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Mediated Effect of Perceived Supervisor Support on Leader-Member Exchange Quality and Employee's Commitment

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Abstract

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MBA, The University of Findlay, 2005

BS, Bowling Green State University, 2000

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management

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Abstract

Social exchange relationship quality can influence an employee's commitment to supporting continuous improvement (CI) initiatives. Researchers have established that leader-member exchange (LMX) quality and perceived supervisor support (PSS) can reduce employee commitment, affecting an organizational outcome. Based on the theoretical foundation of LMX quality theory, the purpose of this quantitative correlational study was to examine the relationship between the independent variables (LMX quality) and the dependent variable (affective commitment [AC]) through the mediated variable (PSS) and moderated mediation variable (workplace ostracism [WO]). Employee age, gender, tenure with the company, ethnicity, certification level, and the manufacturing sector were control variables of the study. Survey data from 51 full-time employees from aerospace and automotive organizations within the coastal region of South Carolina were collected using LMX, PSS, WO, and AC scales. Multiple linear regression analysis revealed that each independent variable was significantly associated with AC separately and when taken together. Employee's age was significantly associated with LMX and PSS, and the other control variables were unrelated to LMX or PSS. WO was statistically irrelevant to PSS but revealed a high PSS with high LMX quality and low WO in the slope interaction model. The results of this study can be used to enhance an organization's certification programs. Such use of data would positively impact social change by enhancing team leader and members' skills in conflict resolution and team building and thus contribute to successful CI initiatives.

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Dedication

I want to dedicate this dissertation to my family members, who have been my biggest supporters throughout the entire doctoral degree process. I appreciate your inspiration, love, faith, and sacrifice in support of this achievement. I owe all praises and thanks to Jesus Christ, my Lord and Savior, who strengthens me to push forward. Jakub, I especially thank you for inspiring dad to finish this journey -- you are a blessing. In my absolute dedication, I thank my mom, who passed away before I completed my doctorate. My mother, a visionary, encouraged all my siblings to reach beyond our dreams and imaginations. I am eternally grateful to all of you.

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Chapter 1: Introduction to the Study

A high-quality leader-member relationship is essential to implementing a CI initiative in a manufacturing environment. Because a leader's behavior and support of team members can significantly impact an organizational financial outcome, there is a need to understand the impact of a leader's help in increasing employee commitment to participate in a CI deployment (Lam et al., 2015). Current literature lacks the information on the relationship quality between leader-member social exchange and employee commitment to participate in a CI deployment. The lack of knowledge can impede CI in leaders influencing employees to support and sustain the results from the change effort. Thus, CI leaders in the aerospace and automotive industries may benefit from an enhanced understanding of how leadership support may increase the success rate of CI deployments.

In this correlation study, I evaluated the effect of the leader-member relationship quality (LMX) and the perception of supervisor support (PSS) on the team member's commitment towards CI initiatives. In addition to the present study, I evaluated the theories of Arici's (2018) perceived supervisor support, Ferris et al.'s (2008) workplace ostracism, Liden and Maslyn's (1998) multidimensionality of LMX, and Rhoades et al.'s (2001) affective commitment. The findings of this correlation study may contribute to the literature on CI and management, which may increase a leader's success rate in attempting a CI activity including, but not limited to 5S, lean, kaizen, total quality management, and six sigma initiatives in a manufacturing environment. I focused solely

on LSS methodologies in this correlation study. A LSS methodology requires more communication and collaboration of a cross-functional team than any other CI activity.

Background of the Study

Small to medium-sized enterprises deal with common issues and questions after their unsuccessful attempts to deploy CI projects. The additional pressure on leaders to push CI activities heightens the focus on the leader-member relationship and their support throughout a CI deployment. A leader's support and the lack of employee participation may significantly affect implementing lean and six sigma deployments. Lean and six sigma methodology recommends that leaders make decisions that encourage total participation and confidence in the methods and tools needed to meet the organizational target (Tsironis & Psychogios, 2016). Leaders need to actively support and empower their employees to fully accept the LSS process (Azyan et al., 2017). The success of LSS deployment relies on the leader-employee relationship to support cross-functional activities in the workplace.

Lean and Six Sigma

LSS is a methodology that supports organizational CI initiatives by developing opportunities for individuals and groups to work autonomously to improve business processes to promote customer satisfaction. The lean quality improvement method originated from the automobile manufacturing sectors in Japan and the United States after the Second World War (LeMahieu et al., 2017). The implementation of lean demonstrated how manufacturing operations could maximize customer value while reducing waste in the process (Kane, 2020; Womack & Jones, 2005; Womack et al.,

1990). Six sigma methodology was introduced into manufacturing as a problem-solving methodology to improve work processes, expand employees' skills, and change the culture (Gupta et al., 2018). The combined aim of the LSS approaches is to enhance customer satisfaction by reducing waste and improving process performance through the utility of individual concepts, methods, and tools (George, 2002; Gupta et al., 2018).

LSS is a quality methodology used in manufacturing and service organizations to improve quality, speed, customer satisfaction, and cost within a business process (Sony et al., 2019). The LSS approach uses a cross-functional strategy to generate rapid and robust solutions to reduce waste and variation in the business process. The successful application of LSS can transform an organization from working in a reactive mode to working proactively in a cross-functional, process-focused culture (Sunder & Mahalingam, 2018). The LSS approach can accelerate small- and large-scale CI projects to increase the bottom line in an organization.

LSS Applications

Since the 1990s, leaders in manufacturing and service organizations have benefited from LSS initiatives, but the implementation of LSS in the public sector is still low. Recent research in the CI and management literature has introduced a theoretical foundation that may increase the likelihood that LSS may become successful beyond the private sector (LeMahieu et al., 2017; Lu et al., 2017; Sunder & Mahalingam, 2018). LSS initiative requires a top-down management approach to dismantle the complexity of an organization.

Challenges of LSS

The usual challenges leaders may experience throughout an LSS deployment are as follows: (a) defining the customer, (b) lack of management commitment and support, (c) project selection, (d) silo mentality that limits cross-functional opportunities, and (e) team selection (Antony et al., 2018). There is a need to understand the effect of each challenge; this study focused on the challenge that influences all other challenges. In this study, I explored how leadership support may impact an employee's commitment to the success of an LSS deployment. A leader must have a sense of urgency in communicating the need for change to reduce the effects of these challenges. Therefore, I evaluated the leader-member social exchange to understand the impact of leader support and employee participation within a team setting.

Leadership Support

Leadership support is the leading critical factor in the development and sustainability of an LSS deployment. The ability of leadership to deliver an unclouded vision and commitment to developing a culture-making radical change is the premise of operational readiness (Antony, 2014; Laureani & Antony, 2017). Thus, leaders must align the LSS objective with the university strategy to establish a desired quality-excellence culture (Haerizadeh & Sunder, 2019). Leaders are responsible for hiring employees who possess the best managerial practices to increase collective participation and commitment toward CI. A committed leader can inspire employees and build the right culture of quality excellence that benefits from an LSS and other ongoing improvement initiatives (Laureani & Antony, 2018). Overall, a leader must ensure that

employees are fully committed and ready to support an LSS initiative. However, CI leaders do not continually assess the level of organizational readiness before investing a significant amount of money and resources into implementing an LSS initiative (Albliwi et al., 2015; Laureani & Antony, 2017).

Employee Participation

Employee participation and leader support have been the impetus for organizational CI initiatives in manufacturing and service organizations. Lam et al. (2015) demonstrated a statistical correlation that leadership responsiveness to workplace climate may influence employees' commitment to organizational change. Leaders should consider employees as critical partners with the authority to make decisions in a CI initiative. A lack of anticipation and responsiveness to challenges by organizational leaders can reduce the participation and readiness of employees in a LSS initiative (Sony et al., 2020).

Problem Statement

A low-quality leader-member exchange (Low-LMX) has challenged increasing employees' commitment to supporting LSS deployment in a manufacturing environment. The general problem was that leaders do not understand how communicating and supporting employees' commitment is essential to the success of an LSS implementation (Sunder & Mahalingam, 2018). However, research has shown that 60% of leaders who have implemented a LSS initiative were due to the leader's positive behavior and support towards team members (Antony & Gupta, 2019; Antony et al., 2019; Lam et al., 2015). Leaders' positive behavior has impacted the relationship quality between leaders and

employees by 57% (Antony & Gupta, 2019; Antony et al., 2019; Lam et al., 2015). A high-quality leader-member social exchange (High-LMX) may enhance employees' commitment to participate in an LSS initiative (Balzer et al., 2016).

The specific problem was that CI teams in aerospace and automotive manufacturing operations in South Carolina have been unsuccessful in creating a High-LMX relationship that inspires employee commitment and support of an LSS initiative. CI leaders cannot increase employees' commitment to participate in an LSS initiative (Albliwi et al., 2015; Lu et al., 2017). Thus, there is a need to understand the impact of a leader-member relationship quality and team member commitment to participate in an LSS initiative in a manufacturing environment.

Purpose of the Study

In this quantitative correlation study, I aimed to understand how an LMX relationship quality impacts a team members' commitment to participate in a CI initiative in aerospace and automotive organizations in South Carolina. This correlation study's target population comprised of CI leaders, manufacturing engineering, and quality assurance personnel from an aerospace and automotive organization. To establish an adequate generalization, a cluster sample size for the correlation study consisted of a team leader and members from randomly selected manufacturing companies located in the inner coastal region of South Carolina. I analyzed the data collected from an online survey through SurveyMonkey to understand participants' relationship quality and level of commitment between the organization, leader, and peers. The survey asked questions about the team members' PSS during CI initiatives. The information from the interview

questions helped determine an overall collective understanding of how the LMX relationship quality may influence the outcome of a CI initiative.

Research Question(s) and Hypotheses

In this study, the independent variable was LMX quality, and the dependent variable was AC. In addition, I selected PSS as a mediator variable to understand the relationship between LMX quality and AC. In comparison, WO was the moderator variable to LMX quality and PSS. The research questions and respective hypotheses are as follows:

Research Question (RQ)1: How does an LMX relationship quality influence an individual commitment to a CI initiative?

$H_0$1: There is no significant relationship between LMX relationship quality and an individual commitment to an LSS deployment.

H_a1: There is a significant relationship between LMX relationship quality and an individual commitment to an LSS deployment.

RQ2: What mediated effect does PSS have on the relationship between LMX relationship quality and an individual commitment to a CI initiative?

$H_0$2: LMX relationship quality does not influence team members' AC through the mediated effect of PSS.

H_a2: LMX relationship quality influences team members' AC through the mediated effect of PSS.

RQ3: What influence does WO have on the relationship between LMX quality and team members' PSS?

$H_0$3: WO moderated effect does not influence the relationship between PSS and LMX quality such that the negative relationship is more robust when team members' level of workplace ostracism is high (vs. low).

H_a3: WO moderated effect influences the relationship between PSS and LMX quality such that the negative relationship is stronger when the team members' level of WO is high (vs. low).

Theoretical Foundation

LMX relationship quality has been the center of success and challenges of LSS initiatives (Antony et al., 2019). In this correlation study, I focused on the idea that the CI leader's approach to providing the necessary support and resources improves employees' readiness to participate in LSS initiatives. For the theoretical foundation, I employed Arici's (2018) PSS, Ferris et al.'s (2008) WO, Kauppila's (2016) LMX quality, and Rhoades et al.'s (2001) AC theory. An added dimension was the mediated effect of PSS, strengthening the relationship between LMX and AC. Kauppila's theoretical structures offered a foundation for understanding how leaders can improve their employee's commitment to implementing an LSS initiative. Successful implementation of an LSS initiative starts with leadership support (Arici, 2018).

Leadership support in CI can reduce the need to work around varying customer demands and create a work climate that is more responsive to unpredictable changes.

Kauppila (2016) determined that an organizational leader must possess the readiness and vision that influences employees to share the same idea. In addition, a leaders' vision must be clear and easy to follow to establish an autonomous culture that performs from best-in-class practices. A leader who understands how individual jobs are linked to customer satisfaction can readily address the need of its customers through organizational change. This theoretical framework may offer new knowledge that increases leadership support and employee commitment to launch a LSS initiative in aerospace and automotive manufacturing operations.

Nature of the Study

The correlation research approach was a quantitative method. Researchers used quantitative methods to identify correlations between multiple measures through statistical testing (Fabrigar & Wegener, 2012). The selected research design for this study was a quantitative correlation study. A correlation study is ideal in understanding how a leader-member relationship quality in CI initiatives can thematically identify their approach that limits employee's commitment to participate. A correlation study is appropriately selected to acquire the latest information on how a leader's influence on employee commitment impacts the success of an LSS initiative. A correlation study was appropriate for this research to discover how and why leaders' support of LSS can affect an institution's readiness and participation in CI activities.

The process of a qualitative research method can allow the researcher to investigate new situations or phenomena in greater depth and clarify the boundaries between the events and the context (Yin, 2017). A qualitative researcher's investigation

happens within the natural setting of the phenomena studied, and the researcher is the instrument who gathers and assesses information (Yin, 2017). The current study's qualitative research design choices were grounded theory and phenomenology in understanding a leader's experience and social role in a LSS initiative. Grounded theory and phenomenology research is like an exploratory case study in discovering an in-depth understanding of a leader's socially constructed experience interacting with human and their surrounding environment. The grounded theory requires researchers to investigate a phenomenon from a neutral perspective and develop their understanding of a new event without supporting existing methods and paradigms (Bryant & Charmaz, 2007). The disadvantages of conducting a grounded theory study are avoiding a researcher's bias and conducting rigorous data collection, coding, and analysis (Coghlan & Brydon-Miller, 2014). A phenomenology researcher seeks to understand the leader and employees' perspective on a new situation or event. A phenomenological study helps the researcher find a deep understanding of the mental states and lived experiences of those who experience a familiar event. The disadvantage of using phenomenological research is the inability of a novice researcher to analyze and interpret the data while remaining subjective.

In the current study, I identified the correlations between LMX quality (independent variable) and AC (dependent variable) by selecting participants from aerospace and automotive manufacturing companies within the coastal region of South Carolina. The participants were team leaders and members from the manufacturing engineering and quality assurance department. The covariate variables selected for this

study were the team leaders and members' age, experience, gender, race, and tenure. I used an online survey through SurveyMonkey software to reach the participants. Once I collected 48 completed responses, the results were uploaded to Version 27 of IBMs SPSS statistical software to decode, test, and interpret the participant's responses to the online survey.

Definitions

Affective commitment (AC): An individual emotional attachment towards an organization (Garg & Dhar, 2014).

Continuous improvement: CI is a quality method that focuses on reducing nonvalue-added activities from a business process (Jurburg et al., 2016).

Employee participation: A total commitment and intention to transfer work-related knowledge towards improvement activities and collaborative decision-making related to organizational change (Jurburg et al., 2016).

Leadership commitment: A leader can develop and engage employees in CI activities through training, practicing, mentoring, and coaching (Laureani & Antony, 2017).

Leader-member exchange (LMX): A social interaction between a team leader (or manager) and team member (Kauppila, 2016).

Lean six sigma (LSS): LSS is an extensive organizational program to eliminate waste and reduce process variation through CI initiatives (Jensen et al., 2017).

Assumptions

Assumptions must be acknowledged to accurately interpret findings from the use of personal interviews, documents, or other data collection procedures selected for a study (Price & Kirkwood, 2013). There were five assumptions associated with the validity of the process and the completion of this study. The first assumption was that Kauppila's (2016) LMX theory would guide this research and data collection. Kauppila's viewpoint on the LMX relationship presents common failures to assure a greater success rate in launching a LSS initiative. In this correlation study, I only considered one of the five critical factors because each influences a leader's visions, commitment, and decision-making. The second assumption was that the leader's support was proportionate to defining customer, project and team selection, and performances of a cross-functional team. The third assumption was that the CI leaders and members participating in this study already had some level of experience or training in lean and six sigma principles or other CI activities. The fourth assumption was that the team leaders and employees participating in the study would respond honestly to the survey questions. Participants could have omitted vital information from the survey to answer based on what they believed their managers would want to see in their responses. The fifth assumption was that the actual number of employees and leaders interviewed would meet or exceed the expected number of participants for this study.

Scope and Delimitations

The scope of the study involved a CI team's participation and responses to an online survey on the relationship quality between the leader and member. The aim of this

correlation study was to understand how the leader-member relationship could improve employees' commitment to CI activities. The CI team consisted of members from manufacturing engineering, quality assurance, and operations in an aerospace and automotive manufacturing organization in South Carolina. In this correlation study, I focused on evaluating team leaders' and members' views on the leader's support and decision-making towards implementing an LSS initiative. The acceptable sample size for this correlation study consisted of 48 aerospace and automotive organizations within the inner coastal region of South Carolina. The participants included a leader and team member from the operations, manufacturing engineering, and quality assurance department. The data were retrieved and compared multiple sources to identify common themes. The sources of data used included an online survey through SurveyMonkey software.

Delimitations

Delimitations are the boundaries of a research scope to assure the accuracy and completion of the study (Bartoska & Subrt, 2012). There were three delimitations associated with this correlation study of LMX relationship quality and individual commitment. I first delimited only aerospace and automotive manufacturing companies in South Carolina. My second delimitation was selecting team leaders and members of the engineering and operations department; therefore, there were delimits to evaluating their experience from a CI initiative.

Limitations

Limitations disclose present awareness to readers of potential issues in the study (Ross & Zaidi, 2019). There were six limitations associated with this correlation study. The first limitation was the potential for researcher bias due to more than 10 years of experience in using LSS in the manufacturing and service sectors. The second limitation was that selecting one manufacturing operation might not represent the problems of all manufacturing operations in South Carolina attempting to implement LSS. The third limitation involved an adequate aerospace and automotive manufacturing operations sample with prior experience in LSS implementation. The fourth limitation involved participants in the study as they may have shared different views on the expectations and support of the team leader during a LSS initiative. The fifth limitation was the online survey available for participants to respond at their leisure. The sixth limitation was that the online survey questions may not have extracted honest employee assessment of leader-member relationship quality during an LSS initiative. In contrast, team leaders' responses to the online survey questions may have concealed their reasons for limited support in maintaining employee commitment.

Significance of the Study

Significance to Theory

Current literature offers information on the strategies and leadership approach to implementing LSS in manufacturing and service organizations. Employee commitment and participation should be the nucleus of any leader’s strategy for promoting the successful implementation of LSS (Lu et al., 2017). A correlation study research design is

practical when attempting to understand the complexity of LSS in a university process. The correlation study has a heightened focus on leadership support of an LSS implementation. The conclusion of this correlation study may lead to valuable information in understanding how a leader's support can influence an employee's commitment to participate in the LSS initiative.

Significance to Practice

LSS is a people-focused system that engages everyone from all levels to work autonomously to reduce variations in the business process (Jurburg et al., 2016). LSS has evolved from primarily focusing on technology-based solutions that have promoted standardizations and process improvement, requiring a social need for autonomy and organizational democracy (Hadid et al., 2016). Employee participation in a LSS initiative opens the door to new knowledge and experiences supporting a successful implementation and adoption of any LSS initiative (Tsironis & Psychogios, 2016). LSS involves cross-functional activities between employees and requires the leader to support these activities. In this correlation study, I investigated the social and technical aspects of an employee-leader’s relationship towards CI efforts through the lens of Kauppila's (2016) LMX theory for LSS cross-functional teams in a manufacturing operation. The study heightened leader-member relationship quality to help viewers understand how leaders can best support employee participation and increase success in implementing LSS. The findings generated in this study may lead to valuable information that adds to the knowledge base and is practiced by future LSS initiatives in manufacturing.

Significance to Social Change

Albliwi et al. (2015) purported those managers who increase their success rate in LSS initiatives pass their success onto their customers to ensure a better product and service quality. The conclusion of the correlation study may support further research in understanding a CI leader's challenges in improving employees' participation and developing a strategy to sustain employees' commitment in a manufacturing environment. The correlation study can promote positive social change to organizations in the private and public sectors seeking to implement an LSS initiative. In this correlation study, I aimed to understand how the LMX relationships affect employee participation and how they may extend the opportunity for product and service organizations to increase their success rate in using LSS and other CI initiatives. The results of this study offer added information to help CI leaders in South Carolina's manufacturing operations increase employees' commitment to a plant comprehensive LSS initiative. A correlation study approach extends the opportunity for organizational service leaders to learn best practices in implementing LSS.

Summary and Transition

Chapter 1 contained a detailed explanation of the research problem, purpose, nature, and theoretical framework that included a baseline to understanding how management's commitment can effectively impact employees' participation in an LSS initiative. The assumptions and limitations helped to mitigate any potential obstacles. A quantitative correlation study was selected as the appropriate research design to examine how a leader-member relationship quality in an LSS initiative can positively impact

employee participation. A team leader must be sensible of their employee's needs when leading change that affects every organization member.

Chapter 2 contains a literature search strategy to demonstrate the search terms used in library databases and search engines and a conceptual framework that includes a synthesis of theorists' perspectives related to LSS concepts. Chapter 2 consists of the current literature discussion to support a quantitative correlation study design used to perform the research—the purpose of this study was to understand the impact of the LMX relationship on employee commitment in implementing the LSS initiative.

Chapter 2: Literature Review

The purpose of this quantitative correlation study was to understand how LMX relationship quality impacts a team member's commitment to participate in a CI initiative in aerospace and automotive organizations in South Carolina. Current literature has identified many failure factors that have impeded organizations' success with LSS deployment, and one main factor often discussed in the literature is leadership support (Laureani & Antony, 2018). In this study, I examined the mediating effect of PSS on the leader-member social exchange quality and individual AC relationship through an LSS deployment. The specific problem was that CI teams in aerospace and automotive manufacturing operations in South Carolina are unsuccessful in creating a high LMX relationship that inspires employee commitment and support of an LSS initiative. Leaders can develop a high-quality relationship that extends benefits, resources, and trust under their leadership (Kauppila, 2016). Thus, there is a need to understand the relationship between LMX quality and AC.

The current literature review includes a literature search strategy, theoretical foundation, a literature review of existing literature, and critical analysis. The literature search strategy yielded a list of library databases and search engines to find topics relevant to the research problem; the theoretical foundation underlies this discussion of the LMX and the consequences to the exchange quality levels. In the literature review, I examine the current literature on LMX, AC, and PSS's direct influence. In conclusion, a critical analysis reveals the significant gap in the existing literature.

Literature Search Strategy

The literature reviewed for this study was gathered from multiple databases within the Walden University library and purchased publications. This literature review's search strategy included internet searches of the following library databases: AB/Inform, Academic Search Complete, EBSCO Host, ERIC, Google Scholar, ProQuest Central, and SAGE Journals Thoreau. Online libraries included Charleston County Public Library, College of Charleston Library, Walden University Library, and Walden Library Books. The literature search strategy included only full-text peer-reviewed scholarly journals published from 2016 and forward from business databases. I selected the following search terms to obtain relevant information for the literature review: *leader-member exchange, social exchange, turnover intentions, or intention to leave, affective commitment, organizational commitment, job change, low-quality LMX, high-quality LMX, LMX differentiation, job satisfaction, job stress, promotion, job transfer, employee turnover,* and *perceived supervisor support*. The keywords were critical to finding resources that addressed the study's research problem and research framework.

The criteria used to narrow the search were articles published in 2016 or later, except for seminal papers, within knowledge management and management publications. The knowledge management and management literature provide a plethora of information on social exchange and management theory across the private and service sectors. Current research and statistical analysis on PSS on LMX differentiation and AC were secondary resources.

Theoretical Foundation

The premise of LMX quality is the dyadic relationship that focuses on the range of contractual exchanges between the leader and members (Matta & Van Dyne, 2020) that stem from behavioral interactions (Liao & Chen, 2018). LMX evaluates the relationship quality between a leader and subordinate based on understanding, loyalty, trust, and competency (Li et al., 2018; Liden & Graen, 1980). The type of behavior extended between the leader and follower can differentiate the LMX relationship quality. The theoretical foundation of this study was framed on the premises of LMX theory, intending to fill in the gap identified by Arici's (2018) PSS, Kauppila's (2016) examination of LMX, and Rhoades et al.'s (2001) study on the significance of affective commitment to extend the work of Haque et al.'s (2019) research that examined the relationship between LMX differentiation and AC. In this study, I examined the interactive effect of PSS on the differentiation in LMX quality and AC. Kondratuk et al. (2004) explored how an individual's AC may differ between internal and external job change using a three-dimensional model (as cited in Allen & Meyer, 1990). The model represented three organizational commitments (i.e., affective, continuity, and normative) to further understand how employee internal and external job change affects each organizational commitment dimension. Allen and Meyer's (1990) 3D organizational commitment failed to exploit critical factors that might strengthen (or weaken) individuals' AC after a job change.

Numerous organizational commitment studies have determined that employees committed to their organization perform better and show greater engagement in their

work (Meyer et al., 2002). Kondratuk et al. (2004) encouraged others to expand their research in examining individual postlevel AC beyond orientation. The relationship quality the employee shares with the leader impacts work engagement and job security. Social exchange is a high-quality social interaction that refers to interpersonal exchanges and trust shared between leader-members. Economic exchange is a low LMX that is more contractual, and reciprocity is clear and immediate. These types of dyadic relationships have different effects on individual behavior and commitment.

Employees who envision their exchange relationship with the leader and other members as less beneficial and untrustworthy will not reciprocate (Shen, 2019). The advantages and support shared in a leader-follower relationship have a critical role in contractual tasks' behavior and performance. Muldoon et al. (2018) claimed that if the relationship quality between a leader and subordinate is positive and beneficial, the associate will less likely abandon the relationship and be more likely to accept extra-role responsibilities. LMX can increase employees' AC, which improves employees' availability, performance, and desire to seek extra responsibility (Wayne et al., 2002).

An employee may feel social pressure from colleagues to reciprocate their emotional and material support, and the reverse occurs with leaders and followers who have low-quality exchanges among themselves. Employees unsatisfied with their organizational support will reduce staying in a role to mitigate the dissonance of exchange imbalance (Liao & Chen, 2018). For example, employees will form turnover intention when the organization extends little trust and support (Flickinger et al., 2016). The sense of disconnection can affect employees' behavior and increase their motivation

to leave. The absence of an AC, low motivation, and voluntary action may become subjected to differentiation in LMX relationship quality.

LMX differentiation describes a leader's treatment of some members over others in unequal dyadic relationships that directly impact individual performance outcomes (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995). Buengeler et al. (2021) described a positive relationship between LMX differentiation and individual and team performance. Buengeler et al. defined LMX differentiation as a social and economic exchange agreement between supervisors and employees. An LMX agreement exists when the leader (supervisor) and their member (employee) perceive the interaction and reciprocity level as social and economic exchange. The social exchange relationship (or high LMX differentiation) demonstrates extended support between supervisor and employee (Buengeler et al., 2021; Liao & Chen, 2018).

In contrast, members of an economic exchange relationship (or low LMX differentiation) indicate a low level of employee organizational commitment and job satisfaction (Ellis et al., 2019). Buch et al. (2019) described LMX differentiation as a dyadic relationship between leaders and followers as social exchange and economic exchange type. However, the leader and member perception of the exchange and level reciprocity differs, resulting in variant performance organizational outcomes (Matta & Van Dyne, 2020). For example, a leader may expand favors to the in-group members to encourage reciprocity in desirable behavior or perform additional roles.

In comparison, the out-group members may view the interaction with their supervisor as less favorable and withdraw from certain activities that may lead to

deficient performance or organizational commitment. Moreover, members of the out-group may receive less respect and trust from the leader and other teams (Ellis et al., 2019). Thus, employee perception of a leader's support may influence their behavior and motivation to become fully committed to the organization or set their intent to leave.

LMX and employees' intention to leave their current positions influence others to seek other opportunities. Wang et al. (2019) added that high LMX encourages employees to promote their work performance and attitude. High relationship quality with a leader can improve positive behavioral outcomes and reverse the employee's sense of threat to their employment (Wang et al., 2019) and turnover intentions (Eisenberger et al., 1986). However, a high LMX relationship may empower employees to do more within their roles. In other words, high LMX may encourage followers to exhibit positive work experience and commitment to performing voluntary tasks (Jeung et al., 2017; Kim, Poulston, et al., 2017). In a high LMX relationship, subordinates function as trusted assistants willing to perform tasks over and beyond their assigned duties (Brown et al., 2019). In contrast, associates in a low LMX relationship take on a passive role and perform their assigned duties (Liden & Graen, 1980).

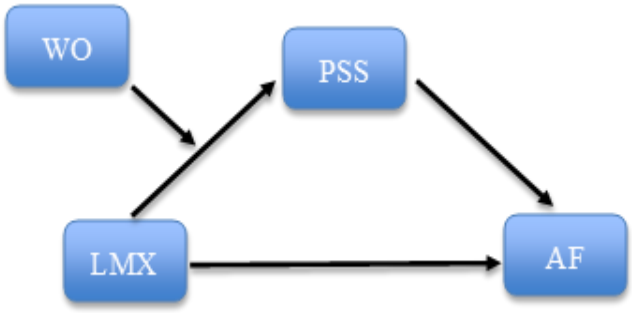
Leader-member relationship quality can influence members' voluntary behavior to engage in their team's responsibility and in-role performance (Kapil & Rastogi, 2019). Employees' behavior can affect an organization's performance and outcomes. Several studies have addressed how the LMX relationship significantly affects a varietal organizational outcome (Erdogan et al., 2004; Gerstner & Day, 1997). A common element between these studies is the benefits a supervisor-employee could receive in their

social exchange. LMX characterizes the dyadic relationship as a mutual transaction that entails a leadership investment in a follower's performance (Breevaart et al., 2015). The number of benefits and interactions a leader proffers may influence a follower's intention to leave an organization. Leaders distinguish the interaction with followers as a low- or high-quality exchange. Employees involved in a high- LMX relationship may receive emotional and material support from their leaders and others (Jeung et al., 2017). Simultaneously, the employees may sense a solid organizational identity when their leader is more valued and respected. They may reciprocate their feelings by cooperating with other organizational members (Erturk & Albayrak, 2020). Employees who feel valued and respected by their supervisor will feel obligated to pay forward the benefits received. Employees will reciprocate the trust and respect to match the leader and other members through a more profound commitment and behavior to do more than required. However, followers who find commonality with other members and feel their personality or skillsets are valued may increase their perception of acceptance (Brimhall et al., 2017).

Figure 1 illustrates an exploratory study's approach to understanding the mediating effect of employees' perception of supervisor support (PSS) on LMX and AC). In this study, I explored the following relationship to find a more significant association between LMX and AC. This study's finding is my contribution to furthering research and understanding how LMX relationship quality can influence employees to limit or increase AC if there is a positive relationship between PSS and LMX.

Figure 1.

Research Model



Note. WO = workplace ostracism; PSS = perception of supervisor support; LMX = leader-member exchange; AC = affective commitment.

In the following section, I review current literature on research relevant to LMX quality on AC, mediating effect of PSS on a LMX, and AC. However, this study is an opportunity to add a dimension to exploring the mediating role of job change on LMX relationships and PSS. Moreover, the current literature provides limited information on the impact of LMX on AC after a job change. This research is timely, if not overdue.

Literature Review

The literature review consists of four main sections: LMX quality, AC, mediating effect of PSS, and moderated mediated effect of WO. The purpose of the literature review is to explore the relationship between LMX quality and AC through the mediating impact of PSS. The LMX quality and AC section outlines two types of dyadic relationships and addresses how these relationships' outcomes can positively influence AC before and after deploying a LSS project. The mediating role of PSS examines the consequences of LMX quality to PSS and PSS to AC in deploying the LSS project. The literature reviews are

modern theories as to the factual foundation for this quantitative study. By examining when and how the LMX quality influences individuals' attitudes and behavior in fully supporting the leadership and organization, this study contributes to the LMX research by increasing findings on the relationship between LMX and AC.

LMX Quality and AC

Several recent studies have discussed the association of the LMX relationship to AC as the primary factor in a varietal employee and organization outcomes (Becker & Kernan, 2003; Tremblay et al., 2021). These studies have linked AC to the LMX relationship and its association with employee turnover (Flickinger et al., 2016), job satisfaction (Lam et al., 2015), and work engagement (Kapil & Rastogi, 2019). The level of LMX quality that increases or limits the support extended from management to direct and indirect line support specialists in manufacturing has received little scholarly attention. Several studies have accepted the traditional assumptions that members of High-LMX respond more favorably to the supervisor's leadership style than members of Low-LMX (Erturk & Albayrak, 2020; Kim, Han et al., 2017; Philippaers et al., 2017). However, the natural relationship between LMX quality and AC remains unclear. What is less clear is how harmful LMQ quality is to members of low- and high LMX (Kauppila, 2016).

Leadership practice's effectiveness depends on trust and how it can influence followers in a dyadic relationship to become psychologically attached to their supervisor and organization; therefore, employees will be less likely to change jobs. Haque et al. (2019) conducted a descriptive and correlation study with 200 full-time employees from

public sector organizations within Australia to understand the relationship between responsible leadership practice and employee turnover intentions. Haque et al. showed a positive and significant correlation between responsible leadership practice with AC. Haque et al.'s results were an indication that responsible leadership practice could positively influence a higher level of psychological attachment and AC in employees. Haque et al.'s research only considered employees' intentions to quit rather than evaluate the organizations' actual turnover due to irresponsible leadership practice. Thus, a literature gap in understanding followers' perception of leadership practices can significantly impact their AC.

LMX Quality

The level of LMX quality can directly influence an employee's commitment and performance outcomes. In LMX theory, there are two exchange relationship levels between a supervisor and an employee: high- and low LMX relationships. The characteristic and quality social exchange between a supervisor and employee can develop an opportunity for a perpetuated level of trust and loyalty between both parties. Compared to a low- and high-quality exchange, the separation between the in-group and out-group may influence a hierarchy amongst the members such that in-group members exert authority over the out-group (Erdogan & Bauer, 2010). A supervisor's ability to develop a high LMX relationship with his team relies on the supervisor's time, power, and organizational resources (Kauppila, 2016). The level of LMX quality exchange is a critical factor in employee behavior and performance outcomes. A high LMX relationship can be rewarding to both parties. For example, a high LMX relationship

develops a better work atmosphere that encourages subordinates to perform tasks beyond their scope of work (Kim, Poulston, et al., 2017). In contrast, a low LMX develops a transactional relationship with minimal support and work engagement between the supervisor and subordinates. However, a leader invested in employee development may influence employees to reciprocate support through relational and behavioral responses (Philippaers et al., 2017).

High-LMX Quality. The high LMX relationship is a social exchange between leaders and followers who demonstrate respect and trust; a high-quality relationship forms an emotional attachment. Erturk and Albayrak (2020) defined a high LMX relationship as an essential social component in an organizational culture that impacts employees' perception of their organizational identity and nullifies organizational undesirable outcomes stressors. In other words, employee behavior and performance are subjective to their relationship with others. In a high LMX, employee behavior and performance reflect the support needed within their in-role responsibilities.

Blau (1964) described the follower's behavior in a high LMX as an extra-role behavior that desires to exceed organizational demands. Employee behavior in a low LMX relies primarily on their self-interest and may result in opposition to the supervisor's expectations. A high LMX relationship, reciprocity of loyalty, mutual trust, and professional respect is often practiced (Porter, 2018). Nandedkar and Brown (2017) purported that trust is a critical factor of an LMX relationship. A supervisor-employee relationship dynamic can grow with trust and respect for another experience and skillset they bring to an organization. However, leaders who extend the trust and respect in a

dyadic relationship with followers make a considerable investment that proffers latitude in the decision-making process and influences other team members (Potnuru et al., 2019). Leaders should optimize their relationship with each employee to improve their behavior and attitude towards the organization (Wang et al., 2019). A high LMX relationship helps employees feel connected and has a positive organizational identification to reciprocate supportive responsibilities.

In a high LMX relationship, the follower may feel obligated to reciprocate any favorable treatment by increasing the feeling of respect and working hard to complete their task **(**Kauppila, 2016). As the leader extends favorable treatments to followers, he can increase the satisfaction and commitment from both leader and organization and develop a healthier and more effective social exchange between leader and follower (Erturk & Albayrak, 2020; McCune Stein & Ai Min, 2019). In high LMX relationships, leaders and employees can develop a social, emotional, and moral attachment that bonds with their organization (Kim, Beehr, et al., 2018; Rockmann & Ballinger, 2017). Employees' social exchange with the leader may receive additional resources, challenging or high visible assignments, and guidance (Carsten et al., 2017). An employee can reap the benefits of favorable treatment by engaging in discretionary behaviors that change the status quo and improve its effectiveness and outcomes (Gerstner & Day, 1997; Mao et al., 2021). Therefore, the supervisor's directions became apparent, and the favorable treatment was extended and reciprocated in a high LMX. A relationship that births a low LMX is limited in the benefits and support possible between the supervisor and employee.

Low-LMX Quality. A low LMX relationship demonstrates the reciprocity of low performance and limited support between a supervisor, employees, and other members of an organization. A low LMX or a transactional or economic LMX relationship focuses on the contractual exchanges without the needs and preference between the supervisor and employees (Son et al., 2016; Wayne et al., 2002). Supervisors in Low-LMX see limited benefits in employees' work performance and support meeting performance expectations in fulfilling in-role obligations. The supervisor may reciprocate the support and become less responsive to employees' needs. At the same time, employees base their performance on the perception of supervisor support and find satisfaction in pursuing their self-interests without considering the team (Jain & Sullivan, 2020). However, a supervisor who receives low work performance and employee behavior may limit the benefits but hold them to a higher standard (Schuh et al., 2017). Employees with limited support may see favorable treatment between a leader and other members as unfair (Mao et al., 2021). Supervisor treatment may seem unemphatic to employees who are experiencing work or personal challenges. However, a low LMX relationship's attributes may increase adverse effects, and recipients display uncivil behaviors towards supervisors and other employees (Sharma et al., 2021).

Supervisors may invest in tools and training to increase employees' job satisfaction and commitment. Besides, AC may reflect the employee's readiness to maintain organizational membership by working for the leader's interests (Fazio et al., 2017). Matta and Van Dyne's (2020) study extended seminal literature on LMX quality and AC to assert employee work engagement and job security as critical factors to LMX

agreement. However, clear expectations between supervisors and employees are essential to employee satisfaction and supervisor commitment (Li, Liu, et al., 2018). The social exchange may affect the expectations between the supervisor and employee.

LMX Differentiation and Employee Turnover. An LMX quality can be seen in increased employees' mobility to extend their tenure with the same organization or seek other opportunities that best support their benefits. The purpose of investigating the relationship between LMX and employee turnover is to explore factors of an LMX relationship that push employees to leave their current roles. Employee turnover may occur through varietal reasons, including a change in responsibility promotion or transfer (internal) and quitting (external job mobility) to find employment elsewhere.

In contrast, voluntary mobility has the purpose of increasing an individual's professional and personal benefit. For example, an individual pursuing a voluntary internal job change may have a stronger focus on their career path. Whereas an individual seeking an external job change may have a focus on job fit or wage growth. Work motivated by either internal or external mobility may have unique reasons but considering those reasons can significantly improve an organizational outcome. This study aims to understand the effect of voluntary and involuntary job change on individual commitment and what factors in a leader-member exchange have that influence these job changes.

An employee's perception of external job mobility is an idea of resigning and moving on to more favorable opportunities and job security. A low-quality economic exchange can develop an employee's perception of job instability (Wang et al., 2019).

Privalko (2019) and Bangwal and Tiwari (2019) have found a link between employees quitting to increase personal benefits, general satisfaction, and job fit. Personal employee benefits could align with a varietal of reasons. In this study, personal employee benefits align with the common factors discussed in recent studies. Privalko's (2019) discussion on employee earnings as justification for external mobility is notable in this study. Employees seeking satisfaction in external mobility want to improve a job fit in their new role (Bangwal & Tiwari, 2019). In a job-fit approach, employees consistently evaluate whether their skillsets match their environment and improve this condition through mobility (Privalko, 2019). Bangwal and Tiwari (2019) found that external mobility significantly affects employee satisfaction. Supervisor behavior has a significant impact on an employee's perceived organizational identity. Employees often see the supervisor as a representative of the organization; therefore, employee perception and attitudes directed at the supervisor reflect how they feel about the organization (Gigliotti et al., 2019). Recent studies discuss employee satisfaction as the working conditions and their perception as part of the out-group status with management and team members (Yang et al., 2019).

AC

AC is one of three analytical forms of organizational commitment, the strength of an employee's identification and involvement with an organization result (Tremblay et al., 2021). Besides, AC significantly influences employee attitude and behaviors than continuance and normative commitment (Garg & Dhar, 2014). This study focuses on AC

since the concept is more relevant to organizational identification and membership (Rockmann & Ballinger, 2017).

Employee Commitment. An individual who believes the organization is supportive may feel obligated to extend their loyalty and trust in return that they can control (Eisenberger et al., 1986). Scholars have often identified the antecedent of AC as associated with the level of quality in an LMX relationship (Jeung et al., 2017). However, the level of AC is significant to an employee's organizational membership and their intention to leave the organization (Meyer et al., 2002). Employees who possess an elevated AC view the organization as an extended family and accept an organizational problem as their own (Jeung et al., 2017). Jeung et al. further elaborated on how incorporating their organizational membership into their social identity may increase their sense of belonging and emotional attachment. The impact of AC in current literature has been extensively examined, such as employee behavior and performance outcomes (Wang et al., 2019), intention to quit (Haque et al., 2019), and psychological contract (Kim, Poulston, et al., 2017). Also, an AC can benefit an organization as to specific operational measures, such as performance appraisals (Haque et al., 2019), employee retention (Kundu & Lata, 2017), and operational performance (Kaplan & Kaplan, 2018).

Leader's Commitment. Leaders often support members from high-level LMX agreements with invaluable information, promotional opportunities, and social support (Lam et al., 2015). An AC is a critical factor in the social exchange process between the supervisor and employees, motivating employees to perform effectively and efficiently within their current organization (Garg & Dhar, 2014). A supervisor selects whom they

want to consider as part of a high-level agreement. However, the quality of social exchange is pre-determined at the onset of an LMX relationship. Rashid et al. (2018) and Li, Liu, et al. (2018) have suggested that LMX is positively related to organizational commitment. Wang et al. (2019) argued that LMX quality fosters an employee's organizational identity and subsequently changes employee behavior, work engagement, and job security. LMX can impact employees' organizational commitment, trust, and loyalty to their leader (Li, Zhu, et al., 2018).

High LMX Quality and AC

Employee commitment is a representation of a social exchange relationship quality developed between the supervisor and employee. Employees with high AC are willing to take the course of actions that reciprocate favorable treatment in a social exchange process (Montani et al., 2017). Employees are ready to perform beyond their role if they feel the supervisor has extended the support needed to become effective. When the relationship quality between a supervisor and employee is high, employees are satisfied with their leader and role; therefore, job stress and job insecurity are significantly reduced (Park & Ono, 2017). A supervisor's leadership style is a critical factor in employee team building and commitment. Employee and supervisor commitment to building positive social exchange seeks occurs in high LMX quality relationships (Ellis et al., 2019; Li, Zhu, et al., 2018). Employees in a high social exchange may feel they are part of an in-group of supportive team members and increase their AC and citizenship behavior towards the organization.

On the contrary, an economic exchange relationship between a supervisor and employee is a transactional relationship set on immediate financial and material organizational obligations in exchange for employees fulfilling their in-role responsibilities (Ellis et al., 2019; Wayne et al., 2002). Employees within a low LMX quality relationship do not share the same commitment level from a high LMX and they may limit their commitment to staying within their boundaries of in-role responsibilities.

Low LMX Quality and AC

Regarding the opposing the high LMX quality relationship, employees within a low-quality relationship's AC level differ from members of a high-quality relationship. An economic exchange relationship predicts performance outcomes and how employees perceive their status as the out-group (Sharma et al., 2021). An employee in a low LMX or transactional exchange will reciprocate the same level of respect and support given by their supervisor and other team members. Employees see limited support from supervisors and other team members as unfavorable treatment. Employees with low AC may perceive their supervisor's treatment as unfavorable and feel their relationship as unbalanced will attempt to restore the balance by reciprocating treatment with minimal engagement or concerns in the leader's interests (Montani et al., 2017). The supervisor may impact employee motivation to perform an extra-role responsibility (Li, Liu, et al., 2018; Zhou & Jiang, 2015). Employees in low-quality relationships may perceive unfair treatment from their supervisor and begin to lose effectiveness in their role and perform the minimal duties required. However, when the relationship quality between a supervisor and employee is low, an employee may seek ways to reduce the feeling of

rejection as a method to offset their dissonance (Fazio et al., 2017). Employees would perform only within their responsibility is ineffective to their team and organization.

In summary, an LMX relationship quality can foster employee commitment. LMX quality stems from the type of leadership practices performed and the employee's perceptions of their supervisor support. A leadership encouraging employee engagement results in a high LMX between a supervisor and employee. In comparison, leadership that minimizes the level of trust and respect extended can create a low-quality economic exchange. A high LMX is an inclusive relationship that considers each member part of an in-group that often reciprocates favorable treatment and support. Members of a low-quality economic exchange perceive their position as an out-group and will not commit to tasks beyond their work scope. Members of a high LMX consider their position as part of an in-group; in-group members are satisfied with their responsibilities and desire to perform extra duties supporting their social exchange with management. The level of trust and commitment between leadership and employees is essential to an LSS deployment's success.

Leadership behavior is essential to an employee's trust. The employee may seek job opportunities outside of their current position or organizations if they do not accept a leader's value (Haque et al., 2019) or see the disconnect between their work and management support (Li, Zhu, et al., 2018). The most common reasons found in the current literature are leadership interaction and response to their employee (Haque et al., 2019). Although management theorists have confirmed a strong association between LMX and organizational commitment, this exploratory study extends the discussion of

Haque et al. (2019) in closing the literature gap through the lens of perceived supervisor support on the relationship between LMX quality and AC.

The Mediating Role of PSS

Employees believe their supervisors value their contributions beyond an assigned task and are willing to reciprocate this behavior upon validating the supervisor's support. The concept of perceived supervisor support is studying employees' observation of the supervisor's support in the workplace (Arici, 2018). Within the current literature, the concept of perceived supervisor supports has taken multiple paths in defining an employee's perception of how supervisors valued their contribution. Several research literature discussions revealed perceived support as a negative effect on employees' performance and behavior (Wang et al., 2019), employee task performance (Afzal et al., 2019), employees' turnover intention (Eisenberger et al., 1986; Maertz et al., 2010; Smith, 2005). The existing researcher described perceived supervisor support as a significant factor in shaping employees' extra-role behaviors and exemplary performance (Chen et al., 2016), but there has been no attempt to understand its effect on LSS deployment.

When employees can no longer trust their supervisor, the supervisor may experience employees' performance and the ability to fulfill their responsibility (Li, Zhu, et al., 2018). Supervisor behavior in limiting information and support can disrupt employees' intention to work effectively in their roles. Haque et al. (2019), Sun and Wang (2017), and Jang and Kandampully (2018) found that a leader's behavior can directly influence an employee's voluntary turnover. A leader's behavior can also impact

an employee's ability to connect emotionally with their organization when required to go beyond their in-role responsibilities. A supervisor's trust is essential to developing a high social exchange level (Blau, 1964). Contrary to a supervisor's trust, a supervisor's responsiveness can impact how employees perceive their relationship with the supervisor and organization identity.

PSS and LMX Quality

A supervisor who extends support and resources to his followers through a high social exchange level can significantly increase employees' job commitment and motivation to perform better in their role. Employees perform well when they feel supported by their supervisors (Tremblay et al., 2021). Supervisor and employees' interactions can outline variant levels of commitment and respect reciprocated between both parties (Paille & Valeau, 2020). The supervisor support extended to members with an elevated level of social exchange can influence employees to perform beyond their in-role responsibilities. The limited supervisor support to members within a low LMX can develop employees' irresponsive behavior to perform required tasks. A supportive supervisor has significant benefits and further enhances their employee's job performance, satisfaction, and commitment (Frear et al., 2018).

A supervisor's unanswered support can negatively impact employees' performance outcomes and social exchange relationships (McIlroy et al., 2021). A strong LMX relationship between a supervisor and employees can demonstrate support of organizational goals to initiating an LSS deployment through mutual trust and commitment in finding opportunities in finding best practices. Unfortunately, an

employee's AC is often absent in LSS projects, leading to a failed or unsuccessful campaign. With some clarity on how the variant levels of the LMX relationship can influence employees' perceptions of their supervisor support, this literature review outlines the effect of PSS on employees' commitment. Employees feel a social identity and job satisfaction through a critical factor of trust.

Employee trust in a supervisor is an attribute to employee commitment, identity, and job satisfaction. Trust is the mechanism that directly affects various employees' outcomes (Lu, Zhang, et al., 2019). Holland et al. (2016) suggested that the supervisor must be willing to extend the necessary resources to support the employee through variant situations; therefore, the employee will feel valued and trust his supervisor. Blau (1964) and Chung (2015) concluded that a supervisor must trust his employee to extend support. A supervisor's trust can increase by the efforts given through behavior and performance (Blau, 1964). Trust building in the relationship between a supervisor and employee is the critical factor to an LMX relationship. Therefore, the LMX relationship is the predictor of PSS.

PSS and AC

An employee's AC comes from the perception of one's identification and position within their group. If the supervisor or employee feels supported within their role, they, in turn, reciprocate the perceived support with increased performance and commitment (Frear et al., 2018). If the group's dynamic includes returning fair treatment, supervisors would care more about sustaining this norm to accomplish organizational goals. Frear et al. (2018) added that supervisors could take the same approach as employees by engaging

in extra-role behavior to help employees follow through on assignments to achieve organizational goals. In group dynamics, this study extends the discussion on several aspects of employees' identity and commitment towards their groups, such as gender inequality, a psychological contract between leader-member and member-member, WO, and employee work engagement.

PSS and Organizational Identity

Employee expectation of supervisor support is an attribute to their identity within an organization. Wu et al. (2016) defined organizational identification as an organizational-specific type of social identity comprised of an individual's self-concept and identity. The more individuals identify themselves with the organization, the more effective support from other team members (Avanzi et al., 2018). Depending on the group's set of norms, seeking social support may impose competition on other team members and the leader's identity (Butler et al., 2019). Butler et al. added that employees seeking social support demonstrate their belief in their position within the group. An employee's organizational identification is a psychological link created through their interaction and relationship with a supervisor and other team members, who function as an organizational agent (Gok et al., 2015). Gok et al. evaluated 549 medical secretaries in various hospital settings on the effect of PSS on job satisfaction and organizational identification. The results of Gok et al. studied found a positive relationship between PSS and job satisfaction. Gok et al. research added that organizational identification partially mediated the relationship between PSS and job satisfaction. Therefore, an employee finding his identity with the organization may develop a bond between the two parties

resulting in high job satisfaction. Whereas the social support extended by team members plays an essential role in employees' identification and the sense of collective efficacy (Avanzi et al., 2015). In contrast to Gok et al.'s findings, Paustian-Underdahl et al. (2017) added a dimension in understanding an employee perception of supervisor support through the lens of female and diversity inequality.

Diversity Inequality and PSS

An employee's perception of discrimination or unfairness towards a particular group or gender can feel influenced as an individual, color their organizational identity, and commit to an organization. For example, a supervisor that extends support and trust to individuals in the context of gender or race may influence certain groups to perceive their identity as low-status or out-group members. Paustian-Underdahl et al. (2017) research explained how a subordinate and supervisor's race impact the subordinate's PSS in the workplace. Paustian-Underdahl et al. studied a sample of 290 practicing supervisors and managers who represented five managerial levels from multiple organizations. Most of the participants were male, white, with a graduate degree. In the study, 960 employees participated from the supervisors initially selected to participate in the survey.

Gender and diversity inequity group members perceive less supervisor support when they believe that aspects of their social identity are at risk. Paustian-Underdahl et al. (2017) argued that members of a gender or diversity inequity group might perceive less support from a female or racially minority supervisor. Humans can identify signals of exclusions from other team members to survive difficulties in social relationships

(Wesselmann & Williams, 2017). Members of these groups may find ways to persevere in reducing the identity threat in the workplace. Cortland and Kinias (2019) purported that women and negatively stereotyped groups who feel devalued are likely to use different personas to reduce identity threat perception within their work environment. Paustian-Underdahl et al. added that gender and diversity inequality members might believe others like them are experiencing the same identity threat may begin to distance themself to restore their identity for advancement opportunities. Project leaders and facilitators of LSS projects need to develop a strong LMX relationship with every member to minimize WO and increase employees' sense of belonging that promotes organizational citizenship behavior within all team members.

Psychological Contract

Employees center their commitment and performance on the unspoken rule of agreement reciprocated respectively by their supervisor. When employees perceive a mutual understanding or commitment from their employer may reciprocate by performing extra work beyond their responsibilities (Kloutsiniotis & Mihail, 2018). LMX relationship has an essential role in how employees and supervisor develop their psychological contract. Leaders and employees working together to define roles and expectations are critical to sustaining employee satisfaction and management commitment (Li, Liu, et al., 2018). Although defined functions are essential to developing a favorable contract between the leader and employee, the varietal levels of LMX quality are critical to the duration of their psychological contracts and the overall relationship quality with their superior and organization. Ellis et al. (2019) concluded that

a high LMX could increase relationship building, enhancing employees' commitment to performing beyond their in-role responsibilities. A high LMX is essential to the development and maintenance of an effective supervisor-employee relationship. A supervisor in a high LMX relationship can benefit from higher team performances and minimum occurrences in team conflicts. In contrast, a low LMX relationship can influence motivation and work engagement amongst employees (Zhou & Jiang, 2015).

Moderated-Mediated Effect of Workplace Ostracism

WO can limit an employee's sense of belongingness and negatively affect their behavior and performance (Wu et al., 2016). The act of WO is a form of interpersonal mistreatment or incivility that may occur in all sets of relationships, such as leader to leader, leader to an employee, and employee to an employee (Chen et al., 2016). Ferris et al. (2015) defined workplace mistreatment as an interpersonal situation in which an employee (perpetrator) performs a hostile act towards another employee (victim). At the same time, an individual who is a victim of WO may experience it in the form of mistreatment or incivility (Howard et al., 2020). Aggressive behaviors towards a member of a team can make it challenging to perform as a team effectively. A person who receives this type of treatment can negatively affect work and the psychological contract between the individual and their opposing member (Wu et al., 2016). If this is the case, ostracism practiced within a workgroup or team could impede their progress. A perpetrator may partake in varietal roles and statuses as antecedents to WO, such as personal (gender), leadership, and work environment (Chung, 2018).

In ostracism literature, gender becomes a part of the discussion (Ferris et al., 2015). Due to women's stereotypical views in the workforce, women often face disparities in pay and job roles (Cortina et al., 2018). Women are candidates for WO due to the perception of being incompetent or possessing a nurturing characteristic compared to their counterparts (Howard et al., 2020). In contrast, women who demonstrate a high performer's characteristics may become victims of WO (Chung, 2015). Cortina et al. (2018) described those women who are more prone to WO are often labeled as "bossy" and construed as counter normative to individuals in the upper hierarchies.

Employees who are victims of WO find it challenging to perform extra-role in their position due to their workplace environment. A workplace environment is an essential factor in reducing ostracism (De Clercq et al., 2019). Employees who perceive social support from peers and superiors within their social network may not experience WO. Howard et al. (2020) claimed WO is unlikely to impact individuals' part of a healthy and supportive social network. Employee interaction with peers and supervisors can indicate the level of social support they will receive. Besides, employee perception of social support is not strong may impede their commitment and work engagement.

Leadership support of their employees can inhibit or prohibit WO (Ferris et al., 2015). Leaders who impede ostracism may allow employees to share the same behavior towards other team members, whereas leaders who prohibit can fear other team members of mistreating others (Howard et al., 2020). LMX relationships have a positive relationship with WO. The likeliness of WO depends on whether the leaders consider a team member as part of an in-group or out-group. Howard et al. (2020) described that

those leaders who are part of the "in-group" might experience a high LMX that encourages positive interaction and consensus among team members; therefore, WO will less likely occur in a group fear of being reprimanded.

On the contrary, the out-group leaders demonstrate their counterparts' opposite behavior in a low LMX, demonstrating a disconnection between members. WO negatively influences an employee's job attitude and engagement level (Haldorai et al., 2020; Kaya et al., 2017). In contrast, the outcome of WO can affect the mental and physical well-being of employees to limit their engagement and commitment (Park & Ono, 2017). Work engagement is critical to an employee's attitude and performance at work (Haldorai et al., 2020). Therefore, leaders that oversee the deployment of LSS must eliminate the opportunities of WO from incurring to ensure employees' work engagement is high throughout the project.

Employee Commitment and Work Engagement

Work engagement is the link to an employee's performance and commitment to work. An employee who engages at work identifies themselves with the outcome (Park & Ono, 2017). Shkoler and Kimura (2020) view engaged workers as hardworking, dedicated, and immersed in their work. Employees' work engagement is high when employees have a greater interest in the role from the perception of their work environment and working relationship with supervisors and other team members. Tanskanen et al. (2019) claimed the work engagement motivates others to increase their performance as a team. Therefore, work engagement can improve the performance of the entire group. Khattak et al. (2017) described employee engagement as involvement in

supporting organizational goals. However, work engagement can influence leader-member social exchange to achieve goals more significant than individual objectives.

An employee will support an organization’s goals if there is mutual trust between the supervisor and them. Besides, team members who feel they are part of the team increase their interaction in reciprocating support with another group member (Butler et al., 2019). Khattak et al. (2017) explained that trust might improve when employees have a strong LMX relationship with their organization and supervisor. Khattak et al. administered a survey questionnaire with 335 faculty and non-faculty members of ten newly established higher educational institutions located in Pakistan. Khattak et al. selected the universities with the highest turnover ratio. Khattak et al. suggested that perceived support supervisors will make up for the employee's work engagement deficiency.

A supervisor's unresponsive behavior to employees' requests can impact the outcome of employees' work engagement, performance, and responsiveness to their supervisor within a leader-member exchange relationship (McIlroy et al., 2021). The trust employees extended to supervisors came from their perception of receiving needed support to function within their role. Therefore, Khattak et al. recommended that supervisors increase support to employees through fair responsibilities and decision-making involvements.

Summary and Conclusions

The relationship between a leader and member is essential to employee commitment and work engagement. Leaders extending fair and reasonable support to

every team member could obligate employees to reciprocate support towards the group and overall organizational goal. Provided in this literature review was the theoretical framework of leader-member exchange with an in-depth study of quantitative researchers' perspectives of LMX influences on employee's organizational identities, commitment, and job satisfaction.

Through extensive research and the challenges of organizational identity and social support, there was a gap in the literature on a study investigating the mediating effect of PSS from the lens of employees on the relationship between differentiated LMX quality and AC. The literature review represents a comprehensive summary of the LMX quality theory and the variables of AC. In addition, this section includes an extent clarification and guidance further to solidify the relationship between theory and the variables. Finally, the following chapter contains a detailed summary of the intended research methodological approach of the study.

Chapter 3: Research Method

The purpose of this quantitative correlation study was to understand how an LMX relationship quality impacts a team member's commitment to participate in a CI initiative in aerospace and automotive organizations in South Carolina. The specific problem was that CI teams in aerospace and automotive manufacturing operations in South Carolina are unsuccessful in creating a high LMX relationship that inspires employee commitment and support of an LSS initiative. In the current study, I examined the mediating effect of PSS on project leader-team member social exchange quality within a CI deployment. In addition, the present study included a moderated-mediation model on WO to center the research around relationship quality between the leader-member and member-member in a project setting.

In Chapter 3, I summarize the research design and rationale, the researcher's role, methodology, issue of trustworthiness, and summary. The research design and rationale sections contain a description of the research design selected and compare other strategies. The methodology section covers the following: description of the target population, data collection and analysis plan, participant recruitment process, and participant selection criteria. The issue of trustworthiness summarizes any known threats to the research validity and ethical issues. Finally, a summary of the research method selected concludes the Chapter 3 research design.

Research Design and Rationale

The research questions and hypotheses in the previous chapter's specific problem were as follows:

RQ1: How does an LMX relationship quality influence an individual commitment to a CI initiative?

$H_0$1: There is no significant relationship between LMX relationship quality and an individual commitment to an LSS deployment.

H_a1: There is a significant relationship between LMX relationship quality and an individual commitment to an LSS deployment.

RQ2: What mediated effect does PSS have on the relationship between LMX relationship quality and an individual commitment to a CI initiative?

$H_0$2: LMX relationship quality does not influence team members' AC through the mediated effect of PSS.

H_a2: LMX relationship quality influences team members' AC through the mediated effect of PSS.

RQ3: What influence does WO have on the relationship between LMX quality and team members' PSS?

$H_0$3: WO moderated effect does not influence the relationship between PSS and LMX quality such that the negative relationship is more robust when team members' level of workplace ostracism is high (vs. low).

H_a3: WO moderated effect influences the relationship between PSS and LMX quality such that the negative relationship is stronger when the team members' level of WO is high (vs. low).

This study's central phenomenon was the impact of project leader-team member relationship quality and its effect on employees' commitment to an LSS initiative. In this study, I compared the outcome of an LMX quality to employee performance and behavior in a project setting. LMX quality is a critical factor in employee performance and an organization's overall success (Tremblay et al., 2021). A mediated model of PSS investigates the significance of management social support and its impact on employee performance. The design choice for this study was consistent with the research design used in the current literature on LMX quality (Kauppila, 2016) and AC (Tremblay et al., 2021).

The research design chosen for this study was a quantitative correlation approach. A quantitative analysis has three traditional research designs: descriptive, experimental, and correlation (Khaldi, 2017). A descriptive study is a nonexperimental research method that allows the researcher to collect data through observation and a recorded description of a phenomenon (Bloomfield & Fisher, 2019). A correlational study is also a nonexperimental research method that evaluates a relationship between two variables using hypothesis testing, whereas an experimental research design considers the causal relationship between two variables (Rogers & Revesz, 2019). The purpose of the study was to examine the relationship between two independent variables (LMX quality and PSS) and a dependent variable (AC) with consideration of three controlled variables (gender, race, and tenure). In addition, a moderated mediation dimension was added to the study to solidify relationships between a leader and a member. The moderated

mediation selected for this study was WO. WO with a leader-member and member-member social exchange may affect how an employee perceives supervisor support.

A qualitative research method would have a limited effect on the accuracy of data analysis and sample size estimation required for this study. A qualitative researcher carries the difficulty in generalizing their findings through data analysis (Carminati, 2018). The generalization problem in qualitative research is the researcher's limitation in generalizing outside of the specific context or cases studied (Halkias & Neubert, 2020). A qualitative researcher is vulnerable to inaccuracy articulation when requiring an interview to recollect events dealing with self or someone else's behavior (Yin, 2017). Other forms of inaccuracy in qualitative research methods include sampling errors and nonresponsive bias. A sampling error occurs when the researcher underestimates a sample size from its actual population, whereas a nonresponsive bias occurs from a low response rate in the data collected (Singleton & Straits, 2010).

The rationale in selecting a quantitative correlation design is the capability to collect a large sample size and the reliability of analyzing the data collected (Headley & Plano Clark, 2019). Because the study included multiple variables (i.e., behavior or emotions) that may influence each other, a research design with a multiple regression was appropriate for analyzing the variables and further demonstrating the strength between the LMX quality and AC. The study required hypothesis testing to validate the relationship between variables; therefore, a regression analysis was appropriate. A null hypothesis testing was needed to support a decision to rule out the potential influence

between variables (Szucs & Loannidis, 2017). A regression analysis strengthens the correlation analysis, part of quantitative methodology (Pal & Bharati, 2019).

Role of the Researcher

Due to the nature of a nonexperimental quantitative study, the researcher's role is solely an observer and describer of the research findings that address the research question. The use of an online survey was the primary instrument for data collection, and I included additional screening questions within the study to ensure the respondents were part of the inclusive criteria required for the study. From prior experience in leading and supporting a CI within a project leader and team member's capacity in several initiatives, the level of expertise I accomplished does not indicate a complete knowledge of a CI initiative or that I fully understand each participant's motivation committed to these initiatives. With all research, there are opportunities for research bias to appear in the data analysis. No prior personal and professional relationship with this study's participants mitigated any potential research bias in the study. I used an online survey to collect data from randomly selected aerospace and automotive manufacturing within the coastal region of South Carolina and provided feedback on the research results. No ethical issues or conflicts of interest were connected to my location and participants selected for the study.

Methodology

The most appropriate research method to address the research question was a quantitative correlational study. However, a researcher must uphold the study's integrity through proper procedures in selecting participants, instrumentation, and data analysis.

The following sections outline my research plan to ensure the appropriate steps to demonstrate transparency in addressing the research inquiry. Transparency is necessary for the intended audience to form a logical interpretation of the research results. In addition, other researchers can easily replicate the procedures with minimal limitations presented in this study.

Population

The target population includes individuals and a phenomenon that help the researcher address a research inquiry (Adam, 2020). The population I used for this research were aerospace and automotive industries in the coastal plain region of South Carolina. The aerospace and automotive industries are strong advocates of CI initiatives. Therefore, the samples selected for this study were original equipment manufacturers (OEMs) or those who had a supportive role in supplying critical components or services to the aerospace and automotive companies' OEMs.

Sampling and Sampling Procedures

The sampling method selected for this study was multistage cluster sampling. In the first stage of the cluster sampling, I selected 332 aerospace and automotive manufacturers and their critical component suppliers located within the Coastal, Piedmont, and Sandhill regions of South Carolina. The coastal regions have 45% of the manufacturing companies listed in South Carolina and are home to 33% of the state's aerospace and automotive manufacturers. The second stage was a cluster sampling of only 48 out of 109 aerospace and automotive manufacturers within the coastal plain region of South Carolina. Table 2 illustrates the locations (by counties) of the 48 potential

aerospace and automotive manufacturers. A manufacturing company typically represents quality assurance within its operations to lead, support, and sustain CI and change management initiatives. Therefore, the third stage included a simple random sampling of team leads and members within a quality assurance department from the 48 aerospace and automotive companies selected in the second stage. I selected cluster sampling because it was cost-effective and less prone to sampling errors with a multistage sample design, but I understood that cluster sampling lacked the precision of a simple or stratified random sampling (see Singleton & Straits, 2010). Therefore, I used a simple random sample in the third stage to ensure that the team leaders and quality assurance department members were present. I highlighted the study's inclusion and exclusion criteria to ensure the research focused on the relationship between a team leader and the quality assurance team members.

I requested a list of quality assurance personnel from the Human Resources department. The inclusion criteria included participants who led or supported CI and change management activities within an aerospace and automotive manufacturing operation. The excluded criteria were part-time employees, interns, and outside contractors. The list provided by the Human Resources Department helped prescreen and secure participants who fell within the inclusion criteria. In the following section, I discuss the sample size requirements within the sample frame mentioned above.

Sampling Frame

The sampling frame for this study included the following: (a) an OEM of aerospace and automotive or a critical component (i.e., Tier-1 or Tier-2) supplier to an

OEM of aerospace or automotive products, (b) operation located within the coastal plain region of South Carolina, (c) organization size consisting of 50 employees or more, and (d) a quality department that actively facilitated or participated in CI initiatives. This study excluded machine shops, wholesale distributors, and any organization with the number of employees unknown. In addition, this study included any level of CI projects implemented because the focus surrounded the project leader and team member social exchange quality and its effectiveness on employee commitment. Table 1 provides a list of 109 organizations as potential research participants of this study. Within the list of organizations, I targeted quality leaders and team members of the quality department.

Sample Size

The study's population sizes were the manufacturing and quality engineering department from the 48 aerospace and automotive manufacturing companies selected (see Appendix A) in the multistage cluster sampling. I targeted the department manager and team members from the quality department. Operations and quality managers are typically project leaders in CI and change management initiatives because they are involved with the day-to-day discussion of change management and manage the business process to ensure performance effectiveness (Pradabwong et al., 2017). Using the Qualtrics sample size calculator with a confidence level of 95% and a 5% margin of error, the ideal sample size was 44 aerospace and automotive manufacturers.

The sampling technique used to reach the targeted audience was the snowballing method. A snowballing method allowed me to reach more participants within the ideal sample size; however, a snowballing method is a part of a purposive sampling technique

that assumes targeted individuals are members of a network or group that share similar experiences and characteristics as the ideal participants (TenHouten, 2017). I requested that the Human Resources Department provide the quality personnel a link to the online survey so that the participants could complete the survey at their convenience.

Procedures for Recruitment, Participation, and Data Collection

The data collection included a SurveyMonkey questionnaire (see Appendix B) distributed to the 48 aerospace and automotive manufacturers within the coastal region of South Carolina. The purpose of a survey was to evaluate managers, project leaders, and team members' relationships, overall leadership experience, and the level of employee involvement during CI initiatives. However, the survey supported my investigation of the management involvement with team members' orientation and training experience, member ostracism, and sustainment of members' commitment to their organization. The survey included employees' demographics and scenario questions answered with a 5-point Likert scale. If recruitment results had been too low, I planned to add the aerospace and automotive manufacturing companies within the Piedmont and Sandhill regions of South Carolina. After the study, I debriefed the participants on the study's results. The debriefing procedures included a PowerPoint presentation of all responses across all participating organizations with recommendations. Upon receiving acceptance and completing the screening questionnaire, all 48 organizations received a link to answer the survey questions through an online portal. The Human Resources Department was responsible for distributing the survey link via email to allow the participants to complete

it at their leisure. Once the participants completed the survey, I saved their responses within the SurveyMonkey database for data analysis.

Instrumentation and Operationalization of Constructs

The data collection instrument used for this study was a 25-item online survey which consisted of four demographic questions and a combination of twenty-one questions from the four existing validated surveys: LMX Quality (Kauppila, 2016), Rhoades et al. (2001) Affective Commitment (AC), and Perceived Supervisor Support (PSS), and Workplace Ostracism (WO) (Ferris et al., 2008). This survey's demographic questions included the participant's gender, race, tenure with the company, and industry. Participants answered using the 5-point Likert Scale (1 = *strongly disagree* to 5 = *strongly agree*).

Published Validity and Reliability of Instrumentation LMX Quality

LMX quality of the relationship between the project leader and team member was measured using Liden and Maslyn's (1998) seven-item scale. Liden and Maslyn multidimensional validated the scale items through expert judges to ensure the items reflected LMX theory and the underlying theoretical dimensions. LMX differentiation scale item measured the relationship between leader to member and member to member using Liden et al. (2006) to evaluate the within-group standard deviation in individual-level LMX scores. In comparison, the higher standard deviation indicated a higher LMX differentiation. Several works of literature have further validated Liden et al. approach in identifying LMX differentiation between the leader and member.

AC

An individual commitment to the organization was measured using Rhoades et al. (2001) six-item scale. Rhoades's AC scale consists of five items from Allen and Meyer's (1990) AC scale and one item from Meyer, Allen, et al. (1993). Literature that used Rhoades et al. (2001) AC questionnaire reported that item scales formed a single factor with high reliability (Allen & Meyer, 1990; Meyer et al., 2002).

PSS

The study's evaluation of employees' perception of the supervisor's support includes Rhoades et al. (2001) four-item PSS survey. The items selected reliability ranged from .74 to .84. This study used a short form of the SPOS to eight items which focused on the employee's performance (3-items), employee's anticipation of future value (1-item), appreciation of employee's extra effort (1-item), employee's satisfaction on the job (1-item), and consideration of employee's goals and opinions (2-items). I replaced the term supervisor with the term organization to reflect the employee's direct experience. Some studies have validated Rhoades et al. (2001) PSS within their research to demonstrate further the relationship between employee turnover intentions and task performance (Afzal et al., 2019).

WO

The evaluation of employee mistreatment from peers and supervision used Ferris et al.'s (2008) 10-item scale. Ferris's 10-item scale on WO scales validation followed four development levels: item generation and reduction; psychometric properties; convergent and discriminant validity; and the scale's criterion-related validity. First, Ferris et al.

generated the initial selection of items from current literature (Wesselmann & Williams, 2017) and Anderson and Gerbing's (1991) two indices' methods in assessing the substantive validity of the scale items, which includes the respondent's substantive agreement of items to its intended construct and the coefficient of substantive validity of the item-sorting and reduction tasks. Second, Ferris et al. used the psychometric properties to evaluate WO in terms of reliability and factor structure, resulting in a mean of .75 coefficient alpha reliability. Third, Ferris et al. (2008) assessed the convergent and discriminant validity through Campbell and Fiske's (1959) methods to investigate the scale items related to other similar constructs and demonstrate low or null correlations with dissimilar measures. Finally, the criterion-related validity scale focused on five variables that correlate with WO: basic needs, well-being, attitudes, performance, and withdrawal.

Appropriateness to the Current Study

The five surveys selected were appropriate to the current study on understanding the leader-member relationship effects on an individual’s commitment towards his organization. Each survey is a replicate instrument used in current research literature related to each dependent and independent variable in this study. The five surveys included are Employee Demographics, LMX, WO, PSS, and AC. The Employee Demographic was included as the control variable to understand the effect of a participant’s education, experience, gender, and race have on their professional relationship and commitment in the workplace.

The employee demographics survey identified several factors about the participants selected in this study. The survey identifies four factors that can impact the dynamic of a relationship and experience between the team leader and member. The employee demographic questions were appropriate to understanding the relationship quality between leader-member exchange and AC through an individual's education, experience, gender, and race.

- How long have you been employed with your current organization?
- What gender do you identify as?
- Please specify your ethnicity.
- What is the highest degree or level of education you have completed?
- What level of experience do you have in continuous improvement?

The leader-member exchange survey answered the research question regarding the relationship between leader-member relationship quality and AC. The leader-member exchange survey was appropriate because it explored the relationship quality from the leader and member perspective. The leader-member exchange survey contains five statements with a 5-point scale rating to gather data from respondents on their views of a leader-member exchange relationship.

- I do work for my supervisor that goes beyond what is specified in my job description.
- I am willing to apply extra efforts beyond those normally required, to further the interests of my workgroup.
- I am impressed with my supervisor's knowledge of his/her job.

- I respect my supervisor’s knowledge and competence on the job.
- I admire my supervisor’s professional skills.

The PSS survey answered the research question regarding the mediating effect an individual perception of the supervisor support has on the relationship between leader-member relationship quality and an individual commitment. Therefore, the PSS survey was appropriate to understand the leader’s support of team members. The PSS survey contains six statements with a 5-point scale rating to gather respondents' perceptions of supervisor support.

- My supervisor cares about my opinions.
- My work supervisor cares about my well-being.
- My supervisor strongly considers my goal and values.
- My supervisor shows very little concern for me.

The WO survey answered the research question regarding the influence WO has on the relationship between leader-member exchange and individual perception of supervisor support. Therefore, the WO survey was appropriate to identify the impact of an individual experience with unfair treatment in the workplace. The WO survey contains five statements with 5-point scale ratings to gather respondents' experience with WO.

- Your greetings have gone unanswered at work.
- Others at work shut out of the conversation.
- Others at work treated you as if you were not there.
- Others at work did not invite you or ask if you wanted anything when they went out for a coffee break.

- Others ignored you at work.

The AC survey answered the questions regarding the respondent's commitment towards the organization. Therefore, the AC survey was appropriate to compare and identify the respondent's perception of their organization. The AC survey contains six statements with 5-point scale ratings to gather respondents' commitment to the organization.

- I feel a strong sense of belonging to my organization.
- I feel personally attached to my work organization.
- I am proud to tell others that I work at my organization.
- Working at my organization has a great deal of personal meaning to me.
- I would be happy to work at my organization until I retire.
- I really feel that problems faced by my organization are also my problems.

Data Analysis Plan

The data analysis plan outlines the researcher's approach to collecting, decoding, testing, -and interpreting the participants' responses from an online survey. The data analysis plan includes the following steps: software used for analysis, data screening procedures, research questions and hypotheses, statistical tests, the rationale for including potential covariates, and an interpretation of the results. In the following sections, I provide the outline of the data analysis in more detail.

Software Used for Analysis

The software selected for this quantitative study is version 27 of IBM's SPSS statistical software program. The SPSS program is a common platform among the current

literature to evaluate data from survey instruments. The SPSS program helped provide information that supports a researcher's decision to reject or accept the null hypotheses. In addition, the SPSS program can assist the researcher in identifying missing values from the raw data file. A researcher must take precautions in screening the raw data before executing the statistical test in SPSS. In the current study, once SurveyMonkey has reached the goal of eighty-five completed surveys, I exported all the respondents' information from SurveyMonkey to a Microsoft Excel spreadsheet. The data was retrieved and uploaded from SurveyMonkey to SPSS for further analysis.

Data Screening Procedures

The raw data extracted from the online survey instrument are subject to missing values or incomplete responses to the questionnaire. The researcher reviewed the collected data and removed the surveys that contained missing answers. Contingent on the total valuable responses from the online survey, I would extend the collection period and distribution channels until he reaches the target sample size. The next step in the data analysis requires the researcher to align the survey responses to the research questions and hypotheses before performing a statistical test. Therefore, I can have the most accurate information to reject or accept the hypotheses.

Research Questions and Hypotheses

This research addresses three research questions and their associated hypotheses as to the following:

RQ1: How does an LMX relationship quality influence an individual commitment to a CI initiative?

$H_0$1: There is no significant relationship between LMX relationship quality and an individual commitment to an LSS deployment.

H_a1: There is a significant relationship between LMX relationship quality and an individual commitment to an LSS deployment.

RQ2: What mediated effect does PSS have on the relationship between LMX relationship quality and an individual commitment to a CI initiative?

$H_0$2: LMX relationship quality does not influence team members' AC through the mediated effect of PSS.

H_a2: LMX relationship quality influences team members' AC through the mediated effect of PSS.

RQ3: What influence does WO have on the relationship between LMX quality and team members' PSS?

$H_0$3: WO moderated effect does not influence the relationship between PSS and LMX quality such that the negative relationship is more robust when team members' level of WO is high (vs. low).

H_a3: WO moderated effect influences the relationship between PSS and LMX quality such that the negative relationship is stronger when the team members' level of WO is high (vs. low).

Statistical Test

The statistical test used for the current study was the Mann-Whitney U test. Mann-Whitney U test is a nonparametric test that does not assume the data distribution is normal (Smalheiser, 2017). The Mann-Whitney U test allows researchers to compare independent samples with ordinal measurements (MacFarland & Yates, 2016). The survey instrument used in this study ranked participant responses with a Likert Scale representing an ordinal measurement scale. In this study, the Mann-Whitney U test identifies the significant difference between aerospace and automotive LMX quality within a CI initiative. In addition, I used the respondents' age, gender, and tenure information to investigate different variant levels of PSS within the aerospace and automotive groups.

The Rationale for the Inclusion of Potential Covariate Variables

To optimize the data collected from the target population, I wanted to exclude part-time employees (e.g., contractors, interns, temporary workers) from the list of potential respondents. Part-time employees have limited interaction and have difficulty establishing long-term relationships with their team leaders (Liao & Chen, 2018). However, full-time employees can develop long-term relationships through frequent interactions in daily tasks and projects. Therefore, I evaluated the four covariates to identify the relationship quality between a full-time employee and a team leader. The five covariates are as follows: age, experience, gender, race, and tenure. The following sections include the rationale of the five potential covariates included in this study.

I included age as a potential factor in the relationship quality between a full-time employee and the team leader. Age differences between an employee and team leader may affect their relationship quality in perceiving the supervisor's support (Rani & Samuel, 2019). For example, a more seasoned employee near retirement may refrain from extending a total commitment towards an unsupportive team leader. In contrast, a new employee may take the opportunity to prove his value to the team. In addition, age differences between an employee and team leader may affect the employee commitment to the organization and team leader. For example, a more seasoned employee may have difficulty collaborating with a younger team leader, or the younger employee may become more competitive with an older team leader. However, gender, education, and tenure may also significantly influence the team's ability to deploy a CI initiative, which requires a more diverse and versatile group. Therefore, I included gender, race, and tenure to factor in the team's relationship quality and each member's commitment.

A team member's experience in leading or participating in CI initiatives may influence the interactions between team leaders and members. An employee's increased expertise or knowledge can improve behavior and performance outcomes (Ng et al., 2014). For example, a team member can effectively perform his role with limited support from the team leader. In addition, an employee tenure (or length of service) with the company may contribute to the team member’s experience collaborating with confident team leaders and a cross-functional team. Therefore, the relationship between the team leader and members increases the employee’s commitment to the organization.

An employee's tenure (or length of time with an organization) may contribute to the relationship between leader-member relationship quality and an employee's commitment towards the organization. For example, an employee who vested five years into an organization may experience high relationship quality and supervisor support. On the other hand, an employee who vested one year with his organization may receive limited support from the supervisor and perceive his social identity as an out-group member of the team. On the contrary, a recent college graduate who worked in the same organization through school may perceive the same level of support as a new employee with ten years of experience in his profession. Thus, age and tenure can have a similar effect on an employee's work relationship and commitment (Ferris et al., 2015).

An employee's perception of discrimination or unfair treatment due to gender and race may contribute to the perception of supervisor support and WO in member-to-member and leader-member relationships. An employee who receives limited supervisor support due to their gender or race believes their social identity is at risk (Paustian-Underdahl et al., 2017). The act of interpersonal mistreatment or incivility within a team can significantly impact their behavior and outcome (Wu et al., 2016). For example, a racial minority team member may perceive limited support from his white male supervisor, or a female employee may perceive their identity as an out-group member in a majority male team. This study's demographic of gender and race represented a more accurate relationship between LMQ relationship quality and AC. I included the respondent's length of time (or tenure) with the organization to identify if the relationship

quality between a leader and team member strengthens over time. The employee's gender and race can also limit their commitment towards an organization.

Results Interpretation

I used the SPSS output to interpret the results of the hypothesis evaluated in the current study. First, I analyzed the difference in median ranks between the two variables stated in each hypothesis tested from the results. If the SPSS output displays the median ranks between the two variables as equal, I accept the null hypothesis because the difference between the two variables is significant. In contrast, if the SPSS output displays that the median between the two variables is not equal, I reject the null hypothesis.

Threats to Validity

External Validity

The threat of external validity refers to the researcher's inability to identify a relationship between the study findings and the larger population (Shadish et al., 2001). A threat to external validity focuses on the researcher's selection of participants, setting, and history of the event studied. The researcher's poor choice in any of these criteria eliminates the opportunity to generalize any aspect of a larger population. Two potential external validity threats to the study were the sampling selection and the setting of the study. I addressed the sampling and setting selection through demographic questions that describe an individual's role in the CI initiative. I alleviated the potential threat in sampling by randomly selecting participants from a cluster of aerospace and automotive companies located in the coastal region of South Carolina. The participants selected for

the study are members of the manufacturing and quality engineers from aerospace and automotive manufacturing companies. Therefore, the potential findings can apply only to other product or service organizations that implement CI initiatives.

Internal Validity

The internal validity evaluates the validity of the study itself (Drost, 2011). Internal validity's primary purpose is to assure the researcher's ability to assess the study findings to identify the relationship between variables (Shadish et al., 2001). In addition, internal validity focuses on the participant's ability to respond to the survey instruments used in the study. The potential internal validity threats to this study were participant selection. The selection threat to the internal validity describes the researcher's ability to select participants who fit the group's criteria studied. I requested only the team leader and members from the CI department to participate in the study to address this internal validity threat.

Construct Validity

The construct validity focuses on how well the survey instrument measured the intended concept of the study (Singleton & Straits, 2010). The survey instruments used for this study have been validated and repurposed in several litera**ry** works. The survey instrument selected aligns with the intended concept of the study in measuring the leader-members social exchange quality, member's perception o**f** supervisor support, and employees' organizational commitment. I noticed that the test results reflected an interaction between a team leader and group members to confirm a valid representation of the construct in the measuring instrument. The test results between leaders and

members supported the researcher's decision to accept or reject the null hypotheses (Mochon & Schwartz, 2019).

Ethical Procedures

Researchers must uphold ethical standards when conducting research that offers transparency and accountability to the participants and communities involved (Ross et al., 2018). However, the researcher is accountable for taking precautions in researching with full consideration and ethical compliance through the university's institutional review board (IRB) to ensure the study's validity. The researcher must seek the approval of the IRB before performing the data collection in the field. The IRB approval # is 08-10-21-01587497.

Data collection comes with a unique set of ethical standards to protect the participants selected for the study. First, the researcher must stay in compliance with the recruitment processes of obtaining the sampling data. The recruitment process poses two major concerns on the ethical compliance in reaching permission from participants to complete a survey. The first significant concern regarded the participant's consent to take the online survey. To ensure the ethical standard in obtaining a participant's permission, I used SurveyMonkey as the survey instrument for this study. SurveyMonkey requires participants to accept the terms of taking the survey and extends the rights to participants to withdraw their survey at any time. If the sampling size were less than required due to an excessive number of incomplete surveys, I would have extended the participation period. The second concern regarded the confidentiality of the participant's information.

After the survey, SurveyMonkey does not disclose participants' information. In addition, the survey allowed participants to answer the questions anonymously.

Summary

Chapter 3 explained the procedures for implementing a quantitative correlation study on the relationship between leader-member relationship quality and AC. Chapter 3 included my rationale in selecting a quantitative correlation study, sampling procedure, software selection and instrumentation, data analysis plan, plans to address threats to validity, and an explanation of the ethical standards in participant recruitment and data collection of the study. The following chapter analyzes and interprets the data collected from the survey instrument. Then, I interpreted the data through statistical analysis and explained the findings. In conclusion, I propose recommendations on the direction of study and how this study progresses social change.

Chapter 4: Results

The purpose of this quantitative correlation study was to understand how an LMX relationship quality impacts a team member's commitment to participate in a CI initiative in aerospace and automotive organizations in South Carolina. The specific problem was that CI teams in aerospace and automotive manufacturing operations in South Carolina are unsuccessful in creating a high LMX relationship that inspires employee commitment and support of an LSS initiative. In the current study, I examined the mediating effect of PSS on project leader-team member social exchange quality within a CI deployment. In addition, the present study includes a moderated-mediation model on WO to center the research around relationship quality between the leader-member and member-member in a project setting.

This research addressed three research questions and their associated hypotheses: (a) How does a LMX relationship quality influence an individual commitment to a CI initiative? (b) What mediated effect does PSS have on the relationship between LMX relationship quality and an individual commitment to a CI initiative? (c) What influence does WO have on the relationship between LMX quality and team members' PSS? For each research question addressed, the null hypothesis indicated that no relationship between variables exists. The existence of a relationship was the alternative hypothesis to all three questions.

In Chapter 4, I summarize the data collection process, study results, and summary. I explain the difference between my intent to collect data and the actual data collection process. In the study results, I present findings from the data collection process using

statistical analysis. In the conclusion of Chapter 4, I answer the three research questions addressed in this study.

Data Collection

I initiated the data collection process through direct mail and social media invitations. The sample size required for this study was 48. I anticipated 132 responses because the target population covered three of the largest departments in manufacturing. The length of time in the data collection was 2 months. The data collection commenced in July 2021 and reached an acceptable sample size by September 2021. Although the online survey had an 86% response rate, the planned number of participants was unforeseen.

The discrepancy in the data collection was the difference between the planned number of participants and the actual number of responses. I used three approaches to reach potential volunteers for the online survey. The first attempt was a direct mail request to the 48 manufacturing companies to which I received zero replies. The second attempt was a Facebook page with membership to various groups in CI and lean manufacturing. In the 2 months of data collection, I received only one interaction. The final and successful attempt was in LinkedIn. The social media, LinkedIn helped find potential participate within the target population (see Stokes et al., 2019). In sending personal messages, I found and connected to potential candidates within the aerospace and automotive organization and asked for their participation in an online survey.

Participant Consent

In accepting a message request to connect, I asked volunteers to participate in an online research survey. If the potential volunteers accepted my request, I provided a link to the online survey. Before the volunteers could take the survey, they were required to review a consent form and agree to participate in the study. The consent form included information on the study purpose, the target population, and the expected number of volunteers. I provided contact information to the office of Walden University's IRB if the volunteer needed further assistance. The target population selected for this study offers generalizability and addresses the gap in research. Therefore, the volunteers could review the research results after this study and can discern how they can close the gap within their organization.

Survey Sections

Volunteers who agreed to the consent form had access to complete all sections of the survey. The survey consists of five sections, which included each volunteer's demographic and questions from a LMX, PSS, WO, and AC. All questions had a 5-point Likert scale from *strongly agree* to *strongly disagree*. I gave a thank you message to the volunteers who completed the survey. The average time volunteers spent taking the survey was 4 minutes and 17 seconds.

Responses Collected

I anticipated 132 participants from 48 manufacturing companies within the Coastal Region of South Carolina to participate in this online survey. The online survey reached 74 volunteers within the aerospace and automotive organizations through the

social media channel LinkedIn. The final number of respondents was 64 participants, with an 86% completion rate. Of the 64 participants, 13 of the surveys collected were missing data. I did not include any missing data as part of the research findings because these can impact the validity of the research study (see Dorazio, 2016). Therefore, I deemed only 51 of the responses usable.

Study Results

I exported the data collected from Survey Monkey into SPSS Version 27 statistical software. I removed all surveys with missing data to reach the final number of 51 usable responses. I used the respondent's data to analyze the demographics, descriptive statistics, and correlations between variables and performed assessments to replicate this study's research model. The demographic questions provided the background on respondents such as age, ethnicity, gender, certification in CI, industry type, and length of time with the organization.

Respondents' Demographics

Using SPSS Version 27 to conduct data analysis, I evaluated the demographic information of 51 respondents who completed the online survey. The results of the demographic of the 51 respondents in Table 1 indicated that most participants were White (55%), female employees (78%), employed in automotive (78%), had tenure over 5 years (49%), were between the ages of 45 to 54 (33%), and did not hold a certification in lean or six sigma (57%).

Table 1

Demographics

Variables	*n*	%
Gender	40	78%
Female	11	22%
Male		
Certification (Lean, Six Sigma)		
No	29	57%
Yest	22	43%
Mfg. Sector		
Aerospace	11	22%
Automotive	40	78%
Tenure		
Less than 1 year	7	14%
1 to 2 years	12	24%
3 to 5 years	7	14%
Over 5 years	25	49%
Ethnicity		
Asian or Pacific Islander	6	12%
Black or African American	12	24%
Hispanic or Latino	5	10%
Native American or American Indian	0	0%
White	28	55%
Other	0	0%
Age		
18-24 years old	0	0%
25-34 years old	14	27%
35-44 years old	5	10%
45-54 years old	17	33%
55 years or older	15	29%

Correlations and Descriptive Statistics

Table 2 provides the correlations and descriptive statistics for the scale variables. LMX is positively related to PSS and AC (r = .645, p < .01; and = .462, p < .01, respectively). LMX is unrelated to WO (r = .124, p < .05); therefore, WO has no impact on the strength of LMX, but PSS is unrelated to WO (r = .41, p < .05). Whereas PSS is positively related to AC (r = .478, p < .01). Age is the only control variable that has a significant effect on employee commitment (r = .440, p < .01).

Table2

Descriptive Statistics and Correlations

Variables	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1 Certification	1.43	0.5	-									
2 Mfg. Sector	1.78	0.415	0.168	-								
3 Tenure	2.98	1.14	0.226	0.16	-							
4 Gender	1.22	0.415	0.121	-0.073	-0.16	-						
5 Ethnicity	3.63	1.6	0.18	0.057	0.073	-0.087	-					
6 Age	3.65	1.18	.297*	.290*	.307*	-0.25	0.257	-				
7 LMX	1.9804	0.63278	0.204	-0.032	-0.039	-0.09	0.119	-0.186	-			
8 PSS	2.5539	0.64675	0.251	0.026	-0.093	-0.063	0.087	-0.066	.645**	-		
9 WO	3.9333	0.88694	-0.141	-0.094	0.169	-0.166	0.058	0.099	.124	-.041	-	
10 AC	2.2304	0.90945	-0.036	-0.131	-0.068	0.157	-0.053	-.440**	.462**	.478**	-.214	-

Note. n = 51, LMX = Leader-Member Exchange, PSS = Perceived Supervisor Support, WO = Workplace Ostracism, AC = Affective Commitment.
Certification: 1 = Yes, 2 = No; Mfg. Sector: 1 = Aerospace, 2 = Automotive; Gender: 1 = Male, 2 = Female

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

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

Research Question and Hypothesis 1

RQ1: How does an LMX relationship quality influence an individual commitment to a CI initiative?

$H_0$1: There is no significant relationship between LMX relationship quality and an individual commitment to an LSS deployment.

H_a1: There is a significant relationship between LMX relationship quality and an individual commitment to an LSS deployment.

In the Hypothesis 1 test, I evaluated the LMX relationship quality influence on individual commitment considering the respondent's demographic as controlling variables (presented in Tables 3 and 4). The results of a multiple regression analysis predicted a significant relationship (p = .005) between LMX relationship quality and individual commitment to an LSS deployment. Table 3 provides the regression summary with five control variables predictors. The results of regression were significant F (7, .602) = 3.484, $p < .01$, $R^{2adj} = .258$, indicating approximately 25.8% of the variance in AC accounted for by the model.

Table 3

RQ1 Model Summary with Control Variables

						Change Statistics			
Model	*R*	*R* Square	Adj. *R* Square	*SE* of the Estimate	*R* Square Change	*F* Change	*df1*	*df2*	Sig. *F* Change
1	0.602[a]	0.362	0.258	0.78337	0.362	3.484	7	43	0.005

a. Predictors: (Constant), Certification, Mfg. Sector, Tenure, Gender, Ethnicity, Age, LMX

b. Dependent Variable: Affective Commitment (AC)

Table 4 provides the coefficients with all five control variables. The model for RQ1 (presented in Table 4) was significantly based on the *F* test ($p < .05$). The age of the respondents ($p = .033$) and LMX ($p = .003$) was positively related to AC. The certification level, type of manufacturing sector, tenure, gender, and ethnicity were unrelated to the respondent's commitment to their organization. The age coefficient was $\beta = -.256$, indicating a negative relationship to the employee's commitment. The negative coefficient for age as a predictor of an employee's commitment to LSS deployment indicated a .256 decrease in age for each point increase in employee's commitment. However, the coefficient of LMX was $\beta = .613$, indicating a strong contribution to employee's commitment. The positive coefficient for LMX indicated a .613 increase in LMX for each point increase in employee commitment. Therefore, I reject the null hypothesis ($H_0 1$).

Table 4

RQ1 Coefficients with Control Variables

		Unstandardized Coefficients		*Standardized Coefficents*			*95.0% Confidence Interval for B*	
Model		*β*	*SE*	*Beta*	*t*	*Sig.*	Lower Bound	Upper Bound
1	(Constant)	1.604	0.865		1.854	0.071	-0.141	3.348
	Certification	-0.104	0.256	-0.057	-0.406	0.687	-0.62	0.412
	Mfg. Sector	-0.033	0.281	-0.015	-0.119	0.906	-0.599	0.533
	Tenure	0.07	0.104	0.087	0.668	0.508	-0.141	0.28
	Gender	0.289	0.291	0.132	0.993	0.326	-0.298	0.876
	Ethnicity	-0.001	0.073	-0.002	-0.017	0.987	-0.149	0.146
	Age	-0.256	0.116	-0.332	-2.202	0.033*	-0.491	-0.022
	LMX	0.613	0.192	0.426	3.191	0.003**	0.226	1.000

Note.*p-value < .05; **p-value <.01

b. Dependent Variable: Affective Commitment (AC)

Research Question and Hypothesis 2

RQ2: What mediated effect does PSS have on the relationship between LMX relationship quality and an individual commitment to a CI initiative?

$H_0$2: LMX relationship quality does not influence team members' AC through the mediated effect of PSS.

H_a2: LMX relationship quality influences team members' AC through the mediated effect of PSS.

In the Hypothesis 2 test, I evaluated the relationship between LMX relationship quality and employees' AC through the mediated effect of PSS. The results of a multiple regression analysis predicted a significant relationship (p = .018) between PSS and LMX

relationship quality on individual commitment. Table 5 provides the regression summary with five control variables as predictors. The results of regression were significant F (8, .666) = 6.109, $p < .05$, $R^{2adj} = .337$, indicating approximately 33.7% of the variance in AC accounted for by the model.

Table 5

RQ2 Model Summary with Control Variables

						Change Statistics			
Model	*R*	*R* Square	Adj. *R* Square	*SE* of the Estimate	*R* Square Change	*F* Change	*df1*	*df2*	Sig. *F* Change
1	.666[a]	0.443	0.337	0.7406	0.018	6.109	1	42	0.018

a. Predictors: (Constant), Certification, Mfg. Sector, Tenure, Gender, Ethnicity, Age, LMX, PSS

b. Dependent Variable: Affective Commitment (AC)

Table 6 provides the coefficients with all five control variables. The model for RQ2 revealed a statistically significant relationship based on the F test ($p<.05$). Using Hayes's (2018) PROCESS macro in SPSS, Version 27 to examine the mediated effect of PSS on LMX relationship quality and AC. The age of the respondents ($p = .021$) was negatively related to employee's AC, whereas PSS ($p = .018$) was positively related to employee's AC. The certification level, type of manufacturing sector, tenure, gender, and ethnicity were unrelated to AC to their organization. The age coefficient was $\beta = -.264$ indicated a negative relationship to AC. The negative coefficient for age as a predictor of employee's commitment to LSS deployment indicated a .264 decrease in age for each point increase in employee's AC. However, the mediated effect of the coefficient PSS was $\beta = .537$, which indicated a solid contribution to employees' AC. The positive

coefficient for PSS indicated a .537 increase in PSS for each point increase in AC. Therefore, I reject the null hypothesis ($H_0$2).

Table 6

RQ2 Coefficients with Control Variables

		Unstandardized Coefficients		*Standardized Coefficents*			*95.0% Confidence Interval for B*	
Model		*β*	*SE*	*Beta*	*t*	*Sig.*	Lower Bound	Upper Bound
1	(Constant)	0.962	0.858		1.121	0.269	-0.77	2.694
	Certification	-0.206	0.245	-0.113	-0.839	0.406	-0.701	0.289
	Mfg. Sector	-0.058	0.265	-0.027	-0.219	0.828	-0.594	0.478
	Tenure	0.106	0.1	0.133	1.066	0.292	-0.095	0.308
	Gender	0.32	0.276	0.146	1.16	0.253	-0.236	0.876
	Ethnicity	0.002	0.069	0.004	0.031	0.975	-0.137	0.142
	Age	-0.264	0.11	-0.343	-2.403	0.021*	-0.486	-0.042
	LMX	0.275	0.227	0.191	1.21	0.233	-0.184	0.734
	PSS	0.537	0.217	0.382	2.472	0.018*	0.099	0.976

Note.*p-value < .05, **p-value < .01

b. Dependent Variable: Affective Commitment (AC)

Research Question and Hypothesis 3

RQ3: What influence does WO have on the relationship between LMX quality and team members' perception of supervisor support?

H_o3: WO moderated effect does not influence the relationship between PSS and LMX quality such that the negative relationship is more robust when team members' level of WO is high (vs. low).

H_a3: WO moderated effect has an influence on the relationship between PSS and LMX quality such that the negative relationship is stronger when the team members' level of WO is high (vs. low).

In the Hypothesis 3 test, I evaluated the relationship between LMX relationship quality and PSS through the moderated mediation effect of WO. The results of a multiple regression analysis predicted a significant relationship (p = .001) between workplace and LMX relationship quality on PSS. Table 7 provides the regression summary with five control variables and the LMX-WO interactions as predictors. The results of regression were significant F (9, .691) = 4.154, p<.001, R^{2adj} = .362, indicating approximately 36.2% of the variance in PSS accounted for by the model.

Table 7

RQ3 Model Summary with Control Variables

						Change Statistics			
Model	*R*	*R Square*	Adj. *R* Square	*SE* of the Estimate	*R Square* Change	*F* Change	*df1*	*df2*	*Sig. F* Change
1	0.691	0.477	0.362	0.51655	0.477	4.154	9	41	0.001

a. Predictors: (Constant), Certification, Mfg. Sector, Tenure, Gender, Ethnicity, Age, LMX, WO, LMX x WO

b. Dependent Variable: Perceived Supervisor Support (PSS)

Table 8 provides the coefficients with all five control variables and LMX-WO interactions. The model for RQ2 was significantly based on the F test (p<.001). Using Hayes's (2018) PROCESS macro in SPSS, Version 27 to examine the moderated mediation effect of WO on LMX relationship quality and PSS. LMX (p = .013, p<.05)

was positively related to PSS. The certification level, type of manufacturing sector, tenure, gender, and ethnicity. LMX coefficient was β = 1.337 indicated a positive relationship to PSS. WO (p = .321) and LMX-WO interaction (p = .175) were not significant in the model. However, the slope interaction plot (Fig. 2) between LMX and WO indicated that high-LMX strongly contributes to PSS when WO is low. Therefore, I reject the null hypothesis ($H_0$3).

Table 8

RQ3 Coefficients with Control Variables

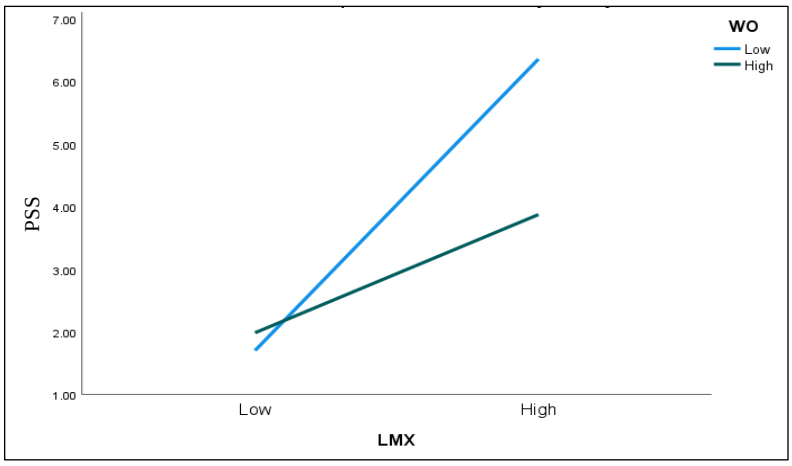
		Unstandardized Coefficients		*Standardized Coefficents*			*95.0% Confidence Interval for B*	
Model		*β*	*SE*	*Beta* [c]	*t*	*Sig.*	Lower Bound	Upper Bound
1	(Constant)	0.294	1.062		0.277	0.783	-1.85	2.438
	Certification	0.128	0.175	.099	0.73	0.469	-0.225	0.48
	Mfg. Sector	0.008	0.187	0.005	0.042	0.966	-0.37	0.386
	Tenure	-0.045	0.071	-0.08	-0.638	0.527	-0.188	0.098
	Gender	-0.099	0.194	-0.063	-0.509	0.614	-0.49	0.293
	Ethnicity	0.012	0.05	0.031	0.25	0.804	-0.088	0.113
	Age	0.006	0.079	0.011	0.079	0.938	-0.153	0.165
	LMX	1.337	0.515	1.308	2.595	0.013*	0.296	2.377
	WO	0.244	0.243	0.335	1.005	0.321	-0.247	0.736
	LMX x WO	-0.173	0.125	-0.871	-1.38	0.175	-0.426	0.080

Note.*p-value < .05;

b. Dependent Variable: Perceived Supervisor Support (PSS)

Figure 2

Slope Interaction of LMX and WO



Summary

In chapter 4, I presented the research purpose as reinstatement to the final study. In addition, I explained the data collection procedure and the necessity of participant consent of the study. I provided an outline of the survey section and how I collected responses in the survey. In the last section of chapter 4, I discussed the data analysis of the fifty-one respondents and the association between the study's results and three questions and hypotheses. In the first research question, LMX relationship quality was statistically significant along with the age of the respondents. Based on the multiple linear regression model analysis for independent and control variables in RQ 1, I rejected the null hypothesis ($H_0$1). The second research question revealed a statistically significant with PSS and the age of the respondents. At the same time, PSS had a positive

relationship with AC while the respondent's age has a negative relationship. Based on the multiple linear regression model analysis of the independent and control variables in RQ2, I rejected the null hypothesis ($H_0$2). In the third research question, the moderated mediation effect of WO on LMX relationship quality and AC. LMX relationship quality revealed a statistically significant to PSS. All five control variables failed to provide a statistical significance to PSS. Based on the multiple linear regression model analysis of the independent and control variables in RQ3, I rejected the null hypothesis ($H_0$3).

Chapter 5 focuses on the conclusion and recommendations that align with the study's research purpose, questions, and hypotheses. In addition to the recommendation, I provide an appraisal of how this study supports the theoretical framework on LMX relationship quality, WO, PSS, and AC. Chapter 5 concludes with the study's implications for positive social change in LSS deployment and guidance to future research.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative correlation study was to understand how LMX relationship quality can inspire team members' AC to participate in a CI deployment within the aerospace and automotive organizations in South Carolina. In the present study, I examined the mediating effect of PSS on LMX relationship quality and team members' AC. In addition, I discussed the moderated mediation effect of work ostracism on LMX relationships and PSS to center the research around relationship quality between the leader-member and member-member in a project setting. I used age, gender, tenure, manufacturing sector, ethnicity, and manufacturing sector as the controlling variables in the data analysis.

In this chapter, I review the study's findings related to the research purpose in addressing three research questions and their associated hypotheses on the mediated effect of PSS on LMX quality and AC. I conducted a series of multiple regression tests to answer the research question. The first research question revealed a positive relationship with LMX and a negative relationship with the control variable (age) to the AC. The second research question revealed a positive relationship between PSS and AC, and the control variable (age) had a negative relationship to AC. In the third research question, LMX relationship quality revealed a positive relationship to PSS. I rejected all three associated null hypotheses in this study.

Interpretation of Findings

A total of 64 participants responded by completing the online survey through SurveyMonkey. Of the 64 responses, I removed 13 incomplete surveys. A total of 51

responses were deemed usable. Demographics of the usable responses indicated that 78% of the participants were women (*n* = 40, 78%) and 22% were men (*n* = 11, 22%). Most participants did not have a lean or six sigma certification (*n* = 29, 57%) and worked in the automotive manufacturing sector (*n* = 40, 78%). Half of the participants had over 5 years of service with their current organization (*n* = 25, 49%). The most frequent age of the participants was between 45 and 54 years old (*n* = 17, 33%) and 55 years or older (*n* = 15, 29%). The ethnicity of the participants was White (*n* = 28, 55%), Black or African American (*n* = 12, 24%), Asian (*n* = 6, 12%), and Hispanic or Latino (*n* = 5, 10%).

The statistical analysis of the data supported the arguments presented in Chapter 2. The responses from the 51 participants to the Likert-type questions reflected a statistical significance between independent and dependent variables illustrated in the research model (see Figure 1). The participants' responses indicated a statistical significance between LMX quality and employees' age to AC. However, the mediated effect of PSS and the employee's age indicated a solid contribution to AC. The moderated-mediation impact of WO on LMX quality and PSS indicated a statistical significance between LMX and PSS when WO was low.

Research Question 1

RQ1: How does an LMX relationship quality influence an individual commitment to a CI initiative?

$H_0$1: There is no significant relationship between LMX relationship quality and an individual commitment to an LSS deployment.

H_a1: There is a significant relationship between LMX relationship quality and an individual commitment to an LSS deployment.

The results of the regression analysis revealed the *R*-Square adjustment value of .258 with a *p*-value of .005, indicating that the employee's age (β = -.256, $p = .033$) and LMX relationship quality (β = .613, $p = .003$) was statistically significant in the relationship between LMX quality and AC. The other control variables, such as certification ($p = .687$), manufacturing sector ($p = .906$), tenure ($p = .508$), gender ($p = .326$), and ethnicity ($p = .987$) indicated no statistical significance in the relationship of LMX quality and AC. The employee's age was negatively related to the LMX quality and AC relationship, whereas LMX quality was positively related to employees' AC. The results indicated a significant relationship between LMX relationship quality and employees' AC. The lesser age employees and high-LMX are more likely to have a stronger AC. Based on the results of the data analysis, the null hypothesis H_01 for RQ1 was rejected. The data analysis results validated the alternative hypothesis for RQ1 that indicated the statistical significance in the relationship between LMX quality and AC.

Research Question 2

RQ2: What mediated effect does PSS have on the relationship between LMX relationship quality and an individual commitment to a CI initiative?

H_02: LMX relationship quality does not influence team members' AC through the mediated effect of PSS.

H_a2: LMX relationship quality influences team members AC through the mediated effect of PSS.

The results of the regression analysis revealed an *R*-Square adjustment of .337 with a *p*-value of .018, indicating that the employees' age (β = -.264, *p* = .021) and the mediated effect of PSS (β = .537, *p* = .018) was statistically significant to LMX quality and AC relationship. The others control variables, such as certification (*p* = .406), manufacturing sector (*p* = .828), tenure (*p* = .292), gender (*p* = .253), and ethnicity (*p* = .975) indicated no statistical significance in the relationship of LMX quality and AC. The age coefficient of -.264 indicated that an employee's age was negatively related to LMX quality and AC. The PSS coefficient of .537 indicated a strong contribution to LMX quality and AC relationship. The results indicated that an LMX quality does influence an employee's AC. The lesser age employees with high PSS are more likely to have a strong AC. Based on the results of the data analysis, I rejected the null hypothesis $H_0$2 for RQ2. The data analysis results validated the alternative hypothesis for RQ2 that indicated the statistical significance in the relationship between LMX quality and AC.

Research Question 3

RQ3: What influence does WO have on the relationship between LMX quality and team members' PSS?

$H_0$3: WO moderated effect does not influence the relationship between PSS and LMX quality such that the negative relationship is more robust when team members' level of WO is high (vs. low).

H_a3: WO moderated effect has an influence on the relationship between PSS and LMX quality such that the negative relationship is stronger when the team members' level of WO is high (vs. low).

The regression analysis results revealed an *R*-Square adjustment of .362 with a *p*-value of .001, revealed LMX quality (β = 1.337, $p = .013$) was statistically significant to LMX quality and the AC relationship. The control variables indicated no statistical significance in the relationship of LMX quality and PSS, and WO ($p = .321$) was not statistically significant in the relationship. At the same time, LMX quality has a direct effect on employees' PSS. The results of the LMX-WO slope interaction indicated that employees with a high LMX quality and high WO are more likely to have high PSS. Based on the results of the data analysis, I rejected the null hypothesis H_03 for RQ3. The data analysis results validated the alternative hypothesis for RQ3 that indicated the statistical significance in the relationship between LMX quality and AC.

The study results confirmed what is identifiable in management literature: There is a relationship between PPS and LMX quality to employee commitment. The association was significantly positive for PPS and LMX quality on employee commitment. The findings of RQ1 aligned with Li, Zhu, et al.'s (2018) perspective on the effect of LMX quality on employee commitment, whereas LMX quality was positively related to employee commitment. The findings of RQ2 aligned with Wang et al.'s (2019) perspective on LMX quality impact on employees' behavior and perception of organizational commitment. As discussed in Rashid et al. (2018) and Li, Liu et al.'s

(2018) study, the findings of RQ3 aligned with the high level of LMX quality and low level of WO, which can positively influence PSS.

As presented in Chapter 2, there were many critical factors to employee commitment, including employee intention to quit (Haque et al., 2019), perceived organizational support (Gigliotti et al., 2019), job mobility (Bangwal & Tiwari, 2019), (Rockmann & Ballinger, 2017), organizational identity (Avanzi et al., 2018), personal benefits (Privalko, 2019), and psychological contract (Kim, Poulston, et al., 2017). This study was unique in understanding the impact of PSS on the relationship between the level of LMX quality and employee commitment. Other research studies within the management literature have focused on the relationship between LMXand AC regarding leadership support in various industries. In this study, I focused on the relationship between LMX quality and members' commitment to CI in a manufacturing organization.

Limitations of the Study

As indicated in Chapter 1, the limitations disclosed present awareness to readers of potential issues in the study (see Ross & Zaidi, 2019). There were seven limitations associated with this correlation study. The first limitation was the potential for researcher bias due to having more than 10 years of experience in using LSS in the manufacturing and service sectors. The second limitation was that selecting two manufacturing operations might not have represented the problems of all manufacturing operations in South Carolina attempting to implement LSS. The third limitation involved choosing manufacturing operations only in South Carolina that might not have represented all domestic and global manufacturing operations. The fourth limitation applied to having an

adequate aerospace and automotive manufacturing operations sample with prior experience in LSS implementation. The fifth limitation involved participants in the study as they may have shared different views on the expectations and support of the team leader during a LSS initiative. The sixth limitation was the online survey available for participants to respond at their leisure. The seventh limitation was that the online survey questions may not have extracted honest employee assessment of leader-member relationship quality during an LSS initiative. In addition, team leaders' responses to the online survey questions may have concealed their reasons for limited support in maintaining employee commitment.

Recommendations

Based on the data analysis results in this study, the relationship quality in a leader-member social exchange is essential to employee AC. The answers to three questions were to understand why there were unsuccessful implementation of CI initiatives in a manufacturing setting. The data analysis results of RQ1 indicated that LMX quality and employee's age directly affect employee's AC. In contrast, the findings of RQ2 indicated that employees' age and PSS indirectly affect LMX quality and AC relationship. The results of RQ3 indicated that LMX quality directly affects employees' PSS and LMX quality; therefore, the lesser age employees are more likely to have a higher LMX relationship quality and AC than any other age group. Based on these findings, further exploration of LMX relationship quality in CI could provide valuable insights to team leaders on supporting employee's commitment through the duration of a CI or six sigma deployments.

This study serves as the baseline for creating research models that identify the effect of LMX quality on power distance relationships and employees' organizational identity. Based on the findings of RQ1, further research on the influence of power distance within a high-LMX relationship is vital to developing a comprehensive understanding of the impact on employees' AC (see Ouerdian et al., 2021). However, different age groups and tenure with the current organization may influence the team leader's level of power distance in supporting employee commitment. Ouerdian et al. (2021) determined that the power distance relationship parallels the level of LMX quality to increasing employees' AC. As the findings of RQ2 indicated an indirect effect of PSS in employees, further research on employee organizational identity within a high-LMX relationship is vital to developing a comprehensive understanding of the influence of employee status on AC. Zhao et al. (2019) determined that employee organizational identity could impact a leader-member social exchange relationship quality in evasive hiding information limiting employee engagement. The employee's age and tenure with the current organization may also influence the organizational identity (Klimchak et al., 2019). The findings of RQ3 indicated a direct effect of LMX quality on PSS, and further exploration of LMX differentiation is vital to developing a comprehensive understanding of the impact of the variant in LMX quality on PSS. In addition, I strongly recommend further exploration of LMX differentiation's influence on LMX quality and organizational identity relationship (see Wang et al., 2019). Wang et al. (2019) explained how leader-member social exchange relationship quality could foster an employee's organizational insider status that reduces the perception of job insecurity.

The findings in RQ1 and RQ2 indicated the employee's age as statistically significant to the relationship between LMX quality and AC. I suggest further research include employees' salary range in the demographic information. The inclusion of the salary information would allow researchers to examine whether the variant in salary influences employee commitment. In addition, the salary information would also allow a researcher to examine the relationship between LMX quality and PSS or organizational identity.

In the scope of the recommendation to further explore the study on LMX relationship quality in CI, I suggest larger sample sizes and the inclusion of other specific industries to increase the statistical significance of employee's AC. In this study, I selected a population from the aerospace and automotive manufacturing companies within South Carolina. Increasing the sample size to U.S.-based manufacturing companies may increase the statistical significance across multiple factors that further validate the relationship between LMX relationship quality and AC in CI deployments. In addition to larger sample size, another recommendation for future research is a qualitative study conducted within a specific industry to acquire a deeper understanding of LMX relationship quality in CI.

Implications for Positive Social Change

The data analysis of RQ1, RQ2, and RQ3 reinforces the association between LMX quality, PSS, and employee's age and AC. The findings of RQ1 support the association between LMX relationship quality and AC with a negative relationship to employee's age. The results of RQ2 support the association between LMX relationship

quality and AC through the mediated effect of PSS with a negative relationship to an employee's age. However, the findings of RQ3 support the association of LMX relationship quality to PSS with no statistical significance to WO. The results of this study could have theoretical and practical implications for how LMX relationship quality and PSS can influence a positive social change in employees' AC within a CI team setting.

Theoretical Implications

The results of RQ1, RQ2, and RQ3 support the theoretical foundation of this study. The theoretical framework I used for the present study was on Kauppila's (2016) LMX quality. Kauppila explained that social exchange quality between a team leader and members has a vital role in an employee's AC. The results of RQ1 reveal the direct effect of LMX quality and AC. In the findings of RQ1, an employee's age was negatively related to AC. The findings in RQ1 suggest an opportunity for positive social change in lesser age employees given the responsibility of shared leadership to encourage high-LMX and increase commitment in the team. The results of RQ2 reveal the mediated effect of PSS on the relationship between LMX quality and AC. In the findings of RQ2, PSS and employee age had an indirect impact on AC. The results of RQ3 reveal the moderated mediation effect of WO on the relationship between LMX quality and PSS. In the findings of RQ3, LMX quality was positively related to PSS. At the same time, WO did not indicate a statistical significance to PSS. The slope interaction between LMX and WO indicated a high PSS with a low WO and high LMX quality. The answering of RQ1, RQ2, and RQ3 indicated that the association between LMX quality, PSS, and employees'

age could affect an employee's AC. The results of this study could apply to the existing policies in CI, which may extend to positive social changes in several practical implications to consider.

Practical Implications

The result of the present study applies to the current practice in implementing CI initiatives in a manufacturing setting. The results of RQ1, RQ2, and RQ3 revealed that high LMX Quality and PSS could have a positive social change on the CI outcomes in aerospace and automotive manufacturing organizations in the coastal region of South Carolina. A high LMX could contribute to team members' job satisfaction with employees from the lesser age group (Shaikh et al., 2019). With a high LMX, team leaders and members could develop trust and loyalty to each other. Given the employee age contributing to high LMX quality and PSS, reinforcing collaboration between team leaders and members could promote a high PSS across age groups. Team leaders must remain cognizant of the issues that could impact an LMX quality in developing checkpoints throughout the project to ensure all members maintain commitment from the start of implementation. A low LMX could be contributing to an employee's organizational identity with the leader and other team members (Niu et al., 2018). In addition, a low-LMX relationship could contribute to the team's underperforming or employee work relationship quality due to limited supervisor support (Chiniara & Bentein, 2018; Manata, 2019;). Although RQ3 findings indicated that WO was statistically unrelated in the relationship between LMX quality and PSS, a slope interaction graph (fig. 2) revealed that the interaction of high LMX and low WO could be

the contributing factor to high PSS. A positive social change in professional and development could prevent further mistreatment and limited supervisor support. Including conflict resolution and team-building training within the organization's six sigma certification program could prepare leaders and members to work together effectively through CI deployments.

Conclusions

The literature I reviewed for the present study included discussions and findings from multiple industries to understand the critical factors of increasing employees' AC through the relationship of high LMX and PSS. To know if this relationship extended to CI teams within the aerospace and automotive organizations in coastal regions of South Carolina, I conducted this quantitative correlational study. After examining fifty-one usable participants' responses, this study's findings revealed that employees' AC in CI deployment was consistent across aerospace and automotive organizations. These findings revealed a universal issue of leadership support within the CI groups.

With the level of social exchange quality between the team leader and members within the CI teams being relevant to the AC and PSS, the LMX quality theory was the theoretical framework used in the study. Researchers on LMX quality have determined that a High-LMX increases employee AC (Kauppila, 2016). Fostering supervisor support, team leaders who focus on ensuring a high LMX with all team members could generate reciprocity of trust and loyalty that inspire employees to support a quality-excellence culture (Haerizadeh & Sunder, 2019). A high LMX relationship and PSS is the critical factor to a high AC.

To improve LMX quality and supervisory support, team leaders must remain cognizant of the issues that could impact an LMX quality in developing one-to-one checkpoints throughout the project to ensure all members maintain the level of commitment from the start of implementation. Given that the employee age contributed to high LMX quality and PSS, reinforcing collaboration between team leaders and members could promote a high PSS across age groups. To prevent mistreatment between leaders and members, the inclusion of conflict resolution and team-building training within the organization's six-sigma certification program could help prepare potential leaders and members to work effectively together through CI deployments. The higher the LMX quality relationship between team leaders and members, the higher PSS and AC occurs with all members of the CI initiatives. High LMX quality increases the success of CI implementation and organizational outcomes.

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Appendix A: Aerospace and Automotive Manufacturers

Company Name	Industries	NAICS	# Of Emply	County
Autoneum North America, Inc.	Automotive	333249 - Other Industrial Machinery Manufacturing	501-1000	Aiken
BAE Systems Land & Armaments	Aerospace & Aviation	336992 - Military Armored Vehicle, Tank, and Tank Component Manufacturing	101-250	Aiken
Bridgestone Americas Tire Operations, LLC (ORR Plant)	Automotive	326211 - Tire Manufacturing (except Retreading)	251-500	Aiken
Bridgestone Americas Tire Operations, LLC (PSR Plant)	Automotive	326211 - Tire Manufacturing (except Retreading)	1000+	Aiken
MTU America, Inc. (SC)	Automotive	333618 - Other Engine Equipment Manufacturing	101-250	Aiken
Newman Technology of South Carolina, Inc.	Automotive	336390 - Other Motor Vehicle Parts Manufacturing	101-250	Aiken
TTX	Automotive	336510 - Railroad Rolling Stock Manufacturing	101-250	Aiken
The Carlstar Group (SC)	Automotive	326211 - Tire Manufacturing (except Retreading)	101-250	Aiken
Delavan Spray, LLC (Collins Aerospace) (SC) - Bamberg	Aerospace & Aviation	332919 - Other Metal Valve and Pipe Fitting Manufacturing	101-250	Bamberg
Freudenberg Sealing Technologies (Tobul Accumulator, Inc.)	Aerospace & Aviation	332420 - Metal Tank (Heavy Gauge) Manufacturing	101-250	Bamberg
Dayco Products, LLC (SC) - Williston	Automotive	326220 - Rubber and Plastics Hoses and Belting Manufacturing	101-250	Barnwell
Century Aluminum Company (SC)	Aerospace & Aviation	331313 - Alumina Refining and Primary Aluminum Production	251-500	Berkeley
Cummins Turbo Technologies	Automotive	333618 - Other Engine Equipment Manufacturing	501-1000	Berkeley
IFA Rotorion NA, LLC (SC) - Summerville	Automotive	336350 - Motor Vehicle Transmission and Power Train Parts Manufacturing	251-500	Berkeley
Parker Hannifin Corporation (Gas Turbine Fuel Systems)	Aerospace & Aviation	333611 - Turbine and Turbine Generator Set Units Manufacturing	101-250	Berkeley

TRU Simulation + Training, Inc.	Aerospace & Aviation	334519 - Other Measuring and Controlling Device Manufacturing	101-250	Berkeley
Volvo Car USA, LLC (SC)	Automotive	336111 - Automobile Manufacturing	501-1000	Berkeley
Amalie Oil Co. (SC) - Charleston (formerly Delfin Group USA)	Automotive	324191 - Petroleum Lubricating Oil and Grease Manufacturing	51-100	Charleston
Cummins Technical Center	Automotive	336310 - Motor Vehicle Gasoline Engine and Engine Parts Manufacturing	51-100	Charleston
Eaton Corporation Aerospace Division	Aerospace & Aviation	335311 - Power, Distribution, and Specialty Transformer Manufacturing	101-250	Charleston
Gear Design & Manufacturing/AAM (formerly TorkTeq)	Automotive	336350 - Motor Vehicle Transmission and Power Train Parts Manufacturing	51-100	Charleston
Hubner Manufacturing Corporation	Automotive	326299 - All Other Rubber Product Manufacturing	51-100	Charleston
MAHLE Behr Charleston, Inc.	Automotive	336390 - Other Motor Vehicle Parts Manufacturing	501-1000	Charleston
Mercedes-Benz Vans, LLC (Daimler Vans Manufacturing, LLC)	Automotive	336211 - Motor Vehicle Body Manufacturing	251-500	Charleston
SKF Aero Bearing Service Center	Aerospace & Aviation	332510 - Hardware Manufacturing	51-100	Charleston
Streit USA Armoring, LLC	Automotive	336992 - Military Armored Vehicle, Tank, and Tank Component Manufacturing	51-100	Charleston
Venture Aerobearings, LLC	Aerospace & Aviation	332991 - Ball and Roller Bearing Manufacturing	51-100	Charleston
Meritor, Inc. (SC) - Manning	Automotive	336340 - Motor Vehicle Brake System Manufacturing	101-250	Clarendon
SarlaFlex LLC, USA	Automotive	313110 - Fiber, Yarn, and Thread Mills	101-250	Colleton
Robert Bosch LLC (SC) - Charleston	Automotive	336310 - Motor Vehicle Gasoline Engine and Engine Parts Manufacturing	1000+	Dorchester
WABCO Compressor Manufacturing Company	Automotive	333912 - Air and Gas Compressor Manufacturing	101-250	Dorchester

Honda of South Carolina Mfg., Inc.	Automotive	336999 - All Other Transportation Equipment Manufacturing	251-500	Florence
Johnson Controls International (SC) - Florence (2)	Automotive	331410 - Nonferrous Metal (except Aluminum) Smelting and Refining	101-250	Florence
Akebono Brake Corporation (SC)	Automotive	336340 - Motor Vehicle Brake System Manufacturing	501-1000	Lexington
Ansaldo STS USA, Inc.	Automotive	334290 - Other Communications Equipment Manufacturing	251-500	Lexington
Hansen International, Inc.	Automotive	336390 - Other Motor Vehicle Parts Manufacturing	101-250	Lexington
Michelin North America, Inc. (US #5)	Automotive	326211 - Tire Manufacturing (except Retreading)	1000+	Lexington
AVM Industries	Automotive	336390 - Other Motor Vehicle Parts Manufacturing	101-250	Marion
GKN Aerospace South Carolina, Inc. (Assembly)	Aerospace & Aviation	336413 - Other Aircraft Parts and Auxiliary Equipment Manufacturing	251-500	Orangeburg
GKN Aerospace South Carolina, Inc. (Manufacturing)	Aerospace & Aviation	336413 - Other Aircraft Parts and Auxiliary Equipment Manufacturing	101-250	Orangeburg
Hikari USA Inc.	Automotive	336350 - Motor Vehicle Transmission and Power Train Parts Manufacturing	51-100	Orangeburg
Koyo Bearings NA, LLC (JTEKT Group) - Orangeburg	Automotive	332991 - Ball and Roller Bearing Manufacturing	501-1000	Orangeburg
QM Group (SC)	Automotive	326199 - All Other Plastics Product Manufacturing	51-100	Orangeburg
American Solid Woven Corporation	Aerospace & Aviation	313210 - Broadwoven Fabric Mills	51-100	Richland
PurePower Technologies, Inc.	Automotive	336310 - Motor Vehicle Gasoline Engine and Engine Parts Manufacturing	251-500	Richland
Caterpillar, Inc. (SC) - Sumter (2)	Automotive	333995 - Fluid Power Cylinder and Actuator Manufacturing	251-500	Sumter
Continental Tire the Americas, LLC (SC) - Sumter	Automotive	326211 - Tire Manufacturing (except Retreading)	1000+	Sumter
EMS-Chemie (North America), Inc.	Aerospace & Aviation	325211 - Plastics Material and Resin Manufacturing	51-100	Sumter

Appendix B: Questionnaire

1. How long have you been employed with your current organization?
2. What gender do you identify as?
3. Please specify your ethnicity.
4. What is the highest degree or level of education you have completed?
5. What level of experience do you in continuous improvement?
6. I do work for my supervisor that goes beyond what is specified in my job description.
7. I am willing to apply extra efforts beyond those normally required, to further the interests of my workgroup.
8. I am impressed with my supervisor's knowledge of his/her job.
9. I respect my supervisor's knowledge and competence on the job.
10. I admire my supervisor's professional skills.
11. My supervisor cares about my opinions.
12. My work supervisor cares about my well-being.
13. My supervisor strongly considers my goal and values.
14. My supervisor shows very little concern for me.
15. Your greetings have gone unanswered at work.
16. Others at work shut you out of the conversation.
17. Others at work treated you as if you were not there.
18. Others at work did not invite you or ask if you wanted anything when they went out for a coffee break.

19. Others ignored you at work.

20. I feel a strong sense of belonging to my organization.

21. I feel personally attached to my work organization.

22. I am proud to tell others that I work at my organization.

23. Working at my organization has a great deal of personal meaning to me.

24. I would be happy to work at my organization until I retire.

25. I really feel that problems faced by my organization are also my problems.