. Specifically, behaving ethically related positively to in-role performance and negatively related to both community citizenship behavior and organizational commitment (Liden et al., 2008). No further research exists using behaving ethically as a separate independent variable.

The initial testing of servant leadership dimensions as independent variables provided further support for a multidimensional construct of servant leadership. Though none of the seven servant leadership dimensions captures the domain of servant leadership alone, each dimension uniquely contributes to an aggregate model of servant leadership (Liden et al., 2015). Researchers have yet to utilize the SL-28 for its intended purpose to measure how individual servant leadership dimensions contribute to an outcome variable (Liden et al., 2015). This study contributed to the literature by potentially being the first to measure how each dimension uniquely contributed to variance in the dependent variable of ACC.

Commitment to Change

Organizations change frequently, and employees must commit to organizational changes for change initiatives to succeed. Herscovitch and Meyer (2002) defined commitment to change as a mindset that binds an individual to a course of action needed for a change initiative to succeed. Commitment to change represents a key psychological effort or attachment to buy into workplaces changes and is a strong predictor of change success (Herscovitch & Meyer, 2002). Employees must commit to changes, as change initiatives will not succeed without the support and commitment of employees.

Successfully managing change initiatives is a recurring business problem. One of the biggest business challenges today is how to ensure change initiatives are successful (Cândido & Santos, 2015). As organizations engage in continuous cycles of organizational change, business leaders must find a way to build and maintain the commitment to change necessary for change success (Morin et al., 2015). Scholars conduct research using commitment to change as an outcome variable to better understand potential influences of commitment to change.

Researchers measure commitment to change using a multidimensional commitment to change model. Herscovitch and Meyer (2002) developed the prevailing multidimensional model to both understand and measure commitment to change (Bouckenooghe, Schwarz, & Minbashian, 2015). In this model, Herscovitch and Meyer defined three dimensions of commitment to change. The first dimension is continuance commitment to change (CCC), defined as the perceived costs of committing to an organizational change. The second dimension is NCC, defined as the perceived

obligation to commit to an organizational change. The third dimension is ACC, defined as the internal desire to commit to an organizational change based upon perceived benefits of the change (Herscovitch & Meyer, 2002). I used ACC as the dependent variable in this study.

The proliferation of research on commitment to change has grown considerably since the conception of Herscovitch and Meyer's (2002) model. Bouckenooghe et al. (2015) conducted a meta-analysis of 17 studies using Herscovitch and Meyer's commitment to change model. In their review, Bouckenooghe et al. found individuals who scored high on CCC supported a change only after calculating a lower cost to support the change than not supporting the change, and that CCC correlated with negative, energy depleting outcomes (Bouckenooghe et al., 2015). The authors found the second type of commitment to change, NCC, closely mirrored employee moral beliefs that supporting a change initiative was the right thing to do. Last, they found the third type of commitment to change, ACC, was present when employees personally wanted or desired to support change. ACC is potentially the most desirable component of commitment to change as it is linked to employee want and desire to commit to workplace changes.

I chose ACC as the dependent variable because researchers have consistently found that ACC is the most positively related commitment to change dimension to behavioral support for change initiatives. Researchers have linked ACC to employee willingness to extend the extra effort to make a change initiative successful (Morin et al., 2015). Though researchers found initial evidence that the global construct of servant

leadership positively related to commitment to change (Kool & van Dierendonck, 2012), no evidence exists on how servant leadership dimensions relate to ACC. Findings from this study may assist organizations in achieving better change success rates by contributing to the understanding of how perceived FLM servant leadership dimensions predict employee ACC. As ACC grows across a workforce, the probability of change success and sustainability may also increase.

Affective commitment to change. ACC is potentially the most important component of commitment to change. Individuals demonstrating ACC are mobilized to engage fully in the change process and engage in positive work behaviors that support change initiatives (Bouckenooghe et al., 2015). Researchers continue to investigate how FLMs positively influence ACC but believe FLMs can manage ACC by changing the context surrounding a change initiative (Bouckenooghe et al., 2015). FLMs can encourage ACC by ensuring the conditions exist where employees both anticipate change benefits from a change initiative and have experienced change benefits with past change efforts (Shin et al., 2015). Michel et al. (2013) agreed with this statement and found that as employees perceived increased change benefits, their ACC also increased. FLMs are in the unique position to influence employee change perceptions and behaviors due to their proximity and daily interactions with employees.

FLMs can influence how employees perceive change by changing the context employees use to assign meaning to change. Employees experience organizational change in many ways, both positive and negative (Bouckenooghe, 2012; Shin et al., 2012). Some changes initiatives may bring positive task changes, benefits, or advantages

(Bouckenooghe, 2012; Shin et al., 2012). Conversely, change initiatives may also produce a loss of autonomy, familiarity, skill, or other work disadvantages (Bouckenooghe, 2012; Shin et al., 2012). Employees make sense of change meanings through interpreting information and assigning meaning to changes (Bouckenooghe, 2012). FLMs have opportunities to influence the meaning employees assign to change initiatives by focusing on the needs of their followers and encouraging an environment where employees are more likely to experience ACC.

FLMs can influence multiple conditions that subsequently influence ACC. FLMs can affect ACC by involving employees in the change implementation decision-making process and preemptively addressing areas of concern (Pardo-Del-Val, Martinez-Fuentes, & Roig-Dobon, 2012). Bouckenooghe (2012) and Rafferty, Jimmieson, and Armenakis (2013) presented findings that a high degree of change communication was positively related with ACC. FLMs should design their communications to alleviate employee concerns about change because employee concerns about change are negatively related to ACC (Battistelli, Montani, Odoardi, Vandenberghe, & Picci, 2014). There is a cost to increased communication and employee participation. As communication and employee participation increases, change implementation occurs more slowly (Pardo-Del-Val et al., 2012). This tradeoff highlights the leadership challenge evident in fast-paced environments such as manufacturing, where the speed of events and production requirements may discourage participative leadership styles such as servant leadership.

FLMs can also influence ACC by treating their employees fairly in daily operations and throughout the change process. Researchers found that perceived

differences in employee treatment negatively impacted employee ACC. Bernerth, Walker, & Harris (2011) and Montani et al. (2012) conducted two of the most recent studies using ACC as a dependent variable within the manufacturing industry. Bernerth et al. found that when employees perceived differences in FLM treatment between self and others, this led to emotional exhaustion, reduced ACC, and increased turnover intentions. Both Kool and van Dierendonck (2012) and Montani et al. confirmed similar findings that perceived fair treatment and positive relationships between FLMs and subordinates positively correlated with ACC. Montani et al. also found that ACC was highest when both FLMs and coworkers exhibited high levels of support. These findings bolstered Bouckenooghe et al.'s (2014) assertions that reducing the threat of unfair treatment and conflict between FLMs and employees is critical to building positive attitudes towards change. These studies provide support for the postulation that FLMs play key roles in developing and sustaining ACC amongst their employees in manufacturing as well as other industries.

There is a strong psychological component to ACC. High employee psychological resilience positively correlated with ACC (Shin et al., 2012). Shin et al. (2012) found evidence that building up individual resources and offering organizational inducements including materialistic and developmental incentives positively correlated with ACC. Increased employee development and incentives also helped employees feel a positive state effect, and positively influenced their subsequent ACC. Further, individuals with higher levels of psychological resilience experienced more positive emotions during organizational change, which also affected their ACC (Shin et al., 2012). These findings

suggest that FLMs can further influence ACC by building up employee resources and psychological resilience before a change.

Additional research suggests a psychological component to ACC. Mangundjaya (2015) examined how psychological empowerment and organizational trust related to all three dimensions of commitment to change. Mangundjaya found that both psychological empowerment and organizational trust positively related to commitment to change as a global construct, but had the highest effect on the dimension of ACC. The author stated that business leaders could improve the probability of change success by creating a trustworthy organizational climate and psychological empowerment among their employees. Though the previously discussed research on ACC informs the literature on the conditions that influence ACC at a singular point in time, scholars are increasingly interested in how ACC changes over multiple data collection points during a naturally occurring organizational change.

Two research efforts addressed how ACC changes over time during a naturally occurring organizational change. Seo et al. (2012) demonstrated that FLMs influence both employee emotional responses to change initiatives and ACC over time. The researchers found over two data collection periods that employee-perceived FLM transformational leadership directly related to positive and negative employee reactions to change. Further, both employee behavioral responses and ACC related strongly to initial experiences during the change initiative. These results were consistent with Morin et al.'s (2015) findings that initial ACC predicted long-term ACC during multiple data

collection points. FLMs may further influence long-term ACC by ensuring employees have initial positive experiences during change initiatives.

FLMs can also influence long-term ACC by ensuring employees understand the necessity and legitimacy of change initiatives. Morin et al. (2015) conducted a longitudinal study at a Canadian public healthcare company to understand how ACC developed while undergoing a continuous change. Among their results, Morin et al. found that only the independent variables of employee perceptions of necessity and legitimacy contributed to the prediction of ACC throughout the cycle of change. The researchers found that when organizational leaders did not convince employees of a change initiative's legitimacy, their ACC was low even if they perceived the change was necessary. Low employee ACC may occur because workers lack the intrinsic motivation associated with ACC when they do not believe that a change initiative will solve the stated problem (Morin et al., 2015). The authors also found that ACC was relatively stable throughout the continuous change, and that initial ACC predicted later ACC. Organizational leaders can potentially influence initial and later ACC by ensuring employees understand how a change initiative addresses a stated problem.

Previous researchers identified leadership styles that positively correlated with ACC, but offered little guidance on the styles of leadership that may best influence ACC. Among these findings, Abrell-Vogel and Rowold (2014), Seo et al. (2012), Shin et al. (2015), and Tyssen et al. (2014) all confirmed that a positive relationship exists between transformational leadership and ACC. Tyssen et al. (2014) additionally found a positive correlation between both transactional and transformational leadership, and ACC. Tyssen

et al. suggested that transformational leadership was more effective than transactional leadership at eliciting ACC. No research exists yet on the relationship between servant leadership and ACC. Only one study exists examining the relationship between servant leadership and commitment to change in general.

Only one study exists where researchers examined the relationship between servant leadership and commitment to change though this study did not explicitly use ACC as a dependent variable. Kool and van Dierendonck (2012) conducted this study in a service industry environment and found that servant leadership was positively related to commitment to change, partially moderated by optimism and interactional justice (Kool & van Dierendonck, 2012). The researchers used a global construct of servant leadership and did not identify which dimension of commitment to change they measured. No researchers have examined the relationship between servant leadership and ACC.

The study by Kool and van Dierendonck (2012) had three significant limitations. First, the authors measured servant leadership as a single independent variable and were unable to distinguish which dimensions of servant leadership positively correlated with commitment to change. Second, the authors did not distinguish between ACC, CCC, and NCC despite using only six items from the 18-item instrument, which infers they examined a single dimension. Third, the authors used a small sample size in a single organizational setting, and further examination is necessary to generalize these findings across different industries such as manufacturing. This study addressed these limitations by using a multidimensional servant leadership instrument, and focusing exclusively on ACC as the dependent variable in a manufacturing context.

Measurement. The multidimensional commitment to change model Herscovitch and Meyer (2002) developed is the prevailing conceptualization to both understand and measure and commitment to change. Researchers have used this instrument in commitment to change research since its creation (Bouckenooghe et al., 2015). Herscovitch and Meyer validated their commitment to change instrument titled the Commitment to Change Inventory (CCI) as a separate measurable construct from organizational commitment. Herscovitch and Meyer extended continuance, normative, and affective components from the organizational commitment construct to commitment to change. Herscovitch and Meyer found that this new construct of commitment to change better-predicted employee efforts to work towards change success than the construct of organizational commitment. Researchers use the commitment to change instrument in part as a behavioral measure of employee efforts towards change.

The CCI contains an 18-item scale equally distributed across three dimensions of commitment to change: CCC, NCC, and ACC. Researchers measure each item on a 7-point Likert-type ordinal scale of measurement ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Herscovitch and Meyer (2002) examined construct and content validity of the CCI by conducting a principal-axis factor analysis with Oblimin rotation for 22 survey items, forming composite scales with corresponding correlations. Next, Herscovitch and Meyer conducted 2 × 2 × 2 ANOVAs to determine if each dimension was influenced as expected and found support for this expectation with strong main effects for each manipulation on each dimension. The authors discarded two items that failed to load at least .5 on the appropriate factor and two items that loaded on multiple

factors, resulting in an 18-item instrument with factor loadings of at least 0.5 per factor. The researchers confirmed the best fit of this model through confirmatory factor analysis and goodness of fit using root-mean-square error of approximation and expected cross-validation index. The resulting 18-item instrument contained six items per dimension with scale reliabilities of (α = .92) for ACC, (α = .71) for CCC, and (α = .78) for NCC, representing high reliability (Herscovitch & Meyer, 2002). The instrument is therefore reliable.

Additional researchers have added to the validity testing of this model. Bouckenooghe et al. (2015) examined the discriminant validity of the CCI during their meta-analysis and reported high correlations between dimensions, indicating a need to improve discriminant validity. Jing, Xie, and Ning (2014) tested for construct and predictive validity in a Chinese context as they stated weak construct validity is one of the criticisms of the CCI. The authors found support for both construct and predictive validity in the Chinese context. Though researchers may still improve upon the CCI, it is the main instrument used to measure commitment to change.

Methodologies

Scholars primarily research commitment to change using a quantitative method and a correlational design. I identified and incorporated 21 peer-reviewed journal articles regarding commitment to change in the literature review, with 20 of these peer-reviewed journal articles published between 2012 and 2015. Researchers used Herscovitch and Meyer's (2002) CCI to measure commitment to change as a dependent variable in all 18 quantitative studies (see Table 2). In the review of the literature, I also included two

theoretical reviews encompassing commitment to change, and one meta-analysis of commitment to change. I found no qualitative studies on commitment to change during my search for scholarly, peer-reviewed journal articles published 2012 or after.

Table 2

Distribution of Commitment to Change Methodologies

Methodology type	Total
Quantitative	18
Qualitative	0
Theoretical review	2
Meta-analysis	1
Total	21

Front-Line Management During Organizational Change

Organizational change affects the lives of both FLMs and their employees. Continuous change efforts are necessary for organizations to be efficient and sustain competitive advantage as business environments evolve (Holt & Vardaman, 2013). Employers must initiative frequent change and employees commit to organizational changes to enable adaptability within their markets (Dermol & Cater, 2013). Despite the need for continual change, change initiative failure rates remain high with no signs of improvement (Maurer, 2011). Researchers are increasingly interested in how FLMs, who spend the most time with employees, influence employees to engage in positive change behaviors (de Sousa & van Dierendonck, 2014). FLMs may be key to driving employee behavioral outcomes.

FLMs can positively influence employee outcomes through skillful leadership. Front-line manager leadership approaches are essential to unlocking positive employee outcomes and helping employees solve workplace challenges in manufacturing environments (Sterling & Boxall, 2013). How FLMs influence employee outcomes through leadership and management practices is a critical and increasingly researched topic (Brewster, Gollan, & Wright, 2013; Kilroy & Dundon, 2015). FLMs are often under skilled in leading change (Smet, Lavoie & Hioe, 2012) and need support and contemporary development to unlock how they can deliver desired employee outcomes (Edgar, Geare, & O'Kane, 2015). Researchers and manufacturing leaders must reexamine the role of FLMs as change agents because FLMs are critical to delivering successful change (Nielsen, 2013). Manufacturing leaders should improve FLM utilization during periods of change.

Organizational change. Complex business environments present business leaders with a multitude of challenges that contribute to poor change initiative success rates. Researchers agree that too many change initiatives fail (Cândido & Santos, 2015; Michel, By, & Burnes, 2013). Business leaders have not seen change failure rates improve despite the growing amount of literature and training on how to manage change (Maurer, 2011). In contrast, a knowing-doing gap is growing as business leaders' increase their knowledge in change management techniques and principles but still fail to manage change effectively (Maurer, 2011). Business leaders should look for new ways to help reduce change failure rates.

Business leaders make many mistakes that contribute to change failure. Maurer (2011) found that leaders often erroneously assume employee understanding of change efforts equals commitment, underestimate the power of engaged employees, fail to reduce change fears and fail to acknowledge the role trust plays in accepting change. Toterhi and Recardo (2012) found that business leaders often accept weak leadership, treat change management as a separate work stream, and fail to align the organization to support change. Eliminating mistakes during change implementation is important as each subsequent change failure increases employee cynicism, making future changes even harder to navigate (Maurer, 2011). Repeated errors that are not corrected contribute to high change failure rates while making future changes more difficult.

Maurer (2011) is not alone in this pessimistic view. Decker et al. (2012) ascribed to the viewpoint that consistently high change failure rates across industries are in part due to a lack of a predictive framework that may guide organizations to positive change outcomes. Decker et al. found 60 previously identified critical failure factors including many leader-follower interactions in a demonstration of how complex a predictive framework would be, despite an admitted nonexhaustive review of the extant literature. This complexity of change failure is in part why failure rates remain static.

Change scholars offer diverse opinions on actual change failure rates though agree improvement is needed. Cândido and Santos (2015) reviewed the available literature and concluded that true change failure rates are elusive but somewhere between 28% to 90%. These high failure rates contribute to poor employee perceptions of how well senior leaders manage change. Among 1.6 million respondents in the United

Kingdom, only 34% felt their management team managed change effectively (Pritchard & Bloomfield, 2014). Together, these statistics indicate that senior leaders do not manage change well.

Senior leaders impact the change design, implementation, employee responses to change, and ultimately, change success. Practical changes are possible without large-scale, risky initiatives associated with change failure, employee discontent, and marginal lasting effects (Golden-Biddle, 2013). Instead of risky, large-scale initiatives, senior leaders can alternatively pursue change through uncovering frequent disconnects and discrepancies between actual and desired practices (Golden-Biddle, 2013). Davies (2013) similarly believed that when senior leaders leave their comfort zones to participate in employee-level process streams, they more effectively drive change through supportive leadership and discover gaps between corporate rhetoric and actual state. These practices also help leverage existing employee knowledge within the organization to help drive change.

Business leaders may find additional benefits to engaging employees during change implementation. Whalen (2014) theorized that during change initiatives, employees transact with each other in an infinite amount of ways. As these transactions accumulate, a change narrative emerges based on how the change initiative is perceived to affect both individuals and the organization as a whole (Whalen, 2014). Organizational leaders lose control of the change narrative when they do not actively remain involved in change discussions. Business leaders may also lose control of a change initiative when the environment changes due to unpredicted external variables (Mackay & Chia, 2013).

Business leaders can improve the probability of change success by remaining engaged with employees during the change process and using collective employee knowledge to help identify external variables that may threaten a change initiative.

Change frequency also affects organizational performance. Klarner and Raisch (2013) conducted a mixed-methods study to examine and explore the relationship between the frequency of organizational change and its effect on firm performance among 67 European insurance companies over a nine-year period. Companies that changed at regular intervals outperformed companies that changed at infrequent intervals, did not change at all, or changed too frequently without periods of stability (Klarner & Raisch, 2013). In manufacturing, change and stability are complementary in nature. Each stage requires periods of change and stability, and a complete absence of stability negatively affects change outcomes through change resistance, organizational inertia, and increased interest to maintain the status quo among employees (Mejia-Morelos, Grima, & Trepo, 2013). These findings are consistent with Klarner and Raisch though the specific mechanisms that drive these outcomes require further research.

Business leaders create and implement change plans, but change will not succeed without employee participation and acceptance. Non-management employees arguably play the most important role in change outcomes (Alasadi & Askary, 2014; Rothermel & LaMarsh, 2012). Employees must be able to change frequently and quickly for the organization to remain agile (Dermol & Carter, 2013). Understanding how organizational leaders can create an environment where employees voluntarily participate in, drive efforts, and commit to those changes is vital to improving change initiative failure rates.

Employee participation and acceptance of organizational change has multiple contextual variables. In a stable environment, employees get comfortable with their job routines. Changes to these routines may result in resistance through unfamiliarity or lack of training in new work processes (Bateh, Castaneda, & Farah, 2013). Organizational changes may conflict with individual employee identities (Drzensky, Egold, & Van Dick, 2012; Gover & Duxbury, 2012). Both Drzensky et al. (2012) and Gover and Duxbury (2012) found via quantitative and qualitative studies, respectively, that organizational identity plays a significant role in organizational readiness to change. Both research teams also found that a high degree of organizational identity among employees resulted in higher levels of readiness to change. Organizational leaders may improve the probability of change success by aligning organizational and individual identities. Organizational leaders can do this by creating a healthy change culture and alignment between change efforts and professional identities.

Scholars increased research efforts to understand employee outcomes and contextual variables during organizational change. Researchers cite employee resistance to change as one of the most significant barriers to change success (Michel et al., 2013; Stonehouse, 2012). Organizations can adjust their change management approach to reduce employee resistance to change (Michel et al., 2013). Business leaders may improve change outcomes through understanding where this resistance comes from and reducing it.

Organizational leaders should also strive to understand the reasons for resistance to change. Grounds for resistance to change relate in some way to a lack of understanding

of the need to change, perceived costs outweighing perceived benefits, shortage of time to work through change issues, and personal anxiety (Stonehouse, 2012). To combat resistance, organizational leaders can improve communication, increase employee engagement, encourage participation with honest responses, and involve employees at each stage to increase shared ownership of the change efforts (Stonehouse, 2012). Recent research expands on the psychological precursors to resistance to change.

Psychological precursors to resistance to change partially explain why employees resist changes. Employees may distance themselves from the organization as a self-protecting psychological mechanism in response to significant changes (Michela & Vena, 2012). Employees may also devalue the organization or mentally disengage due to uncertainty stemming from change (Michela & Vena, 2012). Resisting change is a counterproductive change behavior that reduces the probability of change success and negatively affects a healthy psychological balance among employees (Bouckenooghe, 2012). Significant value exists in reducing this resistance.

The value of overcoming employee resistance to change and actively pursuing employee commitment to change extends past improving upon change initiative failure rates, as the value also includes improving the psychological well-being of workers. FLMs play a significant role in influencing employee behaviors (Evans, 2015). FLMs as a group have been overlooked by researchers for decades (Evans, 2015; Nielsen, 2013). Researchers have only recently increased efforts to understand how FLMs influence employee behaviors in the workplace.

Front-line management in manufacturing. The role of FLMs in manufacturing shifted over the past few decades. FLMs traditionally held process and personnel supervisory roles, but roles have gradually shifted towards increased responsibilities (Townsend & Russell, 2013). FLMs now experience increased job enlargement, work intensity, people management roles, pressures from the employees they lead and increased burden to deliver policy change (Townsend & Russell, 2013). FLMs often find themselves caught in the middle of implementing changes they have little influence over and pressure and resistance to these changes from their employees (Nielsen, 2013; Townsend & Russell, 2013). FLMs in manufacturing face increasingly demanding roles centered on (a) the motivation of individuals and teams, (b) conflict resolution, (c) meeting management, and (d) communication (Pederson, Dresdow, & Benson, 2013). There are negative consequences from enlarging FLM roles.

FLMs are pulled in different directions during organizational change by competing needs. FLMs typically manage the greatest number of people (Townsend & Loudoun, 2015). FLMs often find they simply do not have the time to execute all responsibilities within their expanded job scope (Evans, 2015). This shortage of time occurs in part due to the competing needs of senior managers and direct reports. FLMs facing these competing objectives face increased risk of turnover, burnout, and decreased effectiveness (Townsend & Russell, 2013). FLMs are pulled between organizational and functional roles (Townsend & Russell, 2013), and must manage decreasing budgets while maintaining or improving quality of work (Evans, 2015). Senior managers may impose changes on FLMs who have little to no involvement in change initiative planning, but

nevertheless expectations exist to execute proposed changes. When changes do not work, senior managers may then cite ineffective FLMs (Townsend and Russell, 2013). A new perspective may be considered to combat the adverse effects of expanding FLM job scopes.

FLMs can influence change initiatives through increased participation in policy change and eliciting change support from their employees. FLMs play a crucial role in organizational change and are the most important people in an organization to drive employee performance (Edgar et al., 2015). Senior managers should recognize the importance of and engage FLMs and other floor leaders (Alagaraja & Egan, 2013). FLMs may then be empowered to balance the competing needs of implementing change with the needs of their employees receiving change (Semper, 2011). Manufacturing industry examples of what happens when senior manufacturing leaders ignore FLMs during the change process exist as of recent.

One of the key barriers to success and lessons learned from a major manufacturing improvement effort at MillerCoors was the failure to involve FLMs in the change process. To become a lean, world-class manufacturing organization, MillerCoors implemented new strategies to engage workers in job functions (Semper, 2011). Senior leaders at MillerCoors did not fully explain the role of FLMs in these new strategies, which resulted in conflict (Semper, 2011). MillerCoors gave both senior managers and employees extensive training geared toward empowered work performance, yet FLMs received no training in how to lead in this new environment (Semper, 2011). FLMs took on two separate but conflicting roles: (a) regular job duties, and (b) secondary duties

associated with the new tasks (Semper, 2011). FLMs were unable to sustain new processes as they lacked the knowledge and training to follow new protocols (Semper, 2011). Fast, Burris, and Bartel (2014) found this pattern familiar, as FLMs lacking self-efficacy in their work roles are less likely to solicit input and less likely to take received employee input into account. These lessons highlight the importance of empowering FLMs to both participate in and drive organizational change. Senior manufacturing leaders should include FLMs in training efforts and change strategy formulations for change sustainability.

Developing FLM skills to influence change behaviors, such as employee commitment to change, may increase the likelihood of change initiative success. McClean, Burris, and Detert (2013) postulated that FLMs have significant influence over employee change behaviors. McClean et al. reported that increasing FLM participation and access to resources during change initiatives increased employee engagement and decreased turnover. Regardless of the outcome measured, FLMs influence both positive and negative employee behaviors through their actions and leadership styles.

FLMs behave in ways that may either empower their subordinates and positively influence employee behaviors, or perceptively transgress against their employees and negatively influence employee behaviors. To identify how FLMs may positively influence employees behaviors, Erturk (2012) examined psychological empowerment in a manufacturing context. Erturk found that psychological empowerment and trust in supervisor positively related to creative and innovative employees who (a) believed FLMs had their best interests in mind and (b) felt empowered to share opinions to

influence organizational processes, policies, strategies, and results. FLM behaviors influence employee behaviors.

FLMs may also influence employee trust in the organization through their actions by treating employees fairly and consistently. Sousa-Lima, Michel, and Caetano (2013) found that FLMs in manufacturing could increase employee trust in their organizations by treating employees fairly and uniformly, effectively communicating important issues with employees, and creating supportive supervisory relationships. In another study of manufacturing workplace justice during change initiatives, perceived differences in treatment between employees were positively related to emotional exhaustion and negatively related to commitment to change (Bernerth, Walker, Walker, & Hirschfeld, 2011). Bernerth et al. (2011) described that employees judge what is fair by comparing their treatment against how they perceive FLMs are treating others. Bernerth et al. further postulated that when differences arise that employees perceive as unfair, employees perceive an injustice is committed against them, decreasing the likelihood of positive behavioral outcomes such as commitment to change. These findings highlight the duality of FLM influence, as FLMs can positively or negatively affect the manufacturing workforce through their actions.

Just as leadership empowering behavior influences positive outcomes and behaviors, abusive FLM behaviors negatively affect employee outcomes and behaviors. Lin, Wang, and Chen (2013) suggested that abusive supervisory behaviors were higher in manufacturing than other professional industries. Lin et al. (2013) argued that higher abusive supervisory behaviors occur due to higher power distance orientations in

manufacturing organizations, with similar findings observed in both China and the United States. In this context, FLMs play a potentially larger role in ensuring fair treatment of employees in the manufacturing industry, compared to industries with smaller power distance orientations.

FLMs may significantly influence a broad range of behaviors and outcomes through their employee relationships. Palanski, Avey, and Jiraporn (2014) conducted a quantitative study across industries that highlighted the effects of both ethical and abusive FLM relationships with employees on job satisfaction, job search behaviors, and intentions to quit. Consistent with their hypotheses, ethical leadership behaviors increased employee job satisfaction, reduced intentions to quit, and decreased job search behaviors. Abusive leadership behaviors had an inverse relationship with each of these measures (Palanski et al., 2014). These findings suggest that FLMs hold influential positions across industries due to the positive or negative influence their actions may have on subordinates.

FLMs engaged in abusive employee relationships likely have negative effects on a multitude of outcomes. Gregory, Osmonbekov, Gregory, Albritton, and Carr (2013) examined the relationship between abusive supervisory behavior and organizational citizenship behavior. The researchers found that employees not only reduced organizational citizenship behavior, such as helping coworkers or engaging in tasks that are not formally rewarded, but also demanded more money over time in response to abuse. Demand for pay increases occurs as employees turn to extrinsic reasons to perform when employees are no longer intrinsically motivated to perform due to poor treatment

(Gregory et al., 2013). Botsford Morgan and King (2012) and Sharkawi, Abdul Rahman, and Azuradahalan (2013) explained this effect through the lens of psychological contract violation. Psychological contract violation occurs when employees form psychological contracts with their FLMs and expectations are unfulfilled. As expectations are unfulfilled, employees feel a contract breach resulting in counterproductive work behaviors. Abusive FLM behaviors are damaging to the organization, and many occur overtly or in subtle ways where management may have difficulty observing.

Abusive FLM behaviors may occur in many forms. Basford (2014) identified eleven themes including performance criticisms, demeaning insults, false accusations, unreasonable demands, unfair employment decisions, inconsiderate treatment, inequitable behavior, inappropriate contextual selections, disregard of opinions, undersupplied resources, and underprovided recognition. Business leaders may be able to decrease the probability that FLMs engage in these abusive behaviors by developing skilled FLMs that place employee needs in high regard.

Many leadership styles may be appropriate per situational context. Servant leadership is a viable leadership theory that positively influences organizational outcomes by placing employee needs above those of the leader. FLMs have significant influence over their employees. Through servant leadership, FLMs may positively influence behaviors and outcomes by valuing employees, creating trusting relationships, and demonstrating efforts to treat employees with high regard for their contributions.

Transition and Summary

Change failure rates have consistently remained near 70% for decades with no clear model on how to avoid failure (Decker et al., 2012; Maurer, 2011). Skilled FLMs who positively influence individual and organizational outcomes such as commitment to change may assist in improving upon these change failure rates (Bouckenooghe, 2012). Servant leadership is a tenable leadership theory that FLMs may utilize to influence follower outcomes such as commitment to change (Parris & Peachey, 2013; van Dierendonck, 2011). In this study, I examined the relationship between employee perception of their FLM's servant leadership dimensions and employee ACC.

In section 1, I presented the foundation of this study including the background of the problem, problem statement, the purpose of the study, the research questions and hypotheses, the theoretical framework, operational definitions, significance of the study, and an extensive review of the literature. Section 2 contains the research project including a review of the purpose statement, role of the researcher, participants, research method and design, population and sampling, ethical research, instrumentation, data collection and analysis techniques, and study validity.

Section 2: The Project

Servant leadership theory is a viable leadership theory that places follower needs above those of the leader (Parris & Peachey, 2013). Initial evidence suggests that servant leadership positively correlates with the employee commitment to change necessary to for change success (Kool & van Dierendonck, 2012). I used the following research question in my study: What is the relationship between employee perception of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, (g) creating value for the community, and employee ACC? Section 2 contains the research project including a review of the purpose statement, role of the researcher, participants, research method and design, population and sampling, ethical research, instrumentation, data collection and analysis techniques, and study validity.

Purpose Statement

The purpose of this quantitative study was to examine the relationship between employee perception of their FLM's servant leadership dimensions and employee ACC. The independent variables were employee perceptions of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, and (g) creating value for the community. The dependent variable was employee ACC. The targeted population was manufacturing firms located in the United States. This study promoted positive social change and the potential to improve business practices by providing information manufacturing leaders might use to increase the probability of change success and reduce

change implementation costs. Increased change success rates might benefit communities through access to more affordable, higher quality goods and services. The implications for positive social change also include the potential to decrease employee anxiety and uncertainty during organizational change.

Role of the Researcher

The role of the researcher is to gather data; analyze data; and present the findings in an unbiased, neutral, and ethical manner (Khan, 2014). My role as the researcher was, therefore, to collect data, analyze data, and present the results in an unbiased, neutral, and ethical manner. I had no direct or personal relationships with any study participants. I previously worked in the manufacturing industry within the United States as an FLM. I accumulated experience as an FLM in manufacturing and a working knowledge of servant leadership through organizational and academic experiences before conducting this study. Previous experience and working knowledge did not bias or affect my objectivity or interpretation of results.

Researchers must conduct ethical research (Khan, 2014). Ethical research considerations include causing no harm to participants, ensuring voluntary consent, and ensuring participant anonymity and confidentiality (Khan, 2014). Ethical research also includes not disrupting the collection site and communicating the intent and purpose of the study (Caruth, 2013). I conducted ethical research, caused no harm to participants, ensured voluntary consent, ensured participant anonymity and confidentiality, did not disrupt the collection site, and communicated the intent and purpose of this study to participants.

I complied with all ethical protocols established in the Belmont Report (1979) regarding the ethics and principles of research involving human subjects. I also complied with all ethical protocols as set forth by the Walden University Institutional Review Board (IRB) and the American Psychological Association (APA). The Belmont Report contains three fundamental principles for the ethical treatment of human research subjects: (a) respect for persons, (b) doing no harm including maximizing benefits and minimizing risks to participants, and (c) fairly distributing justice across research participants.

Participants

A sample is the subset of a population and must be representative of the population (Acharya, Prakash, Saxena, & Nigam, 2013). Researchers must also ensure the sample aligns with the overarching research question (Uprichard, 2013). Researchers violate statistical conclusion validity if the sample is not representative of the population (Venkatesh, Brown, & Bala, 2013). I included five eligibility criteria to ensure participants were representative of the target population. The five eligibility criteria were (a) participants work in a manufacturing organization in the United States, (b) participants are hourly employees, (c) participants are employed in an operations or support role, (d) participants have been involved in or affected by an organizational or departmental change in the past year, and (e) participants have an FLM with whom the participant interacts with at least weekly.

I used a purposive, nonprobability sampling technique to gain access to participants. Researchers using purposive, nonprobability sampling techniques accept an

unknown probability of participant selection, making this technique less desirable owing to selection bias (Archarya et al., 2013). The purposive, nonprobability sampling method is the most common method used in correlational designs, and it is more convenient and cost effective than other methods (Kandola et al., 2014). My strategy to find participants was to contact manufacturing organizations in the United States and solicit human resource (HR) managers via telephone and email for permission to survey employees (see Appendix D). Inferential validity is violated if the sample is not representative of the population (Venkatesh et al., 2013). I discussed eligibility requirements with interested HR managers to ensure participants were representative of the target population. Upon receiving a letter of cooperation, I established a working relationship with the participating organization by keeping the participating organization informed of the research process and data collection methods. I also ensured the participating organization had a complete understanding of participant confidentiality and anonymity. I discussed the importance of voluntary consent with the participating organization. I ensured the participating organization understood that they could not recruit participants on my behalf and that there could be no actual or implied repercussions for employees who declined participation.

I interacted with and established a working relationship with individual participants only once I was on-site to collect data. Researchers must convey trust and understanding in their interactions with participants (Venkatesh et al., 2013). Quantitative researchers should also remain neutral during the research process (Yilmaz, 2013). A researcher can establish a neutral, trusting relationship with participants in part by

discussing informed consent (Khan, 2014). Researchers should ensure participants understand that their participation is voluntary and inform participants of the purpose and research goals of the study (Khan, 2014). I ensured that participants had a thorough understanding of informed consent before questionnaire completion, including anonymity within their organization and the exclusion of any personally identifiable information. I had no further contact with participants after data collection. Upon doctoral study approval, I concluded the working relationship with the participating organization by emailing the organization a one-page study summary detailing findings and conclusions. The participating organization ensured all participants had access to study findings and conclusions by posting the one-page summary on their facility announcement boards.

Research Method and Design

The research method and design must align with the research question. The research method may be qualitative, quantitative, or mixed-methods (Yilmaz, 2013). The research design is the particular design within that methodology the researcher uses to address the research question (Castillo-Page et al., 2012). My method and design aligned with the following research question in my study: What is the relationship between employee perception of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, (g) creating value for the community, and employee ACC?

Research Method

The research method delineates a study as qualitative, quantitative, or mixed-methods (Caruth, 2013). A quantitative research method was best suited for the research

question in this study. I examined the linear relationship between multiple independent variables and a single dependent variable. A quantitative approach is the appropriate methodology for examining the relationship between independent and dependent variables, and is objective, generalizable, and reliable (Martin & Bridgmon, 2012). Researchers examine relationships using quantitative methodologies through the use of descriptive and inferential statistics that assign probabilities of observed findings in making external generalizations (Yilmaz, 2013).

In quantitative research, researchers use statistical tools and analysis techniques to examine relationships between phenomena (Caruth, 2013). To accomplish this, researchers use pre-constructed instrumentations to measure the phenomena objectively under inquiry via deductive reasoning and make external generalizations with their findings (Yilmaz, 2013). Researchers focus on hypothesis testing in quantitative methodologies whereas hypothesis generation is better suited to qualitative methods (Castillo-Page et al., 2012). Researchers use quantitative methods to quantify the relationship between variables (Onwuegbuzie et al., 2009). Researchers using quantitative methods may overlook other phenomena or variables affecting outcomes or experiences that may otherwise surface through qualitative methodologies (Yilmaz, 2013).

Qualitative methods may address an identified weakness in quantitative methodologies in that researchers using qualitative methodologies may better identify phenomena, variables, or nuances of a research question that may otherwise be unexplored during quantitative efforts (Hunt, 2011). In qualitative studies, researchers

aim to provide an in-depth understanding of human experiences and the meanings attached to them (Yilmaz, 2013). Researchers using qualitative methods often focus on understanding how and why behaviors and events occur (Castillo-Page et al., 2012). I ruled out using a qualitative method for two reasons. First, a qualitative method was not appropriate to examine the statistical relationship between variables. Second, I tested a hypothesis informed by the literature review, which included both an existing theory on servant leadership and a standardized instrument to measure servant leadership dimensions as independent variables.

I also chose not to use a mixed-method. In mixed-methods, researchers combine aspects of both quantitative and qualitative designs in the same study to potentially add robustness to the research (Caruth, 2013). Mixed-methods include triangulation, embedded, explanatory, and exploratory designs (Castillo-Page et al., 2012). Scholars can develop rich insights by using mixed-methods that may otherwise be difficult to obtain using only qualitative or quantitative methods (Venkatesh et al., 2013). The use of mixed-methods frequently increases research complexity (Leedy & Ormrod, 2013). Researchers often use mixed-methods to generate hypotheses and triangulate qualitative and quantitative data (Leedy & Ormrod, 2013). I did not consider a mixed-method because the variables in this study were well-defined, and the purpose of this study was not to triangulate data or generate new hypotheses for future research.

Research Design

Quantitative research designs are the blueprint for a quantitative study and dictate the type and interpretation of statistics used to gather and analyze data (Martin &

Bridgmon, 2012). The three main categories of design are experimental, quasiexperimental, and nonexperimental (Castillo-Page et al., 2012). I used a nonexperimental correlational design. Researchers use correlational designs to explore multivariate relationships without the utilization of a control group or researcher manipulation to outcome variables (Martin & Bridgmon, 2012). Researchers use correlational designs to measure both direction and strength of the relationship between variables without implying causation (Leedy & Ormrod, 2013).

I chose not to use an experimental or quasiexperimental design. In an experimental design, researchers assign participants to experimental and control groups, while manipulating treatment variables between groups to determine causality (Castillo-Page et al., 2012). Researchers use experimental designs to attempt to control and understand changes in variables by carefully designing the procedures and conditions of an experiment, such as randomization of participant assignment to test or control groups while minimizing extraneous variables (Martin & Bridgmon, 2012). Researchers also use quasiexperimental designs to discover causal relationships between variables (Martin & Bridgmon, 2012). Quasiexperimental designs lack the randomization of participant group assignment (Leedy & Ormrod, 2013).

Neither experimental nor quasiexperimental approaches were appropriate for this study. The independent variables in this study were seven servant leadership dimensions. The dependent variable was ACC. The intent of this study was to examine the statistical relationship between variables, not to identify causation typically measured in experimental designs. Most importantly, I did not use random assignment to groups nor

treatments or interventions. A correlational design was most appropriate. Though it was possible to conduct an experiment or quasiexperiment given the independent and dependent variables, conducting an experiment or quasiexperiment would have required providing a treatment that may have been expensive, time-consuming, and difficult to implement.

Population and Sampling

Researchers must ensure the sample aligns with the overarching research question (Uprichard, 2013). The sample must also be representative of the population to avoid violating statistical conclusion validity (Venkatesh et al., 2013). When a researcher violates statistical conclusion validity, the researcher violates inferences regarding the correlation between study variables (Venkatesh et al., 2013). The target population for this study was manufacturing firms located in the United States. I used five participant eligibility criteria to ensure the sample was representative of the population and aligned with the overarching research question. The five eligibility criteria were: (a) participants work in a manufacturing organization in the United States, (b) participants are hourly employees, (c) participants are employed in an operations or support role, (d) participants have been involved in or affected by an organizational or departmental change in the past year, and (e) participants have an FLM with whom the participant interacts with at least weekly.

Researchers choose their population sampling technique based on the research question, population of interest, and resources available to the researcher (Acharya et al., 2013; Uprichard, 2013). The two primary approaches to sampling techniques are

probability and nonprobability sampling (Kandola, Banner, O'Keefe-McCarthy, & Jassal, 2014). Probability sampling, though time-consuming and costly, is the most desirable sampling technique as each member of the population has an equal and randomized probability of inclusion into the study (Kandola et al., 2014). Probability sampling techniques include simple random sampling, systematic random sampling, stratified random sampling, cluster sampling, multiphase sampling, and multistage sampling (Archarya et al., 2013; Kandola et al., 2014).

In comparison, nonprobability sampling techniques have an unknown probability of participant selection into the study and therefore are less desirable due to selection bias (Archarya et al., 2013; Kandola et al., 2014). Researchers cannot generalize findings across populations using nonprobability sampling techniques due to the potential for selection bias (Archarya et al., 2013). Nonprobability sampling techniques are generally more convenient, cost-effective, and often used for pilot studies or to inform future research directions (Archarya et al., 2013). Nonprobability sampling techniques include purposive sampling, quota sampling, and snowball sampling methods (Kandola et al., 2014). I used a nonprobability purposive sampling technique based on convenient access to the population. The nonprobability purposive sampling technique is the most common sampling method utilized in conjunction with nonexperimental quantitative methodologies such as correlational designs (Archarya et al., 2013).

To determine the minimum required sample size, I used the free statistical software package G*Power to conduct an apriori sample size analysis (Faul, Erdfelder, Buchner, & Lang, 2009). I conducted a power analysis using G*Power version 3.1.9.2

software that indicated, assuming a medium effect size (f^2 = .15), α = .05, and seven independent variables, that a sample size of 103 participants was required to achieve a power of .80 and a sample size of 203 participants was required to increase power to .99 (see Figure 2). I included between 103 and 203 participants in the study.

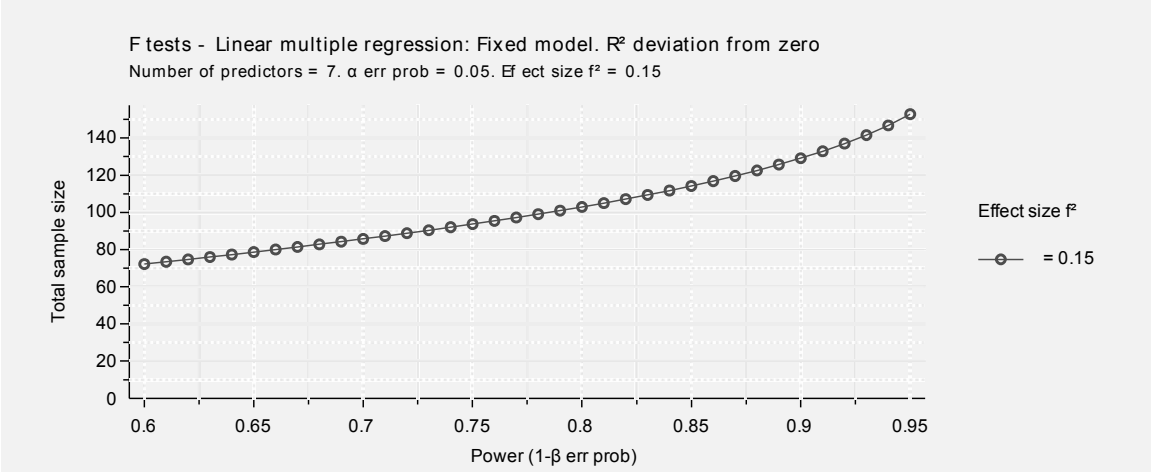

Figure 2. Power as a function of sample size.

The effect size represents an indexed value of the difference between the null and alternate hypothesis, and ultimately the degree to which the null hypothesis is considered false (Cohen, 1992). The use of a medium effect size (f^2 = .15) represents an effect that is likely to be observed by a researcher's naked eye as is recommended for quantitative research (Cohen, 1992; Faul et al., 2009). An alpha value indicates the risk of falsely rejecting the null hypothesis and the probability of committing type I error (Cohen, 1992). Researchers most frequently use an α = .05 in quantitative studies, thereby accepting a 5% probability of committing Type I error (Cohen, 1992). A power of .80 represents a medium probability of rejecting a false null hypothesis at a given confidence interval and corresponds with a .20 probability of committing Type II error, also referred

to as failing to reject a false null hypothesis (Cohen, 1992). A power lower than .80 risks committing too high of Type II error and a power greater than .80 requires a sample size that may be outside researcher resource constraints (Cohen, 1992).

Ethical Research

I obtained approval from the Walden University IRB (05-13-16-0341893) before collecting data. The IRB reviews research proposals for ethical considerations to ensure protections are in place to properly safeguard participants (Tamariz, Palacio, Robert, & Marcus, 2013). I sent an introductory email to the participating organization that included the background and purpose of the study, the anonymity and voluntary nature of participation, and explained the informed consent process (see Appendix D). Researchers must solicit informed consent for research to be ethical (Khan, 2014). Evidence exists that participants may not fully understand informed consent and researchers can improve participant understanding (Tamariz et al., 2013). Researchers can improve comprehension by spending more time explaining informed consent to participants and answering questions that may arise (Tamariz et al., 2013).

Each participant received a copy of the informed consent form in their questionnaire packet. I explained the informed consent process at employee meetings to potential participants interested in learning more about the study. I also remained available during the entire data collection period to answer any additional questions regarding the informed consent form or process. The informed consent form indicated that participants could keep the informed consent copy for his or her records and that no signature was required. I addressed all questions and concerns so that participants felt

comfortable agreeing to informed consent. Participation in any research must be voluntary (Khan, 2014). As indicated in the informed consent form, participants could withdraw from the study at any point. Participants could withdraw by simply declining to participate, returning a partially completed questionnaire, or returning a blank questionnaire. Commercial researchers often use incentives to increase participation and response rates (Chang & Vowles, 2013). I am not a commercial researcher, and I did not use extrinsic incentives to encourage participation in this study. The informed consent form indicated how study findings could lead to positive social change.

Researchers must take measures to assure the ethical protection of participants (Khan, 2014). Researchers must assure participants of anonymity and confidentiality, in addition to voluntary consent (Khan, 2014). I ensured anonymity and confidentiality of all organizational and individual identifiers by explicitly omitting any opportunity to record the participating organization's name, a participant's name, or any personally identifiable information. Researchers cannot fully provide complete confidentiality and anonymity for data collected and stored online (Chang & Vowles, 2013). I collected data on-site and offline, and only I have access to the data. I will store original copies offline in a fire-rated safe for 5 years to maintain participant confidentiality. After 5 years all documents will be shredded in compliance with Walden University requirements. See Appendix E for the National Institutes of Health Certificate of Completion certifying my training in *Protecting Human Research Participants*.

Instrumentation

I conducted a site visit to collect data using two instruments. Liden et al. (2008) published the instrument titled the SL-28. Researchers use the SL-28 to measure seven dimensions of servant leadership. Herscovitch and Meyer (2002) published the instrument titled the Commitment to Change Inventory (CCI) (see Appendix A and Appendix B for the instruments, and Appendix C for permissions to use the instruments). The CCI contains three sections of six-items each, with each section measuring a dimension of commitment to change. I only used the six-item section measuring the dimension of ACC.

Liden et al. (2008) developed the SL-28 as a 28-item instrument measuring seven distinct servant leadership dimensions. The SL-28 contains a 7-point Likert-type ordinal scale of measurement ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) with four items covering each dimension. Each dimension was an independent variable in this study. The independent variables were conceptual skills, empowering, helping subordinates grow and succeed, putting subordinates first, behaving ethically, emotional healing, and creating value for the community (see Table 3 for definitions). Scholars agree that servant leadership is a multidimensional construct (Parris & Peachey, 2013; van Dierendonck, 2011). Researchers often ignore these dimensions and research servant leadership a single variable, which limits implications of research findings (Liden et al., 2015).

Table 3

Definitions of Servant Leadership Dimensions

1. Emotional healing (EH): The act of showing sensitivity to others' concerns.
2. Creating value for the community (CVFTC): A conscious, genuine concern for helping the community.
3. Conceptual skills (CS): Possessing the knowledge of the organization and tasks at hand so as to be in a position to effectively support and assist others, especially immediate followers.
4. Empowering (Emp): Encouraging and facilitating others, especially immediate followers, in identifying and solving problems, as well as determining when and how to complete work tasks.
5. Helping subordinates grow and succeed (HSGAS): Demonstrating genuine concern for others' career growth and development by providing support and mentoring.
6. Putting subordinates first (PSF): Using actions and words to make it clear to others that satisfying their work needs is a priority (supervisors who practice this principle will often break from their work to assist subordinates with problems they are facing with their assigned duties).
7. Behaving ethically (BE): Interacting openly, fairly, and honestly with others.

Herscovitch and Meyer (2002) developed the CCI as an 18-item instrument to measure commitment to change, including a six-item scale to measure the dependent variable in this study, ACC. Researchers use the CCI as the prevailing instrument to both understand and measure commitment to change (Bouckenooghe et al., 2015). Herscovitch and Meyer defined ACC as the internal desire to commit to an organization based upon perceived benefits of the change. Researchers suggest that ACC is the commitment to change dimension most positively related to behavioral support for change initiatives and is linked to employee willingness to extend the extra effort to make a change initiative successful (Morin et al., 2015). The 18-item CCI contains a 7-point Likert-type ordinal scale of measurement ranging from 1 (*strongly disagree*) to 7

(*strongly agree*) with six items covering each dimension. I only used the six-item scale measuring ACC.

Both the SL-28 and the CCI were appropriate instruments for this study. The SL-28 demonstrates a stable factor structure across multiple samples and is a valid instrument owing to the rigorous procedures used in development (van Dierndonck, 2011). Investigating servant leadership as a multifactorial construct using the SL-28 maximizes domain coverage that researchers have previously ignored (Liden et al., 2015). The CCI was the appropriate instrument because it is the only empirically researched instrument used to measure ACC (Bouckenooghe et al., 2015).

After IRB approval, I coordinated with the participating organization for the time and place to administer the instruments via paper and pencil. On-site data collection eliminates potential selection bias that may otherwise occur when target populations have limited Internet access (Weigold, Weigold, & Russell, 2013). Researchers remain present in the room when collecting on-site data to control the research setting and monitor for factors such as distractions and environmental cues (Ward, Clark, Zabriskie, & Morris, 2012). Researchers must also remain neutral (Khan, 2014). The participating organization reserved a private conference room for me, which allowed me to control the research setting and monitor for factors such as distractions and environmental cues. Participants were free to complete the questionnaire in the reserved conference room and ask any questions about the research process. Participants reviewed the procedures located in the informed consent form before instrument administration. Participants then completed the

SL-28 and CCI. The average duration for completion of all questionnaire items was 10 minutes.

Researchers can use the SL-28 as a single factor instrument by summing and averaging all 28 items (Liden et al., 2015). I used the SL-28 as a multifactorial instrument and calculated scale scores by averaging scaled responses for each servant leadership dimension. I calculated the CCI score by averaging the six scaled responses for ACC (Herscovitch & Meyer, 2002). Herscovitch and Meyer (2002) used Oblimin rotation for items 3, 5, and 6 of the ACC scale so I reverse scored these three items to arrive at their true values. Final scores represented the mean value per participant, per variable, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Researchers have used the SL-28 in diverse populations though only as a single factor instrument. Most recently, these populations include a service-oriented private firm in China (Chan & Mak, 2014), information technology professionals in the Ukraine (de Clercq et al., 2014), restaurant managers and employees in the United States (Liden et al., 2014), graduate students and real estate employees in the United States (Liden et al., 2015), cross-industry employees in Singapore (Liden et al., 2015), and technology CEOs in the United States (Peterson et al., 2012). Researchers used the CCI to measure ACC in diverse populations. Most recently, these populations include an Italian hospital setting (Battistelli et al., 2014), and automotive company in Belgium (Bouckenooghe et al., 2014), a European reintegration company (Kool & van Dierendonck, 2012), a state-owned organization in Indonesia (Mangundjaya, 2015), an Italian pharmaceutical

company (Montani et al., 2012), cross-industry employees in Spain (Pardo-Del-Val et al., 2012), and a large organization undergoing change in the United States (Seo et al., 2012).

In an effort to create an efficient and reliable scale, Liden et al. (2008) used the four highest loading factors with a loading factor of at least .4 (for a total of 28 items) for each dimension. The seven dimensions and accompanying scale reliabilities (Cronbach's alpha) were: (a) conceptual skills ($\alpha = .81$), (b) empowering ($\alpha = .80$), (c) helping subordinates grow and succeed ($\alpha = .82$), (d) putting subordinates first ($\alpha = .86$), (e) behaving ethically ($\alpha = .83$), (f) emotional healing ($\alpha = .76$), and (g) creating value for the community ($\alpha = .83$), indicating high scale reliability (Liden et al., 2008). Scholars use Cronbach's alpha, also referred to as the alpha coefficient, as a representation of internal consistency and reliability (Herscovitch & Meyer, 2002). A value of ($\alpha = .70$) or greater indicates acceptable reliability (Liden et al., 2008).

Instrument validity is how accurately an instrument measures what it intends to measure (Caruth, 2013). Multiple types of validity fall into three categories: design validity, measurement validity, and inferential validity (Venkatesh et al., 2013). More specifically, design validity includes internal and external validity; measurement validity includes construct validity, content validity, and reliability, and inferential validity is the statistical conclusion validity (Yilmaz, 2013). Liden et al. (2008) ensured content validity through full content review and item selection per characteristic by each participating researcher (Liden et al., 2008). The researching team then met to discuss and reach consensus on the original 85-items (Liden et al., 2008). The authors then chose the four

highest loading items for each of the remaining seven dimensions to ensure reliability, ease of use, and content validity (Liden et al., 2008).

Liden et al. (2008) tested the external and discriminate validity by regressing hypothesized outcomes using the developed 28-item servant leadership instrument while controlling for transformational leadership and leader–member exchange in a multi-level hierarchical linear modeling analysis (Liden et al., 2008). The authors found that servant leadership was a multidimensional construct and uniquely contributed to explaining hypothesized outcomes after controlling for transformational leadership and leader–member exchange (Liden et al., 2008). Last, the researchers examined predictive validity through both a pilot study with student participants and a secondary study using working professionals and found support for predictive validity (Liden et al., 2008).

Herscovitch and Meyer (2002) tested for reliability and validity of the CCI. Herscovitch and Meyer reported a scale reliability of ($\alpha = .92$) for ACC, representing high reliability. The authors examined construct and content validity by conducting a principal-axis factor analysis with Oblimin rotation for 22 survey items, forming composite scales with corresponding correlations. Next, Herscovitch and Meyer conducted 2 x 2 x 2 ANOVAs and found strong main effects for each manipulation on each dimension. The authors discarded two items that failed to load at least .5 on the appropriate factor and two items that loaded on multiple factors, resulting in an 18-item instrument with factor loadings of at least .5 per factor. The researchers confirmed the best fit of this model through confirmatory factor analysis and goodness of fit using root-mean-square error of approximation and expected cross-validation index. The resulting

18-item instrument contained six items for the dimension of ACC. I made no revisions to either the SL-28 or CCI. Raw data is available upon written request.

Data Collection Technique

I conducted on-site data collection using the SL-28 and CCI instruments. Researchers use standardized instruments to gather data in quantitative studies (Yilmaz, 2013). Online data collection is an increasingly popular method to collect data using standardized instruments and researchers must weigh the advantages and disadvantages of online versus on-site paper and pencil collection techniques (Ward et al., 2012). Online data collection is more convenient, faster, and cost-effective than paper and pencil questionnaires (Chang & Vowles, 2013). Online data collection methods may also correlate with higher participation rates and increased access to larger geographical areas (Ward et al., 2012), and eliminate the time and costs of data entry (Weigold et al., 2013).

There are disadvantages to online techniques. Disadvantages include the potential difficulty in sampling select participants due to spam filters or invalid email addresses (Chang & Vowles, 2013) and disparate internet access (Weigold et al., 2013). A third disadvantage is potential variations in survey instrument reliability developed from paper and pencil data collection methods (Ward et al., 2012). Researchers may also encounter ethical concerns over confidentiality and anonymity using online collection techniques as the data is not under strict control of the researcher (Chang & Vowles, 2013).

I conducted on-site data collection for three interrelated reasons: increased data availability, reduced selection bias, and in-person explanation and responsiveness to issues concerning informed consent. A site visit to collect data was suitable for a

manufacturing facility with a large number of employees and limited Internet access. More specifically, fast-paced manufacturing operations coupled with potential disparate Internet access made completion of an online questionnaire logistically difficult and may have led to a low response rate or selection bias. Further, I justified the increased cost associated with an on-site questionnaire as a strategy to minimally interfere with manufacturing operations, as I could collect data in one short period or during employee downtime. Last, ethical research requires informed consent, and participants often do not fully understand informed consent (Tamariz et al., 2013). The site visit allowed me to answer any questions concerning informed consent.

The researcher must be present during on-site data collection to monitor for distractions (Ward et al., 2012). I attended employee meetings to introduce the study and recruit potential participants. The participating organization reserved a conference room for me to distribute questionnaires and collect data, and this conference room served as the reserved space where employees could ask questions or complete the questionnaire in privacy. I remained in the reserved conference room when not recruiting participants to monitor for distractions and answer questions. The informed consent form indicated that once participants agreed to informed consent, they could then complete both survey instruments. Researchers must also ensure neutrality (Khan, 2014). The informed consent form instructed participants to return questionnaires to the neutral collection point in the reserved conference room upon completion.

Data Analysis

I used the following research question in my study: What is the relationship between employee perception of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, (g) creating value for the community, and employee ACC?

The null and alternative hypotheses were:

$H_0$1: There is no statistically significant relationship between employee perception of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, (g) creating value for the community, and employee ACC.

H_a1: There is a statistically significant relationship between employee perception of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, (g) creating value for the community, and employee ACC.

After I completed data collection, I inputted survey data into an excel spreadsheet. I then uploaded the spreadsheet into SPSS version 23 and analyzed the data using MLR. MLR was the appropriate data analysis technique. In an MLR, researchers attempt to model the relationship between a set of independent variables and a dependent variable through linear equation fitment to data (Green & Salkind, 2011; Nimon & Oswald, 2013). Researchers analyze fitment to data to assess the role multiple variables play in accounting for variance in a singular dependent variable (Nathans, Oswald, & Nimon,

2012). I chose an MLR over other techniques. Researchers use MLR for ordinal data to examine the role multiple independent variables play in accounting for variation in a single dependent variable (Green & Salkind, 2011; Leedy & Ormrod, 2013).

One of the most important steps in data analysis is to make sure the data is entered correctly (Green & Salkind, 2011). A disadvantage of collecting paper and pencil data is that data is not automatically electronically uploaded (Ward et al., 2012). Researchers may make input and processing errors when entering data manually (Chang & Vowles, 2013). I cleaned data by discarding any questionnaires with missing or illegible data. The data cleaning resulted in 107 completed questionnaires.

Researchers must verify assumptions before continuing with additional statistical procedures (Green & Salkind, 2011). Random-effects model assumptions are appropriate for nonexperimental studies (Green & Salkind, 2011). Random-effects model assumptions are: (a) all variables are normally distributed within the population and (b) the data represents both a random sample of the population and variable scores are independent of each other (Green & Salkind, 2011). Researchers should therefore test for normality and linearity at a minimum.

Researchers conducting MLR should also test for outliers, homoscedasticity, and multicollinearity (Tabachnick & Fidell, 2013). I tested for (a) multicollinearity, (b) outliers, (c) normality, (d) linearity, (e) homoscedasticity, and (f) independence of the residuals. Researchers may test for outliers, normality, linearity, and independence of the residuals by examining the normal probability plot (P-P) of the regression-standardized

residual (Tabachnick & Fidell, 2013) and model homoscedasticity using a scatterplot of the standardized residuals (Nimon & Oswald, 2013).

Researchers may test for multicollinearity by calculating correlation coefficients, tolerance levels, and variance inflation factors (Tabachnick & Fidell, 2013). Multicollinearity exists where there is a high correlation between independent variables that may lead to one independent variable confounding the beta weight of another (Keller, 2009). If a researcher observes multicollinearity, additional statistical analysis should be performed (Nathans et al., 2012). I conducted the recommended procedures to test for violations of assumptions and observe for any patterns or values that suggested a violation.

Once I verified assumptions, I conducted an MLR to interpret inferential results. The primary outputs interpreted in an MLR are the beta weights, R^2 value, and the F value reported in the ANOVA (Green & Salkind, 2011). The beta weights would indicate an expected increase or decrease in the dependent variable if the independent variable were increased or decreased by one standard deviation (Nathans et al., 2012). The R^2 value indicates how much variation the linear combination of the independent variables explains in the dependent variable (Pallant, 2013). The F value indicates how much variation in the dependent variable the model explains (Keller, 2009). Each independent variable corresponded to a unique beta weight that may be rank ordered to, on the surface, rank variable importance in accounting for variance in the MLR model (Nathans et al., 2012; Nimon & Oswald, 2013). When researchers use an alpha value of $\alpha = .05$,

the researcher will reject the null hypothesis if the value is less than 0.05 (Nimon & Oswald, 2013).

Study Validity

Study validity includes external, internal, and statistical conclusion validity (Venkatesh et al., 2013). External validity is the extent that researchers can generalize findings across populations or settings (Yilmaz, 2013). I used nonprobability purposive sampling, and this choice was a threat to external validity. When researchers use nonprobability sampling techniques, there is an unknown probability of participant selection into the study and the researcher may introduce selection bias (Archarya et al., 2013; Kandola et al., 2014). A limitation to nonprobability sampling is that results may not be generalizable to the population (Archarya et al., 2013). Researchers and business leaders may find results interesting enough to justify more rigorous designs and sampling methods.

In quantitative research, internal validity refers to cause-and-effect relationships between treatments and outcomes (Yilmaz, 2013). Researchers use correlational designs to explore multivariate relationships without the utilization of a control group or researcher manipulation to outcome variables (Martin & Bridgmon, 2012). Researchers do not investigate cause-and-effect relationships when using correlational designs (Leedy & Ormrod, 2013). Internal validity, therefore, did not apply to this study. Instead, I discussed threats to statistical conclusion validity, otherwise known as inferential validity.

Statistical conclusion validity is the validity of inferences researchers may make regarding the correlation between independent and dependent variables (Leedy & Ormrod, 2013). Threats to statistical conclusion validity include using the appropriate sample size and Type I error rate, as well as using the appropriate statistical tests (Barends, Janssen, ten Have, & ten Have, 2014). I reduced threats to statistical conclusion validity by using the appropriate sample size, Type I error rate and statistical tests.

As previously discussed, I used the free statistical software package G*Power to conduct an apriori sample size analysis to mitigate the threat of too small a sample size. The results indicated I needed a sample size of 103 to 203 participants to reduce the probability of committing Type I error assuming a medium effect size ($f^2 = .15$), $\alpha = .05$, and seven independent variables. Too small a sample size may increase the probability of Type I error (Faul et al., 2009). Last, I reduced threats to statistical conclusion validity by conducting the appropriate statistical tests. I conducted an MLR as this was the appropriate statistical analysis for the research question.

Transition and Summary

In Section 2, I restated the purpose of the study. I also discussed the role of the researcher, participants, research method and design, population sampling, ethical research, reviewed the instruments I used, discussed data collection and analysis procedures, and study validity including external, internal, and statistical conclusion validity. Section 3 contains study results, applications to professional practice, implications for social change, and recommendations for future studies.

Section 3: Application to Professional Practice and Implications for Change

Commitment to change is a strong indicator of employee support needed for organizational change to work (Abrell-Vogel & Rowold, 2014). Business leaders must find ways to improve probabilities of change initiative success, as organizational change initiatives in the United States frequently fail with estimated failure rates as high as 90% (Cândido & Santos, 2015). In this study, I examined the relationship between employee perception of their FLM's servant leadership dimensions and employee ACC in a U.S. manufacturing firm. In this section, I present the findings of the data analysis. I also present how findings apply to professional practice, implications for social change, recommendations for actions, and recommendations for further research.

Introduction

The purpose of this quantitative study was to examine the relationship between employee perception of their FLM's servant leadership dimensions and employee ACC in a U.S. manufacturing firm. The independent variables were employee perceptions of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, and (g) creating value for the community. The dependent variable was employee ACC.

The null hypothesis was that there is no statistically significant relationship between employee perception of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, (g) creating value for the community, and employee ACC. The alternative hypothesis was that there is a statistically significant relationship

between employee perception of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, (g) creating value for the community, and employee ACC. I found that employee perceptions of these variables related to their FLM did not significantly predict employee ACC. Therefore, I failed to reject the null hypothesis.

Presentation of the Findings

In this section, I discuss the statistical tests that I performed, including tests of statistical assumptions, descriptive statistics, and inferential results. I then discuss the findings. I use MLR to model the relationship between employee perception of their FLM's servant leadership dimensions and employee ACC. The independent variables were employee perceptions of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, and (g) creating value for the community. The dependent variable was employee ACC.

I invited 175 eligible employees to participate and received 134 completed or partially completed questionnaires. I cleaned the data by discarding 27 incomplete questionnaires, resulting in 107 completed questionnaires. Therefore, I analyzed 107 completed questionnaires. Researchers use bootstrapping to improve statistical accuracy by offsetting the influence of possible violations of assumptions at a given confidence interval (Koopman, Howe, Hollenbeck, & Sin, 2015). Therefore, I used bootstrapping of 2,000 samples to reduce the influence of any violations of assumptions. After evaluating tests of assumptions, I performed a standard MLR, $\alpha = .05$ (two-tailed) to examine the

role employees perceptions of their FLM's servant leadership dimensions played in the variance in employee ACC. The null hypothesis was that there is no statistically significant relationship between employee perceptions of their FLM's servant leadership dimensions, and employee ACC.

Test of Assumptions

I evaluated tests of assumptions associated with MLR: (a) multicollinearity, (b) outliers, (c) normality, (d) linearity, (e) homoscedasticity, and (f) independence of the residuals. Researchers must test and carefully examine statistical assumptions related to linear regression to determine if data is meaningful (Barton, Crozier, Lillycrop, Godfrey, & Inskip, 2013). If the researcher identifies violations of assumptions, the researcher should use another statistical analysis (Barton et al., 2013).

Multicollinearity. Multicollinearity is a phenomenon that occurs to some degree in most multiple regression models when independent variables are highly correlated (Keller, 2009). Researchers may observe a violation of the validity and consistency of linear regression when independent variables are linearly related (Sinan & Alkan, 2015). Researchers most commonly use variance inflation factors (VIFs) to diagnose multicollinearity (Sinan & Alkan, 2015). VIFs represent the increase in the variance of a regression coefficient related to the collinearity, and multicollinearity is strong when VIFs are above 10 (Sinan & Alkan, 2015).

I tested for multicollinearity by calculating VIFs and correlation coefficients (see Table 4). The VIFs were less than 10, indicating no major violations of multicollinearity. However, correlation coefficients were medium to strong, indicating that independent

variables were medium- to strongly-correlated. Medium to strong correlation coefficients is not surprising since the independent variables are related dimensions comprising, as a sum, the construct of servant leadership. In summary, I found no major violations of multicollinearity.

Table 4

Correlation Coefficients Collinearity Statistics for Study Independent Variables

No.	Variable	Tolerance	VIF	1	2	3	4	5	6	7
1	EH	0.36	2.81	1.00	0.68	0.69	0.65	0.76	0.72	0.66
2	CVFTC	0.29	3.40	0.68	1.00	0.71	0.55	0.81	0.75	0.68
3	CS	0.35	2.84	0.69	0.71	1.00	0.66	0.74	0.62	0.70
4	Emp	0.40	2.52	0.65	0.55	0.66	1.00	0.72	0.70	0.66
5	HSGAS	0.23	4.28	0.76	0.81	0.74	0.72	1.00	0.80	0.70
6	PSF	0.29	3.43	0.72	0.75	0.62	0.70	0.80	1.00	0.70
7	BE	0.38	2.66	0.66	0.68	0.70	0.66	0.70	0.70	1.00

Note. VIF, variance inflation factor; EH, emotional healing; CVFTC, creating value for the community; CS, conceptual skills; Emp, empowering; HSGAS, helping subordinates grow and succeed; PSF, putting subordinates first; BE, behaving ethically.

Outliers, normality, and linearity. Researchers use normal probability plots (P-P) of the regression-standardized residual to test for outliers, normality, and linearity (Pallant, 2013). Linear regression models are sensitive to outliers, as outliers are a frequent source of heteroskedasticity (Barton et al., 2013). An outlier is an observation that is unusually large or small (Keller, 2009). Researchers should investigate outliers to ensure data were recorded correctly (Keller, 2009). The second assumption to linear regression is that variables are normally distributed (Barton et al., 2013; Keller, 2009). Nonnormality may lead to distorted results (Pallant, 2013). A third assumption is in a

linear regression model, independent and dependent variables should exhibit a linear relationship (Keller, 2009). Results of the model will underestimate relationships should a nonlinear relationship exist (Keller, 2009).

Researchers may visually examine the probability plot (P-P) of the regression-standardized residual for outliers, normality, and linearity (Pallant, 2013). Violation of assumptions of outliers, normality, and linearity is evident when points on the normal probability plot (P-P) are not in a reasonably straight line and contain significant outliers (Pallant, 2013). Therefore, I tested for outliers, normality, and linearity by examining the normal probability plot (P-P) of the regression-standardized residual (see Figure 3). I observed no major violation of assumptions regarding outliers, normality, and linearity because the points on the normal probability plot (P-P) are in a reasonably straight line with no outliers.

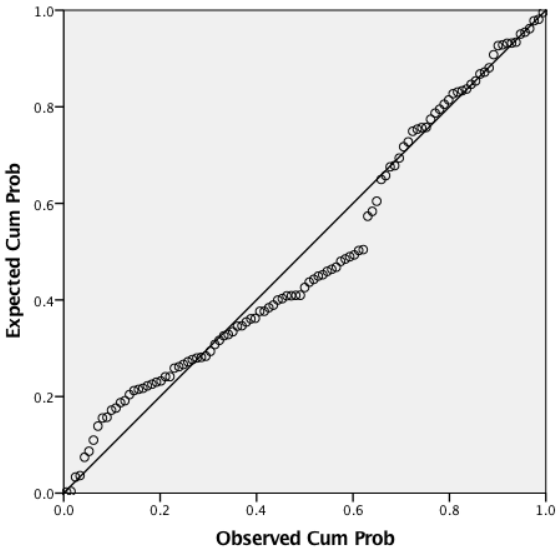

Figure 3. Normal probability plot (P-P) of the regression-standardized residual (dependent variable: ACC).

Homoscedasticity and independence of the residuals. Researchers use scatterplots of the standardized residuals to assess assumptions of homoscedasticity and independence of the residuals (Pallant, 2013). Researchers may plot the standardized residuals against the predicted values of *y* and detect orderly patterns (Keller, 2009). An orderly pattern of plotted points within the scatterplot suggests heteroscedasticity and a relationship among the residuals, which violates the assumption of homoscedasticity and independence of the residuals (Keller, 2009). I assessed homoscedasticity and independence of the residuals by examining a scatterplot of the standardized residuals and found no major violations of assumptions (see Figure 4).

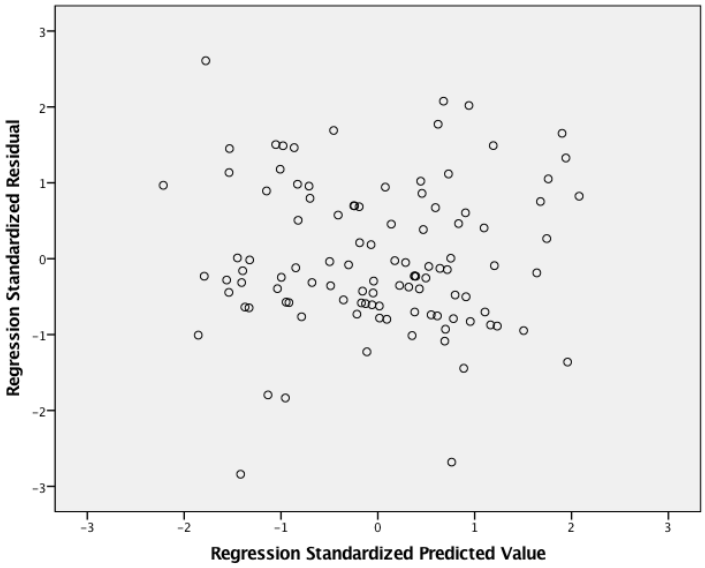

Figure 4. Scatterplot of the standardized residuals (dependent variable: ACC).

Descriptive Statistics

In total, I received 134 questionnaires. I rejected 27 incomplete questionnaires and analyzed 107 completed questionnaires. The average value of emotional healing was 3.86 with a standard deviation of 1.54. Creating value for the community values averaged

4.15 with a standard deviation of 1.61. The average value of conceptual skills was 4.73 with a standard deviation of 1.43. The empowering average value was 4.30 with a standard deviation of 1.36. The average value of helping subordinates grow and succeed was 3.87 with a standard deviation of 1.65. The putting subordinates first average value was 3.47 with a standard deviation of 1.52. The average value of behaving ethically was 4.50 with a standard deviation of 1.61. Last, the ACC average value was 4.65 with a standard deviation of 1.03. Table 5 contains descriptive statistics including means (*M*) and standard deviations (*SD*) for the study variables.

Table 5

Descriptive Statistics (n = 107)

				Std.	Bootstrap 95% CI	
		Statistic	Bias	error	Lower	Upper
EH	*M*	3.86	.0024	.1509	3.55	4.17
	SD	1.54	-.0084	.0819	1.37	1.69
CVFTC	*M*	4.15	-.0006	.1590	3.85	4.48
	SD	1.61	-.0091	.0881	1.42	1.78
CS	*M*	4.73	.0010	.1419	4.44	5.01
	SD	1.43	-.0111	.0901	1.24	1.60
Emp	*M*	4.30	.0008	.1319	4.04	4.57
	SD	1.36	-.0105	.0832	1.19	1.52
HSGAS	*M*	3.87	-.0014	.1631	3.55	4.19
	SD	1.65	-.0114	.0811	1.47	1.79
PSF	*M*	3.47	-.0004	.1506	3.18	3.76
	SD	1.52	-.0089	.0736	1.37	1.66
BE	*M*	4.50	-.0012	.1604	4.18	4.81
	SD	1.61	-.0104	.0941	1.41	1.78
ACC	*M*	4.65	-.0013	.1040	4.45	4.86
	SD	1.03	-.0087	.0789	.89	1.20

Inferential Results

I conducted an MLR to examine the relationship between employee perception of their FLM's servant leadership dimensions and employee ACC in a U.S. manufacturing firm. The independent variables were (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, and (g) creating value for the community. The dependent variable was employee ACC. I assessed the assumptions associated with MLR regarding (a) multicollinearity, (b) outliers, (c) normality, (d) linearity, (e) homoscedasticity, and (f) independence of the residuals, and noted no major violations.

I used a standard MLR, $\alpha = 0.05$ (two-tailed), to examine the relationship between independent and dependent variables. When researchers use an alpha value of $\alpha = .05$, they will reject the null hypothesis if the significance level, also called the *p*-value, is less than 0.05 (Nimon & Oswald, 2013). The results for the MLR were not significant, $F(7, 107) = .714$, $p = .660$, $R^2 = 0.048$, indicating that the linear combination of employee perceptions of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, and (g) creating value for the community did not significantly predict employee ACC (Table 6). Because the significance *p*-value of the model was greater than 0.05 ($p = .660$), I failed to reject the null hypothesis.

Table 6

Model Summary With Dependent Variable Affective Commitment to Change

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.219	.048	-.019	1.05502

Table 7

Analysis of Variance

Model		Sum of squares	*df*	Mean square	*F*	Sig.
1	Regression	5.567	7	.795	.714	.660
	Residual	110.195	99	1.113		
	Total	115.761	106			

The R^2 value represents the percent of the variance in the dependent variable that the linear combination of predictor variables explains (Green & Salkind, 2011). A value of 0 means there is no relationship and a value of 1 represents a perfect linear relationship (Green & Salkind, 2011). However, because the significance *p*-value of the model was greater than 0.05 ($p = .660$) and I failed to reject the null hypothesis, the R^2 (0.048) value is not statistically relevant in this model. Additionally, the significance *p*-values for each independent variable were greater than 0.05, indicating that none of the independent variables significantly predicted employee ACC.

Beta weights indicate an expected increase or decrease in the dependent variable if the independent variable increases or decreases by one standard deviation (Nathans et al., 2012). Each independent variable corresponds to a unique beta weight that may be rank ordered to, on the surface, rank variable importance in accounting for variance in the

MLR model (Nathans et al., 2012; Nimon & Oswald, 2013). The beta weights for CVFTC (β = .165) and BE (β = .168) indicated that CVFTC and BE were potentially the most important variables in accounting for variance in the model (see Table 8). The beta weights for EH (β = -.048) and CS (β = -.047) indicated that EH and CS were potentially the least important variables in accounting for variance in the model. Though beta weight rank ordering may provide an indication of variable importance within the model, the beta weights are not statistically relevant since I failed to reject the null hypothesis. The final regression equation was:

ACC = 4.21 - .032(EH) + .107(CVFTC) - .034(CS) - .047(Emp) + .067(HSGAS) - .074(PSF) +.109(BE).

Table 8

Regression Analysis Summary for Predictor Variables

Variable	*B*	*SE B*	*β*	*t*	*p*	*B* 95% bootstrap CI
EH	-.032	.112	-.048	-.290	.772	[-.239, .229]
CVFTC	.107	.123	.165	.868	.388	[-.162, .389]
CS	-.034	.126	-.047	-.272	.786	[-.241, .177]
Emp	-.047	.125	-.061	-.375	.709	[-.301, .215]
HSGAS	.067	.140	.106	.478	.634	[-.262, .329]
PSF	-.074	.131	-.108	-.568	.571	[-.365, .192]
BE	.109	.105	.168	1.039	.301	[-.088, .302]

Note. N = 107.

Emotional healing. EH was not significant to the model (p = .772). I used an alpha value of α = .05. Since the p-value was greater than 0.05, EH was not significant to the model. The negative slope of EH (-.032) as a predictor of ACC indicated there was

approximately a .032 decrease in ACC for each one-point increase in EH. However, EH did not significantly predict ACC, so the negative slope is not statistically relevant.

Creating value for the community. CVFTC was not significant to the model (p = .388). I used an alpha value of α = .05. Since the p-value was greater than 0.05, CVFTC was not significant to the model. The positive slope of CVFTC (.107) as a predictor of ACC indicated there was approximately a .107 increase in ACC for each one-point increase in CVFTC. However, CVFTC did not significantly predict ACC, so the positive slope is not statistically relevant.

Conceptual skills. CS was not significant to the model (p = .786). I used an alpha value of α = .05. Since the p-value was greater than 0.05, CS was not significant to the model. The negative slope of CS (-.034) as a predictor of ACC indicated there was approximately a .034 decrease in ACC for each one-point increase in CS. However, CS did not significantly predict ACC, so the negative slope is not statistically relevant.

Empowering. Empowering was not significant to the model (p = .709). I used an alpha value of α = .05. Since the p-value was greater than 0.05, empowering was not significant to the model. The negative slope of empowering (-.047) as a predictor of ACC indicated there was approximately a .047 decrease in ACC for each one-point increase in empowering. However, empowering did not significantly predict ACC, so the negative slope is not statistically relevant.

Helping subordinates grow and succeed. HSGAS was not significant to the model (p = .634). I used an alpha value of α = .05. Since the p-value was greater than 0.05, HSGAS was not significant to the model. The positive slope of HSGAS (.067) as a

predictor of ACC indicated there was approximately a .067 increase in ACC for each one-point increase in HSGAS. However, HSGAS did not significantly predict ACC, so the positive slope is not statistically relevant.

Putting subordinates first. PSF was not significant to the model ($p = .571$). I used an alpha value of $\alpha = .05$. Since the p-value was greater than 0.05, PSF was not significant to the model. The negative slope of PSF (-.074) as a predictor of ACC indicated there was approximately a .074 decrease in ACC for each one-point increase in PSF. However, PSF did not significantly predict ACC, so the negative slope is not statistically relevant.

Behaving ethically. BE was not significant to the model ($p = .301$). I used an alpha value of $\alpha = .05$. Since the p-value was greater than 0.05, PSF was not significant to the model. The positive slope of BE (.109) as a predictor of ACC indicated there was approximately a .109 increase in ACC for each one-point increase in BE. However, BE did not significantly predict ACC, so the positive slope is not statistically relevant.

Analysis summary. The purpose of this quantitative study was to examine the relationship between employee perception of their FLM's servant leadership dimensions and employee ACC. I used standard MLR to examine the ability of employee perceptions of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, and (g) creating value for the community to predict employee ACC. I found no major violations of assumptions associated with MLR analysis. The model as a whole was not able to significantly predict employee ACC, $F(7, 107) = .714$, $p = .660$, $R^2 = 0.048$.

Additionally, none of the independent variables significantly predicted employee ACC. My conclusion from this analysis is that employee perceptions of their FLM's (a) conceptual skills, (b) empowering, (c) helping subordinates grow and succeed, (d) putting subordinates first, (e) behaving ethically, (f) emotional healing, and (g) creating value for the community does not significantly predict employee ACC.

The study results indicated that there was no relationship between employee perceptions of their FLM's servant leadership dimensions and employee ACC. Findings from this study were not consistent with findings from two similar studies. Kool and van Dierendonck (2012) found a positive, weak relationship between servant leadership and commitment to change. Gowdy (2015) published his dissertation after the proposal stage of this study and also found a positive, weak relationship between servant leadership and commitment to change. Gowdy examined the relationship between servant leadership and ACC in a nonprofit human service agency and found that the composite score of servant leadership behaviors accounted for 5.1% of the variance in ACC, indicating that servant leadership weakly predicted ACC in this setting. It is possible that findings from my study did not replicate previous findings because I used a different instrument to measure servant leadership and the participants of the study were from a different industry.

Analysis of the data indicated that none of the servant leadership dimensions significantly predicted employee ACC in the participant's manufacturing setting. Servant leadership is a multidimensional construct yet few researchers have investigated servant leadership using multiple dimensions (Liden et al., 2015). Therefore, there is little context in the available research to assist in interpreting study results. Additionally, there is no

universally accepted instrument used to measure servant leadership (van Dierendonck, 2011). The lack of a consistent measurement tool adds to researcher difficulty when investigating servant leadership outcomes (Parris & Peachey, 2013). Last, I found no information available regarding previously investigated relationships between servant leadership dimensions and commitment to change, nor other outcomes of servant leadership dimensions in a manufacturing context. As a result, this study may provide multidimensional context for future servant leadership research efforts in the manufacturing industry.

Empirical research does not exist on the efficacy of servant leadership in manufacturing organizations or similar fast-paced environments despite the increasing popularity of servant leadership among Fortune 500 organizations (Parris & Peachey, 2013). Researchers postulate that servant leaders can inspire positive employee behaviors such as commitment to change (Kool & van Dierendonck, 2012). Servant leaders focus on satisfying the needs of their followers, thereby encouraging a reciprocal relationship where employees feel obligated to commit to the leader's requests (Kool & van Dierendonck, 2012). Researchers identified numerous positive outcomes of servant leadership across varied industries, but researchers also have concerns regarding the efficacy of servant leadership in specific settings.

Researchers have expressed concerns over the efficacy of servant leadership in fast-paced or turbulent environments (Boone & Makhani, 2013). Boone and Makhani postulated that the positive benefits of servant leadership might diminish in high-pressure, fast-paced settings, and van Dierendonck et al. (2014) similarly stated that

servant leadership might work better in static environments. Additionally, employee literacy rates are often low in fast-paced manufacturing organizations, which complicates employee-focused leadership strategies (Sterling & Boxall, 2013). The existing literature is not clear on the efficacy of servant leadership in manufacturing.

Since contrasting researcher views exist on the efficacy of servant leadership in manufacturing or fast-paced settings, and no empirical evidence exists on outcomes of servant leadership in a manufacturing environment, further research is needed to understand if results from this study differ from previous studies because the industry sampled. Business leaders can interpret study results as there being no significant relationship between servant leadership and employee ACC in a manufacturing environment. However, the practice of servant leadership does not correlate with an increase or decrease in employee ACC and poses no risk to employee commitment levels. Business leaders may use this interpretation to improve the effective practice of business as servant leadership may have other positive benefits within manufacturing organizations without affecting commitment to change levels. Separate studies may be needed to better understand the relationships between servant leadership and other employee outcomes in a manufacturing setting.

Despite insignificant findings, investigating servant leadership as a multidimensional construct improved clarity in understanding the relationship between employee perceptions of their FLM's servant leadership dimensions and employee ACC. When researchers investigate bivariate relationships between servant leadership and an outcome variable, it remains unclear which aspects or dimensions of servant leadership

contribute to the bivariate relationship (Liden et al., 2015). This occurs because servant leadership is composed of multiple dimensions, yet often investigated as a single dimension to improve researcher ease of data collection and analysis (Liden et al., 2015). Results from this study indicated that none of the servant leadership dimensions predicted employee ACC. However, results contain more clarity regarding the insignificant findings than if I had only included servant leadership as a singular construct or variable.

Researchers and business leaders are increasingly interested in how FLMs influence employee commitment to change because commitment to change represents the behavioral support needed for change initiatives to succeed (Morin et al., 2015). Researchers and business leaders may turn to alternative leadership theories to identify leadership styles that significantly predict commitment to change. Increased probabilities of change initiative success would improve effective business practice and reduce costs of implementing change. Researchers consistently found positive relationships between transformational leadership and commitment to change (Abrell-Vogel & Rowold, 2014; Tyssen et al., 2014). Researchers found that transformational leadership positively influenced the employee ACC needed for change initiatives to succeed across industries (Abrell-Vogel & Rowold, 2014; Tyssen et al., 2014). However, more research is needed to identify if the positive relationship between transformational leadership and commitment to change remains significant in a manufacturing context.

Applications to Professional Practice

I collected survey data from hourly employees in a manufacturing firm to better understand the relationship between employee perception of their FLM's servant

leadership dimensions and employee ACC. Participants completed questionnaires on servant leadership dimensions of their FLMs and self-rated ACC by answering survey questions. Findings from this study extended existing knowledge of both servant leadership and ACC. In my review of the literature, this is the third study where the researcher investigated the relationship between servant leadership and commitment to change, and the first study to do so in a manufacturing context.

High organizational change failure rates negatively affect business organizations. Organizational competitiveness and survival depend on the ability of organizations to manage change successfully (Holt & Vardaman, 2013). Both researchers and business leaders historically underemphasized the importance of FLMs in delivering change (Nielsen, 2013), and researchers are increasingly interested in how FLMs influence employees to engage in positive change behaviors such as commitment to change (Evans, 2015). Results from this study apply to professional practice by indicating that employee perceptions of their FLM's servant leadership dimensions do not significantly predict employee ACC in a manufacturing context. Manufacturing leaders should not expect the practice of FLM servant leadership to improve employee commitment to change levels.

Some manufacturing leaders do not know the relationship between employee perceptions of their FLM's servant leadership dimensions and employee ACC. In my review of the literature, I found little information regarding the efficacy of servant leadership in manufacturing settings. De Sousa and van Dierendonck (2014) suggested that FLMs practicing servant leadership during periods of change drove positive change behaviors and encouraged engagement in the change process, while Boone and Makhani

(2013) expressed doubts regarding the efficacy of servant leadership in fast-paced or turbulent environments such as manufacturing. Kool and van Dierendonck (2012) and Gowdy (2015) both found that servant leadership was positively yet weakly related to commitment to change. However, no evidence previously existed on the relationship between servant leadership and commitment to change in a manufacturing context. Previous research findings supported that I would expect employee perceptions of their FLM's servant leadership dimensions to influence or partially explain employee ACC in a manufacturing context. However, I found no support for this expectation.

Implications for Social Change

The present study has implications for social change despite insignificant results. The implications for positive social change include the potential to enhance manufacturing leaders' understanding and support for servant leadership. Employees often incur adverse psychological impacts such as increased anxiety and uncertainty during periods of change (Michela & Vena, 2012). Servant leadership positively affects employees during periods of change by sustaining motivations and reducing anxieties associated with change (de Sousa & van Dierendonck, 2014). Servant leadership may lead to reduced employee anxiety and uncertainty during periods of change (Michela & Vena, 2012). Though I found no statistically significant relationship between employee perceptions of their FLM's servant leadership dimensions and employee ACC in manufacturing firms, FLMs may practice servant leadership to retain benefits associated with servant leadership without negatively affecting employee ACC.

Despite insignificant results in this study, researchers previously identified positive benefits of servant leadership across varied industries. In their empirical reviews of the literature, Parris and Peachey (2013) and van Dierendonck (2011) identified positive outcomes associated with servant leadership as increased organizational trust, team and employee effectiveness, organizational citizenship behavior, collaboration, follower well-being, organizational commitment, positive work climate, job satisfaction and decreased turnover. Servant leaders focus on employee well-being and fulfilling follower needs (Liden et al., 2015). Most recently, Chiniara and Bentein (2016) found that fulfilling basic psychological needs mediated the relationship between servant leadership and employee performance. Though results of this study were insignificant, organizations may benefit from other positive outcomes of servant leadership such as improved employee performance while better fulfilling employees needs and psychological well-being.

Recommendations for Action

Several recommendations for manufacturing leaders in the United States follow from this study and are based on both my research experience in this program and the results of this study. The findings from this study indicated that there was no significant relationship between servant leadership and employee ACC in a manufacturing context despite previous researchers finding significant relationships between these variables in other industries. In my review of the literature, I found little research regarding the efficacy of servant leadership in manufacturing. Manufacturing leaders should allow researchers into their facilities to conduct additional research regarding servant leadership

in manufacturing to improve understanding of potential benefits of servant leadership in this setting.

FLMs are in a unique position to influence employee behaviors as they spend the most time with employees (Evans, 2015). Manufacturing leaders should be aware of the importance of FLMs within their organizations and the effects they have on the employees they lead. Manufacturing leaders should also be aware of previously found positive benefits of servant leadership that not only lead to positive outcomes benefitting the organization, but also improve employee well-being (Michela & Vena, 2012) and employee feelings of inclusiveness within the organization (Gotsis & Grimani, 2016). Once manufacturing leaders better understand the importance of FLMs and outcomes of servant leadership in their organizations, they can implement leadership development programs that encourage the servant leadership behaviors that positively influence desired outcomes such as employee commitment to change.

Manufacturing leaders may also benefit from increased knowledge of how to improve upon high change initiative failure rates. Change initiative failure rates remain as high as 90% (Cândido & Santos, 2015). Commitment to change represents the employee support needed for organizational changes to work (Abrell-Vogel & Rowold, 2014). Therefore, manufacturing leaders should educate themselves on how FLMs influence behaviors such as commitment to change to improve better upon high change failure rates.

For scholars, there is a need to expand research to further analyze outcomes of servant leadership in a manufacturing environment. Researchers are increasingly

interested in servant leadership theory (Gotsis & Grimani, 2016). However, in my review of the literature, there is little research regarding the efficacy and outcomes of servant leadership in a manufacturing environment. Scholars interested in the potential benefits and outcomes of servant leadership may improve understanding of the efficacy of servant leadership in manufacturing through expanding servant leadership research into the manufacturing industry.

I may disseminate the results of this study through peer-reviewed publication and presentation at conferences. I intend to submit to and publish findings of this study in one the following scholarly journals, (a) Journal of Organizational Change Management, (b) Journal of Change Management, (c) Academy of Management Journal, and (d) The Leadership Quarterly. I intend to submit my findings to the Greenleaf Center for Servant Leadership, the Spears Center for Servant Leadership, and the National Association of Manufacturers. I will offer to present my findings at future conferences or symposiums affiliated with these organizations.

Recommendations for Further Research

Further studies could examine other outcomes of servant leadership in a manufacturing context. In this study, I examined only one outcome of servant leadership in a manufacturing setting. Study findings were not consistent with previous research findings on the relationship between servant leadership and commitment to change. The dynamics between servant leadership and outcomes variables may be different in fast-paced industries such as manufacturing.

The sample size of the present research was relatively small, and further research efforts would benefit from a larger sample size. I used a power of .80 to calculate a sample size of 103 and accepted a 20% probability of failing to reject a false null hypothesis. I recommend increasing the sample size to 203 to increase the power to .99, resulting in a 1% probability of failing to reject a false null hypothesis.

There were several limitations in this study future research efforts can address. First, I included only participants from a single occupational group and single organization, which limited the generalizability of results. Second, I did not measure FLMs' self-rated perceptions of servant leadership dimensions. Future research efforts could include a comparison of FLM self-rated servant leadership dimension scores to employee-perceived FLM servant leadership dimension scores. Third, I did not measure FLM's ACC as a control variable. FLMs exhibiting high levels of ACC may influence their employees to exhibit high levels of ACC (Bouckenooghe et al., 2014). Researchers could examine whether FLM levels of ACC moderate the relationship between servant leadership and employee ACC.

Reflections

The doctoral research process was an exciting, difficult, and exhausting experience. I had never conducted original research before this program and the experience of reviewing the literature and focusing on a single topic helped me to learn and hone new skill sets. I learned to think more critically, acknowledge biases, and better take constructive criticism. I learned to balance the rigors of the doctoral process with

familial and career obligations, and improved my time management skills to do so effectively.

This program has changed the way I think. The doctoral process has changed the way I think about how knowledge is gained and how I interpret study results. I learned how to conduct research in this program and feel more confident in critically interpreting research methods and results. By researching FLMs in the manufacturing industry, I gained valuable insight that accelerated my ability to manage FLMs within my manufacturing organization. I hope that my research will help other manufacturing leaders better understand the importance of FLMs and introduce servant leadership theory within their organizations.

Summary and Study Conclusions

Previous researchers examined the relationship between servant leadership and commitment to change (Gowdy, 2015; Kool & van Dierendonck, 2012), but neither focused on the manufacturing industry. Employee commitment to change is significantly related to change initiative success and is a strong indicator of the employee support needed for organizational changes to work (Abrell-Vogel & Rowold, 2014). Improved change leadership efforts may focus on increasing employee commitment levels towards organizational change to increase the probability of change initiative success.

Improved change leadership is needed in manufacturing because manufacturing organizations must change frequently. In the last year of available data, there were 3,944 mass manufacturing layoff actions in the United States alone (Bureau of Labor Statistics, 2013), representing significant change efforts in these firms. Using an MLR, I examined

the relationship between employee perceptions of their FLM's servant leadership dimensions and employee ACC in a manufacturing context. Study results indicated that the linear combination of employee-perceived servant leadership dimensions comprising the construct of servant leadership did not significantly predict employee ACC, so I failed to reject the null hypothesis.

I recommend continued investigation of the relationship between servant leadership and employee outcomes in manufacturing, as I found limited research in this context during my review of the literature. As business leaders increase support for servant leadership theory, additional research is needed to examine and explore the effects of servant leadership in varied industries. Manufacturing leaders experiencing high change failure rates should additionally support future research on how their FLMs can positively affect employee change behaviors to increase probabilities of change initiative success.

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Appendix A: SL-28 Servant Leadership Scale

Instructions: Please respond to the following 28 questions in reference to your immediate supervisor or manager.

		Extremely Unlikely (or) Very Rarely						Extremely Likely (or) Very Frequently
1	I would seek help from my manager if I had a personal problem.	1	2	3	4	5	6	7
2	My manager cares about my personal well-being.	1	2	3	4	5	6	7
3	My manager takes time to talk to me on a personal level.	1	2	3	4	5	6	7
4	My manager can recognize when I'm down without asking me.	1	2	3	4	5	6	7
5	My manager emphasizes the importance of giving back to the community.	1	2	3	4	5	6	7
6	My manager is always interested in helping people in our community.	1	2	3	4	5	6	7
7	My manager is involved in community activities.	1	2	3	4	5	6	7
8	I am encouraged by my manager to volunteer in the community.	1	2	3	4	5	6	7
9	My manager can tell if something is going wrong.	1	2	3	4	5	6	7
10	My manager is able to effectively think through complex problems.	1	2	3	4	5	6	7
11	My manager has a thorough understanding of our organization and its goals.	1	2	3	4	5	6	7
12	My manager can solve work problems with new or creative ideas.	1	2	3	4	5	6	7
13	My manager gives me the responsibility to make important decisions about my job.	1	2	3	4	5	6	7

14	My manager encourages me to handle important work decisions on my own.	1	2	3	4	5	6	7
15	My manager gives me the freedom to handle difficult situations in the way that I feel is best.	1	2	3	4	5	6	7
16	When I have to make an important decision at work, I do not have to consult my manager first.	1	2	3	4	5	6	7
17	My manager makes my career development a priority.	1	2	3	4	5	6	7
18	My manager is interested in making sure that I achieve my career goals.	1	2	3	4	5	6	7
19	My manager provides me with work experiences that enable me to develop new skills.	1	2	3	4	5	6	7
20	My manager wants to know about my career goals.	1	2	3	4	5	6	7
21	My manager seems to care more about my success than his/her own.	1	2	3	4	5	6	7
22	My manager puts my best interests ahead of his/her own.	1	2	3	4	5	6	7
23	My manager sacrifices his/her own interests to meet my needs.	1	2	3	4	5	6	7
24	My manager does what she/he can do to make my job easier.	1	2	3	4	5	6	7
25	My manager holds high ethical standards.	1	2	3	4	5	6	7
26	My manager is always honest.	1	2	3	4	5	6	7

27	My manager would not compromise ethical principles in order to achieve success.	1	2	3	4	5	6	7
28	My manager values honesty more than profits.	1	2	3	4	5	6	7

Survey used with permission from Liden, R. C., Wayne, S.J., Zhao, H., & Henderson, D. (2008). Servant leadership: Development of a multidimensional measure and multi-level assessment. *The Leadership Quarterly*, *10*, 161-177. doi:10.1016/j.leaqua.2008.01.006

Appendix B: Commitment to Change Inventory

Instructions: Please respond to the following six questions in reference to an organizational or departmental change in the past year that you have been a part of or affected by.

		Extremely Unlikely (or) Very Rarely						Extremely Likely (or) Very Frequently
1	I believe in the value of this change.	1	2	3	4	5	6	7
2	This change is a good strategy for this organization.	1	2	3	4	5	6	7
3	I think that management is making a mistake by introducing this change.	1	2	3	4	5	6	7
4	This change serves an important purpose.	1	2	3	4	5	6	7
5	Things would be better without this change.	1	2	3	4	5	6	7
6	This change is not necessary.	1	2	3	4	5	6	7

Survey used with permission from Herscovitch, L., & Meyer, J. P. (2002). Commitment to organizational change: Extension of a three-*component model. Journal of Applied Psychology*, *87*, 474-487. doi:10.1037/0021-9010.87.3.474

Appendix C: Instruments Use Request

Gmail by Google [redacted]

Survey Instrument Use

2 messages

[redacted] Tue, Mar 22, 2016 at 9:14 PM

Dr. Liden,

I request permission to use your 28-item servant leadership scale (SL-28) in my doctoral study. I am conducting a quantitative correlational inquiry through the Walden University DBA program. I intend to use the seven servant leadership dimensions measured by your SL-28 instrument as the predictor variables in this study. The outcome variable is affective commitment to change. I also request permission to reproduce the SL-28 in my final doctoral study.

Thanks you for your time,

Jeff Schulkers

[redacted] Wed, Mar 23, 2016 at 9:38 AM

Yes Jeff, you are welcome to use either the 28 or 7-item version of our scale, and it is attached. I've attached a few articles that may be of use to you.

Best of luck with your research,

Bob

Robert C. Liden

Professor of Management

Associate Dean for CBA Ph.D. Programs; Coordinator of the OB/HR Doctoral Program

Department of Managerial Studies (M/C 243) Room 2232

University of Illinois at Chicago

601 S. Morgan Street

Chicago, IL 60607-7123

UIC BUSINESS

Gmail by Google [redacted]

Survey Instrument Use

2 messages

[redacted] Tue, Mar 22, 2016 at 9:06 PM

Dr. Meyer,

I request permission to use the affective commitment to change scale of your Commitment to Change Inventory in my doctoral study. I am conducting a quantitative correlational inquiry through the Walden University DBA program. I am using Liden, Wayne, Zhao, and Henderson's (2008) seven servant leadership dimensions as the predictor variables and an outcome variable of affective commitment to change. I intend to use your six-item scale measuring affective commitment to change as the measurement tool for the dependent variable. I also request permission to reproduce the six item scale in my final doctoral study.

Thanks you for your time,

Jeff Schulkers

[redacted] Wed, Mar 23, 2016 at 7:10 AM

Dear Jeff,

You are welcome to use the commitment to change scale in your dissertation research. You can also reproduce the items as long as you include a note indicating that the measure is not to be reproduced without the permission of the authors. I hope the research goes well.

Best regards,

John Meyer

Western

Appendix D: Email to Participate in Survey

Email Subject: Request to Complete Doctoral Study Survey

Dear *employee name* of *Organization Name*,

My name is Jeffrey Schulkers. I am a student at the School of Management at Walden University and have previously worked in food manufacturing as a front-line manager. I am conducting a research study as part of the requirements of my Doctor of Business Administration degree, and request permission from your organization to include some of your employees as participants.

I am researching servant leadership dimensions of front-line managers in manufacturing and whether a relationship exists between these dimensions and commitment to organizational changes. If your organization decides to participate, I will conduct a site visit to administer a questionnaire to hourly employees. They will be asked to acknowledge an informed consent form and rank a response via a seven-point Likert-type scale to 34 survey questions. The survey will take approximately 10 minutes to complete. Participation is confidential and no personally identifiable information will be asked on the survey.

Taking part in the study is discretionary. Participants may choose to quit at any time prior to submission. There are no ramifications for not completing the survey. If you have any questions regarding the survey, you may contact me at jeffrey.schulkers@waldenu.edu. Your participation may help manufacturing leaders realize benefits of servant leadership. Servant leadership may foster reciprocal relationships that increase employee willingness to engage is positive organizational behaviors such as increased commitment to changes.

Thank you for your consideration. If you would like to participate, please begin by responding with the completed letter of permission and we will be in contact to arrange a site visit at your best convenience.

Thank You,

Jeffrey Schulkers
jeffrey.schulkers@waldenu.edu

Appendix E: National Institutes of Health Certificate of Completion

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Jeffrey Schulkers** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 05/17/2013.

Certification Number: 1181607.