THE MODERATING EFFECT OF TRUST ON LEADERSHIP STYLE AND KNOWLEDGE SHARING IN THE FINANCIAL SERVICES INDUSTRY: AN EXPLANATORY STUDY

by

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Abstract

Upon examination of the literature about contingency theory related to knowledge sharing, a pattern developed where the data was distributed around the explanatory relationship between leadership style and trust and the explanatory relationship between trust and knowledge sharing behavior, but there was no data to explain the relationship between leadership style and knowledge sharing behavior. The same examination of the literature revealed that a study of knowledge sharing behavior in the financial services industry did not exist. This study filled that gap by examining the factor of trust type, made up of affective trust and cognitive trust, to find if trust type could moderate the explanation of contingent fit between leadership style and knowledge sharing behavior within the financial services industry. The study was conducted as a quantitative explanatory analysis using a survey as the instrument of data collection. The survey was administered to a sample of 113 employees of the financial services industry with 63 female participants age 23-64 and 55 male participants age 21-64. The data was analyzed using a multiple moderated regression analysis with the t-score, beta, and significance level as the outcome measurement. The data resulted in leadership style having a large and statistically significant impact on the outcome of knowledge sharing behavior, trust type having a moderate and statistically significant impact, and a lack of a statistically significant interaction between leadership style and trust towards knowledge sharing behavior. The study concluded that leadership style does have the ability to guide knowledge sharing behavior, independent of trust, but that the coexistence of leadership style and trust, noninteracting, had a larger impact on knowledge sharing behavior.

Dedication

To my oldest daughter Amanda Aylor, you suffered the most through the downfalls of traveling to other states and dealing with over-qualifications and long nights of getting assignments in correctly. You were the one that also supported this journey the most as we both pulled through the challenges offered due to the decision to remain moving forward towards obtaining this doctoral degree. I hope you will remember these challenges in a positive light and decide to eventually become a doctoral achiever yourself. To my youngest daughter Sabrina Reagan, you learned as much as I did as you took the coursework with me for nine months on your journey into life. A young girl that also spent your first years of life sitting on my lap as I learned to use different tablet devices, laptops, remote computer operators, and smart phones to give you the loving and snuggling you needed while completing the coursework. Hopefully you will have the gusto to keep the pattern going and earn your own doctoral degree one day.

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Table of Contents

List of Tables

List of Figures

CHAPTER 1. INTRODUCTION

Introduction

Data that consumers require to be private has infiltrated today's financial services industry. The same industry maintains innovative product solutions that create competition among the financial services market while inviting other market players to benefit from sharing the knowledge used to generate such solutions. However, sharing this knowledge is many times impossible due to insecurities about data leakages felt by management as well as leaders of the organization - often expressed as the inability to know what an alliance partner will do with the knowledge (Arnold, Benford, Hampton, & Sutton, 2014), and the inability to understand what individuals within the organizations have a particular knowledge set and who that knowledge set is regularly shared with (Leonardi, 2014). One area that researchers have explored to help leaders overcome these resignations is in a study of trust, including the different types of trust (Casimer, Lee, & Loon, 2012; Jain, Sandhu, & Goh, 2015; Zhu, Newman, Maio, & Hooke, 2013). Based on these findings, researchers have been able to develop a proper conception of how leadership style forms trust (Arnold et al., 2014; Birasasnav, Mittal, & Loughlin, 2015; Boies, Fiset, & Gill, 2015). To create a more comprehensive view of how leaders can directly affect knowledge sharing behavior, and to address the challenge of trust that the wrong data will not be shared, this study uses these recent findings to construct a new set of proposed research questions. Literature was introduced to describe the nature of and background of the problem to illustrate the development of the proposed research questions. There was also a discussion of how the topic is relevant to academic theory and how the financial services industry will benefit from the outcome of the research. Furthermore, a list of key assumptions and limitations define

the critical concepts of the research. The chapter concludes with a brief description of the flow of the rest of the report.

Background of the Problem

Scholars and practitioners have grappled with the question of what drives knowledge sharing behaviors in company employees. Sharma, Signh, and Neha (2012) found that one of the main issues blocking the flow of knowledge sharing was the manager's lack of desire to share knowledge due to a lack of trust. Seminal authors as far back as Glazer (1991) and Spender (1996) have studied the value of knowledge and the value of sharing knowledge and have found that knowledge generation, accumulation, and sharing are positively related to productive outcomes. Similarly, authors Cabrera and Cabrera (2002) found knowledge to be an organizational asset that provided a cause to discover ways to encourage sharing. Other seminal authors of the topic have discovered that some of the benefits of knowledge sharing have been an increased level of blogging due to the prior ability to share with a greater understanding of the rules of sharing (Hsu & Lin, 2008), an increase in financial productivity (Miller & Shamsie, 1996), growth of an organization, and competitive advantage (Spender, 1996). For this reason, researchers have begun to study how to guide knowledge sharing relationships.

Researchers have found that a lack of knowledge sharing has been most closely related to leadership behaviors. Arnold et al. (2014) presented a study regarding the ability of strategic management to reduce risks and encourage inter-organizational information sharing. Birasnav et al. (2015) studied the ability to use transactional and transformational leadership of buyers to influence relational commitment, then utilize relational commitment to induce trust to encourage information flow from suppliers. Cabrera and Cabrera (2002) studied the ability to use management interventions aimed at reconstructing incentives, making quality metrics more

apparent, and encouraging relationships among coworkers to increase knowledge sharing among individuals. All these studies suggest that there is a leadership role in guiding knowledge sharing behaviors.

Researchers have also found a lack of knowledge sharing to be related to different types of trust. Alexopoulos and Buckley (2013) presented a study regarding the ability of personal and professional trust to facilitate knowledge transfer based on the duration of the relationship between the knowledge giver and knowledge receiver. Bois et al. (2015) sought out to study the effect of different constructs of transformational leadership on a team and found within their research that team trust generated knowledge sharing behavior for both tacit and explicit knowledge. Casimer et al. (2012) studied the ability of affective or cognitive trust to overcome the perceived cost of sharing knowledge when coupled with increased levels of affective commitment to generate knowledge sharing. Dejong, Dirks, and Gillespie (2016) studied the effects of team trust on performance outcome, which was measured by creativity and held the same definition as knowledge donating in the current research study. Finally, Pangill and Moi Chan (2014) studied the effect of three types of trust on virtual team effectiveness, as moderated by knowledge sharing, finding that personality-based trust and institution-based trust are related to knowledge sharing but not cognitive-based trust. These studies bring about a need to understand the exact way that trust guides knowledge sharing behavior, and if it moderates other factors that may influence knowledge sharing behaviors.

Knowledge sharing is a sensitive topic in financial services organizations, and the need for it is crucial to the success of an organization. Ahmad, Bosua, and Scheepers (2014) conducted a qualitative study that consisted of a literature review, individual interviews, and an examination of policies and procedures at various organizations to find that most organizations

do not use a formal knowledge management policy, procedure or the designation of employees for handling knowledge. Furthermore, most organizations use the withholding of knowledge, or else the maintenance of knowledge as tacit, in order to protect data, keeping the focus of knowledge protection mechanisms towards client data (Ahmad et al., 2014). Glazer as early as 1991 used a qualitative propositional study to explore effect of the intensity of information within firms on product design, market placement, and competitiveness and found that competitiveness was shifting from product leadership to a mix between product leadership and market placement based upon the management of information exchanges within and external to the firm. Spender (1996) introduced a qualitative cross-examination of knowledge theory with business functions to set a foundation for understanding that knowledge can evolve the firm into a more competitive position, but only with the intelligent management of knowledge. Cabrera and Cabrera (2002) presented a study about how to manage knowledge sharing behavior as a goal against social exchanges where the cost of sharing knowledge is higher than the benefits, they introduced the importance of their study with data stating that 79% of businesses recognize knowledge management as competitive, and 75% recognize that it increases market effectiveness. Hsu & Lin (2008) presented the outcomes of a study describing how knowledge sharing could encouraging blogging by allowing blog hosts to increase capabilities and expand services to satisfy bloggers preferences, and how blogging could increase the knowledge sharing capabilities of a firm, allowing for similar benefits in the firm's based industry. Miller & Shamsie (1996) used consumer data to conduct a quantitative residuals regression analysis of property based and knowledge-based resources within the film industry to find a shift in the positive outcome of financial performance as deriving from property-based resources towards a derivative of knowledge-based resources during times of uncertainty. The finding of knowledge

management as an essential commodity within a firm has generated a need for the proposed study.

Many of the researchers examining how trust effects knowledge sharing have found that trust needs to be administered based on the contingent need of the circumstances for trust to work effectively in a knowledge sharing situation (Casimer et al., 2012; Dejong et al., 2016). Researchers have even found that the way an organization is structured will need flexibility according to the desired knowledge sharing outcome (Khvatova & Block, 2017). Since the ideals related to leadership contingency theory closely match these concerns (Fiedler, 1971; Drazin & Van de Ven, 1975; Khvatova & Block, 2017), this study will utilize a contingency theory perspective to understand and interpret the data. These ideals are that the way that a leader structures an organization should remain flexible so that it becomes fit to match the desired outcome (Fiedler, 1971; Drazin & Van de Ven, 1975; Khvatova & Block, 2017). Such that the direction of the study is geared to find the fit between the task and the desired outcome of the task, where the fit can be leadership style, trust type, or any mixture of the two towards the desired knowledge sharing behavior (Khvatova & Block, 2017).

A study of the previous literature has supported a need to further the knowledge sharing conversation within contingency theory by finding the extent to which trust type moderates the way that leadership style explains knowledge sharing behavior. For instance, contingency theorists have discovered an explanatory relationship towards a fit between leadership created trust and performance outcomes (Balliet & Lange, 2013; Wu et al., 2016). There have also been several studies finding an explanatory relationship towards a fit between trust type and knowledge sharing behaviors (Casimer et al., 2012; De Jong, Dirks, & Gillespie, 2016). In addition, some studies have attempted to discover an explanatory relationship between the fit of

organizational structure towards knowledge sharing (Pualiene, 2012), and the fit of leadership style towards organizational learning (Schiena, Letens, Aken, & Farris, 2013), which, according to Duffield and Whittey (2015), signifies the mechanics of knowledge sharing within an organization. Such research about organizational structure and knowledge sharing has failed to compare multiple leadership styles, list a specific knowledge sharing behavior, or recognize the importance of trust type to knowledge sharing. Contingency theory has been linked to knowledge sharing but has not described the explanatory fit of leadership style toward knowledge sharing behavior (Cohen & Olsen, 2015; Khvatova & Block, 2017; Loebbecke, van Fenema, & Powell, 2016). A gap in contingency theory literature exists regarding an explanation of the relationship between perceived leadership style and a preferred knowledge sharing behavior in the financial services industry, as well as the strength of moderation by trust type regarding that explanatory relationship.

Even though a gap existed in the scholarly literature regarding an explanation of the relationship between leadership style and knowledge sharing behavior as moderated by trust type, previous research has provided information about trust in general, the different types of trust, and the way trust explains knowledge sharing behaviors. For instance, research by Swift and Hwang (2013) found that cognitive trust was less supportive of knowledge sharing while affective trust was more supportive of it. Another study found the specific relationship of knowledge sharing behavior and trust type to be between knowledge donating and knowledge collecting (van den Hooff & de Ridder, 2004). Affective trust generated knowledge collecting and cognitive trust generated knowledge donating behaviors in a study by Jain, Sandhu, and Goh (2015). A similar study by van den Hooff and de Ridder (2004) found that affective trust encouraged both knowledge collecting and knowledge donating while the accumulation of

knowledge collecting that results in cognitive trust encouraged knowledge donating. In sum, previous studies have found a relationship by which trust influences knowledge sharing behavior.

Recent literature about knowledge sharing in the financial services industry has focused on a variety of ways to share knowledge and ways to secure trust in knowledge sharing. For instance, Li, Gai, Ming, Zhao, and Qui (2016) studied the way to increase knowledge sharing to increase innovation in the financial services industry by using big web servers to connect multiple secured cloud systems. As part of a different effort to increase knowledge sharing within the financial services industry, Wang and Hu (2015) used self-determination theory to study the motivations leading into knowledge sharing behaviors. From this research, Wang and Hu (2015) found a close relationship of hard rewards, for example, awards, promotions, and financial incentives; and soft rewards, for example, recognition, reputation, and an improved self-image, to an altruistic concern for the benefit of the organization - leading to knowledge sharing behavior. Ansari and Malik (2017) studied emotional intelligence to find out what governed employees' attitude to share knowledge in the financial services industry, finding that trust and emotional intelligence were independent factors influencing knowledge sharing behaviors and that trust did not influence emotional intelligence. Leonardi (2015) studied the effect that sharing what coworkers knew and whom coworkers knew would have on the ease of sharing knowledge in the financial services industry due to a decrease in duplicating knowledge and the possibility of opening messaging systems to views by third parties. Recent research has focused interest in the financial services industry on technological methods for controlling knowledge that would artificially enhance the ability to share (Leonardi, 2015) or create security blocks to control the ability of knowledge to be shared (Li et al., 2016). Research also has

focused interest on the study of employee's independent emotional factors, such as motivations (Wang & Hu, 2015; Ansari & Malik, 2017; Leonardi, 2015), rather than the use of human-centered leadership methods, or rather than to look at how trust explained knowledge sharing behaviors. These separate pieces of research did incorporate individual aspects, or sub-variables, of different leadership styles - such as structural controls, and motivation found in transformational leadership (Bass & Avolio, 1997) and structural controls and rewards systems found in transactional leadership (Bass & Avolio, 1997). However, such research has not reviewed leadership within the full construct of each individual leadership style as a whole (Bass & Avolio, 1997), which is the focal point of the examination of leadership style, trust type, and knowledge sharing behavior in the proposed study. This lack of wholeness created a gap in the literature specific to the financial services industry and allowed the financial services industry to become the population of interest for this study.

Statement of the Problem

It is known that leadership structure, style, and behavior have been correlated with employee trust per scholarly literature about such correlation (Arnold et al., 2014; Birasnav et al., 2015; Boeis et al., 2015; Wu et al., 2016). It is further known that affective and cognitive trust have been linked to knowledge sharing behavior (Alexopoulos & Buckley, 2013; Arnold et al., 2014; Balliet & Lange, 2013; De Jong et al., 2016; Pangil & Moi Chan, 2014; Casimer, Lee, & Loon, 2012). However, what is not known is how knowledge sharing behavior has been explained by leadership style nor how trust has moderated this relationship. While contingency theory does allow for leadership to change according to the desired outcome (Fielder. 1971, Khatova & Block, 2017), there have not been any studies using contingency theory to find a relationship between knowledge sharing behavior outcomes and leadership style, and especially

not with trust as a moderating factor between the two. Therefore, the proposed quantitative, non-experimental explanatory study has attempted to address this gap in the literature to advance the research in this arena using contingency leadership theory as the theoretical framework of the study, and specifically within the financial services industry.

Purpose of the Study

The purpose of this non-experimental, quantitative, explanatory study is to discover the extent to which there is an explanatory relationship between perceived leadership style and knowledge sharing behavior in the financial services industry. Also, this study has sought to examine the moderating effect of trust on the explanatory relationship between perceived leadership style and knowledge sharing behavior with contingency theory as the theoretical framework of the study and within the financial services industry.

Significance of the Study

This research concludes with an understanding of the leadership role in developing methods of managing knowledge sharing behaviors in the financial services industry using leadership style, and an explanation of how trust type can moderate leadership style. While business leaders may have already used trust thresholds in their current designs (Gordon & Gilly, 2012), these leaders may be able to strengthen the effectiveness of such methods when they are actively aware of how the methods that they are applying can guide behaviors. From the body of research that was available regarding the relationship of trust to the leader-follower relationship, it was evident that leaders recognize that there is a problem regarding patterns of trust (Balliet & Lange, 2013; Wu et al., 2016), however they are unable to define how that relationship affects them explicitly. They are also unable to explicitly define what they could do with such information once they do recognize how to use the trust relationship (Balliet & Lange, 2013; Wu

et al., 2016). This research has sought to define the distinct relationship of leadership style in guiding intra- and inter-organizational boundaries of trust. It has also sought to define a way to use such a relationship to guide knowledge sharing behavior.

Amid more recent business trends, and specifically those within the financial services industry, developing new and better ways of guiding the knowledge sharing relationship has become a frequent topic of study (Arnold et al., 2014; Casimer et al., 2012; Dejong et al., 2016). This study has provided the foundations of a model for generating internal boundaries for sharing knowledge between interfirm and intrafirm employees that will increase the level of willingness to engage in knowledge sharing practices within organizations by leadership personnel. With the active use of the proposed leadership model, managers will be more open to increasing their internal willingness to share knowledge with external organizations (Arnold et al., 2014) and so will employees (Casimir et al., 2012), thus increasing the organization's capabilities towards productivity. The estimated increase in productivity holds true since multiple pieces of literature describe an increased ability to share knowledge as a catalyst for productivity (Cabrera & Cabrera, 2002; Hsu & Lin, 2008; Spender, 1996).

Research Questions

This study was guided by the following central research question: To what extent does trust type (affective trust and cognitive trust) moderate the relationship between perceived leadership style (transformational, transactional, and passive-avoidant) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry? The subquestions were as follows:

RQ1A. To what extent is there an explanatory relationship between perceived leadership style (transformational leadership, transactional leadership, and passive-avoidant leadership) and

knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry?

RQ1B. To what extent is there an explanatory relationship between trust type (affective trust and cognitive trust) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry?

RQ1C. To what extent does trust type (affective trust and cognitive trust) interact with leadership style (transformational leadership, transactional leadership, and passive-avoidant leadership) in explaining knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry?

Definition of Terms

Knowledge Sharing Behavior

The dependent variable, *knowledge sharing behavior*, was operationalized by two constructs: knowledge donating and knowledge collecting (van den Hooff & de Ridder, 2004). The operationalization of these constructs took place through a survey instrument called the Knowledge Sharing Behavior Survey (van den Hooff & de Ridder, 2004), by use of a a five-point Likert scale, where the Knowledge Management Scan Score defined the knowledge sharing behavior. The definition of the variables was as follows:

Knowledge collecting. The act of consulting with others to gather known intellectual capital from them (van den Hooff & de Ridder, 2004).

Knowledge donating. The act of communicating known intellectual property to another (van den Hooff & de Ridder, 2004).

Knowledge sharing. The interactive combination of knowledge donating and knowledge collecting behaviors (van den Hooff & de Ridder, 2004).

Leadership Style

The independent variable, *leadership style*, was comprised of the constructs of idealized influence attributes, idealized influence behaviors, inspirational motivation, inspirational stimulation, individualized consideration, contingent reward, management-by-exception active, management-by-exception passive, and laissez-faire which translated into transactional, transformational, and passive-avoidant leadership styles according to seminal author Antonokis et al. (2003) and foundational authors Bass & Avolio (1997). The operationalization of the constructs took place through the Multifactor Leadership Questionnaire (Bass & Avolio, 1995) where the Leadership Rating Score defined the leadership style, which was measured by use of a five-point Likert scale. Antonakis, Avolio, and Sivasubramaniam (2003) defined leadership styles as follows:

Passive-avoidant leadership. Management by exception, passive, and laissez fair leadership (Bass & Avolio, 1997).

Transactional leadership. Contingent reward leadership and management by exception active (Bass & Avolio, 1997).

Transformational leadership. Idealized influence attribute and behavior, inspirational motivation, intellectual stimulation, and individualized consideration (Antonakis et al., 2003).

Trust Type

The moderating variable, *trust type*, was broken into the two constructs of affective and cognitive trust (Dunn, Ruedy, & Schweitzer, 2012). The Cognitive and Affective Trust Scale operationalized the constructs (Dunn et al., 2012), where the Trust Score defined the trust type - which was measured by use of a five-point Likert scale. The variable constructs were defined as follows:

Affective trust. Agreeing to a vulnerability to another based on a bond related to beliefs and affective consideration (Dunn et al., 2012).

Cognitive trust. Agreeing to vulnerability towards another due to data about their skills and abilities as well as repeated interactions with the other (Dunn et al., 2012).

Research Design

This study utilized a non-experimental quantitative explanatory design. This design was appropriate because quantitative research connecting leadership style to trust utilized a similar design (Zhu et al., 2013) as did quantitative research linking trust to knowledge sharing behavior (Jain et al., 2015). The study was designed to explore the extent to which there is an explanatory relationship between perceived leadership style and knowledge sharing behavior in the financial services industry and to examine the moderating effect of trust on the explanatory relationship between perceived leadership style and knowledge sharing behavior in that industry (Barnham, 2015). According to Bleske-Recheck, Morrisson, and Heidtke (2015), experimental designs are used to predict causation from known facts while non-experimental designs are used to discover causative factors, this study used a non-experimental design because the intended outcome was to find explanatory causations rather than to predict causal inferences. Brenner et al. (2016) described the use of explanatory designs when there are many sets of variables that create a more precise outcome, such as the many variables used to explain the outcome of this study, therefore the use of an explanatory design is justified. The design of the study was such that the data could be used to describe links between the variables that would support an explanation of the outcomes.

The study utilized random probability sampling so that the results were generalizable and unbiased, meaning participants had an equal chance of being selected (Barabesi & Fatorini,

2013). Participants had to be employees in the financial services industry who have been with their firm at least two years. With a 95% confidence interval, a margin of error of 5%, and a 1.5% medium effect size, the targeted sample size minimum was 111 study participants (Gpower 3.1, 2017). All employees who were chosen to participate were granted the ability to decide whether to participate and could opt out at any time. The participants were recruited and randomly sampled through a third-party response panel company called Centiment (2018) to ensure generalizability. The survey was conducted as an online survey using the previously mentioned requirements and analyzed using SPSS moderated multiple regression analysis. The survey was made up of three separate validated instruments: The Multifactor Leadership Questionnaire (Bass & Avolio, 1995), the Knowledge Sharing Behavior Scale (van den Hooff & De Leuww van Weenan, 2004), and the Cognitive and Affective Trust Scale (Dunn et al., 2012).

Assumptions and Limitations

Assumptions

General methodological assumptions. Since the study has taken a scientific, positivistic view, the study has assumed that a multitude of variables can be used to derive one reality, according to seminal authors Eriksson, Johanson, Majkgard, and Sharma (2015). The general inquiry holds no specific value without quantifying the variables, per foundational authors Lincoln and Guba (1985). There was an underlying assumption that the survey did not impact the participants of the survey because the survey remained as a separate entity from the participant (Lincoln & Guba, 1985).

The study assumed that one group's perspectives towards another group could define a set of conclusions, according to foundational authors Bass and Avolio (1997) - meaning that the perceptions of the participants in the study were satisfactory to define conclusions towards

leadership style, trust type, and knowledge sharing behavior, even though perceptions derive from something other than solid facts. Furthermore, the research continued under the assumption that the respondents could provide stable prescriptions, definitions, and benchmarks of experiences through perceptive practices, per foundational author Blumer (1954). The study assumed that generalizations were possible without reference to time or context (Lincoln & Guba, 1985). Another assumption was that real knowledge could only exist when human emotions were made measurable and calculable, according to seminal authors Belanger and Carter (2008); excluding values, beliefs, and intentions in favor of ordinal, interval, and ratio variables, according to foundational author Howe (1988).

Topic-specific assumptions. Topic-specific assumptions involved the relationship that guided the discovery of the research gap. There was an assumption that the qualitative, exploratory link between leadership behaviors and knowledge sharing found in the literature suggested that there was a possibility to explore a quantitative explanatory relationship between leadership style and knowledge sharing behavior (Arnold et al., 2014; Birasnav, 2014). Since there was not a stable theoretical relationship between the two variables as presented in the literature, this study examined the existing gap to explain the relationship between leadership style and knowledge sharing behavior using trust type as a moderator.

Theoretical assumptions. A set of theoretical assumptions informed the underlying theory. The primary assumption of leadership contingency theory has been that leadership style can change according to the desired outcome (Khvatova & Block, 2017). Contingency theorists have further assumed that one could explain the desired outcome using leadership methods, and that desired outcomes could change, per foundational author Fiedler (1971). Also, leadership contingency theorists have also assumed that there is a threshold by which leadership behaviors

generate effectiveness (Lambert, Tepper, Carr, Holt, & Barelka, 2012; Hartnel et al., 2016). Seminal author Hyvönen (2012), aligned with foundational authors Lawrence and Lorsch (1973) and foundational author Donaldson (1999; 2002), used the assumption that there was no universal and ideal structure for all types of organizations. For organizations to actively achieve satisfactory performance, organizations need to align their structures with the characteristics of the environment in which they operate (Donaldson, 1999; Junqueira, Dutra, Zanquetto, & Gonzaga, 2016). Contingency theory assumptions have involved the ability for leadership methods to change to fit with desired outcomes, especially when organizational factors are continuously evolving.

Assumptions about measures. There were five underlying assumptions about measurements related to the conducting of a regression analysis. The first assumption was that the data exercised a normal distribution along with a P-P plot of normality, where the distribution of data generally align around the line of the slope (Ghasemi & Zahediasl, 2012). The second assumption was regarding the linearity of data by which a scatterplot of the dependent variable was plotted against the predictor variable, if the dots maintain a linear pattern then linearity exists (Hickey, Kontopantelis, Takkenberg, and Beyersdorf, 2018). The third assumption was that the data exercised homoscedasticity, meaning that it did not display a cluster or a pattern when a scatterplot of the residual against the predictor variable was displayed (Hickey et al., 2018). The fourth assumption is that the variables do not display multi-collinearity, and each variable is distinct (Hickey et al., 2018). This assumption is tested through review of the variance inflation factor (VIF) output, where a VIF below 10 showed a lack of multi-collinearity and below 100 showed a likely lack of multi-collinearity (Hickey et al., 2018). The fifth and final assumption was that there is no correlation between individual variables, which is proven

using a Durbin-Watson test where a lack of correlation will create an output between 1.5 and 2.5 (Prienerstorfer & Potscher, 2017). Once an examination the five assumptions finalized, then the data was interpreted to test the hypothesis.

Limitations

Design limitations. There was a basic set of limitations that guided the administration of the research. One limitation was in having to base the dependent variable on either knowledge collecting or knowledge donating when it would have been more precise to look at knowledge donating and collecting as a sliding scale between extremes of each one, similar to the way leadership-member exchange, leadership power, and structure controls interchange within the collecting or donating phases (Fiedler, 1971; Hersey & Blanchard, 1982; van de Ven & de van Weenan, 2004). According to Helm and Mark (2012), interpretation of the survey questions may have been different among respondents per the type of firm applying the information, since the requirements only determined the industry and not the industry sector, results could have been dominated by one sector over the other. The survey was conducted under an American only sample which could cause limitations in the overall generalizability of the results if other countries maintain different perspectives of leadership style or trust values (Dorfman, Javidan, Hanges, Dastmalchian, & House, 2012). Finally, respondents were limited to those with internet access who know about Centiment and who are registered as respondents through Centiment, affecting the overall level of generalizability of the study.

Delimitations. Aside from those limitations attributed to the research design, there are also limitations regarding the lack of areas that could have been studied but were not. For instance, only having the MLQ to use for measurable leadership styles created a limitation regarding the lack of use of other leadership methods (Bass & Avolio, 1997). Since the topic of

knowledge sharing was sparse in the financial services industry, the study was developed using a large amount of background knowledge in industries other than financial services, industries that may have utilized different perspectives on knowledge sharing than those perspectives from within the financial services industry. Finally, researchers such as Dejong et al. (2016) found that trust type could not explain knowledge sharing behavior alone and suggested a multifactor analysis using SEM. This study does not include cluster variables and only studies leadership style and trust type as separate variables, furthermore there is no cross-examination between pairs in this moderated linear regression (Dejong et al., 2016). Other than that, there were no delimitations.

Organization of the Remainder of the Study

This first chapter of the dissertation study was used to provide a general overview and summary of the content of the further explanation of the study in future chapters. The next chapter, Chapter 2, will present the methods of searching, theoretical orientation, literature review, research findings, and a critique of previous methods. Chapter 3 will present the purpose of the study, the questions and hypothesis, the research design, population and sample, procedures, instruments, and ethical considerations of the study. Chapter 4 will present a background of the sample and hypothesis, a description of the sample, and the test of the hypothesis. Finally, chapter 5 will present a summary and discussion of the results, conclusions, limitations, implications, recommendations for future research, and the overall conclusion of the study.

CHAPTER 2. LITERATURE REVIEW

Introduction

Studies showing that knowledge sharing enhances competitiveness and productivity (Cabrera & Cabrera, 2002; Sharma et al., 2012; Spender, 1996) has led to much research on how to generate trust (Balliet & Lange, 2013; Wu, et al., 2016), particularly affective and cognitive trust (Casimer et al., 2015), and how to use trust to generate the knowledge sharing behaviors of collecting and donating (Casimer et al., 2015; Dejong et al., 2016). This study examined literature to find a connection between the leadership role and knowledge sharing behavior outcomes. The literature produced two main variables that were leadership style (Bass & Avolio, 1997; Duffield & Whittey, 2015; Schiena et al., 2013) and trust type (Casimer et al., 2015; DeJong et al., 2016; De van Hoof & de van Weenan, 2004). Leadership was never directly related to knowledge sharing; however, leadership was directly related to trust by authors such as Duffield and Whittey (2015). Trust was related to knowledge sharing through a need that had to be fulfilled to generate knowledge transfer and team learning during a study of the connection between leadership style and organizational learning (Schiena et al., 2013). Trust was also directly related to knowledge sharing by Casimer et al. (2015) and DeJong et al. (2016). Therefore, in order to fill a research gap, the chapter contains parts related to how leadership style is related to trust type and then another part regarding how trust type is related to knowledge sharing – both sections introducing each factor as they fall into a contingency theory platform.

Although the focus of this chapter is on the review of literature related to the selected topic, there are a few other elements that allow the chapter to build a foundation for other sections of the report. Before beginning to discuss the topic, there is an explanation of the

methods used to discover the literature that explains the topic. Then there is an explanation of the underlying theory that explains the reasons why the research is being conducted, assisting in developing the research questions. Then the literature review separates the variables into sections where leadership contingency theory fits within the boundaries of the constructs of the topic. First is a discussion of knowledge sharing behavior as understood by the leadership contingency theorist. Next is a discussion of how leadership style is explained by leadership contingency theory, then how it is related to trust type and knowledge sharing behavior. Finally, there is a discussion of how trust type is explained by leadership contingency theory, and its relationship to leadership style and knowledge sharing behavior. The chapter ends with a discussion of research findings in the literature review, and a critique of the literature regarding concepts, missing data, limitations, needs for further study, and methodological errors. The chapter concludes with a summary of the proposed research.

Methods of Searching

The resources used to find data for this paper were found mainly within the Capella University website, and specifically the Capella University library databases. The most common databases referenced were ProQuest, ABI Inform, and EBSCO Host. The American Psychological Association database was referenced for some journal articles and was the primary source for attaining validated survey instruments. Within these databases, keyword searches produced sometimes 3000+ articles and sometimes just 1000+ articles. Results were narrowed by peer-reviewed, scholarly literature and open access to journal articles, then by year, and then subject if needed; until results counted between 100 and 500 articles with preference below 200. These search engines provided an excellent resource for locating literature.

The research was extensive and contained many search terms that needed to be searched separately for data sources. Although considerably long, a list of keywords searched within the databases included: contingency theory; contingency theory and trust type; contingency theory and cognitive trust; contingency theory and affective trust; contingency theory and knowledge sharing; contingency theory and knowledge collecting; contingency theory and knowledge donating; contingency theory and leadership style; contingency theory and transformational leadership; contingency theory and transactional leadership; contingency theory and management by exception; contingency theory and laisses fair leadership; contingency theory and passive-avoidant leadership; contingency theory, trust, and knowledge sharing; contingency theory, leadership style and knowledge sharing; contingency theory and MLQ leadership style; contingency theory, MLQ leadership style and knowledge sharing; contingency theory, MLQ leadership style and trust; contingency theory, leadership style, trust type and knowledge sharing behavior; financial services industry and knowledge sharing behavior; financial services industry and contingency theory; and other similar mixes of the same variables and their sub-variables, including the subunits of contingency theory. There were some searches that did not involve contingency theory, such as trust and leadership style; cognitive trust and leadership style; affective trust and leadership style; trust and knowledge sharing; leadership style and knowledge sharing; trust, leadership style, and knowledge sharing; financial services industry and knowledge sharing; and other mixes of sub-variables to sub-variables that did not include a direct search of contingency theory. The implementation of a Google Scholar search comprised of the same search terms where the results were compared to the Capella University website to depict if each found article was indeed scholarly, in order to increase the ability to find useful articles. The literature review became filled with a more productive outcome, resulting in many useful

articles on the topic, due to the combined use of both Google and the Capella Library search engine.

Documents were chosen based on their date of publication, their determination as seminal, and their relatedness to the topic. First, a determination of the literature as scholarly, meaning as a journal article and as peer-reviewed, was a requirement of each document to be included in this dissertation. Each document determined as a recent document had to be dated within 3-4 years or sooner. The procedures required a test to determine the designation of a document as foundational or seminal for all documents older than 3-4 years. The measure to determine whether a document was seminal was through the number of citing each document had or the number of citing the author(s) of the document had regarding the topic relative to that document. For example, while Capella University library is very informative, it is a private database for Capella students only; therefore, the number of works cited for each article chosen did not derive from the library database. The level of works cited was reviewed using the works cited count in Google Scholar where researchers, not just students, from all over the country and world search out scholarly documents and cite them for use in their informative works. The average count for a paper determined as seminal was at least 1000 citing; however, there were a few in the 900's range, no lower than 500 citing per document, this was a preference of the researcher as previous guidelines merely state a heavy level of citing (Shuck & Wollard, 2010), and these levels were well above the average citing counts on Google Scholar. Another determination was the level of popularity of the author and how many other seminal or foundational articles the author had written aside from the one in question. This method was used for documents found in Capella's databases, in Google Scholar databases, and via searches through works citing other papers chosen for use in the study.

Theoretical Orientation for the Study

The main theoretical framework for the study was the contingency leadership theory. Contingency theory is a multimodal leadership theory that uses three different factors to mitigate individual outcomes: task structure, relational leadership, and positional power (Fiedler, 1971; Pennings, 1975). In this regard, the task structure referred to the amount of guidance or standardization that went along with a task (Drazin & Van de Ven, 1985). Andre, Kraut, and Kittur (2014) defined relational leadership as a high level of communication and responsiveness. Otley (2016) saw relational leadership as the most viable level of leader-member matching. Otley (2016) described positional power to mean the extent and manner of the use of techniques of specificity. Bass (1997) described positional power to prove that one had the merit to know the path to the goals. Otley (2016) also had a unique definition of task structure as defined circumstances. Fiedler (1971) described the task structure as clearly outlined tasks. Regardless of the way that each separate part of the theory was defined, the central facet of contingency theory was that certain parts of the leadership conundrum were flexible to change as different circumstances arrived in order that leadership fit those circumstances and as preferred outcomes varied so that leadership fit the preferred outcome.

Since the formation of contingency theory, there have been many theorists able to transition the theory to their ideas of leadership. Hershey-Blanchard (1982), as mentioned by Meirovich & Gu (2015), introduced a model where the level of readiness, the amount of task structure required, and the level of maturity at the firm informed the contingencies of the model. This model utilized four types of control, depending on those previously mentioned factors: telling, selling, participating, and delegating (Hershey-Blanchard, 1982; Meirivich & Gu, 2015). Loebbecke et al. (2016) studied contingencies in knowledge sharing where knowledge was

shared either in one direction, in one direction but coming from one source through another as if through a path, and in more than one direction creating reciprocity. These researchers studied the management of knowledge depending on the level of opportunistic ability and the need for control, as well as the type of knowledge as being explicit or tacit (Loebbecke et al., 2016). Kim et al. (2014) also micromanaged contingency according to knowledge sharing behaviors where the level of relational leadership versus task structure depended on internal versus external sharing using low or high knowledge intensity. Contingency allowed the researcher to look at all facets of the situation and moderate the leadership style subtly to match the relative need.

Multiple Versions of Contingency Theory

There have been many versions of contingency theory among researchers, however, the primary definition has maintained the facet of sliding scale leadership between a measure of task structure, positional power, and relational leadership as leadership remained as a fitting match to objectives of the firm and the firm's changing atmosphere (Khvatova & Block, 2017). Meirovich and Gu (2015) studied Hershey-Blanchard's (1982) contingency model that addressed the issue of situational contingencies in leadership and introduced four styles of control: telling, selling, participating, and delegating. Each style depended upon the level of readiness and the need for task structure along with the level of maturity at the firm (Meirovich & Gu, 2015). Schilling (2000) described readiness as a contingency of fit between current conditions of the company, the nature of technology/designs introduced, and the way that the introduction of such new interfaces would affect performance at the firm. Hersey and Blanchard (1982) recognized a difference between job maturity and psychological maturity where high maturity allowed for an increased level of autonomy. Telling considered low maturity and a high need for task structure over relational leadership; selling considered low maturity and a high readiness and high need for

relational leadership; participating had a high maturity, connoting a high ability for autonomy where positional power played the leading role with a high need for task structure; and delegating had a high maturity with a high readiness level requiring only positional power with minimal other measures (Meirovich and Gu, 2015). Fiedler (1971) described contingency theory as an interplay between the three leadership constructs of positional power, task structure, and the leader-member exchange. The proposed version of contingency theory introduced a working example of contingency theory paradigms through leadership styles that deploy different levels and types of positional power, task structure, and leader-member exchange (Bass & Avolio, 1997).

Contingencies in a Group Environment

Two versions of contingency theory have informed the literature: an individualistic leadership theory as well as a fit theory when administered in a group atmosphere. Fiedler (1971) tested contingency theory and found that situational contingencies moderated the relationship between leadership and performance in a group and that training groups required relational leadership while requirements on co-groups and inter-groups varied by the situation. Lee, Choi, and Kim (2017) used a contingency perspective when they studied the way that a sliding scale of gender diversity could mediate the performance outcome of team conflict related to differences in status between members of the creative team. De Drue and Weingart (2003), whose contingency theorem was used by Kim et al. (2018) to generate their theory on team interactiveness, found a contingency regarding team performance outcomes. This contingency depended on the level of conflict towards a task, the management of conflict, and the specific task within a group (De Crue & Weingart, 2003). De Drue and Weingart (2003) found that team performance outcomes depended on the conflict, relating more to the content of the task or the

process used to complete the task; the level of task structure in regard to the level of routine standardization versus lack of definition of the performed task; and, finally, the level of collaboration, contention, or avoidance of the task by the group. Leadership contingency has been useful for understanding the level of interactiveness of the group.

Contingency theory has also been used to study the unique element of conflict within groups. Shaw, Zhu, Duffy, Scott, Shih, and Susanto (2011) used the contingency theory to find that relationship conflict moderated the explanatory link between team conflict and team-member satisfaction. Jehn and Bendersky (2003), who also informed Kim et al.'s (2018) contingency theory research, considered the type of conflict, the time when the conflict reached the current phase of group formation, the management of such conflict, and the desired outcome to be contingent moderators of the outcome of conflict performance among a team. They also specified several other factors that included strengtheners, weakeners, ameliorators, and exacerbators (Jehn and Bendersky, 2003). Most theorists looking at team conflict saw the same group of contingencies - task structure, the timing of the conflict, and the relationship among team members (Shaw et al., 2011; Jenhn & Bendersky, 2003; Kim et al., 2018). These contingencies were similar to those spoken of by Fiedler (1971), Van de Ven and de Ridder (1985), and Blanchardt (1981) and have been used to inform this study. As such, talk about a group has referenced relationships within a group rather than relationships between leader and follower, and the timing of group formation has replaced positional power compared to the timing of the conflict (Fiedler, 1971; Van de Ven & de Ridder, 1985; Blanchardt, 1981). Leadership contingency theory has become a useful tool in conquering team conflict.

Review of the Literature

The main concern of the literature review study was to expand upon current knowledge of the contingency theory by explaining how leadership style related to trust and knowledge sharing, and if there was a central link that unites all three variables. The literature review was designed to provide a summary of each of the variables individually, their fit within leadership contingency theory, and how contingency theory guided their relationship to one another through research studies. Each variable had its section with subsections to explain these comparisons. The literature review will conclude to describe the primary hypothesis of the study.

Contingency Theory

Contingency theory is an available leadership theory for use when systems have changing factors to them, departments that operate differently, or when leaders need to gear their leadership methods towards the various leadership style of partnering organizations (Schilling, 2000; Meirovich & Gu, 2015). Two seminal authors of contingency theory were Fiedler (1971) and Hersey and Blanchard (1982). According to Fiedler (1971), contingency had a flexible platform that could be used to fit the current culture of employees to the desired outcome using task structure, relational exchange, and positional power. Hersey-Blanchard (1982) looked at the individual employees rather than the entire culture of the firm or the department such that leadership style was determined by the maturity of the employees as well as whether the communication pointed internally or externally of the firm and the level of technological maturity at the organization. Both versions of the theory are similar; however, Fiedler (1971) created his version during times when most firms did not have the added element of technology while Hersey and Blanchard (1982) created their version as technology was starting to evolve as a necessity of the firm. Khvatova and Block (2017) also recognized differences in leadership

structure where some aspects of leadership structure would need to change according to the fit of organizational structure to the desired outcome of productivity. Specifically, Khvatova and Block (2017) focused on the fit of social structure to the rigidity of organizational structure as an explanatory-factor towards the generation of fit between desired trust and actual trust with knowledge sharing. In the firms that Khvatova and Block (2017) are referencing, technological capabilities are generally high, and the rigidity of organizational structure closely matches the use of technology to standardize knowledge for safekeeping as well as the ability of employees to engage in fruitful relationships with one another outside of the technological interface. The main factors of contingency theory have remained the same throughout the years: rigidity of task structure, relational factors, and positional power; however, the factors determining the outcome have changed due to the evolution of the way that firms operate according to technological interfaces, employee cultures, and through leadership style and structure.

Contingency theory and linking leadership styles. A somewhat recent study of contingency theory sought to connect the contingency theory to transactional and transformational leadership styles. The enterprise systems (ES) study implemented the fit and misfit structure described through a contingency theory perspective by Khvatova and Block (2017). Shao, Feng, and Hu (2015) found that early discovery of the misfit in ES between the system of input, process, and the output; and the ES type and culture, would alleviate the need to conquer conflicts as they arose through the ES procedure. Shao et al. (2015) viewed ES under a structural contingency approach where they needed to find a fit between organizational structure and organizational contingencies. The authors used transactional and transformational leadership styles to code case study data for fit and misfit during their qualitative examination of the subject. They found that during the adoption phase transformational leadership was a close

fit due to the need to inspire executive leadership to go with the vision (Bass & Avolio, 1997; Shao et al., 2015). The implementation phase required transactional leadership to move through the phase that focused on resolving images, employee training, and task structure (Bass & Avolio, 1997; Shao et al., 2015). During the assimilation phase, routine upgrades and conflict resolution, with some inspiration towards the development of new ideas, generated a need for both transactional and transformational leadership (Bass & Avolio, 1997; Shao et al., 2015). Finally, the extension phase involved communicating a vision and coordinating teams and suppliers, displaying a foundation for both transactional and transformational leadership (Bass & Avolio, 1997; Shao et al., 2015). Shao et al. (2015) demonstrated how leadership style changed according to the desired level of performance by describing the move from transformational leadership to transactional leadership to mixtures of both as the enterprise system life-cycle moved from the adoption phase to more mature phases with related outcome requirements, much the same as the theory of leadership contingency in general.

Recent contingency theory studies. Recent studies of contingency theory used moderating variables as examples of contingency constructs. Khvatova and Block (2017) described leadership contingency theory as the ability to fit leadership behaviors or leadership styles to the desired outcome using specific organizational modifications. Such modifications could include factors like trust, leadership style, organizational culture, social structures, and other similar concepts (Khvatova & Block, 2017). These constructs were found to be contributors to the main facets of the theorem that were task structure, positional power, and relational power (Khvatova & Block, 2017). For instance, leadership style could define relational power, task structure, and sometimes even positional power as such styles variated among desired outcomes (Khvatova and Block, 2017). This study used the MLQ leadership

style (Bass & Avolio, 1995) to define the extent to which trust type moderated the level of contingency factors towards a specific outcome of knowledge sharing behaviors. For instance, transformational leadership is known for high levels of relational power with a moderate level of task standardization and positional power, which is an excellent example of the resolution of a leadership contingency need that requires the dominance of relational power (Bass & Avolio, 1997; Fiedler, 1971). This type of description was an example of the theory used to inform the current study.

Another study used different types of leadership coordination to describe how knowledge sharing could be encouraged or discouraged, depending on the circumstances. Loebbecke, Fenema, and Powell (2016) studied the way that leadership coordination could affect knowledge sharing as determined by the desired outcome when the circumstance dealt with either inter-organizational sharing of knowledge or intra-organizational sharing of knowledge and when the circumstances realized either tacit knowledge or explicit knowledge. The coordination techniques were broken down into four types: structural, procedural, technical, and social (Loebbecke et al., 2016). Loebbecke et al. (2016) found that structural coordination was useful for intermediate relationships, but not useful for tacit or architectural knowledge; procedural coordination was useful for inter-organizational relationships and explicit knowledge; technical coordination was useful for both relationship types and explicit, public, private and component knowledge; and social coordination was useful for all knowledge exchange and relationships - although it may have been complex during inter-organizational relationships. Loebbecke et al. (2016) presented a qualitative examination of internal knowledge processes, including the mode of sharing, the type of knowledge, and the control mechanisms used. Leobbecke et al. (2016) based the examination of processes on contingencies in the knowledge sharing paradigm

dependent upon the way knowledge was shared internally, including how knowledge was collected from external sources and then transferred within internal systems, resulting in many contingencies that required modeling for managing knowledge procedure changes (Leobbecke et al., 2016). The procedure, including the mode of sharing and the mechanisms of control used for knowledge sharing, was contingent upon knowledge type, and with whom knowledge was shared.

A third study used contingency theory to explain universal outcomes that came about because of knowledge sharing. Ritala, Olander, Michailova, and Husted (2015) studied contingent paths to intentional or accidental knowledge leakage to discover how knowledge moderated productivity during collaborative innovation efforts. According to Ritala et al. (2015), engaging in collaborative behaviors that entailed the gaining of explicit knowledge was productive to the organization recording the knowledge because the new knowledge helped future innovative processes. However, the research they conducted through regression analysis using a survey instrument found that whether knowledge was internally shared, externally shared, in explicit form, in tacit form, intentionally shared, or accidentally shared – knowledge leakage negatively moderated the productiveness of collaborative knowledge absorption because it lessened the ability to use innovation to compete (Ritala et al., 2015). This article provided a basic understanding of knowledge leakage patterns that may have negatively moderated the productivity of knowledge collaboration with various intensities (Ritala et al., 2015). Through such findings, one can get an idea that studying contingent outcomes is vital to the study of leadership since even a slightly misdirected outcome can have significant impacts on the productivity of knowledge sharing behavior.

Contingency theory and knowledge sharing behavior. Many recent studies of contingency theory relate specifically to knowledge sharing (Khvatova & Block, 2017; Loebbecke et al., 2016; Cohen & Olsen, 2015). Loebecke et al. (2016) located three contingencies related to knowledge sharing that has to do with the level of internalization of the knowledge, the reciprocity of knowledge, or the knowledge sharing intent. From these contingencies, they developed four ways of managing how much knowledge is shared to fit leadership intent with the actual situation; which include structural controls, procedural controls, technical controls, and social controls (Loebecke et al., 2016). Knowledge sharing became known as a catalyst for success towards the generation of intellectual property between organizations (Andersson, Dasí, Mudambi, & Pedersen, 2016; Paraponaris & Sigal, 2015). Knowledge sharing also became known as a catalyst for high performance among creative teams (Hussain, Abbas, Lei, Jamal Haider, & Akram, 2017). However, some organizations have been highly meticulous about the ability to share specific knowledge and with whom (Andersson et al., 2016; Paraponaris & Sigal, 2015). This study focuses on some basic constructs of knowledge sharing; which are knowledge donating, defined as providing knowledge to others, and knowledge collecting, defined as seeking out knowledge from others (Van den Hooff & De Van Weenan, 2004). The current study looks for contingencies in the outcome of knowledge sharing per collecting versus donating of knowledge and the possibility of influence by leadership style and possibly as leadership style are moderated by trust type, producing a possibility of 12 different outcomes of knowledge sharing behavior.

Aside from these more recent studies, knowledge sharing behavior has also been studied by seminal authors as a part of the contingency theory platform. In one such study, the constructs were made up of four knowledge sharing behaviors - knowledge collecting internally, knowledge

collecting externally, knowledge donating internally, and knowledge donating externally (van den Hooff & de Leeuw van Weenan, 2004). The main idea behind the study concerned whether knowledge that was immediately learned or asked for was regularly shared within the department that the subordinate worked in or outside of that department, i.e., within other departments of the firm or between departments of other organizations (van den Hooff & de Leeuw van Weenan, 2004). About the propositional study, knowledge sharing behavior is essential because employees may share company intellectual property (IP) that is either tacit or explicit (Oliveira, Curado, Macada, & Nodari, 2015) while working in cross-organization teams and extra-organizational teams. Previous studies offered the opportunity for legitimate uses of the MLQ (Bass & Avolio, 1995) that could assist with the research question while using a contingency theorem.

There have been several researchers who have recognized a need to study the sharing of knowledge within a contingency theory perspective. Kim, Lee, Chun, and Benbasat (2014) studied knowledge management within a contingency theory framework where they found environmental knowledge intensity and organizational information systems maturity to be pertinent contingencies towards successful knowledge sharing ventures. Their findings indicated that high knowledge intensity and high information systems maturity was the most effective strategy, except when internal personalization was involved, which weakened systems altogether (Kim et al., 2014). Levin and Cross (2004) studied the effect of weak versus strong ties on perceived receipt of useful knowledge using tacit and explicit knowledge as contingencies. They found that weak ties have a substantial effect on the perceived usefulness of knowledge and that while both affective and cognitive trust had a moderating effect on strong ties and the perceived usefulness of both tacit and explicit knowledge, cognitive trust had a moderating effect on weak

ties and the perceived use of tacit knowledge (Levin & Cross, 2004). Khvatova and Block (2017) studied the effect that immediate affective trust had on knowledge sharing, using immediate affective trust as the contingencies between fit and misfit. In this study, Khvatova and Block (2017) found that immediate affective trust served as a sort of balancing point where if it grew without the desire for trust growing, knowledge sharing began to decline, but if it stayed steady while the desire for trust grew, knowledge sharing would grow to a certain point. Contingency theory had become a well-suited paradigm for studying knowledge sharing behaviors.

Knowledge sharing and performance outcomes. Much research has been conducted, attempting to enhance performance based on knowledge sharing. One such study, conducted by Tsai, Baugh, Fang, and Lin (2014) found that it was knowledge heterogeneity, rather than just knowledge sharing itself, that enhanced performance outcomes. Khvatova and Block (2017) found that knowledge sharing enhanced innovation and creativity. Carmeli, Gelbard, and Rieter-Palmon (2013) studied the way that knowledge sharing moderated the effect that the perception of leadership support towards knowledge sharing had on creativity, with a second study testing the way that creative problem solving moderated the first interaction, and found that creative problem solving decreased the influence of knowledge sharing on creative outcomes. Repeatedly studies have found that knowledge sharing has been conducive to the overall performance of the firm, providing a reason for researchers to continue seeking ways to enhance the mechanics of the sharing of knowledge.

Generating knowledge sharing behaviors. There have been several pieces of research studying ways to generate knowledge sharing behavior. Khvatova and Block (2017) found that desired, actual, or a combination of both types of knowledge sharing displayed differing effects

from a task-related trust. The most effective type of trust was desired task related trust, the other two combinations affected knowledge sharing outcomes, but only to a point, and the display of trust alone had more of a balancing effect between desired and actual knowledge sharing but was not necessarily the cause of knowledge sharing activity (Khvatova & Block, 2017). Huang, Hsieh, and He (2014) furthered this data when they found that a team member that had a knowledge set that was different from the rest of the team was more likely to share knowledge when members of the team used explicit knowledge. Those who maintained the same knowledge set as the rest of the team exhibited knowledge sharing when the team used explicit knowledge as a whole, rather than just individual members of the team using explicit knowledge (Huang, Hsieh, & He, 2014). Chuang, Jackson, and Jiang (2016) found that management systems helped to enhance knowledge sharing to an extent, but that tacit knowledge could reduce the effect of management systems while leadership empowerment could replace management systems. Oliveira, Curado, Macado, and Nodari (2015) found that absorptive capacity mediated knowledge sharing behavior while employees were more prone to knowledge participation than they were to conducting knowledge sharing and more likely to share tacit knowledge than explicit. Overall the literature was straightforward in effort to explain knowledge sharing behavior, with much of it pointing towards standard ideals of trust as the primary contributor and leadership methods as the second leading contributor.

Types of knowledge sharing behavior. There were two types of knowledge sharing found in the literature that is of concern in the proposed study; knowledge collecting and knowledge donating. Goh and Sandhu (2013) studied how trust effects knowledge collecting and knowledge donating. They defined knowledge collecting as the act of conversing with others in order to question them for knowledge; and they defined knowledge donating as the act

of conversing with others in order to provide new knowledge (Goh & Sandhu, 2013). Ardichvili, Page, and Wentling (2003) studied the motivating factors for knowledge donating and collecting in virtual platforms. These researchers define knowledge donating as a knowledge contribution and knowledge collecting as the use of a source of new knowledge (Ardichvili et al., 2003). Van den Hoof and de Ridder (2004) studied the way that different levels of communication affected knowledge sharing behavior, splitting those behaviors into knowledge sharing and knowledge collecting. They define knowledge donating as communicating intellectual property and knowledge collecting as consulting others to obtain intellectual property (van den Hoof & de Ridder, 2004). This study defined knowledge collecting as consulting with others to gain new knowledge and knowledge donating as contributing new knowledge to others.

Knowledge management. Since the foundational theorists of situational contingency were able to describe the model, researchers had found different applications of contingency theory to maximize knowledge management performance. Cohen and Olsen (2015) found that knowledge management performance was indeed contingent on the strategy of the firm. Cohen and Olson (2015) studied the difference between knowledge management through universalism, complementarianism, and contingency. They believed that the contingency theory was essential to tacit and explicit knowledge when discovering the fit between knowledge management style and the internal organization of the firm (Cohen and Olson, 2015). Per Cohen and Olson (2015), a business looking to build on efficiency should focus on explicit knowledge while one focused more on creativity and the new design should focus on tacit knowledge. To them, explicit knowledge was that kind of intellectual capital that was captured and codified for use in standardizing (Cohen & Olsen, 2015). Tacit knowledge was a type of knowledge Cohen and Olson (2015) called human capital knowledge because redistribution was not possible due to the

lack of recording of the practice. Cohen and Olsen (2015) called explicit knowledge reusable while tacit knowledge was not as reusable because it was a human capital type interface. There was evidence that business strategy and expected performance outcome played an important role.

Complimenting chaos. The study of contingency theory also occurred with knowledge sharing as a compliment to chaos theory. Khvatova and Block (2017) found that specific tasks fit well within a tight structure until the firm experienced chaos, requiring employees to seek or share knowledge until organizational restructuring took place to restore balance. To them, employees were content with using explicitly prescribed sets of knowledge to fulfill their duties until an instability occurred that required readjusting, requiring the use of tacit knowledge until such restructuring caused stability and an ability to use explicit codified knowledge again (Khvatova & Block, 2017). According to this perspective, leaders could control structural misfits and would only restructure the fit when it became more conducive to higher performance for the organization (Khvatova & Block, 2017). However, organizations could regenerate the fit when needed to control misfit to generate the desired level of knowledge sharing. Khvatova and Block (2017) assumed that the standardization of tasks decreased the desire for trust. However, chaos increased the desire for trust, requiring the sharing and collecting of knowledge in order to generate a new set of standards (Khvatova & Block, 2017). With these basic set of controls, contingencies could be used to generate a specific outcome.

Unilateral, bilateral, and reciprocal. Loebbecke et al. (2016) studied the contingency principle as it related to unilateral, bilateral, and reciprocal knowledge sharing during outsourcing and partnering research and design (R&D) environments. Loebbeck et al. (2016) recognized that there was a need to control inter-organizational knowledge sharing at the same time as there was a need to control intra-organizational knowledge sharing and that these needs

were not necessarily separate. The research focused on the fit between sharing intentions and sharing outcome (Loebbeck et al., 2016). The researchers studied three different knowledge sharing contingencies: tacit versus explicit knowledge; unilateral versus bilateral sharing; and intended versus actual sharing (Loebbeck et al., 2016). They found that while interacting with between organizational knowledge sharing - opportunistic risks required the use of structural controls; the expression of contracts and standards for explicit, specified knowledge required the use of procedural controls; knowledge management by different levels of controlled access, and the need to control opportunistic behaviors, required the use of technical coordination controls; and the sharing of knowledge through direct human interaction, such as tacit knowledge, required the use of social coordination (Loebbecke et al., 2016). While this form of contingency did look at the outcome, the specific environment facilitating the outcome determined the use of contingencies.

Knowledge intensity, codification, personalization, and expression. Kim et al. (2014) focused contingency theory on low versus high knowledge intensity and codification versus personalization mixed with internal versus external expression. From this study they were able to create a list of different contingent categories: high intensity and high maturity defined external codification, low intensity and high maturity defined internal codification, high-intensity low maturity defined external personalization, and low intensity and low maturity defined internal personalization (Kim et al., 2014). Personalization required higher levels of relational leadership, either internalized or externalized, and codification required higher levels of task structure, either internalized or externalized (Kim et al., 2014). Researchers have been able to directly link the contingency leadership theory to knowledge sharing and knowledge management.

Situational structuring. Contingency theorists have recognized a need for the situational structuring of leadership style and the way that such structure helped with knowledge management. Fiedler (1971) was able to test his contingency theory model using situational favorableness, interacting groups, and leadership effectiveness with a positive outcome towards contingency theory. Loebbecke et al. (2016) and Kim et al. (2014) were able to pinpoint contingencies within a knowledge management environment and describe leadership behaviors to go along with each contingency. Hartnell, Kimicki, Lambert, Fugate, and Doyle Corner (2016) found that when cultural values had a task-oriented focus, relationship-oriented focus, or both, then culture could serve as a substitute for leadership using the leader-member exchange construct of contingency theory. Contingency provided a good fit for knowledge studies and other related studies.

Previous designs of contingency theory research informed the design of the proposed study for this document. Rather than to use the previously described contingency models, this research has drawn on trust types (Dunn, Ruedy, & Schweitzer, 2012) and those leadership styles as defined in the Multifactor Leadership Questionnaire (Bass & Avolio, 1995). In this regard, the affective trust would have taken the place of relational leadership, and cognitive trust would have taken the place of task structure (Casimer, Lee, & Loon, 2012; Bass & Avolio, 1997). Furthermore, leadership was studied as disseminated in the form of transformational leadership, transactional leadership, and passive-avoidant leadership (Bass & Avolio, 1997). Linking the research on contingency theory with the research on trust and leadership style coincided with what had been found in research to create a well-fitted model for leading knowledge sharing behaviors.

Contingency theory and leadership style. Contingency theory has formed foundation for leadership style in several studies (Shao, Feng, & Hu, 2015; Yasir, Imran, Irshad, Mohamad, & Khan, 2016; Malloy & Penprase, 2010). Shao et al. (2015) applied MLQ to the contingency theory such that they were able to use transformational and transactional leadership as situational venues to fit a specific set of criteria found within each phase of the enterprise system (ES). Yasir et al. (2016) studied the relationship between leadership style and trust and the effect of the contingent fit on organizational change capacity (OCC). Yasir et al. (2016) found that while leadership style influenced OCC directly, it also influenced trust that impacted OCC indirectly, except in the case of transactional leadership. Transactional leadership had such a mild impact on trust that its relationship with OCC was independent of trust (Yasir et al., 2016). Malloy and Penprase (2010) found that different leadership styles coupled with the leadership of different groups of nurses produced significant contingencies regarding the level of vertical trust, the levels of social responsibility, the amount of social support of colleagues, and the amount of influence over work. According to research, MLQ has had a significant place in a study of trust via the contingency theory - making it a good fit for this study.

There are many leadership styles available for use in this study, however the MLQ is a tried and valid instrument that has only incorporated four styles: transformational, transactional, leadership by exception, and laissez-faire, with leadership by exception passive and laissez-fair making up the leadership style of passive-avoidant (Bass & Avolio, 1995). According to Girma (2016), transformational leadership has inspired people, challenged them, and supplied a level of developmental needs that allows subordinates to be motivated to overcome themselves in order to succumb themselves to the vision of the organization. Such motivation is accomplished with empowerment, role models, cooperation, vision, and change management to motivate

contributions to the organization while sacrificing the self (Girma, 2016). Capelli, Singh, Singh, and Useem (2015) described transactional leadership as making a deal with employees, trading them monetary reward and promotions for compliance without referencing company vision, purpose, or goals. Breevaart, Bakker, Hetland, Demerouti, Olson, and Espevik (2014) explained that two separate factions; which included an active exception, which meant the prevention of mistakes through rule enforcement; and passive exception, which meant disapproval of mistakes through confrontation, comprised the management by exception leadership style. Skogstad, Aasland, Nielsen, Hetland, Matthiesen, and Einarsen (2015) illustrated laissez-fair leadership as exclusionary leadership that involved a lack of influence and rejection of employees. A comprehensive examination of leadership styles that allowed for a contingent review of the intermixing of leadership disposition towards a specific desired outcome informed the administration of MLQ leadership style designation as a variable in this study.

Enterprise management system. The mix of leadership styles within the MLQ model has allowed it to fit well within a contingency framework. For example, Shao et al. (2015) explained MLQ leadership styles to be nonseparated from each other, where the most effective leadership used a combination of multiple styles at one time by intermixing the subcategories. Shao et al. (2015) used the fit of task structure and positional power with relational structure categorizations to describe leadership styles at each phase of the enterprise management system. They found that the adoption phase was equally balanced between task structure and relational leadership while positional power was low, like transformational leadership style (Bass & Avolio, 1997; Shao et al., 2015). The implementation phase required great attention to task structure with high positional power and low relational value, which called for transactional leadership (Bass & Avolio, 1997; Shao et al., 2015). The assimilation phase required a high level of organizational

learning that initiated task structure, a rewards system, and a transparent leadership position which aligned with both transformational and transactional leadership style (Bass & Avolio, 1997; Shao et al., 2015). In the extension phase, leadership needed to exercise charisma along with task structure to draw upon external partnerships with positional power almost oblique, designating the need for both transformational and transactional leadership styles (Bass & Avolio, 1997; Shao et al., 2015). The different dimensions of leadership styles within the MLQ have allowed for a contingency framework of integration.

Researchers have studied the effects of the different leadership styles on employee performance based on a contingency framework. For instance, Avolio (2007) found that transformational leadership exercised many different contingencies that might change based on the situation. He also found that leadership was most effective when contingencies were used to control the environment rather than the individual (Avolio, 2007). Bass (1997) studied the MLQ under cultural contingencies among differing global regions using transformational and transactional leadership styles as interchangeable according to the desired outcome. He found that the effectiveness of different leadership components within each leadership style depended on the cultural specificity of the region, impacting the usefulness of each style based on the region (Bass, 1997). Shao et al. (2015) originally predicted that transformational leadership would be necessary during the change implementation phase and that transactional leadership would help a lot during the fully active stage, while laisses-fair leadership would be useful during the preparation phase to create chaos. They found that the first two hypotheses proved right but that a mix of transformational and transactional leadership worked best during the assimilation and extension phases (Shao et al., 2015). MLQ leadership styles have been found to directly relate to contingency theory when guiding employees to a specific outcome.

Mixing trust with leadership and contingency. The MLQ leadership styles have also been linked to trust using a contingency theory design. Yasir et al. (2016) studied the way that trust moderated MLQ leadership styles during the different phases of organizational change to mitigate its capacity. Yasir et al. (2016) found that transformational leadership and laissez-fair leadership were both significantly related to trust and organizational change capacity, with transformational being positively correlated and laisses-fair, negatively correlated. They also found that trust did not significantly moderate transactional leadership and the two were not significantly related (Yasir et al., 2016). They further found that transactional leadership and transformational leadership were both positively related to organizational change capacity and laisses-fair leadership was negatively related; all three leadership styles related significantly (Yasir et al., 2016). Leaders would have been able to use contingency to manage the capacity among employees to accept and administer changes within the organization using leadership style and trust.

Contingency theory and trust. Contingency theory has been linked to trust in many different studies, such as the studies conducted by Newman, Kaizad, Miao, and Cooper (2014) and Swift and Hwang (2013). Trust has been a barrier to sharing knowledge across inter-organizational and intra-organizational teams, producing a pattern in the literature to study the way knowledge could be micromanaged using contingency theory with cognitive and affective forms of trust interchangeably. A type of trust developed while learning from practice defined cognitive trust, while a type of trust developed from enjoyment defined affective trust (Casimer et al., 2012). Using the ideals exercised in contingency theory, Casimer et al. (2012) found that affective trust overrode animosity towards sharing knowledge for both tacit and explicit knowledge in an alliance, but cognitive trust still had a positive effect on explicit knowledge

sharing across alliances within a certain threshold. According to Swift and Hwang (2013), knowledge sharing and trust could be categorized into tacit knowledge and explicit knowledge and sharing and learning behaviors with contingent outcomes. Using this conundrum, they found that affective trust catalyzed tacit knowledge sharing and cognitive trust facilitated explicit organizational learning (Swift & Hwang, 2013). Trust has had a validated effect on knowledge sharing behavior among employees using these two separate forms.

Cognitive trust. Cognitive trust has had a unique relationship with knowledge sharing. According to Newman et al. (2014), knowledge of a person's track record and performance developed cognitive trust in individuals. This cognitive trust was the type of trust that linked to the knowledge sharing behavior of knowledge donating (Jain, Sandu, and Goh, 2015). Pangil and Chan (2014) found that cognitive trust did not have a significant impact on knowledge sharing compared to other types of trust. However, Swift and Hwang (2013) found that cognitive trust was conducive to a culture of organizational learning. According to research, cognitive trust may have appeared not to have a great relationship with the sharing of knowledge, but it did have an indirect relationship to knowledge sharing through knowledge donating behaviors. The outcome of knowledge sharing was purely contingent on the type of trust and its strength through cultural factors of the organization.

Leadership style has had a moderating effect on employee performance when related to cognitive trust. Zhu, Newman, Miao, and Hooke (2013) conducted a study on the role of trust when transformational leadership was being used and found that cognitive trust hurt employee performance. Zhu and Akhtar (2014) found that cognitive trust positively affected the relationship between low prosocial relations and transformational leadership. This finding was much like Chen, Eberly, Chiang, Farh, and Cheng's (2014) finding using a design by which trust

was generalized, however, even though transformational leadership was unable to generate trust, transactional leadership was able to foster learning. Xenikou (2017) found that transactional leadership (Mierovich and Gu, 2015) was supportive of both cognitive and affective trust. Chou, Lin, Chang, and Chuang (2013) found that transformational leadership was conducive to cognitive trust in a team atmosphere. Kahai, Jestire, and Huang (2013) found that transformational leadership positively influenced cognitive trust while transactional leadership negatively influenced it. A recent study had found that passive leadership was also negative towards cognitive trust (JOMP, 2017). Research linking cognitive trust to leadership by exception was lacking and deserved further study. In summary, data has found that cognitive trust is minimally affected by transformational leadership in a positive relationship and affected by transactional and laisses fair leadership in a negative manner, contributing to its characteristic as a factor of contingency.

Affective trust. Affective trust also has had a distinctly contingent relationship with knowledge sharing. Jain, Sandhu, and Goh (2015) defined affective trust as derived from feelings of emotional pleasantness when interacting with others. Jain et al. (2015) found that affective trust had a definite relation to knowledge collecting but not donating, where collecting meant asking colleagues internal and external to the organization for what they had learned. Per Swift and Huang (2013), affective trust was more conducive to an outcome of knowledge sharing than that of organizational learning. Per Casimer et al. (2012), affective trust was able to override the bounds of personal costing to support knowledge sharing. Researchers have repeatedly found that affective trust is conducive to knowledge sharing and can be used contingently towards both knowledge collecting and knowledge donating behaviors, depending on the factors of the specific circumstance.

The relationship between leadership style and affective trust is much like that between leadership style and cognitive trust. A study by Miao, Newman, and Huang (2014) found a relationship between participation in transformational leadership (Meirovich & Gu, 2015) and affective trust. Zhu et al. (2013) found that transformational leadership was positively related to affective trust in job performance. Zhu and Akhtar (2014) found that transformational leadership was positively related to affective trust in helping behaviors, but only among prosocial individuals. Xenikou (2017) found transformational leadership (Meirovich and Gu, 2015) and affective trust to be positively related when compared to transactional leadership. Stinglhamber, Marique, Caesens, Hanin, and Zanet (2015) found that transformational leadership was positively related to affective trust when leadership was proximally close but that there was no significant relationship when leadership was not. Transactional leadership related generalized trust as a substitute for leadership and not as a direct correlative of it (Chang, 2015). Further study was needed to determine the relationship between affective trust and liaises fair or leadership by exception. Overall, research has found a contingent relationship between affective trust and leadership style.

Summary of contingency theory and cognitive or affective trust. Throughout the literature there was a lack of exploration of the direct relationship between contingency theory and cognitive and affective trust; however, parts of the literature could be placed together to study a proposition since most of the literature involved contingencies and contingent outcomes using a contingency framework. According to Meirovich and Gu (2015), cognitive leadership involved task structure, relational exchange, and positional power. Fiedler (1971) characterized these as well-defined perimeters and guidelines for task structure; the relationship between leadership and subordinate, including the subordinate's ability to define a role, for relational

exchange; and the proximity of leadership to subordinate, including the amount of direct control exercised by leadership, for positional power. Similarly, affective trust dealt with a relationally derived trust associated with emotions (Casimer et al., 2012), while cognitive trust came from learned behaviors based on performance and structure (Newman et al., 2014), which created a similarity between the constructs of both types of trust and those of contingency theory. Ren, Shu, Bao, and Chen (2016) studied entrepreneurial opportunity, discovery, and exploitation against cognitive and affective trust within a contingency framework. They found that affective trust moderated the relationship between network ties, opportunity exploitation (knowledge donating), and opportunity discovery (knowledge collecting) (Ren et al., 2016). Furthermore, cognitive trust mediated the relationship between weak ties and opportunity discovery and strong ties and opportunity exploitation (Ren et al., 2016). Although the research was slow for the discovery of the relationship between contingency theory and cognitive and affective trust, the available research suggested the ability to link these ideas in further study by utilization of a contingency framework.

Contingency theory and financial services industry research. Researchers have also studied the financial services industry under the contingency theory platform. Delery and Doty (1996) studied how human resources management could affect financial performance in the banking industry using contingency theory as a framework. To these researchers, the organizational strategy was the contingent factor that created a fit or misfit towards financial performance (Delery & Doty, 1996). Sirmon and Hitt (2009) studied the fit between resource investment and deployment decisions in the banking industry. For these two researchers, the type of service offered, and the type of human capital maintained were the contingent factors determining fit and misfit between resource investment and deployment decisions (Sirmon &

Hitt, 2009). Ittner, Larcker, and Randall (2003) studied the way that strategy effected performance using economic value drivers as contingency factors that affect the fit between strategy and performance measurements. These researchers found that two specific value drivers had a significant effect as factors determining the fit between strategy and performance measurements: employees performance worked better at improving performance than financial measurements (Ittner et al., 2003). The financial services industry had been studied using the contingency theorem by multiple researchers; however, research has been lacking specifically for contingency perspectives in knowledge sharing, trust, or MLQ leadership style, creating a gap that this current research has filled.

Synthesis of the Research Findings

One way to discover the utility of a study is to compare the general constructs of the study for overarching trends. For instance, a significant trend of research related to the MLQ leadership styles was to focus leadership towards principles of the firm, for example, Capelli et al. (2015) found that US firms focused on stakeholder value and exercised leadership style that was more transactional while India focused on creating value and consumer quality which resulted in a transformational leadership style (Bass, 1997). This analysis examined both leadership style and contingency theory to find if there was an expression of trends in the management of knowledge sharing behavior, as well as the relationship of each sub-variable to each other and to trust, that could be synthesized to develop new insight. The analysis in the literature studied was conducted using multiple regression, SEM, and multidimensional platforms (Jain et al., 2015; Shao et al., 2015; Zhu et al., 2013). Research on knowledge sharing was the most prevalent; where different components of leadership style, contingency theory, and trust type were all studied as direct or indirect moderators and trust type was mostly studied as a

direct path to knowledge sharing but created by something other than leadership style when impacting knowledge sharing (Casimer et al., 2012; Jain et al., 2015; Swift & Hwang, 2013). For instance, Casimer et al. (2012) studied how affect-based trust moderated the ability for affective commitment to generate knowledge sharing, finding that affect-based trust did increase the chances of knowledge sharing in employees who viewed the group as a social commodity where knowledge belonged to the collective rather than the individual. Two leadership styles that were either not mentioned or hardly mentioned in the available literature on contingency theory were passive-avoidant leadership and leadership by exception. Trends provide a good fit for a multidimensional study of leadership style, trust type, and knowledge sharing behavior because they express many links between components of the three variables.

As organizations have begun to develop increasing amounts of knowledge to compete in today's ever-changing marketplace (Andersson et al., 2016), various circumstances that require different types of knowledge management have begun to challenge leaders (Cohen & Olsen, 2015). While knowledge has been known to catalyze productivity (Henderson, 2007), knowledge leaking into the wrong hands could cause a stalemate in the competition (Ritala et al., 2015). Leaders often seek out ways to manage the amount of shared knowledge according to the type of internal staff they have or the relationship with the partner they are coordinating knowledge with (Kim et al., 2014). Past studies have shown that trust has a significant impact on the ability of workers to share knowledge and specifically affective and cognitive trust in retrospect with tacit or explicit knowledge (Swift & Hwang, 2013). Past studies have also coupled the various leadership styles accounted for on the MLQ with the ability for leaders to generate trust in employees, and with either cognitive or affective trust (Chuo et al., 2013). To synthesize the knowledge gained from this literature into the discovery of something new, an

insight gained from the literature is that both chunks of knowledge could be pulled together as a single unit through the examination of how leadership style explains knowledge sharing behavior with trust as a moderator – directly relating the role of leadership in guiding knowledge sharing behavior.

Leaders have become aware of the effectiveness of knowledge sharing towards creative productivity. Two subcategories of knowledge are an explicit form of knowledge where knowledge is charted and stored for extraction at later times (Cohen & Olsen, 2015); and a tacit form where knowledge is revealed through practice and never formally documented by the knowledge holder (2015). Explicit knowledge is the easiest to manage and the most influential toward the creation of new knowledge (Loebbecke et al., 2016). Tacit knowledge could be managed using task structure and lack of relational leadership (Loebbecke et al., 2016). Tacit knowledge is useful for increasing processing time or making the process of creativity easier (Cohen & Olson, 2015). In some relationships, tacit knowledge sharing is used to encourage the sharing of explicit knowledge (Khvatova & Block, 2017). In bringing together this literature towards new knowledge, one insight is that leaders need a way to actively monitor the leaking of knowledge to control the ability of partners to dissolve efforts toward market competition.

The financial services industry offers many products in the knowledge industry; however, little research has been implemented to discover ways to share or manage knowledge in the industry. The financial services industry has used knowledge such as marketing techniques, different products for obtaining mortgages or business loans, for interest, for long-term saving, and other products to allow consumers to learn about money management (Sirmon & Hitt, 2009). Other knowledge areas include products towards specific agendas of society or community social responsibility actions (Ittner et al., 2003). Even though study regarding sharing capabilities is

lacking, these knowledge areas allow individual industry market players to stay above or at a level in the competitive forefront (Sirmin & Hitt, 2009). Some industry studies related to knowledge have been concerned about technical security barriers to physically control knowledge (Li et al., 2016), or motivational barriers to allow the creation of new knowledge (Wang & Hu, 2015). There has also been a study on the benefits of knowledge networking in the financial services industry in order to enhance product portfolios to increase consumer interest (Leonardi, 2015). From the bringing together of this literature on knowledge sharing in the financial services industry in order to discover something new, an insight from the available research was a finding of the need to make leaders of the financial services industry more aware of the capabilities of sharing knowledge.

From the bringing together of several pieces of literature on the relationship between contingency theory and various expressions of knowledge sharing behavior, leadership style, and trust type, towards presenting something new; an insight from the writings supports a future study to link each variable together such that leadership style moderated by trust type could explain knowledge sharing behavior, rather than just explaining trust type. From this synthesis of the reviewed literature, several small insights developed into this main finding. For instance, the subconstructs of the two main leadership styles, which are transformational and transactional leadership (Bass & Avolio, 1995), fit well within the three factors of contingency theory: task structure, positional power, and relational exchange (Avolio, 2007; Bass, 1997; Fiedler, 1971). The affective trust has a direct relationship with transformational leadership (Zhu et al., 2013) while cognitive trust has a moderating relationship with transformational leadership and a negative relationship with transactional leadership (Kahai et al., 2013; Zhu et al., 2013) – suggesting a leadership contingency theory presentation of leadership style with trust type

(Fielder, 1971; Khvatova & Block, 2017). Passive leadership has a nonsignificant relationship with trust and may need transactional leadership as a backup since transactional leadership can bypass trust (Chang, 2015), suggesting the intermixing of leadership constructs in relationship with trust type as suggested by leadership contingency theorists (Drazin & Van de Ven, 1975). Affective trust shows a significant relation to knowledge collecting and cognitive trust shows a moderating relationship to knowledge donating and organizational learning (Jain et al., 2015; Swift & Hwang, 2013), which supports the idea of moderation by trust type. Therefore, from the synthesizing of the literature, an insight from the writings suggest that in order to manage knowledge sharing behavior through inter-organizational and intra-organizational transactions, the data on leadership style and trust type should form a knowledge sharing behavior model using leadership style with trust as a moderator.

Critique of Previous Research Methods

Leadership Style

While the literature on leadership style was extensive, there were some gaps in the research. Most trust research related to MLQ focused on transformational leadership and did not address the other styles (Chen et al., 2014; Chuo et al., 2013; Kahai et al., 2013; Yasir et al., 2016; Zhu et al., 2013). While there was some research attempting to link leadership style with contingency theory, such research only explained what contingency theory was and then used it to support the methodology (Khvatova & Block, 2016; Shao et al., 2015). For example, explanations of the different phases of the enterprise system (ES) described constructs of contingency, but the literature did not directly state these constructs as contingency in the explanation of ES, the authors merely listed contingency as the underlying theory of the research (Shao et al., 2015). Avolio (2007) explained transformational leadership as a style with changing

components, using contingency theory as a way to understand leadership, and Bass (1997) explained the interchanging scale of transformational and transactional leadership components using a contingency theory framework. Regardless, research linking the financial services industry to contingency theory was lacking, and especially when considering leadership style and trust within the contingency theory paradigm. While the literature was conclusive for each study, it still produced many gaps in the overall breadth of research available.

Some methodological issues that were fit for critical analysis within these previously mentioned studies. For instance, the study conducted by Chen et al. (2013) provided validity factors for extra-role performance and paternalistic leadership, but only provided reliability factors for affective trust and in-role performance - although a variable can be reliable throughout a study that does not mean that it is valid enough to prove useful in the study (Saville & Blinkhorn, 1981). Furthermore, Chen et al. (2013) removed two questions from the original instrument for affective trust so that the resulting instrument matched Chinese culture. Even so, they did provide a confirmatory factor analysis of the study to prove the validity of the associated factors (Chen et al., 2013). Chuo et al. (2013) were complete in their analysis, and their analysis was sound; however, the way that they tested for team adherence was questionable. The PLS experts consulted conducted the composite analysis first then the factor analysis second, as per the construct of a composite analysis (Kock, 2015; Lowry & Gaskin, 2014), which is in the reverse order of the process conducted by Chou et al. (2013) who validated the measurements after the analysis was complete. Kahai et al. (2013) did not validate any of their chosen tests; they also did not check for reliability. There was not even an evaluation of theoretical validity as opposed to construct validity or other more reproducible forms of validity (Kahai et al., 2013).

Otherwise, the literature was well written, and the methodology was proficient enough to prove the findings.

Trust Type

Researchers explained trust in ways that matched the contingency theory; however, only one of the researchers explained their research using contingency theory terminology. For instance, Meirovich and Gu (2015) described cognitive trust using the constructs of contingency; however, contingency theory was used as a defining principle and not to provide a link between cognitive trust and contingency theory. Casimer et al. (2012) and Newman et al. (2014) described constructs of each trust type in such a way that those constructs matched perfectly with the constructs of various MLQ leadership styles (Bass & Avolio, 1995), but contingency theory was only implied in their studies and not explicitly mentioned. For instance, Newman et al. (2014) described cognitive trust with the repeat introduction to specific behaviors which is similar to the tactics used in transformational leadership, and effective trust as resulting from numerous transactions which is similar to the workings of transactional leadership (Bass & Avolio, 1997). Shao et al. (2015) used a contingency theory framework but did not delve deeply into the constructs of either trust type or contingency theory to analyze the side by side explanation of how they match. Furthermore, research regarding trust as it related to knowledge sharing within the financial services industry was profoundly lacking in direct form. This lack of research created a research gap related to the need to describe how contingency theory directly defined cognitive and affective trust, and especially within the financial services industry.

Trust type literature also has various methodological limitations. For instance, Meirovich and Gu (2015) use the SLT despite their evaluation of the instrument as having no determination of validity. Furthermore, other instruments by Meirovich and Gu (2015) have an expressed level

of validity based upon previous tests of the instruments, but no mention of what that validity is in the study conducted by Meirovich and Gu (2015). There was some question regarding the distance calculation for the different levels of readiness since there was nothing in the literature to validate the reason for choosing the different measurements for the level of readiness, i.e., why describe the term medium as 2 for task structure and 5 for people orientation and onward (Meirovich & Gu, 2015). Even so, Meirovich and Gu (2015) did help to contribute to the research in contingency theory related to trust.

Meirovich and Gu (2015) are not the only trust type researchers with methodological limitations. Zhu et al. (2013) conducted a useful academic SEM analysis by which they were able to prove most of the hypothesis. However, although the researchers did mention the use of composite analysis and chi-square analysis (Zhu et al., 2013), the researchers did not provide information on the type of SEM used and what the analysis calculations were for the SEM output. Another thing noticed in Zhu et al.'s (2013) research was that they conducted the components analysis around descriptive statistics, in other studies of SEM examined (Lowry and Gaskin, 2014; Kock, 2015), they based the components analysis on factors and sub-factors that could be identified as independent variables, moderators, mediators, or their constructs rather than descriptive statistics. Newman et al. (2014) conducted latent variable SEM that followed closely with the procedures mentioned by Russel, Kahn, Spoth, and Altmaier (1998) in their seminal work on latent variable analysis. The only methodological concern was that they used the separation of the different types of trust and the different levels of OCB as latent variables where the final output did not require the separation of these variables into their subparts since there was virtually no difference between them (Newman et al., 2014). Furthermore, Newman et al. (2014) conducted a latent variable analysis to test moderation rather than to test for the

possibility of latent variables (Russel et al., 1998). There were both knowledge gaps and methodological limitations found in the recent research literature about trust related to contingency theory and knowledge sharing.

Knowledge Sharing

Knowledge sharing has been a trending topic of study among researchers extending from past to recent literature. Some of the more recent studies touched on the ways that trust affected knowledge sharing using a contingency theory perspective (Levin & Cross, 2004; Khvatova & Block, 2017). Other studies have introduced ways that different management structures could ease the path of knowledge sharing (Kim et al., 2014; Arnold et al., 2014). Trust researchers have studied either the variable of trust as a generalized term (Arnold et al., 2014; Khvatova & Block, 2017), or the use of trust as a product of either friendship or merit (Levin & Cross, 2004), but research regarding cognitive versus affective trust as created by leadership style was lacking, creating a gap in the literature. While management systems fit under the idea of task structure, and may also have fit into MLQ leadership context, these systems were not studied explicitly as a leadership agenda but more like a mechanical system within the firm (Kim et al., 2014; Arnold et al., 2014). This lack of literary data also created a gap that would allow researchers to understand what leadership system most fit towards a specific knowledge sharing behavior. While contingency theory had been used to study many facets of knowledge sharing behaviors, research was lacking in MLQ leadership and cognitive versus affective trust, a gap which this research had been designed to fill.

There were also some methodological issues to consider in the knowledge sharing data. First, Levin and Cross (2004) used HLM and OLS techniques to analyze their data – these two techniques are enough for random predictor outputs; however, they are also used to analyze

cluster data which is not the type of data analyzed by Levin and Cross (2004). Secondly, Levin and Cross (2004) gathered their variables from several different sources where they developed the research instrument from partial inclusion of various other instruments rather than to fuse full instruments or to use just one validated instrument. They used theoretical methods to validate the data, bypassing construct validity procedures by using cluster terms for the regression analysis rather than to conduct a CFA analysis (Levin & Cross, 2004). The study conducted by Khvatova and Block (2017) had very few errors; the only notable error was that they justified polynomial regression by explaining the structural fits of contingencies replete with contingency theory; however, the methodology itself already justified the analysis by the covariance of factors (Wang et al., 2016). Although Kim et al. (2014) did perform acceptable analytic methodology (Koo & Li, 2016), there was a concern about the methodology used to conduct the knowledge management section of their, since the researchers chose to educate the participants on knowledge management strategies and used that to omit questions designed to find strategies from uneducated respondents. Such a procedure could produce bias because the respondents now understand strategies by the way the researchers teach strategy and not necessarily from blind experience. Many of these limitations will not be possible in moderated multiple regression analysis (Helm & Mark, 2012), and the proposed methodology incorporates procedures of re-constructible validity analysis.

Financial Services Industry

Although there have been several pieces of research using the contingency theorem perspective, research in the financial industry using contingency theory was still very small compared to the use of other theories. Furthermore, when using contingency as a framework, the financial services industry lacked in research regarding knowledge sharing, trust, and leadership

style. The research did touch on strategy (Delery & Doty, 1996; Ittner et al., 2003) and human resources agendas (Delery & Doty, 1996), which are constructs that could have involved leadership style, but it did not specifically mention any leadership style. There was also research involving the need to know about competition and competitive methods, but the research was not directly about knowledge sharing, it merely supported a need to study knowledge sharing in the financial services industry (Sirmon & Hitt, 2009). This research had used the financial services industry, where there was a need to expand contingency theory and a gap in the literature about leadership style and trust and a lack of research in knowledge sharing behaviors, to fill such gap and resolve the need.

The financial industry research also had some methodological limitations. For instance, Delery and Doty (1996) conducted a proper logistic regression analysis according to Peduzzi et al. (1996) and Steyerbeg et al. (2000), however, according to Peng, Lee, and Ingersoll (2002), logistic regression is typically used to repair non-linear data during a comparison of two different data sets rather than as a control technique for large sets of variables. Steyerbeg et al. (2000) also attributed logistic regression to cross-comparison of data, whereas Delery and Doty (1996) were modeling a broad set of variables. Ittner et al. (2003) produced what looks like a sound research study, incorporating different business measurement methods, however they did not validate the instrument or check for reliability, furthermore they never specifically mentioned the analysis technique used, only that the results came from t statistics, residuals, and some form of regression. According to the methodology described by Johnson (2005) and de Hoyos and Sarafidis (2006), the methodology and analysis chosen by Sirmon and Hitt (2009) matched perfectly, the research was sound and unable to be criticized. While all the research was helpful and able to be used, much of it did contain limitations in content and methods of analysis.

Summary

The results of the literature review indicate trust as a midpoint between leadership style and knowledge sharing behavior, although there is no study of the direct relationship available. According to Yasir et al. (2016), employee trust may impose a significant relation to both transformational and transactional trust. However, transformational leadership was brought about by individualized relationships, intellectual stimulation, and group acceptance, which led to an emotional attachment (Yasir et al., 2016). In the same context, transactional leadership led to trust through a series of contingent rewards that were being honored for specific behaviors (Yasir et al., 2016). Swift and Hwang (2013) found that the coupling of the senses with personality into an emotional reaction generated affective trust. They also described cognitive trust as deriving from experiences and historical references (Swift & Hwang, 2013). In this sense, transformational leadership, as described by Yasir et al. (2016), was said to develop trust in the same manner as Swift and Hwang (2013) described when they referenced affective trust. Furthermore, transactional leadership methods helped leaders to develop trust (Yasir et al., 2016) in the same manner that Swift and Hwang (2013) described the development of cognitive trust. Therefore, the outcome of the study will potentially show that leadership style is positively related to trust type.

In the same study by Swift and Hwang (2013), findings indicated the direction of affective trust and cognitive trust towards knowledge sharing. The study initially tested for both types of trust together, which disseminated a positive finding (Swift & Hwang, 2013). It then displayed results for each separately, showing that affective trust was positively related to knowledge sharing while the cognitive trust was positively related to organizational learning (Swift & Hwang, 2013). Van den Hooff and de van Weenan (2004) separated knowledge

sharing behavior into two factions: knowledge donating and knowledge collecting. The outcome of affective trust with knowledge sharing that was referenced by Swift and Hwang (2013) related directly to knowledge donating behavior (van den Hooff & de van Weenan, 2004), while the outcome of organizational learning for cognitive trust (Swift & Hwang, 2013) was related directly to knowledge collecting behavior (van den Hooff & de van Weenan, 2004). Therefore, the outcome of the study will show that the trust type is positively related to knowledge sharing behavior.

The separate pieces of research had the potential to combine into single research project that linked each separate dominion of the research examined into a single conclusion. For instance, transformational leadership would have produced affective trust (Yasir et al., 2016; Swift & Hwang, 2013) which would have resulted in knowledge donating behavior as described by van den Hooff & De van Weenan (2004). Also, transactional leadership would have produced cognitive trust (Yasir et al., 2016; Swift & Hwang, 2013) which would have resulted in knowledge collecting behavior as described by van den Hooff & de van Weenan (2004). Therefore, the outcome of the study will potentially show that knowledge sharing behavior among team members have been affected by the moderation of leadership style with a specific trust type. Furthermore, since leadership style is related to trust type and trust type is related to knowledge sharing, it is predicted that the use of trust type as a moderator creates an increase in the strength of the relationship between leadership style and knowledge sharing. Finally, there is a direct correlation between leadership style and knowledge sharing, but there is a difference in the strength of this correlation than the strength of the correlation between trust type, derived from leadership style, and knowledge sharing.

The findings of the literature and an analysis of the meaning of the articles studied provided a baseline for the establishment of a position for contributing research to enhance current findings on the proposed topic. This review of the literature has produced some apparent gaps that will enhance the value of the research upon filling those gaps. The study in question will expand the literature by explaining the relationship that MLQ Leadership Styles have had to cognitive and affective trust, how these variables are affected by task structure, leader-member exchange, and positional power within the contingency theory framework, and their relationship with knowledge sharing. The expansion of literature also will include the discovery of how cognitive and affective trust work within contingency theorem and whether MLQ is more active towards knowledge sharing alone or by using a specific trust type as a path to generate knowledge sharing. The research has been designed to expand contingency theory in the financial services industry to fill such gaps. Therefore, the study will expand the current literature by providing a deeper understanding of how leadership styles use task structure, positional power, and leader-member exchange to effect knowledge sharing behavior when moderated by trust type.

CHAPTER 3. METHODOLOGY

Introduction

With the insights developed from the review of literature, a possible research design has been proposed that takes into consideration a critique of research methods already used in studies related to the topic. This chapter will provide a brief description of the methodology used in the study, with an explanation of the reasons for the chosen methodology. It then presents the research questions to be answered with a definition of the constructs. Furthermore, this chapter will present a description of the research population and sampling techniques; the design of the research, including methods of data collection, an overview of the study instrument, and the methods of analysis; and a description of the limitations and assumptions. The purpose of the chapter is to provide a replicable description of the research conducted in the following chapters.

Purpose of the Study

The purpose of this non-experimental, quantitative, explanatory study is to explore the extent to which there is an explanatory relationship between perceived leadership style and knowledge sharing behavior in the financial services industry. Also, this study has sought to examine the moderating effect of trust on the explanatory relationship between perceived leadership style and knowledge sharing behavior with contingency theory as the theoretical framework of the study and within the financial services industry.

Research Questions and Hypotheses

This study was guided by the following central research question, subquestions, and hypothesis: To what extent does trust type (affective and cognitive trust) moderate the explanatory relationship between perceived leadership style (transformational, transactional, and

passive-avoidant) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry?

$H_0 1$: Trust type (affective trust and cognitive trust) does not have a statistically significant moderating effect on the explanatory relationship between perceived leadership style (transformational, transactional, and passive-avoidant) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

$H_a 1$: Trust type (affective and cognitive trust) has a statistically significant moderating effect on the explanatory relationship between perceived leadership style (transformational, transactional, and passive-avoidant) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

RQ1a: To what extent is there an explanatory relationship between perceived leadership style (transformational, transactional, and passive-avoidant) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry?

$H_0 1a$: There is no statistically significant explanatory relationship between perceived leadership style (transformational, transactional, and passive-avoidant) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

$H_a 1a$: There is a statistically significant explanatory relationship between perceived leadership style (transformational, transactional, and passive-avoidant) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

RQ1b: To what extent is there an explanatory relationship between trust and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry?

$H_0$1b: There is no statistically significant explanatory relationship between trust type (affective and cognitive trust) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

H_a1b: There is a statistically significant explanatory relationship between trust type (affective and cognitive trust) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

RQ1c: To what extent does trust type (affective and cognitive trust) interact with leadership style (transformational, transactional, and passive-avoidant) in explaining knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

$H_0$1c: There is no statistically significant interaction between trust type (affective and cognitive trust) and with leadership style (transformational, transactional, and passive-avoidant) in explaining knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

H_a1c: There is a statistically significant interaction between trust type (affective and cognitive trust) and with leadership style (transformational, transactional, and passive-avoidant) in explaining knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

Research Design

The study utilized a non-experimental quantitative explanatory design. This design was appropriate because of quantitative research connecting leadership style to trust utilized a similar design (Zhu et al., 2015), as did quantitative research linking trust to knowledge sharing behavior (Jain et al., 2015). According to Shmueli (2010), explanatory and predictive models are very

similar except that explanatory models describe causation, provide an understanding, and provide a description of science, while predictive models use descriptive science, theories, and laws to predict what will happen from a known set of causative factors. In this study, likely outcomes were unpredictable due to the lack of availability of causative factors (Shmueli, 2010). The study utilized random probability sampling so that the results were generalizable and unbiased (Barabesi & Fatorini, 2013). Participants were employees in the financial services industry who had been employed with their firm at least two years. The study population included employees working in firms within the financial services industry in the United States of America (Centiment, 2018). With a 95% confidence interval, the targeted sample size minimum was 111 study participants (Gpower 3.1, 2017). All employees who were chosen to participate were granted the ability to decide whether to participate and could opt out at any time.

Study data sources included three validated instruments. The first of such was the Knowledge Sharing Behavior Scale derived from Van Den Hooff and De Van Weenen (2004). The second was the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio (1995). Responses from employees about their leaders, instead of leaders about themselves, was the format of the version of the MLQ survey administered for this study. The third instrument was the Affective and Cognitive Trust Scales developed by Dunn, Reudy, and Schwietzer (2012). The data was analyzed using a moderated multiple regression analysis, which was appropriate for this study because both the predictor and the moderating variables were continuous variables (Helm & Mark, 2012**).**

Target Population and Sample

Population

The industry sector of financial services firms was the focus of this survey. According to the Bureau of Labor Statistics, approximately 6,332,700 employees were working for the finance and insurance industries in the United States as of January of 2019 (United States Department of Labor, 2019). From this population: 109,720 were accountants and auditors, 374,050 were insurance sales agents, 261,590 were loan officers, 367,180 were securities, commodities, and financial services sales agents, and 481,490 were tellers (United States Department of Labor, 2019).

Sample

The sampling procedures of the survey were to conduct a randomized probability sample in order to ensure that the results could be generalizable to the significant population (Barabesi & Fatorini, 2013). Furthermore, randomized probability sampling ensured an equal opportunity for participant selection within the desired population (Barabesi & Fatorini, 2013). The picking of participants happened through random selection from a database of eligible employees, and all employees experienced the granting of the ability to decide to participate. The selection of participants was solely the responsibility of a third-party panel company named Centiment (2018), who conducted the process of randomization. However, there was only one industry classification that random participants belonged to, and those selected were only eligible if they worked for their current employer at least two years.

Power Analysis

A power analysis was conducted to determine the minimum population needed to generate a valid study. The analysis progressed with a 95% confidence interval and an effect

size of 0.33. The minimum requirement for completed surveys measured 111 participants (GPower 3.1, 2017). This population should have provided a good representation of the specific population under study for the research topic.

Procedures

The research included a data collection phase involving the administered survey. The administration of a research plan allowed a structure in place for collecting data in the form of a survey (Barabesi & Fatorini, 2013). This section describes the sampling procedures for the data intended for collecting through the proposed survey instrument of the specified population.

Participant Selection

While populations are usually too large to use entirely for one survey, sampling allowed researchers to select a proportion of a population to represent a legitimate study. According to Barabesi and Fatorini (2013), random sampling allows for the singling out of individuals from the overall population in a randomized way. The sampling procedure for this survey was a random probability sample to generalize the results to the larger population (Barabesi & Fatorini, 2013). To ensure that participant samples were generalizable to only the population under study (Barabesi & Fatorini, 2013), the screening for disqualification of participants according to the guidelines of the study took place through qualifier questions incorporated at the beginning of the survey. Such questions included asking participants if they worked in the financial services industry and if they had worked for their current employer for at least two years.

This study required a specific type of organization to be examined to fulfill its purpose. To locate specific organizations, the SIC codes for corporations having registered their license under the most fitting industry, which was the financial services industry, was the designated target for survey solicitation. Specifically, organizations exercising license under the SIC codes

6282, 8742, 6351, 6029, 6289, 6021, 6022, 6211, 9311 and 7389 with subcategories, and any other financial services related sic, specifically from the Bureau of Labor Statistics NAICS 52 category of Financial and Insurance industry sector (bls.gov, 2019), was solicited for participation in this survey. These types of corporations were most likely to have a large population that would generate a good participation count for the survey and were more likely to require the protection of owned intellectual property. This survey included the use of an electronic version to make it more efficient for the third-party panel recruiter, Centiment, to carry out the mechanics of solicitation for the survey.

Protection of Participants

Since this study centered around the recruitment, dissemination, conduction, and analysis of a survey, there was a need to take steps towards an ethical outcome. First, it was essential to obtain permissions from the correct source within the chosen companies for participation in the study (IRB, 2015) without using harassing means to do so (AOM, 2006). Furthermore, the survey included a statement to ensure that employees were aware of what would happen with the facts from conduction of the survey, the specifics of the revealing of personal data, if any, what the survey's purpose was, and that recruited individuals would receive no harm if they refused to participate (NIH, 2011). An assurance was made to all participants that all data underwent a process of encryption during live handling and that it was either secured or destroyed when handling had ceased (IRB, 2015). There was an informed consent form that had to be accepted for participants to proceed to the online survey used to provide documentation of the assurances made. A copy of the informed consent form is available in Appendix A.

According to the AOM policy (2006), any websites used to disseminate electronic versions of the survey provided participants with a review of privacy policies to describe the

secure use of data for this study. The collection of IP addresses convened in order to avoid personal identifiers while identifying survey instruments as an individual (IRB, 2015). There was also the provision of a full description of the selection process and assurance that the survey did not include demographic questions (AOM, 2006; IRB, 2015). If there were any sign of a conflict of interest or potential ethics error, the IRB was contacted immediately for procedures and investigation (IRB, 2015). With the inclusion of these necessary steps, there was enough security to protect the privacy, confidentiality, anonymity, and consent of participants.

Data Collection

This section described the data collection procedures for this quantitative survey research design. The first item to be collected was the actual survey. The proposed platform for the electronic survey was ZohoSurvey (2018). This online survey site allowed for researchers to easily download survey results into Excel and CVC formats (ZohoSurvey, 2018). Although not used for this study, the website had options for some data analysis that included an explanation of correlative values and regression (ZohoSurvey, 2018).

The data collection process started with the designation of participants. The first step was to consult with Centiment (2018) to set the desired population for recruitment of participants. A correct analysis of the needed sample size from GPower 3 (2017) software provided a measurement of the needed sample size. Since the MLQ required purchasing a user license for each respondent, the next step included obtaining a student voucher for the use of the survey and then purchasing as many surveys as the minimum estimated number of participants, or the most efficient numerical value for the pricing system MindGarden (2018) offered for the MLQ. Then the ZohoSurvey (2018) site for this survey was updated with a participant cutoff point to match that number of surveys. The online panel company, Centiment (2018),

randomized the participant sample and removed bias from the selection process (Barabesi & Fatorini, 2013).

ZohoSurvey (2018) was the administering agency for the survey. The website is a self-service portal where the survey is created, published, and administered by the administrator of the secured portal. Before the use of the survey as a data collection instrument, the entering of the survey package took place into ZohoSurvey (2018). Once the survey was entered and ready to be used, the website had to be set up to allow employees access while also screening them for qualifications and policy acceptance. The location of the preliminary questioning was on the first page of the survey site such that the path of the survey led non-qualifying employees to a site page that apologized that the participant was not qualified. Qualification was that the employee must have worked for the firm for two years or more and hold employment within the financial services industry. Programmed into the ZohoSurvey (2018), a policy acceptance question required acceptance to advance into the survey. The policy acceptance statement included information on the secrecy of personal data and information privacy. Participants were made aware that they should answer questions according to their interpretations and that they could opt out at any time.

Once the survey process was complete, the next step was to download data into a spreadsheet compatible with SPSS for statistical analysis. The SPSS software was used to strengthen the process of comparison by computerizing the calculations for the researcher rather than the researcher attempting to calculate all that data by pen and paper (Gonzalas, Gasco, & Llopis, 2015). The data was entered into SPSS using the hierarchal block method (Helm & Mark, 2012). SPSS was used to enter data with the simple enter process because the equation for moderation required simultaneous entering of variables without discarding pieces of data due to

insignificance (Dawson, 2014). The alternative method, stepwise regression, removes variables that fall outside of the significance value from the regression analysis while the enter method displays results showing that the test was insignificant without removing variables (Masoudi, Ordibeheshti, Rajaipoor, and Sakhaei, 2016). The block enter method allowed alignment of the independent variable by itself; then the independent variable with the moderating variable; and finally, the independent variable with the moderating variable and the interaction variable (Dawson, 2014; Helm & Mark, 2012).

Data Analysis

Descriptive statistics. The survey did not include questions related to descriptive statistics for respondents. The panel company, Centiment (2018), offered concern that the survey was already considerably extensive and could be a cause for participants to leave the survey early without completing it. However, the IP address of each respondent was collected. Furthermore, Centiment (2018) also collected descriptive data regarding the gender, age, and industry of employment for each participant before entering the survey. The Centiment (2018) representative was able to provide this data, which was matched with the date and time of participation for each completed survey to obtain a general understanding of the participant population.

Hypothesis testing. The testing sequence began by using the Excel spreadsheet with test answers downloaded from ZohoSurvey (2018) to create the main variables of the reaction by adding the related questions describing each variable and dividing by the number of questions asked for each variable. Then the analysis continued by entering data into SPSS software version 24 from the Excel spreadsheet containing the survey answers from ZohoSurvey (2018).

Then the SPSS software was used to conduct a linear regression analysis using the multiple moderated regression equation, as follows.

$$Y = b_0 + b_1X + b_2Z + b_3(X*Z) + e \text{ (Helm \& Mark, 2012)}$$

In this equation, Y was the outcome variable that was either knowledge collecting or knowledge donating. X was the independent variable that was either transformational leadership, transactional leadership, or passive-avoidant leadership. Z was the moderating variable that was either affective trust or cognitive trust. The small e was the difference between the residual and the predicted residual (Helm & Mark, 2012). The terms were entered as a simple enter block method where the first test was $Y = b_0 + b_1X + e$, the second test was $Y = b_0 + b_1X + b_2Z + e$, then the final test was $Y = b_0 + b_1X + b_2Z + b_3(X*Z) + e$ (Ghasemi & Zahediasl, 2012). This method allowed the output to include scatterplots for normality, linearity, and homoscedasticity, which are three of the five assumptions found in regression analysis (Zhang et al., 2015).

Before hypothesis testing could take place, analysis has to be conducted to resolve the five assumptions of regression. The first of these is an assumption of normality, which utilization of a P-P plot resolved (Ghasemi & Zahediasl, 2012). The second of these is an assumption of linearity, which is resolved through a scatterplot of the dependent against the predictor variables (Hickey et el., 2018). The third is an assumption of heteroscedasticity, which is resolved through a scatterplot of the residual against the predictor variables (Hickey et al., 2018). This fourth is the assumption of multicollinearity, which is resolved through the variance inflation factor (VIF) for each reaction (Hickey et al., 2018). The fifth is an assumption of the lack of correlation between variables, which the Durbin-Watson statistic resolved (Prienerstorfer & Potscher, 2017). After resolving these assumptions, it was safe to begin hypothesis testing.

The first step of hypothesis testing was to locate the t-statistic for each response to discover the strength of the reaction to the variable (Helm & Mark, 2012). The second step was to consider the probability statistic where $p < .05$ to be significant (Dawson, 2014). A third step was to check the standard beta statistic to see how far from the null hypothesis that the variable moves for a single unit of reaction (Hickey et al., 2018). These were the steps followed for each reaction, then the overall answer was determined by if all were insignificant, some were significant, and some insignificant, or all were significant. Once the null hypothesis was either accepted or failed to be accepted, the more in-depth analysis determined the strength of the significant reaction using the standard beta term (Helm & Mark, 2012). A t-statistics was used to measure the level of moderation was measured with consideration of the p-value and beta calculation for the interaction, while discarding noninteraction output data (Helm & Mark, 2012). This fundamental analysis was enough to answer the main research question and all its sub-parts.

Instruments

Multifactor Leadership Questionnaire (MLQ) (Bass & Avolio, 1995)

This instrument tests for leadership style with the three main leadership styles being transformational leadership, transactional leadership, and passive-avoidant leadership (Bass & Avolio, 1995). It consists of a 5-point Likert scale. By seeking permission from the publishing company and obtaining a license for use of this survey, this instrument is administered for use to test for leadership style per the constructs of inspirational motivation, idealized influence attributed, idealized influence behavior, intellectual stimulation, individualized consideration, contingent reward, active management by exception, management by exception passive, and laisses-faire. The survey also includes questions about extra effort, effectiveness, and

satisfaction. Transformational leadership has 20 questions total, transactional leadership has eight questions total, and passive-avoidant leadership has eight questions total. The entire survey, including the three noninclusive variables, includes 60 questions.

Validity. Testing for construct validity of the MLQ took place with the use of confirmatory factor analysis and factor loading (Rowold, 2005). The test scored positive for validity, and the manual for the use of the MLQ includes the results of such testing (Rowold, 2005). Researchers assessed for convergent validity of the MLQ using the transformational leadership index (TLI) (Rowold, 2005).

Reliability. The name of the analysis used for measurement of reliability was Cronbach's alpha scoring between 0.60 and 0.92 (Bass & Avolio, 1995). Rowold (2005) further tested each construct of the MLQ using Cronbach's alpha scoring 0.85 for inspirational motivation, 0.97 for idealized influence attributed, 0.89 for idealized influence behavior, 0.95 for intellectual stimulation, 0.93 for individualized consideration, 0.87 for contingent reward, 0.84 for active management by exception, 0.74 and for management by exception passive, and 0.82 for laissez-faire.

Affective and Cognitive Trust Scales (Dunn, Ruedy, & Schweitzer, 2012)

This instrument is a 13-question scale with two constructs of affective trust and cognitive trust. It consists of a 7-point Likert scale. The instrument requires the permission of the original authors for use, which is obtained in this research by way of direct email with response from the authors providing such permission. Affective trust has seven questions related to whether the respondent will share outlandish ideas, talk about difficulties, admit worst mistakes, rely on the leader, reveal information to the leader, avoid revealing personal information to the leader, or tell something the respondent does not want others to know about to the leader. Cognitive trust has

six questions related to the respondent taking advice from the leader, relying on the leader for commitments, assuming proper completion of work by the leader, feeling comfortable with the leader in a critical role, feeling uneasy depending on the leader's abilities, and assuming good cause for the leader showing up late.

Validity. The measurement of validity took place using confirmatory factor analysis where the results indicated the instrument as a fit model. Specifically, the overall model had a CFI result of 0.91 with an RMSEA value of 0.09 and a significance of 0.01, which is considered significant.

Reliability. Reliability testing displayed a Cronbach's alpha score of 0.86 for affective trust and 0.85 for cognitive trust (Dunn et al., 2012).

Knowledge Sharing Behavior Scale (Rosendaal & Bijlsma-Frankema, 2015)

This scale includes two subscales of knowledge collecting and knowledge donating. The scale consists of a 5-point Likert scale. Use of the instrument requires permission of the authors of the survey, which is obtained in this research through direct email and response from the authors providing such permission. The first scale, knowledge donating, contains six questions. The questions measure what happens when the respondent learns something new, what happens when the respondents colleagues learn something new, the culture of knowledge sharing within the department, whether knowledge is shared within the department or outside of the department, what colleagues inside of the department versus outside of the department do about sharing new knowledge, and the culture of knowledge sharing with colleagues outside of the department. The second scale, knowledge collecting, contains eight questions. The questions measure whether the respondent shares information with colleagues inside the department or outside of the department when they ask, whether the respondent shares skills with colleagues inside or outside

of the department when asked, whether colleagues inside or outside of the department share what they know when asked, and whether colleagues inside or outside the department share skills when asked.

Validity. This instrument used theoretical validity to validate the constructs of the instrument (Heale & Twycross, 2015; Van Den Hooff & De Van Weenan, 2004). The development of each question took place through the evaluation of theoretical literature previous to conducting the test, and all questions interacted well in factor analysis testing of RMSEA conducted by van den Hooff and de van Weenan (2004), with an RMSEA significance of 0.000.

Reliability. The testing of the instrument consisted of reliability using Cronbach's alpha, where knowledge donating was 0.83, and knowledge collecting was 0.90 (van den Hooff & de van Weenan, 2004).

Ethical Considerations

One of the main requirements of conducting research was that it needed to be reviewed by the Institutional Review Board (IRB) (AOM, 2006). For this research to be eligible for implementation, it was essential to follow the rules of the IRB for Capella University and to consult with the associated code of ethics manual (AOM, 2006). Ethical considerations provided by these sources included human relations, privacy and confidentiality, and publications, and the specific code of ethical behaviors (AOM, 2006, p. 2-8). These guidelines had to be implemented exactly as written throughout the completion of the associated research plan.

Summary

This chapter described the data collection methods, which included the study design, describing the keywords for the study and the resources used to find literature about the study topic. The data collection process also included a survey that was used to study how each

leadership style variable explained knowledge sharing behavior and how trust moderated that relationship. This chapter also described the population studied, the participant recruitment process, and any ethical steps taken to ensure the privacy of data and the permission of participants. There was an in-depth description of the three instruments making up the survey to include what each instrument measured, a description of the scale used to measure it, a description of the validity of each instrument, and a description of the reliability of each instrument. There was also a description of the data analysis plan that included each step of the data analysis process after the data was collected. The following chapter will describe the results of the study.

CHAPTER 4. RESULTS

Introduction

In this chapter, a summary of the results was described to include the explanatory relationship of leadership style to knowledge sharing behavior as moderated by trust type, the relationship of trust type to knowledge sharing behavior, and the relationship of leadership style to knowledge sharing behavior. Since regression analysis served to interpret the study, the researcher began the analysis section by describing the outcomes of the five assumptions of linear regression to include an assumption of linearity, an assumption of normality, an assumption of homoscedasticity, an assumption of the lack of multicollinearity, and an assumption of the lack of autocorrelation. The researcher also described the sample and the power analysis, including effect size, used to derive the minimum sample size that can support the generalizability of the outcome. The researcher also described the general population for the affected industry within the affected region of the study. Also discussed are the demographics of the study, the results of the analysis, and the results of the post hoc analysis. The chapter discusses each hypothesis individually and then ends with a summary of the results without discussing the meaning thereof.

Background

In Chapter 1, there was a description of the purpose of the study, including background knowledge leading to the research problem. In Chapter 2, there was a review of the literature referenced to determine new insights for testing through research. Chapter 2provided a critique of the literature already available on the research topic and included information about the research methods previously used in the review and critique sections. Chapter 3 provided a replicable description of the research design and methodology. This chapter provides an in-

depth description of the results, including the testing of assumptions. All assumptions were satisfied, allowing the research to continue. The results showed that there is no statistically significant moderating effect during the interaction of leadership style and trust type towards knowledge sharing behavior, but there is a statistically significant explanatory relationship between leadership style and knowledge sharing behavior and between trust type and knowledge sharing behavior. Furthermore, there is a change in the strength of the statistically significant explanatory relationship with leadership style and trust type working as covariables with no interaction towards knowledge sharing behavior. However, there are no currently defining variables that can work with or interact with passive-avoidant leadership style to allow it to explain knowledge sharing behavior in a statistically significant manner.

Description of the Sample

A random probability sampling technique was used to recruit survey participants. A panel company named Centiment administered the survey. Centiment requires potential respondents to contact them with interest in completing surveys. The potential respondents must answer questions about themselves that qualify them for specific surveys. They are incentivized based on the quality of answers - speediness, honesty, and accuracy (Centiment.com, 2018). For this survey, the response time had a median timeframe between 7-12 minutes with outliers as low as 1 minute and as high as a few hours.

For participant selection, each respondent profile is descriptive based on questions asked at the time of registration with Centiment, to include age and gender. Those who fit the desired industry sector and time at work requirement of the survey were queried to participate. As a final screen of the participants, a disclaimer policy was administered to the first page of the online survey, requiring acceptance for survey access. In this regard, the descriptive data

collected was the number of years at the same firm, a member of the financial services industry, and the age and gender of the respondents. Centiment collects internet protocol data for each respondent, which provides the ability to check the location of the respondent and guarantees there is no duplication of data (Centiment.com). Company policies were enforced by Centiment to build accuracy of responses.

The sample size was controlled to match a G*Power 3.1 (2017) calculation. The calculation included a 95% confidence interval and an effect size of 1.5. This calculation displayed a need for 111 participants. The survey was controlled to stop receiving participants after 111 completed surveys had accrued. The result was 113 participants because some participants completed the survey at approximately the same time.

These 113 respondents were able to provide a productive output on age and gender. The age ranged between 21 years of age and 64 years of age. There were 63 female respondents and 50 male respondents, making the response rate at 56% female and 44% male. The age range for females was 23-64, and the range for males was 21-64. See Table 1 for gender details and Table 2 for a listing of age by gender. According to the histogram in Figure 1, there were many more participants in their 30's compared to other age ranges.

Table 1
Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	63	55.8	55.8	55.8
	Male	50	44.2	44.2	100.0
	Total	113	100.0	100.0	

Table 2
Age by Gender

		Age		
		Range	Minimum	Maximum
Gender	Female	41	23	64
	Male	43	21	64

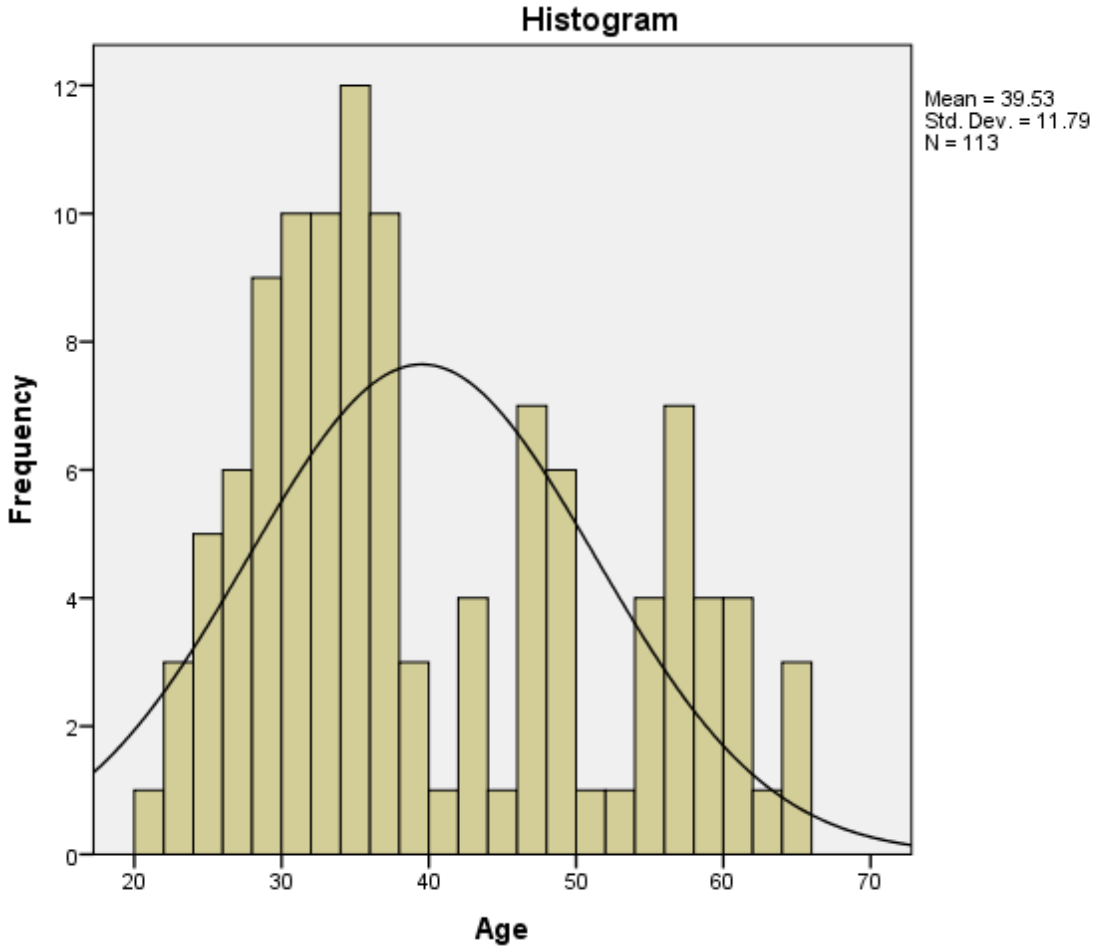

Figure1. Chart of Ages

Hypothesis Testing

Assumptions of Regression

Before testing the hypothesis, a set of five assumptions regarding linear regression needed testing with and outcome of positive results (Mark & Helm, 2012). The first assumption tested for linearity of the data. Linearity testing was completed with a scatterplot of the predictor variable against the dependent variable for each variable set (Hickey et al., 2018). The scatterplot produced a linear pattern with some slight outliers. The data was set to remove outliers after two standard deviations; however, the data followed the same linear pattern

regardless of the extremity of the output. Figure 2 shows a depiction of the scatterplots with full representation in Appendix F.

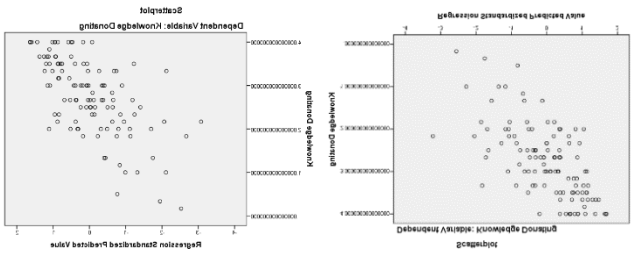

Figure 2. Scatterplots 1 & 2 of Linearity Data

A p-p plot was created to test the second assumption of normality of the data (Ghasemi & Zahediasl, 2012), showing positive normality since the plot points flowed closely around the line of the slope. Figure 3 shows a depiction of the P-P plots, the full results are located in Appendix G.

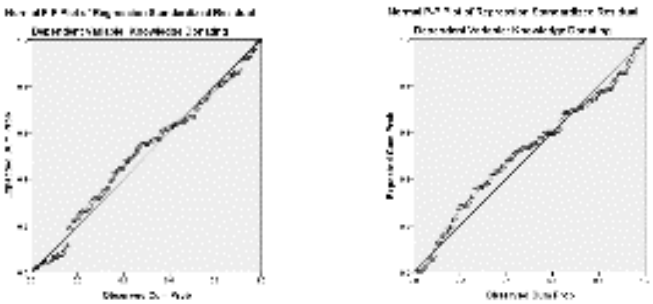

Figure 3. P-P Plots 1 & 2 of Normality of the Data

For the third assumption, scatterplots of the ZRESID (residual statistic) and the ZPRESID (predicted residual statistic) displayed homoscedasticity (Hickey at al., 2018). Data was scattered and non-clustered, proving a positive result for homoscedasticity (Hickey et al., 2018). Figure 4 displays a depiction of the scatterplots for homoscedasticity full representation in Appendix H.

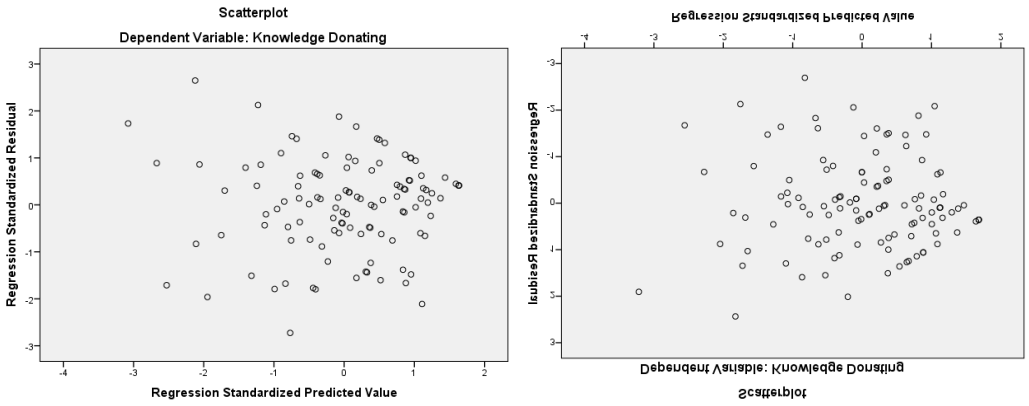

Figure 4. Scatterplots 1 & 2 of the Homoscedastic Property of the Data

The next test of the data was for the fourth assumption that the variables did not express multicollinearity. This test was conducted using the VIF scores (Hickey et al., 2018). Scores below 10 are negative for multicollinearity, and between 10 and 100 could display multicollinearity but are not necessarily colinear (Hickey et al., 2018). All scores, except for the moderated interaction factors, produced VIF factors below 10 points, no scores were 100 or above. It is safe to assume that the test was positive that multicollinearity did not exist. Results are in Appendix I.

Finally, the fifth assumption was that the results are negative for autocorrelation. The Durbin-Watson test allowed for the measurement of autocorrelation (Prienerstorfer & Potscher, 2017). The Durbin-Watson should produce scores between 1.5 and 2.5 for autocorrelation to not exist (Prienerstorfer & Potscher, 2017). All scores fit within the desired range, allowing for a positive result of the fifth assumption. Results are in Appendix J.

Analysis

Since the data fulfilled all assumptions for regression, the data was ready for analysis of the hypothesis. Multiple moderated regression (MMR) was the analysis that fit best with the research question and data. MMR is conducted using a hierarchical block and enter method

analysis such that the test started with the leadership style variable, then it added the trust type, so that leadership style and trust type were analyzed together, and then it ended by analyzing leadership style with trust type and the interaction variable of leadership style multiplied by trust type as illustrated in the works of Ghasemi and Zahediasl (2012) and Helm and Mark (2012). Since the study was examining an explanation of the relationship between leadership style and knowledge sharing with trust type as the moderator, the t-statistic was used to signify the differing levels of variance from the null hypothesis while beta was used to represent the percent change from the t-statistic constant per unit of each variable (Helm & Mark, 2012). The t-statistic constant represents the value of the x,y slope as it crosses the y-axis, or the axis of the dependent variable just as in the works of Dawson (2004), Ghasemi and Zahediasl (2012) and Helm and Mark (2012). A significance calculation was performed to measure if the difference from the null hypothesis was significant enough to validate the alternative hypothesis and reject the null (Dawson, 2014). Since the test measured for individual variable effects on the dependent as well as a moderating or co-existing variable effect, the hypothesis was tested using the significance of the constant in unison with individual variable effects per unit impact, with the significance of the variable determining the result which is the same method used by Dawson (2004), Ghasemi and Zahediasl (2012), and Helm and Mark (2012). There were 17 total tests performed, with twelve of them performed for the first hypothesis, so that each variable construct could undergo testing as described in the hypothesis. Each leadership style, each type of trust, and each outcome of knowledge sharing behavior were tested as separate constructs rather than as a clustered group.

$H_0$1: Trust type (affective and cognitive trust) does not have a statistically significant moderating effect on the explanatory relationship between perceived leadership style (transformational, transactional, and passive-avoidant) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

This section will be covered using the null hypothesis for RQ1C.

$H_0$1c: There is no statistically significant interaction between trust type (affective and cognitive trust) and with leadership style (transformational, transactional, and passive-avoidant) in explaining knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

Knowledge donating. The study began with a test of knowledge donation for the impact of leadership style on the outcome, then for the impact of leadership style coexisting with trust type, and finally for the impact of the interaction effect of leadership style with trust type. The basic moderation equation looks as such:

$$KD = b_0 + b_1(LS) + b_2(TT) + b_3(LS*TT) + e$$

Where KD is knowledge donating, LS is leadership style, and TT is trust type. B is the slope of the associated variable and e is the residual which is the difference in the observed value of KD and the predicted value of KD (Ghasemi & Zahediasl, 2012; Helm & Mark, 2012).

Knowledge donating and transformational leadership. The first test examined the extent that transformational leadership affected knowledge donating behavior and how affective trust impacted this effect. When transformational leadership coexisted with affective trust, the t-statistic for transformational leadership was 5.211, and for the affective trust, it was 2.588 with betas of 0.483 and 0.143 and a constant of 4.519. The p scores were 0.000 and 0.011, respectively, which is statistically significant and a constant p score of 0.000, which is also

significant. While coexisting, knowledge donating changed by 48% for each unit of transformational leadership and 14% for every unit of affective trust. When introducing the interaction variable, the constant changed to 2.332 with a significance value of 0.022, which is less than 0.05 and is a significant amount of change for the value of knowledge donating. The t-statistics changed to 2.741 for transformational leadership, 1.427 for cognitive trust, and -0.157 for the interaction variable with betas of 0.509, 0.159, and -0.007 respectively and significance scores of 0.007, 0.156, and 0.876 respectively, transformational leadership was still significant on its own, but the other two variables were not. There was no statistically significant moderation effect. See Table 3 for a listing of the results.

Table 3

Knowledge Donating, Transformational Leadership, Affective Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.095	.208		5.274	.000		
	Transformational Leadership	.634	.074	.630	8.540	.000	1.000	1.000
2	(Constant)	.949	.210		4.519	.000		
	Transformational Leadership	.483	.093	.480	5.211	.000	.608	1.643
	Affective Trust	.143	.055	.239	2.588	.011	.608	1.643
3	(Constant)	.899	.385		2.332	.022		
	Transformational Leadership	.509	.186	.505	2.741	.007	.153	6.517
	Affective Trust	.159	.111	.264	1.427	.156	.153	6.542
	Transformational Leadership * Affective Trust	-.007	.043	-.047	-.157	.876	.059	16.887

The second test examined the extent to which transformational leadership effected knowledge donating when moderated by cognitive trust. When tested as co-existing with cognitive trust the t-statistic for transformational leadership was 5.306 and cognitive trust was 2.996 with beta scores of 0.474 and 0.179 respectively and significance scores of 0.000 and 0.003 respectively, which was significant. The constant of co-existence was 3.504, with a significance score of 0.000. When used as co-existing variables, knowledge donating changed by 47% for transformational leadership and 18% for cognitive trust. The interaction term constant had a t-score of 1.751 with a significance of 0.083. During the interaction

transformational leadership had a t-statistic of 2.173 and beta of 0.467, the cognitive trust had a t-statistic of 1.441, and a beta of 0.175 and the interaction term had a t-statistic of 0.035 and a beta of 0.002. The significance scores were 0.032, 0.152, and 0.972, with transformational leadership statistically significant here and the other two insignificant. There was no statistically significant moderation effect. See Table 4 for a listing of the results.

Table 4

Knowledge Donating, Transformational Leadership, Cognitive Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.095	.208		5.274	.000		
	Transformational Leadership	.634	.074	.630	8.540	.000	1.000	1.000
2	(Constant)	.788	.225		3.504	.001		
	Transformational Leadership	.474	.089	.471	5.309	.000	.644	1.552
	Cognitive Trust	.179	.060	.266	2.996	.003	.644	1.552
3	(Constant)	.803	.458		1.751	.083		
	Transformational Leadership	.467	.215	.464	2.173	.032	.112	8.920
	Cognitive Trust	.175	.121	.260	1.441	.152	.157	6.372
	Transformational Leadership * Cognitive Trust	.002	.048	.011	.035	.972	.049	20.296

Knowledge donating and transactional leadership. The next test examined the extent that transactional leadership affected knowledge donating behavior and how affective trust impacted this effect. For the co-existence reaction between transactional leadership and affective trust the constant had a t-statistic of 3.090 and a significance of 0.003 and the variables had a t-statistic of 5.196 for transactional leadership and 2.833 for affective trust with betas of 0.560 and 0.154 respectively and significance values of 0.000 and 0.005 respectively. When coexisting, the

amount of knowledge collecting changed by 56% for each unit of transactional leadership and 15% for each unit of affective trust. The interaction constant was 1.712, with a significance of 0.090. The variable t-statistics were 2.986 for transactional leadership, 1.283 for affective trust, and -0.038 for the interaction term and betas of 0.566, 0.158, and -0.002 respectively with a significance value of 0.003, 0.202, and 0.970 respectively. While transactional leadership maintained some significance during the interaction, affective trust and the interaction term did not. There was no statistically significant moderation effect. See Table 5 for a listing of the results.

Table 5

Knowledge Donating, Transactional Leadership, Affective Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.831	.241		3.452	.001		
	Transactional Leadership	.744	.089	.624	8.406	.000	1.000	1.000
2	(Constant)	.730	.236		3.090	.003		
	Transactional Leadership	.560	.108	.469	5.196	.000	.635	1.575
	Affective Trust	.154	.054	.256	2.833	.005	.635	1.575
3	(Constant)	.716	.418		1.712	.090		
	Transactional Leadership	.566	.189	.474	2.986	.003	.207	4.827
	Affective Trust	.158	.123	.263	1.283	.202	.125	8.026
	Transactional Leadership * Affective Trust	-.002	.045	-.011	-.038	.970	.062	16.238

The next test examined the extent to which transactional leadership effected knowledge donating when moderated by cognitive trust. The co-existence t-statistics were 2.351 for the

constant, 5.244 for transactional leadership, and 3.140 for cognitive trust. The betas were 0.551 and 0.186 for transactional leadership and cognitive trust, respectively, with significance scores of 0.021, 0.000, and 0.002 for all three statistics, respectively. While coexisting, the amount of knowledge donating changed by 55% for transactional leadership and 19% for cognitive trust. The interaction constant was 1.621, with a significance level of 0.108, which is not significant. The individual variables had t-statistics of 2.228 for transactional leadership, 1.058 for cognitive trust, and 0.459 for the interaction term. Significance levels were 0.027, 0.293, 0.647 respectively. There was no statistically significant moderation effect. See Table 6 for a listing of the results.

Table 6

Knowledge Donating, Transactional Leadership, Cognitive Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.831	.241		3.452	.001		
	Transactional Leadership	.744	.089	.624	8.406	.000	1.000	1.000
2	(Constant)	.577	.245		2.351	.021		
	Transactional Leadership	.551	.105	.462	5.244	.000	.657	1.521
	Cognitive Trust	.186	.059	.277	3.140	.002	.657	1.521
3	(Constant)	.760	.469		1.621	.108		
	Transactional Leadership	.468	.210	.392	2.228	.028	.166	6.026
	Cognitive Trust	.134	.127	.200	1.058	.293	.144	6.950
	Transactional Leadership * Cognitive Trust	.022	.047	.135	.459	.647	.060	16.724

Knowledge donating and passive-avoidant leadership. Another set of tests examined the extent to which passive-avoidant leadership affected knowledge donating behavior and how affective trust

impacted this effect. The co-existence constant was 7.301, with a significance of 0.000. The individual variables had a t-statistic of -0.985 for passive-avoidant leadership and 6.816 for affective trust and betas of -0.70 and 0.331 for each, respectively. The significance values were 0.327 and 0.000 for each, respectively, showing that passive-avoidant leadership does not have a significant effect, but affective trust does while co-existing with passive-avoidant leadership. The interaction constant had a t-statistic of 3.691 with a significance of 0.000. For each variable of the interaction, the t-statistic was -1.172 for passive-avoidant leadership, 1.548 for affective trust, and 0.940 for the interaction term. The betas were -0.307, 0.211, and 0.054, respectively, and the significance scores were 0.073, 0.125, and 0.349, respectively. There was no statistically significant moderation effect. See Table 7 for a listing of the results.

After testing affective trust, a test was conducted to examine the extent that passive-avoidant leadership effects knowledge donating with cognitive trust as a moderator. When passive-avoidant leadership and cognitive trust were coexisting, the constant was 5.325 with a significance score of 0.000. For the individual variables, the t-statistic was -0.812 for passive-avoidant leadership and 6.918 for cognitive trust with betas scoring -0.057 and 0.372 respectively and significant scores of 0.419 and 0.000 respectively. The interaction constant was 2.316, with a significance of 0.022, which is significant. The variable scores for the interaction had a t-statistic of -0.640 for passive-avoidant leadership, 1.895 for cognitive trust, and 0.481 for the interaction variable with betas of -0.216, 0.301, and 0.034 respectively and significance scores of 0.523, 0.061, and 0.631. There was no statistically significant moderation effect. See Table 8 for a listing of the results.

Table 7

Knowledge Donating, Passive-Avoidant Leadership, Affective Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.789	.186		14.984	.000		
	Passive Avoidant Leadership	-.005	.084	-.006	-.063	.950	1.000	1.000
2	(Constant)	1.663	.228		7.301	.000		
	Passive Avoidant Leadership	-.070	.071	-.079	-.985	.327	.982	1.018
	Affective Trust	.331	.049	.550	6.816	.000	.982	1.018
3	(Constant)	2.173	.589		3.691	.000		
	Passive Avoidant Leadership	-.307	.262	-.348	-1.172	.244	.073	13.739
	Affective Trust	.211	.136	.351	1.548	.125	.125	8.027
	Passive Avoidant Leadership * Affective Trust	.054	.057	.362	.940	.349	.043	23.252

Table 8

Knowledge Donating, Passive-Avoidant Leadership, Cognitive Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.789	.186		14.984	.000		
	Passive Avoidant Leadership	-.005	.084	-.006	-.063	.950	1.000	1.000
2	(Constant)	1.372	.258		5.325	.000		
	Passive Avoidant Leadership	-.057	.071	-.065	-.812	.419	.989	1.011
	Cognitive Trust	.372	.054	.554	6.918	.000	.989	1.011
3	(Constant)	1.703	.735		2.316	.022		
	Passive Avoidant Leadership	-.216	.338	-.245	-.640	.523	.044	22.928
	Cognitive Trust	.301	.159	.447	1.895	.061	.115	8.729
	Passive Avoidant Leadership * Cognitive Trust	.034	.070	.222	.481	.631	.030	33.405

Knowledge collecting. The equation used to measure knowledge collecting was the same as that used for knowledge donating except that the KD changed to KC, which stood for knowledge collecting. The equation looked as follows:

$KC = b_0 + b_1(LS) + b_2(TT) + b_3(LS*TT) + e$

Knowledge collecting and transformational leadership. The next test conducted examined the effect of transformational leadership on knowledge collecting and this same relationship as it is affected by the moderation of affective trust. The constant of co-existent was 6.472, with a significance of 0.000. For the co-existence variables, the t-statistic for transformational leadership was 3.120 with a beta of 0.318, and the t-statistic for affective trust was 2.687 with a beta of 0.163 with significance score of 0.002 and 0.008 respectively. While coexisting, the amount of knowledge collecting changed by 32% for each unit of transformational leadership and 16% for each unit of affective trust. The constant interaction was 2.792, with a significance of 0.006. The individual variables had a t-statistic of 2.339 for transformational leadership, 2.120 for affective trust, and -0.895 for the interaction. The betas were 0.475, 0.258, and -0.042, respectively, and the significance scores were 0.021, 0.036, and 0.373, respectively. There was no statistically significant moderation effect. See Table 9 for a listing of the results.

Table 9

Knowledge Collecting, Transformational Leadership, Affective Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.658	.228		7.262	.000		
	Transformational Leadership	.489	.082	.494	5.989	.000	1.000	1.000
2	(Constant)	1.492	.231		6.472	.000		
	Transformational Leadership	.318	.102	.321	3.120	.002	.608	1.643
	Affective Trust	.163	.061	.277	2.687	.008	.608	1.643
3	(Constant)	1.177	.421		2.792	.006		
	Transformational Leadership	.475	.203	.480	2.339	.021	.153	6.517
	Affective Trust	.258	.121	.436	2.120	.036	.153	6.542
	Transformational Leadership * Affective Trust	-.042	.047	-.295	-.895	.373	.059	16.887

The next study was an examination of the transformational leadership effect on knowledge collecting as moderated by cognitive trust. The individual test scores for transformational leadership remain the same. The constant of co-existence was 5.003, with a significance score of 0.000. For the individual variables, the t-statistic of transformational leadership was 2.599 with a beta of 0.246 and significance of 0.011. The t-statistic for cognitive trust was 4.320, with a beta of 0.273 and a significance of 0.000. When coexisting, the amount of knowledge collecting changed by 25% for each unit of transformational leadership and 27% for each unit of cognitive trust. The constant of interaction was 1.562, with a significance score

of 0.121. The specific terms had a t-statistic of 2.032 for transformational leadership, 3.040 for affective trust, and -1.042 for the interaction term with betas of 0.460, 0.388, and -0.053 respectively and significance scores of 0.045, 0.003, and 0.300 respectively. There was no statistically significant moderation effect. See Table 10 for a listing of the results.

Table 10

Knowledge Collecting, Transformational Leadership, Cognitive Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.658	.228		7.262	.000		
	Transformational Leadership	.489	.082	.494	5.989	.000	1.000	1.000
2	(Constant)	1.191	.238		5.003	.000		
	Transformational Leadership	.246	.094	.248	2.599	.011	.644	1.552
	Cognitive Trust	.273	.063	.413	4.320	.000	.644	1.552
3	(Constant)	.753	.482		1.562	.121		
	Transformational Leadership	.460	.226	.465	2.032	.045	.112	8.920
	Cognitive Trust	.388	.128	.588	3.040	.003	.157	6.372
	Transformational Leadership * Cognitive Trust	-.053	.050	-.360	-1.042	.300	.049	20.296

Knowledge collecting and transactional leadership. The next test was conducted to examine the effect of transactional leadership on knowledge collecting and the way that the moderation of affective trust impacts this effect. The constant of co-existence was 5.223, with a significance of 0.000. For the specific terms of co-existence, the t-statistic for transactional

leadership was 3.068 with a beta of 0.363 and a significance of 0.003. The t-statistic for affective trust was 2.880 with a beta of 0.172 and a significance of 0.005. When coexisting, the amount of knowledge collecting changed by 36% for transactional leadership and 17% for affective trust. The interaction constant was 2.428, with a significance of 0.017. The individual variables had a t-statistic of 2.271 for transactional leadership, 1.845 for affective trust, and -0.638 for the interaction terms with betas of 0.472, 0.249 and -0.032 respectively and significance scores of 0.025, 0.068, and 0.525 respectively. There was no statistically significant moderation effect. See Table 11 for a listing of the results.

The next test examined the relationship of transactional leadership to knowledge collecting as moderated by cognitive trust. The specific outcome of transactional leadership remained the same. The constant of co-existence was 4.196, with a significance of 0.000. For the variable terms, the t-statistic for transactional leadership was 2.521 with a beta of 0.280 and a significance of 0.013. For cognitive trust, the t-statistic was 4.444 with a beta of 0.278 and a significance of 0.000. While coexisting, the amount of knowledge collecting changed by 28% for transactional leadership and 27% for cognitive trust. The constant of interaction had a t-statistic of 1.708 with a significance of 0.082. For the individual variables the t-statistic was 1.758 for transactional leadership, 2.579 for affective trust, and -0.573 for the interaction term and betas of 0.390, 0.346, and -0.029 respectively and significance of 0.082, 0.011, and 0.568 respectively. There was no statistically significant moderation effect. See Table 12 for a listing of the results.

Table 11

Knowledge Collecting, Transactional Leadership, Affective Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.468	.265		5.546	.000		
	Transactional Leadership	.569	.097	.485	5.844	.000	1.000	1.000
2	(Constant)	1.355	.259		5.223	.000		
	Transactional Leadership	.363	.118	.310	3.068	.003	.635	1.575
	Affective Trust	.172	.060	.291	2.880	.005	.635	1.575
3	(Constant)	1.114	.459		2.428	.017		
	Transactional Leadership	.472	.208	.402	2.271	.025	.207	4.827
	Affective Trust	.249	.135	.421	1.845	.068	.125	8.026
	Transactional Leadership * Affective Trust	-.032	.050	-.207	-.638	.525	.062	16.238

Table 12

Knowledge Collecting, Transactional Leadership, Cognitive Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.468	.265		5.546	.000		
	Transactional Leadership	.569	.097	.485	5.844	.000	1.000	1.000
2	(Constant)	1.088	.259		4.196	.000		
	Transactional Leadership	.280	.111	.239	2.521	.013	.657	1.521
	Cognitive Trust	.278	.063	.421	4.444	.000	.657	1.521
3	(Constant)	.846	.496		1.708	.091		
	Transactional Leadership	.390	.222	.332	1.758	.082	.166	6.026
	Cognitive Trust	.346	.134	.524	2.579	.011	.144	6.950
	Transactional Leadership * Cognitive Trust	-.029	.050	-.180	-.573	.568	.060	16.724

Knowledge collecting and passive-avoidant leadership. The next test examined the effect of passive-avoidant leadership and how the moderation of affective trust impacted this effect. The constant of co-existence was 8.454, with a significance of 0.000. The individual values had a t-statistic of -0.772 with a beta of -0.056 and a significance of 0.442 for passive-avoidant leadership and a t-statistic of 5.768 with a beta of 0.287 and a significance of 0.000 for affective trust. The interaction constant was 3.526, with a significance of 0.001. For the individual values, the t-statistic was -0.488 for passive-avoidant leadership, 1.775 for affective trust, and 0.290 for the interaction term and the betas were -0.132, 0.249, and 0.017 respectively with significance levels of 0.627, 0.079, and 0.773 respectively. There was no statistically significant moderation effect. See Table 13 for a listing of the results.

Table 13

Knowledge Collecting, Passive-Avoidant Leadership, Affective Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.957	.183		16.161	.000		
	Passive Avoidant Leadership	-6.846E-5	.082	.000	-.001	.999	1.000	1.000
2	(Constant)	1.978	.234		8.454	.000		
	Passive Avoidant Leadership	-.056	.073	-.065	-.772	.442	.982	1.018
	Affective Trust	.287	.050	.486	5.768	.000	.982	1.018
3	(Constant)	2.140	.607		3.526	.001		
	Passive Avoidant Leadership	-.132	.270	-.152	-.488	.627	.073	13.739
	Affective Trust	.249	.140	.422	1.775	.079	.125	8.027
	Passive Avoidant Leadership * Affective Trust	.017	.059	.117	.290	.773	.043	23.252

The next test examined the effect of passive-avoidant leadership on knowledge collecting as moderated by cognitive trust. The individual effect of passive-avoidant leadership remained the same. The constant of co-existence was 6.109, with a significance of 0.000. To describe the individual values, passive-avoidant leadership had a t-statistic of -0.764 with a beta of -0.053 and a significance of 0.447 and cognitive trust had a t-statistic of 2.136 with a beta of 1.529 and a significance of 0.035. The interaction constant was 2.136, with a significance of 0.035. For the individual variables the t-statistic was -0.158 for passive-avoidant leadership, 2.428 for cognitive

trust, and -0.002 for the interaction term with betas of -0.052, 0.375, and 0.000 respectively and significance of 0.875, 0.017, and 0.998 respectively. There was no statistically significant moderation effect.RQ. See Table 14 for a listing of the results.

Table 14

Knowledge Collecting, Passive-Avoidant Leadership, Cognitive Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.957	.183		16.161	.000		
	Passive Avoidant Leadership	-6.846E-5	.082	.000	-.001	.999	1.000	1.000
2	(Constant)	1.530	.251		6.109	.000		
	Passive Avoidant Leadership	-.053	.069	-.060	-.764	.447	.989	1.011
	Cognitive Trust	.375	.052	.567	7.159	.000	.989	1.011
3	(Constant)	1.529	.716		2.136	.035		
	Passive Avoidant Leadership	-.052	.329	-.060	-.158	.875	.044	22.928
	Cognitive Trust	.375	.154	.567	2.428	.017	.115	8.729
	Passive Avoidant Leadership * Cognitive Trust	.000	.068	-.001	-.002	.998	.030	33.405

Summary of the hypothesis testing. The first hypothesis stated whether trust explained the relationship between leadership style and knowledge sharing behaviors. There was no statistically significant moderation effect for each interaction tested. However, there was some data regarding the main effect variable that may be useful during the interpretation of the other two hypotheses. For RQ1, there is a failure to reject the null hypothesis.

$H_0$1a: There is no statistically significant explanatory relationship between perceived leadership style (transformational, transactional, and passive-avoidant) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

Knowledge donating and leadership style. RQ1a questioned the explanatory relationship of leadership style to knowledge sharing behavior. For the first part of the test, the leadership style measured for the outcome of knowledge donating. To start, transformational leadership scored 8.5340 with a constant of 5.274 and a beta of 0.634 and a p = 0.000 and a constant p score of 0.000, which is significant that each unit of transformational leadership changes the amount of knowledge donating behavior by 63.4%. The t-statistic for transactional leadership by itself was 8.406 with a constant of 3.452 and a beta of 0.744. The significance level of transformational leadership was 0.000 and for the constant was 0.001, everything was significant, there was a 74% change in the amount if knowledge donating for each unit of transactional leadership. The independent effect of passive-avoidant leadership on knowledge donating behavior had a t-statistic of -0.063 with a significance score of 0.95 with a constant t-statistic of 14.984 and a constant significance of 0.000. The explanation of passive-avoidant leadership towards knowledge donating was insignificant. Knowledge donating has some ability to be explained by leadership style. See Table 15 for a listing of the results.

Table 15

Leadership Style and Knowledge Donating

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	1.095	.208		5.274	.000		
Transformational Leadership	.634	.074	.630	8.540	.000	1.000	1.000
(Constant)	.831	.241		3.452	.001		
Transactional Leadership	.744	.089	.624	8.406	.000	1.000	1.000
(Constant)	2.789	.186		14.984	.000		
Passive Avoidant Leadership	-.005	.084	-.006	-.063	.950	1.000	1.000

Knowledge collecting and leadership style. For the second part of the test, leadership style was measured with knowledge collecting. The independent effect of transformational leadership on knowledge collecting had a t-statistic constant of 7.262 and a t-statistic value of 5.989 with a beta of 0.489 and a significance score of 0.000 and 0.000 for the constant and the value. There was a 48% change in the amount of knowledge collecting for each unit of transformational leadership. The independent effect of transactional leadership has a t-statistic constant of 5.546 with a significance of 0.000 and a t-statistic value of 5.844 with a beta of 0.569 and a significance of 0.000. There was a 57% change in the amount of knowledge collecting for each unit of transactional leadership. The individual effect of passive-avoidant leadership had a t-statistic constant of 16.161 with a significance of 0.000. The t-statistic value was -0.001 with a beta of -6.846E-5 with a significance of 0.999. Passive avoidant leadership did not produce a

significant level of change towards knowledge collecting behavior. Overall, leadership style did have a significant explanation towards knowledge collecting. See Table 16 for a listing of the results.

Table 16

Leadership Style and Knowledge Collecting

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	1.658	.228		7.262	.000		
Transformational Leadership	.489	.082	.494	5.989	.000	1.000	1.000
(Constant)	1.468	.265		5.546	.000		
Transactional Leadership	.569	.097	.485	5.844	.000	1.000	1.000
(Constant)	2.957	.183		16.161	.000		
Passive Avoidant Leadership	-6.846E-5	.082	.000	-.001	.999	1.000	1.000

Summary of the hypothesis testing. The second hypothesis was regarding the explanatory relationship between leadership style and knowledge sharing behavior. For this test, all variables showed a significant relation to knowledge sharing behavior except passive-avoidant leadership. Transformational leadership produced a change of 63.4% towards knowledge donating and change of 48% towards knowledge collecting. Transactional leadership produced a change of 74% towards knowledge donating and a change of 57% towards knowledge collecting. Furthermore, the variables of co-existence were all highly significant. For RQ1a, the null hypothesis is rejected.

$H_0$1b: There is no statistically significant explanatory relationship between trust type (affective trust and cognitive trust) and knowledge sharing behavior (knowledge donating and knowledge collecting) in the financial services industry.

Knowledge donating and trust type. Next, the individual effect of trust type on knowledge donating behavior went under examination. The t-statistic constant for affective trust was 7.920 with a significance of 0.000, and the t-statistic value was 6.745 with a beta of 0.324 and a significance of 0.000. For every unit of affective trust, the amount of knowledge donating changed by 32%. The t-statistic constant for cognitive trust was 5.572, with a significance of 0.000. The t-statistic value was 6.882, with a beta of 0.368 and a significance of 0.000. For every unit of cognitive trust, the amount of knowledge donating changed by 36%. There is a significant explanation of trust type towards knowledge sharing behavior. See Table 17 for a listing of the results.

Table 17

Trust Type and Knowledge Donating

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.548	.195		7.920	.000		
	Affective Trust	.324	.048	.539	6.745	.000	1.000	1.000
1	(Constant)	1.277	.229		5.572	.000		
	Cognitive Trust	.368	.053	.547	6.882	.000	1.000	1.000

Knowledge collecting and trust type. The final test examined the individual effect of trust type on knowledge collecting. The t-statistic constant for affective trust was 9.407, with a significance of 0.000. The t-statistic value was 5.727, with a beta of 0.282 and a significance of 0.000. For every unit of affective trust, the amount of knowledge collecting changed by 28%. The t-statistic constant for cognitive trust was 6.480, with a significance of 0.000. The t-statistic value was 7.131 with a beta of .370 and a significance of 0.000. For every unit of cognitive trust, the amount of knowledge collecting changed by 37%. There was a significant level of explanation for trust type towards knowledge collecting behaviors. See Table 18 for a listing of the results.

Table 18

Trust Type and Knowledge Collecting

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.885	.200		9.407	.000		
	Affective Trust	.282	.049	.478	5.727	.000	1.000	1.000
1	(Constant)	1.443	.223		6.480	.000		
	Cognitive Trust	.370	.052	.561	7.131	.000	1.000	1.000

Summary of the hypothesis testing. The third hypothesis was regarding the explanatory relationship between trust and knowledge sharing behavior. For all tests conducted, both types of trust had a significant explanatory relationship on knowledge sharing behavior. Affective trust produced a change of 32% on knowledge donating and a change of 28% towards

knowledge collecting. Cognitive trust produced a change of 36% towards knowledge donating and a change of 4% towards knowledge collecting. Figure 6 contains a list of the results. For RQ1b, the null hypothesis is rejected.

Post-Hoc Analysis

During the process of evaluating the data output to interpret the hypotheses, a pattern with the passive-avoidant leadership style began to emerge, leading to a need to conduct post-hoc analysis.

Passive avoidant leadership, affective trust, and knowledge donating. The passive-avoidant leadership style became insignificant as a single variable whether it was independently affecting the dependent variable, coexisting with another independent, or part of interaction towards the dependent variable. This pattern needed some further analysis. Passive avoidant leadership was measured with perceived effectiveness, extra effort, and satisfaction, as coexisting predictors to see if this would change the significance value of passive-avoidant leadership as a singular term.

The first test examined the significance of knowledge donating as an outcome variable. This analysis was used only to determine the significance value. Passive avoidant leadership had a significance of 0.622, affective trust a significance of 0.003, effectiveness a significance of 0.001, extra effort a significance of 0.649, and satisfaction a significance of 0.540. The constant of coexistence had a significance of 0.001. The interaction constant had a significance value of 0.031, passive-avoidant leadership 0.558, affective trust 0.502, effectiveness 0.001, extra effort 0.706, satisfaction 0.532, and the interaction terms 0.451. The only highly significant independent variable in the interaction was perceived effectiveness. These results provided a

need for further analysis where effectiveness remained in the analysis and extra effort and satisfaction left out. See Table 19 for a listing of the results.

Table 19

Knowledge Donating, Passive-Avoidant Leadership, Mixed Factors, Affective Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.822	.244		3.364	.001		
	Passive Avoidant Leadership	.033	.066	.037	.495	.622	.882	1.133
	Affective Trust	.165	.053	.275	3.096	.003	.622	1.608
	Effectiveness	.487	.141	.558	3.456	.001	.188	5.312
	Extra Effort	.057	.125	.071	.456	.649	.205	4.872
	Satisfaction	-.098	.159	-.124	-.614	.540	.121	8.254
2	(Constant)	1.191	.546		2.181	.031		
	Passive Avoidant Leadership	-.138	.235	-.156	-.587	.558	.070	14.278
	Affective Trust	.082	.122	.137	.674	.502	.120	8.366
	Effectiveness	.493	.141	.566	3.490	.001	.188	5.332
	Extra Effort	.047	.125	.059	.379	.706	.203	4.920
	Satisfaction	-.100	.159	-.127	-.627	.532	.121	8.257
	Passive Avoidant Leadership * Affective Trust	.038	.051	.259	.757	.451	.042	23.733

Perceived effectiveness remained in the equation, and the other two extra variables left out to increase the possibility of significant outcomes for passive-avoidant leadership. The following analysis measured knowledge donating as an output. The coexistence constant was 0.001 with passive-avoidant leadership at 0.550, affective trust at 0.002, and effectiveness at 0.000. The interaction constant was 0.029 with passive-avoidant leadership at 0.574, affective trust at 0.527, effectiveness at 0.000, and the interaction term at 0.447. This addition did not

increase the significance of passive-avoidant leadership with affective trust and knowledge donating. See Table 20 for a listing of the results.

Table 20

Knowledge Donating, Passive-Avoidant Leadership, Effectiveness, Affective Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.823	.242		3.396	.001		
	Passive Avoidant Leadership	.039	.065	.044	.600	.550	.905	1.105
	Affective Trust	.160	.051	.267	3.155	.002	.678	1.475
	Effectiveness	.446	.074	.511	6.020	.000	.671	1.491
2	(Constant)	1.190	.539		2.208	.029		
	Passive Avoidant Leadership	-.130	.230	-.147	-.563	.574	.072	13.972
	Affective Trust	.077	.121	.128	.635	.527	.120	8.316
	Effectiveness	.443	.074	.508	5.960	.000	.669	1.495
	Passive Avoidant Leadership * Affective Trust	.038	.050	.257	.763	.447	.043	23.317

Passive avoidant leadership, cognitive trust, and knowledge donating. The next test examined the variables of effectiveness, extra effort, and satisfaction added to the analysis of passive-avoidant leadership moderated by the cognitive trust as effecting knowledge donating. The coexisting constant was 0.023, passive-avoidant leadership 0.584, cognitive trust 0.000, effectiveness 0.000, extra effort 0.785, and satisfaction 0.502. The interaction constant was 0.184, passive-avoidant leadership 0.3732, cognitive trust 0.274, effectiveness 0.000, extra effort 0.799, satisfaction 0.481, and the interaction term was 0.638. Although the significance value

did increase, it was not enough to make passive-avoidant leadership significant by itself. See Table 21 for a listing of the results.

Table 21

Knowledge Donating, Passive-Avoidant Leadership, Mixed Factors, Cognitive Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.587	.255		2.307	.023		
	Passive Avoidant Leadership	.035	.064	.040	.549	.584	.909	1.100
	Cognitive Trust	.213	.056	.317	3.801	.000	.680	1.470
	Effectiveness	.511	.138	.586	3.707	.000	.188	5.305
	Extra Effort	.033	.122	.041	.273	.785	.204	4.903
	Satisfaction	-.105	.155	-.132	-.674	.502	.122	8.183
2	(Constant)	.870	.651		1.337	.184		
	Passive Avoidant Leadership	-.101	.296	-.115	-.343	.732	.042	23.560
	Cognitive Trust	.153	.139	.227	1.100	.274	.111	8.985
	Effectiveness	.517	.139	.593	3.721	.000	.187	5.352
	Extra Effort	.031	.123	.039	.255	.799	.204	4.909
	Satisfaction	-.111	.156	-.140	-.707	.481	.121	8.235
	Passive Avoidant Leadership * Cognitive Trust	.029	.061	.190	.472	.638	.029	33.941

The next study isolated effectiveness as an addition to the original equation because it was highly significant on its own while the other added variables were insignificant. For this analysis, the constant of coexistence was 0.019, passive-avoidant leadership was 0.511, cognitive trust 0.000, and effectiveness 0.000. The interaction constant was 0.195, passive-avoidant was

0.799, cognitive trust 0.271, effectiveness 0.000, and the interaction term 0.685. Adding effectiveness with cognitive trust decreased the significance of passive-avoidant leadership rather than increasing it. Adding perceived effectiveness to the cognitive trust equation also decreased the significance of the interaction constant. See Table 22 for a listing of the results.

Passive avoidant leadership, affective trust, and knowledge collecting. The next set of tests were conducted to score the new effects with knowledge collecting as an outcome in comparison to knowledge donating as an outcome. The predictor variables for the coexistence reaction were passive-avoidant leadership, affective trust, effectiveness, extra effort, and satisfaction. The constant of coexistence was 0.000. The variables were 0.841 for passive-avoidant leadership, 0.003 for cognitive trust, 0.057 for effectiveness, 0.555 for extra effort, and 0.782 for satisfaction. The interaction constant was 0.014. The interaction variables were 0.900 for passive-avoidant leadership, 0.253 for cognitive trust, 0.057 for effectiveness, 0.547 for extra effort, 0.786 for satisfaction, and 0.850 for the interaction term. The level of significance has changed in a positive direction, however still insignificant to reject the null hypothesis. See Table 23 for a listing of the results.

Table 22

Knowledge Donating, Passive-Avoidant Leadership, Effectiveness, Cognitive Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.598	.252		2.378	.019		
	Passive Avoidant Leadership	.041	.063	.047	.659	.511	.928	1.077
	Cognitive Trust	.204	.053	.304	3.851	.000	.746	1.340
	Effectiveness	.443	.069	.509	6.391	.000	.734	1.363
2	(Constant)	.840	.645		1.303	.195		
	Passive Avoidant Leadership	-.074	.291	-.084	-.255	.799	.043	23.065
	Cognitive Trust	.153	.138	.227	1.106	.271	.111	8.985
	Effectiveness	.443	.070	.508	6.355	.000	.733	1.364
	Passive Avoidant Leadership * Cognitive Trust	.024	.060	.161	.407	.685	.030	33.425

Table 23

Knowledge Collecting, Passive-Avoidant Leadership, Mixed Factors, Affective Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.442	.276		5.233	.000		
	Passive Avoidant Leadership	.015	.074	.017	.201	.841	.882	1.133
	Affective Trust	.182	.060	.309	3.025	.003	.622	1.608
	Effectiveness	.306	.159	.357	1.928	.057	.188	5.312
	Extra Effort	-.083	.140	-.105	-.592	.555	.205	4.872
	Satisfaction	.050	.179	.064	.278	.782	.121	8.254
2	(Constant)	1.547	.618		2.505	.014		
	Passive Avoidant Leadership	-.033	.265	-.038	-.126	.900	.070	14.278
	Affective Trust	.159	.138	.269	1.150	.253	.120	8.366
	Effectiveness	.308	.160	.360	1.927	.057	.188	5.332
	Extra Effort	-.086	.142	-.108	-.605	.547	.203	4.920
	Satisfaction	.049	.180	.063	.273	.786	.121	8.257
	Passive Avoidant Leadership * Affective Trust	.011	.057	.075	.190	.850	.042	23.733

Since perceived effectiveness shows a healthy level of significance and extra effort and satisfaction do not the two latter variables were removed from the equation, and effectiveness was examined by itself in the equation. The constant of co-existence was 0.000. The variables were 0.862 for passive-avoidant leadership, 0.002 for cognitive trust, and 0.001 of effectiveness.

The interaction constant was 0.015, and the interaction variables were 0.943 for passive-avoidant leadership, 0.234 for cognitive trust, 0.001 for effectiveness, and 0.900 for the interaction term. See Table 24 for a listing of the results.

Table 24

Knowledge Collecting, Passive-Avoidant Leadership, Effectiveness, Affective Trust

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.445	.273		5.285	.000		
	Passive Avoidant Leadership	.013	.073	.015	.174	.862	.905	1.105
	Affective Trust	.179	.057	.303	3.128	.002	.678	1.475
	Effectiveness	.283	.083	.330	3.389	.001	.671	1.491
2	(Constant)	1.513	.609		2.483	.015		
	Passive Avoidant Leadership	-.019	.260	-.021	-.072	.943	.072	13.972
	Affective Trust	.164	.137	.277	1.198	.234	.120	8.316
	Effectiveness	.282	.084	.330	3.363	.001	.669	1.495
	Passive Avoidant Leadership * Affective Trust	.007	.056	.049	.125	.900	.043	23.317

Passive avoidant leadership, cognitive trust, and knowledge collecting. The constant of coexistence was 0.000. The variables were 0.984 for passive-avoidant leadership, 0.000 for cognitive trust, 0.027 for effectiveness, 0.361 for extra effort, and 0.946 for satisfaction. The interaction constant was 0.127. The interaction variables were 0.992 for passive-avoidant leadership, 0.054 for cognitive trust, 0.028 for effectiveness, 0.364 for extra effort, 0.947 for

satisfaction, and 0.989 for the interaction term. The level of significance has changed in a positive direction, however still insignificant to reject the null hypothesis. There is a failure to reject the null hypothesis for this test. See Table 25 for a listing of the results.

Table 25

Knowledge Collecting, Passive-Avoidant Leadership, Mixed Factors, Cognitive Trust

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.078	.276		3.903	.000		
	Passive Avoidant Leadership	.001	.069	.002	.020	.984	.909	1.100
	Cognitive Trust	.296	.061	.448	4.870	.000	.680	1.470
	Effectiveness	.335	.150	.391	2.240	.027	.188	5.305
	Extra Effort	-.122	.133	-.154	-.917	.361	.204	4.903
	Satisfaction	.011	.168	.015	.068	.946	.122	8.183
2	(Constant)	1.088	.707		1.538	.127		
	Passive Avoidant Leadership	-.003	.321	-.004	-.010	.992	.042	23.560
	Cognitive Trust	.294	.151	.445	1.948	.054	.111	8.985
	Effectiveness	.335	.151	.391	2.221	.028	.187	5.352
	Extra Effort	-.122	.134	-.154	-.913	.364	.204	4.909
	Satisfaction	.011	.170	.014	.066	.947	.121	8.235
	Passive Avoidant Leadership * Cognitive Trust	.001	.066	.006	.014	.989	.029	33.941

Since perceived effectiveness shows a healthy level of significance and extra effort and satisfaction do not the two latter variables were removed from the equation, and effectiveness was examined by itself in the equation. The constant of co-existence was 0.000. The variables were 0.974 for passive-avoidant leadership, 0.000 for cognitive trust, and 0.001 of effectiveness. The interaction constant was 0.138, and the interaction variables were 0.932 for passive-avoidant leadership, 0.054 for cognitive trust, 0.002 for effectiveness, and 0.936 for the interaction term. See Table 26 for a listing of the results.

Table 26

Knowledge Collecting, Passive-Avoidant Leadership, Effectiveness, Cognitive Trust

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.101	.274		4.019	.000		
	Passive Avoidant Leadership	.002	.068	.003	.033	.974	.928	1.077
	Cognitive Trust	.281	.058	.426	4.872	.000	.746	1.340
	Effectiveness	.246	.076	.287	3.260	.001	.734	1.363
2	(Constant)	1.049	.702		1.494	.138		
	Passive Avoidant Leadership	.027	.316	.031	.086	.932	.043	23.065
	Cognitive Trust	.293	.150	.443	1.947	.054	.111	8.985
	Effectiveness	.246	.076	.288	3.246	.002	.733	1.364
	Passive Avoidant Leadership * Cognitive Trust	-.005	.065	-.035	-.081	.936	.030	33.425

Summary of Post-Hoc Analysis

A post-hoc analysis was performed based on a pattern in the research results that showed passive-avoidant leadership with consistent, statistically insignificant results. The post-hos

analysis studied the covariate interaction of post-hoc analysis with subfactors of the MLQ (Bass & Avolio, 1997) that were separate from leadership style; which was extra effort, effectiveness, and satisfaction with the leader. The results of all three variables co-existing with passive-avoidant leadership displayed a new pattern where effectiveness produced statistically significant results individually, while the other two covariables did not. Therefore, effectiveness underwent testing as co-existing with passive-avoidant leadership alone. Perceived effectiveness produced statistically insignificant results as coexisting with passive-avoidant leadership, but statistically significant results as an individual variable. All factors added to the passive-avoidant equation were unable to bring passive-avoidant leadership results to a statistically significant level.

Summary

The analysis contained a sample size of 113 respondents, of which 63 were female, and 50 were male, with an age range between 21 and 64. Although there was only one primary research question with two sub-questions, there were 17 separate test sets required to derive a conclusion to the data. For null hypothesis 1, which was that leadership style was not significantly related to knowledge sharing behavior when moderated by trust type, the interaction variables were inconsistent, leading to a failure to reject the null hypothesis. For null hypothesis 1a, which was that leadership style was not significantly related to knowledge sharing behavior, the data showed a statistically significant relationship between leadership style and knowledge sharing behavior with no evidence of autocorrelation between individual leadership styles, leading to rejection of the null hypothesis. For null hypothesis 1b, which was that trust type was not significantly related to knowledge sharing behavior, the data showed a significant relationship between trust type and knowledge sharing behavior with no evidence of autocorrelation between the individual types of trust, leading to rejection of the null hypothesis.

When leadership style and trust type were in co-existence with one another, there was a change in the strength of the relationship between leadership style and knowledge sharing behavior, even though there were no autocorrelations. A post-hos analysis of passive-avoidant leadership with other leadership style factors was unable to provide a statistically significant relationship for passive-avoidant leadership with any mixture of variables in the analysis. The next chapter will provide an overview of the findings and a discussion that will conclude why the data displayed as it did.

CHAPTER 5. DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

Introduction

This conclusory chapter summarizes the findings and explains the results. The chapter provides data from previous research studies to explain the outcome of the results. Current literature is referenced to provide meaning to the explanation of the results so that practical implications derived from the data. This chapter also describes how these results serve to expand the contingency theory. It also uses previous research to explain limitations that may have impacted the results in order to provide possible areas of future study on the topic. Finally, the results promote a future study that may expand the knowledge derived through this study.

Summary of the Results

The problem presented in the data was a gap in the literature on contingency theory that described the financial services industry regarding knowledge of the extent to which leadership style explains knowledge sharing behavior and the extent to which trust moderates this relationship. There were several studies linking leadership style to trust type outside of the financial services industry (Balliet & Lange, 2013; Wu et al., 2016), as well as a rich variety of the literature linking trust type to knowledge sharing (Casimer et al., 2012; Dejong et al., 2016). However, regardless of the industry under study, there was a lack of literature about how leadership style explains knowledge sharing behavior, or how trust influences that relationship. This study intended to fill that gap.

The problem was studied using an explanatory, nonexperimental quantitative research design and analyzed using a moderated multiple regression equation in SPSS version 24 for students. The outcome showed that there was no moderation by trust towards an explanation of knowledge sharing behavior by leadership style, only that trust coexisted as an explanatory

variable. However, leadership style directly explained knowledge sharing behavior with a much stronger per unit change than the level of explanation trust type provided towards knowledge sharing behavior. Such increase in per unit change closely compliments research conducted by Dejong, Dirks, and Gillespie (2016) where the authors discuss that trust is unable to explain knowledge sharing behavior by itself, that many factors explain the behavior in coexistence with trust type.

Contingency theorists Drazin and van de Ven (1985) described the process that explains why many researchers have studied how trust type explains knowledge sharing behavior while disregarding leadership style, and why researchers acknowledge the explanatory power of leadership style towards trust without attempting to apply this to knowledge sharing behavior. Most researchers in contingency theory have studied the fit of structure to context but have failed to consider performance (Khvatova & Block, 2017), as predicted by Drazin and van de Ven (1985), and further exemplified by Hagger (2019). Drazin and van de Ven further mention that studies ignored implications and focused more on domain assumptions and methodology as recently exemplified by Carmeli et al. (2015). The Carmeli et all. (2015) study resulted in an explanation regarding how to multiple contingencies can affect creative outcomes but failed to discuss the implications regarding knowledge sharing or creative problem solving. Drazin & van de Ven (1985) further stated that there has been a regular practice among researchers to ignore the possibility that a methodological domain could be an explanatory factor of an implication or part of the explanation of performance. Hagger (2019) also mentioned that implications were neglected, utilizing an explanation of implications as the main focus in Hagger's (2019) study. This study has considered both, using trust type as a methodological domain that interacts with leadership style, such as the study by Newman et al. (2014) and Swift

and Hwang (2013) who studied the interaction of trust type with knowledge sharing behavior. At the same time, this study examines how leadership style explains trust type as part of that interaction as presented in the study of Chang (2015), Meirovich and Gu (2015), and Zhu et al. (2013). The following section discusses the meaning of the results in more detail as well as the implications of such results.

Discussion of the Results

The research presented in this dissertation will be the first to scientifically associate leadership style with knowledge sharing behavior, even while presenting the problem using trust type as a moderator. Previous literature studied trust type as explained by leadership style (Chang., 2015; Meirovich & Gu, 2015; Zhu et al., 2013) or knowledge sharing behavior as explained by trust type (Newman et al., 2014; Swift & Hwang, 2013). Researchers have not crossed the trust type barrier to associate leadership style to knowledge sharing behavior directly. The following discussion proceeds with an explanation of how leadership style explains knowledge sharing behavior, and how trust type does or does not moderate that relationship.

Trust Type, Knowledge Sharing Behavior, and Leadership Style

The first null hypothesis stated that there was no significant moderation by trust type towards knowledge sharing behavior when being explained by leadership style. However, the interaction term for trust type as a moderator of leadership style consistently showed a lack of significant explanatory relationship for all three leadership styles: transformational leadership, transactional leadership, and passive-avoidant leadership; for both trust types: affective trust and cognitive trust; and for both knowledge sharing behaviors: knowledge collecting and knowledge donating. Even so, there was a significant difference in the value of the constant, where the knowledge sharing behavior was stronger when trust coexisted with leadership style. De Jong et

al. (2016) support these findings in their research where they discovered that trust could not explain knowledge sharing alone, that trust needs to be paired with other variables to generate a clear explanation. These findings are also supported in the research showing that leadership style explains trust type (Chang., 2015; Meirovich & Gu, 2015; Zhu et al., 2013). There was also a significant direct explanatory relationship between leadership style and knowledge sharing behavior, meaning that even though trust may not be a moderator, leadership style exhibits an explanation of knowledge sharing behavior. This finding indicates that researchers need to evolve their current focus of trust as a critical factor of knowledge sharing behavior to examine more closely the direct explanation of leadership style towards knowledge sharing behavior.

Leadership Style and Knowledge Sharing Behavior

The second null hypothesis stated that leadership style would not show a significant explanation of knowledge sharing behavior. However, although passive-avoidant leadership was not significantly related to knowledge sharing behavior, transformational, and transactional leadership was. Transactional leadership showed a 10% stronger explanation towards both knowledge donating and knowledge collecting than did transformational leadership. Transformational leadership showed a 15% stronger, and transactional leadership showed a 20% stronger explanation of knowledge donating than knowledge collecting. This difference in explanatory strength means that it is much easier for leaders to have an impact on knowledge donating behaviors than knowledge collecting behaviors and that the most potent way to affect knowledge sharing behavior, in general, is through transactional leadership. Both significant leadership styles were nearly 50% or more in strength towards an explanation of knowledge sharing behaviors than trust type was. This increase in robustness compliments De Jong et al. (2015), who found that trust could not stand alone in explaining knowledge sharing behavior. It

also supports Drazin and van de Ven (1985) when they mention that most research does not consider the implications of the outcomes considering that much of the knowledge sharing research considers trust but does not consider how trust forms. More recent research by Haggar (2019) uses a lack of exploration of the implications in past research as the problem that is being resolved through Haggar's (2019) research. What this means in practice is that researchers should look past trust to guide knowledge sharing behavior and consider more closely examining leadership style directly to generate the preferred knowledge sharing behavior.

Trust Type and Knowledge Sharing Behavior

The third null hypothesis stated that there was not a significant level of the explanatory power of trust towards knowledge sharing behavior. However, both trust types; affective trust and cognitive trust, exhibited a significant level of explanation towards knowledge sharing behavior. In this research, the explanation of cognitive and affective trust towards knowledge donating behavior displayed similar levels of strength. However, cognitive trust was nearly 10% stronger than affective trust in explaining knowledge collecting behavior. This finding is contrary to the finding of Levin and Cross (2004) where they discovered that affective trust and cognitive trust were equally explanatory of knowledge collecting and cognitive trust was more closely related to the sharing of tacit knowledge while affective trust was more closely related to the sharing of explicit knowledge. However, Levin and Cross (2004) further explained that cognitive trust might be more closely related to the collection of useful knowledge than the collection of generalized knowledge. The current findings support that prediction. This finding indicates that leaders may be able to create a model of trust type to use a type of trust to generate the type of knowledge sharing behaviors they favor the most. It also suggests further study regarding the type of knowledge being shared or collected, and whether the knowledge is useful.

Post Hoc Analysis

There was some post hoc analysis that took place after testing revealed that passive-avoidant leadership was not significantly explanatory of any of the factors. This analysis was a test to see if any of the other factors tested on the MLQ questionnaire could moderate the level of significance of passive-avoidant leadership (Chiniara & Bentein, 2016; Hsieh & Wang, 2015; Tu & Lu, 2016). The results yielded that these entrants added to the equation would not significantly change the ability for passive-avoidant leadership to affect anything. However, perceived effectiveness did show significant explanatory performance toward knowledge sharing behavior, as suggested in the research conducted by Aarons et al. (2015) and Hsieh & Wang (2015). Such a finding means that perceived effectiveness may warrant further research as a covariable with trust type when studying a cluster analysis of knowledge sharing behavior.

Conclusions Based on the Results

Comparison of the Findings to the Theoretical Framework and Previous Literature

The basis of this study is an expansion of the leadership contingency theory, defined as the ability for leadership to fit the preferred outcome (Khvatova & Block, 2017). Previous research studied the preferred outcome of knowledge sharing behavior as explained by trust type (Casimer et al., 2012; Newman et al., 2014; Swift & Hwang, 2013). Previous research has also studied the explanatory power of the fit of leadership style to trust (Chuo et al., 2013; Meirovich & Gu, 2015; Zhu & Akthar, 2014; Zhu et al., 2013), without attempting to find the fit of leadership style to knowledge sharing behavior. The results of this study have found a stronger explanatory power of the fit of leadership style to a knowledge sharing behavior than the explanatory power of the fit of trust type to a knowledge sharing behavior, which directly supports De Jong et al.'s (2016) finding that trust cannot explain knowledge sharing behavior

alone. This study also found one leadership style to fit stronger than the other towards a knowledge sharing behavior, meaning it is possible to use leadership style to develop a fit towards a desired knowledge sharing outcome, as leadership contingency theory suggests (Khvatova & Block, 2017). In this regard, study of the fit of leadership style to knowledge sharing behaviors does serve to expand on current knowledge of the leadership contingency theory since the different leadership styles, transactional and transformational, use different mixes of the contingency theory constructs of leader-member exchange, task structure, and positional power, with passive-avoidant leadership utilizing only the contrast of positional power, and not the mix of all three constructs, as contingency theorists suggest (Fiedler, 1971, Meirovich & Gu, 2015).

Leadership contingency theory presents as a flexible leadership behavior where the mode of leadership changes according to the fit and misfit to the desired outcome (Fiedler, 1971; Hershey and Blanchard, 1982; Khvatova & Block, 2017). The results of this study support this interpretation where leadership style was most robust towards an explanation of knowledge donating, and, of the two leadership styles, transactional leadership showed the most robust explanatory fit towards knowledge donating. Such robustness means that these two leadership styles can be made to fit according to the preferred outcome of knowledge sharing behavior (Khvatova & Block, 2017; Meirovich & Gu, 2015). Where the preferred outcome is to generate a healthy level of knowledge donating behaviors, the dominance of a transactional leadership approach works, which focuses more on task structure to set goals for the transforming of positional power into rewards and recognition with very little leader-member exchanges (Bass, Avolio, Jung, & Berson, 2003; Meirovich & Gu, 2015; Bass & Avolio, 1997). If the preferred outcome is a weak level of knowledge collecting with little donating, the use of transformational

leadership is the fittest, which focuses on leader-member exchanges that transform positional power into immediate gratification through charisma and motivation and uses only a moderate amount of task structure (Bass et al., 2003; Meirovich & Gu, 2015; Bass & Avolio, 1997). There could be several mixes of either depending on the level of the knowledge sharing behavior leadership is attempting to match.

Leadership contingency theory exercises the interchanging use of three main elements: relational leadership, task structure, and positional power (Fiedler, 1971). Such practice supports the finding that there are differences in the strength of various mixtures of leadership styles and trust types in explaining knowledge sharing behavior, since each of the constructs of leadership style contain elements of the contingency theory design factors (Bass & Avolio, 1997; Hershey & Blanchard, 1982; Khvatova & Block, 2017). Fiedler's (1971) study also supports the outcome that there was a significant difference in the strength of explanatory power when covariation with trust was present since trust can strengthen the leader-member exchange, thus enhancing leadership power (Khvatova & Block, 2017; Dejong et al., 2016). In this regard, the mixture of leadership style and trust may be used to define the strength of the outcome of knowledge sharing behavior, although trust does not influence the relationship between leadership style and the type of knowledge sharing behavior that is displayed. For instance, the results indicate that cognitive trust could be used to strengthen knowledge collecting when transactional leadership is used and the preferred outcome is that both knowledge sharing behaviors be equally presented among employees. This is because transactional leadership has a stronger outcome towards knowledge donating, but can significantly produce knowledge collecting, while cognitive trust has a strong relationship with knowledge collecting.

Interpretation of the Findings

The results of the study brought about several inferences regarding the conclusion, or that suggest an area of future study. The first of these is that leadership explains knowledge sharing behavior with more per unit change than trust type. This first inference compliments the suggestions of Chen et al. (2014) where they found that although leadership style was unable to generate trust, it did not affect the ability for transactional leadership to foster learning. It also compliments the suggestions of De Jong et al. (2016) when they found that the strength of the explanatory power of trust cannot stand alone as a determining factor of knowledge sharing behavior. Leadership style deserves a deeper level of analysis to model the fit towards preferred outcomes of knowledge sharing behavior.

The second inference is that leaders can more easily manipulate the level of knowledge donating than they can knowledge collecting. This skew towards knowledge donating supports Swift & Hwang's (2013) finding that cognitive trust was strictly related to knowledge donating among peers. The results showed that leadership explains knowledge donating more strongly through both leadership style and trust type, which supports both Khvatova & Block (2017) and Dejong et al. (2016). Such a finding expands the previous findings by including leadership style as an explanatory factor towards knowledge donating.

The third inference is that the coexistence of leadership style and trust is stronger than the occurrence of either one alone in explaining knowledge sharing behavior, even though there is no moderating effect. This difference in strength supported Khvatova & Bock (2017) when they suggested that trust present as a cluster variable with other variables, such as organizational structure, social culture, and other things. It also supports De Jong et al. (2016) finding that trust is not strong enough to stand alone, that it must have other factors. A future study could benefit

from the creation of SEM modeling of different clustered factors towards varying degrees of knowledge sharing behavior.

A fourth inference is that knowledge donating behavior is more prevalent when employees are familiar with their peers and alliances. This increase in the appearance of knowledge donating behavior among employees supports Swift and Hwang's (2013) finding that cognitive trust is closely related to knowledge donating behaviors among peers. According to Casimer et al. (2012), cognitive trust appropriates as a type of trust that derives from knowledge and experience. Furthermore, Bass & Avolio (1997) defined transactional leadership such that a system of actions and rewards generates desired behaviors, meaning that employees use learning to define how they are going to behave. Leaders who provide training to employees before knowledge sharing activities take place may be able to foster a stronger amount of knowledge donating when compared to leaders who do not.

The final inference is that more research should be conducted to gain an even more in-depth understanding of the way that leadership style explains knowledge sharing behavior. Research can be expanded by including trust as a co-variable and by using an SEM type study to match clusters of variables with leadership style to find the most effective path to the desired knowledge sharing behavior. Zhu and Akhtar (2014) and Stinglhamber (2015) both suggested that the relationship between leadership style and trust were contingent upon other factors. This study found a co-existing effect between leadership style and trust type, but there was not a significant moderation. Since the relationship between both variables is contingent on other factors, a cluster reaction would be an effective way to examine the most efficient path towards the knowledge sharing behavior most fitting to the intentions of the organization.

Limitations

Although Chapter 1 describes limitations already, this section is intended to describe any limitations that may have impacted the results of the study. These limitations included a skewed histogram, even though the p-p plot of normality came out with a normal distribution. It also included a survey based on perception and the recognition that even though the strength of knowledge sharing behavior change was significantly stronger when leadership style and trust coexisted, moderation had an insignificant outcome.

The first limitation, the skewed histogram, was overridden by the normal p-p plot. According to Ojedokun et al. (2015), slight skewness is ok in a test of normality if the squared significance level does not exceed the desired level of significance. Furthermore, Khan, Rehman, and Rehman (2016) expressed a histogram with a similar level and type of skewness to the one from this study, while also producing a normal p-p plot, resulting in an affirmative assumption of normality since the overarching curve of the histogram was bell-shaped. The overarching curve from this study's histogram was also bell-shaped. Therefore, this study can also be assumed to have maintained a normal distribution.

The other two limitations were minor and commonly expected with a moderated regression analysis. Dawson and Richter (2006) found that many times a moderated regression analysis will result in an insignificant interaction effect because the interaction either leans in the opposite direction or else it goes in both directions. Therefore, an insignificant interaction in moderated multiple regression suggests the need for an SEM PLS study of clustered variables (Dawson & Richter, 2006). Fassot, Henseler, and Coelho (2016) suggest that centering the data around the mean may produce a more significant interaction, or else the data runs in the other direction. The student version of SPSS 24 does not provide an option for centering the mean;

therefore, there was no centering of the mean in this study. The outcome suggested that the study may produce stronger results after utilizing an SEM analysis.

Implications for Practice

On a practical level, many executives have experimented with the question of how to get employees to share knowledge, and how to manage it within the financial services industry (Casimer et al., 2012). Executives have also delved into research about how to manage knowledge sharing within the financial services industry, similar to the research of Sirmon and Hitt (2009) that studies how to manage the deployment of resources, described the same as knowledge donating, congruently with the investment of resources, described the same as knowledge collecting, to gain greater performance outcomes in the financial services industry. Although many researchers have linked trust to knowledge sharing (Casimer et al., 2012; Newman et al., 2014; Swift & Hwang, 2013), and leadership style or leadership behavior to trust (Chuo et al., 2013; Newman et al., 2014; Zhu & Akthar, 2014; Zhu et al., 2013), they have not bridged this gap to recommend a leadership style that could most effectively generate preferred knowledge sharing behaviors. According to the outcome of this study, such a gap becomes null and void since the consideration of trust is overridden by the strength of leadership style as it explains knowledge sharing behaviors. Leaders can look to simple measures such as charisma, structure, reinforcements, and rewards systems (Bass & Avolio, 1997) to lean employees towards the desired outcome of knowledge collecting or knowledge donating.

Even though leadership style does display a much stronger reference towards knowledge sharing behavior, trust is not without impact. Although the outcome of this study does not prove trust as a moderator, it does indicate that trust affects knowledge sharing behavior separate from leadership style. When adding trust to the equation, the strength of the explanation of knowledge

sharing behavior is stronger - meaning trust adds to the strength of leadership style so that the outcome is stronger than each variable on their own. Employers may consider the type of trust employees are more likely to adhere to according to the factors surrounding their experience with the company that relates most closely with the expected type of trust (Casimer et al., 2012; Newman et al., 2014). Leaders may also consider operational controls that are known to facilitate a specific type of trust (Newman et al., 2014; Swift & Hwang, 2013). Attempting to control for trust may work during the selection of employees on a team. Controlling for trust may also work during the preparation phase for a project during the training and cultural development of the team (Shao et al., 2015). Regardless, considering both leadership style and trust type will generate a much stronger fit towards a desired knowledge sharing behavior.

Since there were differences in the strength towards each behavior based on leadership style and trust type, leaders may also wish to model preferred outcomes to find the best mix of leadership controls. Leaders can define what behaviors are ideal for the given project then match these behaviors with the leadership style and trust type that are more likely to generate such a behavior. If the behavior does not have a leadership method measured more likely to create it, leaders can use the modeling technique to find which is least likely to generate the other behaviors and utilize that to guide the desired behavioral outcome. This technique may be more efficient with the addition of other contributing explanatory factors, as discussed in the section that follows regarding recommendations for future research. This technique may also be most efficient by modeling the constructs of each leadership style against the desired outcome rather than just the primary leadership style variable. Meaning the level of charisma, rewards systems, organizational learning, social interaction, etc, (Bass & Avolio, 1997) that may be most efficient in creating the desired outcome, and then match these secondary variables with the primary

leadership style for the best administration of that leadership style. This technique also supports Hershey and Blanchard's (1982) interpretation of leadership contingency theory as well as Fielder (1971) and Khvatova & Block (2017). Leaders can be flexible in order to guide employees towards the preferred outcome most efficiently.

Recommendations for Further Research

Recommendations Developed Directly From the Data

There were significant outcomes from the data that led to the recommendation for future study. For instance, the data indicated that trust was not a modifier, but that trust and leadership style together made the explanation of knowledge sharing behavior even stronger than either alone. This increased level of strength leads to a recommendation to study other factors that may explain knowledge sharing behavior, creating a cluster analysis where factors group together until there is no ability to increase the strength of the explanation of a single knowledge sharing behavior. Khvatova and Block (2017) and Swift and Hwang (2013) both suggested multiple factors using cluster analysis. With such an analysis, leaders can precisely model the path they would prefer to take to generate the desired level of performance. Furthermore, such a study will most effectively resolve the problem that led to this study: that leaders are unable to trust their methods for guiding knowledge sharing behavior and, therefore, reject knowledge sharing agreements altogether. With an analysis that attempts to find all the factors until there are no other factors to find, leaders will gain confidence that their methods are a solid match towards the correct behavior.

Recommendations Based on Delimitations

Although the study was able to explain knowledge sharing behaviors with leadership style successfully, and with trust type, it did not study the relationship of leadership style to trust

type beyond a possible moderator effect. Furthermore, the study only examined modification in one direction. Even so, Casimer et al. (2012) and Shao et al. (2015) mention transformational leadership as having affective trust as an element of its description as opposed to it being expressed as a coexisting variable or as a predictor or outcome variable. It would be beneficial to study the specific path between leadership style and trust type. It would also be beneficial to discover if there is a moderation in the opposite direction, where leadership style moderates trust type. It would be even more beneficial to study the constructs as sub-variables of each leadership style as they are related to trust type for microanalysis of the best fit to the desired outcome. Finally, a qualitative study of the topic may serve to confirm the findings of this study.

Conclusion

Although recent research appears to consider trust type as the primary explanation of knowledge sharing behavior (Casimer et al., 2012; Swift & Hwang, 2013). This study found leadership style, as what has been put into practice by Bass & Avolio (1995), to be more effective than trust type in explaining knowledge sharing behavior, as suggested in the Shao et al. (2015) study of contingent fit between leadership style and the phases of the enterprise system . The phenomenon of the superiority of leadership style over trust is also suggested in Mierovich and Gu's (2015) introduction of the fit between leadership style and levels of readiness and satisfaction towards increased performance. Furthermore, the study found that trust does not modify that relationship. Much recent research has also studied the relationship between leadership style and trust type (Chuang et al., 2016; Meirovich & Gu, 2015; Zhu et al., 2014), but this study was effectively able to go beyond trust type to directly match leadership style to knowledge sharing behavior. The results of this study indicate that it is time to stretch past the

trust type divide and directly study how leadership style can be used to influence the fit between organizational structure and knowledge sharing behavior. Leaders should model the factors of each leadership style to create leadership agendas that will efficiently guide employees towards the behaviors most preferred for each project. According to the theory of leadership contingency (Drazin & van de Ven, 1985; Fielder, 1971; Hershey & Blanchard, 1982; Khvatova & Block, 2017), it is the mix of factors that most strongly guides the misfit towards the fit, therefore the factors of each style should be appropriately administered such that the strength of the outcome leads employees to collect or donate knowledge as appropriate for each occasion. Researchers should evolve the focus from trust to include many factors, and to strengthen the ability for leadership style to guide knowledge sharing behavior.

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Appendices

APPENDIX A. SCATTERPLOTS OF LINEARITY

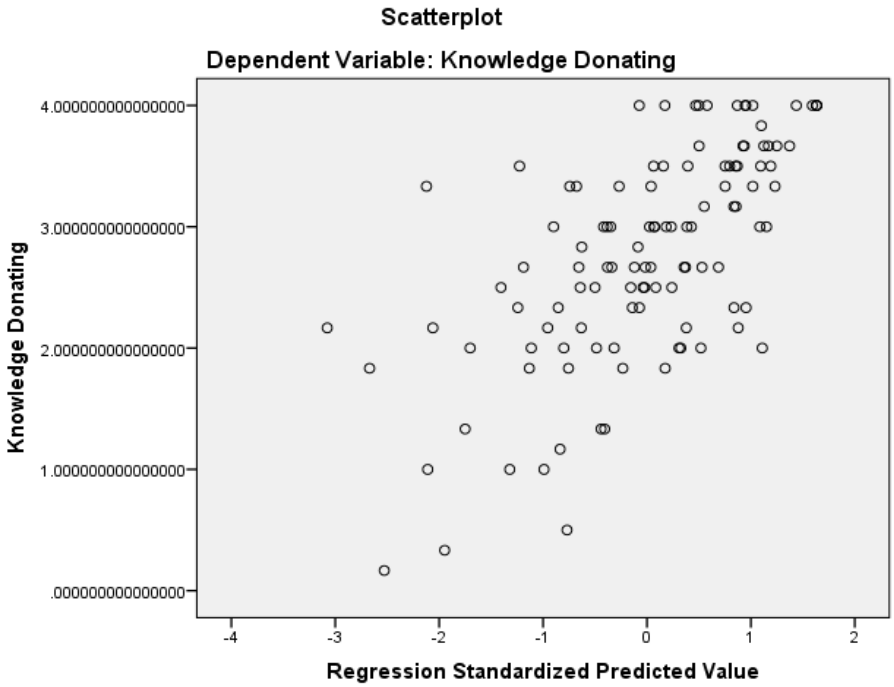

Figure A1. Knowledge Donating, Transformational Leadership and Affective Trust

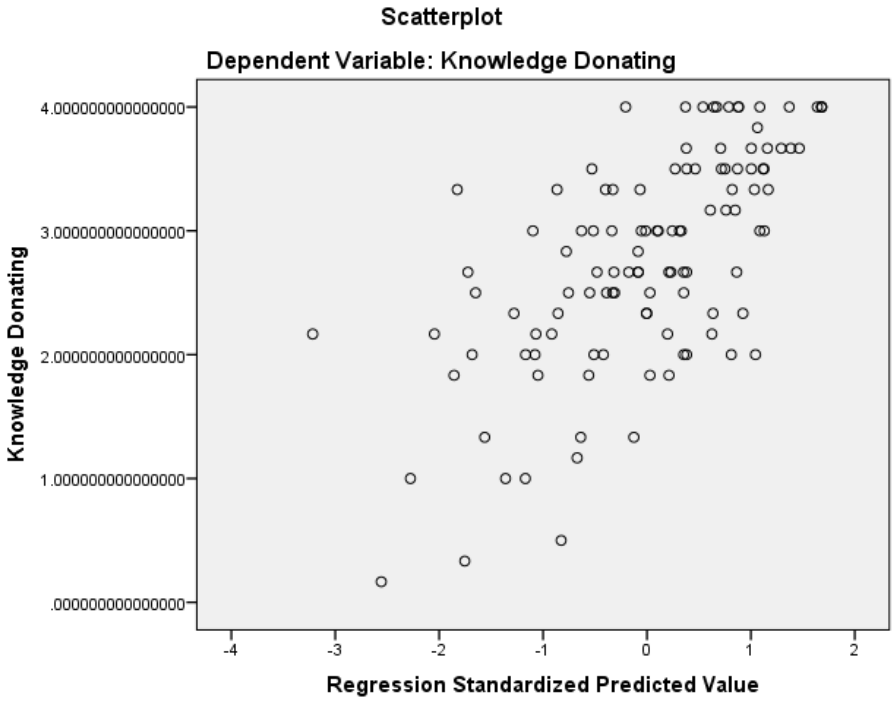

Figure A2. Knowledge Donating, Transformational Leadership and Cognitive Trust

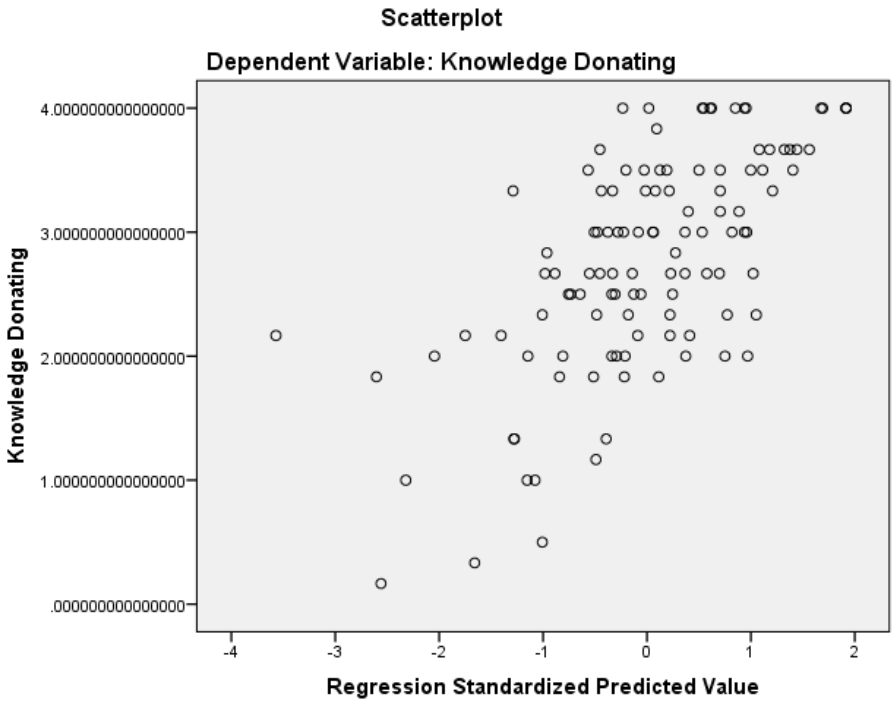

Figure A3. Knowledge Donating, Transactional Leadership, Affective Trust

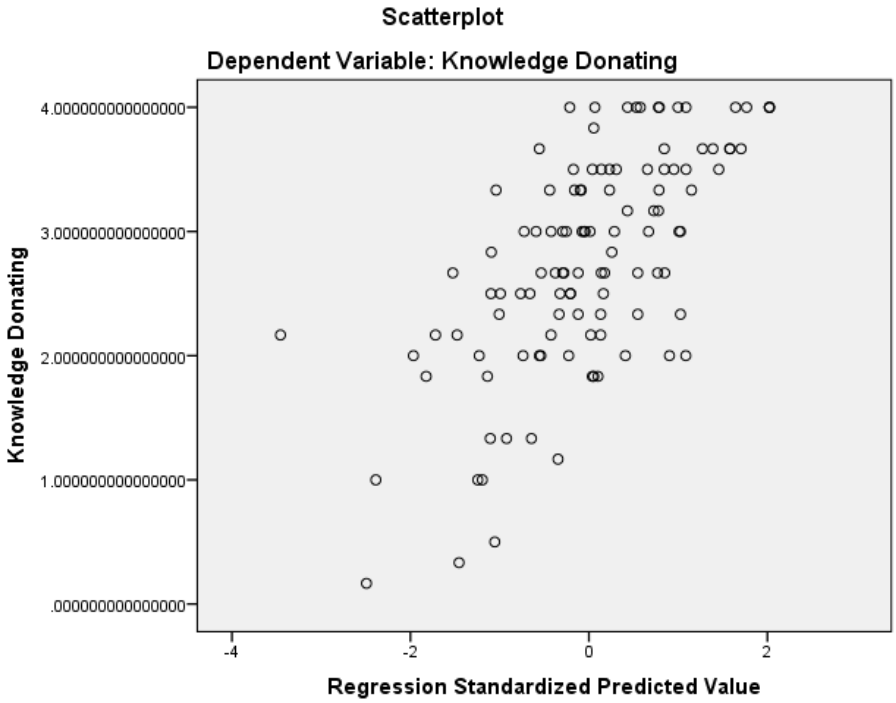

Figure A4. Knowledge Donating, Transactional Leadership, Cognitive Trust

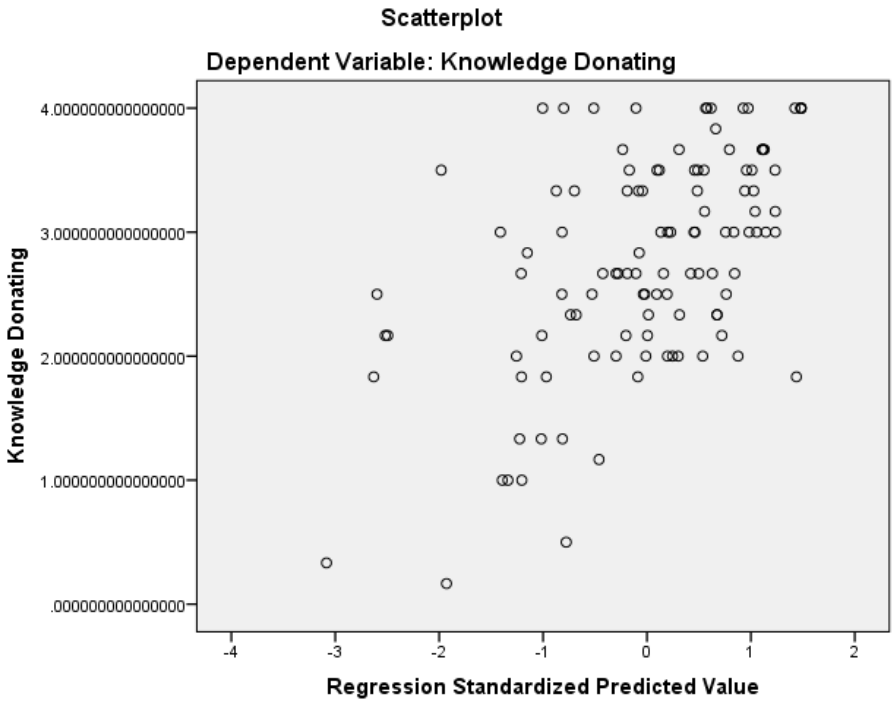

Figure A5. Knowledge Donating, Passive-Avoidant Leadership, Affective Trust

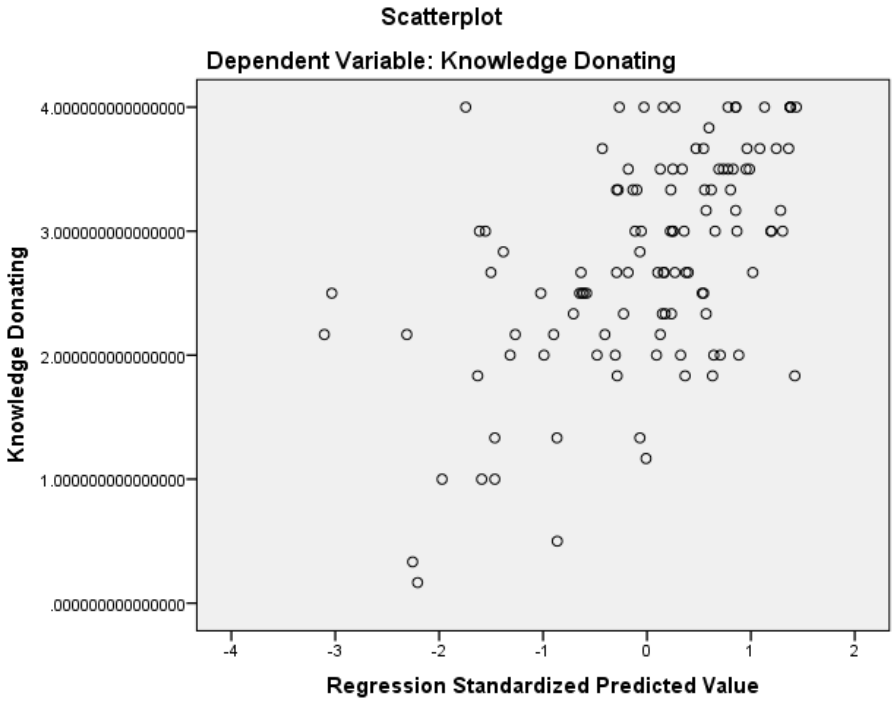

Figure A6. Knowledge Donating, Passive-Avoidant Leadership, Cognitive Trust

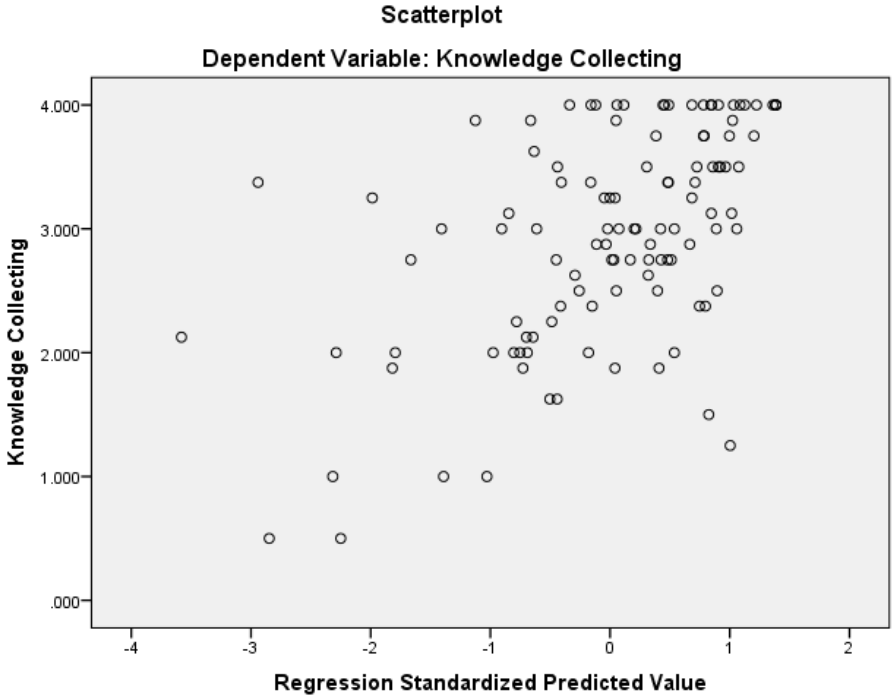

Figure A7. Knowledge Collecting, Transformational Leadership, Affective Trust

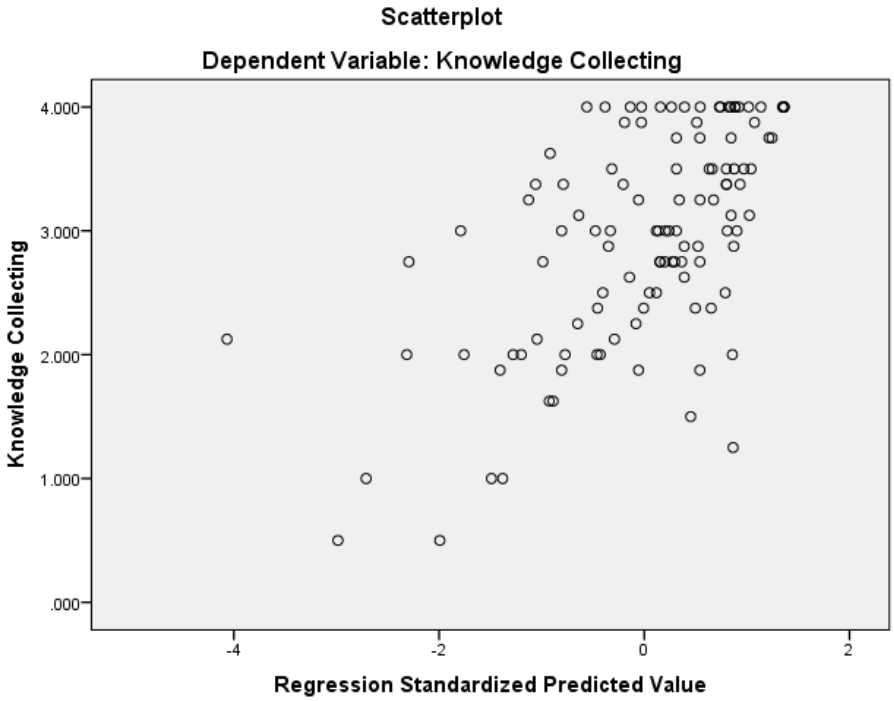

Figure A8. Knowledge Collecting, Transformational Leadership, Cognitive Trust

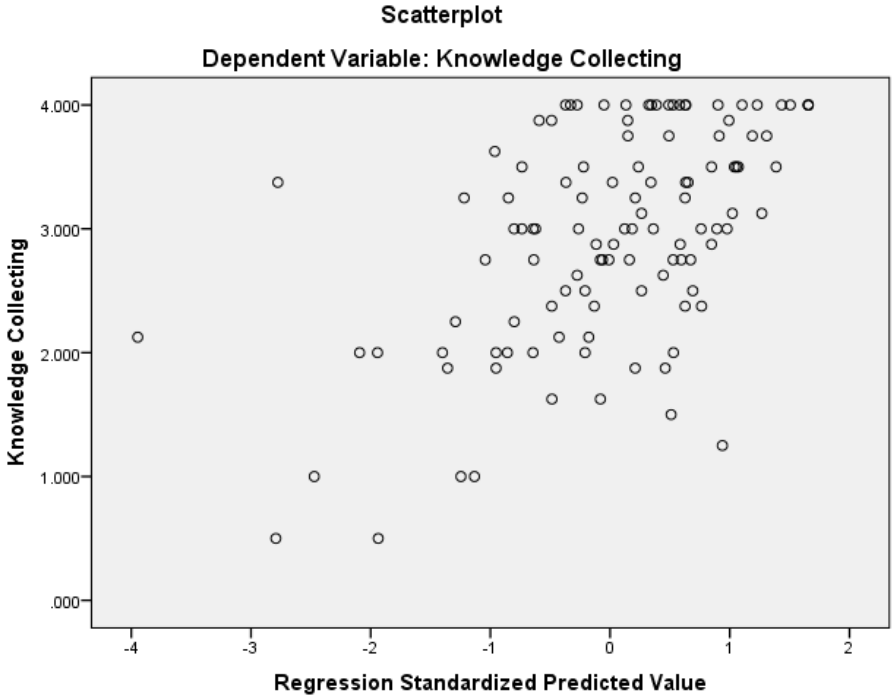

Figure A9. Knowledge Collecting, Transactional Leadership, Affective Trust

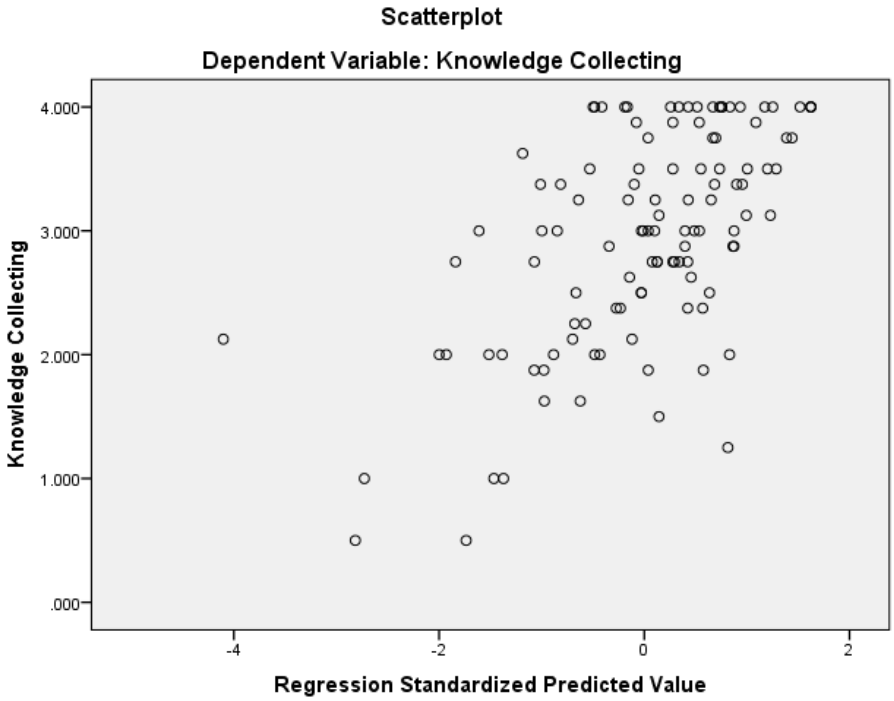

Figure A10. Knowledge Collecting, Transactional Leadership, Cognitive Trust

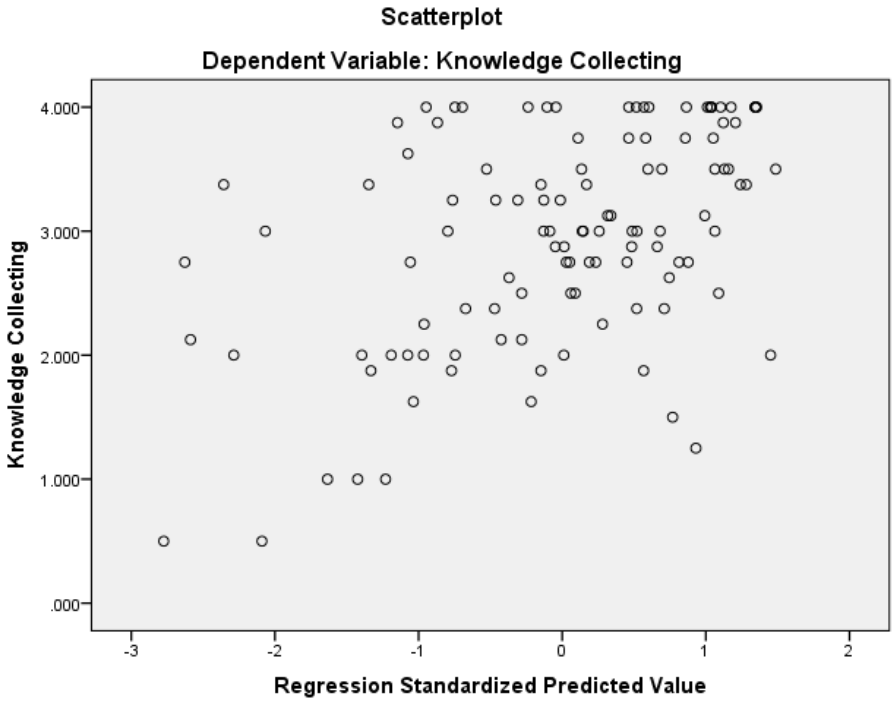

Figure A11. Knowledge Collecting, Passive-Avoidant Leadership, Affective Trust

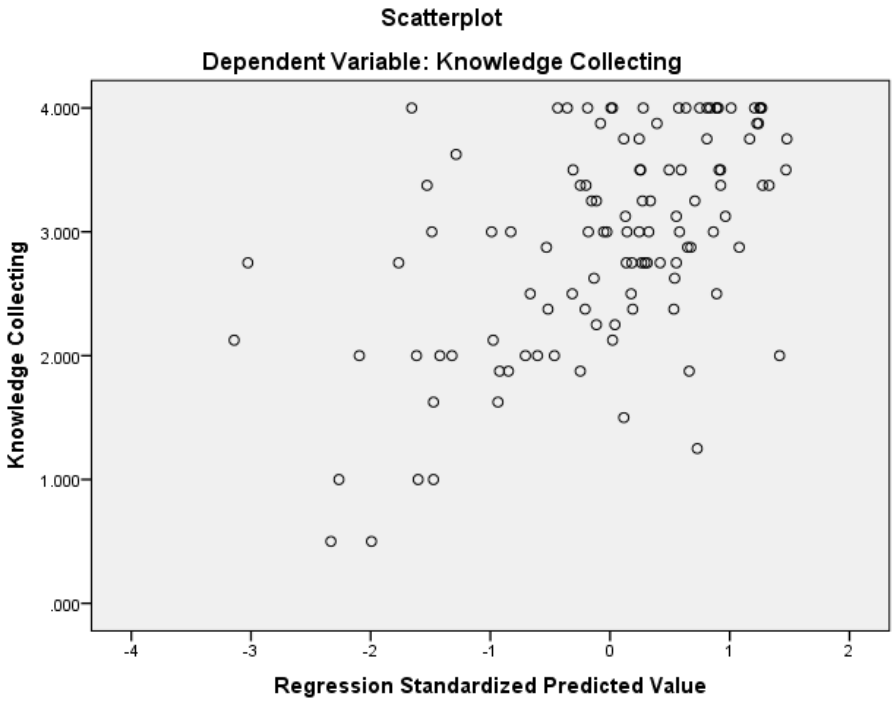

Figure A12. Knowledge Collecting, Passive-Avoidant Leadership, Cognitive Trust

APPENDIX B: P-P PLOTS OF NORMALITY

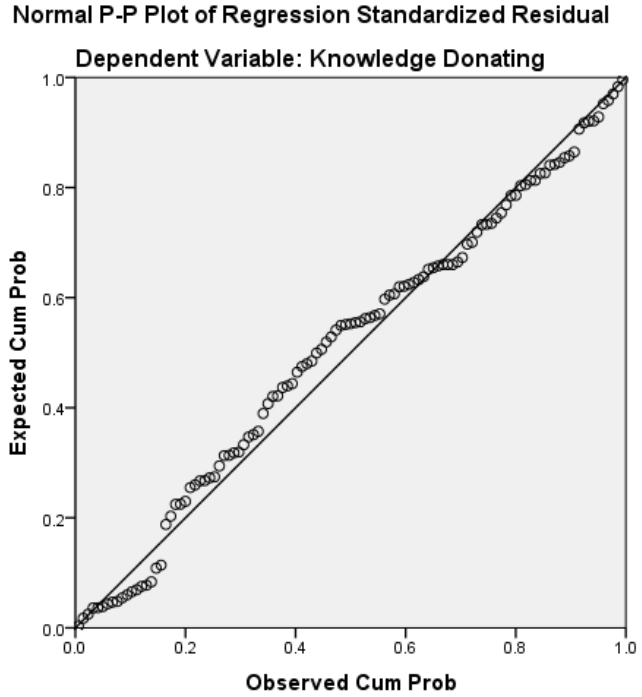

Figure B1. Knowledge Donating, Transformational Leadership, Affective Trust

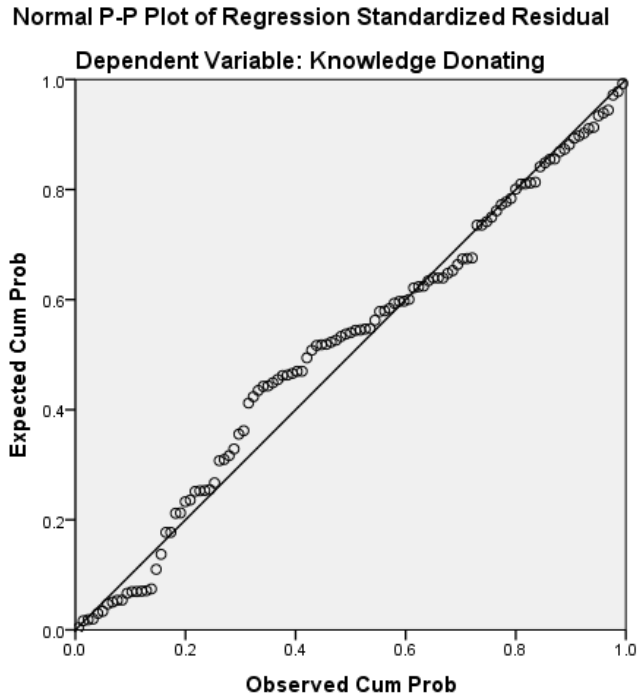

Figure B2. Knowledge Donating, Transformational Leadership, Cognitive Trust

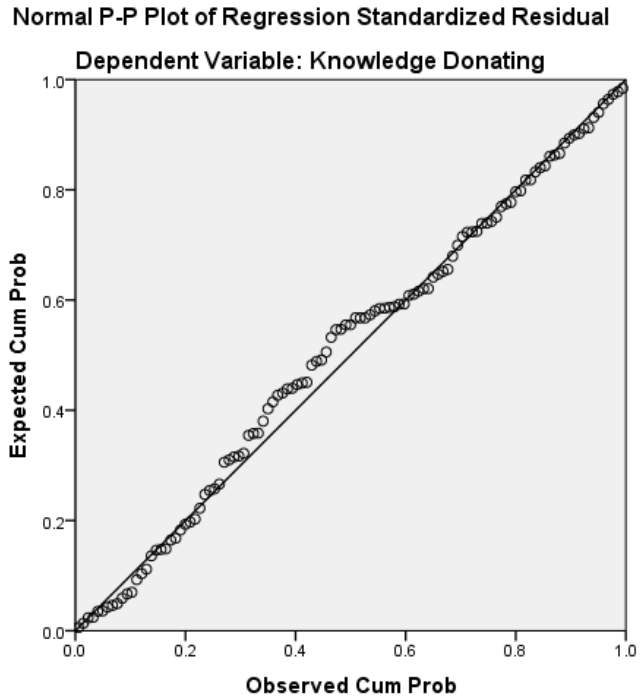

Figure B3. Knowledge Donating, Transactional Leadership, Affective Trust

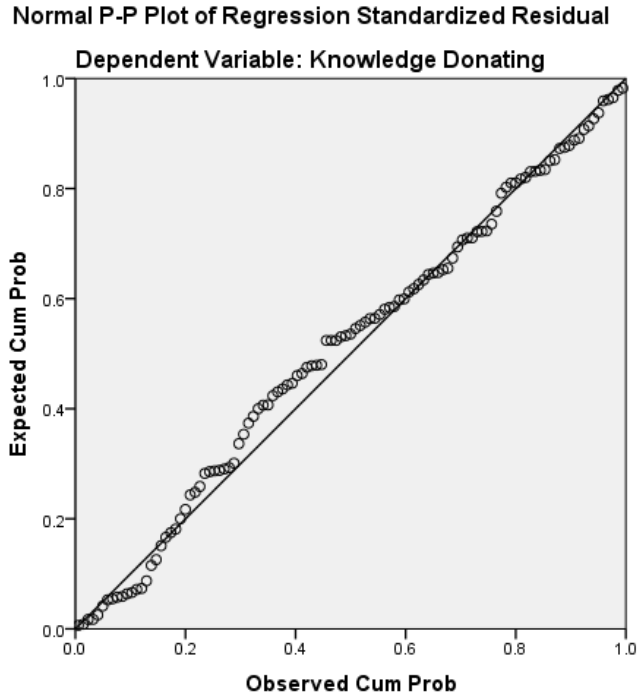

Figure B4. Knowledge Donating, Transactional Leadership, Cognitive Trust

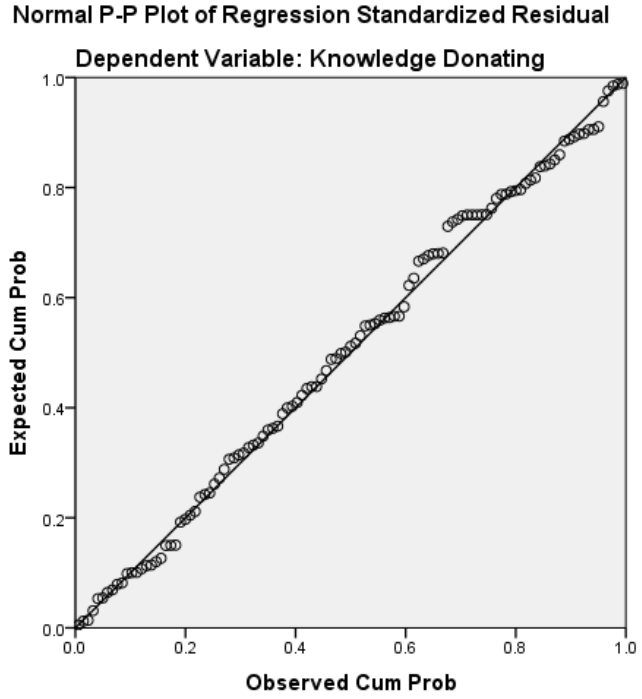

Figure B5. Knowledge Donating, Passive Avoidant Leadership, Affective Trust

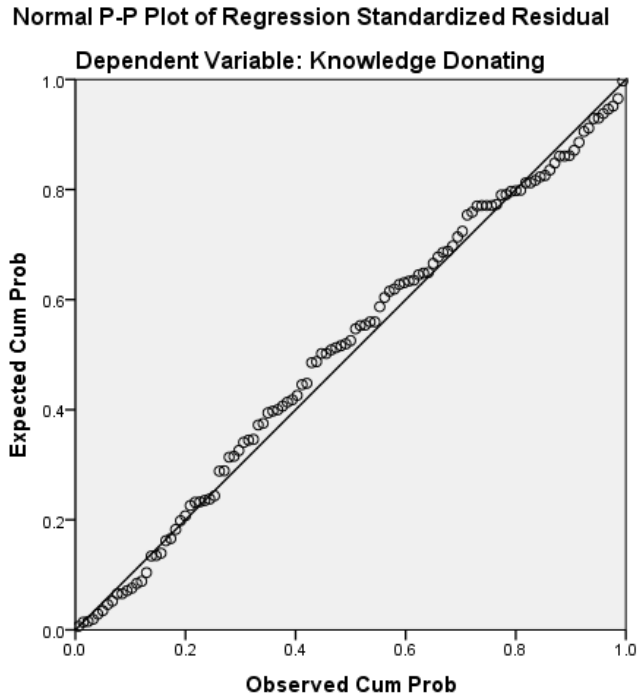

Figure B6. Knowledge Donating, Passive-Avoidant Leadership, Cognitive Trust

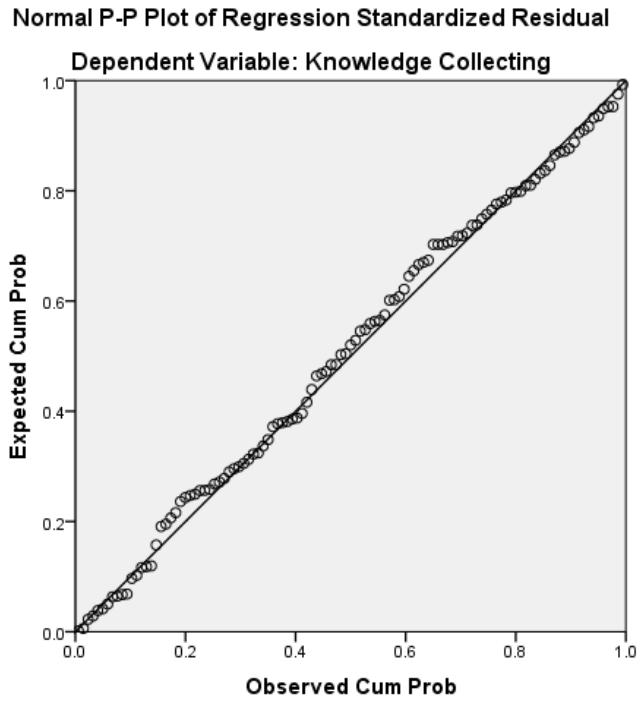

Figure B7. Knowledge Collecting, Transformational Leadership, Affective Trust

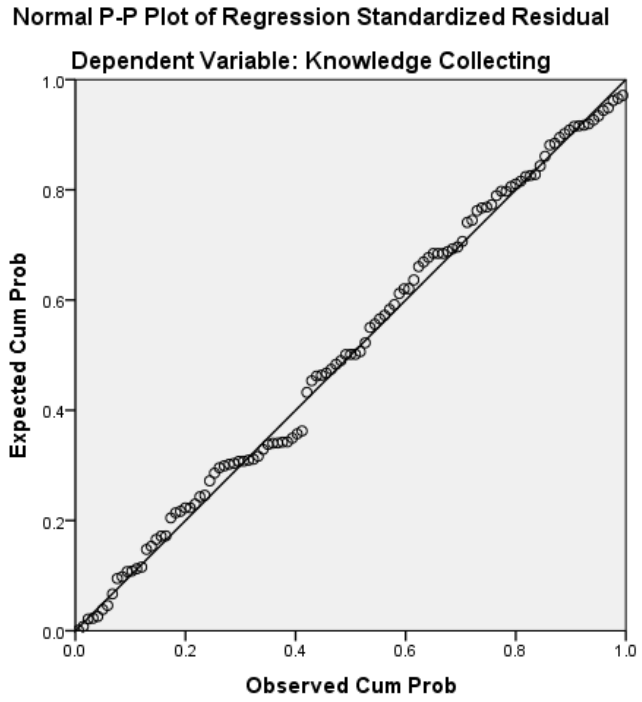

Figure B8. Knowledge Collecting, Transformational Leadership, Cognitive Trust

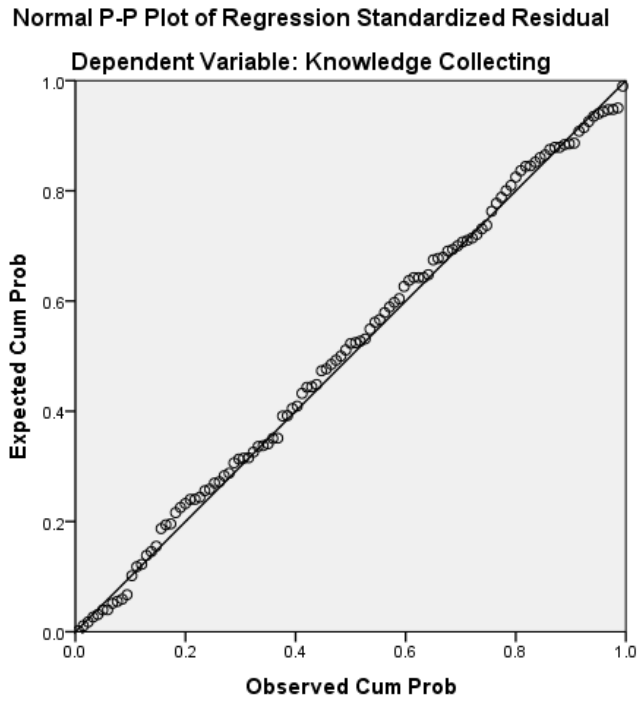

Figure B9. Knowledge Collecting, Transactional Leadership, Affective Trust

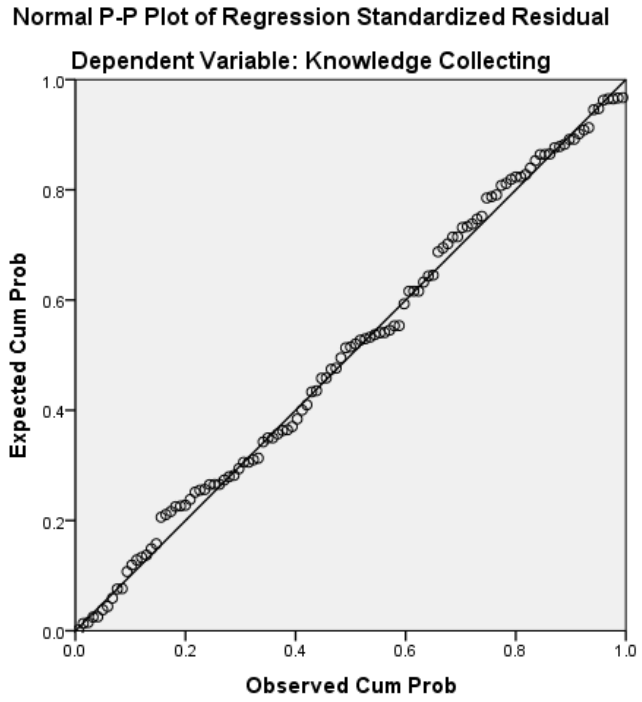

Figure B10. Knowledge Collecting, Transactional Leadership, Cognitive Trust

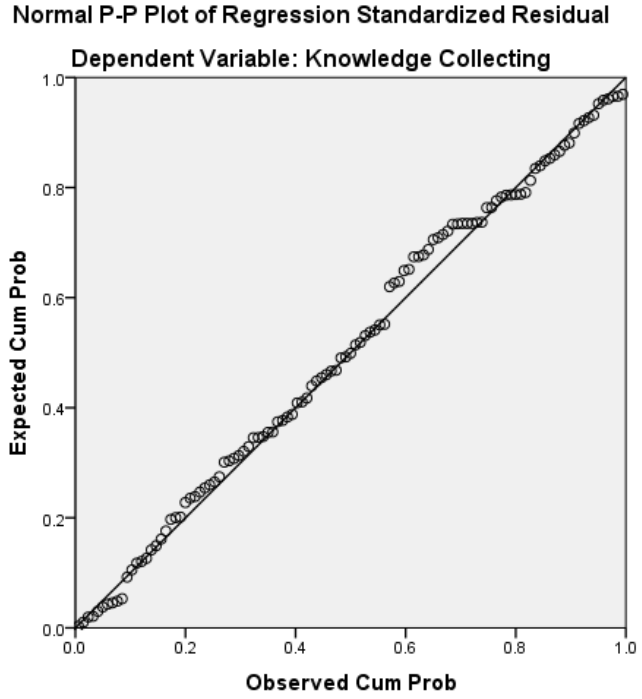

Figure B11. Knowledge Collecting, Passive-Avoidant Leadership, Affective Trust

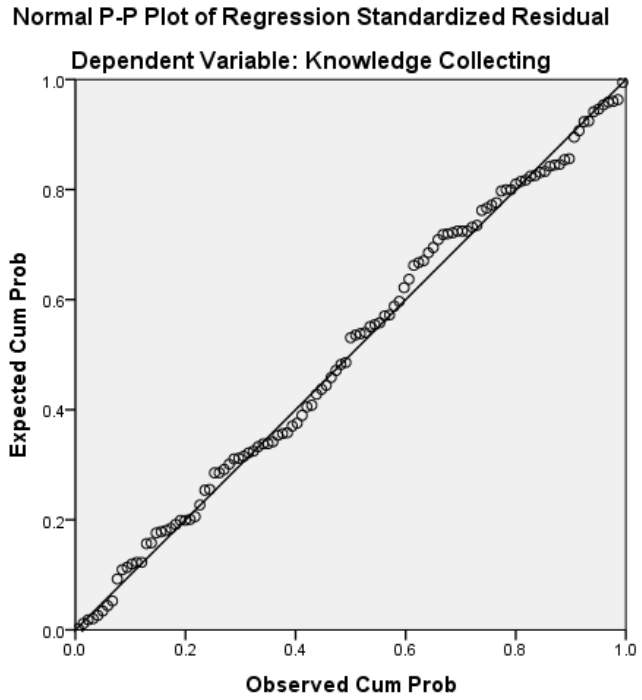

Figure B12. Knowledge Collecting, Passive-Avoidant Leadership, Cognitive Trust

APPENDIX C: SCATTERPLOTS OF HOMOSCEDASCICITY

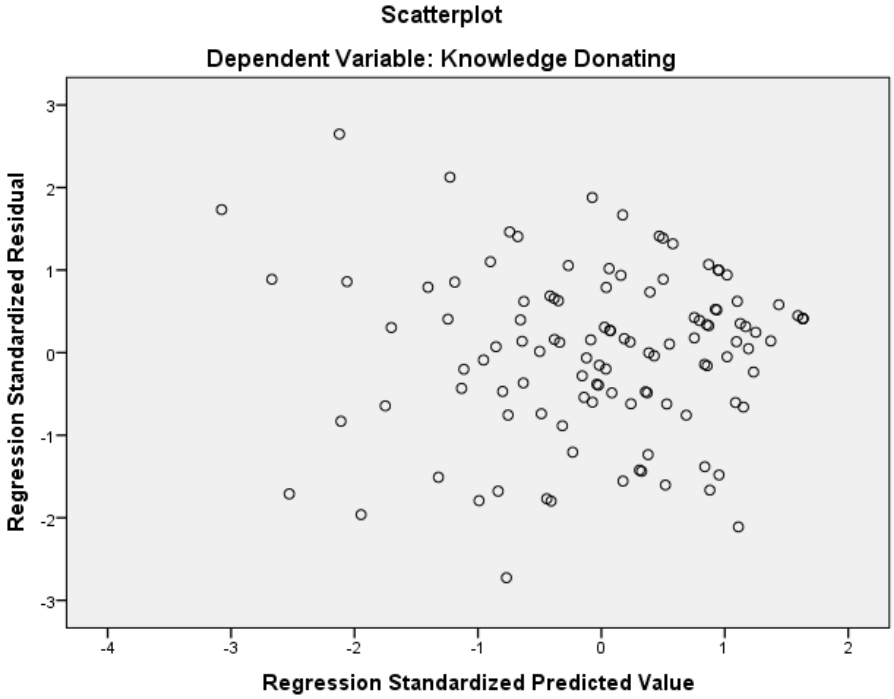

Figure C1. Knowledge Donating, Transformational Leadership, Affective Trust

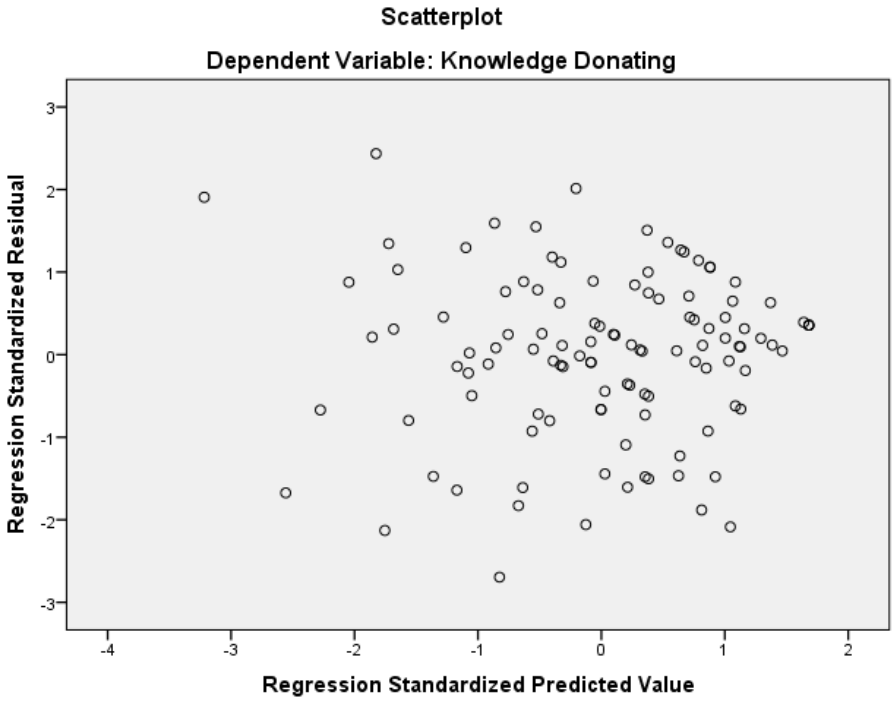

Figure C2. Knowledge Donating, Transformational Leadership, Cognitive Trust

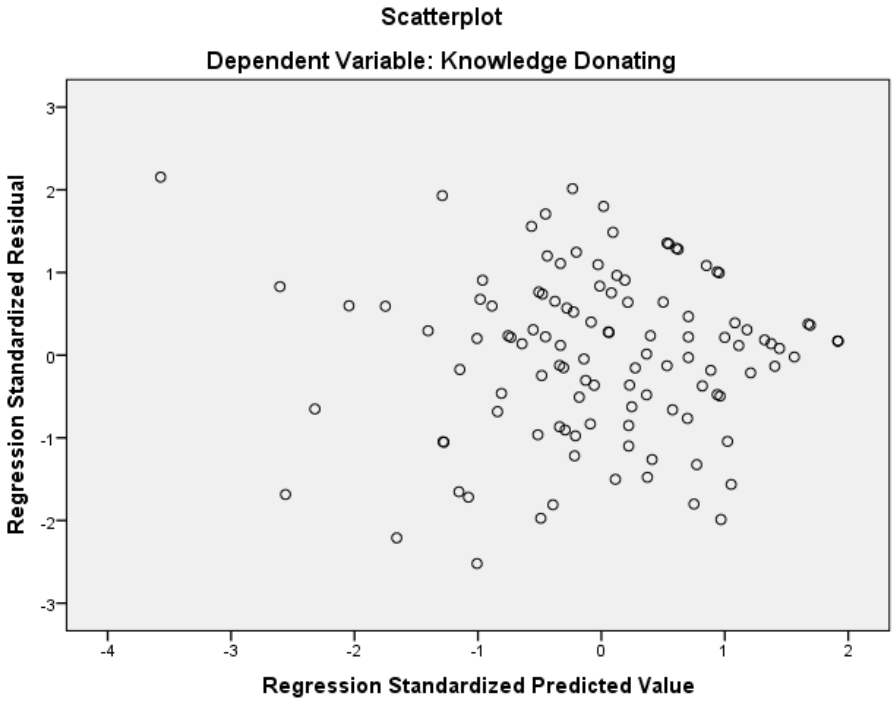

Figure C3. Knowledge Donating, Transactional Leadership, Affective Trust

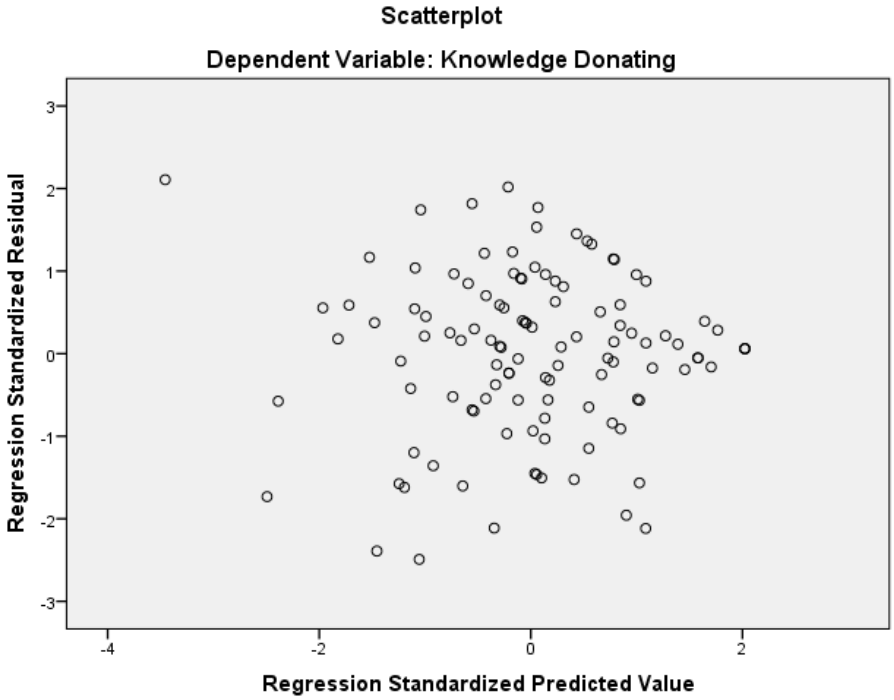

Figure C4. Knowledge Donating, Transactional Leadership, Cognitive Trust

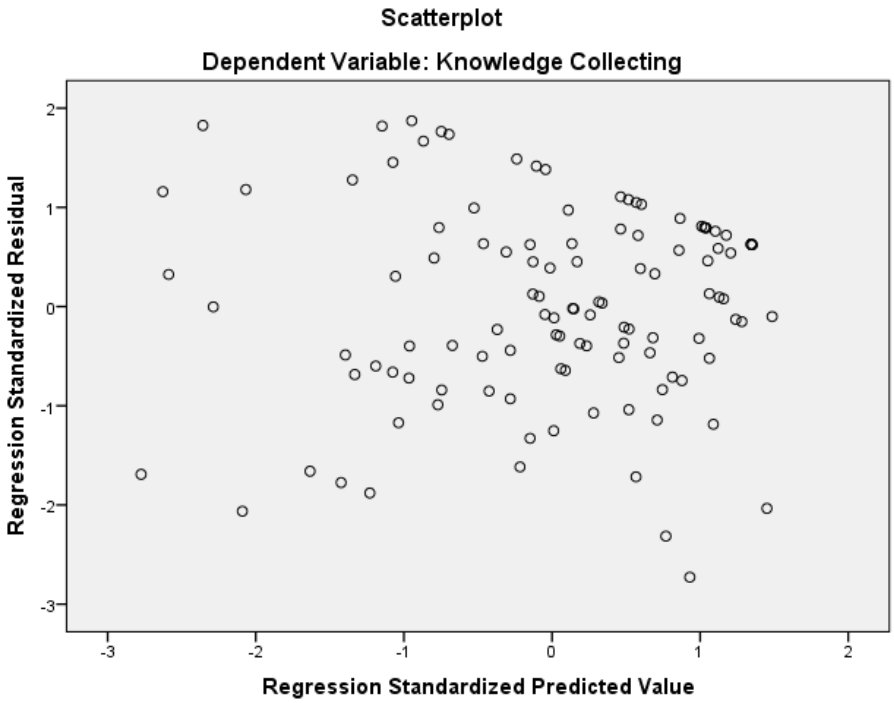

Figure C5. Knowledge Donating, Passive-Avoidant Leadership, Affective Trust

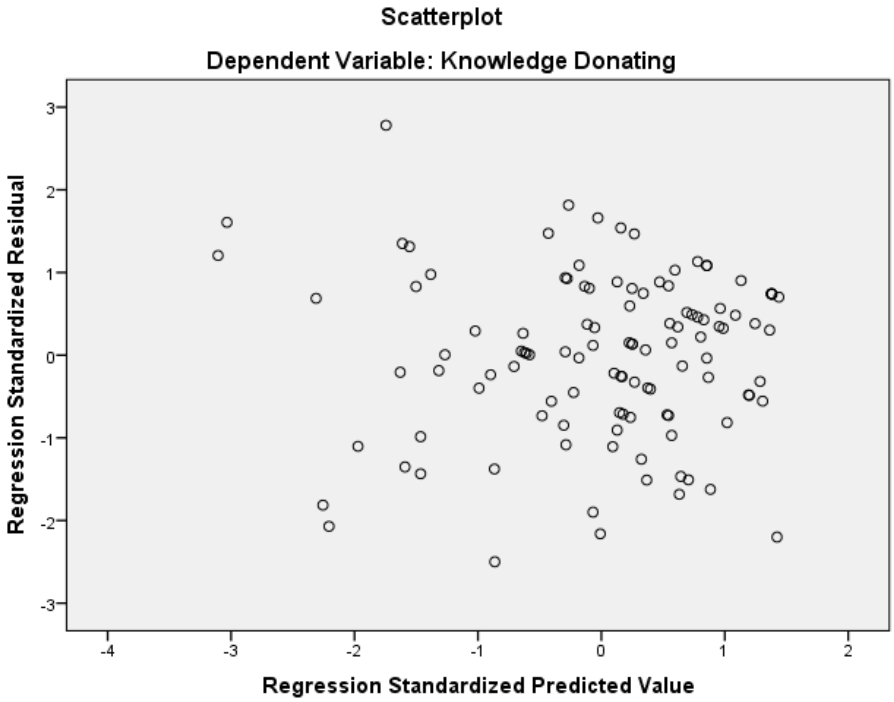

Figure C6. Knowledge Donating, Passive-Avoidant Leadership, Cognitive Trust

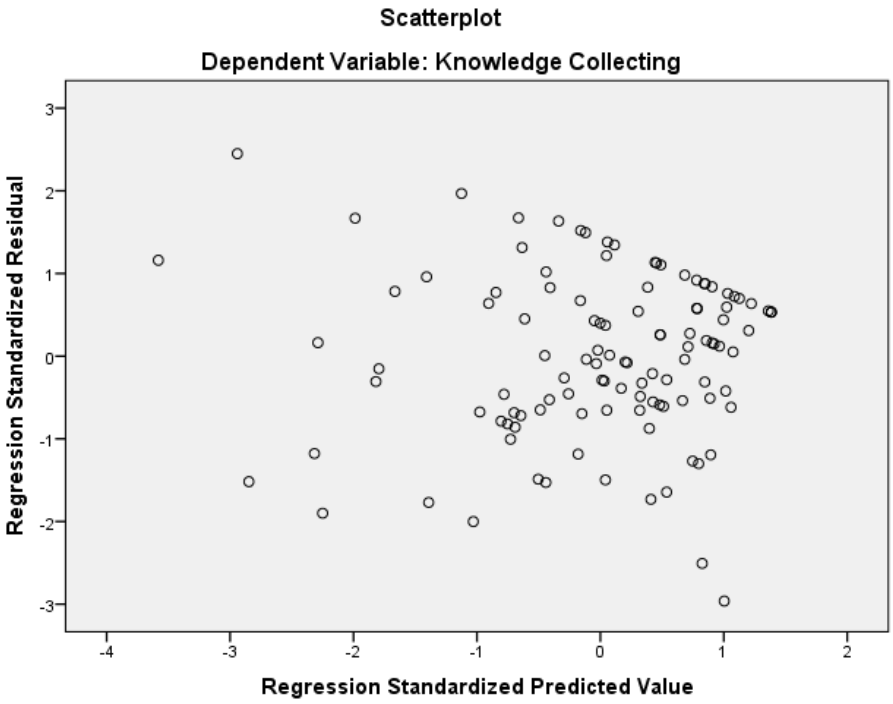

Figure C7. Knowledge Collecting, Transformational Leadership, Affective Trust

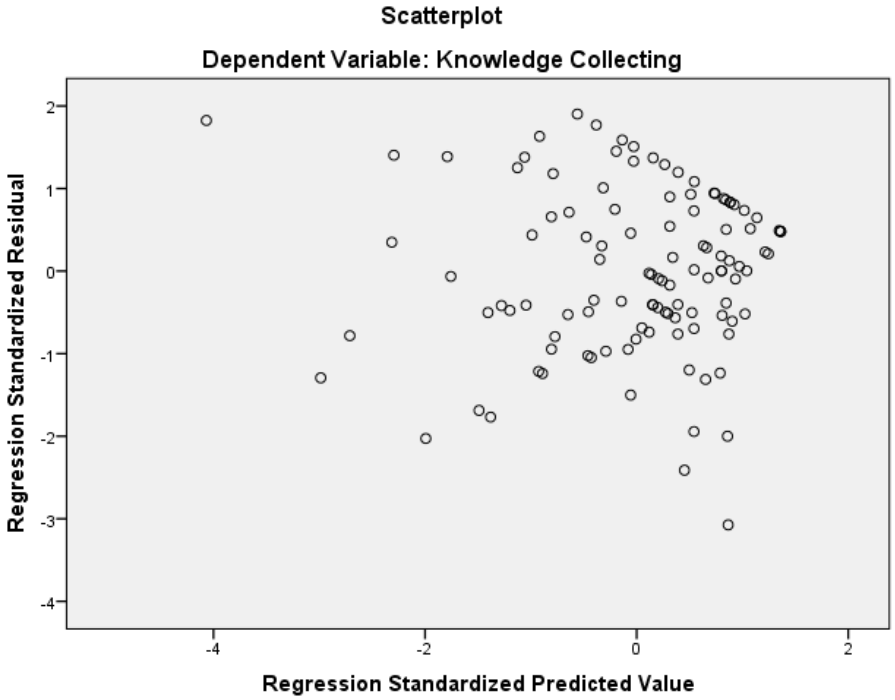

Figure C8. Knowledge Collecting, Transformational Leadership, Cognitive Trust

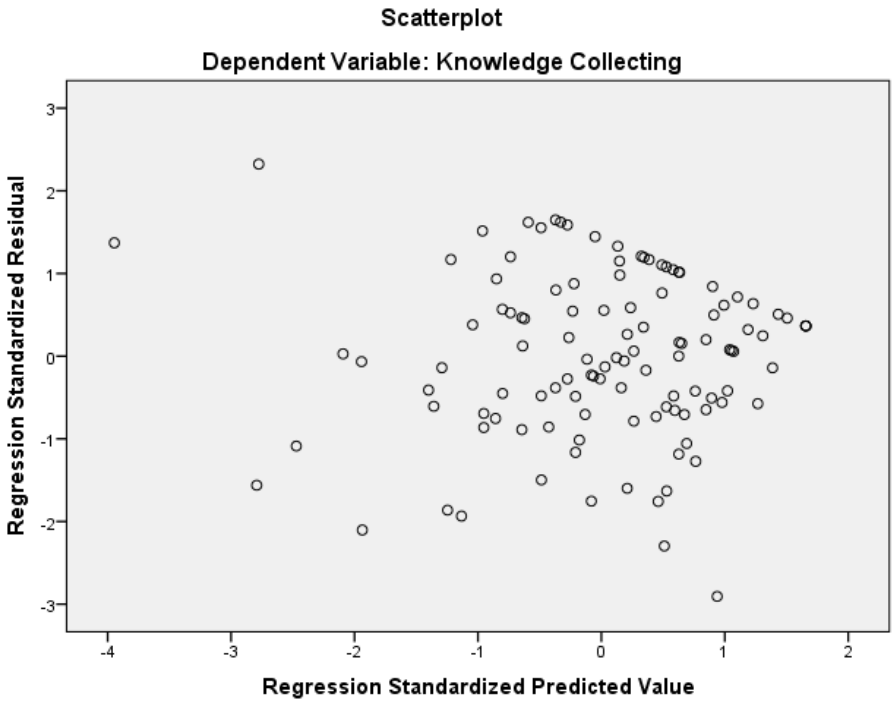

Figure C9. Knowledge Collecting, Transactional Leadership, Affective Trust

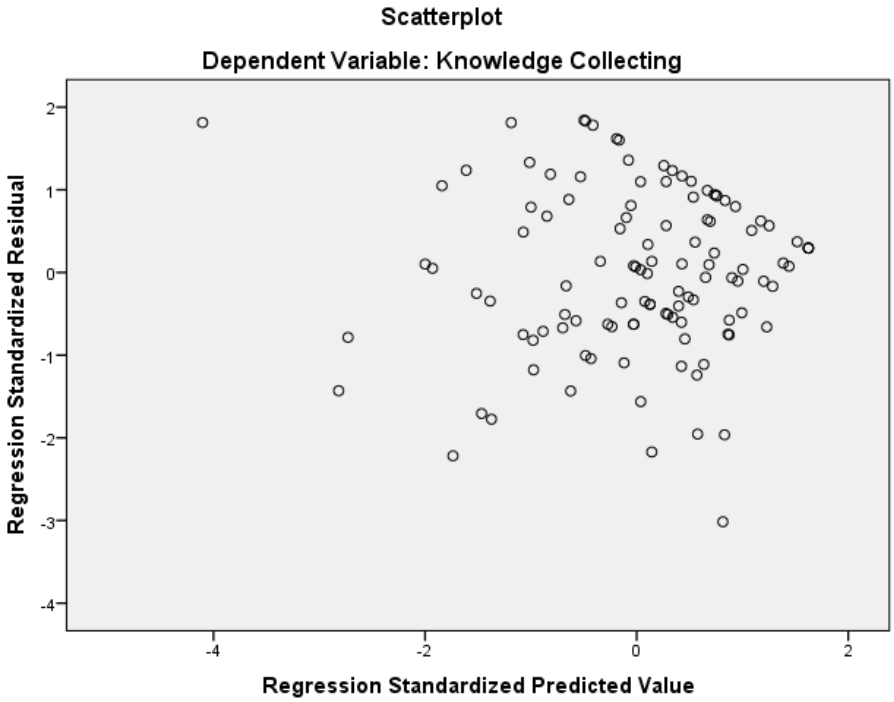

Figure C10. Knowledge Collecting, Transactional Leadership, Cognitive Trust

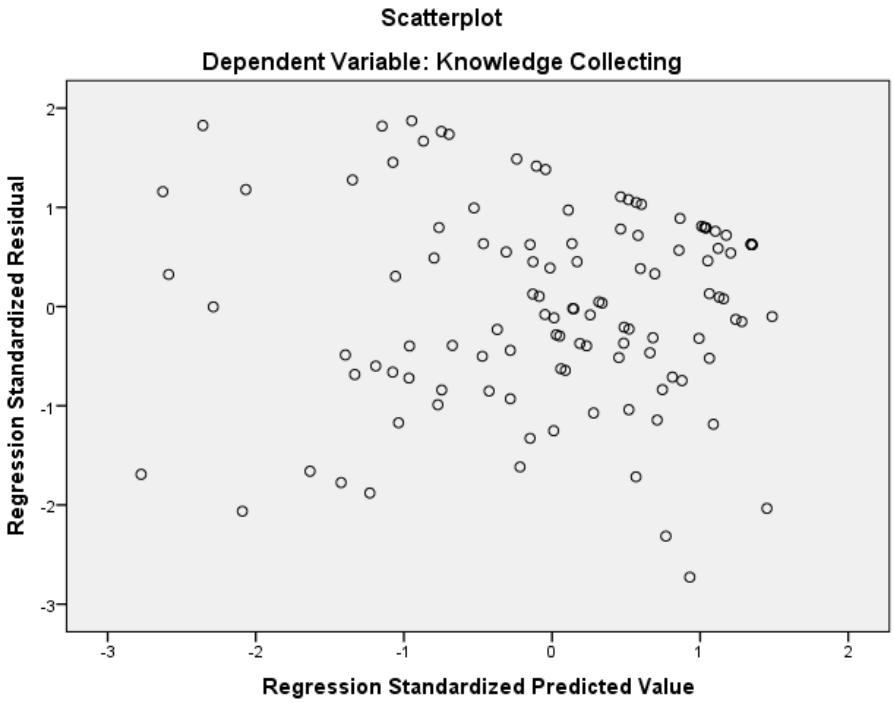

Figure C11. Knowledge Collecting, Passive-Avoidant Leadership, Affective Trust

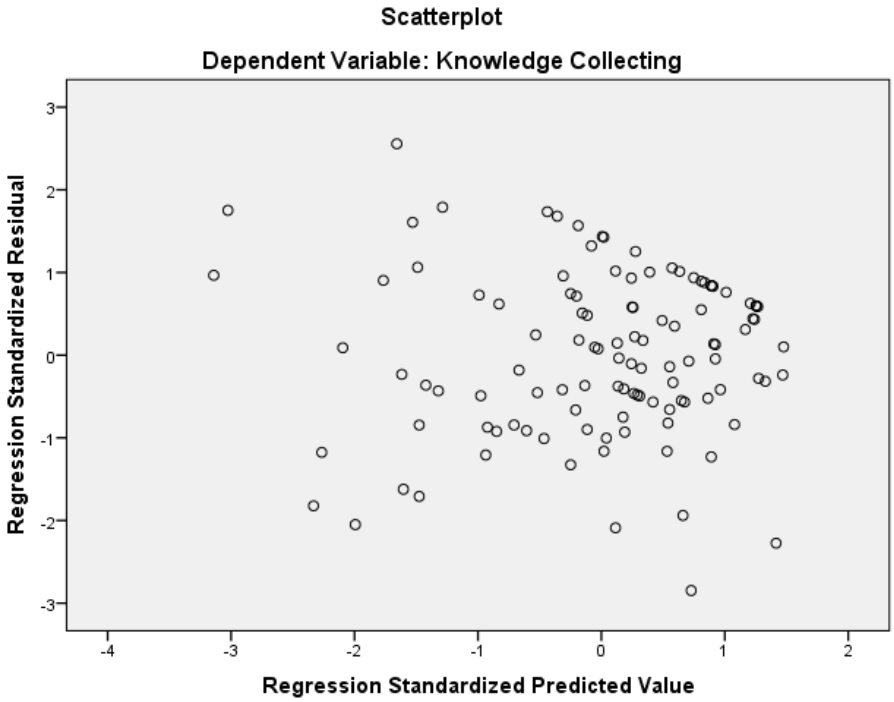

Figure C12. Knowledge Collecting, Passive-Avoidant Leadership, Cognitive Trust

APPENDIX D: VIF FACTORS OF MULTICOLLINEARITY

Table D1. VIF for Transformational Leadership, Affective Trust and Knowledge Donating

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.095	.208		5.274	.000		
	Transformational Leadership	.634	.074	.630	8.540	.000	1.000	1.000
2	(Constant)	.949	.210		4.519	.000		
	Transformational Leadership	.483	.093	.480	5.211	.000	.608	1.643
	Affective Trust	.143	.055	.239	2.588	.011	.608	1.643
3	(Constant)	.899	.385		2.332	.022		
	Transformational Leadership	.509	.186	.505	2.741	.007	.153	6.517
	Affective Trust	.159	.111	.264	1.427	.156	.153	6.542
	Transformational Leadership * Affective Trust	-.007	.043	-.047	-.157	.876	.059	16.887

Table D2. VIF for Transformational Leadership, Cognitive Trust and Knowledge Donating

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.095	.208		5.274	.000		
	Transformational Leadership	.634	.074	.630	8.540	.000	1.000	1.000
2	(Constant)	.788	.225		3.504	.001		
	Transformational Leadership	.474	.089	.471	5.309	.000	.644	1.552
	Cognitive Trust	.179	.060	.266	2.996	.003	.644	1.552
3	(Constant)	.803	.458		1.751	.083		
	Transformational Leadership	.467	.215	.464	2.173	.032	.112	8.920
	Cognitive Trust	.175	.121	.260	1.441	.152	.157	6.372
	Transformational Leadership * Cognitive Trust	.002	.048	.011	.035	.972	.049	20.296

Table D3. VIF for Transactional Leadership, Affective Trust and Knowledge Donating

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.831	.241		3.452	.001		
	Transactional Leadership	.744	.089	.624	8.406	.000	1.000	1.000
2	(Constant)	.730	.236		3.090	.003		
	Transactional Leadership	.560	.108	.469	5.196	.000	.635	1.575
	Affective Trust	.154	.054	.256	2.833	.005	.635	1.575
3	(Constant)	.716	.418		1.712	.090		
	Transactional Leadership	.566	.189	.474	2.986	.003	.207	4.827
	Affective Trust	.158	.123	.263	1.283	.202	.125	8.026
	Transactional Leadership * Affective Trust	-.002	.045	-.011	-.038	.970	.062	16.238

Table D4. VIF for Transactional Leadership, Cognitive Trust and Knowledge Donating

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.831	.241		3.452	.001		
	Transactional Leadership	.744	.089	.624	8.406	.000	1.000	1.000
2	(Constant)	.577	.245		2.351	.021		
	Transactional Leadership	.551	.105	.462	5.244	.000	.657	1.521
	Cognitive Trust	.186	.059	.277	3.140	.002	.657	1.521
3	(Constant)	.760	.469		1.621	.108		
	Transactional Leadership	.468	.210	.392	2.228	.028	.166	6.026
	Cognitive Trust	.134	.127	.200	1.058	.293	.144	6.950
	Transactional Leadership * Cognitive Trust	.022	.047	.135	.459	.647	.060	16.724

Table D5. VIF for Passive Avoidant Leadership, Affective Trust and Knowledge Donating

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.789	.186		14.984	.000		
	Passive Avoidant Leadership	-.005	.084	-.006	-.063	.950	1.000	1.000
2	(Constant)	1.663	.228		7.301	.000		
	Passive Avoidant Leadership	-.070	.071	-.079	-.985	.327	.982	1.018
	Affective Trust	.331	.049	.550	6.816	.000	.982	1.018
3	(Constant)	2.173	.589		3.691	.000		
	Passive Avoidant Leadership	-.307	.262	-.348	-1.172	.244	.073	13.739
	Affective Trust	.211	.136	.351	1.548	.125	.125	8.027
	Passive Avoidant Leadership * Affective Trust	.054	.057	.362	.940	.349	.043	23.252

Table D6. VIF for Passive Avoidant Leadership, Cognitive Trust and Knowledge Donating

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.789	.186		14.984	.000		
	Passive Avoidant Leadership	-.005	.084	-.006	-.063	.950	1.000	1.000
2	(Constant)	1.372	.258		5.325	.000		
	Passive Avoidant Leadership	-.057	.071	-.065	-.812	.419	.989	1.011
	Cognitive Trust	.372	.054	.554	6.918	.000	.989	1.011
3	(Constant)	1.703	.735		2.316	.022		
	Passive Avoidant Leadership	-.216	.338	-.245	-.640	.523	.044	22.928
	Cognitive Trust	.301	.159	.447	1.895	.061	.115	8.729
	Passive Avoidant Leadership * Cognitive Trust	.034	.070	.222	.481	.631	.030	33.405

Table D7. VIF for Transformational Leadership, Affective Trust and Knowledge Collecting

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.658	.228		7.262	.000		
	Transformational Leadership	.489	.082	.494	5.989	.000	1.000	1.000
2	(Constant)	1.492	.231		6.472	.000		
	Transformational Leadership	.318	.102	.321	3.120	.002	.608	1.643
	Affective Trust	.163	.061	.277	2.687	.008	.608	1.643
3	(Constant)	1.177	.421		2.792	.006		
	Transformational Leadership	.475	.203	.480	2.339	.021	.153	6.517
	Affective Trust	.258	.121	.436	2.120	.036	.153	6.542
	Transformational Leadership * Affective Trust	-.042	.047	-.295	-.895	.373	.059	16.887

Table D8. VIF for Transformational Leadership, Cognitive Trust and Knowledge Collecting

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.658	.228		7.262	.000		
	Transformational Leadership	.489	.082	.494	5.989	.000	1.000	1.000
2	(Constant)	1.191	.238		5.003	.000		
	Transformational Leadership	.246	.094	.248	2.599	.011	.644	1.552
	Cognitive Trust	.273	.063	.413	4.320	.000	.644	1.552
3	(Constant)	.753	.482		1.562	.121		
	Transformational Leadership	.460	.226	.465	2.032	.045	.112	8.920
	Cognitive Trust	.388	.128	.588	3.040	.003	.157	6.372
	Transformational Leadership * Cognitive Trust	-.053	.050	-.360	-1.042	.300	.049	20.296

Table D9. VIF for Transactional Leadership, Affective Trust and Knowledge Collecting

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.468	.265		5.546	.000		
	Transactional Leadership	.569	.097	.485	5.844	.000	1.000	1.000
2	(Constant)	1.355	.259		5.223	.000		
	Transactional Leadership	.363	.118	.310	3.068	.003	.635	1.575
	Affective Trust	.172	.060	.291	2.880	.005	.635	1.575
3	(Constant)	1.114	.459		2.428	.017		
	Transactional Leadership	.472	.208	.402	2.271	.025	.207	4.827
	Affective Trust	.249	.135	.421	1.845	.068	.125	8.026
	Transactional Leadership * Affective Trust	-.032	.050	-.207	-.638	.525	.062	16.238

Table D10. VIF for Transactional Leadership, Cognitive Trust and Knowledge Collecting

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.468	.265		5.546	.000		
	Transactional Leadership	.569	.097	.485	5.844	.000	1.000	1.000
2	(Constant)	1.088	.259		4.196	.000		
	Transactional Leadership	.280	.111	.239	2.521	.013	.657	1.521
	Cognitive Trust	.278	.063	.421	4.444	.000	.657	1.521
3	(Constant)	.846	.496		1.708	.091		
	Transactional Leadership	.390	.222	.332	1.758	.082	.166	6.026
	Cognitive Trust	.346	.134	.524	2.579	.011	.144	6.950
	Transactional Leadership * Cognitive Trust	-.029	.050	-.180	-.573	.568	.060	16.724

Table D11. VIF for Passive Avoidant Leadership, Affective Trust and Knowledge Collecting

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.957	.183		16.161	.000		
	Passive Avoidant Leadership	-6.846E-5	.082	.000	-.001	.999	1.000	1.000
2	(Constant)	1.978	.234		8.454	.000		
	Passive Avoidant Leadership	-.056	.073	-.065	-.772	.442	.982	1.018
	Affective Trust	.287	.050	.486	5.768	.000	.982	1.018
3	(Constant)	2.140	.607		3.526	.001		
	Passive Avoidant Leadership	-.132	.270	-.152	-.488	.627	.073	13.739
	Affective Trust	.249	.140	.422	1.775	.079	.125	8.027
	Passive Avoidant Leadership * Affective Trust	.017	.059	.117	.290	.773	.043	23.252

Table D12. VIF for Passive Avoidant Leadership, Cognitive Trust and Knowledge Collecting

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.957	.183		16.161	.000		
	Passive Avoidant Leadership	-6.846E-5	.082	.000	-.001	.999	1.000	1.000
2	(Constant)	1.530	.251		6.109	.000		
	Passive Avoidant Leadership	-.053	.069	-.060	-.764	.447	.989	1.011
	Cognitive Trust	.375	.052	.567	7.159	.000	.989	1.011
3	(Constant)	1.529	.716		2.136	.035		
	Passive Avoidant Leadership	-.052	.329	-.060	-.158	.875	.044	22.928
	Cognitive Trust	.375	.154	.567	2.428	.017	.115	8.729
	Passive Avoidant Leadership * Cognitive Trust	.000	.068	-.001	-.002	.998	.030	33.405

APPENDIX E: DURBIN-WATSON SCORES OF AUTOCORRELATIONS

Table E1: Durbin Watson Transformational Leadership, Affective Trust, Knowledge Donating

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics: R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.630[a]	.396	.391	.686764364000000	.396	72.924	1	111	.000	
2	.657[b]	.431	.421	.669781668000000	.035	6.700	1	110	.011	
3	.657[c]	.431	.416	.672771055000000	.000	.025	1	109	.876	1.749

Table E2: Durbin Watson Transformational Leadership, Cognitive Trust, Knowledge Donating

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics: R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.630[a]	.396	.391	.686764364000000	.396	72.924	1	111	.000	
2	.665[b]	.442	.432	.663341205000000	.046	8.977	1	110	.003	
3	.665[c]	.442	.427	.666373286000000	.000	.001	1	109	.972	1.703

Table E3: Durbin Watson Transactional Leadership, Affective Trust, Knowledge Donating

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.624[a]	.389	.383	.691025804000000	.389	70.662	1	111	.000	
2	.656[b]	.431	.420	.670141095000000	.042	8.026	1	110	.005	
3	.656[c]	.431	.415	.673203665000000	.000	.001	1	109	.970	1.703

Table E4: Durbin Watson Transactional Leadership, Cognitive Trust, Knowledge Donating

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.624[a]	.389	.383	.691025804000000	.389	70.662	1	111	.000	
2	.663[b]	.439	.429	.664996394000000	.050	9.860	1	110	.002	
3	.664[c]	.440	.425	.667393865000000	.001	.211	1	109	.647	1.626

Table E5: Durbin Watson Passive Avoidant Leadership, Affective Trust, Knowledge Donating

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.006[a]	.000	-.009	.884010541000000	.000	.004	1	111	.950	
2	.545[b]	.297	.284	.744608368000000	.297	46.452	1	110	.000	
3	.550[c]	.303	.283	.745004792000000	.006	.883	1	109	.349	1.689

Table E6: Durbin Watson Passive Avoidant Leadership, Cognitive Trust, Knowledge Donating

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics: R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.006[a]	.000	-.009	.884010541000000	.000	.004	1	111	.950	
2	.704[b]	.495	.472	.639620469000000	.495	26.257	4	107	.000	
3	.705[c]	.496	.468	.641955261000000	.001	.223	1	106	.638	1.705

Table E7: Durbin Watson Transformational Leadership, Affective Trust, Knowledge Collecting

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics: R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.494[a]	.244	.237	.755376	.244	35.874	1	111	.000	
2	.539[b]	.291	.278	.735054	.047	7.223	1	110	.008	
3	.544[c]	.296	.277	.735722	.005	.800	1	109	.373	1.643

Table E8: Durbin Watson Transformational Leadership, Cognitive Trust, Knowledge Collecting

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics: R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.494[a]	.244	.237	.755376	.244	35.874	1	111	.000	
2	.595[b]	.354	.342	.701612	.110	18.664	1	110	.000	
3	.600[c]	.360	.343	.701336	.006	1.086	1	109	.300	1.566

Table E9: Durbin Watson Transactional Leadership, Affective Trust, Knowledge Collecting

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics: R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.485[a]	.235	.228	.759846	.235	34.151	1	111	.000	
2	.538[b]	.289	.276	.736041	.054	8.296	1	110	.005	
3	.540[c]	.292	.272	.738032	.003	.407	1	109	.525	1.601

Table E10: Durbin Watson Transactional Leadership, Cognitive Trust, Knowledge Collecting

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.485[a]	.235	.228	.759846	.235	34.151	1	111	.000	
2	.593[b]	.352	.340	.702812	.116	19.747	1	110	.000	
3	.595[c]	.354	.336	.704968	.002	.328	1	109	.568	1.522

Table E11: Durbin Watson Passive Avoidant Leadership, Affective Trust, Knowledge Collecting

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.000[a]	.000	-.009	.868909	.000	.000	1	111	.999	
2	.482[b]	.232	.218	.764816	.232	33.271	1	110	.000	
3	.483[c]	.233	.212	.768020	.001	.084	1	109	.773	1.624

Table E12: Durbin Watson Passive Avoidant Leadership, Cognitive Trust, Knowledge Collecting

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.000[a]	.000	-.009	.868909	.000	.000	1	111	.999	
2	.564[b]	.318	.305	.720925	.318	51.247	1	110	.000	
3	.564[c]	.318	.299	.724225	.000	.000	1	109	.998	1.520