

A Quantitative Correlative Analysis:  
Attributional Relationship between Servant Leadership and Global Leadership

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### **Abstract**

The purpose of this study was to examine the attributional association between servant leadership and global leadership. The research employed a correlational, hypothetical-deductive, cross-sectional quantitative research strategy with two established instruments to measure servant leadership and global leadership attributes. The sample included 413 leaders and executives of organizations in northeast Indiana in the United States. The study found a close association between servant leadership and global leadership and between individual leadership attributes of both constructs. The strength of the correlative relationship between the two leadership constructs was found to be dependent on a leader's leadership position and gender. Post hoc analysis revealed differences in servant leadership by a leader's gender and the type and size of organization. Differences in global leadership were found between leaders when moderated by size of organization and number of countries the organization does business with, but not the proportion of products or services sold to foreign countries.

**Dedication**

To the two strongest women in my life, my mother and my wife Betsy.

### **Acknowledgments**

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I wish to thank Drs. Kenneth Rauch, Lillian Schumacher, and Mary Anna Bradshaw for serving on my committee and for their invaluable help and guidance. I am grateful to Drs. Dan Wheeler and Marshall Goldsmith for allowing me to utilize their instruments for this research. I appreciate the assistance of Mike Landram, president and CEO of the Greater Fort Wayne Chamber of Commerce and John Sampson, president and CEO of the Northeast Indiana Regional Partnership for submitting the leadership survey to their members.

My deepest appreciation goes to my family, my wife Betsy and our children Anna, Laura, and Stefan. Completing this Ph.D. has taken much time and required many sacrifices from our family. Without their support, tolerance, and encouragement, this would not have been possible.

Although he did not know, the idea for this leadership research was initiated by Ed Baker, president and CEO of the Nieco Corporation. I have always admired Baker's leadership style, but was unable to find a leadership concept or approach that would describe or explain it until Dr. Rauch introduced me to servant leadership. Baker's personal and professional leadership exemplifies the qualities and perseverance of a global and a servant leader.

I thank my Heavenly Father, the divine servant leader Jesus Christ, and the Holy Spirit for transforming my life and guiding me on my journey.

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## **Chapter 1**

### **Introduction**

With globalization embedded at all levels of the economy and society in general, successful global leadership will require leaders to no longer think as individuals, but rather to think of leadership as a team process (Hess & Bandyopadhyay, 2010). Global leaders think and act beyond culture, gender, religion, or social classes and search for the greater good, whether it is defined as that of their company, their customers, or humanity as a whole (Hopper, 2007). Maak and Pless (2009) argued for the need for responsible global leaders who act as agents of world benefits and take an active role in generating solutions to problems. These global leaders understand the pressing problems in the world, care for the needs of others, enhance human values on a global scale, and act as responsible global citizens (Maak & Pless, 2009). These requirements of successful global leaders seem to resonate with the characteristics of servant leaders.

Servant leadership is a leadership style in which the leader is primarily focused on identifying and meeting the needs of others (Keith, 2010). As it represents an ethical, practical, and meaningful way to live and lead, Keith (2010) saw servant leadership as a key for a better world, with less violence, starvation, sickness, and environmental degradation. Irving (2010a) considered servant leadership to hold great promise in meeting the distinctive leadership challenges that global communities face. Irving promoted “the great need and opportunity for future research” (p. 129) to advance the understanding and practice of servant leadership within the global context. Van Dierendonck and Patterson (2010) illustrated the importance of servant

leadership and the perspectives of solid, global, and inspiring service to others: “Our world might be crying out for more servant leaders” (p. 7).

This empirical quantitative research study attempted to determine whether there is an association between the attributes of servant leaders and global leaders. This first chapter provides the necessary framework for conducting this study. It consists of the problem statement, the purpose of the study, the significance of its research, the research questions, the study’s limitations and delimitations and the definitions of terms. Chapter 2 provides a review of the literature associated with the constructs of servant leadership and global leadership. It includes a discussion of servant leadership in organizations and its applicability across continents, cultures, and religions. Chapter 2 also includes a discussion of organizational and leadership challenges of globalization. The construct of global leadership is presented with essential global leadership competencies and the characteristics, attributes, and abilities of global leaders. Chapter 2 concludes with a theoretical overview of associations between servant leadership and global leadership and between available servant leadership and global leadership research instruments. In chapter 3, the study’s methods of research and the research parameters of this research proposal are explained and an overview of the research design process is provided. The results of each hypothesis testing are presented in chapter 4. Finally, in chapter 5 the findings of the each hypothesis testing and the practical application of the findings and the implications for future research are discussed.



### **Statement of the Problem**

The increased economic, social, technical, and political interdependence between nations (Northouse, 2009) is shifting the global economy to more interdependence and integration, which Hill (2007) referred to as globalization. With the emergence of the global economy, globalization is leading to increased global competition and rapid technological changes that provide opportunities and threats for many organizations (Hitt, Ireland, & Hoskisson, 2010). This trend requires the development of global leaders who can respond to challenges of the complexity of globalization (Mendenhall, 2008) and calls for global leaders who can encounter the dynamics of global integration, rapidly changing conditions, new competitors, and cultural diversity in the global market (Cateora, Gilly, & Graham, 2011; Friedman, 2006; Northouse, 2009). Absent of an agreed-upon definition of global leadership (Mendenhall, 2008), Mendenhall, Bird, Oddou, and Maznevski (2008) asked, “What are the skills that global leaders should possess in order to be successful” (p. xi)? Instead of particular global leadership skills, a unique leadership style, such as servant leadership, may provide the answer. Molnar (2007) claimed that servant leadership holds the potential to act as an intellectual and emotional bridge between worldviews, benefitting organizations entering new, international markets, and leading and managing people into the 21<sup>st</sup> century.

In 2002, for the 25th anniversary of Robert K. Greenleaf’s seminal work on servant leadership, *Servant Leadership – A Journey into the Nature of Legitimate Power & Greatness*, Covey (2002) argued that success in the competitive global market with its constant drive for higher productivity, higher quality, and lower cost

will require “an empowerment philosophy that turns bosses into servants and coaches, and structures and systems into nurturing institutionalized servant processes” (p.2). Keith (2010) valued servant leadership as a key to a better world; one that is freer, healthier, more humane, and more prosperous. Patterson, Dannhauser, and Stone (2007) opined that servant leadership must be considered as a viable option in the global marketplace and explained:

Knowing that the entire premise of servant leadership is a focus on followers, as well as understanding that global leadership requires a focus on understanding and respect for others, the current paradigm for a global perspective ought to catch leadership from a servanthood approach. (p. 3)

Patterson et al. (2007) raised specific questions to encourage further research to help organizations succeed in their quest for effective leaders and leadership outcomes in a global environment.

- Is there an attributional correlation between servant leadership and global leadership?
- Do successful servant leaders have an attributional advantage in becoming a successful global leader?
- What core values are required for success as a global leader (Patterson, et al., 2007, pp. 15-16) ?

The health of organizations and societies increasingly depends on the health of other individuals, organizations, and global communities (Sendjaya, 2010). Sendjaya (2010) presented servant leadership as an approach to the unprecedented challenges that today’s contemporary leaders face, pointing to the increasing amount of servant

leadership research throughout the world in broader global and cross-cultural settings. This includes Ngunjiri's (2006) examination of servant leadership as practiced by female leaders in Africa, Irving and McIntosh's (2010) investigation of the adoption of servant leadership in Latin America, and Molnar's (2007) cross-cultural study of national cultural dimensions and servant leadership. However, Sendjaya (2010) reiterated the need for further clarification and refinement of the servant leadership construct in the global context to help establish it as a suitable model of leadership for future organizations.

To date, no published work or study has empirically examined the association between servant leadership and global leadership or whether servant leader characteristics would create better global leaders. No empirical data currently supports an association between servant leadership and global leadership. Thus, a need exists for empirical research that examines the relationship between servant leadership and global leadership characteristics. By exploring the association between leadership attributes and characteristics of servant leaders and global leaders, the findings of this leadership research may help establish servant leadership as the "best fitting model of leadership" (Sendjaya, 2010, p. 51) for future organizations within a global context.

### **Purpose of Study**

The purpose of this research study is to relate servant leader attributes to global leader attributes for leaders and executives of organizations. Control variables comprised of leader's leadership position, years in leadership position, duration with the organization, size of the organization, for-profit or not-for-profit status of the

organization, type of industry, number of employees in the organization, proportion of products or services the organization sells abroad, number of foreign countries the organization conducts business with, and the leaders' gender, age, education, and race. In addition, this study provides data related to the reliability of Goldsmith, Greenberg, Robertson, and Hu-Chan's (2003) global leadership instrument.

For practitioners, this study may demonstrate how the understanding of the attributional relationships can inform the development of leaders in organizational settings. It may inform whether servant leadership characteristics in global leaders can assist them in thriving in the complex global competitive environment and whether global leadership characteristics can assist servant leaders in succeeding in the complex global environment.

### **Significance of Research**

Businesses continue to globalize at a relentless pace, complicating the competitive environment (Hitt, et al., 2010). Hitt et al. (2010) described the need for research on leadership that will help businesses compete in today's global marketplace. Company leaders and managers are tasked with engaging and empowering their employees to utilize the vast opportunities and deflect the immense threats of the global competitive environment. However, many organizations struggle with preparing their leaders and executives to succeed in the global environment (Robinson & Harvey, 2008).

In order to sustain and achieve organizational competitiveness in the global economy, Ismail, Mohamed, Sulaiman, Mohamad, and Yusuf (2011) pointed to followers' empowerment in managing organizational functions as a critical aspect of

the organizational leadership style. This view is supported by Leskiw and Singh (2007), who claimed that increasing competition in the local and global marketplace requires organizations to flatten their organizational structures with leadership skills throughout the organization that emphasize employee empowerment. With the focus on employee empowerment as one of the key attributes of servant leaders, can the servant leadership approach provide essential skills for global leaders? This research study aimed to begin the process of answering this important question.

Savage-Austin and Honeycutt (2011) described servant leaders as thriving on the opportunity to share their ideas, including followers in the decision-making process, and acting in the best interest of their followers. Servant leadership holds the promise of positively revolutionizing interpersonal work relations and organizational life (Russell & Stone, 2002). Russell and Stone (2002) even claimed that “servant leadership is a concept that can potentially change organizations and societies” (p. 154).

Trompenaars and Voerman (2010) presented servant leadership as the world’s most powerful management philosophy, with its ability to integrate opposites to a stronger synergy. Servant leaders are not tempted to make a choice between opposing values, but rather excel by combining opposing opinions, points of views, and concepts. Trompenaars and Voerman argued that servant leadership is applicable for leaders facing the ever-increasing importance of cooperation in a world characterized by globalization and in which cultural differences may require the integration of opposing values.

Quist (2008) described the need for servant leaders who successfully engage and lead global organizations in the changing cross-cultural world. However, Irvin (2010a) cautioned that literature and research is not yet sufficiently extensive to answer the question whether servant leadership is a valid and viable approach across cultures. Empirical research of servant leadership and global leadership may provide a better understanding “why some individuals function more effectively than others in culturally diverse situations” (Bücker & Poutsma, 2010, p. 264).

If leadership skills can be taught and learned, a positive relationship between the attributes of servant leaders and global leaders may encourage organizations to train and coach their global leaders and executives in servant leadership characteristics and apply the gained servant leadership attributes to succeed in the complex global environment. Today, many companies embrace servant leadership principles (Trompenaars & Voerman, 2010). These include many listed in Fortune’s *100 Best Companies to Work For in America* such as SAS, Wegmans Food Market, REI, Whole Foods Market, TD Industries, Intel, Marriott International, Nordstrom, Starbucks, Southwest Airlines, and Synovus (CNNMoney, 2011; Lichtenwalner, 2011; Trompenaars & Voerman, 2010). A positive association between servant and global leadership attributes may encourage other organizations to embrace servant leadership in their operational endeavors in the global context and join the ranks of successful global companies. This study may also encourage future studies to develop and establish training programs in servant leadership as tools for global leaders and organizations operating in the complex global environment.

### **Nature and Conceptual / Theoretical Framework of the Study**

The current research study was designed to collect and analyze data related to servant leadership and global leadership constructs and to present the findings in a correlative format. An online survey, Appendix A, was used to collect data. The context of this study was limited to leaders and executives of companies and organizations in northeast Indiana in the United States.

**Servant leadership construct and measurement.** Servant leadership attributes of leaders and executives were measured using Barbuto and Wheeler's (2006) Servant Leadership Questionnaire (SLQ). The SLQ instrument is based on the foundational principles of servant leadership expressed in Greenleaf's (1970, 1972, 1977) writings which has been examined further through Spears's (1995b, 1996) widely accepted research. Barbuto and Wheeler rigorously tested the SLQ instrument for reliability and validity, and it has been used in numerous empirical research studies (A. R. Anderson, 2009; Beck, 2010; Bugenhagen, 2006; Daubert, 2007; Hayden, 2011; Hucklebee, 2008; McCann & Holt, 2010; Ostrem, 2006; Searle, 2011; Westfield, 2010). The SLQ self-rater survey contains 23 items. Barbuto and Wheeler determined the internal reliability with alpha coefficients for the self-rating SLQ instrument and its five-factor structure ranging from .68 to .87 for individual factors. Intercorrelations between the subscales were established with a range of  $r = .28$  and  $r = .53$  for the self-rater SLQ instrument. Confirmatory factor analysis found that the "data appeared to support the five-factor structure" (Barbuto & Wheeler, 2006, p. 314).

**Global leadership construct and measurement.** The Goldsmith et al. (2003) Global Leader of the Future Inventory (GLFI) was developed with the help of thought panels and focus and dialogue groups with high-potential leaders of global companies. In addition to these groups, more than 200 specially selected, high-potential leaders from 120 international companies were interviewed regarding global leadership competencies. The GLFI consists of 15 leadership dimensions covered via 72 items in a self-rater instrument. Statistical analysis determined the reliability for the dimensions ranging from a minimum of .76 to a maximum of .97, indicating that “items composing a dimension were highly correlated” (Goldsmith, et al., 2003, p. 336).

### **Research Questions**

This study gathered data from leaders and executives of organizations in northeast Indiana and attempted to answer the following questions:

1. How does the overall presence of global leadership characteristics of leaders in organizations relate to their overall presence of servant leadership characteristics?
2. How do individual global leadership attributes of leaders in organizations relate to individual servant leadership attributes?
3. Do demographic factors such as leader’s leadership position, years in a leadership position, duration with an organization, size of the organization, for-profit or not-for-profit status of the organization, type of industry, number of employees in the organization, proportion of products or services the organization sells abroad, number of foreign countries the



organization does business with, and the leader's gender, age, education or race affect the strength of the relationship between servant leadership and global leadership?

In relation to the research question, the following hypotheses were tested:

### **Hypothesis 1**

- H1<sub>0</sub>: There is no statistically significant correlative relationship between the overall presence of servant leadership characteristics and the overall presence of global leadership characteristics.
- H1<sub>1</sub>: There is a statistically significant correlative relationship between the overall presence of servant leadership characteristics and the overall presence of global leadership characteristics.

### **Hypothesis 2**

- H2<sub>0</sub>: There is no statistically significant correlative relationship between individual servant leadership attributes and individual global leadership attributes.
- H2<sub>1</sub>: There is a statistically significant correlative relationship between individual servant leadership attributes and individual global leadership attributes.

### **Hypothesis 3**

- H3<sub>0</sub>: There is no statistically significant difference in the strength of the correlative relationship between servant leadership and global leadership, when segmented by demographic factors that include a leader's leadership position, years in a leadership position, duration with an organization, for-

profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or services the organization sells abroad, number of countries the organization does business with, leader's gender, age, level of education, or race.

- H3<sub>1</sub>: There is a statistically significant difference in the strength of the correlative relationship between servant leadership and global leadership, when segmented by demographic factors that include a leader's leadership position, years in a leadership position, duration with an organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or services the organization sells abroad, number of countries the organization does business with, leader's gender, age, level of education, or race.

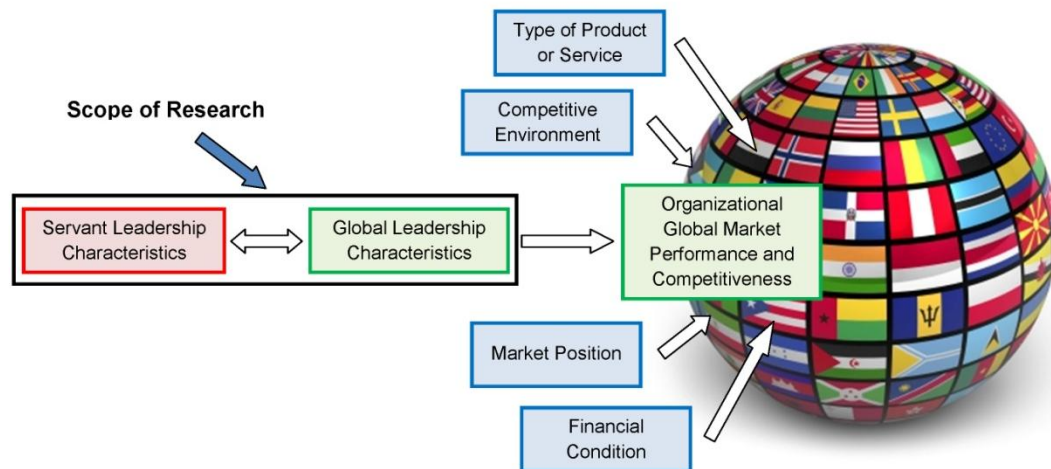
### **Limitations and Delimitations**

The research study included executives of companies and organizations in northeast Indiana, connected to or members of the Greater Fort Wayne Chamber of Commerce and the Northeast Indiana Regional Partnership (a regional economic development organization). Thus, any potential generalization of this study may be limited to this particular population. The study's findings are also limited to the type of instruments used to collect data in that alternate instruments might have produced different data.

A delimitation of the research study is the subjects' influence on ratings. The subjects' self-reporting response to questions about their leadership characteristics might not have accurately reflected their actual behaviors. In addition, internet

surveys may be biased toward participants who are young, educated, and of middle to high socioeconomic status (R. T. Howell, Rodzon, Kurai, & Sanchez, 2010). Internet surveys are also beset by low response rates and, therefore, carry a nonresponsive bias (Bech & Kristensen, 2009). Another delimitating factor is the use of a limited number of control variables. This study included 12 demographic questions related to the leader and the organization. The number of demographic questions was held to 12 to allow the survey to be completed within a reasonable time. The fact that the research study was conducted under the direction of Indiana Tech's Global Leadership PhD program might have influenced subjects' answers to global leadership questions.

This research study attempts to correlate servant leadership and global leadership attributes at the individual leader level instead of at the organizational level. Research at an organizational level within a global context would require the inclusion and discussion of organizations' global market performance and company competitiveness. Many factors affecting a firm's global performance are unrelated to leadership. Controlling for these factors, including a firm's type of product, its competitive environment, market position, and financial conditions, would be difficult across industry segments and could make a correlational relationship between servant and global leadership difficult to detect. Thus, this research study focuses on individual leadership characteristics and not organizational leadership dimensions, as presented in Figure 1.1.



*Figure 1.1.* Scope of research study examining servant leadership and global leadership characteristics, and sample factors affecting organizational global market performance and competitiveness. Globe with world flags image copyright 2012 by iStockphoto.com/scanrail. Reprinted with permission.

### Definition of Terms

*Attributes in leaders* are defined as observable characteristics and behaviors in leaders that are distinctive (Russell & Stone, 2002).

*Correlation* is defined as a statistical test to determine the tendency or pattern for two or more variables or two sets of data to vary consistently (Creswell, 2008).

*Culture* refers to a collective programming of the mind which distinguishes one group from another (Hofstede, 1980). It denotes a surfeit of meanings, including education, experience, age, skill sets, ethnicity, religion, race, gender, marital status, geography, income, language, knowledge, occupation, generation, and communication and learning styles (Hyatt, Evans, & Haque, 2009). House and Javidan (2004) defined culture “as shared motives, values, beliefs, identities, and interpretations or meanings

of significant events that result from common experiences of members of collectives that are transmitted across generations” (p. 15).

*Globalization*, according to Hill (2007), is the shift towards a more integrated and interdependent world economy. It is the development of interaction and mixing of people, corporations, and governments of different nations and cultures (Y.-C. Chen, Wang, & Chu, 2011) and increased economic, social, technical, and political interdependence (Northouse, 2009).

*Global leaders* are individuals who effect significant positive change in organizations by building communities through the development of trust and the arrangement of organizational structures and processes in a context involving multiple cross-boundary stakeholders, multiple sources of external cross-boundary authority, and multiple cultures under conditions of temporal, geographic, and cultural complexity (Mendenhall, 2008).

*Global leadership* is defined by Javidan (2008) as the process of influencing individuals, groups, and organizations inside and outside the boundaries of the global organization, representing diverse cultural/political/institutional systems to contribute towards the achievement of the organization’s goals.

*Global leadership competencies* refer to the core abilities, attributes, and skills of leadership that enable an individual to adapt quickly to new and different cultural settings and function effectively within an intercultural global environment (Alon & Higgins, 2005; Earley & Peterson, 2004; Suutari, 2002).

*Servant leadership* is defined as a leadership style in which the leader is primarily focused on serving his or her followers individually and organizational concerns peripherally (Patterson, 2003a).

### **Dissertation Summary**

This dissertation is presented in five chapters. Chapter 1 provided the necessary framework for conducting this study. This framework consisted of the problem statement, the purpose of the study, the significance of its research, the research questions, the study's limitations, and delimitations and the definitions of terms.

Chapter 2 provides a literature review that introduces the constructs of servant leadership and global leadership. It includes a discussion of servant leadership in organizations and its applicability across continents, cultures, and religions. The literature review also encompasses a discussion of globalization with its impact on organizations, in particular the challenges for leaders facing cultural diversity, cross-cultural knowledge transfer, and converging global management practices in the global economy. The construct of global leadership is presented with the essential global leadership competencies, characteristics, attributes, and abilities of global leaders. The literature review includes a theoretical overview of associations of servant leadership and global leadership and concludes with an overview of available servant leadership and global leadership research instruments.

In chapter 3, the study's methods of research and the research parameters of this research proposal are explained and the selected survey instruments for measuring

servant leadership and global leadership described. Chapter 3 concludes with an overview of the research design.

Chapter 4 presents the research results and includes an overview of the data collection process, the target population, and the demographics of the sample. The methods selected for the statistical data analysis and the evaluation of the selected instruments also are discussed. This chapter provides the results of each hypothesis testing and concludes with a summary of the research findings.

In chapter 5, the findings and the implication of the each hypothesis testing is discussed. Also, the limitations of the study, the practical application of the findings, and implications for future research are presented.

## Chapter 2

### Review of Literature

#### Servant Leadership

The following review of literature on servant leadership describes the leadership style's origination, its basic construct and attributes, and the characteristics of servant leaders. It also examines the application of servant leadership in organizations within the global context and cross-cultural perspectives, across continents and regions, and among different religious belief systems.

**Origin and basic construct of servant leadership.** The servant leadership approach was originated by Greenleaf (1977) who based it on Hermann Hesse's (1956) novel *Journey to the East*. Hesse's story depicted a group of explorers on an adventurous and mythical expedition. This spiritual pilgrimage was not only a geographic excursion to the East, but was also a journey to the inner soul of the characters. The central figure of this novel was the servant Leo, a person of remarkable presence, who performed all basic chores and whose spirit and courage, guided the group through trials and tribulations. The novel's narrator described the challenges of travelling abroad and reflecting on new experiences via the axiom: "He who travels far will often see things far removed from what he believed was truth" (Hesse, 1956, p. 4). In this novel, Leo disappeared suddenly and the group fell into complete disarray. Without their servant leader, the members began to feel that their impending destiny was a hopeless disaster. Thus, the journey lost its meaning and was abandoned. After years of hopeless wandering, the narrator, one of the original pilgrims, found Leo and the Order, the group that had sponsored the expedition. He



discovered that Leo, who he first knew as his servant, was the great and noble leader of the Order.

Greenleaf posited that Hesse's story supported his idea that great leaders are servants first (Spears, 1996). Greenleaf showed how the novel illustrates that through the apparently absurd and irrational coexistence of servanthood and leadership, a profound sense of serving first emerges and overcomes the desire for formal leadership (Sendjaya, Sarros, & Santora, 2008).

It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead. The difference manifests itself in the care taken by the servant—first to make sure that other people's highest priority needs are being served, become healthier, wiser, freer, and more autonomous, more likely themselves to become servants. (Greenleaf, 1970, p. 13)

The servant leader's primary objective is to serve, rather than wanting power, influence, fame, or wealth (Senge, 2002). Servant leaders put other people's needs, aspirations, and interests above their own (Greenleaf, 1977). They are interested in the growth, development, and well-being of their followers (Patterson, Redmer, & Stone, 2003). Servant leaders want their followers to become stronger, healthier, more autonomous, more self-reliant, and more competent (Greenleaf, 1977). Hayden (2011) confirmed Greenleaf's articulation of the growth of followers with the four personal outcomes of health, wisdom, freedom-autonomy, and service orientation. He tested these outcomes against established servant leadership dimensions and found a significant and positive association.

**Overview of servant leadership attributes.** Although Greenleaf (1970, 1972, 1977) never formally described or defined the characteristics of a servant leader (Hayden, 2011), a large number of researchers (Barbuto & Wheeler, 2006; Bradshaw, 2007; Irving, 2005; Laub, 1999; Liden, Wayne, Zhao, & Henderson, 2008; Patterson, 2003; Rauch, 2007; Spears, 1995b) considered Greenleaf's work on servant leadership important. Table 2.1 lists primary theorists and researchers on servant leadership and the attributes their research associated with servant leaders.

Table 2.1

*Primary Servant Leadership Theorist and Their Acknowledged Servant Leadership**Attributes*

| Theorist  | Servant Leader Attributes   |
|---|---|
| Graham (1991)                                       | Inspirational, Moral  |
| Spears (1995a, 1995b, 1996)                         | Listening, Empathy, Healing, Awareness, Persuasion, Conceptualization, Foresight, Stewardship, Commitment, Community Building   |
| Buchen (1998)                                       | Self-Identity, Capacity for Reciprocity, Relationship Builders, Preoccupation with the Future   |
| Farling, Stone, and Wilson (1999)                   | Vision, Influence, Credibility, Trust, Service  |
| Laub (1999)   | Valuing People, Developing People, Building Community, Displaying Authenticity, Provides Leadership, Shares Leadership  |
| Russell (2001)                                      | Vision, Credibility, Trust, Service, Modeling, Pioneering, Appreciation of Others, Empowerment  |
| Russell and Stone (2002)                            | Vision, Honesty, Integrity, Trust, Service, Modeling, Pioneering, Appreciation of Others, Empowerment, Communication, Credibility, Competence, Stewardship, Visibility, Influence, Persuasion, Listening, Encouragement, Teaching, Delegation |
| Barbuto and Wheeler (2002, 2006)                    | Calling, Listening, Empathy, Healing, Awareness, Persuasion, Conceptualization, Foresight, Stewardship, Commitment, Community Building  |
| Sendjaya (Sendjaya, 2003), (Sendjaya, et al., 2008) | Voluntary Subordination, Authentic Self, Covenantal Relationship, Responsible Morality, Transcendent Spirituality, Transforming Influence   |

(table continues)

| Theorist                                    | Servant Leader Attributes   |
|---|---|
| Patterson (2003)                            | <i>Agapao</i> Love, Humility, Altruism, Vision, Trust, Empowerment, Service   |
| Wong and Page (2003)                        | Developing and Empowering Others, Visionary Leadership, Servanthood, Responsible Leadership, Integrity-Honesty, Integrity-Authenticity, Courageous Leaders. It includes an inverse construct, identified as Abuse of Power and Egoistic Pride |
| Dennis (2004)                               | Love, Empowerment, Vision, Humility, Trust  |
| Whittington, Frank, May, and Goodwin (2006) | Other-Centeredness, Facilitative Environment, Self-Sacrifice, Affirmation   |
| Van Dierendonck and Heeren (2006)           | Competence, Autonomy, Relatedness, Inner Strength, Passion, Intuition, Integrity, Authenticity, Courage, Objectivity, Humility, Empowerment, Emotional Intelligence, Stewardship, Conviction  |
| Liden, Wayne, Zhao, and Henderson (2008)    | Emotional Healing, Creating Value for the Community, Conceptual Skills, Empowering, Help Subordinates Grow and Succeed, Putting Subordinates First, Behaving Ethically  |
| Reed, Vidaver-Cohen, and Colwell (2011)     | Interpersonal Support, Building Community, Altruism, Egalitarianism, Moral Integrity  |
| Van Dierendonck and Nuijten (2011)          | Empowerment, Humility, Standing Back, Authenticity, Forgiveness, Courage, Accountability, Stewardship   |

**Spears's servant leader characteristics.** Barbuto and Wheeler (2006)

claimed that Greenleaf (1970, 1977) and Spears (1995b, 1996) represent the most accepted views on servant leadership. Spears (1995b, 1996), the chief executive officer (CEO) of the Robert K. Greenleaf Center for Servant Leadership from 1990–2007, analyzed the writings of Greenleaf and identified 10 characteristics of servant

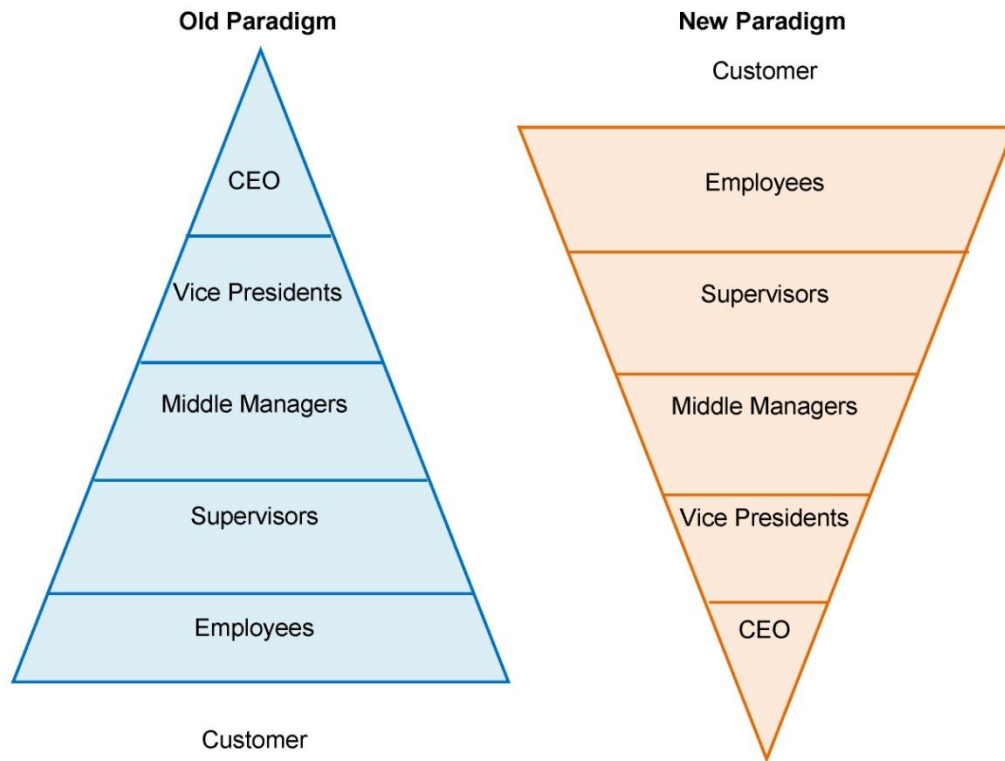
leaders: listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment to the growth of people, and building community. Beaver (2007) opined that Spears's 10 characteristics are commonly referenced in servant leadership literature and most often addressed in research. Contee-Borders's (2003) case study confirmed Spears's 10 characteristics as essential to servant leadership in competitive for-profit businesses.

**Barbuto and Wheeler's 11th construct.** Barbuto and Wheeler (2006) added an 11th construct, *calling*, to Spears's original 10 servant leadership characteristics. Calling is operationalized as a desire to serve and the willingness to sacrifice self-interest for the benefit of others (Barbuto & Wheeler, 2006). Motivation of a servant leader begins with a conscious choice to serve others (Greenleaf, 1970). It is the selfless and sacrificial roles that leaders play in organizations that help servant leaders gain respect and loyalty from followers (Choi & Mai-Dalton, 1998).

**Servant leadership within the organizational context.** Leadership theories are shifting from leader-centered to follower-centered (Bass, 2008; Yukl, 2010). Leaders are faced with achieving a vision and setting a direction that require them to motivate and inspire their employees (Kotter, 2001). Servant leadership holds the primary promise of business creating a positive impact on its employees and the community (Fry, 2003). It is based on the belief that organizational goals can be achieved through leaders who serve, develop, inspire, and empower others (Greenleaf, 1977). Greenleaf (1977) advocated breaking down hierarchical structures and making work more significant for employees. Leaders of successful businesses "will need to evolve from being the *chief* into the *builder of the team*" (p. 85). For Spears (1995b),

the traditional autocratic and hierarchical modes of leadership are yielding to a leadership model that attempts to simultaneously enhance the personal growth of workers and improve the quality and caring of the organization. This is accomplished through a combination of teamwork, community, participative decision making, and ethical and caring behavior, all of which are integral to servant leadership (Spears, 1995b).

Instead of a command-and-control environment, servant leadership places greater emphasis on collaboration, orchestration, and teamwork (Pelletier, 2005). Hunter (1998) went even further by suggesting a complete reversal of the old paradigm of leadership to a new model of servant leadership, as illustrated in Figure 2.1.



*Figure 2.1.* Complete reversal of the old paradigm of leadership to a new model of servant leadership. Adapted from *The servant: A simple story about the true essence of leadership*, by J. C. Hunter, 1998, Roseville, CA: Prima Publishing. Copyright 1998 by James C. Hunter.

The inverted pyramid depicts a servant leader CEO at the bottom who serves and meets the needs of others. In this upside-down pyramid, an organization's front-line employees are truly serving the customer, and the front-line supervisors see their employees as their customers, an approach that continues throughout the organization (Hunter, 1998). For Hunter (1998), this new paradigm shifts the role of a leader from ruling and controlling to serving. Instead of an unilateral power model tilting heavily towards leading, servant leadership balances through "serving *by* leading and leading

*by serving*” (Trompenaars & Voerman, 2010, p. 14), resulting in a more harmonious management style.

Hamilton (2008) specified the advantages to servant-led organizations as mission and value focused, with high levels of creativity, innovation, responsiveness, and flexibility. Organizations that embrace servant leadership demonstrate a commitment to both external and internal service, a respect for employees, employee loyalty, and a celebration of diversity (Hamilton, 2008). Patterson (2003) determined that servant leadership is a belief that organizational goals will be achieved on a long-term basis only by first assisting the growth, development, and general well-being of the organization’s employees. Numerous researchers (Chu, 2008; Irving, 2005; Irving & Longbotham, 2006; Johnson, 2008; Jones, 2011; Joseph & Winston, 2005; Miers, 2004; Rauch, 2007; Searle, 2011; R. R. Washington, 2007, 2008) have related empirically the presence of servant leadership to organizational performance and employee satisfaction. Patterson, Redmer, and Stone (2003) concluded that servant leaders display some similarities to what Collins (2001) termed great or “Level 5” (p. 17) leaders. Both, servant and Level 5 leaders are role models, stand for high levels of trust, delegation, empowerment, teaching, listening, and persuasion, and present dynamic leadership that can “bring about real change in organizations” (Patterson, et al., 2003, p. 19).

Servant leaders seek to involve their followers in decision making and enhance their followers’ growth while improving the caring and quality of organizational life (Spears, 2010). Buchen (1998) concluded that servant leaders have a strong service orientation and are influenced by the needs of their organization and their followers.



For Buchen, employee empowerment is servant leadership's most important characteristic. Stone et al. (2003) confirmed the focus of servant leaders on followers by emphasizing that "servant leaders trust their followers to undertake actions that are in the best interest of the organization, even though the leaders do not primarily focus on organizational objectives" (p. 5).

Servant leadership is both a product and antecedent of leader and organizational trust (Joseph & Winston, 2005). Covey (2002) asserted that servant leadership represents a kind of employee empowerment that can serve as a key decisive principle "between an organization's enduring success or its eventual demise" (p. 2). Today, many well-known companies practice servant leadership principles, including SAS, Wegmans Food Market, REI, Whole Foods Market, TD Industries, Intel, Marriott International, Nordstrom, Starbucks, Southwest Airlines, and Synovus (Lichtenwalner, 2011; Servant-Leader Associates, 2010; Trompenaars & Voerman, 2010).

The servant leadership approach within the organizational context is not without critics, however. Eicher-Gatt (2005) rejected servant leadership as being a deceptive linguistic wordplay of opposing terms, *servant* and *leadership*. For Eicher-Gatt, this linguistic irony creates sufficient ambiguity to allow politically-motivated members to advance their own agenda in the context of organizational confusion and anonymity (Eicher-Gatt, 2005). Eicher-Gatt saw servant leadership as promoting a theology of leadership that is insidiously religious, patriarchal, and oppressive, while hiding behind neutral spiritual connotations. It does not present a revolutionary mode of leadership reflecting an appreciation of organizational culture, diversity, and

heterogeneity of interests and motivations. Eicher-Gatt called servant leadership an operational myth and questioned its integration into common management practices.

In contrast, Trompenaars and Voerman (2010) pointed to the integration of opposites, *servicing* and *leading*, to achieve an enriching synthesis. It allows servant leaders to bridge cultural differences, different opinions, viewpoints, and concepts (Trompenaars & Voerman, 2010). Trompenaars and Voerman explained that in a world characterized by globalization, global organizations face a myriad of challenges. The cooperation across cultures and integration of opposing values is becoming increasingly important for global organizations and entrepreneurs in the international market (Trompenaars & Voerman, 2010).

**Servant leadership within the global context.** The increasing complexity of global business and technological advances requires a shift from a traditional to a new leadership model, one based on teamwork, community, joint decision making, strong ethical and caring behavior, and a focus on personal growth (Spears, 1996; Vidic, 2007). Patterson, Dannhauser, and Stone (2007) advocated for a servanthood approach to global leadership. With the focus of servant leadership on followers, “global leadership requires a focus on understanding and respect for others” (p. 3). Servant leadership must be considered as a practical opportunity to succeed in the global marketplace (Patterson, et al., 2007).

The applicability of servant leadership in today’s era of globalization and rapid economic changes is explained by Trompenaars and Voerman (2010). By integrating opposing viewpoints, concepts, and value systems, servant leaders are able to identify and satisfy the needs of employees from different cultures, overcome cultural bias, and

build cross-cultural communities through stewardship (Trompenaars & Voerman, 2010). For Molnar (2007), servant leadership offers the opportunity to bridge incommensurate, intractable, interminable moral orders and diverse worldviews that are part of globalization and the socio-economic complexities of the 21<sup>st</sup> century.

**Servant leadership: An American concept?** House and Aditya (1997) cautioned that leadership research is authored primarily by scholars in the United States who do not address whether this research can be generalized to other cultures. Almost all of the established leadership theories and empirical research is derived from an American perspective, including the focus on individualism versus collectivism, the stressing of follower responsibilities rather than follower rights, and the assumption of hedonism before altruistic motivation (House & Aditya, 1997). Moran, Harris, and Moran (2007) explained that researchers in the United States should not assume that American management techniques are necessarily the best for American managers or for managers from other countries. American management techniques are based on American values and assumptions that may not hold true for managers from other countries.

Sendjaya (2010) confirmed that servant leadership, like a large number of other leadership theories, was originally a U.S.-centric theory, mostly studied and practiced by companies in the United States. Winston and Ryan (2008) warned that if servant leadership is considered to be primarily a Western concept, with the authors indicating a North American and Western European bias, there will be reluctance to accept it and world leaders may miss out on a human form of leadership. Winston and Ryan demonstrated the overlap of servant leadership characteristics and the global

acceptance of the humane orientation across different cultural concepts as evidence that servant leadership is a global rather than a Western concept.

Irving (2010a) explained that research on servant leadership has gradually moved from theoretical discussions, model development, and initial empirical research in North American and European contexts to a broader global and cross-cultural setting. Irving presented servant leadership research and its application within regional and cultural perspectives and concluded that literature and research is not yet sufficiently extensive to conclude whether servant leadership is applicable across all cultural and global perspectives. The following chapters present theoretical reviews and empirical research works of servant leadership across cultures, geographic regions, and religions.

**Servant leadership within cross-cultural perspectives.** Alas, Tafel, and Tuulik (2007) opined that leadership is contingent on culture: “The status and influence of leaders vary considerably as a result of cultural forces in the countries or regions in which the leaders function” (Alas, et al., 2007, p. 50). Manning (2003) acknowledged that effective global leadership requires the ability to manage across cultural diversity. Global managers must be flexible enough to work with people from other cultures (Adler & Gundersen, 2007). However, are servant leaders flexible enough to manage cross-cultural diversity? “Is [servant leadership] relevant cross-culturally” (Sendjaya, 2010, p. 50)?

Irving (2010a) stated that engaging in cross-cultural perspectives on servant leadership is a valuable exercise, especially when considering the impact of globalization. Trompenaars and Voerman (2010) identified the respect for diversity as

a core principle for servant leaders. Servant leaders are willing and eager to listen to others' opinions and different viewpoints (Hunter, 2004). Hannay (2009) discussed the cross-cultural applications of servant leadership, especially as the U.S. economy becomes more integrated with the international economy due to globalization.

Hannay's theoretical review was based on Hofstede's (1993) five national cultural dimensions. It concluded that servant leadership is best applied in countries with national cultures constituting low power distance, low to moderate individualism, low to moderate masculinity, low uncertainty avoidance, and a moderate to high long-term orientation. Hannay's review concluded by stating that servant leadership theory based on American research "does not appear [to be] a model that is only applicable to the American leader or even one that is necessarily best suited to the American workplace" (Hannay, 2009, p. 9). Among the countries and regions that Hofstede examined—United States, Germany, Japan, France, the Netherlands, Hong Kong, Indonesia, West Africa, Russia, and China—none represented the ideal cultural environment for servant leadership application. However, the Netherlands provided the best fitting settings (Hannay, 2009).

**Servant leadership from a non-United States perspective.** Sendyaja (2010) maintained that servant leadership, like many other leadership theories, was developed in the United States and is mostly studied and practiced by companies in the United States. When examining servant leadership as a global concept, the enormous differences between the United States and other countries in the world in terms of national culture needs to be considered (Sendjaya, 2010). Thus, Sendjaya asked an

important question for this study: “Is this theory applicable in non-U.S. countries” (Sendjaya, 2010, p. 50)?

In recent years, numerous empirical research studies have attempted to examine the application of servant leadership across countries and many regions in the world, as presented below. These studies confirmed the relevance of servant leadership outside the United States (Sendjaya, 2010).

*Africa.* Ngunjiri (2007) illustrated with her research of women leaders in Africa that servant leadership is also practiced by leaders in a non-Western context in the business, education, government, and non-profit sectors. African women in Ngunjiri’s study demonstrated that servant leadership is not counter-cultural in the traditional African context. Creff (2004) and Mumley (2007) found close assimilation of the servant leadership construct with the indigenous values of *ubuntu*, a concept that describes the group solidarity of African communities. Creff recommended that African leaders model servant leadership principles to compliment African values and utilize the potential of the African continent.

Hale and Fields (2007) explored the extent to which followers in Ghana experienced the constructs of service, humility, and vision. Hale and Fields found three interesting perspectives related to servant leadership: Ghanaians experienced servant leadership behaviors significantly less frequently than North Americans, the construct of vision had a significantly stronger relationship with leader effectiveness compared to North Americans, and North American and Ghanaians related to the construct of service and humility similar to leader effectiveness.

Okafor-Dike (2008) identified servant leadership characteristics among the majority of civilian presidents of Nigeria in contrast to the authoritarian/dictatorial leadership of military regimes. Okafor-Dike concluded that pockets of servant leadership existed and were practiced in Nigeria despite numerous military intercessions.

Koshal (2005) explored the acceptability and applicability of the servant leadership construct of service in Kenya. Leaders and managers in this study from positions in corporate organizations, government, non-governmental organizations (NGOs), and academic institutions indicated service as their fundamental career and leadership goals. Koshal claimed a close relationship of servant leadership to the Kenyan philosophy of *harambee*, which embodies and reflects on the strong ancient values of mutual assistance, joint effort, mutual social responsibility, and community self-reliance (Koshal, 2005).

Similarly, Nelson (2003) found acceptance of the servant leadership constructs among black leaders in South Africa. However, practicing and adopting the servant leadership construct of trust remained a challenge among black leaders in South African organizations (Nelson, 2003).

*Asia.* Han, Kakabadse, and Kakabadse's (2010) case study showed that the Western concept of servant leadership holds similar meaning in the public sector in the People's Republic of China (PRC). The study suggested that the development and formulation of servant leadership in China was enthused by elements of Confucianism, Daoism, and Communist ideology. Han, Kakabadse, and Kakabadse found that servant leadership is a powerful philosophy and practice in the PRC in

recruiting, keeping, and motivating high performance employees, and restoring employee's trust, commitment, and confidence in management.

Chen (2002) examined the concept of servant leadership as a ministerial model in Taiwan's Mennonite Churches. Chen found that the hierarchical culture of Taiwan, and the opposing concept of servant and leader in the Chinese mindset were challenges to the servant leadership concept. However, Chen concluded that servant leadership would be an appropriate strategy to facilitate the collaborative leadership style in churches, even if many pastors see authority as necessity.

Pinner (2003) concluded that in Japan servant leadership resonates well with the culture when examining Total Quality Management (TQM) and organizational culture dimensions. Some tenets of servant leadership, identified as empowerment within a group setting, participative management, community development, service learning, healing, listening, intuitive foresight, humility, and building the capacity of the company, correspond to elements of Japanese culture (Pinner, 2003). Pinner stated that servant leadership is an acceptable style of leadership with the Japanese cultural bias of not promoting one's self and fits well with elements of preserving *kao*. *Kao* is the most precious commodity a Japanese person has, encompassing pride, self-esteem, and reputation (Pinner, 2003). Pinner concluded that servant leadership fits well into the core tenets of Japanese culture with a focus on harmony of organization and teamwork.

In India, the servant leadership concept is viewed as closely related to the traditional ethical leadership (Chatterjee, 2009). Chatterjee (2009) claimed that



servant leadership presents a striking resemblance to the *Ramakrishna* movement with the organizational leader depicted as *Dasasya-Das*, or servant of servants.

***Latin America.*** Marinho (2005) described the struggle of introducing the concept of servant leadership into the corporate environment in Brazil, especially because the term *servant* conflicts with Brazilian's long period of slavery throughout its colonial history. However, Marinho asserted that the political, economic, and social environment in Brazil is in the midst of a dynamic change and ready to embrace servant leadership.

Serrano (2005) examined Patterson's (2003) construct of servant leadership and determined that it is conceptually feasible within Panamanian culture. In order to develop servant leaders, Serrano concluded that empowerment as one of servant leadership's characteristics needs appropriate understanding and political leaders in Panama need to embrace servant leadership.

Irving and McIntosh (2010) found that participants at a leadership conference in Lima, Peru, recognized the value of servant leadership, but struggled with how to adopt servant leadership within the Peruvian context. Similarly, K. R. Anderson's (2006) interviews with Latin American leaders revealed the recognition of value in the servant leadership model. However, doubts were raised about how well servant leadership would work in an area where the *caudillo* or *cacique* approach, a form of authoritarian power and political leadership, had dominated for a long period of time (K. R. Anderson, 2006). McIntosh and Irving (2010) suggested conducting more research to determine the obstacles that servant leadership faces in Latin America,

especially with the infant nature of servant leadership research in the Latin American context.

*Australia and Indonesia.* Pekerti and Sendjaya (2010) investigated the existence of servant leadership in Australia and Indonesia. Both, Australian and Indonesian effective leaders endorse, exhibit, and practice servant leadership (Pekerti & Sendaya, 2010). However, Pekerti and Sendjaya found that culture influences people's perception of servant leadership. Leaders in Australia and Indonesia view self-sacrificial, follower-centric, and altruistic behaviors as an important practice in their organizations (Pekerti & Sendaya, 2010). Dillman (2003) investigated cross-cultural implications of servant leadership among Australian pastors. The pastors confirmed some familiarity with the concept of servant leadership and strongly identified themselves as servant leaders. The constructs of service, selfless motivation, and empowerment were seen as important leadership components, with vision and trust as unique components with lesser support (Dillman, 2003).

*Eastern Europe.* Dimitrova (2008) conducted an empirical study of Bulgarian university students to examine the causal relationship of Patterson's (2003) theoretical leadership model. Dimitrova's research supported the causal relationship among the elements of servant leadership, except the association of vision and altruism.

**Servant leadership: A Judeo-Christian concept?** Eicher-Gatt (2005) rejected servant leadership as originating from religious doctrine with the objective to infuse and regulate the corporate world with a leadership practice and organizational ethics steeped in religious thought. Eicher-Gatt claimed that servant leadership is "politically motivated to reproduce an androcentric, Judeo-Christian doctrine" (p. 18).

Wallace (2006) examined five major world religions, Buddhism, Christianity, Hinduism, Islam, and Judaism, for their ability to provide a philosophical foundation for servant leadership. Wallace's theoretical review claimed that servant leadership holds close association with Judaism and Christianity, but significant contradictions within Buddhism, Hinduism, and Islam. Wallace concluded that these contradictions do not preclude the practice of servant leadership within these religions, but rather merely showed that servant leadership may not serve as a philosophic base.

On the other hand, Kurth (2003) posited that most world religions, non-religious belief systems, and many well-known philosophers have promoted service to others aligned with a higher purpose as a means for fulfillment. Senjaya (2010) claimed that the majority of publications associate servant leadership with Judeo-Christian theology but that recent publications also relate it to other religious teachings. Sendjaya concluded that the practice of servant leadership does not require an association with a particular religion or even a religious belief because it originates from certain meaningful and significant human core values, ideals, or causes.

**Servant leadership within religious context.** Zohar and Marshall (2004) held that servant leaders find new ways for human beings to relate to each other, for companies to serve society, and for societies to develop. Zohar and Marshall pointed to Buddha, Moses, and Jesus as past religious servant leaders, and Mahatma Gandhi, Martin Luther King, Jr., Mother Teresa, Nelson Mandela, and the Dalai Lama as modern exemplars. Greenleaf (1996) encouraged the application of the servant leadership approach because "with all the diversity of religious beliefs and non-

beliefs, there is a chance that substantial consensus could be achieved in searching for a basis for this idea in our history and myth” (p. 44).

**Christianity.** Greenleaf (1977) frequently referred to Jesus of Nazareth when illustrating the concept of servant leadership. Sendjaya and Sarros (2002) demonstrated the conceptual roots of servant leadership using numerous biblical accounts. Powerful instructions from Jesus to his disciples teach that a leader’s greatness is measured by the total commitment to service of others (Sendjaya & Sarros, 2002). Senjaya and Sarros referred to biblical verses such as “whoever wants to become great among you must be your servant” (NIV Bible, Matthew 20:26) and “I am among you as one who serves” (NIV Bible, Luke 22:27). For Blanchard and Hodges (2005), Jesus provided the foremost model of servant leadership.

**Judaism.** Bekker (2010) described the traditional Jewish approach to leadership as a system of communal leadership. According to Bekker, the concept of service as leadership in Judaism is embodied in the biblical figure of Moses as shepherd who led and liberated his followers from slavery. Eyre (2011) presented Moses as a servant leader. Moses was committed to empowering followers and nurturing others for leadership for the long-term benefit of the community (Lewis, 2007).

**Islam.** Analyzing the Bedouin-Arab culture, Sarayrah (2004) concluded that servant leadership is deeply rooted in Arab-Islamic culture with many similarities between pre- and early Islamic leadership and servant leadership styles. These similarities include serving for a cause, whether for the benefit of an organization or a nation; an emphasis on listening; and the use of persuasion as an effective tool in

decision-making. However, the positive servant-like type of leadership in early Arab societies was diluted by external events and influences after Islam spread, as well as the absorption of foreign practices and customs (Sidani & Thornberry, 2009).

Unpopular bureaucratic procedures and practices resulted in alienated leadership in the Middle East (Sarayrah, 2004). Sarayrah recommended that necessary administrative reforms could be greatly facilitated by servant leadership, which truly complies with the Arab value system and tradition. According to Beekun and Badawi (1999), the two primary roles of a leader in Islam are those of a servant leader and a guardian leader. The leader as a servant of his followers—*sayyid al qawn khadimuhum*—is part of Islam and is reflected in seeking followers welfare and guiding them toward what is good (Beekun & Badawi, 1999).

**Buddhism.** According to Kriger and Seng (2005), a Buddhist leader is selfless and promotes interconnectedness with everyone and everything in the world with four immeasurable Buddhist virtues of states of mind, the *brahmaviharas*: loving, compassion, joy, and equanimity. For Bekker (2010), the willingness of Buddha to defer entrance to nirvana in order to serve others by showing the way is a critical link between Buddhist leadership and Greenleaf's (1970) servant leadership. Greenleaf (1977) claimed that the idea of servant leadership was first formulated as the right vocation, or *right livelihood*, as one step of the noble eightfold path in the Buddhist ethic.

**Other religions and philosophies.** Kurth (2003) claimed that service is a natural expression of spirituality and can be found in all major religions and philosophies, including Taoism, Hinduism, Buddhism, Confucianism, Islam, and

Siddha yoga. Zohar (1997) connected the servant leadership paradigm with ancient Eastern religions, centering on values like compassion, humility, gratitude, and service. Wicker (1998) claimed that advocates of servant leadership or the stewardship business movement quote “Jewish mystics, Buddhist masters, Hebrew prophets, Jesus, and Albert Einstein” (p. 147).

Rarick and Nickerson (2008) confirmed the association of servant leadership with the Bhagavad Gita. In this 700-verse Hindu scripture, a leader acts in the role of a servant “in a manner which at all times benefits the followers” (Rarick & Nickerson, 2008, p. 62). According to Rarick and Nickerson, these leaders as servants often sacrifice their own interests in order to promote the well-being of the group.

**Summary of servant leadership applicability.** The preceding integrative literature review about the applicability of the servant leadership construct from global, cross-cultural, and religious perspectives is by no means exhaustive. However, it shows support for servant leadership or particular construct dimensions that seem to be applicable and relevant globally and cross-culturally. Irving (2010a) explained that servant leadership is a valid and viable approach across cultures, but it requires more research for qualification. Irving stated that the servant leadership mode finds challenges in high power-distance relationships in which it is associated with a weak form of leadership. The paradigm is counter-intuitive to culturally familiar hierarchical structures and in a linguistic context in which the language of service and servant is closely associated with the language, images, and histories of slavery. Irving argued that servant leadership theory and practice need to become culturally contingent as well as able to adapt to diverse cultural contexts and societal variety.

Sendjaya (2010) pointed to the increasing number of qualitative and quantitative studies currently conducted on the application of servant leadership across different continents that will further clarify and refine its construct and establish it as an exceptional leadership model for future organizations.

In an interview (Dittmar, 2006), Spears stated that he had not encountered any cultural differences suggesting that there is any particular country or culture where servant leadership would be perceived differently. Spears claimed that “servant leadership increasingly has a global face” (p. 117).

### **Globalization**

Globalization is not only an economic phenomenon, but also has social, cultural, political, and environmental implications (Friedman, 2006; Gitsham, 2008). Goldsmith et al. (2003) claimed that the global business arena is becoming a melting pot for people with different cultures, races, ages, socioeconomic statuses, and religious backgrounds. Hitt et al. (2010) claimed that the competitive landscape of the 21st century, with the emergence of the global economy and rapid technology changes, will provide opportunities and threats within firms striving to meet today’s competitive challenges. Organizations and their leaders face the dynamics of global integration, rapidly changing conditions, new competitors, and cultural diversity in the global market (Cateora, et al., 2011; Friedman, 2006; Northouse, 2009).

**Impact of globalization on organizations.** Globalization is the most predominant trend affecting today’s businesses (Palthe, 2009). Hess and Bandyopadhyay (2010) asserted that future businesses will be more globalized and multinational with every business being affected by globalization either directly or

indirectly. Mendenhall (2008) claimed that the need for developing global leaders who can respond to challenges of complexity of globalization is imminent. With technology allowing capital and labor to flow easily across the world, globalization renders the global economy interconnected, borderless, and invisible, and global leaders are unable to navigate the new challenges with traditional leadership characteristics (Wanasika, 2009). The emerging global world, in which “everybody is competing with everyone, from everywhere, and for everything” (Jurse & Korez Vide, 2010, p. 1154), is entering an era of fundamentally changing global competitive context that enables global access to markets, knowledge, and talent as a key strategic resource of the future. Any leadership model that may find application in organizations, whether domestically or globally, needs to reflect on the impact of globalization.

**Primary challenges for organizations.** Globally operating companies and exporters face unique challenges in each market given the differences in cultures, languages, laws, economies, and business customs (Bellin & Pham, 2007). Global companies find themselves embedded in a complex set of global political, economic, and cultural networks (Werhane, 2007). Multi-national corporations (MNCs) need to integrate and coordinate geographically dispersed operations with a culturally diverse workforce (Levy, Beechler, Taylor, & Boyacigiller, 2007) and utilize the benefits of a global teamwork (Northouse, 2009). The primary challenges of the impact of globalization on leaders and organizations include complexity, diversity, cross-cultural knowledge transfer, and converging global management practices.



**Complexity.** Lane, Maznevski and Mendenhall (2004) stated that globalization is a manifestation of complexity. They described the complexity of globalization as flowing from interrelated conditions of (a) multiplicity—dealing with different competitors, customers, governments, and stakeholders, and different modes of worldwide operations; (b) interdependence—complex system of human and technological interaction; and (c) ambiguity—equivocality of information and cross-cultural difference in interpretation. These conditions are in a state of constant change and generate a multiplier effect, responsible for the dynamic complexity of the global business environment.

**Diversity.** The globalization of economies and marketplaces are transforming the workplace culture and workforce worldwide and increasing the diversity in society and within organizations (Moran, et al., 2007). With the marketplace becoming more globalized, international companies must face the challenges of a multi-cultural environment, not only at the customer relationship level, but also at the employee level (Albescu, Pugna, & Parachiv, 2009). Lin, Tu, Chen, and Tu (2007) stated that “the complexities of dealing with cross-cultural consumers and employees can be overwhelming and, yet, crucial to a company's success” (p. 27). Diversity needs to be managed to bring out the best of employees’ talent, abilities, skills, and knowledge for the well-being of the organization (Pathak, 2011). Managing teams effectively across borders, finding and retaining cross-cultural talent, and understanding customer demand in multiple territories are considered to be the greatest challenges for global businesses (Economist Intelligence Unit, 2006). Gardenswartz and Rowe (2009)

stated that diversity “when ignored or mismanaged . . . brings challenges and obstacles that can hinder the organization’s ability to succeed” (2009, p. 36).

***Cross-cultural knowledge transfer.*** An organization’s ability to exchange and transfer knowledge has become crucial to success in today’s global business environment (Millar & Choi, 2010). Millar and Choi (2010) explained that today’s global, diverse, and cross-cultural setting increases the complexity of communication through differences in cross-cultural interpretations, informational constraints, and communication distortions. Schleimer and Riege (2009) confirmed that “cross-cultural differences such as language, general practices and other culture-bound issues are commonly known to influence intra-organizational knowledge transfer” (p. 33).

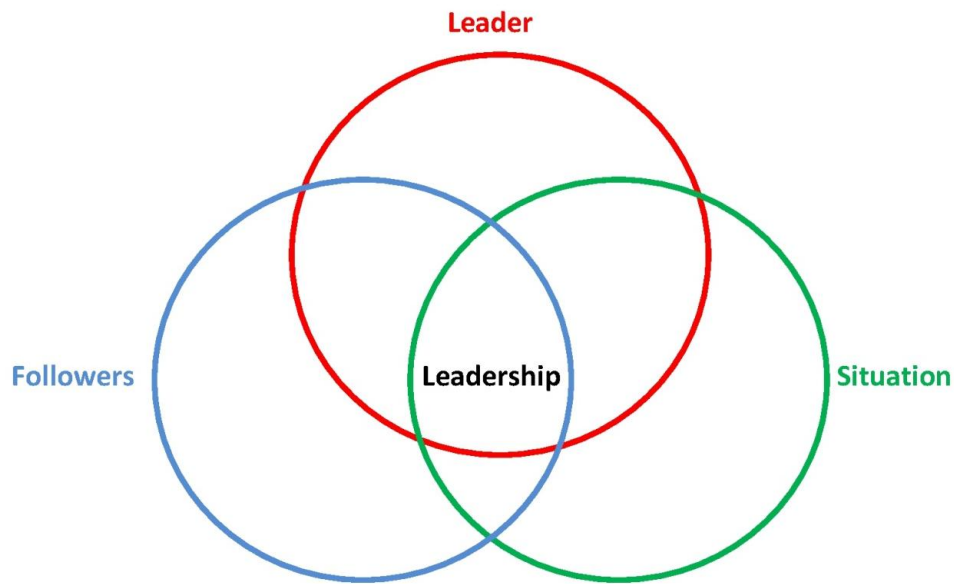
***Converging global management practices.*** Gatignon and Kimberly (2004) predicted a greater harmonization of global regulations, such as the standardization of international accounting rules, a convergence of cultures with the sharing of products, experiences, travel, communications, and the use of the English language as the primary mode of global communication. Advanced communication technologies, like the internet, might trigger an “endogeneity of preferences” (Tedlow & Abdelal, 2004, p. 26) with economic globalization being convergent and transformative with an increase of economic interactions among societies.

Global management practices are critical when organizations want to apply certain leadership models and theories across their operations, which Synovus, a full-service financial services company with headquarters in the United States and subsidiaries in Mexico, Japan and the United Kingdom, discovered (Hamilton & Bean, 2005). Hamilton and Bean (2005) illustrated how the implementation of the servant

leadership model into Synovus's larger organizational paradigm, in particular its introduction to the subsidiary in the United Kingdom, faced significant impediments. References to Christianity and quotations from the New Testament in the United States training material led to an initial rejection of the leadership model among British managers. Hamilton and Bean concluded that servant leadership is particularly sensitive to context in which ethical and moral foundations are expressed differently. This is an important finding if servant leadership continues to expand internationally.

### **Global Leadership**

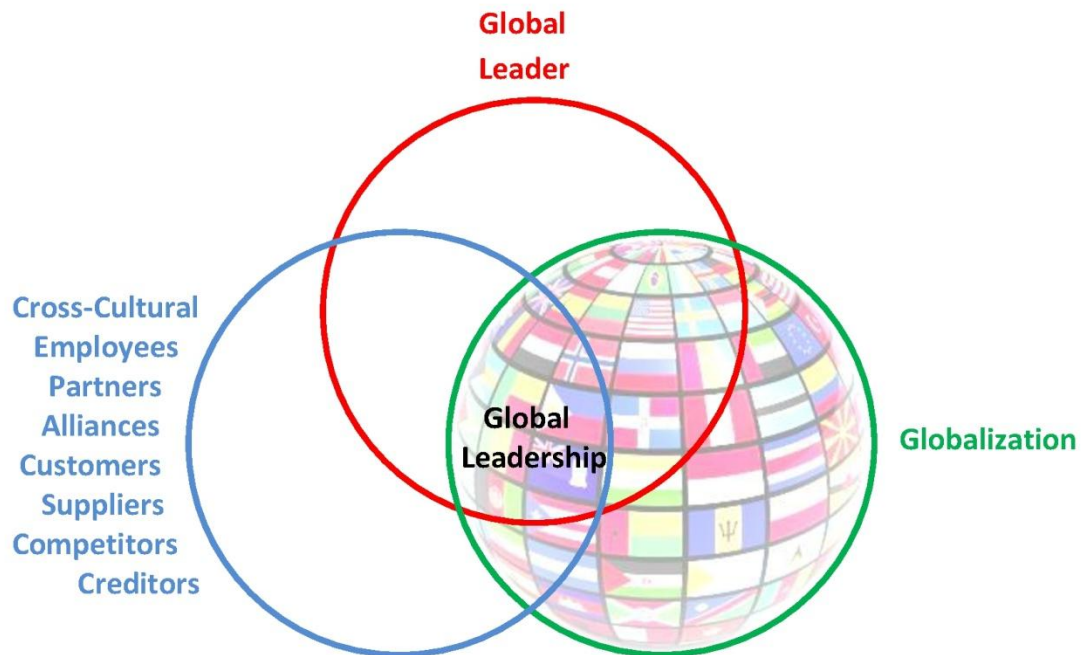
Northouse (2009) defined leadership as "a process whereby an individual influences a group of individuals to achieve a common goal" (p.3). Hughes, Ginnett, and Curphy (2006) argued that leadership, seen as a process, involves an interaction between the leader, followers, and the situation, as presented in Figure 2.2.



*Figure 2.2.* Leadership as a process of interaction between the leader, the followers, and the situation. Adapted from *Leadership: Enhancing the lessons of experience*, 5th edition, by R. L. Hughes, R. C. Ginnett, and G. J. Curphy, 2006, New York, NY: McGraw-Hill. Copyright 2006 by The McGraw-Hill Companies, Inc.

Global leadership differs from domestic leadership related to issues of “connectedness, boundary spanning, complexity, ethical challenges, dealing with tension and paradoxes, pattern recognition, and building learning environments, teams, community and leading large-scale change efforts—across diverse cultures” (Osland & Bird, 2006, p. 123). Javidan et al. (2006) defined global leadership as “the ability to influence people who are not like the leader and come from different cultural backgrounds” (p. 85). Global leadership is “the process of influencing the thinking, attitudes and behaviors of a global community to work together synergistically toward a common vision and common goals” (Osland & Gaines, 2011, p. 3).

With organizations worldwide converging (Adler & Gundersen, 2007), “the global economic playing field . . . being leveled” (Friedman, 2005), and the world economy shifting towards integration and interdependence (Hill, 2007), corporations must increasingly cope with diverse cross-cultural employees, customers, suppliers, competitors, and creditors (Javidan, et al., 2006). Global leadership will require effective collaboration, building relationships, alliances, and partnerships within the new, complex, and shifting social architecture of globalization (Goldsmith, et al., 2003). Global leaders need to handle the dynamic complexity of globalization with its “multiplicity” (Mendenhall, 2008, p. 14), when facing different competitors, customers, governments, and stakeholders on all aspects along the value chain. The impact of globalization necessitates the expansion of the simplistic leadership model of the leader, followers, and the situation to a global leadership model that includes global leaders and global partners in a global context, as presented in Figure 2.3.



*Figure 2.3:* Expanded global leadership as a process involving the global leader, cross-cultural employees, partners, alliances, customers, suppliers, competitors, creditors, and globalization.

**Fundamental global leadership competencies.** Today's global leaders face an increasingly complex, ambiguous, and multicultural environment (Osland, 2008). This has triggered a variety of global leadership models and frameworks with numerous leadership skills, attributes, competencies, and qualities, as illustrated by Osland (2008) in her review of global leadership literature. Despite Jokinen (2005), McCall and Hollenbeck (2002a), Osland (2008), and Tubbs and Schulz (2006) cautioning against the missing agreement on imperative global leader competencies, various research studies of global leadership, including those by Bird (2008), Kets de Vries, Vriegnaud, and Florent-Tracy (2004), Mendenhall and Osland (2002), and

Rhinesmith (2003), show recurring discussions of certain competencies for successful global leadership. Among these are intercultural competence and cultural awareness, cultural intelligence, emotional intelligence, global mindset, and the managing of change and complexity. Numerous researchers, such as Alon and Higgins (2005), Matear (2010), Ngunjiri, Schumacher, and Bowman (2009), Javidan et al. (2006), and Townsend and Cairns (2003), advocated for the combination of selected global leadership competencies.

***Intercultural competence and cultural awareness.*** Intercultural competence is “the ability to communicate effectively in cross-cultural situations and to relate appropriately in a variety of cultural contexts” (Bennett & Bennett, 2003, p. 149). For Bennett and Bennett (2003), it refers to the combination of concepts, attitudes, and skills necessary for effective cross-cultural interaction. The increase in global trade transactions has resulted in integrated cultural exchanges, new cultural partnerships, and unique cultural interactions, making old, superficial generalities less accurate (Rudd & Lawson, 2007). Intercultural competence is critical for global leaders with the expanding international level of economic, educational, and cultural interaction (Carey, Newman, & McDonough, 2004). Critical for successful global leadership is the ability to understand and appreciate “cultural differences and communicate successfully across and work within different cultures” (Barrett, 2010, p. 10), and it may be unattainable without intercultural competence (Moodian, 2009).

Effective global leadership requires the ability to manage across cultural diversity (Manning, 2003) and the flexibility to work with people from other cultures (Adler & Gundersen, 2007). Spitzberg and Changnon (2009) explained that cultural

diversity will manifest within the global marketplace, which makes intercultural competence an extremely important skill. It increases the ability to achieve business objectives across cultures, to succeed with the management of cross-cultural aspects in an international environment, and can be a source of competitiveness (Albescu, et al., 2009). Albescu et al. (2009) described elements of intercultural competence including (a) awareness of cultural values, (b) ability to avoid cross-cultural misunderstanding, (c) knowledge of cross-cultural fundamentals, tools, and country/region specific knowhow, and (d) specific cross-cultural communication or behavior skills necessary to build trusting, sustainable, and long-term relationships. Pusch (2009) identified the critical elements of interculturally competent leaders as the mind-set, heart-set, and skill-set to function in a global intercultural environment with its diverse population, needs, and values, which encourages a shift in worldviews and perspectives and the ability to achieve clarity and integrity in complex situations.

Bhawuk, Landis, and Munusamy (2009) described the importance of learning about cultural differences for international managers, “because behavioral mistakes and misattribution can lead to dysfunctional relationships and can be a cause of poor organizational performance” (p. 7). Bennett (2009) affirmed that intercultural competence can be learned.

Lorange (2003) stated that future leaders need to possess cultural awareness and global perspective to bring together people from different cultures, backgrounds, understandings, and geopolitical viewpoints. Hyatt, Evans, and Haque (2009) opined that cultural awareness will enhance adaptability, multiple-perspective thinking, effective communication, diplomacy, and culturally influenced decision making.



House (2004) explained that leadership is contingent on culture and that “the status and influence of leaders vary considerably as a result of cultural forces in the countries or regions in which the leaders function” (p. 5).

Adler and Gundersen (2007) reiterated the need for cultural awareness that includes self-awareness, the understanding of one’s own culture. Adler and Gundersen explained that recognizing one’s own cultural conditioning will help to see and understand cultures from the perspective of people from other cultures, allowing the modification of behavior, emphasizing the most appropriate and effective characteristics and minimizing the least helpful ones. Earley and Peterson (2004) cautioned that an awareness of cultural values is not a substitute for interpersonal interaction.

***Cultural intelligence.*** Earley (2002) argued that forms of intelligence such as social intelligence, emotional intelligence, and practical intelligence do not capture the complexity of understanding that can arise from intercultural interaction and travels. Earley introduced and explored the implications of cultural intelligence (CQ), defining it as “a person’s capacity to adapt to new cultural settings based on multiple facets including cognitive, motivational and behavioral features.” (p. 271). CQ captures this cross-cultural adaptive ability by reflecting a person’s capability to gather, interpret, and act upon the differences to function effectively across cultural or in multicultural settings (Earley & Peterson, 2004). For Van Dyne, Ang, and Koh (2009), CQ is associated closely with culture, but it is not an emic, indigenous, culture-bound, or culture-specific construct. CQ focuses on adaptive capabilities. Successful global leaders adapt to the cultural variety embedded in the global context (Alon & Higgins,

2005) and align leadership processes with cultural demand (Walumbwa, Lawler, & Avolio, 2007). Cross-cultural skills and the effectiveness of global leaders are closely related (Thomas & Fitzsimmons, 2008). Successful interaction across cultures requires CQ, supported with cognitive, affective, and behavioral training (Triandis, 2006). De La Garza Carranza and Egri (2010) found that small business managers engaged in international business exhibit a higher cultural intelligence than small business managers at domestic-only firms.

Ang et al. (2007) divided CQ further into four CQ dimensions: metacognitive, cognitive, motivational, and behavioral. Correlating with three intercultural effectiveness outcomes, the authors found that metacognitive CQ and cognitive CQ predicted cultural judgment and decision making; motivational CQ and behavioral CQ predicted cultural adaptation; and metacognitive CQ and behavioral CQ predicted task performance. Earley (2002) claimed that cognitive flexibility is critical to CQ in order to constantly adapt to new cultural situations and settings. It also requires motivation to produce a culturally appropriate response to the new surroundings and the capability to acquire or adapt behavior appropriate for the new culture. Brislin, Worthley, and Macnab (2006) posited that CQ can increase with experience, practice, and a positive attitude toward lifelong learning, and can be developed as a capability for the next generation of global leaders (Mannor, 2008).

***Emotional intelligence.*** Global businesses and global business leaders need to be culturally and emotionally competent to succeed in the global market (Alon & Higgins, 2005; Ngunjiri, et al., 2009). Goleman, Boyatzis, and McKee (2002) found that emotional intelligence is the most important leadership skill in the United States.

Salovey and Pizarro (2003) defined emotional intelligence as “the ability to perceive and express emotion accurately and adaptively, the ability to understand emotions and emotional knowledge, the ability to use feelings to facilitate thought, and the ability to regulate emotions in oneself and in others” (p. 263). Gabel, Dolan, and Cerdin (2005) found emotional intelligence important for intercultural adjustment and success of internationally assigned managers. Emotional intelligence helps to diminish cultural differences between the host and home culture of global managers and improve cross-cultural adjustment (Gabel, et al., 2005). McCall and Hollenbeck (2002a) confirmed that cross-cultural interaction requires emotional learning rather than merely intellectual and cognitive learning. In a global environment, emotional intelligence is linked to effective leadership (Reilly & Karounos, 2009) and a company’s success (Adler & Gundersen, 2007).

***Global Mindset.*** As explained by Osland, Bird, Mendenhall, and Osland (2006), “the term ‘global’ encompasses more than simply *geographic reach* in terms of business operations. It also includes the notion of *cultural reach* in terms of people and *intellectual reach* in the development of a global mindset” (p. 197). Gupta and Govindarajan (2002) described global mindset as combining “an openness to and awareness of diversity across cultures and markets with a propensity and ability to synthesize across this diversity” (p. 117). Hitt, Javidan, and Steers (2007) defined global mindset as “a set of individual attributes that enable an individual to influence individuals, groups, and organizations from diverse social/cultural/institutional systems” (pp. 2–3). According to Beechler and Javidan (2007), a global mindset is an individual’s collection of “knowledge, cognitive and psychological attributes that

enable him/her to influence individuals, groups, and organizations from diverse sociocultural systems” (p. 152). For Rhinesmith (2003), it is the combination of intellectual intelligence and global emotional intelligence, including cultural self-awareness, cultural adjustment, cross-cultural understanding, and cross-cultural effectiveness. Individuals with global mindsets have an awareness of diversity across businesses, countries, cultures, and markets (Beechler & Javidan, 2007). Executives need global mindsets and cross-cultural abilities to understand the variety of cultural and leadership paradigms, and legal, political, and economic systems, as well as different competitive frameworks (Javidan, et al., 2006). Javidan et al. (2006) suggested preparing global leaders with information on cross-cultural and global issues and country specific reports.

According to Cruse (2009), a global mindset also encompasses geopolitical knowledge and the understanding of global sociopolitical and cross-cultural issues impacting an organization. Individuals with a global mindset have the cognitive ability to mediate and integrate across multiplicity, and thus are better equipped to deal with the complexity of multiple organizational environments, structural indeterminacy, and cultural heterogeneity (Levy, et al., 2007). Having a global mindset also implies the recognition of organizational benefits from encouraging and valuing cultural diversity (Kapoor, 2011). Nummela, Saarenketo, and Puumalainen (2004) determined that the global mindset of a firm’s management seems to be a key parameter in the firm’s international performance.

***Managing change and complexity.*** Jurse and Korez Vide (2010) described today’s businesses as operating in an increasingly turbulent world market that is

influenced by a variety of trends and strategies surrounded by an array of strategic interests, actions, and stakeholders in both the market and global society. Jurse and Korez Vide envisioned continued “heterogeneity and dynamics in an increasingly globalized world economy” (p. 1152). Ahn, Adamson, and Dornbusch (2004) explained that the accelerated pace of change in globalization, communication, disruptive technologies and innovations, cross-border capital flows, alliances, and partnerships will continue to create fundamental shifts on business operations.

The continuous dramatic changes in the global competitive landscape require leaders to initiate frequent supportive organizational changes amid challenging economic and competitive conditions (Gilley, McMillan, & Gilley, 2009). Global managers must be flexible enough to alter their approach when crossing national borders and to work with people from different cultures (Adler & Gundersen, 2007). Lane, Maznevski, and Mendenhall (2004) claimed that complexity caused by globalization requires global leaders to manage organizational processes of collaborating, discovering, architecting, and system thinking. Lane, Maznevski, and Mendenhall believed that the key element to binding and managing the processes of such complexity in globalization are people who will decipher complex and ambiguous information and execute appropriate action plans. Global leaders need to understand the risk and opportunities of changes in the external context, including social, political, cultural, and environmental trends and need to lead in the face of complexity and ambiguity (Gitsham, 2008). Ahn, Adamson, and Dornbusch (2004) explained that the challenge of managing change, with its impact on organizational

structure, culture, and management style, is one of the most fundamental aspects of leadership.

**Overview of global leader characteristics, attributes, and abilities.** Global leaders face an international context that is multifaceted, entailing different cultural norms and values, misunderstandings due to language, and behaviors that are acceptable in one culture but not others (McCall & Hollenbeck, 2002b). Leading globally is complex and fraught with disorienting challenges (Osland, et al., 2006). Globalization and its demands have shifted the necessary skill set that leaders need in the twenty-first century (Mendenhall, et al., 2008). Mendenhall et al. (2008) asked “what are the skills that global leaders should possess in order to be successful and what exactly is global leadership” (p. xi)?

Mendenhall (2008) claimed that there is no agreed-upon definition of *global leadership*. Osland (2008) opined that “there is less consensus what global leaders do and the competencies they should possess” (p. 53). McCall and Hollenbeck (2002b) maintained that the research of global leadership failed to identify and agree upon a “universal set of competencies . . . because there is no universal global job” (p. 34). Nonetheless, future global leadership research is essential (Osland, 2008).

Osland et al. (2006) recognized that global leadership is an emerging research topic and compared it to the domestic leadership research that began with trait theories before expanding into more complex research theories. These authors identified the path for future global leadership research, including construct definition, identifying global leader behaviors, thought processes, and contingencies, antecedents, and global leader developmental training methodologies. An overview of recent primary

theorists and their findings on global leadership characteristics and attributes is presented in Table 2.2.

Table 2.2

*Primary Global Leadership Theorist and Their Acknowledged Global Leadership*

*Attributes*

| Theorist                                       | Global Leader Competencies, Attributes, Capabilities, Skills  |
|--|---|
| Yeung and Ready (1995)                         | Articulate vision, values and strategy; catalysts for strategic and cultural change; empower others; results and customer orientation   |
| Black, Morrison, and Gregersen (1999)          | Inquisitiveness—love of learning and intrigued by diversity; embracing duality—invigorated by uncertainty; exhibiting character—connect emotionally with diverse group of people and personal integrity; business and organizational savvy  |
| Rosen et al. (2000)                            | Global Literacies: Personal—self-awareness, open, honest, and committed to learning; social—challenge and engage others, collaborative relationships; business—focus and mobilization; cultural—valuing and leveraging cultural differences |
| McCall and Hollenbeck (2002a)                  | Open-minded and flexible; culture interest and sensitivity; able to deal with complexity; resilient, resourceful, optimistic, energetic; honesty and integrity; stable personal life, value-added technical and business skills             |
| Mendenhall and Osland (2002) and Osland (2008) | 54 individual competencies within the dimensions of cross-cultural relationship skills, traits, global business expertise, global organizing expertise, cognitive orientation, visioning  |

(table continues)

| Theorist  | Global Leader Competencies, Attributes, Capabilities, Skills  |
|---|---|
| Goldsmith et al. (2003)                             | Thinking globally, appreciating diversity, developing technological savvy, building partnerships, sharing leadership, creating a shared vision, developing people, empowering people, achieving personal mastery, encouraging constructive dialogue, demonstrating integrity, leading change, anticipating opportunities, ensuring customer satisfaction, maintaining a competitive advantage |
| Bikson, Treverton, Moini, and Lindstrom (2003)      | Substantive depth (professional or technical knowledge) related to organization's primary business processes; managerial ability with emphasis on teamwork and interpersonal skills; strategic international understanding; cross-cultural experience   |
| Bueno and Tubbs (2004)                              | Communication skills, motivation to learn, flexibility, open-mindedness, respect for others, sensitivity  |
| Kets de Vries, Vriegnaud, and Florent-Treacy (2004) | Envisioning, empowering, energizing, designing, rewarding, team building, outside orientation, global mindset, tenacity, emotional intelligence, life balance, resilience to stress   |
| Osland and Bird (2004)                              | Global knowledge; threshold traits—integrity, humility, inquisitiveness, resilience; attitudes and orientation—cognitive complexity, global mindset, cosmopolitanism; interpersonal skills—mindful communication, create and build trust, multicultural teaming; system skills—lead change, span boundaries, architecting, build community, make ethical decisions, influence stakeholders    |
| Jokinen (2005)                                      | Competencies: Fundamental—self-awareness, engagement in personal transformation, inquisitiveness; mental—optimism, self-regulation, social judgment skills, empathy, motivation to work in an international environment, cognitive skills, acceptance of complexity and its contradictions; behavioral—social skills, network management skills, knowledge                                    |

---

(table continues)



| Theorist                | Global Leader Competencies, Attributes, Capabilities, Skills  |
|-------------------------|---|
| Javidan et al. (2006)   | Ability to influence people from different cultural backgrounds, global mindset, tolerance of ambiguity, cultural adaptability, and flexibility   |
| Tubbs and Schulz (2006) | 50 competencies under meta-competencies: Understanding the big picture, attitudes are everything, the driving force, communication and the leader's voice, innovation and creativity, leading change, and teamwork and followership     |
| Caligiuri (2006)        | Culture-general knowledge, international business knowledge, intercultural interaction skills, foreign language skills, cognitive ability, extroversion, agreeableness, conscientiousness, emotional stability, openness, and intellect |
| Keys and Wellins (2008) | Intellectual grunt, contextual chameleon, people black belt, global explorer, master mobilize, visionary, humility, solid as a rock, company poster child, unbridled energy   |

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*Note.* Adapted and expanded from “Overview of global leadership literature” by J. S. Osland, 2008, in M. E. Mendenhall, J. S. Osland, B. Allan, G. R. Oddou, & M. L. Maznevski (Eds.), *Global leadership research, practice, and development* (pp. 34-63). New York, NY: Routledge.

### **Associative Relationship of Servant Leadership and Global Leadership**

Covey (2002) argued that the competitive global market is constantly driven in a quest for higher productivity, higher quality, and lower cost. He claimed that the only way to succeed in such a market is through empowerment of people, “and the only way you get empowerment is through high-trust culture and an empowerment philosophy that turns bosses into servants and coaches, and structures and systems into nurturing institutionalized servant processes” (Covey, 2002, p. 2). However, this does not mean that leaders will relinquish leading. Tompenaars and Voerman (2010)

explained that the integration of serving and leading will lead to a stronger synthesis. Servant leadership can be used to bridge opposing values and viewpoints. It works in different cultures because it allows for different starting points (Trompenaars & Voerman, 2010). Trompenaars and Voerman illustrated the different starting points within Chinese and Dutch culture. According to Trompenaars and Voerman, Chinese culture has a need for more participative-serving but less authoritative-leading to reach a balance between serving and leading. On the other hand, Dutch culture has people participate, but it is a challenge to have them follow direction. In Dutch culture, there is a need for strong and clear leadership to reach a balance.

This leaves the question whether servant leadership is an ideal leadership approach for organizations in the a global context (Sendjaya, 2010). To answer this question, it is beneficial to review the numerous parallel constructs that indicate a promising attributional relationship between servant leadership and global leadership characteristics from a theoretical perspective:

**Leadership style.**

***Servant leadership.*** Hays (2008) confirmed that the servant leader persuades through dialogue in creating positive outcomes for leaders and followers: “Servant leaders don’t push; they pull” (p.125). Servant leaders emphasize the power of persuasion and seek consensus instead of coercive decision making through hierarchical authoritative powers (Spears, 2002).

***Global leadership.*** Goldsmith et al. (2003) asserted that global leaders rely on persuasion and partnerships rather than command and control management. Fu and

Yukl (2000) confirmed that rational persuasion was rated the most effective influence tactic among American managers in multinational companies.

**Community building.**

*Servant leadership.* Greenleaf (2002) explained that servant leaders hold their organizations in trust for the greater good of society:

All that is needed to rebuild community as a viable life form for large numbers of people is for enough servant-leaders to show the way, not by mass movements, but by each servant-leader demonstrating his or her unlimited liability for a quite specific community-related group. (p. 53)

*Global leadership.* Hess and Bandyopadhyay (2010) stated that “global leaders need to think beyond their own organization” (p. 184). Globalization will require successful global leaders to strive for integration, rather than control, especially in view of global alliance structures and networks (Goldsmith, et al., 2003). Mazilu (2010) described the social dimensions of globalization with a world that has become a “global village” (p. 191) and innovative networks of communication adding to traditional communities, like family and neighborhood. Companies worldwide strive to fulfill their organizational and societal missions as global corporate citizens (Adler & Gundersen, 2007).

**Diversity and flexibility.**

*Servant leadership.* Trompenaars and Voerman (2010) explained that the respect for diversity is a core principle for servant leaders in that they know how to bring people with different viewpoints together and transform resulting tension into a

productive dynamic. Servant leaders are willing and eager to listen to others' opinions and different viewpoints (Hunter, 2004).

***Global leadership.*** Adler and Gundersen (2007) claimed that global managers must be flexible enough to work with people from other cultures. Manning (2003) posited that effective global leadership requires the ability to manage across cultural diversity. Future global leaders need to augment their skill set with promoting international relations and valuing diversity of perspectives created by people from vastly different backgrounds (Lajtha & Carminati-Rabasse, 2008). Successful global leaders are able to unleash the power and wealth of multicultural diversity and create synergy of productive collective performance (Carey, et al., 2004).

**Motivation, empowerment and development of people.**

***Servant leadership.*** Graham (1991) and Farling, Stone, and Winston (1999) asserted that servant leadership, similar to transformational leadership, encourages collaboration between leaders and followers to reach higher levels of motivation and morality. Servant leaders seek to assist their followers "to grow healthier, wiser, freer, more autonomous, and more likely themselves to become servants" (Sendjaya & Sarros, 2002, p. 58).

Buchen (1998) described employee empowerment as servant leadership's most important characteristic. Servant leaders entrust powers to others, involving effective listening, making people feel significant, and emphasizing teamwork (Russell & Stone, 2002). By entrusting followers with authority and responsibility and emphasizing teamwork, servant leaders' goal of empowerment is to create many leaders at all levels (Russell, 2001).

**Global leadership.** Global businesses have realized the importance of motivating and communicating with diverse employees so that individual and combined work reflects each employee's highest potential (Moran, et al., 2007). There is a need for globally minded and interculturally competent leaders to manage virtual global teams as well as the multicultural context of regional teams and organizations (Irving, 2010b). Global leaders recognize that employee empowerment is critical to the success of their organization (Carey, et al., 2004). Encombe (2008) explained that the 21st century provides challenging business complexities that effective global leaders must approach by invigorating organizational cultures that attract, motivate, and inspire employees.

**Uncertainty, ambiguity, and flexibility.**

**Servant leadership.** Zohar (1997) claimed that servant leadership requires a high tolerance for uncertainty, ambiguity, and flexibility to allow the dynamics of a situation to transpire. De Pree (1992) listed "comfort with ambiguity" (p. 224) as an important attribute for effective servant leadership. With the instabilities of today's work environments, increasing competition, heightened uncertainty, and stress in the workforce, servant leaders tend to the growing needs of employees for psychological security and stability (Smith, 2005).

**Global leadership.** Javidan et al. (2006) asserted that "global leaders need to have a global mindset, tolerate high levels of ambiguity, and show cultural adaptability and flexibility" (p. 85) to succeed. With constant change in the competitive environment due to globalization, global leaders need to manage greater ambiguity and uncertainty (Hernez-Broome & Hughes, 2004). Global leaders have

the ability to provide followers with the guidance and resources necessary and then utilize the collective wisdom to navigate through uncertainty and complexity (Patterson, et al., 2007).

**Empathy and trust.**

*Servant leadership.* Andersen (2009) explained that a servant leader demonstrates empathy and develops trust by showing concerns for others and putting their needs and interest first. Spears (2003) described servant leaders as skilled empathetic listeners, striving to understand and empathize with others. Trust is an essential component to servant leadership, establishing leader credibility, fostering collaboration and providing the foundation for people to follow their leaders with confidence and enthusiasm (Russell, 2001).

*Global leadership.* Manning (2003) and Jokinen (2005) illustrated that global leaders are able to build trust by emotionally connecting with people of different backgrounds and viewpoints. Empathy is a fundamental leadership construct of today's global leaders who work in global organizations or across cultural boundaries and need to connect to the local workforce and those in other countries (Gentry, Weber, & Sadri, 2010). Trust is a central construct in building international buyer-seller relations (Katsikeas, Skarmeas, & Bello, 2009).

**Vision and pioneering.**

*Servant leadership.* Russell and Stone (2002) identified vision and pioneering as important servant leadership attributes. Servant leaders are pioneers who venture out, take risk, embark on challenges, and demonstrate courage (Russell & Stone, 2002). Greenleaf (2002) used the term foresight when describing vision for the

servant leader “to have a sense for the unknowable and be able to foresee the unforeseeable” (p. 35).

**Global leadership.** Karp (2004) stated that foresight in organizations can lead to competitive advantages, especially for firms that are entrenched in the increasing complexity and competitive pressure in the global business environment. Lee (2011) explained that leaders of global organizational teams must be able to communicate the vision and goals in a manner that establish a group identity with all having a sense of ownership, regardless of the diverse cultural framework.

**Emotional Intelligence (EI) in servant and global leaders.**

**Servant leadership.** Van Dierendonck and Heeren (2006) argued for EI as an essential competency for servant leaders. “Emotionally intelligent people are good listeners, show empathy, and take care of others” (p. 159). Waddell (2009) determined a positive relationship between a leader’s servant leadership attribution and emotional intelligence. On the contrary, Johnson (2008) found no significant relationship between servant leadership and emotional intelligence and no significant relationship between emotional intelligence and job satisfaction.

**Global leadership.** Reilly and Karounos (2009) and Adler and Gundersen (2007) confirmed the link of emotional intelligence to effective leadership and organizational success. Success in the global market requires emotional intelligence for global business leaders (Alon & Higgins, 2005; Ngunjiri, et al., 2009).

The preceding theoretical parallel constructs encourage the research on the correlative relationship of attributes of servant leaders and global leaders. Figure 2.4 illustrates the examination of the attributional correlation for this research study. It

includes Barbuto and Wheeler’s (2006) servant leadership attributes and Goldsmith et al.’s (2003) global leadership dimensions.

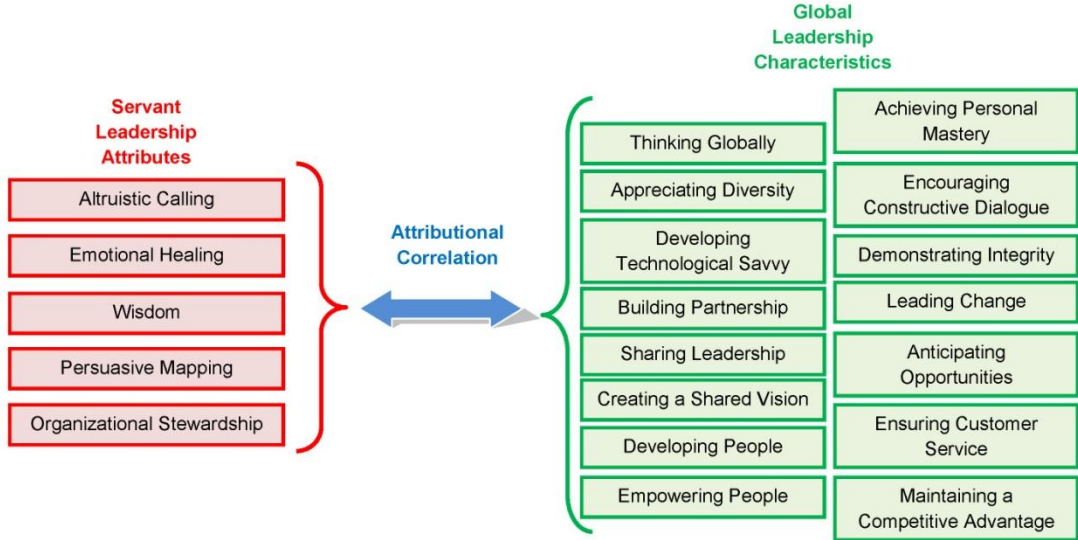


Figure 2.4. Servant leadership attributes (Barbuto & Wheeler, 2006) and global leadership dimensions (Goldsmith, et al., 2003).

**Overview of Servant Leadership Instruments**

This research study attempted to measure the level of servant leadership in leaders with an established instrument. Nine different servant leadership instruments were identified and are presented in Table 2.3. These instruments measure servant leadership characteristics either within organizations and groups or at the individual leader level or both, and are applied either as self-rater or other-rater measure.



Table 2.3

*Established Servant Leadership Instruments*

| Servant Leadership Researcher              | Servant Leadership Instrument                       | # of Items and Dimensions     |
|--|---|-------------------------------|
| Laub (1999)                                | Servant Organizational Leadership Assessment (SOLA) | 60 items within 6 dimensions  |
| Sendjaya (2003),<br>Sendjaya et al. (2008) | Servant Leadership Behavior Scale (SLBS)            | 35 items within 6 dimensions  |
| Wong and Page (2003)                       | Revised Servant Leadership Profile (RSLP)           | 99 items within 12 dimensions |
| Dennis and Bocarnea (2005)                 | Servant Leadership Assessment Instrument (SLAI)     | 42 items within 5 dimensions  |
| Barbuto and Wheeler (2006)                 | Servant Leadership Questionnaire (SLQ)              | 23 items within 5 dimensions  |
| Whittington et al. (2006).                 | Servant Shepherd Leadership Scale (SSLS)            | 30 items within 4 dimensions  |
| Liden et al. (2008)                        | Servant Leadership Assessment (SLA)                 | 28 items within 7 dimensions  |
| Reed et al. (2011)                         | Executive Servant Leadership Scale (ESLS)           | 25 items within 5 dimensions  |
| Van Dierendonck and Nuijten (2011)         | Servant Leadership Survey (SLS)                     | 30 items within 8 dimensions  |

Laub's (1999) Servant Organizational Leadership Assessment (SOLA) measures servant leadership at the organizational level and is available as an other-rater version only. Its six subscales include the servant leadership characteristics:

someone who values people, develops people, builds community, displays authenticity, provides leadership, and shares leadership. With the focus of this study on leaders instead of organizations or groups, the SOLA instrument is not applicable. No convergent or divergent validity was reported, and no confirmatory factor analysis was performed (Hayden, 2011).

Sendjaya (2003) and Sendjaya et al.'s. (2008) Servant Leadership Behavior Scale (SLBS) includes the six dimensions of voluntary subordination, authentic self, covenantal relationships, responsible morality, transcendent spirituality, and transforming influence. The SLBS development was guided by themes offered by Buchen (1998), Farling et al. (1999), Looper and McGee (2001), Russell (2001), and Spears (1995b). Expert interviews supported content validity, however data are missing to show criterion validity, convergent, and divergent validity (Searle, 2011). According to Beck (2010), no empirical research has been published utilizing this instrument.

Wong and Page's (2003) Revised Servant Leadership Profile (RSLP) instruments are based on Page and Wong's (2000) earlier conceptual framework of the Servant Leadership Profile (SLP), based on four fundamental, functional processes of character-, people-, task-, and process-orientation of a servant leader. A factor analysis determined eight subscales for the RSLP, specified as developing and empowering others, visionary leadership, servanthood, responsible leadership, integrity-honesty, integrity-authenticity, courageous leaders, and an inverse construct, identified as abuse of power and egoistic pride. This antithetical construct, operationalized as power and pride, measures an individual's absence of these two

non-servant characteristics, instead of directly measuring servant leader characteristics. According to Sendjaya et al. (2008) content validation was achieved through literature review and personal experience. No convergent or divergent validity was reported, and no confirmatory factor analysis was performed. The author found only limited empirical research utilizing the RSLP instrument.

Dennis and Bocarnea's (2005) Servant Leadership Assessment (SLA) instrument, available as an other-rater version only, is based on Patterson's (2003) servant leadership model and its dimensions of agapao love, humility, altruism, vision, trust, empowerment, and service. An exploratory factor analysis supported five factors, but failed to measure altruism and service. A confirmatory factor analysis was not conducted (Hayden, 2011; Searle, 2011). The author found only limited research utilizing the SLA instrument.

Barbuto and Wheeler's (2006) SLQ instrument is based on Greenleaf's (1977) seminal work on servant leadership and Spears's (1995a, 1995b, 1996) studies of Greenleaf's published and unpublished works. It found application in numerous empirical research works (A. R. Anderson, 2009; Beck, 2010; Bugenhagen, 2006; Daubert, 2007; Hayden, 2011; Hucklebee, 2008; McCann & Holt, 2010; Ostrem, 2006; Searle, 2011; Westfield, 2010). Literature review and the use of an expert panel supported content validity. Exploratory and confirmatory factor analyses supported all five subscales—altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship—and that “data appeared to support the five-factor structure” (Barbuto & Wheeler, 2006, p. 314). Convergent and divergent validity was determined using transformational leadership and leader-member-exchange (LMX).

The analysis of criterion-related validity included motivation to perform extra work, employee satisfaction, and perceptions of organizational effectiveness. Barbuto and Wheeler determined the internal reliability with alpha coefficients for the self-rating SLQ instrument and its five-factor structure ranging from .68 for emotional healing to .87 for wisdom. Intercorrelations between the subscales were established with a range of  $r = .28$  and  $r = .53$  for the self-rater SLQ instrument.

The Whittington et al. (2006) Servant Shepherd Leadership Scale (SSLS) is centered around four subscales, identified as other-centeredness, facilitative environment, self-sacrifice, and affirmation. According to Sendjaya et al. (2008) content validation was not determined. The author did not find any empirical research utilizing this instrument.

Liden et al.'s (2008) Servant Leadership Assessment (SLA) instrument is based on works by Barbuto and Wheeler (2006), Ehrhart (2004), Page and Wong (2000), and Spears and Lawrence (2002). A literature review and a subsequent exploratory and confirmatory factor analysis, providing construct validity, supported seven dimensions: conceptual skills, empowering, helping subordinates to grow and succeed, putting subordinates first, behaving ethically, emotional healing, and creating value for the community. Convergent and divergent validity was determined using transformational leadership and leader-member-exchange (LMX) (Searle, 2011). The author found no empirical research published utilizing this instrument.

Reed et al. (2011) were especially concerned with the emotional, relational, and moral dimensions of leadership when developing their Executive Servant Leadership Scale (ESLS) with a focus on the ethical conduct of top executives in

organizations. The survey underwent construct validity testing via a jury and subsequent exploratory factor analysis and confirmatory factor analysis to arrive at five ESLS subscales: interpersonal support, building community, altruism, egalitarianism, and moral integrity. The instrument development was based on a survey of adult learners at and alumni of a college who were asked about their top executive of the organization they are affiliated with. Reed et al. did not discuss whether the participants had worked with or even knew the top executive or their organizations. Data are missing to support criterion validity as well as convergent and divergent validity. The author did not find any published empirical research to date utilizing this recently developed instrument.

Van Dierendonck and Nuijten (2011) developed the Servant Leadership Survey (SLS) via an extensive literature review and expert judgment; it comprises of eight dimensions: standing back, forgiveness, courage, empowerment, accountability, authenticity, humility, and stewardship. The SLS was supported by exploratory and confirmatory factor and followed by an analysis of criterion-related validity. The authors claimed convergent validity with other leadership measures. The author did not find any published empirical research to date utilizing this recently developed servant leadership instrument.

Among the above mentioned servant leadership instruments, there exist only two, the Barbuto and Wheeler (2006) SLQ instrument and the Liden et al. (2008) SLA instrument, that are available as self-rater and leader level oriented instruments and seem most psychometrically sound. The researchers for both instruments have applied exploratory and confirmatory factor analysis in their development while establishing

discriminate and convergent validity (Searle, 2011). The Barbuto and Wheeler (2006) SLQ instrument has been widely applied in numerous empirical research studies (A. R. Anderson, 2009; Beck, 2010; Bugenhagen, 2006; Daubert, 2007; Hayden, 2011; Hucklebee, 2008; Ostrem, 2006; Searle, 2011; Westfield, 2010). In contrast, Liden et al.'s (2008) SLA instrument, according to Searle (2011), was applied only in limited research to date. The author did not find any empirical research using the SLA instrument.

### **Overview of Global Leadership Instruments**

This research study attempted to measure the level of global leadership competency in leaders with an established instrument. There are various instruments that measure certain segments or components of global leadership, including the Global Mindset Inventory (Thunderbird, 2011), the Cultural Intelligence Scale (Van Dyne, et al., 2009), the Intercultural Conflict Style Inventory (Hammer, 2005), and the Intercultural Development Inventory (Hammer, Bennett, & Wiseman, 2003). Three comprehensive global leadership instruments were identified and are presented in 2.4. These instruments measure multiple characteristics of global leadership at the leader level and can be applied either as a self-rater or as an other-rater measure.

Table 2.4

*Established Global Leadership Instruments*

| Global Leadership Researcher | Global Leadership Instrument                 | # of Items and Dimensions      |
|------------------------------|--|--------------------------------|
| Kozai Group (2011)           | Global Competencies Inventory (GCI)          | 180 items within 17 dimensions |
| Kets de Vries (2005)         | Global Executive Leadership Inventory (GELI) | 100 items within 12 dimensions |
| Goldsmith et al. (2003)      | Global Leader of the Future Inventory (GLFI) | 72 items within 15 dimensions  |

The Global Competencies Inventory (GCI) was developed in 2000 by global leadership researchers Allen Bird, Michael Stevens, Mark Mendenhall, and Gary Oddou (Bird, 2008). It is commercially available through the Kozai Group (2011). According to Bird (2008), the GCI is based on Black, Mendenhall, and Oddou's (1991) expatriate adjustment model and Bird and Osland's (2004) global management competency model.

The GCI contains 180 items within 17 dimensions, categorized as (a) perception management–nonjudgmentalness, inquisitiveness, tolerance to ambiguity, cosmopolitanism, and category inclusiveness, (b) relationship management–relationship interest, interpersonal engagement, emotional sensitivity, self-awareness, and behavioral flexibility, and (c) self management–optimism, self-confidence, self-identity, emotional resilience, non-stress tendency, stress management, and interest flexibility. Bird (2008) reported internal reliability alpha coefficients for the GCI

individual dimensions ranging from .70 for category inclusiveness to .85 for cosmopolitanism. Information or data to confirmatory factor analysis and data validity, convergent and divergent validity were not reported. The Kozai Group (2011) claimed a large number of commercial customers that have used the GCI. Nonetheless, the author did not find any empirical research utilizing this instrument. Konyu-Fogel (2011) had considered using the GCI for his research but found the cost of the instrument prohibitive as it is based on a per participant fee, and the number of the items was too voluminous for his study. Permission to use the GCI instrument for this study was granted via email response by the Kozai Group on September 9, 2011. However, the cost to use this instrument was confirmed as based on a per-participant fee and was prohibitively costly even with the educational discount. Therefore, the use of this instrument for this study was rejected.

Kets de Vries's (2005) Global Executive Leader Inventory (GELI) is based on the 360-degree feedback Global Leadership Life Inventory instrument (Kets de Vries, et al., 2004). The GELI is applied commercially in leadership programs to identify the operational mode of individual executives and determine areas of leadership behavior with need for improvement. The GELI comprises of 100 items within 12 dimensions: visioning, empowering, energizing, designing and aligning, rewarding and feedback, team building, outside orientation, global mindset, tenacity, emotional intelligence, life balance and resilience to stress. Bird (2008) reported internal reliability alpha coefficients for the GELI individual dimensions ranging from .77 for visioning to .91 for emotional intelligence. Information to confirmatory factor analysis and data validity, convergent and divergent validity were not reported. According to Bird,



results for this commercially available instrument have not been made available through empirical studies or published in peer-reviewed journals, making it not possible to confirm their validity. The author did not find any empirical research utilizing this instrument. The licensing cost for the use of this commercial instrument is based on a per-participant basis. Even with a volume discount, the cost of the GELI instrument was prohibitively costly for this study and it was therefore rejected.

The Goldsmith et al. (2003) Global Leader of the Future Inventory (GLFI) consists of 72 items within 15 leadership dimensions: thinking globally, appreciating diversity, developing technological savvy, building partnerships, sharing leadership, creating a shared vision, developing people, empowering people, achieving personal mastery, encouraging constructive dialogue, demonstrates integrity, leading change, anticipating opportunities, ensuring customer satisfaction, and maintaining a competitive advantage. Goldsmith et al. determined the internal reliability alpha coefficients for the dimensions ranging from .76 to .97, indicating that “items composing a dimension were highly correlated” (Goldsmith, et al., 2003, p. 336). It is applied as a self-rater or a 360-degree feedback instrument. Information to confirmatory factor analysis and data validity, convergent and divergent validity were not reported. The author did not find any empirical studies published in peer-reviewed journals or dissertations utilizing this instrument.

Among these existing global leadership assessment instruments, the Goldsmith et al. GLFI is the only one that examined “*future* CEOs and executives who *will* be running the organizations in the future [emphasis added]” (Goldsmith, et al., 2003, p. xxxi). Certain servant leadership characteristics also carry *future* objectives, based on

Greenleaf's (1970, 1972, 1977) writings that servant leaders want their followers *to become* stronger, healthier, more autonomous, more self-reliant, and more competent (Greenleaf, 1977). Servant leaders are concerned with the growth, development, and well-being of their followers (Patterson, et al., 2003). Figure 2.5 illustrates the *future* objectives of the GLFI construct and servant leadership.

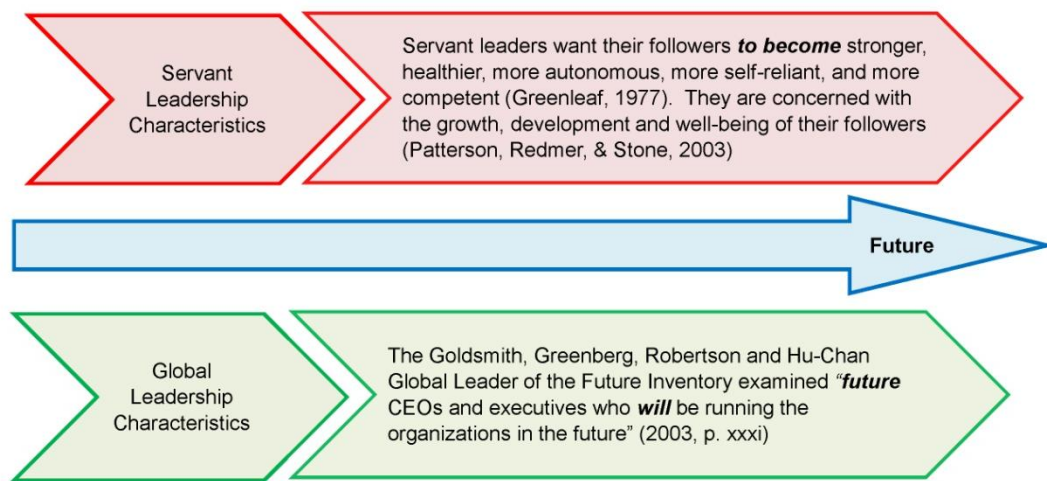


Figure 2.5. Future objectives of servant leaders and the Goldsmith et al. GLFI.

Servant leaders use foresight to anticipate challenges and envision the future of their organizations (Spears, 1995b). Similarly, successful global leaders need to anticipate rapid technological, economic, and conditional changes in the global market due to increasing globalization (Hitt, et al., 2010).

The Goldsmith et al. (2003) GLFI instrument contains, for an online survey, a manageable 72 items. In comparison, the GCI with 180 items within 17 dimensions

(Kozai Group, 2011) and the GELI with 100 items in 12 dimensions (Kets de Vries, 2005) may require more time from executives and leaders to complete the survey.

Because of the cost involved and the size of the instrument, the Goldsmith et al.'s (2003) GLFI instrument was selected for this study to determine global leadership competencies in leaders and executives. In addition, Patterson et al. (2007) referred to the GLFI when discussing global leader competencies and considering servant leadership as a viable option for global leadership. In an email dated March 3, 2011, to the researcher, the Goldsmith office confirmed Marshall Goldsmith's ownership of the copyrights of the Global Leader of the Future Inventory. Goldsmith permitted the use of the GLFI for this study for no additional cost or fees, under the condition that proper credit is given to the authors and the book in which it was published.

### **Chapter Conclusion**

This chapter presented an overview and a literature review of servant leadership, global leadership and the impact of globalization on organizations. It presented the associative relationships of servant leadership and global leadership attributes. The chapter concluded with an overview of servant leadership and global leadership instruments and the selection of instruments for this study.

### **Chapter 3**

#### **Method of Research**

This research study employed a correlational, hypothetical-deductive, cross-sectional quantitative research strategy and analysis between the constructs of servant leadership and global leadership. This chapter will introduce the methods of research, including the research parameters, describe the selected instruments to measure servant and global leadership in individuals, and present the organization and clarity of the research design.

#### **Servant Leadership Instrument: Barbuto and Wheeler's SLQ**

The Barbuto and Wheeler (2006) SLQ instrument was selected for this study because it is based on the foundational principles of servant leadership expressed in Greenleaf's (1970, 1972, 1977) writings and Spears's widely accepted (1995b, 1996) research. The SLQ instrument has been widely applied in numerous empirical research studies (A. R. Anderson, 2009; Beck, 2010; Bugenhagen, 2006; Daubert, 2007; Hayden, 2011; Hucklebee, 2008; Ostrem, 2006; Searle, 2011; Westfield, 2010). The SLQ instrument consists of five distinct servant leadership subscales: altruistic calling, emotional healing, wisdom, persuasive mapping, and organizational stewardship. These subscales are described in Table 3.1.

Table 3.1

*Barbuto and Wheeler's (2006) SLQ Subscales and Definitions*

| Subscale              | Definition   |
|-----------------------|--|
| Altruistic<br>Calling | A leader's deep-rooted desire to make a positive difference in others' lives. It is a generosity of the spirit consistent with a philanthropic purpose in life. Because the ultimate goal is to serve, leaders high in altruistic calling will put others' interests ahead of their own and will diligently work to meet followers' needs.   |
| Emotional<br>Healing  | A leader's commitment to and skill in fostering spiritual recovery from hardship or trauma. Leaders using emotional healing are highly empathetic and great listeners, making them adept at facilitating the healing process. Leaders create environments that are safe for employees to voice personal and professional issues. Followers who experience personal traumas will turn to leaders high in emotional healing.   |
| Wisdom                | A combination of awareness of surroundings and anticipation of consequences, similarly described by the philosophers Plato (1945) and (Kant, 1978; Plato, 1945). When these two characteristics are combined, leaders are adept at picking up cues from the environment and understanding their implications. Leaders high in wisdom are characteristically observant and anticipatory across most functions and settings (Bierly, Kessler, & Christensen, 2000). Wisdom is the ideal of perfect and practical, combining the height of knowledge and utility. |
| Persuasive<br>Mapping | The extent to which leaders use sound reasoning and mental frameworks. Leaders high in persuasive mapping are skilled at mapping issues and conceptualizing greater possibilities and are compelling when articulating these opportunities. They encourage others to visualize the organization's future and are persuasive, offering compelling reasons to get others to do things.   |

(table continues)

| Subscale                   | Definition  |
|----------------------------|---|
| Organizational Stewardship | The extent to which leaders prepare an organization to make a positive contribution to society through community development, programs, and outreach. Organizational stewardship involves an ethic or value for taking responsibility for the well-being of the community and making sure that the strategies and decisions undertaken reflect the commitment to give back and leave things better than found. They also work to develop a community spirit in the workplace, one that is preparing to leave a positive legacy. |

*Note.* Adapted and quoted from “Scale Development and Construct Clarification of Servant Leadership,” by J. E. Barbuto and D. W. Wheeler, 2006, *Group & Organization Management*, 31(3), pp. 318-319. Copyright 2006 by Sage Publications.

The framework for the servant leadership SLQ instrument is based on Spears’ (1995b, 1996) original 10 constructs with the 11th construct, *calling*. For Barbuto and Wheeler (2006), calling is fundamental to Greenleaf’s early writings: “The natural feeling that one wants to serve, to serve first” (Greenleaf, 1970, p. 13). A calling to serve is deeply rooted and value-based (Barbuto & Wheeler, 2002). Barbuto and Wheeler explained that servant leaders desire to make a positive difference for other people, but not for their own gain. Hayden (2011) confirmed Greenleaf’s articulation of the growth of follower with the four personal outcomes of health, wisdom, freedom-autonomy, and service orientation. These correlated positively and significantly against Barbuto and Wheeler’s five distinct servant leadership subscales of the SLQ instrument.

The SLQ instrument contains 23 items and measures the occurrence of servant leadership characteristics that a leader is believed to exhibit. Barbuto and Wheeler (2006) used data from 80 leaders, and 388 raters were used to test the internal consistency, confirm factor structure, and assess convergent, divergent, and predictive

validity. Barbuto and Wheeler's analysis produced five servant leadership subscales that the researchers named altruistic calling, emotional healing, persuasive mapping, wisdom, and organizational stewardship. The individual SLQ items, each utilizing a five-point Likert scale, were applied in the same random order as presented by Barbuto and Wheeler's (2006) scale development.

### **Global Leadership Instrument: Goldsmith et al.'s GLFI**

The development of the GLFI instrument employed thought leader panels, focus groups, and dialogues with CEO's of global companies (Goldsmith, et al., 2003). In addition, Goldsmith et al. (2003) interviewed high-potential leaders of international companies in great depth to determine dimensions that are critical for global leadership. Furthermore, "since each company could nominate no more than two future leaders, these were some of the *highest* potential leaders in the world" (Goldsmith, et al., 2003, p. xxxi).

Questionnaires were distributed to more than 200 high potential leaders, future CEOs, and executives from 120 international companies (Goldsmith, et al., 2003). Goldsmith et al.'s (2003) method for analysis included basis statistical analysis, reliability analysis, two-tailed T-tests, factor analyses with Varimax rotation and Kaiser normalization, and multiple analyses of variances. Goldsmith et al.'s GLFI includes 15 dimensions of future effective global leaders, as presented in Table 3.2.

Table 3.2

*Goldsmith et al.'s (2003) GLFI Dimensions and Descriptions*

| Dimension                           | Description  |
|-------------------------------------|--|
| Thinking Globally                   | The trend toward globally connected markets will become stronger. Leader will need to understand the economic, cultural, legal, and political ramifications. Leaders will need to see themselves as citizens of the world. (p. 2)  |
| Appreciating Cultural Diversity     | Future leaders will need to appreciate cultural diversity, defined as diversity of leadership style, industry style, individual behavior and values, race and sex. They will need to understand not only the economic and legal differences, but also the social and motivational differences that are part of working around the world and across nations, states, and regions of diverse people and cultures. (p. 2) |
| Developing Technological Savvy      | Organizations with technologically savvy leaders will have a competitive advantage. Without, the future of integrated global partnerships and networks will be impossible. (p. 3)  |
| Building Partnerships and Alliances | The ability to negotiate complex alliances and manage complex networks of relationships is becoming increasingly important . . . Developing and operating efficiently under new, complex, and shifting social architectures means that tomorrow's leaders will function inside of alliances, partnerships, and ventures like never before. (p. 3)  |
| Sharing Leadership                  | CEOs are no longer the sole decision makers; they have to create an environment in which other leaders, who subscribe to the common vision and purpose, collaborate to make effective decisions. Unlike individualistic leaders today, successful leaders in the future will strive for integration, not control. (p. 4)   |
| Creating a Shared Vision            | Creating a share vision is the integral to any company's success, because it aligns the company's stakeholders, operations, and structures with its mission and vision. In the future, the strongest companies will be those with a common vision, an effective strategy, and a workforce that shares in the commitment to accomplishing the vision. (p. 119)  |

(table continues)



| Dimension                         | Description  |
|-----------------------------------|--|
| Developing People                 | Every successful global leader understands that highly committed, highly competent people create financial rewards. An organization's investment in its people creates this commitment and competence. (p. 142)  |
| Empowering People                 | Trusted, responsible, knowledgeable— <i>empowered</i> —workers are the foundation upon which successful companies are based. However, only if employees feel that their abilities and contributions are fully valued will they share their ideas and expertise. (p. 164)   |
| Achieving Personal Mastery        | Personal mastery essentially means having a heightened self-awareness—a deep understanding of one's own behavior, motivators, and competencies—and having “emotional; intelligence” that allows one to monitor and manage—rather than controls or suppress—one's emotional state. (p. 175)   |
| Encouraging Constructive Dialogue | The global leader will need to keep tabs on his or her ability to accept, listen to, and respect feedback from many different sources, because the global success of his or her company may be highly dependent on the leader's ability to encourage constructive dialogue, listen without judgment or defensiveness, and appreciate and understand the many different viewpoints and perspectives of his or her own culture as well as the many cultures around the world. (p. 204) |
| Demonstrating Integrity           | Integrity rests partly on courage, partly on honesty, and greatly on integrating one's beliefs with one's actions. It will not be enough to simply espouse values. To be successful, the global leader of the future will not have the added responsibility of influencing others through personal example. (p. 220)   |
| Leading Change                    | The challenge for global leaders today is to guide and direct their organizations and employees in this era of unprecedented complexity and fast-paced world change. (p. 238)  |
| Anticipating Opportunities        | A global leader's capacity to lead a company toward success and longevity is in part dependent on his or her recognition of future opportunities. (p. 253)   |

(table continues)

| Dimension                           | Description  |
|-------------------------------------|--|
| Ensuring Customer Satisfaction      | Ensuring customer satisfaction means ensuring global business success, for without a customer, there can be no business. The global leader understands that this simple formula for success entails excellent customer service, inspired employees, quality products and services, customer feedback, commitment, and understanding the competition. (p. 273)  |
| Maintaining a Competitive Advantage | To maintain a competitive advantage, the global leader must guide the organization to produce better results faster; share knowledge; train and empower others to improve existing systems, products, and services, streamline the company; eliminate waste and unneeded cost; provide high-quality, unique products; and achieve results that will add long-term value to the shareholder. (p. 287) |

*Note.* Adapted and quoted from “*Global Leadership: The Next Generation*,” by M. Goldsmith, C. L. Greenberg, A. Robertson and M. Hu-Chan, 2003, Upper Saddle River, NJ: Pearson Education, Inc. Copyright 2003 by Pearson Education, Inc.

The GLFI instrument allows six answers to each item: Five Likert-style answers—highly dissatisfied, dissatisfied, neither satisfied nor dissatisfied, satisfied, and highly satisfied—plus an added “no information” answer option. A preliminary pre-test of the questionnaire showed that numerous participants initially misunderstood the six answers. Some participants misread the horizontally oriented answer boxes as six-point visual analog response levels. Such misunderstanding would cause an overall shift of actual answers compared to intended answers by a ½ answer level towards the right portion of the scale—highly satisfied. In addition, some participants reported confusion between the highly dissatisfied and no information answer options for a number of items. To avoid participants’ confusion and the potential skewing of answers, the no information answer option was removed from the scale. Thus, the modified GLFI instrument reflected a typical five-level

Likert scale with theoretically equal intervals among responses (Creswell, 2008). In addition, pre-test participants reported that the title of each GLFI dimension had a guiding effect when answering the subsequent items. To avoid such guiding effect, the titles of each dimension were removed and the items were applied in random order.

### **Control Variables**

Control variables are used to measure and understand the impact of other factors (Adams, Khan, Raeside, & White, 2007). Others factors potentially influencing global leadership characteristics include size of firm (Bonaccorrsi, 1992), team size (Nemanich & Dusya, 2009), and leader's age (Goldsmith, et al., 2003). Other factors potentially influencing servant leadership characteristics could be gender (Eicher-Gatt, 2005), socioeconomic status, educational level, and domicile (McCuddy & Cavin, 2009). Considering these prior studies, this research study attempted to control for leader's leadership position, years in a leadership position, duration with an organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or services an organization sells abroad, number of foreign countries the organization does business with, leaders' gender, age, education, and race.

### **Research Questions**

This study gathered data from leaders and executives of organizations in northeast Indiana in the United States and attempted to answer the following questions:

1. How does the overall presence of global leadership characteristics of leaders in organizations relate to their overall presence of servant leadership characteristics?
2. How do individual global leadership attributes of leaders in organizations relate to their individual servant leadership attributes?
3. Do demographic factors such as a leader's leadership position, years in a leadership position, duration with an organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or services the organization sells abroad, number of foreign countries the organization does business with, and leaders' gender, age, education, or race affect the strength of the relationship between servant leadership and global leadership?

## **Hypotheses**

### **Hypothesis 1**

- H<sub>10</sub>: There is no statistically significant correlative relationship between the overall presence of servant leadership characteristics and the overall presence of global leadership characteristics.
- H<sub>11</sub>: There is a statistically significant correlative relationship between the overall presence of servant leadership characteristics and the overall presence of global leadership characteristics.

**Hypothesis 2**

- H2<sub>0</sub>: There is no statistically significant correlative relationship between individual servant leadership attributes and individual global leadership attributes.
- H2<sub>1</sub>: There is a statistically significant correlative relationship between individual servant leadership attributes and individual global leadership attributes.

**Hypothesis 3**

- H3<sub>0</sub>: There is no statistically significant difference in the strength of the correlative relationship between servant leadership and global leadership, when segmented by demographic factors that include leader's leadership position, years in a leadership position, duration with an organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or services the organization sells abroad, number of countries the organization does business with, leader's gender, age, level of education, or race.
- H3<sub>1</sub>: There is a statistically significant difference in the strength of the correlative relationship between servant leadership and global leadership, when segmented by demographic factors that include leader's leadership position, years in a leadership position, duration with an organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or services the organization sells

abroad, number of countries the organization does business with, leader's gender, age, level of education, or race.

### **Construct Validity and Internal Reliability of Instruments and External Validity**

**Construct validity.** Construct validity can be established by determining the relationship between the operationalized concept of the study and the actual relationship targeted for the study (Adams, et al., 2007). Construct validity is assessed by using both statistical and practical procedures and verifying that that “scores of an instrument are significant, meaningful, useful, and have a purpose” (Creswell, 2008, p. 173).

Construct validity of Barbuto and Wheeler's (2006) SLQ instrument was established via an expert panel of 11 judges, including faculty members from three universities and advanced leadership doctoral students. The construct validity was further demonstrated with numerous past studies (A. R. Anderson, 2009; Beck, 2010; Bugenhagen, 2006; Daubert, 2007; Hayden, 2011; Hucklebee, 2008; McCann & Holt, 2010; Ostrem, 2006; Searle, 2011; Westfield, 2010). In addition, Barbuto and Wheeler conducted tests for convergent, divergent, and criterion validity.

The construct validity of the Goldsmith et al. (2003) GLFI instrument was determined with the help of thought panels, focus groups, and dialogue groups with high-potential leaders of global companies. In addition to these groups, more than 200 specially selected high-potential leaders from 120 international companies were interviewed regarding global leadership competencies.

**Internal reliability.** Barbuto and Wheeler (2006) determined the internal reliability with alpha coefficients for the self-rating SLQ instrument and its five-factor

structure with altruistic calling ( $\alpha = .77$ ), emotional healing ( $\alpha = .68$ ), wisdom ( $\alpha = .87$ ), persuasive mapping ( $\alpha = .83$ ), and organizational stewardship ( $\alpha = .83$ ).

Numerous past studies reported high levels of internal reliability (A. R. Anderson, 2009; Beck, 2010; Bugenhagen, 2006; Daubert, 2007; Hayden, 2011; Hucklebee, 2008; McCann & Holt, 2010; Ostrem, 2006; Searle, 2011; Westfield, 2010). In addition, Barbuto and Wheeler conducted and reported data from exploratory and confirmatory factor analysis of the instrument.

Goldsmith et al. (2003) determined the reliability for the GLFI instruments dimensions ranging from a minimum of .76 to a maximum of .97, indicating that “items composing a dimension were highly correlated” (Goldsmith, et al., 2003, p. 336). Goldsmith et al. conducted factor analyses with Varimax rotation and Kaiser normalization but further information to confirmatory factor analysis were not reported.

**External validity.** External validity of a study exists when the findings of a study hold true for other groups, populations, or settings (Chambliss & Schutt, 2010). This research study examined servant leadership and global leadership characteristics from a sample of leaders and executives of companies and organizations in northeast Indiana associated with the Greater Fort Wayne Chamber of Commerce and the Northeast Indiana Regional Partnership. The findings of the study are limited to the selected population and a specific point in time of the survey and cannot be generalized over other populations or other time periods. Future replications of this study with other populations could strengthen the generalizability of the initial findings.

### **Correlative Method of Inquiry and Data Analysis**

A review of the frequency distribution, the skewness and kurtosis values, the Q-Q plots, and the box plots demonstrated proximate alignments to a normal distribution pattern of the composite SLQ score, the individual SLQ subscales, the composite GLFI score, and individual GLFI dimensions. This formed the basis for the researcher's decision to conduct subsequent statistical procedures assuming a parametric data set. The internal reliabilities and latent construct of all subscales of both instruments were determined with Cronbach's (1951) alpha coefficient. In addition, a confirmatory factor analysis via Varimax rotation and Kaiser normalization was conducted on both instruments.

The statistical treatment used in evaluating the hypotheses included independent-samples *t* test, ANOVA, MANOVA, bivariate linear regression, multiple linear regression, Pearson product-moment correlation coefficient, Pearson product-moment partial correlation coefficient, canonical correlation coefficient, and the test for equality for multiple correlations. The Statistical Package for the Social Sciences (SPSS), provided by IBM (2012), Version 20.0, was utilized for statistical analysis.

### **Subjects, Population, and Sample Size**

**Subjects.** Adhering to the primary research objective of examining servant and global leadership among leaders, the research study's subjects were leaders and executives of companies and organizations. The context of the research study was limited to leaders and executives of companies and organizations in northeast Indiana that are associated with the Greater Fort Wayne Chamber of Commerce and the Northeast Indiana Regional Partnership. The subjects were not selected by any other



specific characteristics, whether age, gender, race, ethnic origin, religion, or any social or economic qualification.

**Population and sample size.** The population of this research study included executives of companies and organizations in northeast Indiana related to or as members of the Greater Fort Wayne Chamber of Commerce and the Northeast Indiana Regional Partnership. The participants were not randomly, but conveniently selected. A total of 4,058 executive and leaders received invitations from the aforementioned organizations to participate in the online survey. Responses were received from 453 participants, but only 413, the sample size, completed the survey.

### **Organization and Clarity of Research Design**

The organization of the research design process is presented in Figure 3.1. It included the review, defense, and approval of the qualifying paper (QP) and the three-chapter dissertation paper, and the Institutional Review Board (IRB) approval. It continued with a coordinated approach of identifying and contacting leaders and executives, the development and pretesting of the online survey, the administration of the survey tool, the collection of the data, a follow-up contact procedure for missing surveys, and the data analysis.

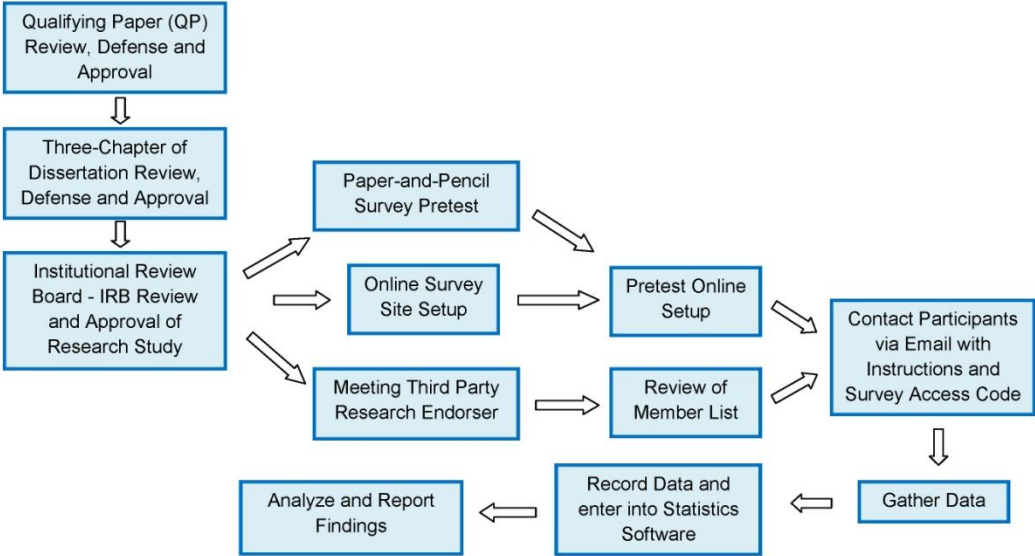


Figure 3.1. Research design process and data collection.

**Institutional Review Board approval.** Before contacting the participating organization or participants, the researcher sought the IRB approval through Indiana Tech. The IRB approval was granted on December 4, 2011, and a copy of the approval letter is presented in Appendix B.

**Quantitative online survey tool.** SurveyMonkey (2011), an established electronic web-based survey tool, was used to collect and manage the survey data. The use of an outside survey provider helped to prevent jeopardizing data confidentiality, unauthorized access, or the loss, inadvertent disclosure, or modification of data, thereby ensuring a trouble-free survey process.

**Pretest.** Before developing and implementing the survey tool, questions assigned for the survey were pretested in paper-and-pencil form with approximately 10 participants to determine if the survey instructions were logical and the individual

questions were comprehensible. In addition, the actual electronic survey tool was pretested with 10 participants for smooth operation and functioning.

**Third party endorsement and support of leadership research.** After the research design and the survey was approved by the IRB, the author contacted the executive leaders of the Greater Fort Wayne Chamber of Commerce and the Northeast Indiana Regional Partnership and asked for their endorsement and support of leadership research from the Indiana Tech Global Leadership Ph.D. program. Discussed were the objectives of the research and the timing and setup of the online survey. The executives were asked to directly contact their members and associates to encourage them to participate in the survey. The goal was to have these organizations endorse the research and directly contact their members to potentially increase the response rates (Adams, et al., 2007).

**Data collection and confidentiality.** All data were saved on data servers at SurveyMonkey (2011). Access to the database was restricted to the researcher via user identification (ID) and password. Additional data confidentiality was provided by not requiring participants to disclose their names.

**Exclusion of Survey Responses.** All surveys were reviewed for responses that would indicate same or patterned answering. A survey entry was called suspicious and subject to elimination when more than two sets of answers carried the same responses, such as 2-2-2-2-2, or a pattern, such as 1-2-3-4-5. The review did not determine any such same or patterned answering. No survey entry was eliminated or removed from data analysis.

**Chapter Conclusion**

This chapter introduced the methods of research, including research parameters. It described the selected instruments to measure servant and global leadership in individuals and the control variables. The construct validity and internal reliability of the instruments and the external validity of the study was discussed. This chapter introduced the subjects, population and sample size and presented the organization and clarity of the research design.

## Chapter 4

### Results

The purpose of this research study was to relate servant leader attributes to global leader attributes for leaders and executives of organizations in northeast Indiana in the United States. Quantitative survey data were used to answer the following research questions:

1. How does the overall presence of global leadership characteristics of leaders in organizations relate to their overall presence of servant leadership characteristics?
2. How do individual global leadership attributes of leaders in organizations relate to their individual servant leadership attributes?
3. Do demographic factors such as leader's leadership position, years in a leadership position, duration with an organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or services the organization sells abroad, number of countries the organization does business with, and leader's gender, age, level of education, or race affect the strength of the relationship between servant leadership and global leadership?

In this chapter, the data collection process, the target population, and the demographics of the sample are reviewed. The chapter continues with the discussion of the assumptions requisite for parametric data analysis. It also includes the assessment of normality, the analysis of the internal consistency estimate of reliability, the instruments' intercorrelations, and the confirmatory factor analysis of Barbuto and

Wheeler's (2006) servant leadership SLQ instrument, Goldsmith et al.'s (2003) global leadership GLFI instrument, and their subscales and dimensions. Finally, the results of each hypothesis testing will be presented, and the chapter concludes with a summary of the research findings.

### **Data Collection**

After receiving the Indiana Tech IRB's approval to conduct the research study, the CEOs of the Greater Fort Wayne Chamber of Commerce and Northeast Indiana Regional Partnership were contacted to discuss the survey, its questions, the sampling method, and the timing of the online survey distribution. The CEOs agreed to contact their members and associated partners via an email that included a hypertext link to the online survey. The online survey was administered by SurveyMonkey (2011) and was set to collect data for a maximum of 30 days.

Following the hypertext link in the email invitation, participants entered the online survey. The survey's introduction explained that it was part of leadership research doctoral dissertation through Indiana Tech. An informed consent form followed the introduction. By agreeing and acknowledging the consent form, the participants entered the online survey. The entire online survey with introduction and informed consent form is presented in Appendix A.

The online survey commenced with eight demographic questions about the participant's leadership position and organization. It was followed by 72 randomly arranged global leadership survey items from Goldsmith et al.'s (2003) GLFI instrument, the sequence of which determined by an online random sequence generator (Haahr, 2011) as presented in Appendix C. The subsequent 23 servant

leadership survey items of the SLQ instrument were sequenced in random order as presented by Barbuto and Wheeler (2006). The survey concluded with four demographic questions related to the participant's gender, age, level of education, and race. At the conclusion of the survey, the participants could submit their name and email address if they wished to receive a copy of their survey scores and a copy of the dissertation. Participants were asked if they had any questions about the survey or the Ph.D. program, and whether they would refer a leader or executive of their or another organization who they felt could benefit from participating in the survey (a snowball sampling method (Chambliss & Schutt, 2010)). The researcher decided to analyze responses from initial participants only to avoid any potential conflict of independence among subjects.

### **Population and Sample**

The population of this research study included leaders and executives of companies and organizations in northeast Indiana related to or members of the Greater Fort Wayne Chamber of Commerce and the Northeast Indiana Regional Partnership. The participants were not randomly but conveniently selected. A total of 4,058 executive and leaders received invitations from the aforementioned organizations to participate in the online survey. Participation was voluntary and not incentivized. Responses were received from 453 participants, with 413 completed surveys, representing a response rate of 10.2%. This response rate is consistent with the researcher's expectations for surveys conducted online and with executives. Anseel, Lievens, Schollart, and Choragwicka (2010) confirmed lower survey response rates among executive respondents versus managers and non-managerial employees. Shih

(2008) found a considerably lower response rate for online surveys versus traditional paper-and-pencil surveys.

### **Demographic Statistics**

Table 4.1 illustrates the demographic distribution of the participants. Table 4.2 describes the participants related to the leadership position and their associated organization.



Table 4.1

*Demographic Distribution of Participants*

| Variable          | Category                       | <i>n</i> | %     |
|-------------------|--------------------------------|----------|-------|
| Gender            | Male                           | 249      | 60.3% |
|                   | Female                         | 164      | 39.7% |
| Age               | 60 years and older             | 60       | 14.5% |
|                   | 50-59 years old                | 139      | 33.7% |
|                   | 40-49 years old                | 127      | 30.8% |
|                   | 30-39 years old                | 63       | 15.3% |
|                   | 29 years and younger           | 24       | 5.8%  |
|                   |                                |          |       |
| Highest Education | Doctoral degree                | 13       | 3.1%  |
|                   | Masters degree                 | 138      | 33.4% |
|                   | Baccalaureate degree           | 188      | 45.5% |
|                   | Less than baccalaureate degree | 74       | 17.9% |
| Race              | White, Caucasian               | 389      | 94.2% |
|                   | Black, African-American        | 6        | 1.5%  |
|                   | Asian                          | 4        | 1.0%  |
|                   | Hispanic                       | 3        | .7%   |
|                   | Other                          | 11       | 2.7%  |

Table 4.2

*Distribution of Participants Related to Leadership Position and Associated Organization*

| Variable                    | Category                                  | <i>n</i> | %     |
|-----------------------------|---|----------|-------|
| Leadership Position         | President, CEO                            | 70       | 16.9% |
|                             | Executive, COO, CFO, VP                   | 139      | 33.7% |
|                             | Director, Senior Management               | 117      | 28.3% |
|                             | Middle Management                         | 68       | 16.5% |
|                             | Other                                     | 19       | 4.6%  |
| Years in Position           | 10 years or more                          | 67       | 16.2% |
|                             | 5-9 years                                 | 149      | 36.1% |
|                             | 1-4 years                                 | 154      | 37.3% |
|                             | Less than 1 year                          | 43       | 10.4% |
| Years with Organization     | 10 years or more                          | 136      | 32.9% |
|                             | 5-9 years                                 | 146      | 35.4% |
|                             | 1-4 years                                 | 99       | 24.0% |
|                             | Less than 1 year                          | 32       | 7.7%  |
| Designation of Organization | For-Profit                                | 304      | 73.6% |
|                             | Not-For-Profit                            | 109      | 26.4% |
| Type of Industry            | Mining and Farming                        | 3        | .7%   |
|                             | Refining, Construction, and Manufacturing | 119      | 28.8% |
|                             | Services and Distribution                 | 179      | 43.3% |
|                             | Research, Design, and Development         | 22       | 5.3%  |
|                             | Not-for-Profit Activities                 | 90       | 21.8% |

(table continues)

| Variable   | Category      | <i>n</i> | %     |
|--|---------------|----------|-------|
| Number of Employees  | 500 or more   | 49       | 11.9% |
|  | 100-499       | 113      | 27.4% |
|  | 10-99         | 164      | 39.7% |
|  | Fewer than 10 | 87       | 21.1% |
| Percentage of Products or Services the Organization Sells to Foreign Countries | 50% or more   | 5        | 1.2%  |
|  | 20-49%        | 24       | 5.8%  |
|  | 5-19%         | 60       | 14.5% |
|  | 1-4%          | 102      | 24.7% |
|  | 0%            | 222      | 53.8% |
| Number of Countries the Organization Does Business with                        | 10 or more    | 81       | 19.6% |
|  | 4-9           | 97       | 23.5% |
|  | 1-3           | 117      | 28.3% |
|  | 0             | 118      | 28.6% |

### **Assumptions for the Use of Parametric Statistical Data Analysis**

Numerous researchers of servant leadership (A. R. Anderson, 2009; Beck, 2010; Bugenhagen, 2006; Daubert, 2007; Hayden, 2011; Hucklebee, 2008; McCann & Holt, 2010; Ostrem, 2006; Searle, 2011; Westfield, 2010) have applied parametric statistical methods to Barbuto and Wheeler's SLQ instrument. Both instruments, Barbuto and Wheeler's SLQ and Goldsmith et al.'s GLFI, were developed applying parametric statistical methods.

The use of parametric statistical procedures requires satisfying several assumptions, including the measurement of variables on interval or ratio scales, the independence of observations, the random selection of subjects, the approximate

normal distribution of the sample data, and the homogeneity of variances (Ravid, 2011). Various statistical analyses were conducted to assess the validity of these assumptions.

**Interval scale assumption.** The statistical analyses assume an interval scale of measurement of Barbuto and Wheeler's (2006) servant leadership SLQ instrument and Goldsmith et al.'s (2003) global leadership GLFI instrument. Both instruments measure item responses on a five-point Likert scale. Likert scales are widely accepted standardized research instruments with equal intervals between response categories (Abbott, 2011; Creswell, 2008). In addition, the horizontal distribution of each item in the online survey with visually equal distances between response categories further supported the interval character of the measurement.

**Independence of observation.** Each participant received an invitation to participate in the survey, independent of other participants. Participants had the opportunity to refer others, but the researcher decided to analyze responses from initially invited participants only to avoid any potential conflict of independence among subjects.

**Random selection of subjects.** The data was not randomly but rather conveniently sampled in order to compensate for an anticipated low response rate typical for online surveys. Creswell (2008) explained that the researcher may select participants who are willing and available to be studied. The individuals may not be representative of the target population, although "convenience sampling can provide useful information for answering questions and hypotheses" (Creswell, 2008, p. 155).

**Normal distribution.** SPSS (IBM, 2012) provided two statistical procedures to analyze the normality of the dataset, the Kolmogorov-Smirnov test and the Shapiro-Wilk test. D'Agostino and Stephens (1986) criticized the unreliability of the Kolmogorov-Smirnov test for normality. Elliott and Woodward (2007) recommended using the Shapiro-Wilk test for normality for small sample size of  $n < 50$ . In addition, both procedures will not provide the researcher with an explicit conclusion whether certain violations to the primary assumption will require the use of certain parametric or nonparametric statistical procedures.

Instead of relying on statistical methods, D. C. Howell (2010) recommended visual inspections of the frequency distribution for alignment to a normal distribution, and the Quantile-Quantile (Q-Q) plots for proximate alignment of percentiles of the data with the percentiles of the standard normal distribution. In addition, Morgan, Leech, Gloeckner, and Barrett (2007) advised for the initial inspection of a dataset for normal distribution and use for parametric statistical analysis by determining a unimodal frequency distribution, whether the values for mean, median, and mode are nearly identical and that the skewness value ranges from -1.0 to +1.0. Moderately larger leptokurtic or platykurtic values do not seem to affect the results of most statistical analyses (Morgan, et al., 2007).

**Homogeneity of variances.** SPSS (IBM, 2012) provided the Levene's test to analyze the assumption of equal variances in the different groups of the dataset. It tested the null hypothesis of equal variances, also called the homogeneity of variances.

### **Assessing Normality Assumptions, Internal Reliability, Subscale Intercorrelations, and Factor Analysis of Instruments**

Abbott (2011) suggested assessing the assumptions and the reliability of the instruments prior to using statistical procedures. The following sections describe the assessment of the normality of the servant leadership SLQ subscales and the global leadership GLFI dimensions and their respective composite scores. It is followed by an analysis of internal consistency estimate of reliability (known as Cronbach's (1951) alpha coefficient) for the composite score and each subscale, the intercorrelations of the subscales, and a confirmatory factor analysis of each instrument.

**Servant leadership SLQ instrument.** The individual subscales of the servant leadership SLQ instrument showed means ranging from 3.66 for emotional healing to 4.22 for organizational stewardship. The standard deviations across the subscales ranged from .69 for wisdom to .85 for emotional healing. Wisdom and organizational stewardship were the highest reported characteristics of the SLQ instrument.

**Normality of SLQ subscales.** The frequency distribution of each SLQ subscale was determined as unimodal, each with nearly identical mean, medium, and mode. The skewness values ranged from -.83 for organizational stewardship to -.24 for wisdom. The kurtosis values ranged from -.59 for wisdom to .51 for organizational stewardship. The visual inspection of the frequency distributions, the Q-Q plots, and the box plots of each SLQ subscale demonstrated an acceptable alignment to a normal distribution pattern. The Q-Q plots showed a proximate alignment of percentiles of the data with the percentiles of the standard normal distribution for the SLQ subscales altruistic calling, emotional healing, wisdom, and

persuasive mapping. The Q-Q plot for the subscale organizational stewardship indicated minor deviations from a normal distribution, especially for lower subscale values, due to a larger negative skewness value. The box plots pointed to a small number of outliers for the subscales persuasive mapping and organizational stewardship at lower subscale scores.

Abbott (2011) claimed that many statistical procedures, including  $t$  tests, analysis of variances (ANOVAs), and correlation are robust and can provide meaningful results even if there are minor violations to primary assumptions, including normal distribution. Based on the frequency distribution, the skewness values, the visual inspections of the Q-Q plots, and the box plots, the researcher decided that the SLQ dataset is appropriate for conducting correlational statistical procedures assuming a parametric dataset.

***Internal consistency estimate of reliability and intercorrelations of SLQ subscales.*** The individual reliability statistics of the SLQ subscales was acceptable with Cronbach's alpha coefficients  $\geq .82$  for all subscales. These values exceeded Nunnally's (1978) minimum criteria and generally acceptable level of .70 for internal reliability in exploratory research.

The SLQ subscale intercorrelations were assessed with the Pearson product-moment correlation coefficient analysis. The Bonferroni (1936) correction method for Type I error was applied across the 10 ( $\frac{4}{1}n = 10$ ) intercorrelations. A  $p$  value of less than .005 ( $.05/10 = .005$ ) was required for statistical significance. All intercorrelations, as presented in Table 4.3 were determined to be positive and statistically significant at the  $p < .1E^{-5}$  level with the exception of the intercorrelation

between persuasive mapping and emotional healing, which showed no statistically significant association. The greatest intercorrelation of the SLQ subscales was found between wisdom/persuasive mapping with  $r(411) = .44, p < .1E^{-5}$  and the lowest statistically significant intercorrelation between wisdom/altruistic calling with  $r(411) = .27, p < .1E^{-5}$ .

Table 4.3

*Internal Reliabilities and Intercorrelations of SLQ Subscales*

| SLQ Subscale                  | <i>M</i> | <i>SD</i> | 1                  | 2                  | 3                  | 4                  | 5          |
|-------------------------------|----------|-----------|--------------------|--------------------|--------------------|--------------------|------------|
| 1. Altruistic Calling         | 3.97     | .76       | <b>.85</b>         |                    |                    |                    |            |
| 2. Emotional Healing          | 3.66     | .85       | .32 <sup>***</sup> | <b>.87</b>         |                    |                    |            |
| 3. Wisdom                     | 4.06     | .69       | .27 <sup>***</sup> | .39 <sup>***</sup> | <b>.82</b>         |                    |            |
| 4. Persuasive Mapping         | 3.96     | .79       | .09                | .37 <sup>***</sup> | .44 <sup>***</sup> | <b>.88</b>         |            |
| 5. Organizational Stewardship | 4.22     | .75       | .38 <sup>***</sup> | .34 <sup>***</sup> | .40 <sup>***</sup> | .28 <sup>***</sup> | <b>.83</b> |

*Note.* Cronbach's alpha coefficients are in boldface and reported along the diagonal axis.  
<sup>\*\*\*</sup> Correlation is significant at the  $p < .1E^{-5}$  level

**Confirmatory factor analysis of SLQ instrument.** The dimensionality of the 23 items of the SLQ instrument was examined with a confirmatory factor analysis via Varimax rotation and Kaiser normalization. To allow for a substantial approach in confirming factor loadings, the extraction criteria was set for eigenvalues  $\geq 1.0$  instead of limiting the analysis to a number of factors. The rotation converged in six iterations and resulted in five extracted components. The rotated solution, as presented in Table 4.4, confirmed the five factors as described by Barbuto and Wheeler (2006).



Table 4.4

*Confirmatory Factor Analysis and Varimax Rotation Pattern for SLQ instrument*

| SLQ  |          | Component   |             |             |             |             |
|------|----------|-------------|-------------|-------------|-------------|-------------|
| Item | Subscale | 1           | 2           | 3           | 4           | 5           |
| S18  | PM       | <b>.856</b> | .017        | .169        | .108        | -.009       |
| S40  | PM       | <b>.837</b> | .048        | .187        | .157        | .042        |
| S29  | PM       | <b>.787</b> | .070        | .199        | .160        | -.020       |
| S7   | PM       | <b>.738</b> | .076        | .311        | .109        | .104        |
| S8   | PM       | <b>.720</b> | .271        | -.020       | .102        | -.065       |
| S43  | OS       | .076        | <b>.790</b> | .101        | .116        | .177        |
| S21  | OS       | -.035       | <b>.735</b> | .114        | .105        | .153        |
| S54  | OS       | .187        | <b>.716</b> | .222        | -.032       | .110        |
| S34  | OS       | .064        | <b>.712</b> | .140        | .140        | .110        |
| S45  | OS       | .162        | <b>.707</b> | .096        | .176        | .108        |
| S6   | W        | .032        | .061        | <b>.808</b> | .157        | -.015       |
| S28  | W        | .190        | .143        | <b>.762</b> | .049        | .076        |
| S17  | W        | .194        | .167        | <b>.727</b> | .124        | .149        |
| S50  | W        | .171        | .114        | <b>.655</b> | .172        | .084        |
| S9   | W        | .215        | .232        | <b>.626</b> | .117        | .134        |
| S16  | EH       | .140        | .159        | .112        | <b>.836</b> | .117        |
| S27  | EH       | .090        | .165        | .138        | <b>.822</b> | .084        |
| S5   | EH       | .166        | .059        | .165        | <b>.774</b> | .120        |
| S38  | EH       | .196        | .115        | .168        | <b>.773</b> | .165        |
| S3   | AC       | -.005       | .205        | .073        | .053        | <b>.808</b> |
| S35  | AC       | -.040       | .178        | .068        | .117        | <b>.805</b> |
| S1   | AC       | -.042       | .049        | .062        | .190        | <b>.802</b> |
| S46  | AC       | .132        | .190        | .161        | .094        | <b>.798</b> |

*Note.* Item numbers adapted from “Scale Development and Construct Clarification of Servant Leadership” by J. E. Barbuto and D. W. Wheeler, 2006, *Group & Organization Management*, 31(3), pp. 318–319. Factor loadings > .40 are in boldface. PM=Persuasive Mapping, OS=Organizational Stewardship, W=Wisdom, EH=Emotional Healing, AC=Altruistic Calling. Rotation method: Varimax with Kaiser normalization. Extraction method: Principal component analysis with eigenvalues  $\geq 1.0$ .

*Normality and internal reliability of composite SLQ score.* The composite SLQ score ( $M = 91.80$ ,  $SD = 9.69$ ) is derived from the sum of all SLQ items. The internal consistency estimate of reliability for the composite SLQ instrument was determined with a Cronbach's alpha coefficient of .89. The frequency distribution of the composite SLQ is illustrated in Figure 4.1. The skewness value was determined at -.31 and the kurtosis value at -.42. The Q-Q plot of the composite SLQ score is presented in Figure 4.2. The visual inspection of the frequency distribution, the Q-Q plot, and the box plot of the composite SLQ score indicated an acceptable alignment to a normal distribution pattern. Based on these findings and the fact that the correlation is a robust statistical procedure that can provide meaningful results, even if there are slight violations to primary assumptions (Abbott, 2011), the researcher decided to conduct correlational statistical procedures assuming a parametric dataset when involving the composite SLQ score.

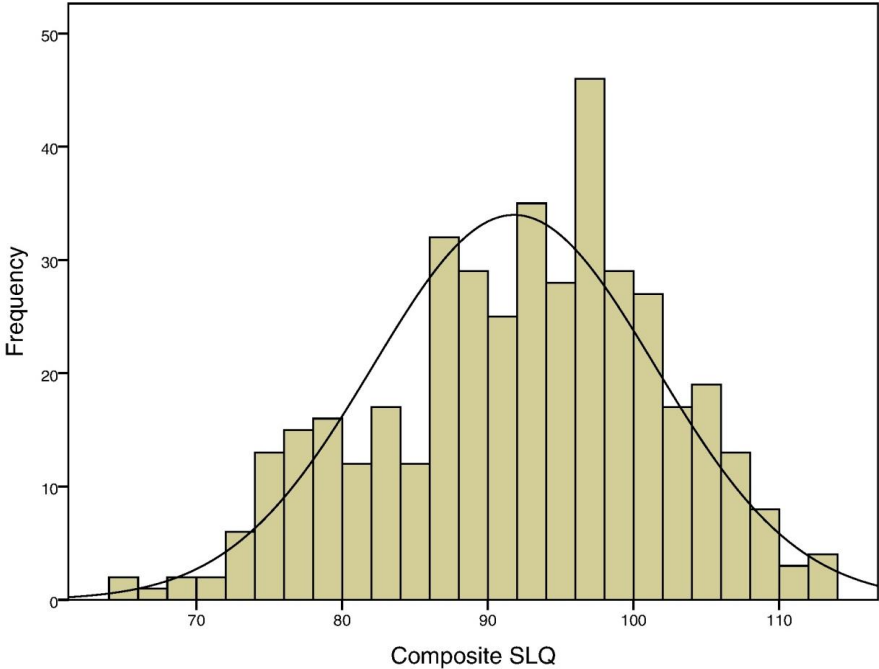


Figure 4.1. Distribution of composite SLQ scores of data set.

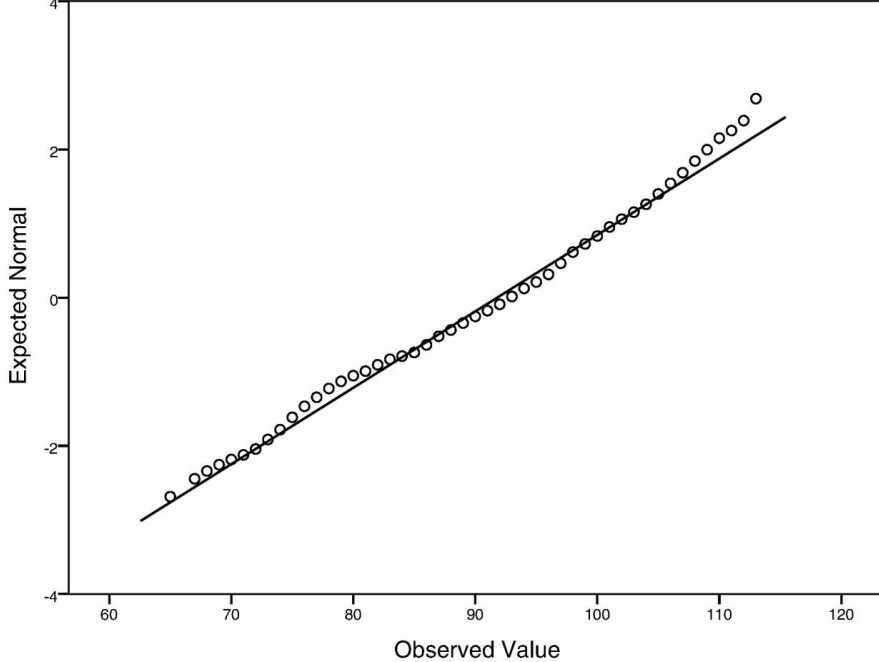


Figure 4.2. Quantile-Quantile (Q-Q) plot of composite SLQ scores.

**Global leadership GLFI instrument.** The individual dimensions of the global leadership GLFI instrument demonstrated means ranging from 3.17 for thinking globally to 4.33 for demonstrating integrity. The standard deviations across the subscales ranged from .66 for sharing leadership to .83 for developing technological savvy. Demonstrates integrity, sharing leadership, and empowering people were the highest reported characteristics of the GLFI instrument.

**Normality of GLFI dimensions.** The frequency distribution of each GLFI dimension was determined as unimodal, each with nearly identical mean, medium, and mode. The skewness values ranged from -.72 for empowering employees to .36 for thinking globally. The kurtosis values ranged from -.50 for sharing leadership to .87 for leading change. The visual inspection of the frequency distributions, the Q-Q plots, and the box plots of each GLFI dimension revealed an acceptable alignment to a normal distribution pattern. The Q-Q plots for appreciating diversity, demonstrates integrity, leading change, and ensuring customer satisfaction indicated minor deviations from a normal distribution, mostly for lower subscale values, due to a few outliers within these dimensions, confirmed by a visual inspection of the box plots. Based on the robustness of correlational statistical procedures to slight violations to primary assumptions (Abbott, 2011), the researcher decided to utilize parametric statistical methods involving GLFI dimensions.

**Internal consistency estimate of reliability and intercorrelations of GLFI dimensions.** The internal reliability statistics of the GLFI dimensions determined Cronbach's alpha coefficients  $\geq .70$  for all GLFI dimensions with the exception of sharing leadership that exhibited an alpha coefficient of .65. Nunnally's (1978)

minimum criteria and generally acceptable level of .70 for reliability in exploratory research was exceeded by 14 out of 15 GLFI dimensions.

The intercorrelations of the GLFI dimensions were assessed with the Pearson product-moment correlation coefficient analysis. The Bonferroni (1936) correction method for Type I error across the 105 ( $\frac{1}{2}n(n-1) = 105$ ) correlations was applied. A  $p$  value of less than  $.5E^{-3}$  ( $.05/105 = .5E^{-3}$ ) was required for significance. All intercorrelations, as presented in Table 4.5 were determined to be positive and statistically significant at the  $p < .5E^{-3}$  level with the exception of the intercorrelations between thinking globally/demonstrates integrity, and thinking globally/creating a shared vision that showed no statistically significant association. The greatest intercorrelation between the GLFI dimensions was found between creating a shared vision/empowering people with  $r(411) = .63, p < .1E^{-5}$ , and creating a shared vision/leading change with  $r(411) = .63, p < .1E^{-5}$ . The lowest statistically significant intercorrelation was determined between thinking globally/developing technological savvy with  $r(411) = .17, p < .5E^{-3}$ .

Table 4.5

*Internal Reliabilities and Intercorrelations of GLFI Dimensions*

| GLFI Dimension                          | M    | SD  | 1          | 2          | 3          | 4          | 5          | 6          | 7          | 8          | 9          | 10         | 11         | 12         | 13         | 14         | 15         |
|---|------|-----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1. Thinking Globally                    | 3.17 | .77 | <b>.90</b> |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| 2. Appreciating Diversity               | 3.82 | .74 | .46***     | <b>.77</b> |            |            |            |            |            |            |            |            |            |            |            |            |            |
| 3. Developing Technological Savvy       | 3.82 | .82 | .17*       | .26***     | <b>.75</b> |            |            |            |            |            |            |            |            |            |            |            |            |
| 4. Building Partnerships                | 4.06 | .70 | .21***     | .36***     | .38***     | <b>.75</b> |            |            |            |            |            |            |            |            |            |            |            |
| 5. Sharing Leadership                   | 4.18 | .66 | .28***     | .49***     | .26***     | .50***     | <b>.65</b> |            |            |            |            |            |            |            |            |            |            |
| 6. Creating a Shared Vision             | 4.00 | .76 | .16        | .29***     | .29***     | .51***     | .51***     | <b>.81</b> |            |            |            |            |            |            |            |            |            |
| 7. Developing People                    | 3.96 | .69 | .18*       | .35***     | .29***     | .49***     | .46***     | .62***     | <b>.76</b> |            |            |            |            |            |            |            |            |
| 8. Empowering People                    | 4.15 | .76 | .24***     | .35***     | .20**      | .47***     | .58***     | .63***     | .58**      | <b>.80</b> |            |            |            |            |            |            |            |
| 9. Achieving Personal Mastery           | 4.04 | .71 | .28***     | .34***     | .16***     | .48***     | .46***     | .51***     | .46***     | .48***     | <b>.75</b> |            |            |            |            |            |            |
| 10. Encouraging Constructive Dialogue   | 3.92 | .75 | .22***     | .50***     | .27***     | .50***     | .57***     | .51***     | .45***     | .45***     | .44***     | <b>.73</b> |            |            |            |            |            |
| 11. Demonstrating Integrity             | 4.33 | .69 | .14        | .33***     | .28***     | .51***     | .55***     | .40***     | .35***     | .45***     | .37***     | .51***     | <b>.75</b> |            |            |            |            |
| 12. Leading Change                      | 4.07 | .75 | .28***     | .40***     | .36***     | .46***     | .52***     | .63***     | .41***     | .46***     | .48***     | .48***     | .40***     | <b>.81</b> |            |            |            |
| 13. Anticipating Opportunities          | 3.75 | .79 | .34***     | .40***     | .41***     | .40***     | .38***     | .51***     | .48***     | .31***     | .41***     | .43***     | .26***     | .57***     | <b>.81</b> |            |            |
| 14. Ensuring Customer Satisfaction      | 3.96 | .78 | .21**      | .31***     | .27***     | .52***     | .37***     | .56***     | .57***     | .43***     | .45***     | .49***     | .39***     | .41***     | .51***     | <b>.81</b> |            |
| 15. Maintaining a Competitive Advantage | 3.88 | .71 | .23***     | .34***     | .30***     | .52***     | .44***     | .59***     | .53***     | .41***     | .45***     | .48***     | .33***     | .45***     | .44***     | .44***     | <b>.70</b> |

Note: Cronbach's coefficient alphas are reported along the diagonal axis.

\*\*\* Correlation is significant at the  $p < .5E^{-3}$  level

\*\* Correlation is significant at the  $p < .1E^{-3}$  level

\* Correlation is significant at the  $p < .001$  level

*Confirmatory factor analysis of GLFI dimensions.* A confirmatory factor analysis via Varimax rotation and Kaiser normalization was employed to examine the dimensionality of the 72 items of the GLFI instrument. To allow for a substantial approach in confirming factor loadings, the extraction criteria was set for eigenvalues  $\geq 1.0$  instead of limiting the analysis to a number of factors. The rotation converged in 15 iterations and extracted 17 factors. The rotated solution and the proportion of variance accounted for by each of the rotated factors are presented in Table 4.6.

Table 4.6

*Confirmatory Factor Analysis and Varimax Rotation Pattern for GLFI Instrument*

| Item | GLFI Dimension | Component   |             |             |             |             |       |       |       |       |       |       |       |       |       |       |       |       |
|------|----------------|-------------|-------------|-------------|-------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|      |                | 1           | 2           | 3           | 4           | 5           | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    |
| G1   | TG             | <b>.840</b> | .053        | .046        | .098        | .069        | .021  | .131  | .000  | .031  | -.047 | .062  | .105  | .006  | .034  | .003  | .028  | .019  |
| G5   | TG             | <b>.833</b> | .028        | .038        | .070        | .085        | .089  | .074  | .051  | .003  | .101  | -.050 | .019  | .036  | .017  | .076  | .004  | .062  |
| G4   | TG             | <b>.825</b> | .051        | -.002       | -.049       | .057        | -.014 | .100  | .041  | .104  | .078  | .058  | .008  | -.014 | .040  | .032  | .060  | -.061 |
| G3   | TG             | <b>.800</b> | .068        | -.020       | .013        | -.001       | -.006 | .149  | .084  | .011  | .085  | .002  | -.114 | .051  | .020  | -.007 | .067  | -.028 |
| G2   | TG             | <b>.752</b> | .056        | .057        | .110        | .069        | .003  | .168  | -.009 | .147  | .103  | .072  | .188  | .062  | .097  | .069  | -.065 | .077  |
| G38  | EP             | .187        | <b>.706</b> | .225        | .043        | .039        | .173  | .079  | .079  | .136  | .015  | .143  | .024  | .033  | -.012 | .111  | .023  | -.139 |
| G36  | EP             | .117        | <b>.676</b> | .276        | .129        | .133        | .165  | .160  | .110  | .130  | .000  | .095  | .037  | -.009 | -.021 | .122  | .007  | .160  |
| G37  | EP             | .080        | <b>.639</b> | -.001       | .141        | .219        | .153  | .032  | .111  | -.008 | -.062 | -.002 | -.019 | .054  | -.013 | .190  | .212  | .044  |
| G35  | EP             | .029        | <b>.556</b> | .176        | .150        | .112        | .019  | .075  | .275  | .155  | .129  | -.016 | .030  | .117  | .105  | .142  | -.001 | .015  |
| G25  | CSV            | .001        | <b>.538</b> | .107        | .147        | .163        | .046  | -.004 | .151  | .219  | .020  | .159  | .079  | .114  | .268  | .152  | .040  | .194  |
| G29  | DP             | -.150       | <b>.491</b> | -.025       | .087        | -.031       | .289  | .041  | .165  | .190  | .122  | .261  | .190  | .190  | .218  | -.132 | -.129 | .045  |
| G27  | CSV            | -.016       | .181        | <b>.644</b> | .247        | .158        | .041  | .031  | .125  | .174  | .190  | -.009 | .093  | .005  | .080  | .071  | .159  | .138  |
| G24  | CSV            | .006        | .165        | <b>.627</b> | .122        | .346        | .110  | -.015 | .133  | .104  | .033  | .129  | .063  | .099  | .077  | .091  | .003  | .069  |
| G69  | MCA            | .053        | .119        | <b>.586</b> | .043        | -.059       | .054  | .039  | .267  | .132  | .066  | .169  | -.033 | .102  | .219  | .075  | .177  | -.043 |
| G58  | LC             | .074        | .135        | <b>.576</b> | .102        | .471        | .074  | .146  | .009  | .132  | .189  | .043  | .148  | .166  | -.030 | -.037 | .049  | .058  |
| G28  | CSV            | .020        | .398        | <b>.520</b> | .182        | .226        | .051  | .012  | .236  | .072  | .136  | .138  | .059  | -.029 | -.014 | -.082 | .114  | -.122 |
| G66  | ECS            | .130        | .204        | .065        | <b>.679</b> | .088        | .165  | -.101 | .083  | -.056 | .212  | .140  | -.017 | .157  | .072  | -.057 | -.025 | -.104 |
| G64  | ECS            | .053        | .110        | .071        | <b>.672</b> | .034        | .082  | .114  | .259  | .088  | .090  | .089  | .035  | .005  | .158  | .052  | .012  | -.103 |
| G65  | ECS            | .027        | .049        | .293        | <b>.649</b> | .094        | .070  | .040  | .027  | .111  | .030  | -.009 | .113  | .128  | -.107 | .003  | .240  | .205  |
| G67  | ECS            | .057        | .060        | .163        | <b>.631</b> | .123        | .087  | .111  | .075  | .205  | .154  | .076  | .058  | .083  | .028  | .153  | .040  | .054  |
| G63  | ECS            | .011        | .225        | .026        | <b>.618</b> | .021        | .068  | .178  | .215  | .190  | .111  | .103  | .108  | .160  | .096  | .019  | .007  | .217  |
| G55  | LC             | .033        | .169        | .066        | .075        | <b>.697</b> | .156  | .106  | .070  | .095  | .161  | .022  | .011  | .124  | .102  | .037  | .089  | .100  |
| G54  | LC             | .157        | .098        | .178        | .137        | <b>.661</b> | .085  | .086  | .024  | .139  | .109  | .112  | .185  | -.076 | .068  | .117  | -.026 | .079  |
| G56  | LC             | .147        | .132        | .158        | -.006       | <b>.622</b> | .108  | .245  | -.027 | .154  | .138  | .093  | .098  | .083  | .042  | .059  | .150  | -.226 |
| G57  | LC             | .058        | .116        | .129        | .081        | <b>.545</b> | -.012 | -.001 | .141  | .032  | .166  | .117  | .161  | .020  | .066  | .344  | -.088 | .057  |



(table continues)

| Item | Dimension | Component |       |       |       |       |             |             |             |             |             |             |       |       |       |       |       |       |
|------|-----------|-----------|-------|-------|-------|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------|-------|-------|-------|-------|-------|
|      |           | 1         | 2     | 3     | 4     | 5     | 6           | 7           | 8           | 9           | 10          | 11          | 12    | 13    | 14    | 15    | 16    | 17    |
| G49  | DI        | .020      | .290  | -.026 | .089  | .157  | <b>.718</b> | .021        | .016        | .053        | .004        | .041        | .001  | .043  | .110  | -.032 | .042  | .119  |
| G51  | DI        | .049      | .098  | .044  | .163  | -.036 | <b>.661</b> | .127        | .099        | .043        | -.071       | .070        | .078  | .150  | -.086 | .207  | .005  | -.225 |
| G50  | DI        | .075      | .074  | .015  | .000  | .117  | <b>.624</b> | .088        | .087        | .209        | .144        | .244        | .154  | -.184 | .023  | -.009 | .213  | .037  |
| G53  | DI        | .060      | .108  | .329  | .202  | -.020 | <b>.604</b> | .141        | -.093       | .047        | .005        | .110        | .227  | .154  | .049  | .120  | -.166 | .031  |
| G52  | DI        | -.071     | .023  | .117  | .070  | .297  | <b>.490</b> | .001        | .119        | .034        | .033        | .179        | -.067 | .178  | .141  | .094  | -.039 | .117  |
| G9   | AD        | .232      | .162  | .083  | .161  | .061  | .126        | <b>.655</b> | .047        | .041        | -.025       | .210        | .076  | .066  | -.001 | .028  | .125  | .087  |
| G8   | AD        | .105      | .061  | .002  | .084  | .193  | -.005       | <b>.643</b> | .056        | .172        | .025        | .117        | .102  | -.063 | .319  | .018  | -.010 | -.194 |
| G6   | AD        | .183      | -.004 | .082  | .129  | .161  | .162        | <b>.636</b> | .166        | -.161       | -.012       | .167        | -.007 | -.129 | .069  | .199  | .079  | .018  |
| G10  | AD        | .281      | .003  | .006  | -.011 | .052  | .075        | <b>.630</b> | -.012       | .192        | .179        | -.003       | .066  | .140  | -.114 | .001  | .051  | .044  |
| G7   | AD        | .231      | .159  | .001  | -.046 | .013  | -.023       | <b>.535</b> | .143        | .076        | .221        | .247        | .068  | .122  | .016  | .033  | .000  | .256  |
| G33  | DP        | .029      | .136  | .173  | .098  | -.058 | .056        | .071        | <b>.675</b> | .047        | .185        | .067        | .085  | .045  | -.096 | .057  | -.014 | .132  |
| G32  | DP        | .106      | .182  | .148  | .191  | .069  | -.022       | .097        | <b>.605</b> | .007        | .139        | -.043       | .066  | .032  | .247  | .139  | .066  | -.012 |
| G30  | DP        | .045      | .191  | .101  | .186  | .257  | .111        | .092        | <b>.605</b> | -.051       | -.060       | .064        | -.073 | .203  | .006  | .064  | .113  | -.068 |
| G31  | DP        | .049      | .304  | .096  | .196  | .032  | .120        | .057        | <b>.532</b> | .278        | .138        | .031        | .183  | .057  | .219  | -.021 | .089  | .053  |
| G39  | APM       | .038      | .102  | .204  | .109  | .159  | .118        | .044        | .093        | <b>.661</b> | -.032       | .188        | -.070 | .080  | .133  | .059  | .041  | -.103 |
| G40  | APM       | .062      | .080  | .036  | .086  | .059  | .067        | .186        | .004        | <b>.636</b> | .275        | -.028       | .068  | .090  | -.040 | .004  | .046  | .207  |
| G42  | APM       | .150      | .195  | .164  | .109  | .057  | .040        | .115        | .048        | <b>.600</b> | .002        | .076        | .006  | .064  | -.132 | -.010 | .226  | .016  |
| G43  | APM       | .174      | .196  | .135  | .183  | .154  | .216        | -.051       | .014        | <b>.529</b> | .074        | .031        | -.051 | .049  | .317  | .077  | -.041 | -.068 |
| G41  | APM       | .099      | .172  | -.025 | .161  | .212  | -.058       | -.057       | .122        | <b>.477</b> | .088        | .177        | -.001 | .180  | .225  | .458  | -.106 | .098  |
| G59  | AO        | .135      | -.013 | .032  | .183  | .221  | .021        | .142        | .056        | .116        | <b>.728</b> | .008        | .190  | -.038 | .069  | -.053 | .059  | .007  |
| G60  | AO        | .168      | -.041 | .222  | .219  | .239  | -.052       | .021        | .087        | .061        | <b>.564</b> | .221        | .133  | -.041 | -.026 | .206  | .183  | -.058 |
| G62  | AO        | .159      | .099  | .242  | .128  | .157  | -.055       | .237        | .239        | .181        | <b>.504</b> | .103        | .264  | .057  | .112  | .051  | -.085 | .057  |
| G61  | AO        | .203      | .011  | .191  | .337  | .244  | .064        | -.013       | .230        | .085        | <b>.503</b> | .101        | .103  | -.027 | .068  | -.001 | .054  | .163  |
| G19  | BP        | .029      | .203  | .268  | .123  | .085  | .270        | .010        | .089        | -.045       | <b>.481</b> | .028        | .069  | .293  | .090  | .191  | .037  | .031  |
| G45  | ECD       | .075      | .010  | .094  | .157  | .144  | .148        | .119        | .036        | -.022       | .017        | <b>.673</b> | -.023 | .145  | .149  | .069  | -.012 | .065  |
| G46  | ECD       | .011      | .170  | .076  | .053  | .143  | .098        | .227        | -.030       | .192        | .057        | <b>.669</b> | .069  | .043  | -.033 | .186  | .092  | -.136 |
| G47  | ECD       | .029      | .204  | .156  | .102  | -.030 | .167        | .276        | .038        | .103        | .179        | <b>.574</b> | .056  | .028  | .067  | -.029 | -.008 | .115  |
| G44  | ECD       | .088      | -.032 | .012  | .239  | .129  | .155        | -.054       | .360        | .144        | -.105       | <b>.445</b> | .198  | -.113 | .050  | .133  | .269  | .217  |

(table continues)

| Item | Dimension | Component |       |       |       |       |       |       |       |       |       |       |             |             |             |             |             |             |
|------|-----------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|-------------|-------------|-------------|-------------|-------------|
|      |           | 1         | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12          | 13          | 14          | 15          | 16          | 17          |
| G17  | DP        | -.002     | .256  | .181  | -.137 | .073  | .318  | .114  | .150  | .066  | .188  | .388  | .036        | .342        | -.076       | -.104       | .120        | .015        |
| G11  | DTS       | -.013     | .014  | -.033 | -.011 | .127  | .066  | .063  | .032  | .007  | .137  | .005  | <b>.797</b> | .094        | .060        | -.042       | .091        | .062        |
| G13  | DTS       | .081      | .037  | .062  | .134  | .077  | .083  | .124  | -.003 | -.145 | .183  | .079  | <b>.762</b> | .068        | -.049       | -.004       | .044        | -.050       |
| G12  | DTS       | .108      | .098  | .220  | .072  | .088  | .074  | .005  | .166  | .132  | .014  | .029  | <b>.681</b> | .121        | .124        | .150        | .040        | -.013       |
| G16  | BP        | .064      | .002  | .273  | .154  | .090  | .046  | .103  | .333  | .152  | -.122 | .059  | .130        | <b>.644</b> | .148        | .062        | -.041       | -.046       |
| G18  | BP        | .129      | -.037 | -.092 | .153  | .086  | .245  | -.078 | -.056 | .072  | .181  | .082  | .157        | <b>.613</b> | .030        | .064        | .129        | .207        |
| G15  | BP        | -.045     | .209  | .313  | .252  | .052  | -.013 | .098  | .202  | .232  | -.072 | .070  | .165        | <b>.604</b> | .144        | -.023       | -.016       | -.025       |
| G14  | BP        | .161      | .333  | -.124 | .204  | .038  | .113  | .126  | -.083 | .052  | .070  | .288  | .119        | <b>.443</b> | .146        | .135        | .228        | -.158       |
| G68  | MCA       | .138      | .146  | .045  | .082  | .225  | .057  | .066  | .167  | .042  | .016  | .102  | .056        | .167        | <b>.690</b> | -.005       | .164        | .005        |
| G71  | MCA       | .090      | .006  | .422  | .104  | .011  | .166  | .064  | -.032 | .029  | .149  | .108  | .121        | .050        | <b>.534</b> | .103        | .045        | .110        |
| G21  | SL        | .148      | .282  | .018  | -.010 | .131  | .171  | .155  | .190  | .088  | -.008 | .021  | .032        | .086        | .081        | <b>.623</b> | -.076       | .065        |
| G22  | SL        | -.003     | .234  | .155  | .052  | .213  | .235  | .133  | -.052 | -.032 | .102  | .242  | .010        | .006        | .006        | <b>.541</b> | .243        | -.075       |
| G26  | CSV       | .046      | .238  | .365  | .248  | .244  | .016  | .015  | .224  | .065  | .169  | .074  | .049        | -.076       | -.003       | .396        | .021        | .057        |
| G70  | MCA       | .074      | .084  | .199  | .120  | .085  | -.020 | .066  | .093  | .078  | .038  | .069  | .119        | .018        | .100        | -.089       | <b>.677</b> | .086        |
| G72  | MCA       | .019      | .031  | .285  | .072  | -.008 | .011  | .113  | .105  | .140  | .141  | -.003 | .080        | .120        | .428        | .223        | <b>.494</b> | .033        |
| G20  | SL        | .014      | .196  | -.097 | -.022 | -.020 | .323  | .249  | .047  | .146  | .327  | .122  | .043        | .204        | .049        | .131        | <b>.453</b> | -.136       |
| G48  | ECD       | .068      | .127  | .181  | .247  | .277  | .139  | .177  | .109  | .045  | .035  | .249  | .015        | .103        | .115        | .111        | .185        | <b>.414</b> |
| G34  | DP        | .011      | .278  | .250  | .251  | .007  | -.100 | .131  | .231  | .145  | .273  | -.043 | -.061       | .001        | .225        | -.001       | .073        | .398        |
| G23  | SL        | .176      | .273  | .204  | .088  | .153  | .209  | .255  | .093  | .098  | .015  | .200  | .065        | .118        | -.098       | .249        | .053        | .335        |

Note. Factor loadings  $\geq .4$  are illustrated in bold. TG=Thinking Globally, EP=Empowering People, CSV=Creating a Shared Vision, DP=Developing People, MCA=Maintaining a Competitive Advantage, LC=Leading Change, ECS=Ensuring Customer Satisfaction, DI=Demonstrates Integrity, AD=Appreciating Diversity, APM=Achieving Personal Mastery, AO=Anticipating Opportunities, BP=Building Partnerships, ECD=Encouraging Constructive Dialogue, DTS=Developing Technological Savvy, SL=Sharing Leadership. Rotation method: Varimax with Kaiser normalization. Extraction method: Principal component analysis with eigenvalues  $\geq 1.0$ .

The factor analysis confirmed 12 of Goldsmith et al.'s (2003) 15 GLFI dimensions. The GLFI dimensions sharing leadership, creating a shared vision, and maintaining a competitive advantage experienced cross-loading and non-loading of factorial items. An examination of the involved items led to the following suggestions to improve the component factor loadings and internal consistency estimates of reliability. These suggestions will require more research and were not implemented for subsequent analysis in this research study.

*Reposition two items to GLFI dimension empowering employees.* Item G25 of the GLFI dimension sharing leadership and item G29 of the GLFI dimension developing people loaded with the GLFI dimension empowering people. Item G25, expressed as “effectively involve people in decision making,” and item G29, expressed as “consistently treat people with respect and dignity,” may support Goldsmith et al.'s (2003) intent for the dimension empowering people. Adding items G29 and G25 to the dimension empowering people would slightly improve the internal consistency estimate of reliability for this dimension from Cronbach's alpha .80 to .82.

*Replace dimension creating a shared vision with new GLFI dimension.* Only three items of the GLFI dimension creating a shared vision, item G24, expressed as “create and communicate a clear vision for our organization,” item G27, expressed as “develop an effective strategy to achieve the vision,” and item G28, expressed as “clearly identify priorities,” loaded together. These were extracted with item G58,

expressed as “effectively translate creative ideas into business results” and item G69, expressed as “hold people accountable for their results.” The researcher suggested replacing the description for this dimension to focusing on business success to reflect these five items and their expressions. The Cronbach’s alpha coefficient would slightly improve to .83 from currently .81. It would create the 13th dimension of a revised global leadership instrument.

*Replace dimension maintaining a competitive advantage with new GLFI dimension.* Item G70, expressed as “successfully eliminate waste and unneeded cost,” and item G72, expressed as “achieving results that lead to long-term shareholder value” of GLFI dimensions maintaining a competitive advantage loaded with item G20, expressed as “willingly share leadership with business partners.” The researcher suggested forming a new dimension that may result in a 14th global leadership dimension of a revised global leadership instrument. It would encase topics of cost effective partnership and outsourcing. These three items currently exhibit a Cronbach’s alpha coefficient of .56. Different item expressions and the inclusion of additional items may increase its internal reliability.

Item G19, expressed as “create a network of relationships that help to get things done” loaded with the GLFI dimension anticipating opportunities. This may reflect the sample of leaders and executives in this survey who may anticipate opportunities not based on tasks or products, but through the building of relationships and networking. More research is required to analyze and confirm this claim. Item G48 of the GLFI dimension encouraging constructive dialogue exhibited a factor loading of  $\geq .4$ , but did not load with other items. Item G17 of the GLFI dimension

building partnership, item G26 of the GLFI dimension creating a shared vision, item G34 of the GLFI dimension developing people, and item G23 of the GLFI dimension sharing leadership loaded on more than one component with factor loadings  $< .4$ . These items may require improved item expressions and additional research with confirmatory factor analyses to establish a revised global leadership instrument.

*Normality and internal reliability of composite GLFI score.* The composite GLFI score ( $M = 283.95$ ,  $SD = 26.02$ ) was derived from the sum of all GLFI items. The internal consistency estimate of reliability for the composite GLFI instrument was determined with a Cronbach's alpha coefficient of .95. The frequency distribution of the composite GLFI score is illustrated in Figure 4.3. The skewness value was determined at  $-.03$  and the kurtosis value at  $.15$ . Figure 4.4 presents the Q-Q plot of the composite GLFI score. The visual inspection of the frequency distribution, the Q-Q plot, and the box plot of the composite GLFI score pointed to two outliers, but otherwise an acceptable alignment to a normal distribution pattern. Based on these findings and the robust nature of many statistical procedures that can provide meaningful results even if there are slight violations to primary assumptions (Abbott, 2011), the researcher decided to conduct subsequent statistical procedures assuming a parametric dataset when involving the composite GLFI score.

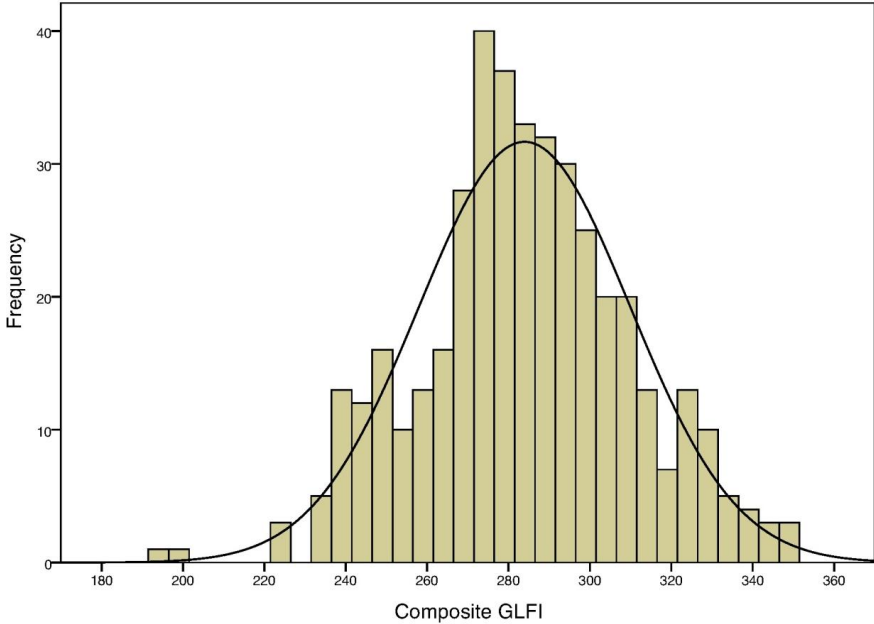


Figure 4.3. Distribution of composite GLFI scores of data set.

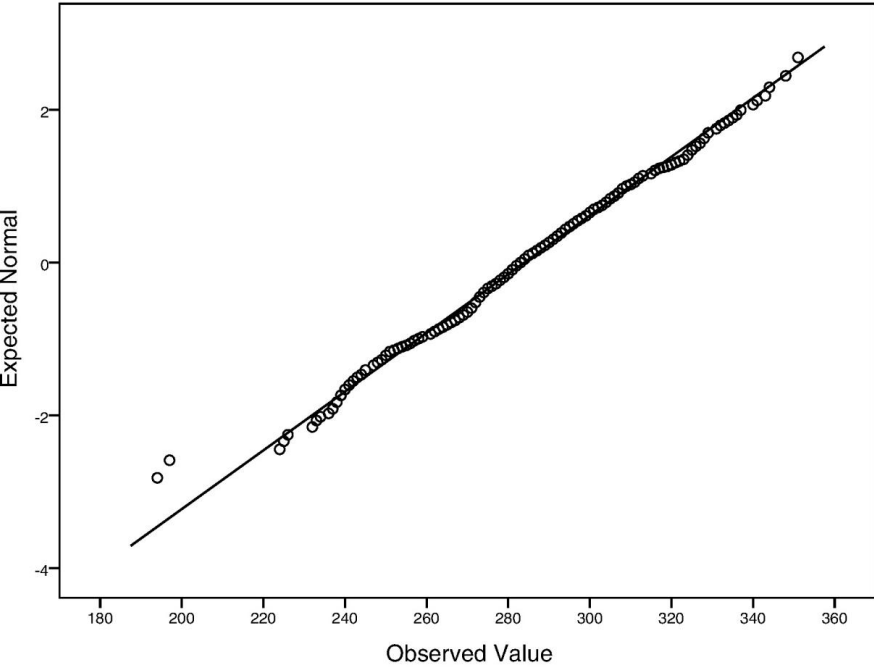


Figure 4.4. Quantile-Quantile (Q-Q) plot of composite GLFI scores.

**Hypothesis 1**

- H<sub>10</sub>: There is no statistically significant correlative relationship between the overall presence of servant leadership characteristics and the overall presence of global leadership characteristics.
- H<sub>11</sub>: There is a statistically significant correlative relationship between the overall presence of servant leadership characteristics and the overall presence of global leadership characteristics.

**Hypothesis testing.** The Pearson product-moment correlation coefficient was computed between the composite SLQ and the composite GLFI score. To control for Type 1 error, a  $p$  value  $< .05$  was required for significance. The analysis showed that the correlation between the composite servant leadership SLQ and composite global leadership GLFI scale was positive and statistically significant with  $r(411) = .621, p < .001$ , indicating a large effect size. Figure 4.5 presents the scatter plot matrix with regression line. A bivariate linear regression analysis determined a statistically significant linear relationship between the composite SLQ and the composite GLFI score at  $p < .001$ . Approximately 39% ( $r^2 = .386$ ) of the variance of one composite score is associated with the variance of the other composite score.

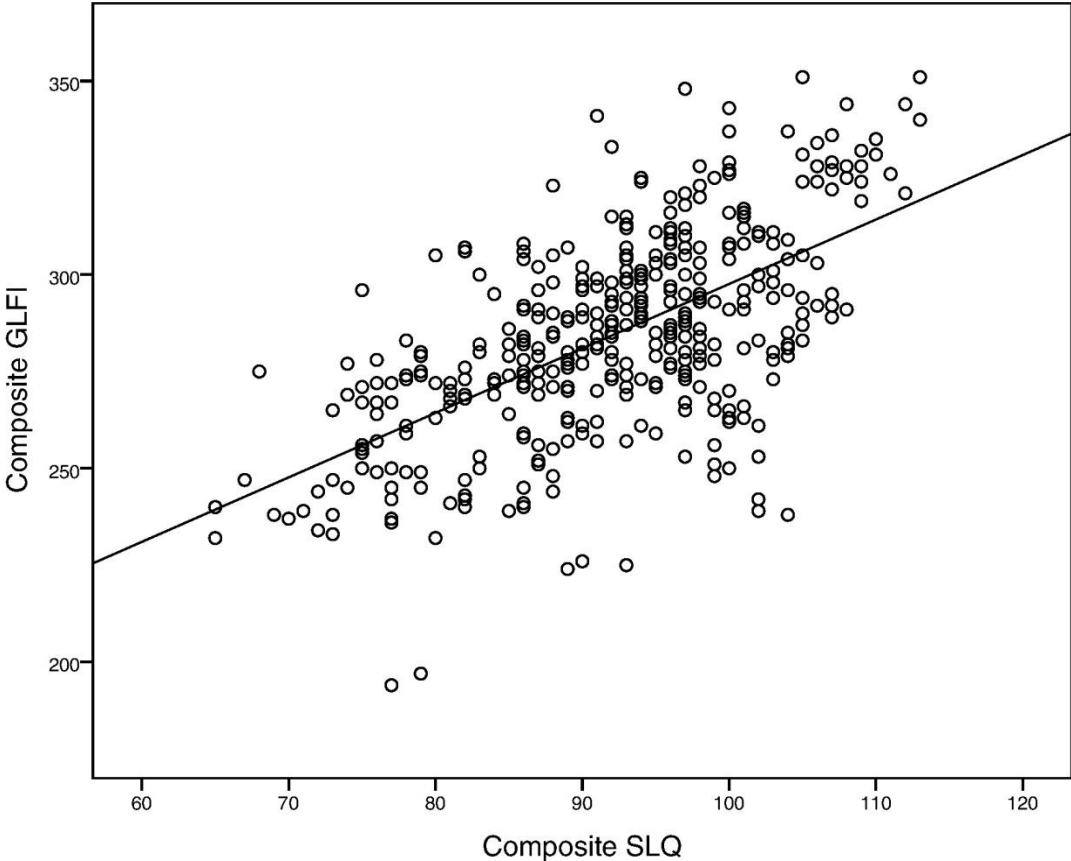


Figure 4.5. Scatter plot matrix of composite SLQ and composite GLFI scores.

**Canonical correlation analysis.** A subsequent canonical correlation analysis examined the dimensionality of both sets of variables, the subscales of the SLQ instrument, and the dimensions of the GLFI instrument. Table 4.7 illustrates the tests of dimensionality for the canonical correlation analysis, indicating that four out of five canonical dimensions were statistically significant at the  $p < .05$  level.



Table 4.7

*Tests of Canonical Dimensions*

| Dimensions | Correlation $R_c$ | $F$  | $df1$ | $df2$  | Sig. (2-tailed) |
|------------|-------------------|------|-------|--------|-----------------|
| 1          | .72               | 7.83 | 75    | 1886.6 | <.001           |
| 2          | .47               | 4.27 | 56    | 1534.8 | <.001           |
| 3          | .40               | 3.29 | 39    | 1170.4 | <.001           |
| 4          | .29               | 2.25 | 24    | 792.0  | .001            |
| 5          | .21               | 1.62 | 11    | 397.0  | .091            |

The first dimension computed to a canonical correlation of  $R_c = .721$ ,  $p < .001$ . It represents the maximum canonical correlation between the canonical variates with the weighted sums of the variables as illustrated in Table 4.8. With the minimum loading of standardized beta weights of .30 for interpretation of canonical correlation analysis (Lambert & Durand, 1975), the SLQ subscales persuasive mapping and organizational stewardship and the GLFI dimensions anticipating opportunities and creating a shared vision are the major contributors to the canonical correlation coefficient.

Table 4.8

*Standardized Canonical Coefficients*

| Instrument                          | Dimension  |      |       |      |
|-------------------------------------|------------|------|-------|------|
|                                     | 1          | 2    | 3     | 4    |
| Servant Leadership                  |            |      |       |      |
| Altruistic Calling                  | .02        | .11  | -1.03 | .18  |
| Emotional Healing                   | .06        | .21  | .30   | 1.01 |
| Wisdom                              | .19        | .22  | -.28  | -.63 |
| Persuasive Mapping                  | <b>.66</b> | -.85 | -.08  | .02  |
| Organizational Stewardship          | <b>.38</b> | .68  | .60   | -.26 |
| Global Leadership                   |            |      |       |      |
| Thinking Globally                   | -.15       | -.03 | -.46  | -.16 |
| Appreciating Diversity              | .03        | .60  | .55   | .44  |
| Developing Technological Savvy      | -.12       | .32  | .12   | .15  |
| Building Partnerships               | .11        | -.26 | .09   | .80  |
| Sharing Leadership                  | .14        | -.13 | -.45  | .19  |
| Creating a Shared Vision            | <b>.32</b> | -.25 | 1.04  | -.10 |
| Developing People                   | .14        | .11  | -.24  | -.11 |
| Empowering People                   | -.13       | -.40 | -.34  | .20  |
| Achieving Personal Mastery          | .21        | -.09 | -.38  | .04  |
| Encouraging Constructive Dialogue   | .05        | .16  | -.34  | .05  |
| Demonstrates Integrity              | .04        | .73  | -.04  | -.75 |
| Leading Change                      | .04        | -.15 | .09   | -.54 |
| Anticipating Opportunities          | <b>.31</b> | -.09 | .01   | -.17 |
| Ensuring Customer Satisfaction      | .24        | .17  | .09   | .34  |
| Maintaining a Competitive Advantage | -.07       | -.20 | -.14  | -.43 |

*Note.* Standardized beta weights  $\geq .3$  for Dimension 1 are in boldface.

**Hypothesis 2**

- H<sub>20</sub>: There is no statistically significant correlative relationship between individual servant leadership attributes and individual global leadership attributes.
- H<sub>21</sub>: There is a statistically significant correlative relationship between individual servant leadership attributes and individual global leadership attributes.

**Hypothesis testing.** A Pearson product-moment correlation analysis was employed to determine the relationship between individual SLQ subscales and GLFI dimensions. Correlation coefficients were computed among the five SLQ subscales and the 15 GLFI dimensions. Using the Bonferroni (1936) correction approach for Type I errors across the 75 ( $5 \times 15 = 75$ ) cross-instrument correlations, a  $p$  value  $< .67E^{-3}$  ( $.05/75 = .67E^{-3}$ ) was required for statistical significance. Table 4.9 presents an excerpt of the Pearson product-moment correlation matrix with correlation coefficients equating the direct relationship between individual SLQ subscales and individual GLFI dimensions. The results show that 61 correlations were statistically significant at  $p < .67E^{-3}$ , with 57 correlations reaching significance levels of  $p < .13E^{-3}$  and 50 attaining  $p < .13E^{-4}$ . Out of 61 statistically significant correlations, 54 exhibited correlation coefficients of  $r(411) > .2$ , 32 with  $r(411) > .3$ , and 10 with  $r(411) > .4$ . All statistically significant correlations were positive.

Table 4.9

*Correlations among Five SLQ Subscales and 15 GLFI Dimensions*

| GLFI Dimension           | Servant Leadership Subscale |           |        |            |                |  |
|--------------------------|-----------------------------|-----------|--------|------------|----------------|--|
|                          | Altruistic                  | Emotional | Wisdom | Persuasive | Organizational |  |
|                          | Calling                     | Healing   |        | Mapping    | Stewardship    |  |
| Thinking Globally        | .175*                       | .095      | .185*  | .083       | .066           |  |
|                          | .34E-3                      | .053      | .16E-3 | .091       | .181           |  |
| Appreciating Diversity   | 413                         | 413       | 413    | 413        | 413            |  |
|                          | .209**                      | .284**    | .260** | .160       | .349**         |  |
| Developing Tech. Savvy   | .19E-4                      | <.1E-6    | <.1E-6 | .001       | <.1E-6         |  |
|                          | 413                         | 413       | 413    | 413        | 413            |  |
| Building Partnerships    | .105                        | .161      | .149   | .109       | .260**         |  |
|                          | .033                        | .001      | .002   | .027       | <.1E-6         |  |
| Sharing Leadership       | 413                         | 413       | 413    | 413        | 413            |  |
|                          | .206**                      | .321**    | .291** | .417**     | .316**         |  |
| Creating a Shared Vision | .23E-4                      | <.1E-6    | <.1E-6 | <.1E-6     | <.1E-6         |  |
|                          | 413                         | 413       | 413    | 413        | 413            |  |
| Developing People        | .300**                      | .220**    | .296** | .377**     | .335**         |  |
|                          | <.1E-6                      | <.7E-5    | <.1E-6 | <.1E-6     | <.1E-6         |  |
| Empowering People        | 413                         | 413       | 413    | 413        | 413            |  |
|                          | .052                        | .248**    | .345** | .564**     | .365**         |  |
| Thinking Globally        | .294                        | <.1E-6    | <.1E-6 | <.1E-6     | <.1E-6         |  |
|                          | 413                         | 413       | 413    | 413        | 413            |  |
| Appreciating Diversity   | .189**                      | .292**    | .392** | .457**     | .322**         |  |
|                          | .11E-3                      | <.1E-6    | <.1E-6 | <.1E-6     | <.1E-6         |  |
| Developing Tech. Savvy   | 413                         | 413       | 413    | 413        | 413            |  |
|                          | .183*                       | .191**    | .252** | .400**     | .207**         |  |
| Building Partnerships    | .19E-3                      | .93E-4    | <.1E-6 | <.1E-6     | .22E-4         |  |
|                          | 413                         | 413       | 413    | 413        | 413            |  |

(table continues)

| GLFI Dimension         | Servant Leadership Subscale |            |           |         |            |                |  |
|------------------------|-----------------------------|------------|-----------|---------|------------|----------------|--|
|                        |                             | Altruistic | Emotional | Wisdom  | Persuasive | Organizational |  |
|                        |                             | Calling    | Healing   | Wisdom  | Mapping    | Stewardship    |  |
| Achieving Personal     | Pearson Corr.               | .246***    | .249***   | .360*** | .461***    | .287***        |  |
| Mastery                | Sig. (2-tailed)             | <.1E-6     | <.1E-6    | <.1E-6  | <.1E-6     | <.1E-6         |  |
|                        | N                           | 413        | 413       | 413     | 413        | 413            |  |
| Encouraging            | Pearson Corr.               | .282***    | .271***   | .351*** | .346***    | .391***        |  |
| Constructive Dialogue  | Sig. (2-tailed)             | <.1E-6     | <.1E-6    | <.1E-6  | <.1E-6     | <.1E-6         |  |
|                        | N                           | 413        | 413       | 413     | 413        | 413            |  |
| Demonstrates Integrity | Pearson Corr.               | .275***    | .168      | .314*** | .199**     | .422***        |  |
|                        | Sig. (2-tailed)             | <.1E-6     | .001      | <.1E-6  | .47E-4     | <.1E-6         |  |
|                        | N                           | 413        | 413       | 413     | 413        | 413            |  |
| Leading Change         | Pearson Corr.               | .094       | .187*     | .352*** | .425***    | .321***        |  |
|                        | Sig. (2-tailed)             | .055       | .14E-3    | <.1E-6  | <.1E-6     | <.1E-6         |  |
|                        | N                           | 413        | 413       | 413     | 413        | 413            |  |
| Anticipating           | Pearson Corr.               | .145       | .270***   | .395*** | .454***    | .363***        |  |
| Opportunities          | Sig. (2-tailed)             | .003       | <.1E-6    | <.1E-6  | <.1E-6     | <.1E-6         |  |
|                        | N                           | 413        | 413       | 413     | 413        | 413            |  |
| Ensuring Customer      | Pearson Corr.               | .209**     | .340***   | .365*** | .459***    | .410***        |  |
| Satisfaction           | Sig. (2-tailed)             | .18E-4     | <.1E-6    | <.1E-6  | <.1E-6     | <.1E-6         |  |
|                        | N                           | 413        | 413       | 413     | 413        | 413            |  |
| Maintaining a          | Pearson Corr.               | .136       | .150      | .265*** | .395***    | .267***        |  |
| Competitive Advantage  | Sig. (2-tailed)             | .006       | .002      | <.1E-6  | <.1E-6     | <.1E-6         |  |
|                        | N                           | 413        | 413       | 413     | 413        | 413            |  |

Note. Statistically significant correlations are shaded. A darker shading of individual correlations represents a greater statistical significance level.

\* Correlation is statistically significant at the  $p < .05/75 = .67E^{-3}$

\*\* Correlation is statistically significant at the  $p < .01/75 = .13E^{-3}$

\*\*\* Correlation is statistically significant at the  $p < .001/75 = .13E^{-4}$

A post hoc multiple linear regression analysis with stepwise extraction method permitted a detailed analysis of the standardized beta weights for each individual SLQ subscale and GLFI dimension. In a stepwise multiple linear regression, each variable was entered in sequence and its statistical contribution assessed. Only variables that represented statistically significant contributions to the model were retained to determine the most parsimonious set of variables that are most effective. The Bonferroni (1936) correction method was applied due to multiple comparisons in these regression analyses. The stepwise inclusion criteria for variables was set at probability  $p < .01$  and the exclusion criteria was set at  $p > .05$ . The suitability of the multiple linear regression analyses was examined by reviewing the Variable Inflation Factors (VIF) for threats of multicollinearity that may impact the accuracy of the beta weights. Multicollinearity refers to the successive inclusion of additional variables that increase the collinearity of the full set of explanatory variables, threatening the reliability of the regression analysis (Lauridsen & Mur, 2006). All VIFs computed to values less than 1.85, which is lower than 10 as the maximum limit suggested by Neter, Wasserman, and Kutner (1996) for the existence of multicollinearity. In addition, the zero-order correlation coefficients at less than  $< .65$  indicated noncollinearity and supported the accuracy of the beta weights and the use of multiple regression analysis. The following sections describe the significant GLFI dimensional contributors of individual SLQ subscales.

### Standardized beta weights of GLFI dimensions on SLQ subscales

***SLQ Subscale Altruistic Calling.*** Table 4.10 presents statistically significant GLFI dimensions, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the SLQ subscale Altruistic Calling. The regression model was statistically significant,  $F(4, 408) = 19.42, p < .001$ . The resulting  $R^2 = .16$  indicated that 16% of the variability of the SLQ subscale altruistic calling could be accounted for by four GLFI dimensions sharing leadership, encouraging constructive dialogue, creating shared vision, and achieving personal mastery.

Table 4.10

*GLFI Dimensions with Statistically Significant Contribution to the SLQ Subscale Altruistic Calling*

| GLFI Dimension                          | Standardized<br>Coefficient<br>Beta | t     | Sig.<br>(2 tailed) | Correlations   |         |      |
|---|-------------------------------------|-------|--------------------|----------------|---------|------|
|   |                                     |       |                    | Zero-<br>Order | Partial | Part |
| Sharing Leadership                      | .24                                 | 4.05  | <.001              | .30            | .20     | .18  |
| Encouraging<br>Constructive<br>Dialogue | .20                                 | 3.43  | <.001              | .28            | .17     | .16  |
| Creating Shared<br>Vision               | -.27                                | -4.57 | <.001              | .05            | -.22    | -.21 |
| Achieving Personal<br>Mastery           | .18                                 | 3.32  | <.001              | .25            | .16     | .15  |

The occurrence of the negative regressor creating shared vision warranted further examination. A review of the correlation matrix, as presented earlier in Table 4.9, determined that the global leadership dimension creating a shared vision did not

significantly correlate with the servant leadership dimension altruistic calling. With all VIFs < 1.7 for the stepwise multiple linear regression the threat of multicollinearity was limited. With beta weights determined significant with  $p < .001$ , linearity was confirmed. A review of the five survey items, G24–G28 of the creating a shared vision dimension determined that these focused on creating, communicating, people committing to the vision of the organization, and involving people in decision making and identifying priorities. Thus, it is likely that these counteract the servant leadership subscale altruistic calling that is primarily focused on the follower (Barbuto & Wheeler, 2006), taking precedence over organizational goals. Thus, potential causality for the negative regressor was established.

***SLQ Subscale Emotional Healing.*** Table 4.11 presents statistically significant GLFI dimensions, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the SLQ subscale emotional healing. The regression model was statistically significant,  $F(3, 409) = 27.35, p < .001$ . The resulting  $R^2 = .17$  indicated that 17% of the variability of the SLQ subscale emotional healing could be accounted for by three GLFI dimensions ensuring customer satisfaction, appreciating diversity, and building partnerships.



Table 4.11

*GLFI Dimensions with Statistically Significant Contribution to the SLQ Subscale**Emotional Healing*

| GLFI Dimension                 | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|--------------------------------|--|----------|--------------------|----------------|---------|------|
|                                |  |          |                    | Zero-<br>Order | Partial | Part |
| Ensuring Customer Satisfaction | .21  | 3.94     | <.001              | .34            | .19     | .18  |
| Appreciating Diversity         | .16  | 3.33     | <.001              | .28            | .16     | .15  |
| Building Partnerships          | .15  | 2.83     | <.005              | .32            | .14     | .13  |

***SLQ Subscale Wisdom.*** Table 4.12 presents statistically significant GLFI dimensions, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the SLQ subscale wisdom. The regression model was statistically significant,  $F(4, 408) = 30.94, p < .001$ . The resulting  $R^2 = .25$  indicated that 25% of the variability of the SLQ subscale wisdom could be accounted for by four GLFI dimensions anticipating opportunities, developing people, demonstrates integrity, and achieving personal mastery.

Table 4.12

*GLFI Dimensions with Statistically Significant Contribution to the SLQ Subscale**Wisdom*

| GLFI Dimension                | Standardized<br>Coefficient<br>Beta | t    | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|-------------------------------------|------|--------------------|----------------|---------|------|
|                               |                                     |      |                    | Zero-<br>Order | Partial | Part |
| Anticipating<br>Opportunities | .22                                 | 4.32 | <.001              | .40            | .21     | .19  |
| Developing People             | .18                                 | 3.32 | <.001              | .39            | .16     | .14  |
| Demonstrates<br>Integrity     | .15                                 | 3.10 | .002               | .31            | .15     | .13  |
| Achieving Personal<br>Mastery | .14                                 | 2.68 | .008               | .36            | .13     | .12  |

***SLQ Subscale Persuasive Mapping.*** Table 4.13 presents statistically significant GLFI dimensions, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the SLQ subscale persuasive mapping. The regression model was statistically significant,  $F(6, 406) = 48.72, p < .001$ . The resulting  $R^2 = .42$  indicated that 42% of the variability of the SLQ subscale persuasive mapping could be accounted for by six GLFI dimensions creating a shared vision, achieving personal mastery, anticipating opportunities, developing technological savvy, building partnerships, and appreciating diversity.

Table 4.13

*GLFI Dimensions with Statistically Significant Contribution to the SLQ Subscale**Persuasive Mapping*

| GLFI Dimension                 | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|--------------------------------|--|----------|--------------------|----------------|---------|------|
|                                |  |          |                    | Zero-<br>Order | Partial | Part |
| Creating a Shared Vision       | .35  | 6.99     | <.001              | .56            | .32     | .27  |
| Achieving Personal Mastery     | .17  | 3.60     | <.001              | .46            | .18     | .14  |
| Anticipating Opportunities     | .25  | 5.16     | <.001              | .45            | .25     | .20  |
| Developing Technological Savvy | -.15                                       | -3.49    | <.001              | .11            | -.17    | -.13 |
| Building Partnerships          | .16  | 3.20     | .001               | .42            | .16     | .12  |
| Appreciating Diversity         | -.12                                       | -2.73    | .007               | .16            | -.13    | -.10 |

***SLQ Subscale Organizational Stewardship.*** Table 4.14 presents statistically significant GLFI dimensions, the associated standardized beta weights and zero-order, part, and partial correlation coefficients for the SLQ subscale organizational stewardship. The regression model was statistically significant,  $F(5, 407) = 37.03$ ,  $p < .001$ . The resulting  $R^2 = .31$  indicated that 31% of the variability of the SLQ subscale organizational stewardship could be accounted for by five GLFI dimensions demonstrates integrity, ensuring customer satisfaction, appreciating diversity, thinking globally, and anticipating opportunities.

Table 4.14

*GLFI Dimensions with Statistically Significant Contribution to the SLQ Subscale  
Organizational Stewardship*

| GLFI Dimension                    | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|-----------------------------------|--|----------|--------------------|----------------|---------|------|
|                                   |  |          |                    | Zero-<br>Order | Partial | Part |
| Demonstrates<br>Integrity         | .26  | 5.55     | <.001              | .42            | .27     | .23  |
| Ensuring Customer<br>Satisfaction | .19  | 3.83     | <.001              | .41            | .19     | .16  |
| Appreciating<br>Diversity         | .21  | 4.26     | <.001              | .35            | .21     | .18  |
| Thinking Globally                 | -.17                                       | -3.55    | <.001              | .07            | -.17    | -.15 |
| Anticipating<br>Opportunities     | .17  | 3.41     | <.001              | .36            | .17     | .14  |

Figure 4.6 presents a graphic illustration summarizing the standardized beta weights of GLFI dimensions on individual SLQ subscales found in stepwise multiple linear regression analyses. Each SLQ subscale is associated with three or more GLFI dimensional regressors. Within the servant leadership and global leadership correlative analysis, altruistic calling found its largest contributors with sharing leadership and encouraging constructive dialogue, but creating a shared vision as a negative contributor. Emotional healing is primarily associated with ensuring customer satisfaction, and wisdom with anticipating opportunities. For persuasive mapping, creating a shared vision, and anticipating opportunities are strong GLFI contributors. Organizational stewardship is primarily associated with appreciating diversity and demonstrates integrity.

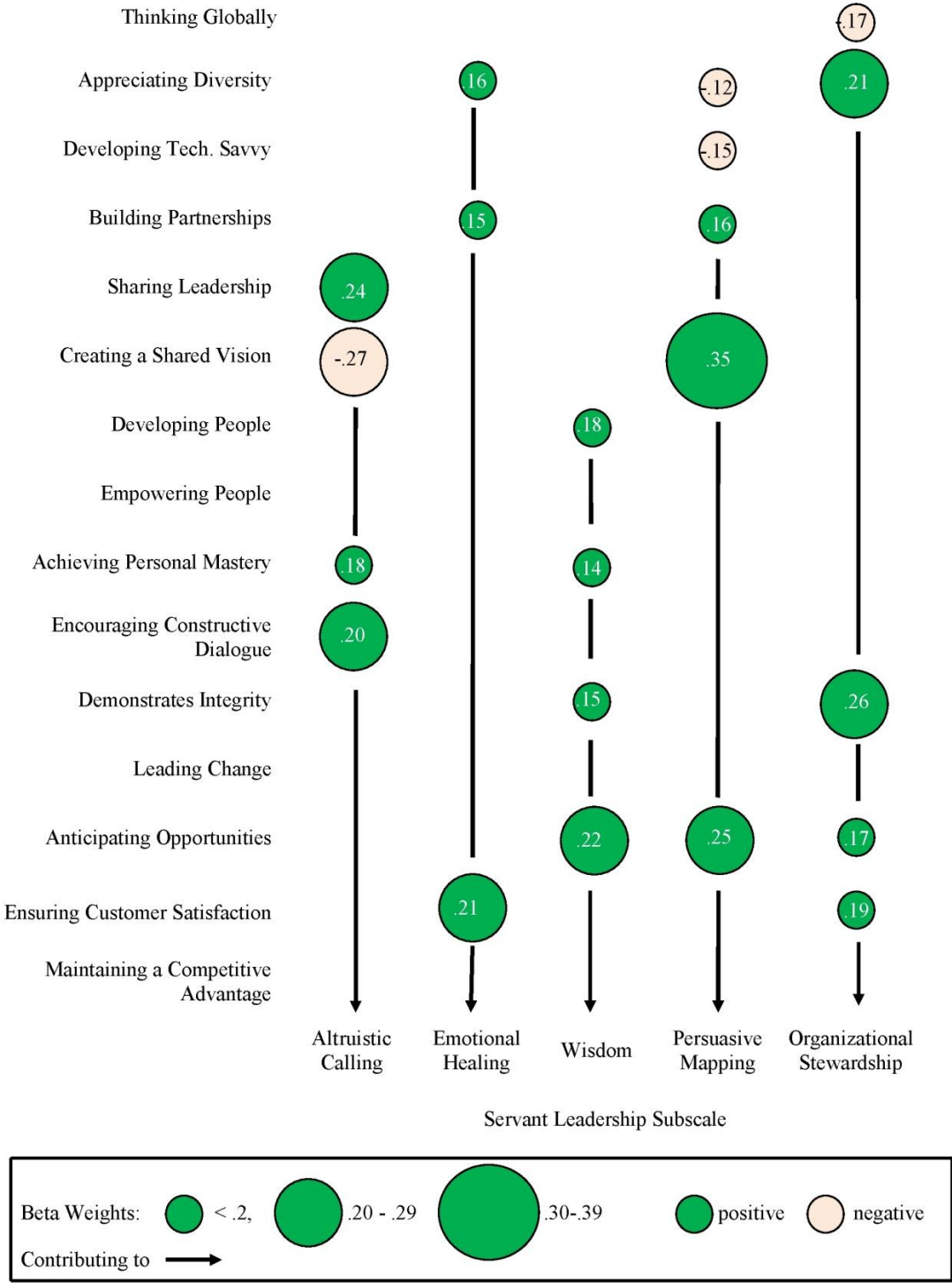


Figure 4.6. Standardized beta weights of GLFI dimensions on individual SLQ subscales.

**Standardized beta weights of SLQ subscales on GLFI dimensions.**

**GLFI Dimension Thinking Globally.** Table 4.15 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension thinking globally. The regression model was statistically significant,  $F(2, 410) = 11.04, p < .001$ . The resulting  $R^2 = .05$  indicated that 5% of the variability of the GLFI dimension thinking globally could be accounted for by two SLQ subscales wisdom and altruistic calling.

Table 4.15

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension Thinking Globally*

| SLQ Subscale       | Standardized<br>Coefficient<br>Beta | t    | Sig.<br>(2 tailed) | Correlations   |         |      |
|--------------------|-------------------------------------|------|--------------------|----------------|---------|------|
|                    |                                     |      |                    | Zero-<br>Order | Partial | Part |
| Wisdom             | .15                                 | 5.55 | .003               | .19            | .15     | .14  |
| Altruistic Calling | .14                                 | 3.41 | .007               | .18            | .13     | .13  |

**GLFI Dimension Appreciating Diversity.** Table 4.16 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension appreciating diversity. The regression model was statistically significant,  $F(2, 410) = 36.94, p < .001$ . The resulting  $R^2 = .15$  indicated that 15% of the variability of the GLFI dimension appreciating diversity could be accounted for by two SLQ subscales organizational stewardship and wisdom.

Table 4.16

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension**Appreciating Diversity*

| SLQ Subscale                  | Standardized<br>Coefficient<br>Beta | t    | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|-------------------------------------|------|--------------------|----------------|---------|------|
|                               |                                     |      |                    | Zero-<br>Order | Partial | Part |
| Organizational<br>Stewardship | .29                                 | 5.91 | <.001              | .35            | .28     | .27  |
| Wisdom                        | .19                                 | 3.88 | <.001              | .28            | .19     | .18  |

**GLFI Dimension Developing Technological Savvy.** Table 4.17 presents the statistically significant SLQ subscale, the associated standardized beta weight, and zero-order, part, and partial correlation coefficients for the GLFI dimension developing technological savvy. The regression model was statistically significant,  $F(1, 411) = 29.74, p < .001$ . The resulting  $R^2 = .07$  indicated that 7% of the variability of the GLFI dimension developing technological savvy could be accounted for by the SLQ subscales organizational stewardship.

Table 4.17

*SLQ Subscale with Statistically Significant Contribution to the GLFI Dimension**Developing Technological Savvy*

| SLQ Subscale                  | Standardized<br>Coefficient<br>Beta | t    | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|-------------------------------------|------|--------------------|----------------|---------|------|
|                               |                                     |      |                    | Zero-<br>Order | Partial | Part |
| Organizational<br>Stewardship | .26                                 | 5.45 | <.001              | .26            | .26     | .26  |

***GLFI Dimension Building Partnerships.*** Table 4.18 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension building partnerships. The regression model was statistically significant,  $F(3, 409) = 41.62, p < .001$ . The resulting  $R^2 = .23$  indicated that 23% of the variability of the GLFI dimension building partnerships could be accounted for by three SLQ subscales persuasive mapping, organizational stewardship, and emotional healing.

Table 4.18

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension Building Partnerships*

| SLQ Subscale                  | Standardized<br>Coefficient<br>Beta | t    | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|-------------------------------------|------|--------------------|----------------|---------|------|
|                               |                                     |      |                    | Zero-<br>Order | Partial | Part |
| Persuasive Mapping            | .31                                 | 6.64 | <.001              | .42            | .31     | .29  |
| Organizational<br>Stewardship | .18                                 | 3.81 | <.001              | .32            | .19     | .17  |
| Emotional Healing             | .15                                 | 3.03 | .003               | .32            | .15     | .13  |

***GLFI Dimension Sharing Leadership.*** Table 4.19 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension sharing leadership. The regression model was statistically significant,  $F(3, 409) = 42.11, p < .001$ . The resulting  $R^2 = .24$  indicated that 24% of the variability of the GLFI dimension sharing



leadership could be accounted for by three SLQ subscales persuasive mapping, altruistic calling, and organizational stewardship.

Table 4.19

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension*

*Sharing Leadership*

| SLQ Subscale                  | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|--|----------|--------------------|----------------|---------|------|
|                               |  |          |                    | Zero-<br>Order | Partial | Part |
| Persuasive Mapping            | .31  | 6.91     | <.001              | .38            | .32     | .30  |
| Altruistic Calling            | .21  | 4.44     | <.001              | .30            | .22     | .19  |
| Organizational<br>Stewardship | .17  | 3.46     | <.001              | .34            | .17     | .15  |

***GLFI Dimension Creating Shared Vision.*** Table 4.20 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension creating shared vision. The regression model was statistically significant,  $F(2, 410) = 117.71, p < .001$ . The resulting  $R^2 = .37$  indicated that 37% of the variability of the GLFI dimension creating shared vision could be accounted for by two SLQ subscales persuasive mapping and organizational stewardship.

Table 4.20

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension*

*Creating Shared Vision*

| SLQ Subscale                  | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|--|----------|--------------------|----------------|---------|------|
|                               |  |          |                    | Zero-<br>Order | Partial | Part |
| Persuasive Mapping            | .50  | 12.23    | <.001              | .56            | .52     | .48  |
| Organizational<br>Stewardship | .22  | 5.46     | <.001              | .37            | .26     | .22  |

***GLFI Dimension Developing People.*** Table 4.21 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension developing people. The regression model was statistically significant,  $F(3, 409) = 51.56, p < .001$ . The resulting  $R^2 = .27$  indicated that 27% of the variability of the GLFI dimension developing people could be accounted for by three SLQ subscales persuasive mapping, wisdom, and organizational stewardship.

Table 4.21

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension**Developing People*

| SLQ Subscale                  | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|--|----------|--------------------|----------------|---------|------|
|                               |  |          |                    | Zero-<br>Order | Partial | Part |
| Persuasive Mapping            | .33  | 7.05     | <.001              | .46            | .33     | .30  |
| Wisdom                        | .19  | 3.77     | <.001              | .39            | .18     | .16  |
| Organizational<br>Stewardship | .15  | 3.32     | <.001              | .32            | .16     | .14  |

***GLFI Dimension Empowering People.*** Table 4.22 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension empowering people. The regression model was statistically significant,  $F(2, 410) = 45.62, p < .001$ . The resulting  $R^2 = .18$  indicated that 18% of the variability of the GLFI dimension empowering people could be accounted for by two SLQ subscales persuasive mapping and altruistic calling

Table 4.22

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension**Empowering People*

| SLQ Subscale       | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|--------------------|--|----------|--------------------|----------------|---------|------|
|                    |  |          |                    | Zero-<br>Order | Partial | Part |
| Persuasive Mapping | .39  | 8.63     | <.001              | .40            | .39     | .39  |
| Altruistic Calling | .15  | 3.30     | .001               | .18            | .16     | .15  |

***GLFI Dimension Achieving Personal Mastery.*** Table 4.23 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension achieving personal mastery. The regression model was statistically significant,  $F(3, 409) = 50.71, p < .001$ . The resulting  $R^2 = .27$  indicated that 27% of the variability of the GLFI dimension achieving personal mastery could be accounted for by three SLQ subscales persuasive mapping, altruistic calling, and wisdom.

Table 4.23

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension**Achieving Personal Mastery*

| SLQ Subscale       | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|--------------------|--|----------|--------------------|----------------|---------|------|
|                    |  |          |                    | Zero-<br>Order | Partial | Part |
| Persuasive Mapping | .38  | 8.12     | <.001              | .46            | .37     | .34  |
| Altruistic Calling | .17  | 3.92     | <.001              | .25            | .19     | .17  |
| Wisdom             | .15  | 3.07     | .002               | .36            | .15     | .13  |

***GLFI Dimension Encouraging Constructive Dialogue.*** Table 4.24 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension encouraging constructive dialogue. The regression model was statistically significant,  $F(3, 409) = 41.94, p < .001$ . The resulting  $R^2 = .24$  indicated that 24% of the variability of the GLFI dimension encouraging constructive dialogue could be accounted for by three SLQ subscales organizational stewardship, persuasive mapping, and altruistic calling.

Table 4.24

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension*

*Encouraging Constructive Dialogue*

| SLQ Subscale                  | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|--|----------|--------------------|----------------|---------|------|
|                               |  |          |                    | Zero-<br>Order | Partial | Part |
| Organizational<br>Stewardship | .26  | 5.30     | <.001              | .39            | .25     | .23  |
| Persuasive Mapping            | .26  | 5.75     | <.001              | .35            | .27     | .25  |
| Altruistic Calling            | .16  | 3.42     | <.001              | .28            | .17     | .15  |

***GLFI Dimension Demonstrates Integrity.*** Table 4.25 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension demonstrates integrity. The regression model was statistically significant,  $F(2, 410) = 52.25, p < .001$ . The resulting  $R^2 = .20$  indicated that 20% of the variability of the GLFI dimension demonstrates integrity could be accounted for by two SLQ subscales organizational stewardship and wisdom.

Table 4.25

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension*

*Demonstrates Integrity*

| SLQ Subscale                  | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|--|----------|--------------------|----------------|---------|------|
|                               |  |          |                    | Zero-<br>Order | Partial | Part |
| Organizational<br>Stewardship | .35  | 7.34     | <.001              | .42            | .34     | .32  |
| Wisdom                        | .17  | 3.59     | <.001              | .31            | .18     | .16  |

***GLFI Dimension Leading Change.*** Table 4.26 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension leading change. The regression model was statistically significant,  $F(3, 409) = 43.07, p < .001$ . The resulting  $R^2 = .24$  indicated that 24% of the variability of the GLFI dimension leading change could be accounted for by three SLQ subscales persuasive mapping, organizational stewardship, and wisdom.

Table 4.26

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension**Leading Change*

| SLQ Subscale                  | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|--|----------|--------------------|----------------|---------|------|
|                               |  |          |                    | Zero-<br>Order | Partial | Part |
| Persuasive Mapping            | .31  | 6.46     | <.001              | .43            | .30     | .28  |
| Organizational<br>Stewardship | .18  | 3.68     | <.001              | .32            | .32     | .16  |
| Wisdom                        | .15  | 2.90     | .004               | .35            | .35     | .13  |

***GLFI Dimension Anticipating Opportunities.*** Table 4.27 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension anticipating opportunities. The regression model was statistically significant,  $F(3, 409) = 55.20, p < .001$ . The resulting  $R^2 = .29$  indicated that 29% of the variability of the GLFI dimension anticipating opportunities could be accounted for by three SLQ subscales persuasive mapping, organizational stewardship, and wisdom.



Table 4.27

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension**Anticipating Opportunities*

| SLQ Subscale                  | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|--|----------|--------------------|----------------|---------|------|
|                               |  |          |                    | Zero-<br>Order | Partial | Part |
| Persuasive Mapping            | .32  | 6.87     | <.001              | .45            | .32     | .29  |
| Organizational<br>Stewardship | .20  | 4.45     | <.001              | .36            | .22     | .19  |
| Wisdom                        | .17  | 3.54     | <.001              | .40            | .17     | .15  |

***GLFI Dimension Ensuring Customer Satisfaction.*** Table 4.28 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension ensuring customer satisfaction. The regression model was statistically significant,  $F(3, 409) = 61.06, p < .001$ . The resulting  $R^2 = .31$  indicated that 31% of the variability of the GLFI dimension ensuring customer satisfaction could be accounted for by three SLQ subscales persuasive mapping, organizational stewardship, and emotional healing.

Table 4.28

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension**Ensuring Customer Satisfaction*

| SLQ Subscale                  | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|--|----------|--------------------|----------------|---------|------|
|                               |  |          |                    | Zero-<br>Order | Partial | Part |
| Persuasive Mapping            | .34  | 7.52     | <.001              | .46            | .35     | .31  |
| Organizational<br>Stewardship | .27  | 6.16     | <.001              | .41            | .29     | .25  |
| Emotional Healing             | .12  | 2.72     | .007               | .34            | .13     | .11  |

***GLFI Dimension Maintaining Competitive Advantage.*** Table 4.29 presents statistically significant SLQ subscales, the associated standardized beta weights, and zero-order, part, and partial correlation coefficients for the GLFI dimension maintaining competitive advantage. The regression model was statistically significant,  $F(2, 410) = 45.80, p < .001$ . The resulting  $R^2 = .18$  indicated that 18% of the variability of the GLFI dimension maintaining competitive advantage could be accounted for by two SLQ subscales persuasive mapping and organizational stewardship.

Table 4.29

*SLQ Subscales with Statistically Significant Contribution to the GLFI Dimension**Maintaining Competitive Advantage*

| SLQ Subscale                  | Standardized<br>Coefficient<br><i>Beta</i> | <i>t</i> | Sig.<br>(2 tailed) | Correlations   |         |      |
|-------------------------------|--|----------|--------------------|----------------|---------|------|
|                               |  |          |                    | Zero-<br>Order | Partial | Part |
| Persuasive Mapping            | .35  | 7.52     | <.001              | .40            | .35     | .33  |
| Organizational<br>Stewardship | .17  | 6.16     | <.001              | .27            | .18     | .16  |

Figure 4.7 presents a graphic illustration summarizing the standardized beta weights of SLQ subscales on GLFI dimensions found in stepwise multiple linear regression analyses. Within the servant leadership and global leadership correlative analysis, persuasive mapping is the foremost contributor for nearly all GLFI dimensions, followed by organizational stewardship. Altruistic calling, emotional healing, and wisdom exhibited a lesser role across the various GLFI dimensions when examining the association between servant leadership and global leadership.

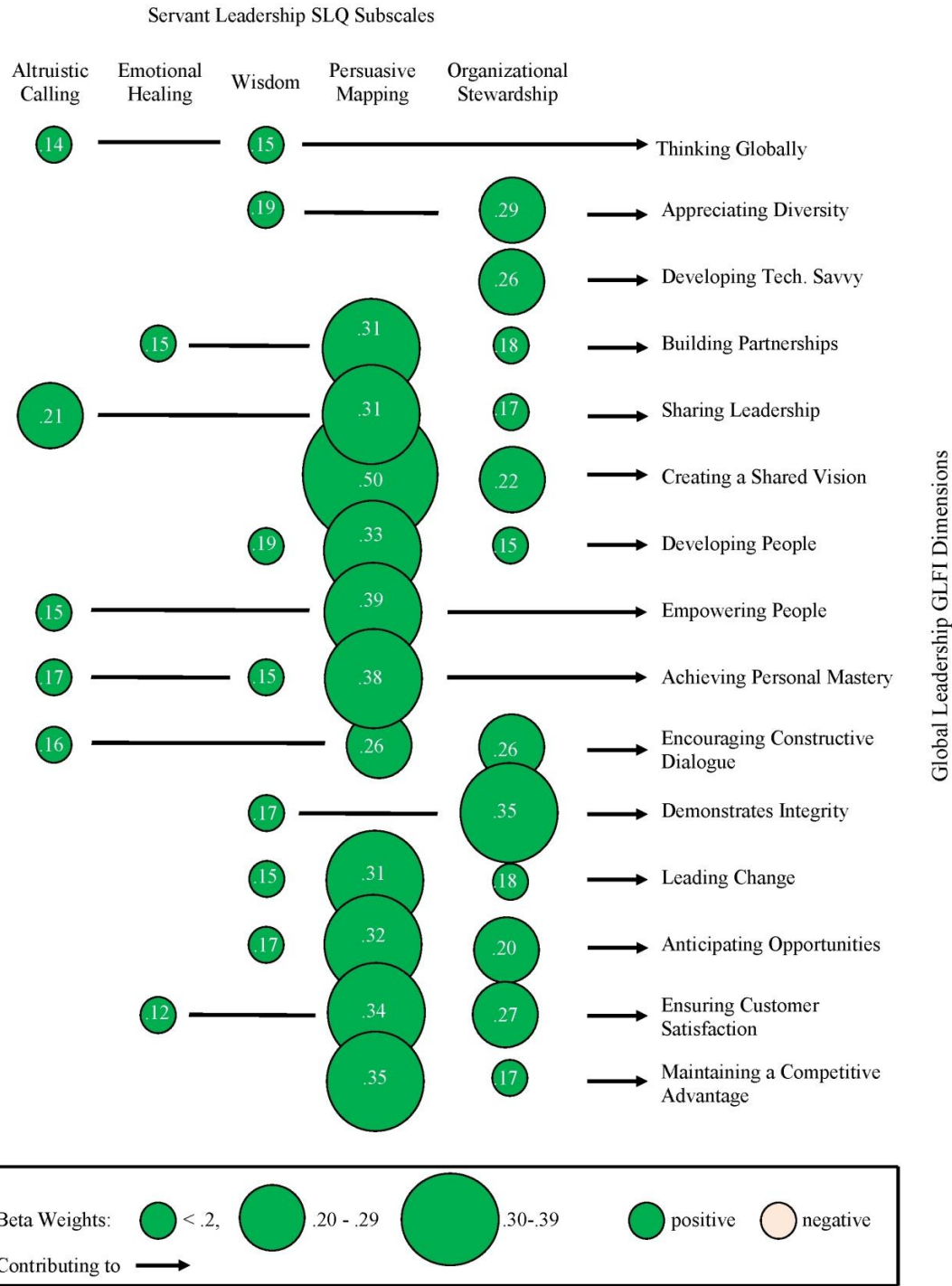


Figure 4.7. Standardized beta weights of SLQ subscales on individual GLFI dimensions.

### Hypothesis 3

- H3<sub>0</sub>: There is no statistically significant difference in the strength of the correlative relationship between servant leadership and global leadership, when segmented by demographic factors that include a leader's leadership position, years in a leadership position, duration with an organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or services the organizations sells abroad, number of countries the organization does business with, leader's gender, age, level of education, or race.
- H3<sub>1</sub>: There is a statistically significant difference in the strength of the correlative relationship between servant leadership and global leadership, when segmented by demographic factors that include a leader's leadership position, years in a leadership position, duration with an organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or services sells abroad, number of countries the organization does business with, leader's gender, age, level of education, or race.

**Leadership position.** Pearson product-moment correlation coefficients were computed to assess the relationship between the composite SLQ and the composite GLFI scores among leaders' leadership positions according to the leadership position variable. Table 4.30 represents the individual correlation coefficients by leadership position. The relationships were determined to be statistically significant within all

groups of this category at  $p < .01$ , except the “other” group that showed no statistically significant correlation.

Table 4.30

*Correlations between Composite SLQ Score and Composite GLFI Score by Leader's Leadership Position*

| Control Variable    | Category                    |                                       | SLQ/GLFI Correlation  |
|---------------------|-----------------------------|---------------------------------------|-----------------------|
| Leadership Position | President, CEO              | Pearson Corr.<br>Sig. (2-tailed)<br>N | .757**<br><.01<br>70  |
|                     | Executive, COO, CFO, VP     | Pearson Corr.<br>Sig. (2-tailed)<br>N | .753**<br><.01<br>139 |
|                     | Director, Senior Management | Pearson Corr.<br>Sig. (2-tailed)<br>N | .624**<br><.01<br>117 |
|                     | Middle Management           | Pearson Corr.<br>Sig. (2-tailed)<br>N | .349**<br><.01<br>68  |
|                     | Other                       | Pearson Corr.<br>Sig. (2-tailed)<br>N | .243<br>.317<br>19    |

*Note.* \*\* Correlation is statistically significant at  $p < .01$

The Pearson product-moment partial correlation coefficient showed that the composite SLQ and the composite GLFI scores statistically significantly correlated when partialling out the effect of the leadership position,  $r_{Leadership\ Position} (410) = .62, p < .01$ . The test for equality of independent correlation coefficients with Fisher's  $r$ -to- $z$  transformations (W. L. Hays, 1963) determined a statistically significant difference among the correlations coefficients with  $\chi^2 (3, N = 394) = 19.67, p < .01$ . The “other”

leadership position group was excluded from this analysis due to its non-significant correlation coefficient. The results of post hoc pair-wise testing of equality of correlation coefficients are presented in Table 4.31. After applying the Bonferroni (1936) correction method over the six possible combinations of statistically significant correlations and testing at  $p < .0083$  ( $.05/6 = .0083$ ), the tests showed statistically significant larger correlation coefficients for leaders in the top two leadership groups when compared to the correlation coefficient for leaders in middle management positions.

Table 4.31

*Pair-wise Testing of Equality of Correlation Coefficients across Leader's Leadership Position*

| Leader's Leadership Position   |                 | 1     | 2     | 3     | 4     | 5 |
|--------------------------------|-----------------|-------|-------|-------|-------|---|
| 1. President, CEO              | <i>z</i>        | 0     |       |       |       |   |
|                                | Sig. (2-tailed) | 1     |       |       |       |   |
| 2. Executive, COO, CFO, VP     | <i>z</i>        | .06   | 0     |       |       |   |
|                                | Sig. (2-tailed) | .95   | 1     |       |       |   |
| 3. Director, Senior Management | <i>z</i>        | 1.67  | 1.96  | 0     |       |   |
|                                | Sig. (2-tailed) | .09   | .05   | 1     |       |   |
| 4. Middle Management           | <i>z</i>        | 3.59* | 4.08* | 2.36  | 0     |   |
|                                | Sig. (2-tailed) | <.01  | <.01  | .02   | 1     |   |
| 5. Other                       | <i>z</i>        |       |       |       |       | 0 |
|                                | Sig. (2-tailed) | excl. | excl. | excl. | excl. | 1 |

*Note.* \* Correlation statistically significant at  $p < .0083$  ( $.05/6 = .0083$ )

Figures 4.8 and 4.9 illustrate the scatter plots of the composite SLQ and composite GLFI by leader’s leadership position. These confirm a closer alignment of the data points with the depicted regression line for higher leadership positions. In addition, the slopes of the regression lines of the servant and global leadership association seemed to flatten for lower leadership positions, indicating overall lower composite GLFI scores when SLQ scores held stable for lower leadership positions. This tendency was further analyzed in post hoc MANOVA and ANOVAs.

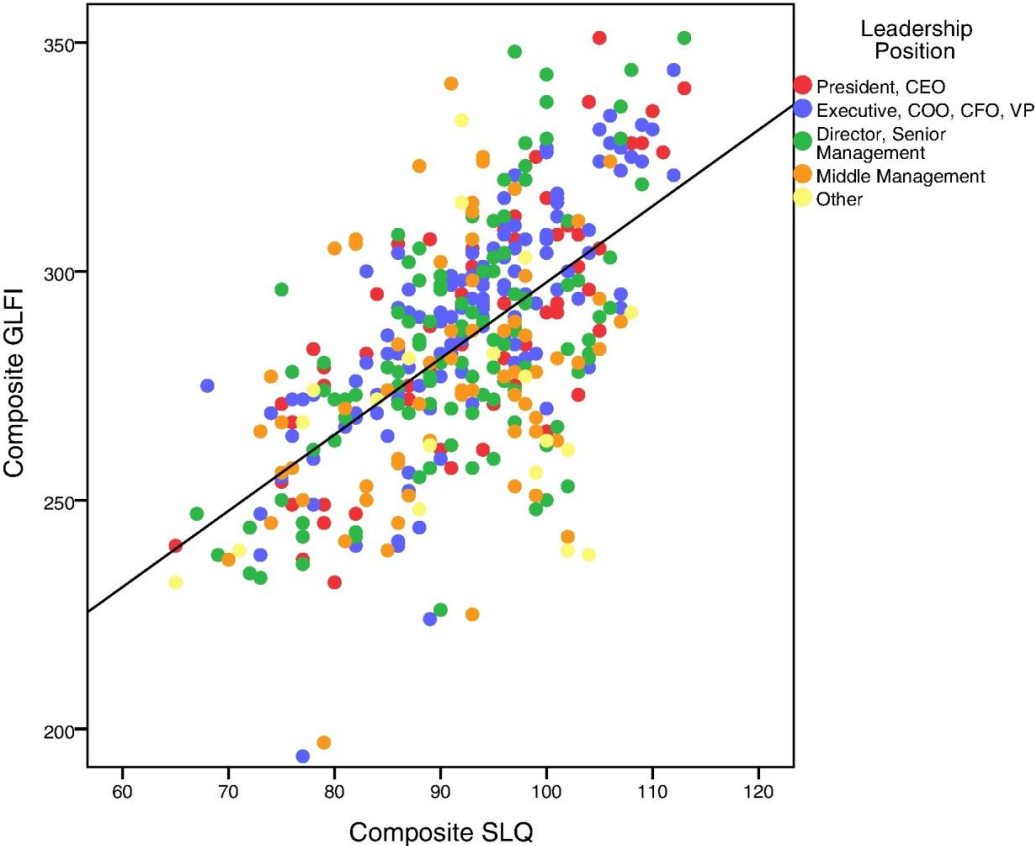


Figure 4.8. Scatter plot of composite SLQ and GLFI scores by leader’s leadership position.



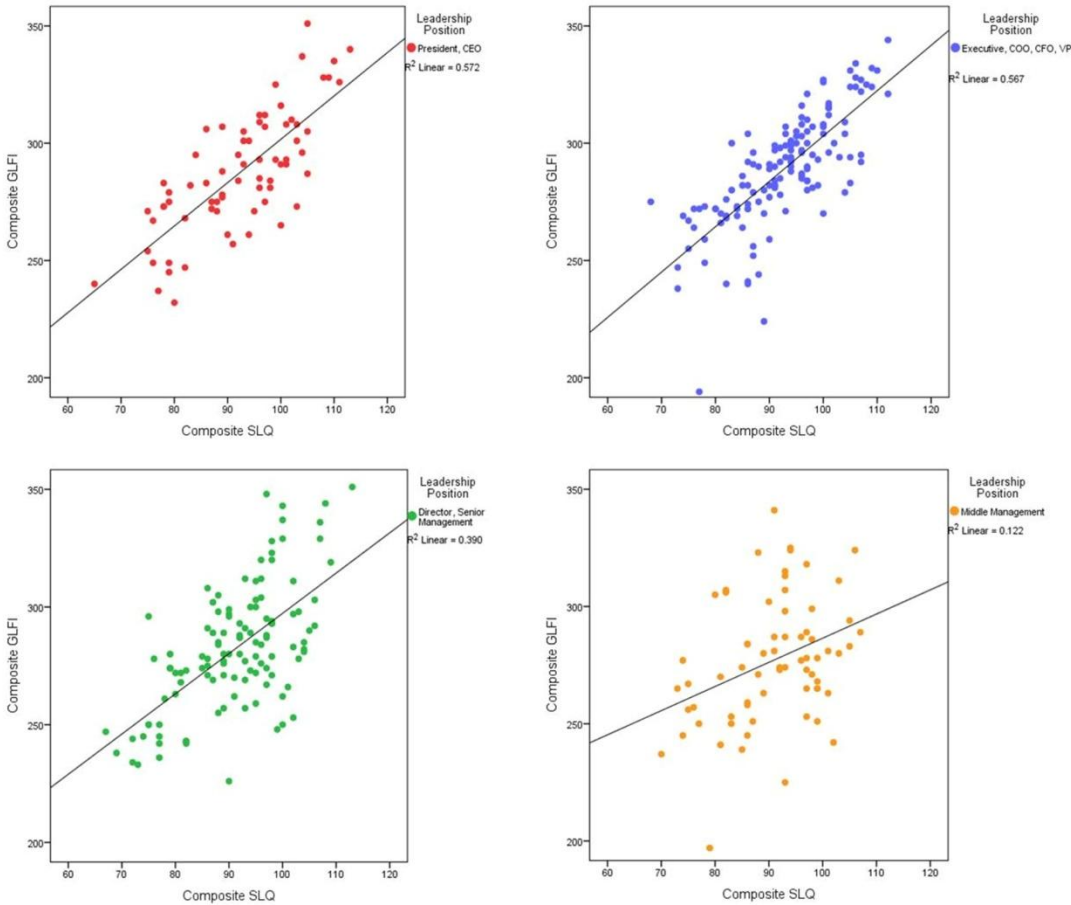


Figure 4.9. Scatter plots of composite SLQ and GLFI scores for individual groups of leader’s leadership position.

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of the leadership position on the two dependent variables, the composite servant leadership SLQ score and the composite global leadership GLFI score. A statistically significant difference was found among the leadership positions on the dependent measures, Wilks’s  $\Lambda = .95$ ,  $F(8, 814) = 2.51$ ,  $p = .011$ . However, the multivariate  $\eta^2$  based on Wilks’s  $\Lambda$  was weak with .02.

Post hoc ANOVAs were conducted as follow-up tests to the MANOVA.

Applying the Bonferroni (1936) correction method, each ANOVA was tested at  $p < .01$  ( $.05/5 = .01$ ). The first ANOVA revealed no statistically significant relationship between the leader’s leadership position and the composite SLQ scores  $F(4,408) = .68, p = .61$ . Figure 4.10 illustrates the box plots of the composite SLQ scores based on the leader’s leadership position.

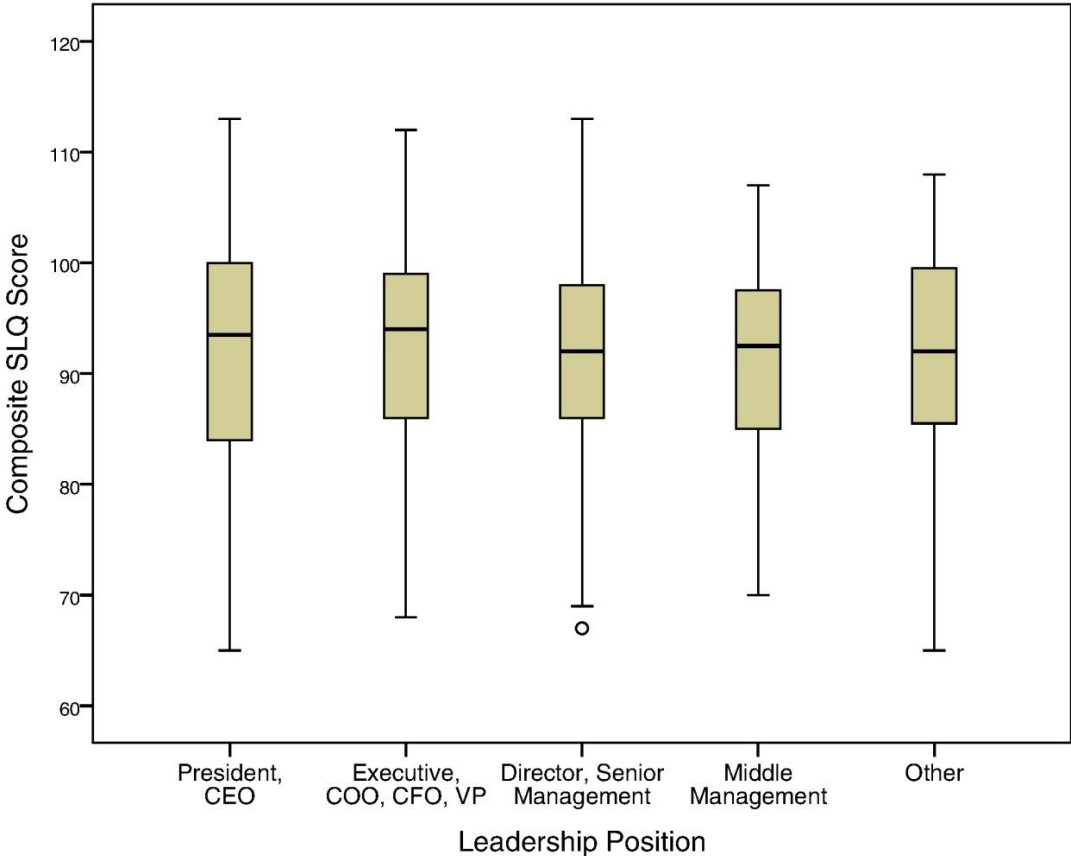


Figure 4.10. Box plot matrix of composite SLQ scores across leader’s leadership position.

The second ANOVA revealed a statistically significant relationship between the leadership position and the composite GLFI scores  $F(4,408) = 4.41, p < .01$  with a small to medium effect size with  $\eta^2 = .04$ . The leader's leadership position accounted for 4% of the variance of the dependent variable, the leader's composite GLFI scores. With the Levene's test confirming equality of error variances across groups with the composite GLFI score as dependent variable, a follow up Tukey *HSD* test was conducted. The Tukey *HSD* test indicated greater GLFI means for the executive, COO, CFO, and VP leadership position compared to the GLFI means for middle management and other. It supports the tendency of the aforementioned flattening of the regressions lines for lower leadership positions. However, the differences of the GLFI means across the leadership positions variable did not prove statistically significant after applying the Bonferroni (1936) correction and testing the composite GLFI scores at  $p < .01$ . Figure 4.11 illustrates the box plots of the composite GLFI scores based on leader's leadership position.

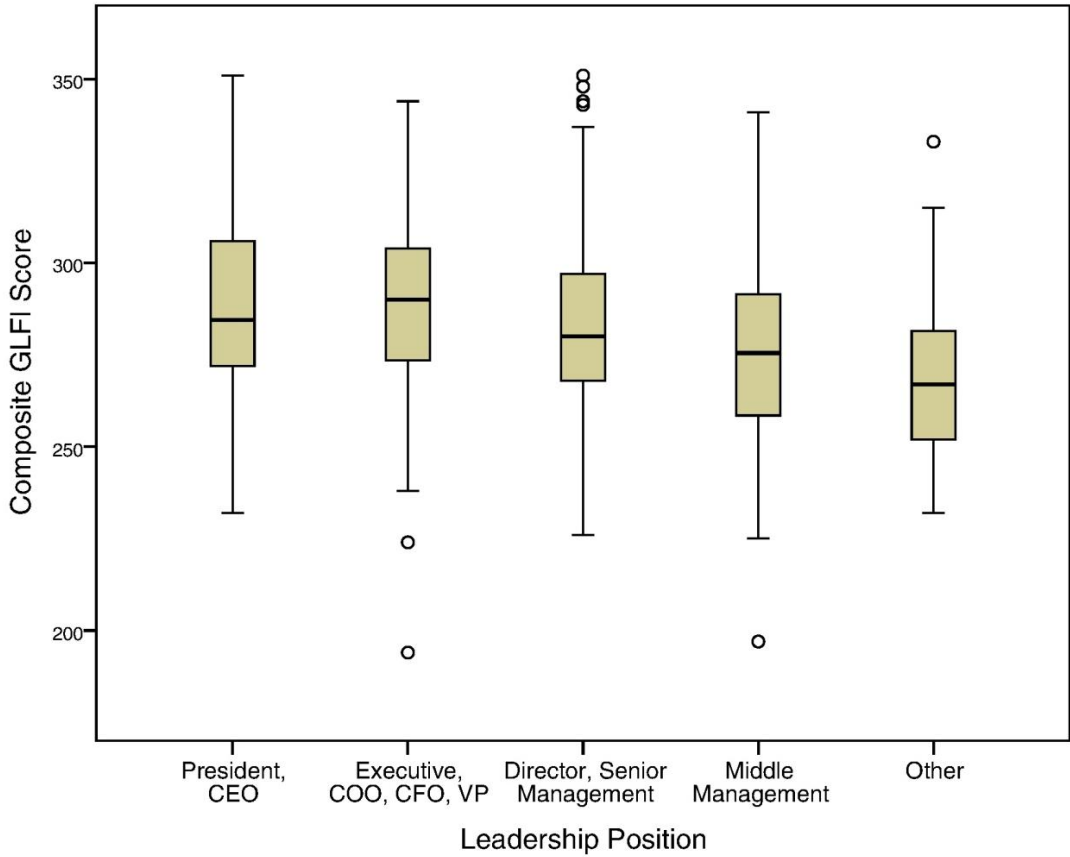


Figure 4.11. Box plot matrix of composite GLFI scores across leader's leadership position.

**Leader's years in leadership position.** Pearson product-moment correlation coefficients were computed to assess the relationship between the composite SLQ and the composite GLFI scores among the years leaders held their current leadership position according to the years in position control variable. Table 4.32 presents the individual correlation coefficients. The correlative relationships were determined statistically significant for each group at  $p < .01$ , independent of the years the leader held the leadership position.

Table 4.32

*Correlations between Composite SLQ Score and Composite GLFI Score by Leader's Years in Leadership Position*

| Control Variable             | Category         |                                       | SLQ/GLFI Correlation  |
|------------------------------|------------------|---------------------------------------|-----------------------|
| Years in Leadership Position | 10 years or more | Pearson Corr.<br>Sig. (2-tailed)<br>N | .725**<br><.01<br>67  |
|                              | 5-9 years        | Pearson Corr.<br>Sig. (2-tailed)<br>N | .699**<br><.01<br>149 |
|                              | 1-4 years        | Pearson Corr.<br>Sig. (2-tailed)<br>N | .550**<br><.01<br>154 |
|                              | Less than 1 year | Pearson Corr.<br>Sig. (2-tailed)<br>N | .451**<br><.01<br>43  |

Note. \*\* Correlation is statistically significant at  $p < .01$

The Pearson product-moment partial correlation coefficient between the composite SLQ and the composite GLFI scores, when holding constant the effect of leaders' years in leadership position, showed a statistically significant relationship with  $r_{\text{Years in Leadership Position}}(410) = .62, p < .01$ . The test for equality of independent correlation coefficients based on Fisher's r-to-z transformations (W. L. Hays, 1963) determined a statistically significant difference among the correlations coefficients with  $\chi^2(3, N = 413) = 9.14, p < .05$ . The results of these tests are presented in Table 4.33, indicated that, when both top groups are combined, leaders holding their leadership position for five or more years demonstrated greater correlation coefficients than leaders with four years or fewer in their position. However, this finding was not

statistically significant after applying the Bonferroni (1936) correction method and testing at  $p < .0083$  ( $.05/6 = .0083$ ).

Table 4.33

*Pair-wise Testing of Equality of Correlation Coefficients across Leader's Years in Position*

| Leader's Years in Position |                 | 1    | 2    | 3   | 4 |
|----------------------------|-----------------|------|------|-----|---|
| 1. 10 years or more        | <i>z</i>        | 0    |      |     |   |
|                            | Sig. (2-tailed) | 1    |      |     |   |
| 2. 5-9 years               | <i>z</i>        | .35  | 0    |     |   |
|                            | Sig. (2-tailed) | .73  | 1    |     |   |
| 3. 1-4 years               | <i>z</i>        | 2.01 | 2.13 | 0   |   |
|                            | Sig. (2-tailed) | .04  | .03  | 1   |   |
| 4. Less than 1 year        | <i>z</i>        | 2.14 | 2.13 | .75 | 0 |
|                            | Sig. (2-tailed) | .03  | .03  | .46 | 1 |

*Note.* No correlation statistically significant at  $p < .0083$  ( $.05/6 = .0083$ )

Figures 4.12 and 4.13 illustrate the scatter plots of the composite SLQ and composite GLFI by leader's years in leadership position. A visual inspection and comparison of the individual scatter plots seems to indicate aforementioned greater correlation coefficients for leaders with five or more years in the leadership position than leaders with four years or fewer in their position. Although this trend was not statistically significant.

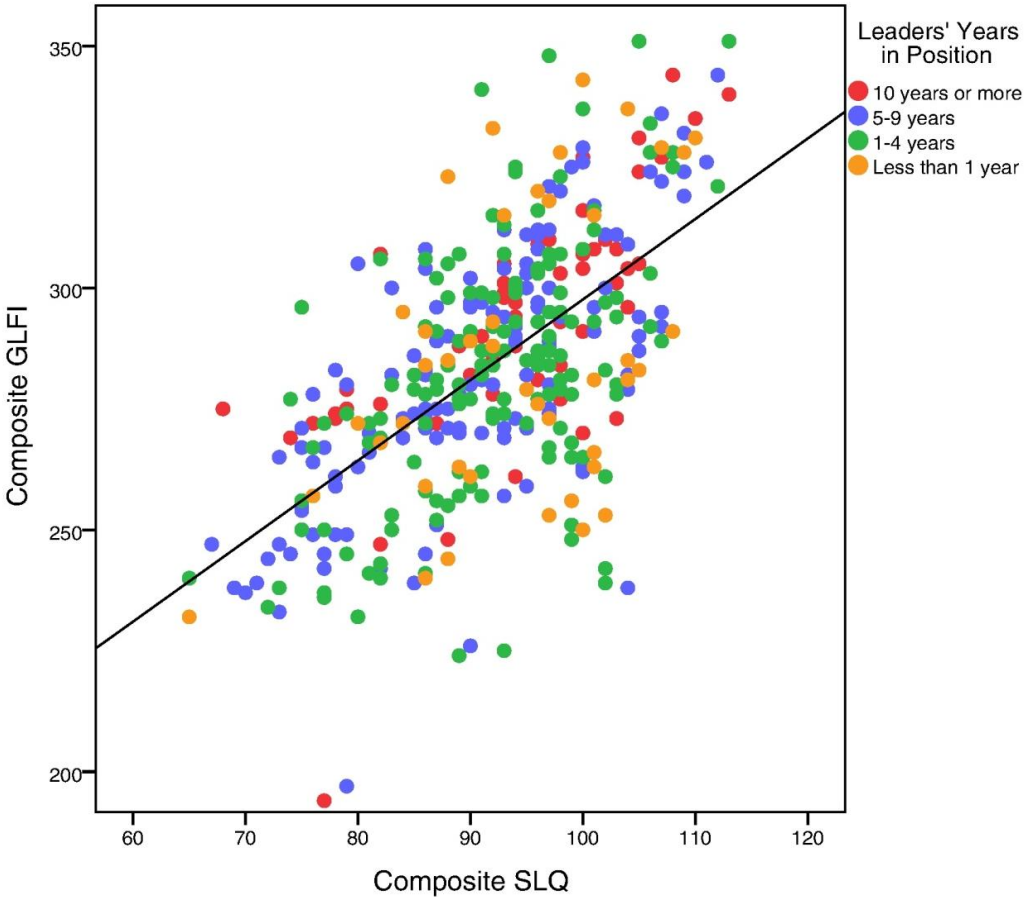


Figure 4.12. Scatter plot of composite SLQ and GLFI scores by leader’s years in leadership position.

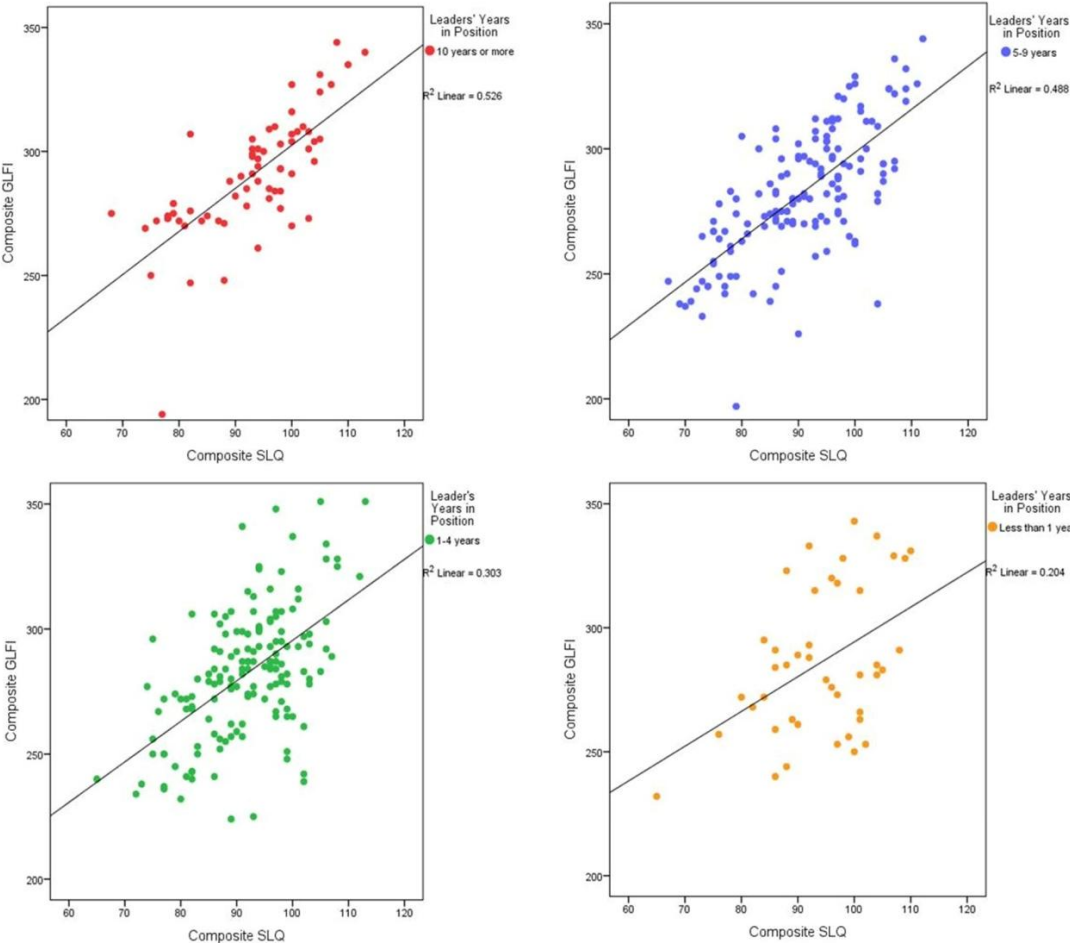


Figure 4.13. Scatter plots of composite SLQ and GLFI scores for individual groups of leader’s years in leadership position.

A MANOVA was conducted to determine the effect of a leader’s years in the position on the two dependent variables, the composite servant leadership SLQ score and the composite global leadership GLFI score. No statistically significant difference was found among the leader’s years in the position on the dependent measures, with Wilks’s  $\Lambda = .98, F(6, 816) = 1.57, p = .15$ .



Post hoc ANOVAs as follow-up tests to the MANOVA were conducted to evaluate the relationship between a leader’s years in the leadership position and the score on the composite SLQ and composite GLFI instruments. After applying the Bonferroni (1936) correction method, each ANOVA was tested at  $p < .0125$  ( $.05/4 = .0125$ ). The first ANOVA revealed no statistically significant relationship between a leader’s years in the leadership position and the composite SLQ scores with  $F(3,409) = 1.62, p = .18$ . Figure 4.14 presents the box plots of the composite SLQ scores based on leader’s years in the leadership position.

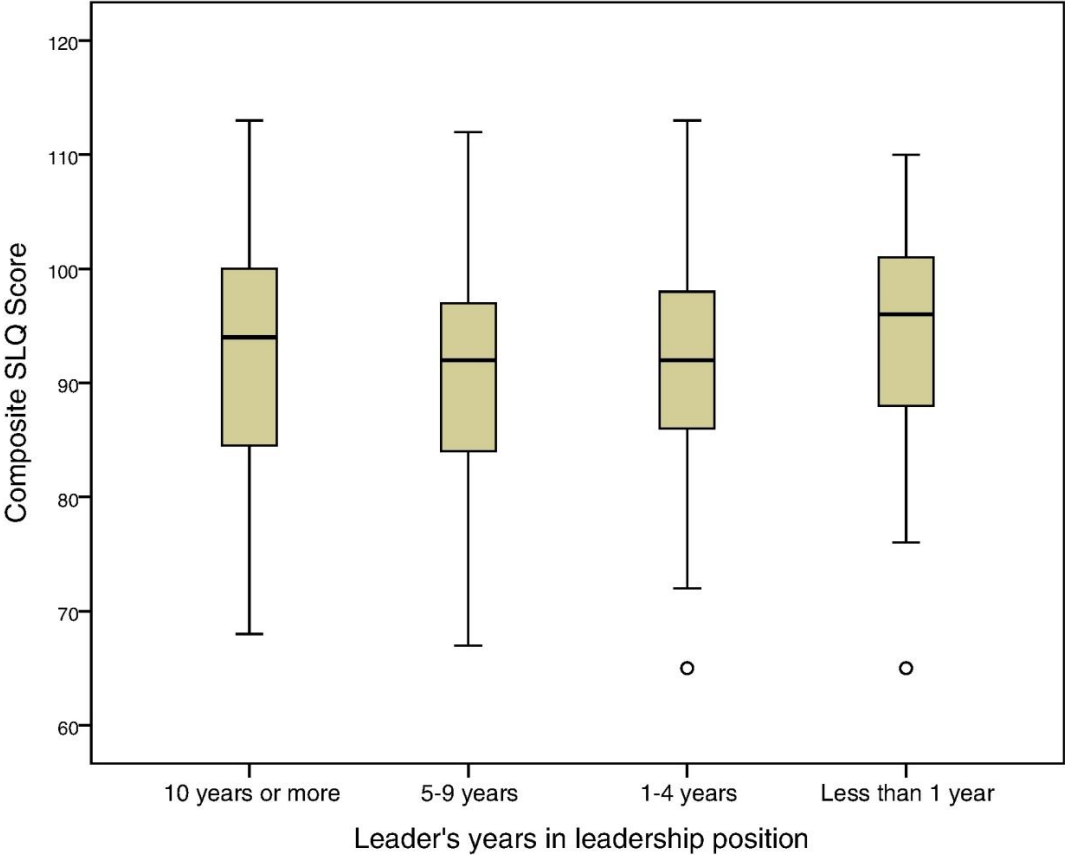


Figure 4.14. Box plot matrix of composite SLQ scores across leader’s years in leadership position.

A second ANOVA determined no statistically significant relationship between leader’s years in the leadership position and the composite GLFI scores  $F(3,409) = 1.60, p = .19$ . Figure 4.15 shows the box plots of the composite GLFI scores based on leader’s years in the leadership position. The Levene’s test confirmed the equality of error variances for both ANOVAs.

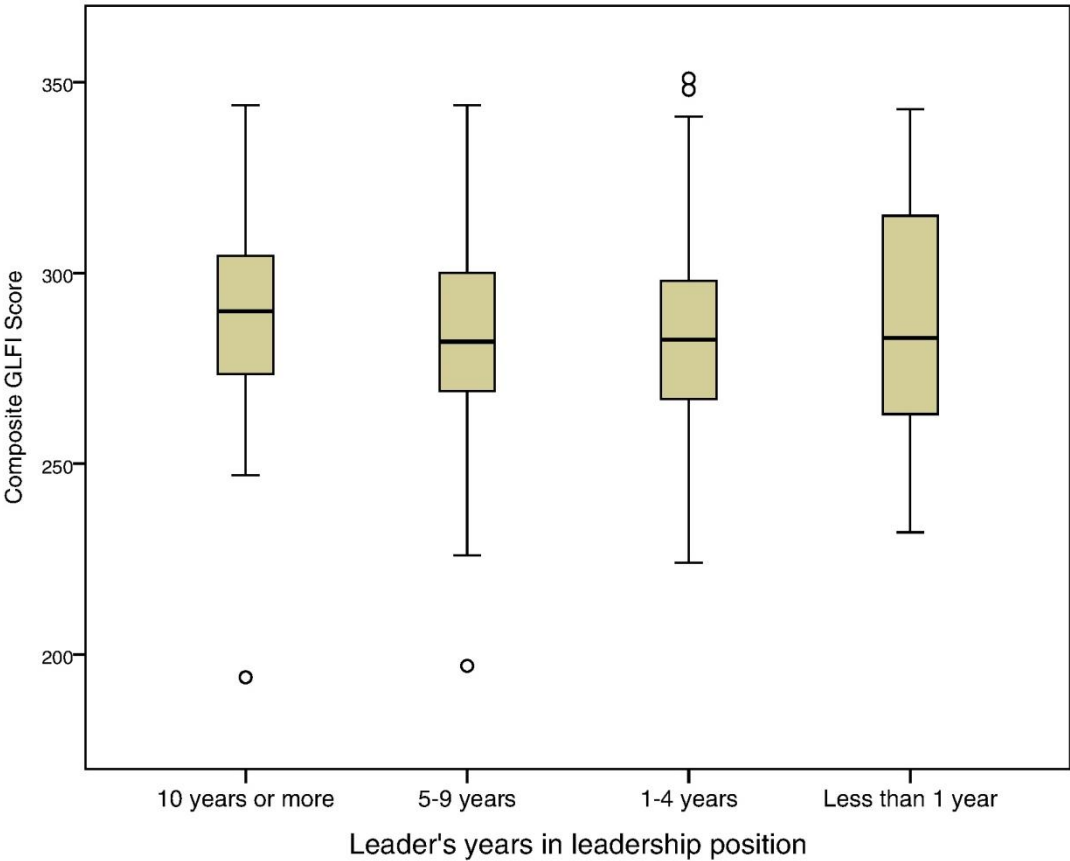


Figure 4.15. Box plot matrix of composite GLFI scores across leader’s years in leadership position.

**Leader's years with organization.** Pearson product-moment correlation coefficients were computed to assess the relationship between the composite SLQ and the composite GLFI scores across the years the leaders were employed with the organization according to the years with organization scale. Table 4.34 presents the individual correlation coefficients. The relationships were determined to be significant within all groups of this category at  $p < .01$ , independent of the years a leader spent with the organization.

Table 4.34

*Correlations between Composite SLQ Score and Composite GLFI Score by Leader's Years with Organization*

| Control Variable                 | Category         |                                       | SLQ/GLFI Correlation  |
|----------------------------------|------------------|---------------------------------------|-----------------------|
| Leader's Years with Organization | 10 years or more | Pearson Corr.<br>Sig. (2-tailed)<br>N | .615**<br><.01<br>136 |
|                                  | 5-9 years        | Pearson Corr.<br>Sig. (2-tailed)<br>N | .654**<br><.01<br>146 |
|                                  | 1-4 years        | Pearson Corr.<br>Sig. (2-tailed)<br>N | .540**<br><.01<br>99  |
|                                  | Less than 1 year | Pearson Corr.<br>Sig. (2-tailed)<br>N | .619**<br><.01<br>32  |

*Note.* \*\* Correlation is statistically significant at  $p < .01$

The Pearson product-moment partial correlation coefficient between the composite SLQ score and the composite GLFI score, partialling out the seniority

effect as identified with the leader's years with organization control variable, was determined statistically significant with  $r_{\text{Years in Organization}}(410) = .61, p < .01$ . The test for equality of independent correlation coefficients based on Fisher's r-to-z transformations (W. L. Hays, 1963) determined no statistically significant difference among the correlations coefficients with  $\chi^2(3, N = 413) = 1.83, p = .61$ . The results of post hoc pair-wise testing of equality of correlation coefficients are presented in Table 4.35. These confirmed no statistically significant difference in the correlations among leader's years with organization after applying the Bonferroni (1936) correction method and testing at  $p < .0083 (.05/6 = .0083)$ .

Table 4.35

*Pair-wise Testing of Equality of Correlation Coefficients across Leader's Years with Organization*

| Leader's Years with Organization |                 | 1    | 2    | 3    | 4 |
|----------------------------------|-----------------|------|------|------|---|
| 1. 10 years or more              | <i>z</i>        | 0    |      |      |   |
|                                  | Sig. (2-tailed) | 1    |      |      |   |
| 2. 5-9 years                     | <i>z</i>        | -.54 | 0    |      |   |
|                                  | Sig. (2-tailed) | .59  | 1    |      |   |
| 3. 1-4 years                     | <i>z</i>        | .84  | 1.35 | 0    |   |
|                                  | Sig. (2-tailed) | .40  | .18  | 1    |   |
| 4. Less than 1 year              | <i>z</i>        | -.03 | .29  | -.56 | 0 |
|                                  | Sig. (2-tailed) | .98  | .77  | .57  | 1 |

Note: No correlation statistically significant at  $p < .0083 (.05/6 = .0083)$

A MANOVA was conducted to determine the effect of a leader's seniority within the company as measured in years with the organization on the two dependent

variables, the composite servant leadership SLQ score, and the composite global leadership GLFI score. A statistically significant difference was found among the different years of a leader with the organization on the dependent measures, Wilks's  $\Lambda = .97$ ,  $F(6, 816) = 2.38$ ,  $p = .028$ . However, the multivariate  $\eta^2$  based on Wilks's  $\Lambda$  was weak with .02.

Post hoc ANOVAs as follow-up tests to the MANOVA were conducted to evaluate the relationship between a leader's seniority as measured in years with the organization and the scores on the composite SLQ and composite GLFI instruments. The first ANOVA revealed a statistically significant relationship between a leader's years with the organization and the composite SLQ scores  $F(3,409) = 3.35$ ,  $p < .05$  with a small effect size, as assessed with  $\eta^2 = .02$ . A leader's years with the organization accounted for 2% of the variance of the dependent variable, the leader's SLQ. With the Levene's test confirming the equality of error variances for the first ANOVA, a follow-up Tukey *HSD* test was conducted. However, the test did not reveal any significant difference in the means of the composite SLQ scores among leaders with different years with the organization after applying the Bonferroni (1936) correction method and testing at  $p < .0125$  ( $.05/4 = .0125$ ). Figure 4.16 presents the box plots.

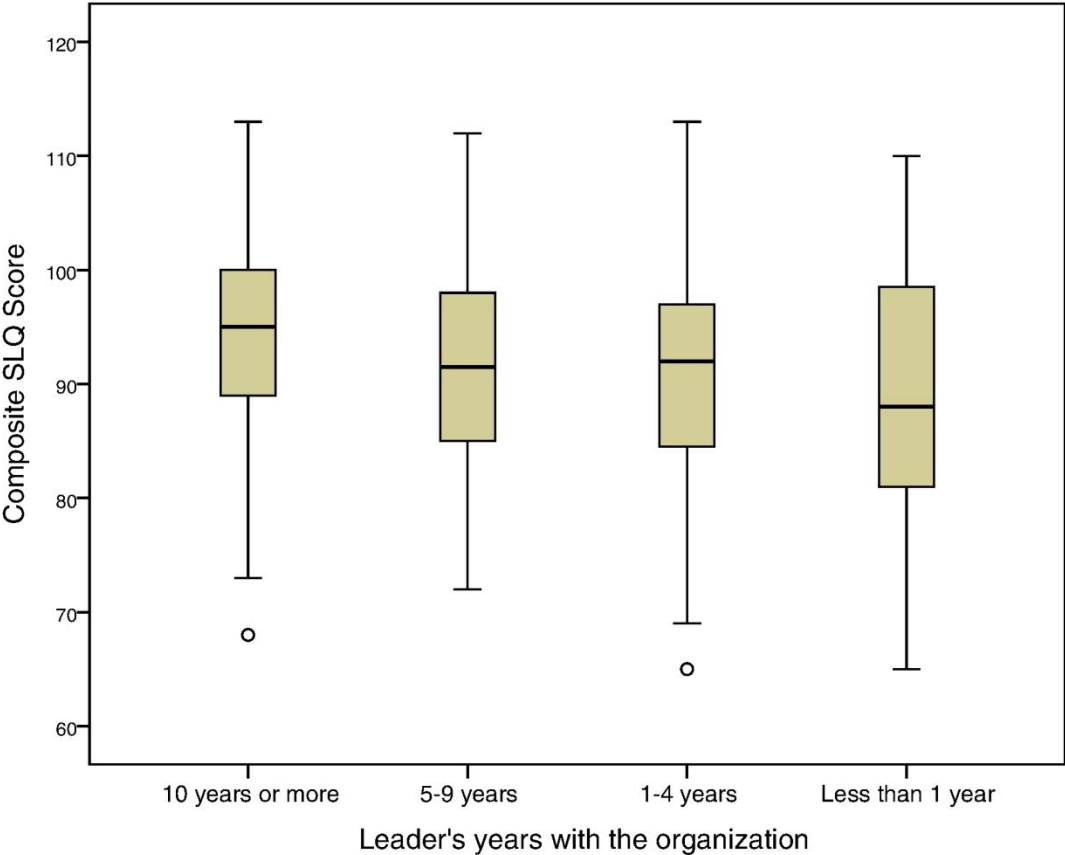


Figure 4.16. Box plot matrix of composite SLQ scores across leader's years with the organization.

A second ANOVA determined a statistically significant relationship between leader's years in organization and the composite GLFI scores  $F(3,409) = 4.01, p < .01$  with a small effect size, as assessed with  $\eta^2 = .03$ . Leaders' years with the organization accounted for 3% of the variance of the dependent variable, leaders' composite GLFI score. With the Levene's test determining inequality of the composite GLFI scores across groups, a post hoc Dunnett's *C* test was conducted and revealed no statistically significant relationships between groups of the years in

position category and the composite GLFI scores after applying the Bonferroni (1936) correction and testing at  $p < .0125$  ( $.05/4 = .0125$ ). Figure 4.17 presents the box plots.

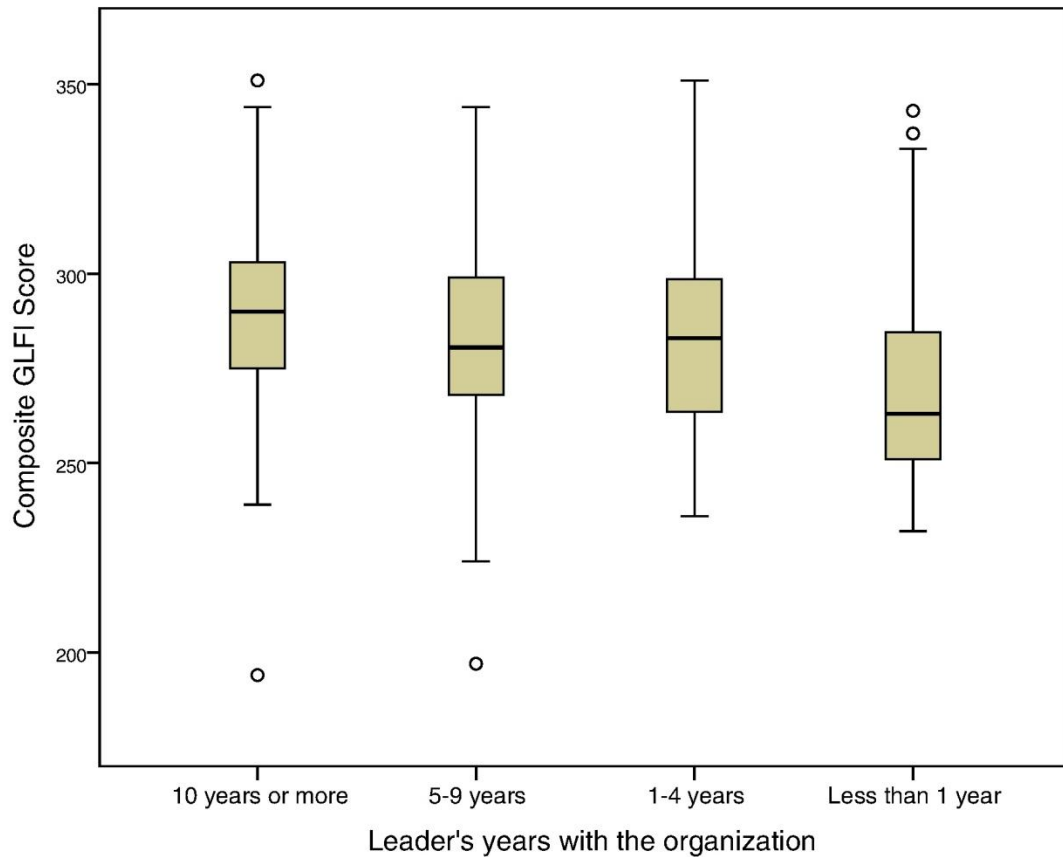


Figure 4.17. Box plot matrix of composite GLFI scores across leader's years with the organization.

**For-profit and not-for-profit-organization.** The relationship between the composite SLQ and the composite GLFI scores was computed as statistically significant for both, for-profit Organization with  $r_{\text{For-Profit Organization}}(302) = .635, p < .01$  and not-for-profit organizations with  $r_{\text{Not-For-Profit Organization}}(107) = .600, p < .01$ . The test for equality of independent correlation coefficients based on Fisher's  $r$ -to- $z$

transformations (W. L. Hays, 1963) determined no statistically significant difference among both correlations coefficients with  $z = .58, p = .56$ .

An independent-samples  $t$  test was conducted to compare the difference of means for the composite SLQ and the composite GLFI score for for-profit and not-for-profit organizations. The Levene's test determined equal variances for both the SLQ and the GLFI composite scores. The  $t$  tests for equal variances revealed a statistically significant difference of the mean of the composite SLQ scores with  $t(411) = -2.71, p < .01$  with a small effect size of  $\eta^2 = .02$ . Whether a leader is employed in a for-profit or a not-for-profit organization accounted for 2% of the variance of the dependent variable, the leaders' composite SLQ scores. Leaders employed in not-for-profit organizations ( $M = 93.94, SD = 9.81$ ) scored on average slightly greater means on the composite SLQ score than leaders employed in for-profit organizations ( $M = 91.03, SD = 9.56$ ). There was no statistically significant difference between the means of the composite GLFI scores for leaders employed in for-profit and not-for-profit organizations. Figure 4.18 and Figure 4.19 present the box plots for leaders in for-profit and not-for-profit organizations and their composite SLQ and GLFI scores, respectively.



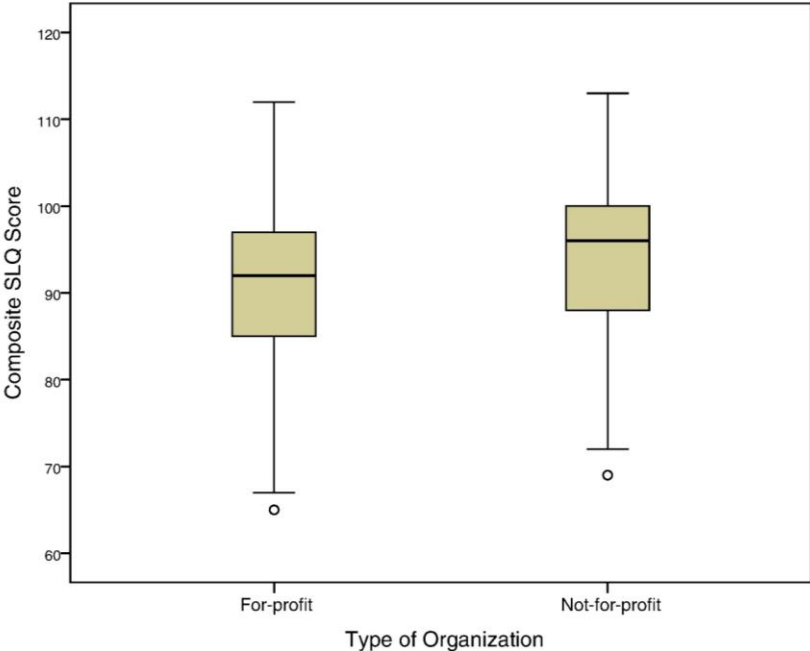


Figure 4.18. Box plot matrix of composite SLQ scores for leaders employed in for-profit and not-for-profit organizations.

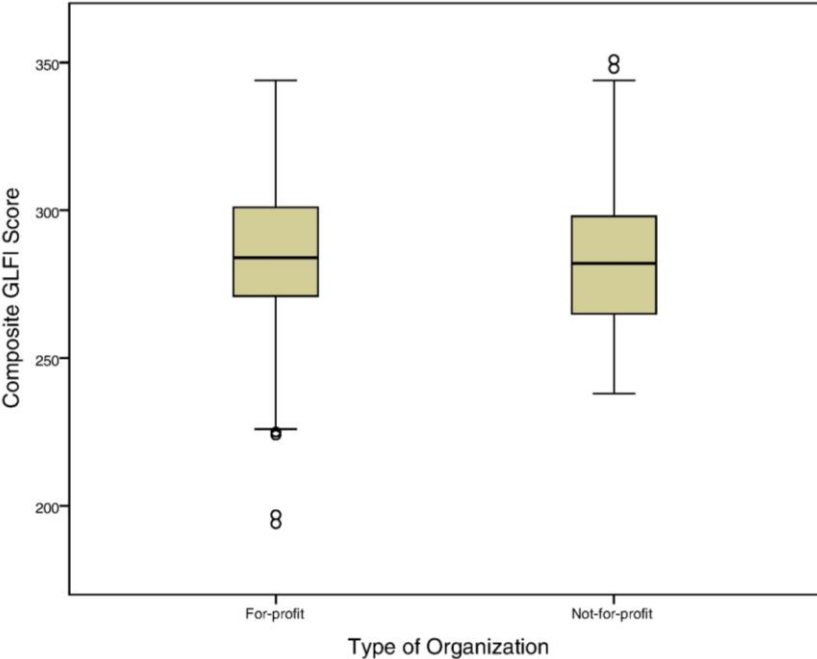


Figure 4.19. Box plot matrix of composite GLFI scores for leaders employed in for-profit and not-for-profit organizations.

**Type of industry.** Pearson product-moment correlation coefficients were computed to assess the relationship between the composite SLQ and the composite GLFI scores among leaders working in organizations in different type of industries. Table 4.36 presents the individual correlation coefficients. The relationships were determined to be significant within all groups of this category at the  $p < .01$  significance level, independent of the type of industry. With  $N_{\text{Mining and Farming}} = 3$ , there were not enough data points to analyze a meaningful correlative relationship for leaders within the farming and mining group.

Table 4.36

*Correlations between Composite SLQ Score and Composite GLFI Score by Type of Industry of the Leader's Organization*

| Control Variable                          | Category                                  |                                       | SLQ/GLFI Correlation  |
|---|---|---------------------------------------|-----------------------|
| Type of Industry of Leader's Organization | Mining and Farming                        | Pearson Corr.<br>Sig. (2-tailed)<br>N | n/a<br>n/a<br>3       |
|   | Refining, Construction, and Manufacturing | Pearson Corr.<br>Sig. (2-tailed)<br>N | .667**<br><.01<br>119 |
|   | Services and Distribution                 | Pearson Corr.<br>Sig. (2-tailed)<br>N | .621**<br><.01<br>179 |
|   | Research, Design, and Development         | Pearson Corr.<br>Sig. (2-tailed)<br>N | .735**<br><.01<br>22  |
|   | Not-for-profit Activities                 | Pearson Corr.<br>Sig. (2-tailed)<br>N | .594**<br><.01<br>90  |

*Note.* \*\* Correlation is statistically significant at  $p < .01$

The Pearson product-moment partial correlation coefficient, when controlling for the type of industry the leader's organization does business in, determined a statistically significant relationship with  $r_{\text{Type of Industry}}(410) = .63, p < .01$  between the composite SLQ and the GLFI scores. The test for equality of independent correlation coefficients based on Fisher's r-to-z transformations (W. L. Hays, 1963) determined no statistically significant difference among the correlations coefficients with  $\chi^2(3, N = 410) = 1.51, p = .68$ . The results of a post hoc pair-wise testing of equality of correlation coefficients are presented in Table 4.37. There were no statistically significant differences between correlations after applying the Bonferroni (1936) correction method and testing at  $p < .0083$  ( $.05/6 = .0083$ ).

Table 4.37

*Pair-wise Testing of Equality of Correlation Coefficients across Type of Industry of the Leader's Organization*

| Type of Industry of Leader's Organization    |                        | 1     | 2           | 3           | 4           | 5      |
|--|------------------------|-------|-------------|-------------|-------------|--------|
| 1. Mining and Farming                        | $z$<br>Sig. (2-tailed) | excl. |             |             |             |        |
| 2. Refining, Construction, and Manufacturing | $z$<br>Sig. (2-tailed) | excl. | 0<br>1      |             |             |        |
| 3. Services and Distribution                 | $z$<br>Sig. (2-tailed) | excl. | .66<br>.51  | 0<br>1      |             |        |
| 4. Research, Design, and Development         | $z$<br>Sig. (2-tailed) | excl. | -.54<br>.59 | -.88<br>.38 | 0<br>1      |        |
| 5. Not-for-profit Activities                 | $z$<br>Sig. (2-tailed) | excl. | .86<br>.39  | .33<br>.74  | 1.01<br>.31 | 0<br>1 |

*Note.* No correlation statistically significant at  $p < .0083$  ( $.05/6 = .0083$ )

A MANOVA was conducted to determine the effect of the type of industry the leaders' organizations were operating in on the two dependent variables, the composite servant leadership SLQ, and composite global leadership GLFI scores. A statistically significant difference was found among the type of industry on the dependent measures, Wilks's  $\Lambda = .96$ ,  $F(8, 814) = 2.13$ ,  $p = .031$ . However, the multivariate  $\eta^2$  based on Wilks's  $\Lambda$  was weak with .02.

Post hoc ANOVAs as follow-up tests to the MANOVA were conducted to evaluate the relationship between the type of industry the leaders' organizations were operating in and the leaders' scores on the composite SLQ and composite GLFI instruments. Applying the Bonferroni (1936) correction method, each ANOVA was tested the  $p < .01$  ( $.05/5 = .01$ ). The analyses determined no statistically significant relationship between the type of organization and the composite SLQ or the composite GLFI scores. Figure 4.20 and Figure 4.21 present the box plots for leaders employed in organizations within different types of industries and their composite SLQ score and composite GLFI scores, respectively.

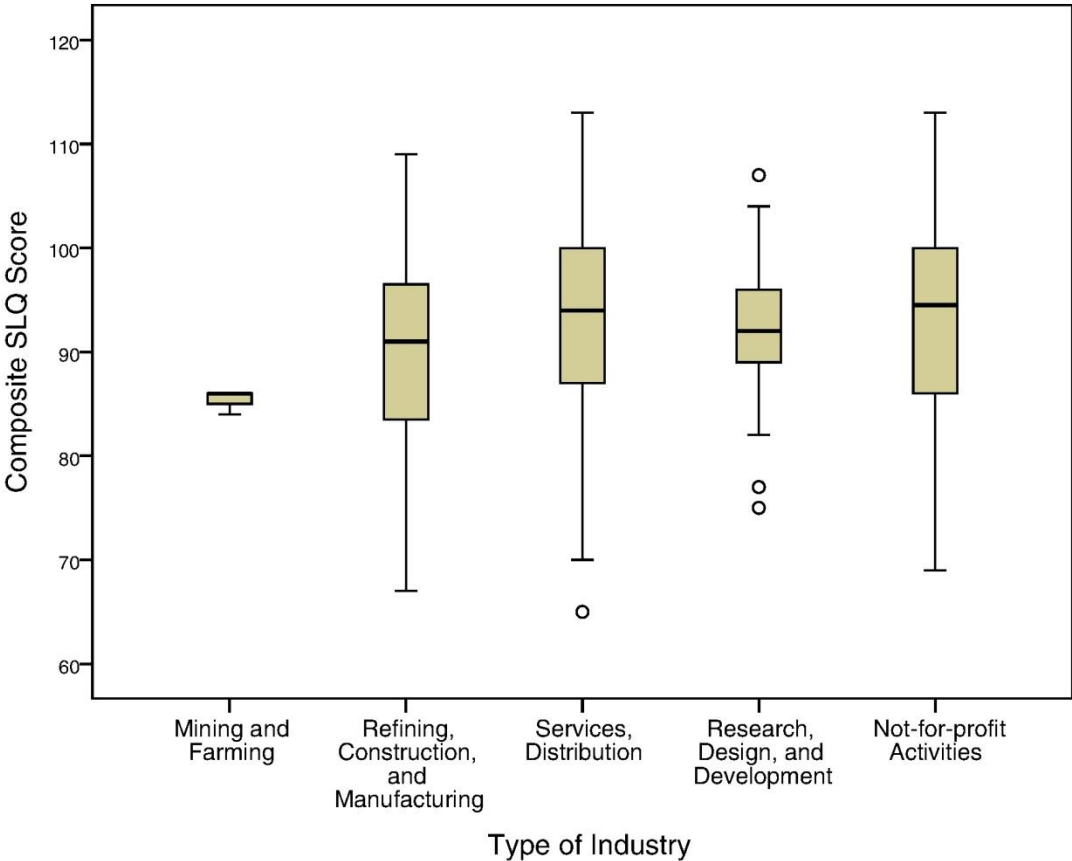
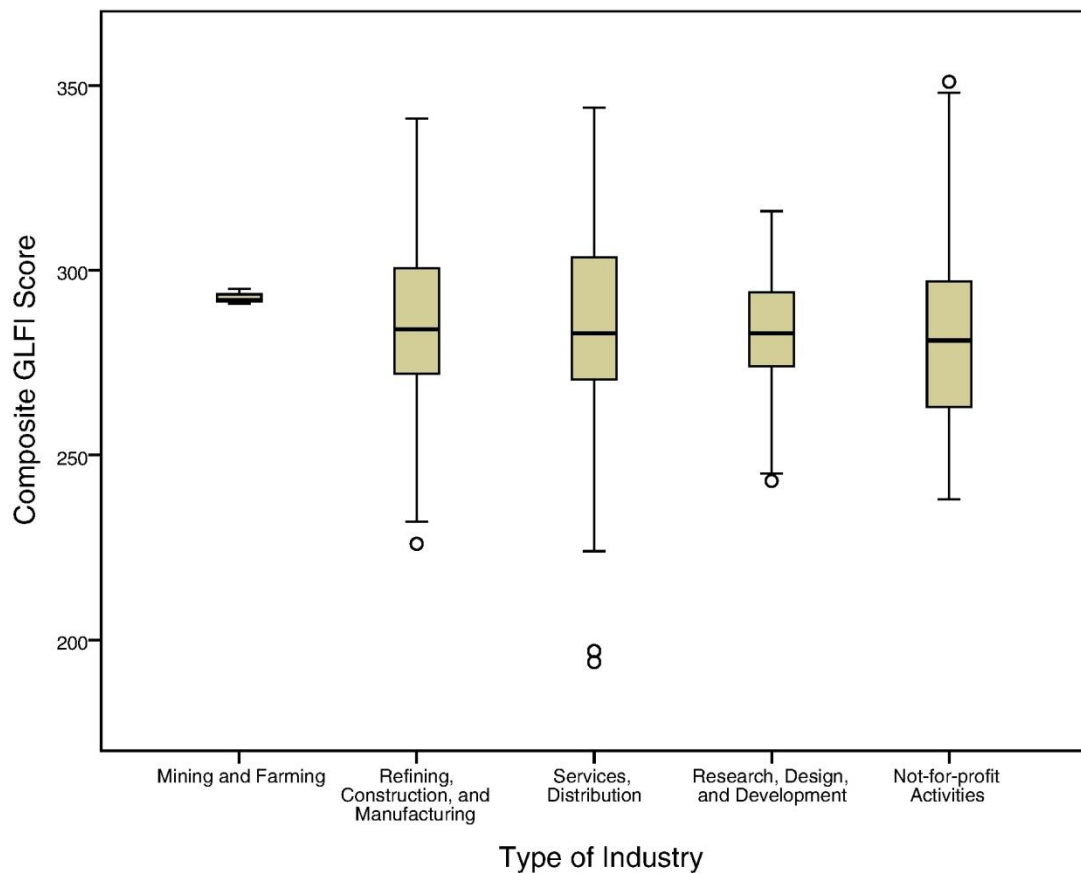


Figure 4.20. Box plot matrix of composite SLQ scores for leaders employed in organizations within different types of industries.



4.21. Box plot matrix of composite GLFI scores for leaders employed in organizations within different types of industries.

**Size of Leader's Organization.** Pearson product-moment correlation coefficients were computed to assess the relationship between the composite SLQ and the composite GLFI scores among leaders in organizations of different sizes as measured by the number of employees. Table 4.38 presents the individual correlation coefficients. The associative relationships were determined to be significant within all groups of this category at  $p < .01$ , independent of the number of employees in a leader's organization.

Table 4.38

*Correlations between Composite SLQ Score and Composite GLFI Score by Number of Employees in Leader's Organization*

| Control Variable                             | Category      |                                       | SLQ/GLFI Correlation  |
|--|---------------|---------------------------------------|-----------------------|
| Number of Employees in Leader's Organization | 500 or more   | Pearson Corr.<br>Sig. (2-tailed)<br>N | .425**<br><.01<br>49  |
|  | 100-499       | Pearson Corr.<br>Sig. (2-tailed)<br>N | .695**<br><.01<br>113 |
|  | 10-99         | Pearson Corr.<br>Sig. (2-tailed)<br>N | .546**<br><.01<br>164 |
|  | Fewer than 10 | Pearson Corr.<br>Sig. (2-tailed)<br>N | .643**<br><.01<br>87  |

*Note.* \*\* Correlation is statistically significant at  $p < .01$

The Pearson product-moment partial correlation coefficient, when controlling for the size of a leader's organization as measured by the number of employees, determined a statistically significant relationship between the composite SLQ and GLFI scores with  $r_{\text{Size of Organization}}(410) = .60, p < .01$ . The test for equality of independent correlation coefficients based on Fisher's r-to-z transformations (W. L. Hays, 1963) determined no statistically significant difference among the correlations coefficients with  $\chi^2(3, N = 413) = 7.07, p = .07$ . The results of the post hoc pair-wise testing of equality of correlation coefficients are presented in Table 4.39. These confirmed the non-existence of any statistically significant differences between

correlations after applying the Bonferroni (1936) correction method and testing at  $p < .0083$  ( $.05/6 = .0083$ ).

Table 4.39

*Pair-wise Testing of Equality of Correlation Coefficients across Number of Employees in Leader's Organization*

| Number of Employees in Leader's Organization |                 | 1     | 2    | 3     | 4 |
|--|-----------------|-------|------|-------|---|
| 1. 500 or more                               | <i>z</i>        | 0     |      |       |   |
|  | Sig. (2-tailed) | 1     |      |       |   |
| 2. 100-499                                   | <i>z</i>        | -2.30 | 0    |       |   |
|  | Sig. (2-tailed) | .02   | 1    |       |   |
| 3. 10-99                                     | <i>z</i>        | -.95  | 1.98 | 0     |   |
|  | Sig. (2-tailed) | .34   | .05  | 1     |   |
| 4. Fewer than 10                             | <i>z</i>        | -1.69 | .65  | -1.12 | 0 |
|  | Sig. (2-tailed) | .09   | .52  | .26   | 1 |

*Note.* No correlation statistically significant at  $p < .0083$  ( $.05/6 = .0083$ )

A MANOVA was conducted to determine the effect of the size of the leaders' organization, specified in number of employees, on the two dependent variables, the composite SLQ and GLFI scores. Statistically significant differences were found among the size of the organization on the dependent measures, Wilks's  $\Lambda = .93$ ,  $F(6, 816) = 4.92$ ,  $p < .001$ . However, the multivariate  $\eta^2$  based on Wilks's  $\Lambda$  was weak with .04.

Post hoc ANOVAs as follow-up tests to the MANOVA were conducted to evaluate the relationship between the size of the leaders' organizations by number of employees and leaders' scores on the composite SLQ and composite GLFI



instruments. Applying the Bonferroni (1936) correction method, each ANOVA was tested at  $p < .0125$  ( $.05/4 = .0125$ ). The first ANOVA revealed a statistically significant relationship between the size of the organization and the composite SLQ score  $F(3, 409) = 6.79, p < .01$  with medium effect size  $\eta^2 = .05$ . The size of the leader's organization as measured with the number of employees accounted for 5% of the leader's composite SLQ score. Because the Levene's test determined inequality of the error variances, a post hoc Dunnett's *C* test was conducted. It determined a statistically significant greater mean on the composite SLQ score for leaders in companies with 100 or more employees, represented by group 500 or more ( $M = 94.55, SD = 6.59$ ) and 100-499 ( $M = 94.25, SD = 9.38$ ), than leaders in organizations with fewer than 10 ( $M = 89.22, SD = 9.70$ ) employees at  $p < .01$ . Figure 4.22 presents the representative box plots.

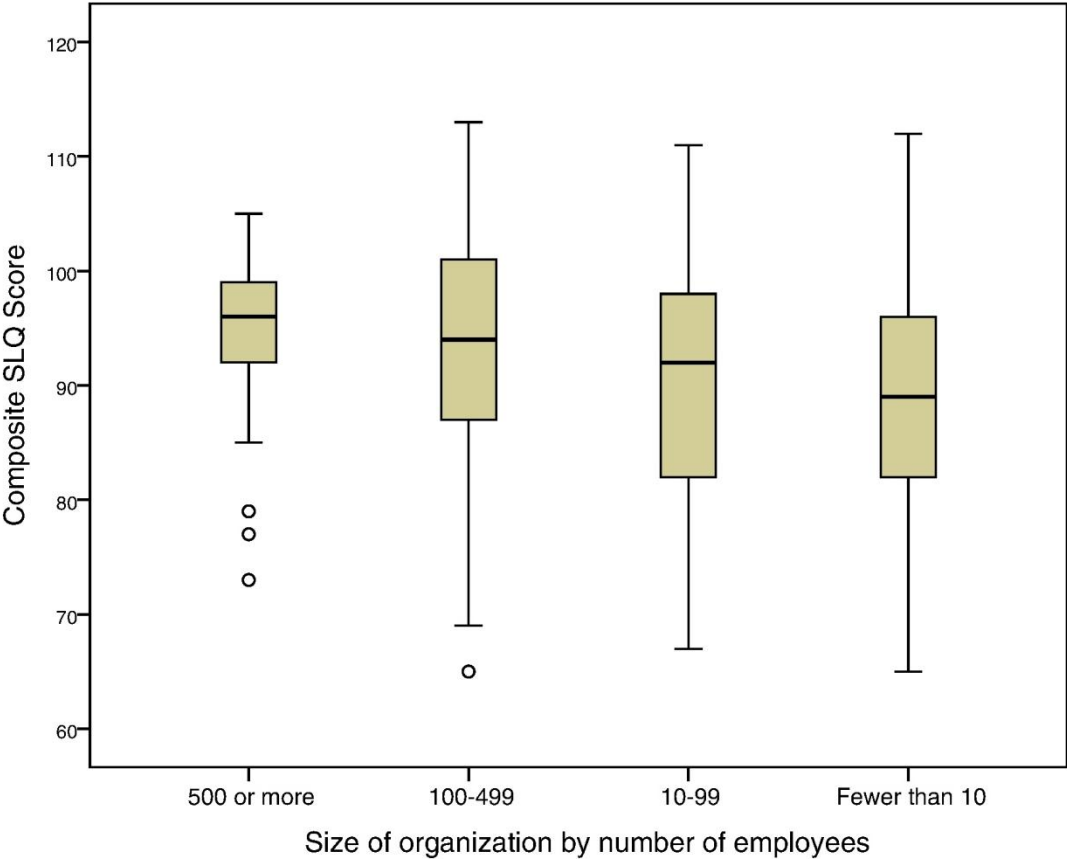


Figure 4.22. Box plot matrix of composite SLQ scores for leaders across different sizes of organizations by number of employees.

The second ANOVA also revealed a statistically significant relationship between the size of the leaders’ organization and leaders’ composite GLFI score  $F(3, 409) = 8.63, p < .01$  with a medium effect size  $\eta^2 = .06$ . The size of the organization as measured in the number of employees accounted for 6% of the leader's composite GLFI score. With the Levene’s test determining equality of the error variances for this ANOVA, a Tukey *HSD* test was conducted. It established that leaders working in organizations with 100-499 employees ( $M = 292.48, SD = 27.14$ ) scored statistically

significant greater means on the composite GLFI instrument than leaders working in organizations with fewer than 100 employees, represented by group 10-99 ( $M = 279.77, SD = 24.96$ ), and fewer than 10 ( $M = 277.38, SD = 25.84$ ) at  $p < .01$ . Figure 4.23 presents the box plots.

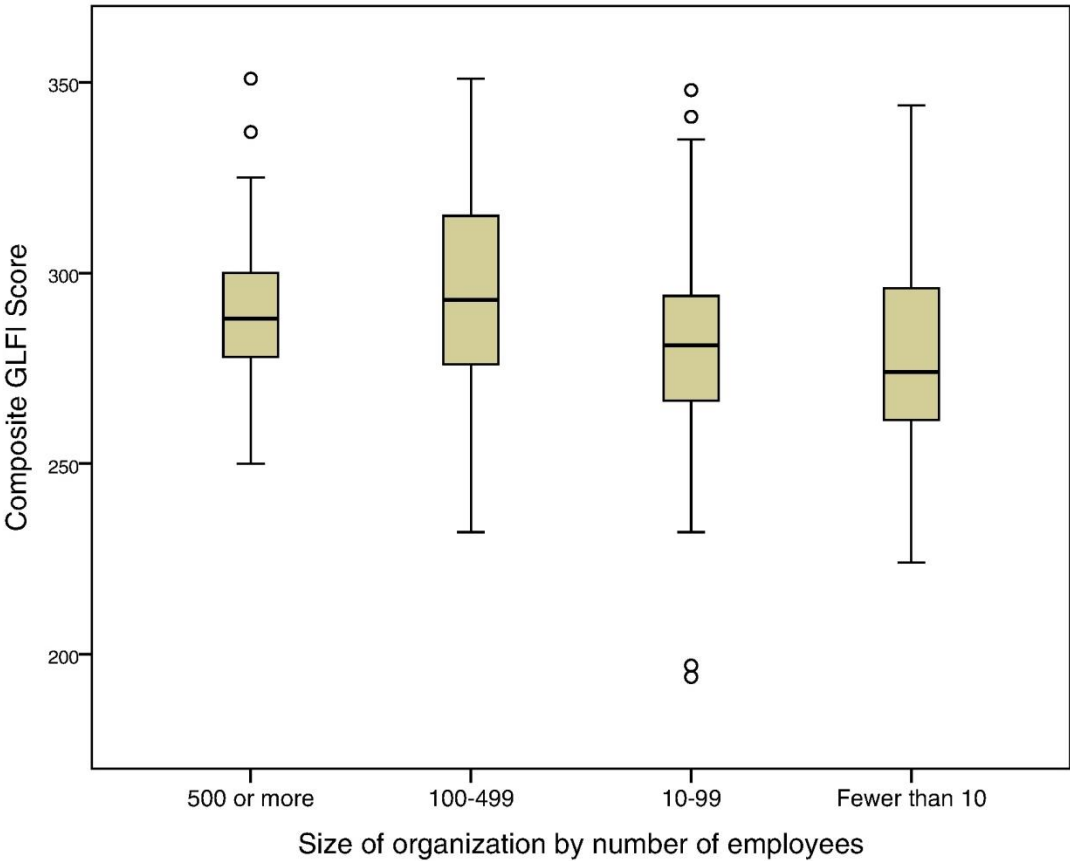


Figure 4.23. Box plot matrix of composite GLFI scores for leaders across different sizes of organizations by number of employees.

**Proportion of products or services sold to foreign countries by leader’s organization.** Pearson product-moment correlation coefficients were computed to assess the relationship between the composite SLQ and GLFI scores among leaders

working in organizations that sell products or services at various proportions to foreign countries. Table 4.40 presents the individual correlation coefficients. The relationships were determined to be significant within all groups of this category at  $p < .01$ , independent of the proportion of product or services sold to foreign countries. With  $N_{50\% \text{ or more}} = 5$ , there were not enough data points for organizations with sales of more 50% to foreign countries to conduct a meaningful analysis for leaders in that group. This group was excluded from further correlative analyses.

Table 4.40

*Correlations between Composite SLQ Score and Composite GLFI Score by Proportion of Products and Services Sold to Foreign Countries by Leader's Organization*

| Control Variable   | Category     |                                       | SLQ/GLFI Correlation  |
|--|--------------|---------------------------------------|-----------------------|
| Proportion of Products or Services Sold to Foreign Countries | 50% or more  | Pearson Corr.<br>Sig. (2-tailed)<br>N | .987**<br><.01<br>5   |
|  | 20-49%       | Pearson Corr.<br>Sig. (2-tailed)<br>N | .707**<br><.01<br>24  |
|  | 5-19%        | Pearson Corr.<br>Sig. (2-tailed)<br>N | .738**<br><.01<br>60  |
|  | 1-4%         | Pearson Corr.<br>Sig. (2-tailed)<br>N | .499**<br><.01<br>102 |
|  | Less than 1% | Pearson Corr.<br>Sig. (2-tailed)<br>N | .682**<br><.01<br>222 |

*Note.* \*\* Correlation is statistically significant at  $p < .01$

The Pearson product-moment partial correlation coefficient between the composite SLQ and the composite GLFI scores, partialling out the effect of the proportions of products or services sold to foreign countries, was determined as statistically significant with  $r_{\text{Products/Services sold to Foreign Countries}}(410) = .62, p < .01$ . The test for equality of independent correlation coefficients based on Fisher's r-to-z transformations (W. L. Hays, 1963) determined no statistically significant difference among the correlations coefficients with  $\chi^2(3, N = 408) = 7.73, p = .052$ . The results of a post hoc pair-wise testing of equality of correlation coefficients are presented in Table 4.41. It illustrates that the correlation coefficients are not statistically significantly different after applying the Bonferroni (1936) correction method and testing at  $p < .0083$  ( $.05/6 = .0083$ ).

Table 4.41

*Pair-wise Testing of Equality of Correlation Coefficients across Proportion of Products and Services Sold to Foreign Countries by Leader's Organization*

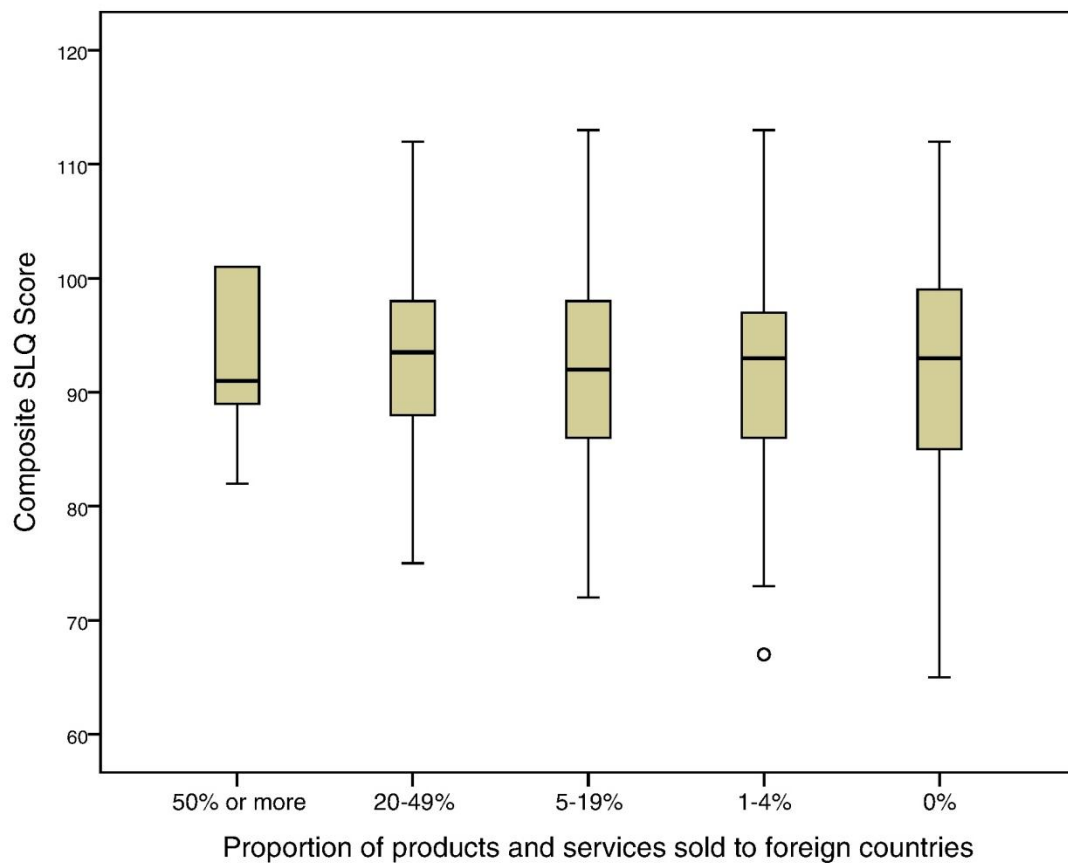
| Proportion of products and services sold to foreign countries |                             | 1     | 2           | 3           | 4             | 5      |
|---|-----------------------------|-------|-------------|-------------|---------------|--------|
| 1. 50% or more  | <i>z</i><br>Sig. (2-tailed) | excl. |             |             |               |        |
| 2. 20-49%   | <i>z</i><br>Sig. (2-tailed) | excl. | 0<br>1      |             |               |        |
| 3. 5-19%  | <i>z</i><br>Sig. (2-tailed) | excl. | -.25<br>.80 | 0<br>1      |               |        |
| 4. 1-4%   | <i>z</i><br>Sig. (2-tailed) | excl. | 1.39<br>.17 | 2.39<br>.02 | 0<br>1        |        |
| 5. Less than 1%   | <i>z</i><br>Sig. (2-tailed) | excl. | .21<br>.83  | .76<br>.45  | -2.35<br>.019 | 0<br>1 |

Note. No correlation statistically significant at  $p < .0083$  ( $.05/6 = .0083$ )

A MANOVA was conducted to determine the affect of leaders working for organizations with different proportions of products and services sold to foreign countries on the two dependent variables, the composite SLQ score and the composite GLFI score. No statistically significant differences were found among the proportions of products and services sold to foreign countries by the leader's organization on the dependent measures, Wilks's  $\Lambda = .96$ ,  $F(8, 814) = 1.94$ ,  $p = .051$ .

Post hoc ANOVAs as follow-up tests to the MANOVA were conducted to evaluate the relationship between leaders working for organizations with different proportions of products and services sold to foreign countries and the leaders' score on the composite SLQ and composite GLFI instruments. Applying the Bonferroni (1936) correction method, each ANOVA was tested at  $p < .01$  ( $.05/5 = .01$ ). The first

ANOVA revealed no statistically significant relationship between the proportion of products and services sold to foreign countries and the composite SLQ score  $F(4,408) = .16, p = .96$ . Figure 4.24 illustrates the box plots for the composite SLQ scores for different proportions of foreign business.



*Figure 4.24.* Box plot matrix of composite SLQ scores for leaders across organizations with different proportions of products and services sold to foreign countries.

A second ANOVA revealed no statistically significant relationship between the proportion of products and services sold to foreign countries and the composite GLFI score  $F(4, 408) = 2.95, p = .02$  after applying the Bonferroni (1936) correction method at  $p < .01$  ( $.05/5 = .01$ ). Figure 4.25 illustrates the box plots for the composite GLFI scores for different proportions of foreign business. The Levene's tests determined equality of the error variances for both ANOVAs.

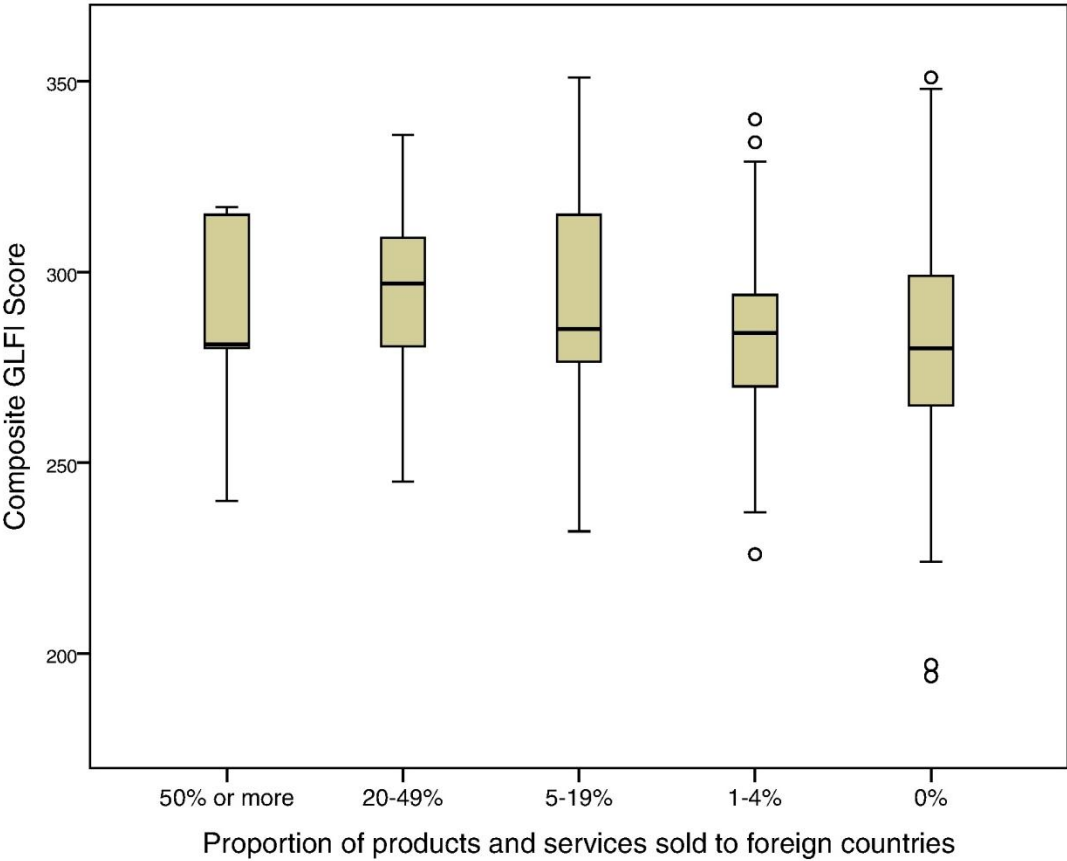


Figure 4.25. Box plot matrix of composite GLFI scores for leaders across organizations with different proportions of products and services sold to foreign countries.



**Number of foreign countries the leader's organization does business with.**

Pearson product-moment correlation coefficients were computed to assess the relationship between the composite SLQ and the composite GLFI scores among leaders in organizations that do business with a different number of foreign countries. Table 4.42 presents the individual correlation coefficients. The relationships were determined to be significant within all groups of this category at  $p < .01$ .

Table 4.42

*Correlations between Composite SLQ Score and Composite GLFI Score by Number of Countries the Leader's Organization Does Business with*

| Control Variable  | Category   |                                       | SLQ/GLFI<br>Correlation |
|---|------------|---------------------------------------|-------------------------|
| Number of Countries<br>the Organization<br>does Business with | 10 or more | Pearson Corr.<br>Sig. (2-tailed)<br>N | .606**<br><.01<br>81    |
|   | 4-9        | Pearson Corr.<br>Sig. (2-tailed)<br>N | .650**<br><.01<br>97    |
|   | 1-3        | Pearson Corr.<br>Sig. (2-tailed)<br>N | .741**<br><.01<br>117   |
|   | 0          | Pearson Corr.<br>Sig. (2-tailed)<br>N | .579**<br><.01<br>118   |

*Note.* \*\* Correlation is statistically significant at  $p < .01$

The Pearson product-moment partial correlation coefficient between the composite SLQ and the composite GLFI scores, controlling for the number of countries the leader's organization does business with, was determined as statistically

significant with  $r_{\text{Number of Foreign Countries doing Business}}(410) = .62, p < .01$ . The test for equality of independent correlation coefficients based on Fisher's r-to-z transformations (W. L. Hays, 1963) determined no statistically significant difference among the correlations coefficients with  $\chi^2(3, N = 413) = 5.50, p = .13$  across the different number of foreign countries. The results of a post hoc pair-wise testing of equality of correlation coefficients are presented in Table 4.43. These confirmed that the correlation coefficients are not statistically significantly different after applying the Bonferroni (1936) correction method and testing at  $p < .0083$  ( $.05/6 = .0083$ ).

Table 4.43

*Pair-wise Testing of Equality of Correlation Coefficients across the Number of Countries the Leader's Organization Does Business with*

| Number of countries the leader's organization does business with |                 | 1     | 2     | 3    | 4 |
|--|-----------------|-------|-------|------|---|
| 1. 10 or more  | <i>z</i>        | 0     |       |      |   |
|  | Sig. (2-tailed) | 1     |       |      |   |
| 2. 4-9   | <i>z</i>        | -.48  | 0     |      |   |
|  | Sig. (2-tailed) | .64   | 1     |      |   |
| 3. 1-3   | <i>z</i>        | -1.70 | -1.27 | 0    |   |
|  | Sig. (2-tailed) | .09   | .20   | 1    |   |
| 4. 0   | <i>z</i>        | .28   | .82   | 2.21 | 0 |
|  | Sig. (2-tailed) | .78   | .41   | .03  | 1 |

*Note.* No correlation statistically significant at  $p < .0083$  ( $.05/6 = .0083$ )

A post hoc MANOVA was conducted to determine the effect of the different number of foreign countries the leader's organization does business with on the two dependent variables, the composite servant leadership SLQ score and the composite

global leadership GLFI score. Statistically significant differences were found among the number of foreign countries the organization does business with on the dependent measures, Wilks's  $\Lambda = .96$ ,  $F(6, 816) = 2.73$ ,  $p = .012$ . However, the multivariate  $\eta^2$  based on Wilks's  $\Lambda$  was weak with .02.

Post hoc ANOVAs as follow-up tests to the MANOVA were conducted to further evaluate the relationship between the different number of foreign countries the leader's organization does business with on the composite SLQ and composite GLFI scores. Applying the Bonferroni (1936) correction method, each ANOVA was tested at  $p < .0125$  ( $.05/4 = .0125$ ). The first ANOVA revealed no statistically significant relationship between organizations and their different number of foreign countries and the leader's composite SLQ score  $F(3,409) = 1.43$ ,  $p = .23$ . Figure 4.26 illustrates the box plots of the leaders' composite SLQ scores across the different number of countries the leaders' organizations do business with.

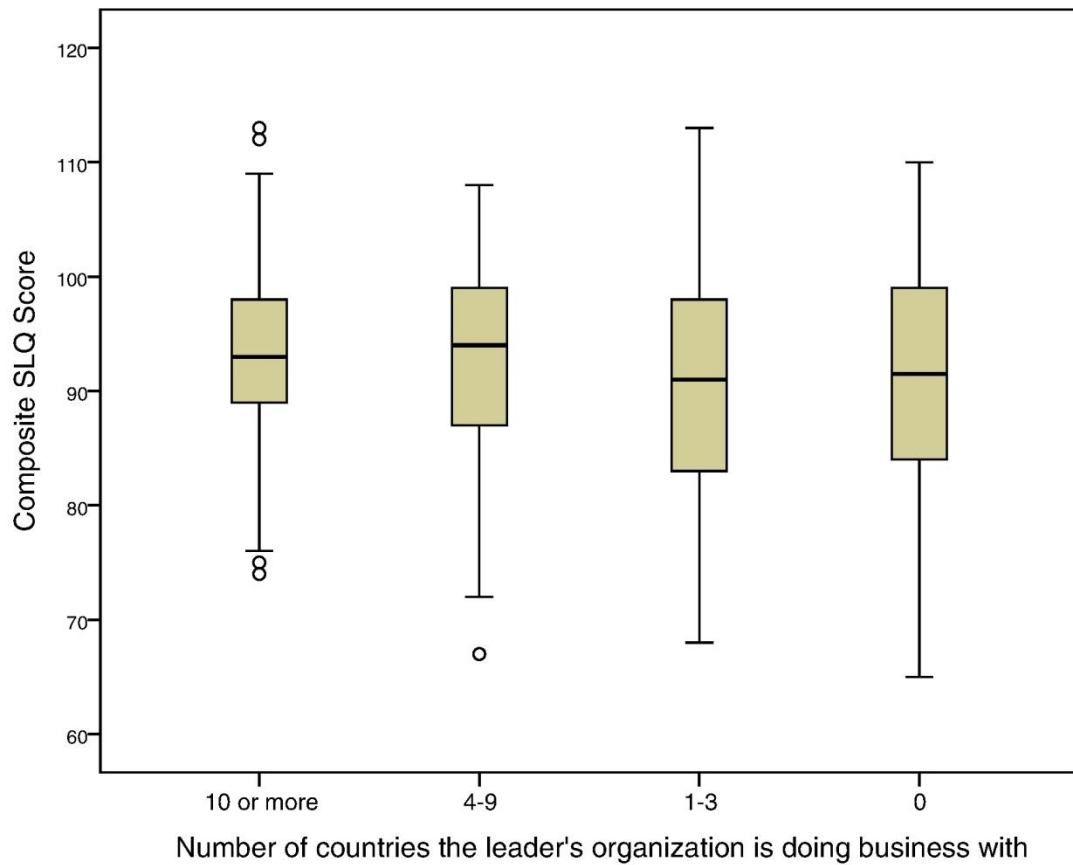


Figure 4.26. Box plot matrix of composite SLQ scores for leaders across organizations with different number of foreign countries it does business with.

A second ANOVA revealed a statistically significant relationship between the proportion of products and services sold to foreign countries and the composite GLFI score  $F(3, 409) = 5.29, p < .01$  with a small to medium effect size of  $\eta^2 = .04$ . An organization's number of countries it does business with accounted for 4% of the leader's composite GLFI mean score. The Levene's test determined equality of the error variances for this ANOVA. The Tukey *HSD* test determined that leaders in organizations that do business with 10 or more ( $M = 290.40, SD = 23.84$ ) foreign

countries score greater composite GLFI means than leaders in organizations with no foreign business ( $M = 277.44, SD = 28.73$ ) exposure. Figure 4.27 illustrates the box plots.

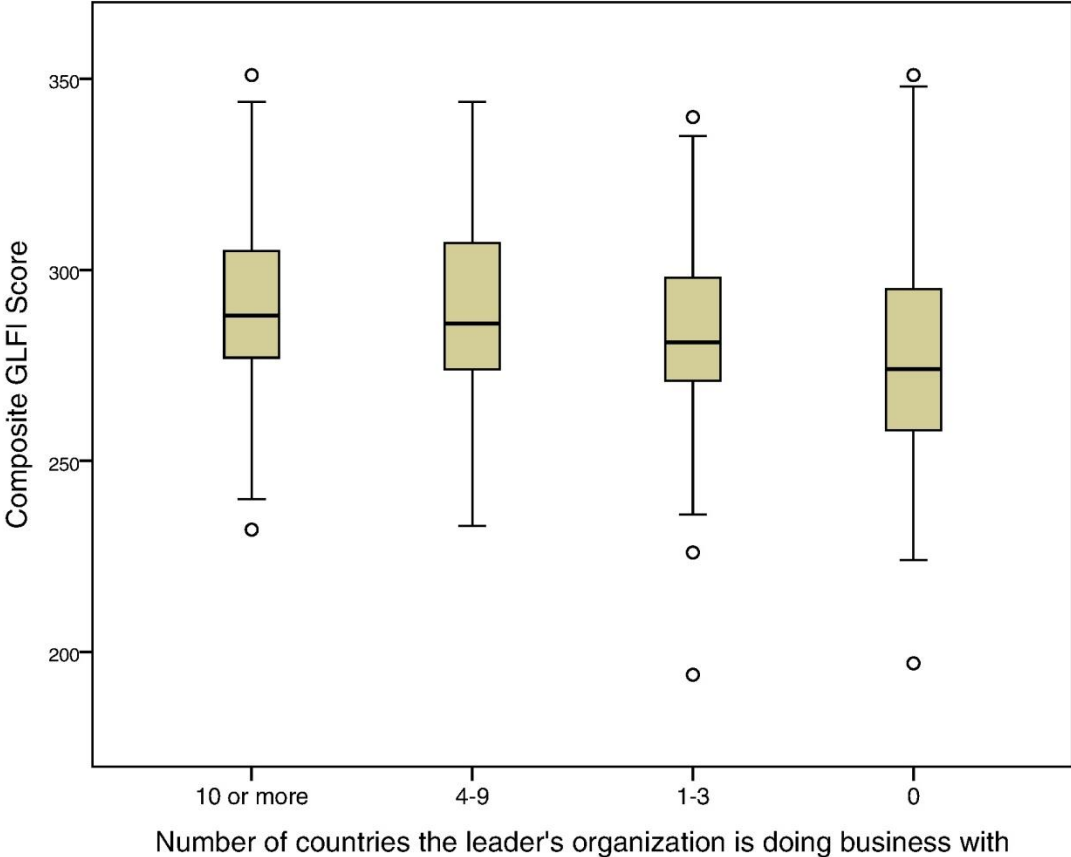


Figure 4.27. Box plot matrix of composite GLFI scores for leaders across organizations with different number of foreign countries it does business with.

**Leader’s gender.** The strength of the relationship between the composite SLQ score and the composite GLFI score was computed as being statistically significant for both gender, male leaders with  $r_{\text{Male}}(247) = .682, p < .01$  and female

leaders with  $r_{\text{Female}}(162) = .504, p < .01$ . The test for equality of independent correlation coefficients based on Fisher's r-to-z transformations (W. L. Hays, 1963) determined a statistically significant difference between the correlations coefficients for male or female leaders with  $z = 2.73, p < .01$ .

Figures 4.28 and 4.29 illustrate the scatter plots of the composite SLQ and composite GLFI scores by leader's gender. A visual inspection and comparison of the individual scatter plots supports the aforementioned greater correlation coefficients for male leaders versus female leaders with the closer alignment of data points to the regression line. In addition, many male leaders exhibited low SLQ scores, which was further analyzed in post hoc MANOVA and ANOVAs. The slope of regression curve was also determined to be flatter, indicating a larger emphasis on servant leadership for female leaders than male leaders.

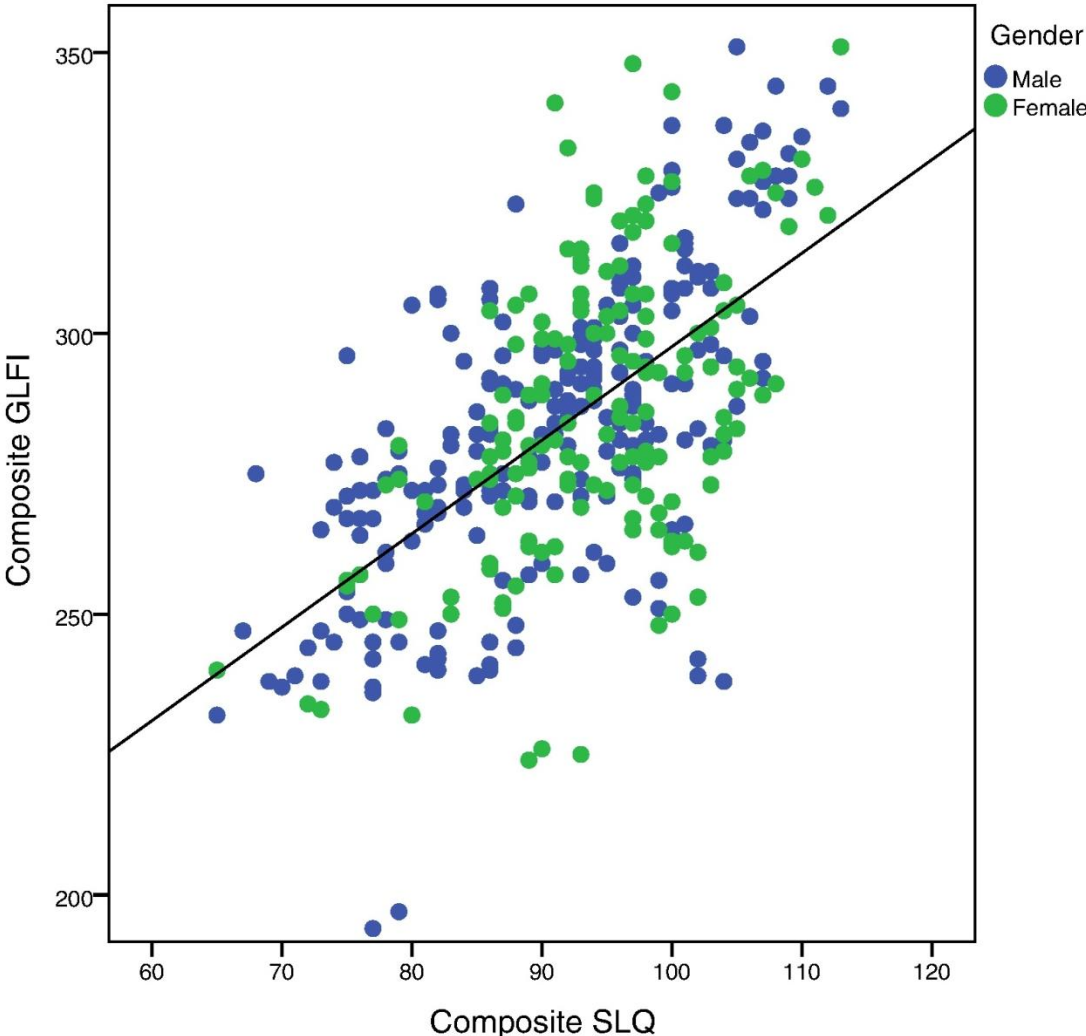


Figure 4.28. Scatter plot of composite SLQ and GLFI scores by leader's gender.

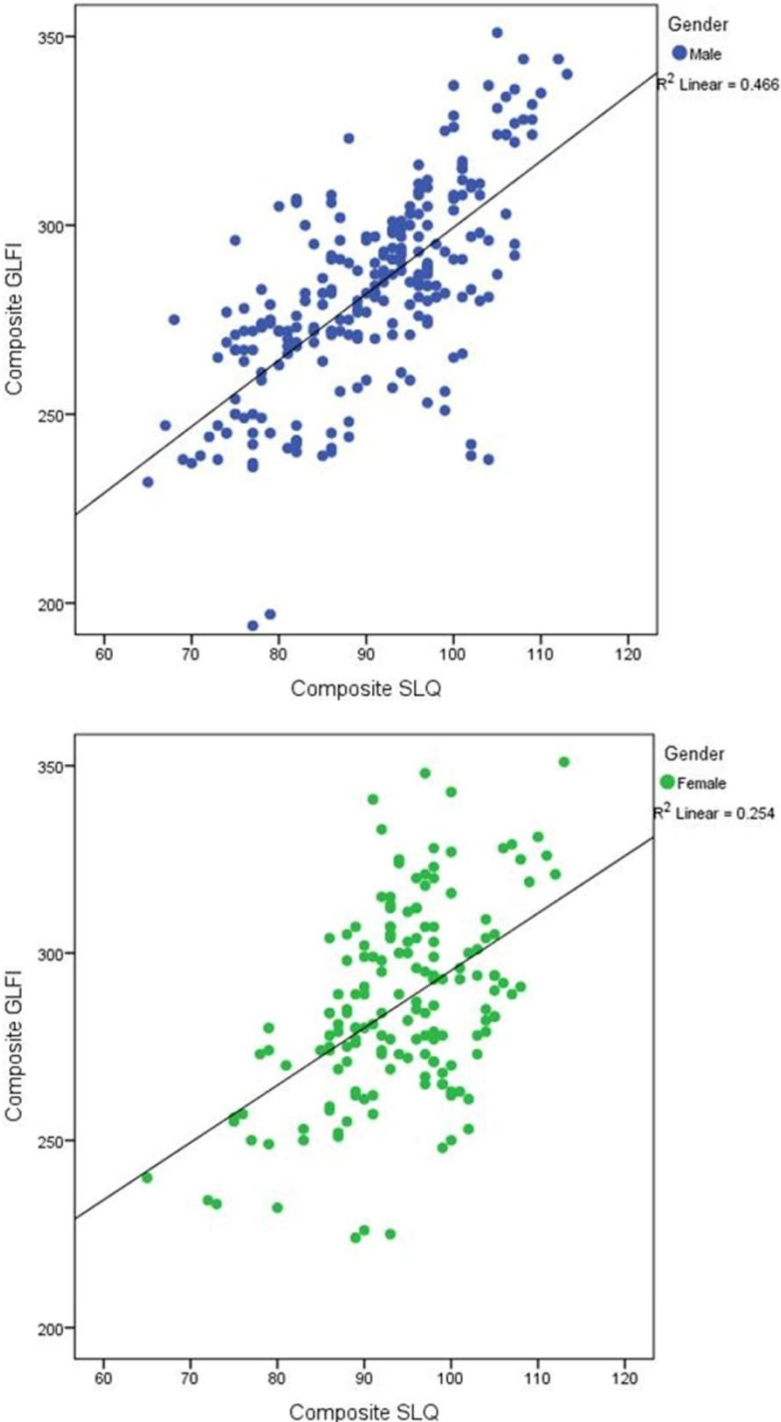


Figure 4.29. Scatter plots of composite SLQ and GLFI scores for male and female leaders.



Post hoc independent-samples *t* tests were conducted to compare the difference of means on the composite SLQ and the composite GLFI score for male and female leaders. The Levene's test determined that equal variances could not be assumed for the SLQ composite score but for the GLFI composite score.

The *t* test for unequal variances revealed a statistically significant difference of the mean of the composite SLQ scores with  $t(392.43) = -4.01, p < .01$  with a small to medium effect size of  $\eta^2 = .04$ . Female leaders ( $M = 94.02, SD = 8.36$ ) on average scored greater means on the composite SLQ score than males leaders ( $M = 90.34, SD = 10.24$ ). Additional independent-samples *t* tests were conducted across the five SLQ subscales. Females leaders scored significant higher means ( $M = 15.30, SD = 2.81$ ) on the subscale emotional healing than male leaders ( $M = 14.27, SD = 2.91$ ) with  $t(411) = -3.58, p < .001$ . Females leaders also scored significant higher means ( $M = 21.97, SD = 2.06$ ) on the subscale organizational stewardship than male leaders ( $M = 20.54, SD = 3.21$ ) with  $t(410.76) = -5.52, p < .001$ .

The *t* test for equal variances found no statistically significant difference of the mean of the composite GLFI scores between males and females leaders with  $t(411) = -1.42, p = .16$ . Figure 4.30 and Figure 4.31 present the box plots based on gender of leaders for the composite SLQ and the composite GLFI scores, respectively.

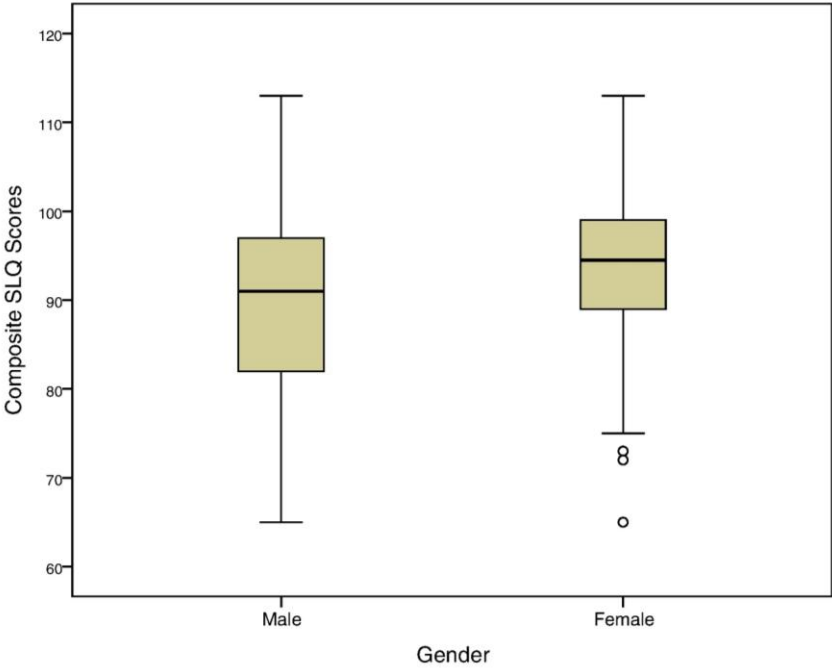


Figure 4.30. Box plot matrix of composite SLQ scores for male and female leaders.

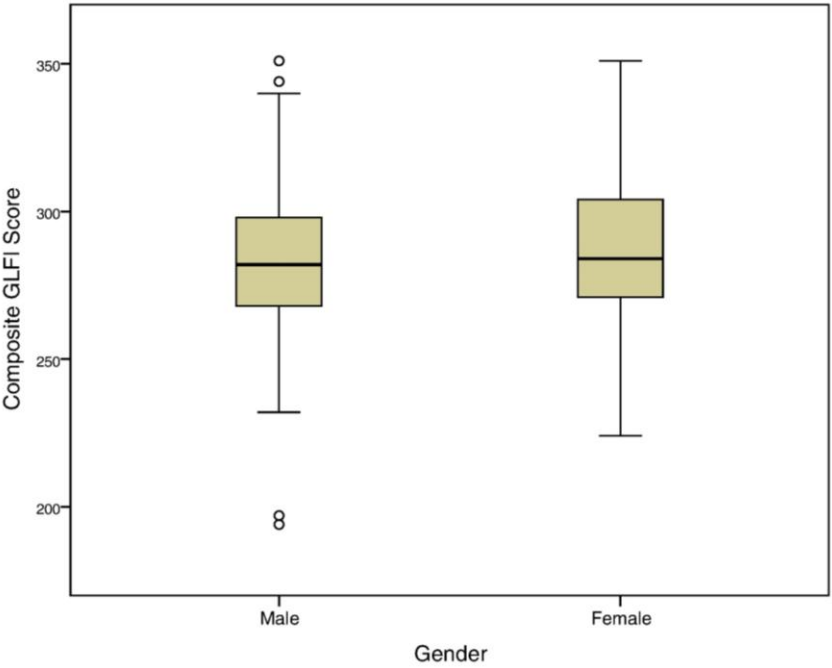


Figure 4.31. Box plot matrix of composite GLFI scores for male and female leaders.

**Leader's age.** Pearson product-moment correlation coefficients were computed to examine the relationship between the composite SLQ and the composite GLFI scores among leaders in different age groups. Table 4.44 presents the individual correlation coefficients. The relationships were determined to be significant in all age groups at  $p < .01$ , but for the group of leaders 29 years and younger, which did not exhibit a statistically significant correlation. This group was excluded from subsequent correlative statistical analyses.

Table 4.44

*Correlations between Composite SLQ Score and Composite GLFI Score by Leader's Age Group*

| Control Variable | Category             |                                       | SLQ/GLFI Correlation  |
|------------------|----------------------|---------------------------------------|-----------------------|
| Leader's Age     | 60 years and older   | Pearson Corr.<br>Sig. (2-tailed)<br>N | .752**<br><.01<br>60  |
|                  | 50-59 years old      | Pearson Corr.<br>Sig. (2-tailed)<br>N | .741**<br><.01<br>139 |
|                  | 40-49 years old      | Pearson Corr.<br>Sig. (2-tailed)<br>N | .576**<br><.01<br>127 |
|                  | 30-39 years old      | Pearson Corr.<br>Sig. (2-tailed)<br>N | .590**<br><.01<br>63  |
|                  | 29 years and younger | Pearson Corr.<br>Sig. (2-tailed)<br>N | .025<br>.91<br>24     |

*Note.* \*\* Correlation is statistically significant at  $p < .01$

The Pearson product-moment partial correlation coefficient between the composite SLQ and the composite GLFI scores, controlling for age of the leader, was determined as statistically significant with  $r_{\text{Age}}(410) = .62, p < .01$ . The test for equality of independent correlation coefficients based on Fisher's r-to-z transformations (W. L. Hays, 1963) determined a statistically significant difference among the correlations coefficients with  $\chi^2(3, N = 389) = 8.33, p < .05$  across the different age groups. The results of a post hoc pair-wise testing of equality of correlation coefficients are presented in Table 4.45. After applying the Bonferroni (1936) correction method and testing at the  $p < .0083 (.05/6 = .0083)$ , these correlation coefficients were found not to be statistically significantly different.

Table 4.45

*Pair-wise Testing of Equality of Correlation Coefficients across Leader's Age Group*

| Leader's Age            |                 | 1     | 2     | 3     | 4     | 5     |
|-------------------------|-----------------|-------|-------|-------|-------|-------|
| 1. 60 years and older   | <i>z</i>        | 0     |       |       |       |       |
|                         | Sig. (2-tailed) | 1     |       |       |       |       |
| 2. 50-59 years old      | <i>z</i>        | .16   | 0     |       |       |       |
|                         | Sig. (2-tailed) | .88   | 1     |       |       |       |
| 3. 40-49 years old      | <i>z</i>        | 2.01  | 2.39  | 0     |       |       |
|                         | Sig. (2-tailed) | .05   | .02   | 1     |       |       |
| 4. 30-39 years old      | <i>z</i>        | 1.62  | 1.77  | .13   | 0     |       |
|                         | Sig. (2-tailed) | .11   | .08   | .89   | 1     |       |
| 5. 29 years and younger | <i>z</i>        | excl. | excl. | excl. | excl. | excl. |
|                         | Sig. (2-tailed) |       |       |       |       |       |

*Note.* No correlation statistically significant at  $p < .0083 (.05/6 = .0083)$

Figure 4.32 and Figure 4.33 illustrate the scatter plots of the composite SLQ and composite GLFI scores by leader's age group. A visual inspection and comparison of the individual scatter plots seems to indicate aforementioned greater correlation coefficients for older leaders than younger leaders. Although this trend was not statistically significant.

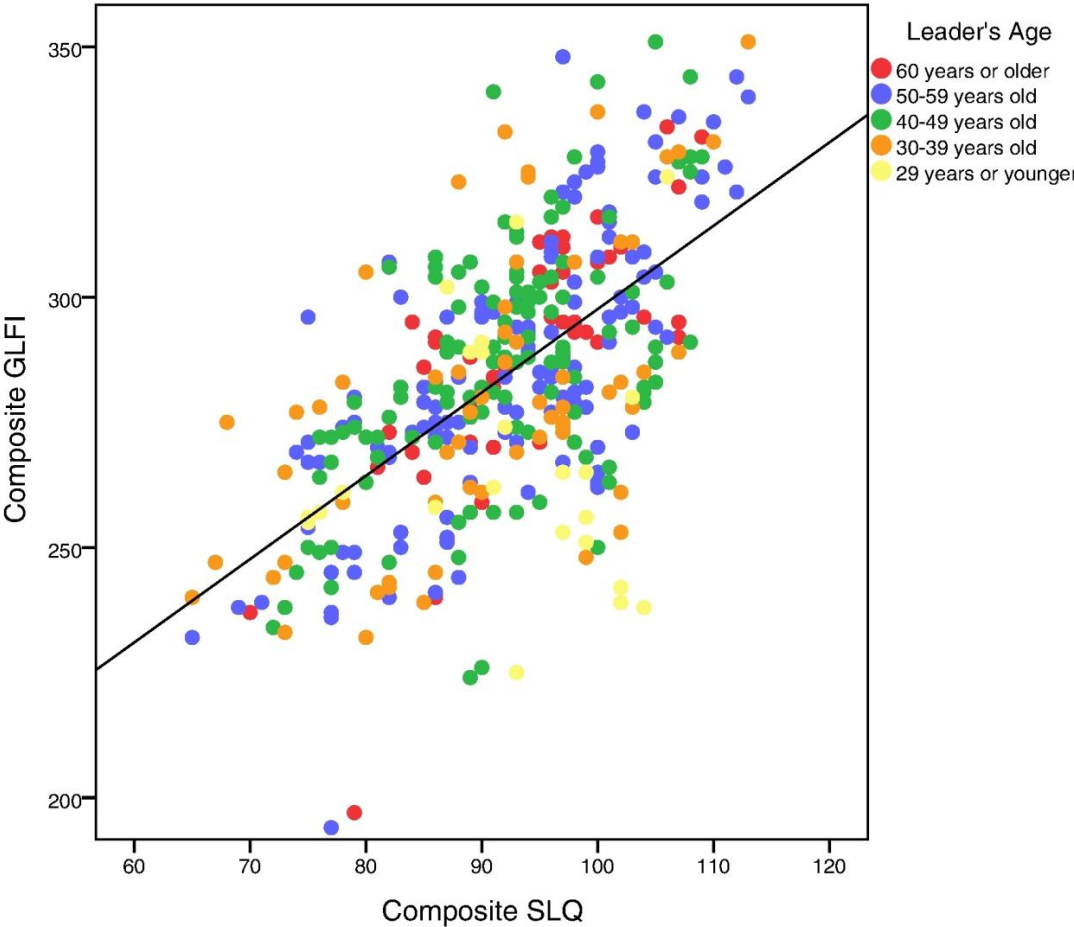


Figure 4.32. Scatter plot of composite SLQ and GLFI scores by leader's age group.

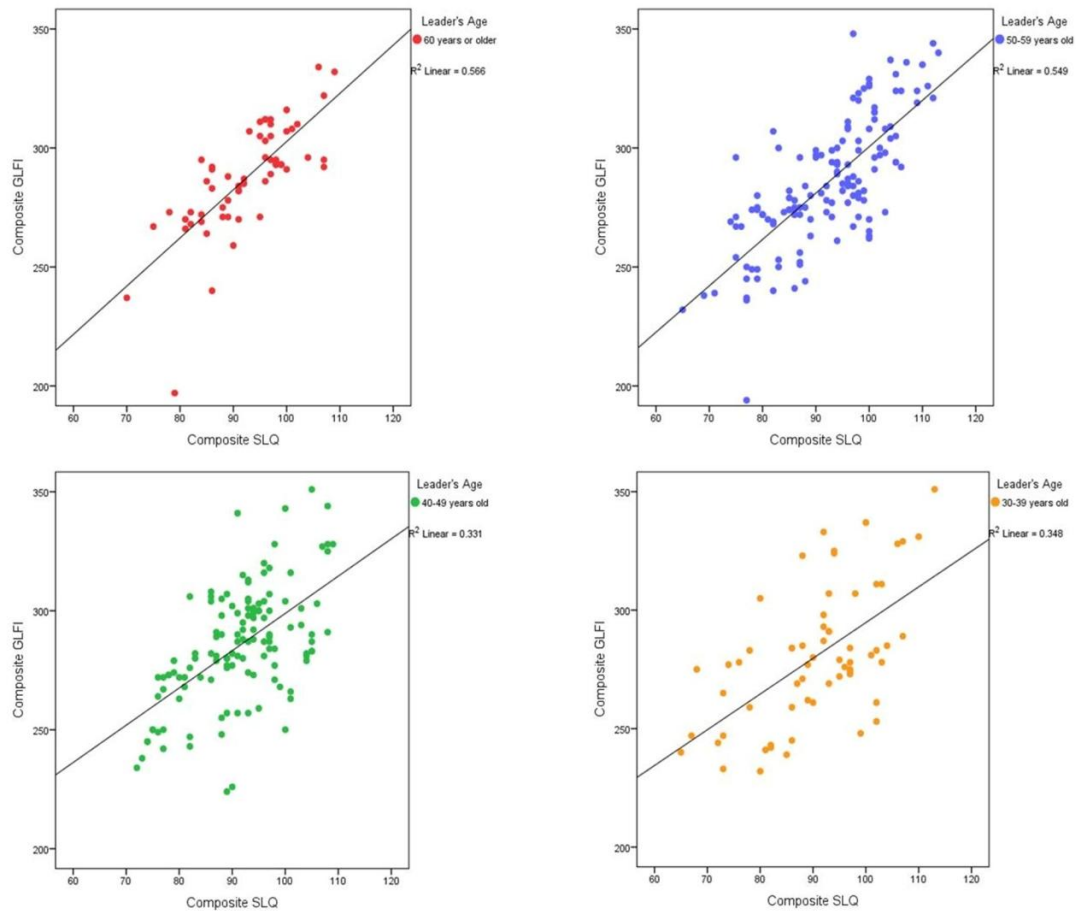


Figure 4.33. Scatter plots of composite SLQ and GLFI scores for individual leader's age groups.

A MANOVA was conducted to determine the effect of the leader's age on the two dependent variables, the composite servant leadership SLQ score and the composite global leadership GLFI score. A statistically significant difference was found among the leader's age groups on the dependent measures, Wilks's  $\Lambda = .94$ ,  $F(8, 814) = 3.05$ ,  $p = .002$ . However, the multivariate  $\eta^2$  based on Wilks's  $\Lambda$  was weak with .03 indicating that only 3% of the multivariate variance of the dependent variables is associated with the age of the leader.

Post hoc ANOVAs as follow-up tests were conducted to evaluate the relationship between a leader’s age group and the scores on the composite SLQ and composite GLFI instruments. Applying the Bonferroni (1936) correction method, each ANOVA was tested at  $p < .01$  ( $.05/5 = .01$ ). The first ANOVA revealed no statistically significant relationship between a leader’s age group and the composite SLQ score  $F(4,408) = .55, p = .70$ . Figure 4.34 presents the box plots for the composite SLQ scores based on the leader’s age.

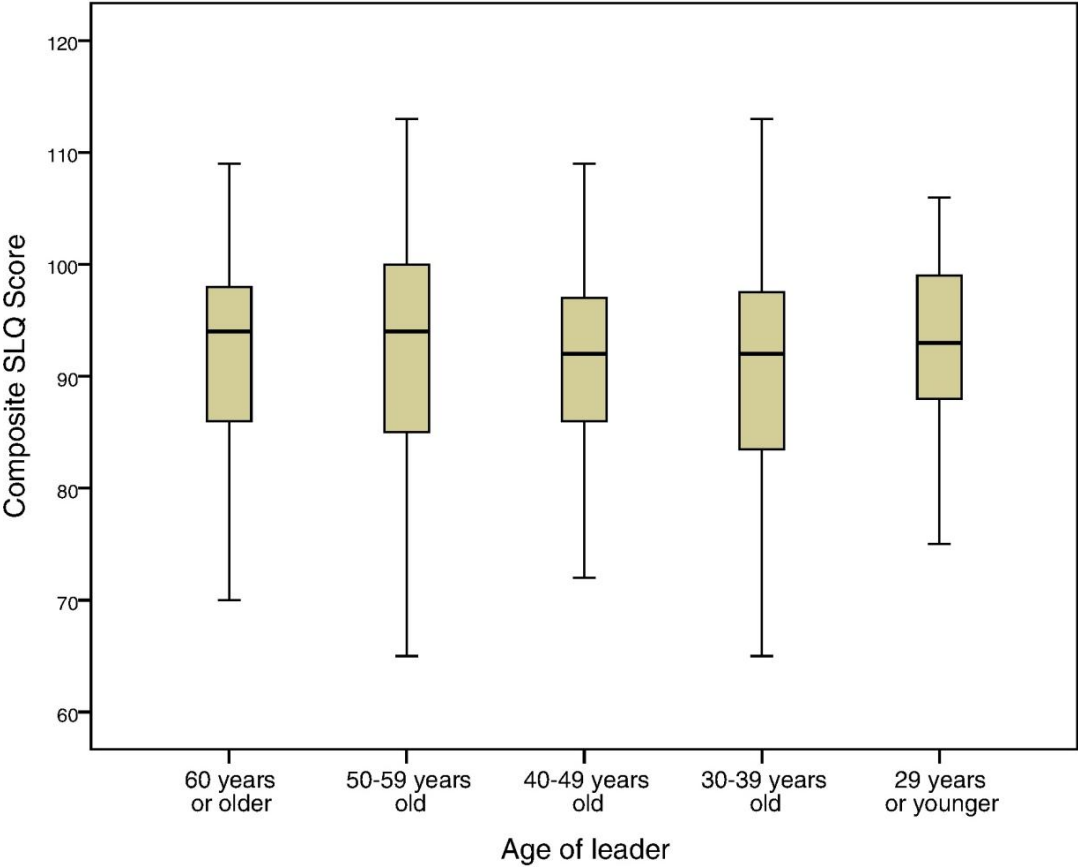


Figure 4.34. Box plot matrix of composite SLQ scores across age of leaders.

A second ANOVA revealed a statistically significant relationship between the leader's age group and the composite GLFI score  $F(4, 408) = 3.40, p < .01$  with a small effect size of  $\eta^2 = .03$ . A leader's age group accounted for 3% of the leader's composite GLFI mean score. The Levene's test determined equality of the error variances for this ANOVA. The Tukey *HSD* test revealed that leaders in age groups 60 years and older ( $M = 287.55, SD = 23.47$ ) showed statistically significant greater composite GLFI means than leaders 29 years and younger ( $M = 267.17, SD = 24.36$ ) at  $p < .01$ . Figure 4.35 presents the box plots for the composite GLFI scores based on the leader's age.



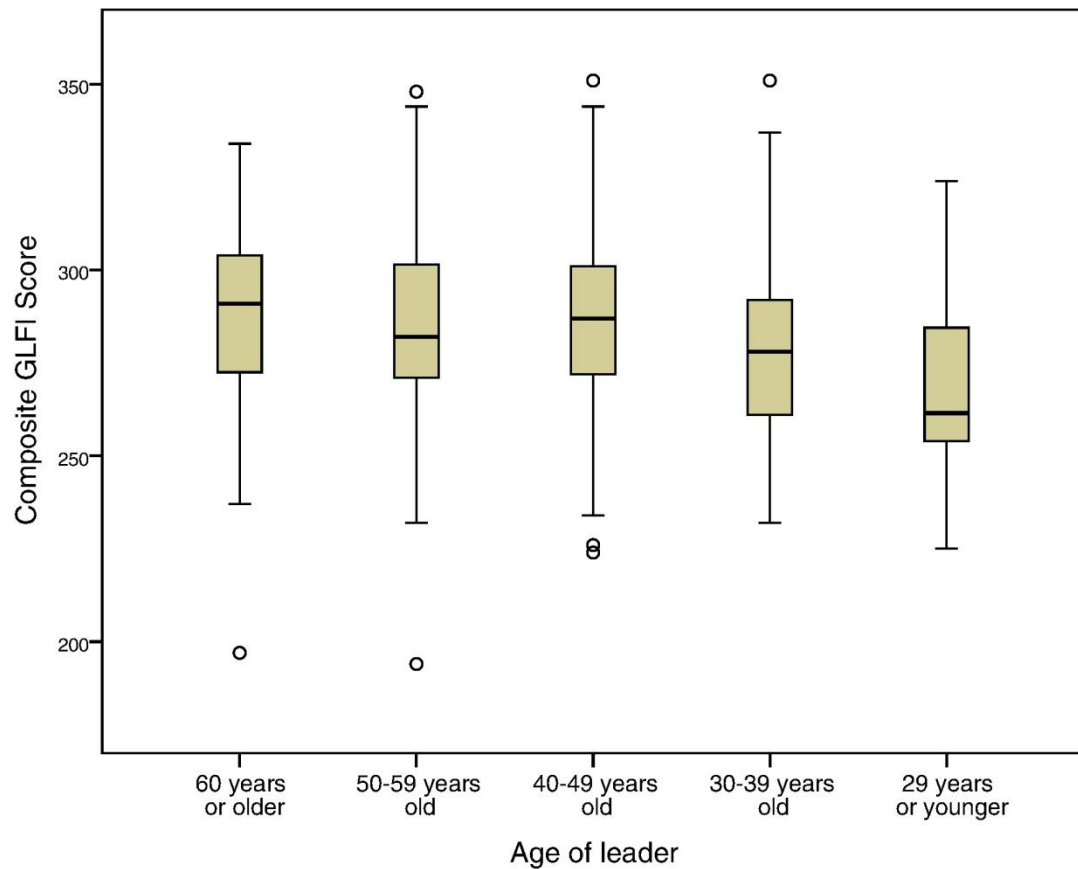


Figure 4.35. Box plot matrix of composite GLFI scores across age of leaders.

**Leader's level of education.** Pearson product-moment correlation coefficients were computed to assess the relationship between the composite SLQ and the composite GLFI scores among different education levels of leaders. Table 4.46 presents the individual correlation coefficients. The relationships were determined to be significant for all groups and levels of education at  $p < .01$ .

Table 4.46

*Correlations between Composite SLQ Score and Composite GLFI Score by Leader's Level of Education*

| Control Variable            | Category                       |                                       | SLQ/GLFI Correlation  |
|-----------------------------|--------------------------------|---------------------------------------|-----------------------|
| Leader's Level of Education | Doctoral degree                | Pearson Corr.<br>Sig. (2-tailed)<br>N | .813**<br><.01<br>13  |
|                             | Masters degree                 | Pearson Corr.<br>Sig. (2-tailed)<br>N | .665**<br><.01<br>138 |
|                             | Baccalaureate degree           | Pearson Corr.<br>Sig. (2-tailed)<br>N | .566**<br><.01<br>188 |
|                             | Less than baccalaureate degree | Pearson Corr.<br>Sig. (2-tailed)<br>N | .613**<br><.01<br>74  |

Note. \*\* Correlation is statistically significant at  $p < .01$

The Pearson product-moment partial correlation coefficient between the composite SLQ and the composite GLFI scores, controlling for the level of education the leader, was determined statistically significant with  $r_{\text{Leader's Level of Education (410)}} = .61, p < .01$ . The test for equality of independent correlation coefficients based on Fisher's r-to-z transformations (W. L. Hays, 1963) determined no statistically significant difference among the correlations coefficients with  $\chi^2(3, N = 413) = 8.33, p = .29$  across the different level of education groups. The results of a post hoc pairwise testing of equality of correlation coefficients are presented in Table 4.47. It illustrates that the correlation coefficients are not statistically significantly different

when applying the Bonferroni (1936) correction method and testing at  $p < .0083$  ( $.05/6 = .0083$ ).

Table 4.47

*Pair-wise Testing of Equality of Correlation Coefficients across Leader's Level of Education*

| Leader's Level of Education       |                 | 1    | 2    | 3    | 4 |
|-----------------------------------|-----------------|------|------|------|---|
| 1. Doctoral degree                | <i>z</i>        | 0    |      |      |   |
|                                   | Sig. (2-tailed) | 1    |      |      |   |
| 2. Masters degree                 | <i>z</i>        | 1.02 | 0    |      |   |
|                                   | Sig. (2-tailed) | .31  | 1    |      |   |
| 3. Baccalaureate degree           | <i>z</i>        | 1.52 | 1.41 | 0    |   |
|                                   | Sig. (2-tailed) | .13  | .16  | 1    |   |
| 4. Less than baccalaureate degree | <i>z</i>        | 1.25 | .60  | -.52 | 0 |
|                                   | Sig. (2-tailed) | .21  | .55  | .61  | 1 |

*Note.* No correlation statistically significant at  $p < .0083$  ( $.05/6 = .0083$ )

A MANOVA was conducted to determine and evaluate the effect of the level of education of leaders on the two dependent variables, the composite servant leadership SLQ score and the composite global leadership GLFI score. Statistically significant differences were found among the leader's age groups on the dependent measures, Wilks's  $\Lambda = .96$ ,  $F(8, 814) = 2.65$ ,  $p = .015$ . However, the multivariate  $\eta^2$  based on Wilks's  $\Lambda$  was weak with .02 indicating that only 2% of multivariate variance of the dependent variables is associated with the level of education of the leader.

Post hoc ANOVAs as follow-up tests to the MANOVA were conducted to evaluate the relationship between the leader's level of education and the leader's score on the composite SLQ and composite GLFI instruments. Applying the Bonferroni (1936) correction method, each ANOVA was tested at  $p < .0125$  ( $.05/4 = .0125$ ). The first ANOVA revealed a statistically significant relationship between the level of education and the composite SLQ score  $F(3, 409) = 3.90, p < .01$  with a small effect size  $\eta^2 = .03$ . The leader's level of education accounted for 3% of the leader's composite SLQ score. Because the Levene's test determined inequality of the error variances, a post hoc Dunnett's *C* test was conducted that determined a statistically significant greater mean on the composite SLQ score for leaders with a master's degree ( $M = 93.82, SD = 8.62$ ) scored than for leaders with less than a baccalaureate degree ( $M = 89.27, SD = 10.65$ ) at  $p < .0125$ . Figure 4.36 presents the box plots of leaders' composite SLQ scores based on level of their education.

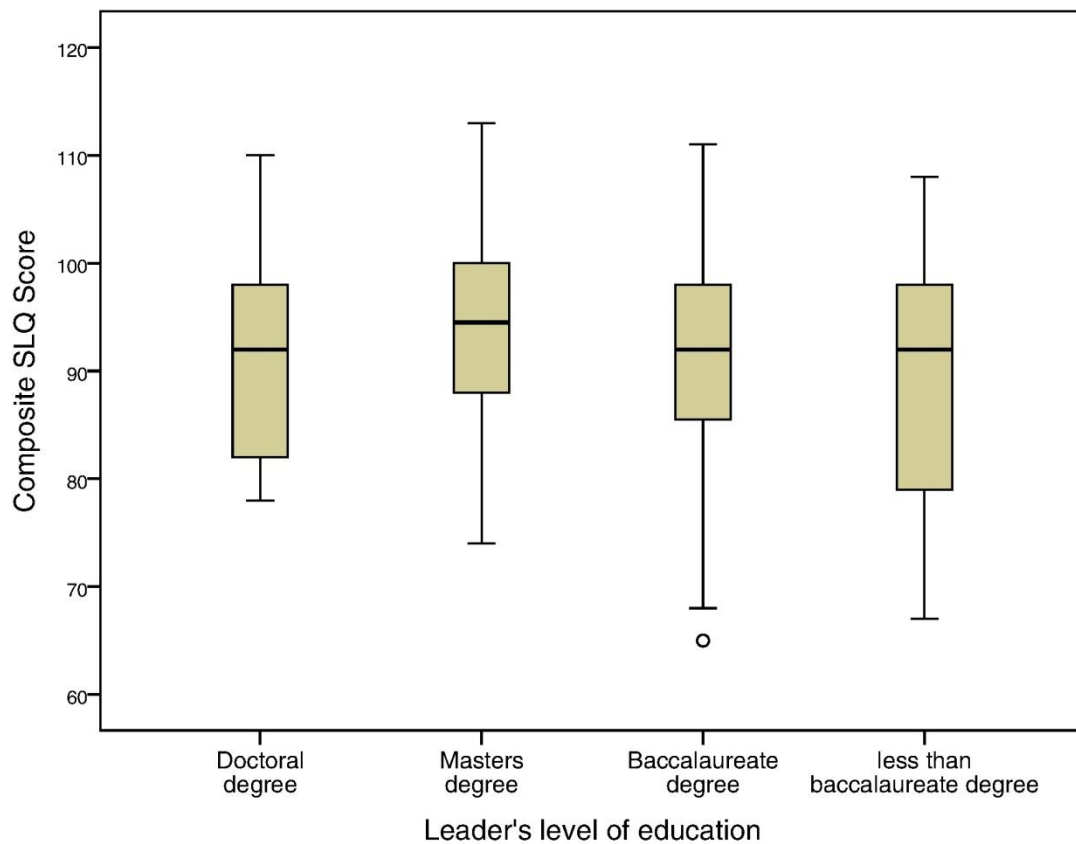
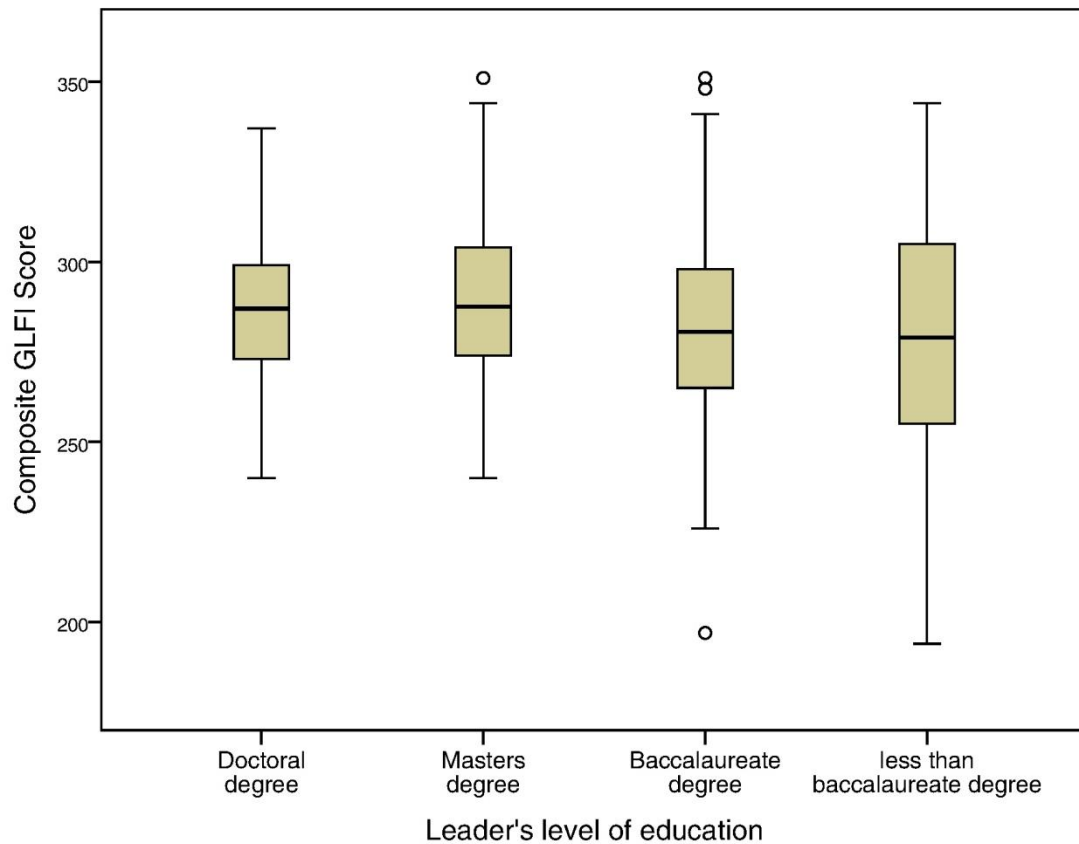


Figure 4.36. Box plot matrix of composite SLQ scores across leader's level of education.

A second ANOVA revealed a statistically significant relationship between the leader's level of education and the composite GLFI score  $F(3, 409) = 4.14, p < .01$  with a small effect size of  $\eta^2 = .03$ . Because the Levene's test determined inequality of the error variances, a post hoc Dunnett's *C* test was conducted. It determined statistically significant greater means on the composite GLFI score for leaders with a master's degree ( $M = 289.90, SD = 22.23$ ) than for leaders with a baccalaureate degree ( $M = 281.53, SD = 26.02$ ) at  $p < .0125$ . Figure 4.37 presents the box plots.



*Figure 4.37.* Box plot matrix of composite GLFI scores across leader's level of education.

**Leader's race.** The majority of participants were White/Caucasian (94.2%) and only a small number of participants in groups were other than White/Caucasian. There were not enough data points to arrive at a meaningful analysis based on race of the survey participants.

**Summary of Hypothesis 3 findings.** Table 4.48 presents a summary of the statistically significant findings and non-statistically significant indications of the research study. Differences in the strength of the correlative relationship and post hoc

findings for servant leadership and global leadership are categorized by the individual control variable.

Table 4.48

*Summary of Findings for Hypothesis 3*

| Control Variable                      | Statistically Significant Difference in Strength of Correlative Relationship                                 | Post Hoc Finding of Statistically Significant Difference across Groups  |  |
|---------------------------------------|--|---|--|
|                                       |  | <i>SLQ</i>  | <i>GLFI</i>  |
| Leadership Position                   | Greater correlation coefficients for leaders in top two groups versus middle management                      |   |  |
| Leader's Years in Leadership Position | Indication of greater correlation coefficients for five or more years versus four or fewer years in position |   |  |
| Leader's Years with Organization      |  |   |  |
| For-Profit / Not-For-Profit           |  | Greater means on SLQ for leaders in not-for-profit organizations  |  |
| Type of Industry                      |  | Indication of greater SLQ means for service & distribution and not-for-profit activities versus refining, construction, and manufacturing |  |
| Number of Employees in Organization   |  | Greater means on SLQ with 100 or more versus fewer than 10 employees  | Greater means on GLFI with 100-499 versus fewer than 100 employees |

(table continues)

| Control Variable                                | Statistically Significant Difference in Strength of Correlative Relationship | Post Hoc Finding of Statistically Significant Difference across Groups                |  |
|---|--|---|--|
|   |  | <i>SLQ</i>  | <i>GLFI</i>  |
| Proportion of Products/Services sold abroad     |  |   |  |
| Number of Foreign Countries doing Business with |  |   | Greater means on GLFI for 10 or more countries versus none                       |
| Leader's Gender                                 | Greater correlation coefficient for male versus female leaders               | Greater means on SLQ for female leaders   |  |
| Leader's Age                                    |  |   | Greater means on GLFI for leaders 60 years and older versus 29 years and younger |
| Leader's Level of Education                     |  | Greater means on SLQ for leaders with master's degrees versus less than baccalaureate | Greater means on GLFI for leaders with master's versus baccalaureate degrees     |

*Note.* Statistically significant findings are dark shaded. Non-statistically significant indications are light shaded.

**Summary of Research Findings**

A review of the frequency distribution, skewness and kurtosis values, Q-Q plots, and box plots demonstrated proximate alignments to a normal distribution pattern of the composite SLQ, individual SLQ subscales, composite GLFI, and individual GLFI dimensions. This formed the basis for the researcher's decision to conduct subsequent statistical procedures assuming a parametric dataset.

The internal consistency estimate of reliability for the composite SLQ instrument was determined at a Cronbach's alpha coefficient of .89. All individual



subscale Cronbach's alpha coefficients measured  $> .82$ . A confirmatory factor analysis via Varimax rotation and Kaiser normalization confirmed Barbuto and Wheeler's (2006) five SLQ factors.

The internal consistency estimate of reliability for the composite GLFI instrument was determined at a Cronbach's alpha coefficient of  $.95$ . All but one GLFI dimension exhibited Cronbach's alpha coefficients  $> .70$  with one dimension's alpha at  $.65$ . A confirmatory factor analysis via Varimax rotation and Kaiser normalization confirmed 12 of Goldsmith et al.'s (2003) 15 GLFI dimensions. An examination of the factor loadings led to the following suggestions to improve the instrument construct and internal consistency estimate of reliability for a revised global leadership instrument: The researcher suggested combining items of the GLFI dimension creating a shared vision with two items from other GLFI dimensions and renaming the dimension focusing on business success. This could establish a 13th dimension for a revised global leadership instrument. Remnants of the GLFI dimensions maintaining a competitive advantage combined with one item of GLFI dimension sharing leadership may result in a 14th dimension encasing topics of cost effectual partnerships and outsourcing. Additional items may require a revision of their expressions in their item statement to clarify the construct for improved factor loading in future surveys. These suggestions will require more research and were not implemented for subsequent analysis in this research study.

**Research Question 1.** A Pearson product-moment correlation coefficient determined a statistically significant and positive correlation between the composite SLQ score and the composite GLFI score with  $r(411) = .621, p < .001$ , indicating a

large effect size. A bivariate linear regression analysis determined a statistically significant linear relationship between both variables. A canonical correlation analysis resulted in  $R_c = .721, p < .001$ , with SLQ subscales persuasive mapping and organizational stewardship and the GLFI dimensions anticipating opportunities and creating a shared vision as the major contributors to the canonical variates.

**Research Question 2.** A Pearson product-moment correlation coefficient was employed to determine zero-order correlations between individual servant and global leadership attributes. Stepwise multiple linear regression analyses were used to determine standardized beta weights and primary contributors to the individual attributes. The statistical analysis resulted in 61 out of a possible 75 ( $5 \times 15 = 75$ ) statistically significant zero-order correlations between individual SLQ subscales and GLFI dimensions.

Stepwise multiple linear regression analyses revealed that the SLQ dimension persuasive mapping is the foremost contributor to nearly all GLFI dimensions, followed by organizational stewardship. Altruistic calling, emotional healing, and wisdom showed a lesser role across the various GLFI dimensions when examining the servant leadership and global leadership association.

The regression analysis also revealed that the primary contributors to servant leadership are the global leadership dimensions appreciating diversity, sharing leadership, encouraging constructive dialogue, anticipating opportunities, demonstrates integrity, and creating a shared vision for the organization. The SLQ subscale altruistic calling found its largest contributors with the GLFI dimensions sharing leadership and encouraging constructive dialogue, but a negative regressor in

the GLFI dimension creating a shared vision. SLQ subscale emotional healing's primary contributor was the GLFI dimension ensuring customer satisfaction. GLFI dimension anticipating opportunities is the largest contributor to the SLQ subscale wisdom. For SLQ subscale persuasive mapping, the GLFI dimensions creating a shared vision and anticipating opportunities are the primary driver. The SLQ subscale organizational stewardship is primarily driven by two GLFI dimensions, appreciating diversity and demonstrates integrity.

A further examination of the GLFI dimension creating a shared vision determined that its five items focused on creating, communicating, people committing to the vision of the organizations, and involving people in decision making and identifying priorities. These items are motivated by organizational goals and objectives and likely counteract the servant leadership subscale altruistic calling, the deep-rooted desire to make a positive difference in the lives of others (Barbuto & Wheeler, 2006).

**Research Question 3.** A comparative analysis of the correlation coefficients revealed a greater strength of the correlative relationship between servant leadership and global leadership for leaders in executive management versus middle management, and male leaders versus female leaders. The study found indications that the servant and global leadership association may be moderated by the leader's years in the leadership position and the leader's age. However, these indications were not statistically significant. The analysis showed no statistically significant differences in the strength of correlative relationship when moderated by leader's

years with the organization, size of the organization, type of industry, for-profit or not-for-profit status of the organization, or leader's educational level.

Post hoc analyses on servant leadership revealed that leaders employed at not-for-profit organizations scored slightly greater means in the servant leadership score than leaders employed at for-profit organizations. Greater means in servant leadership score was also established for female leaders versus male leaders, and for leaders working in organizations with 100 and more employees than leaders working in organizations with fewer than 10 employees. Leaders with master's degrees had greater servant leadership means scores than leaders with less than a baccalaureate degree. The means of the servant leadership score did not moderate for a leader's leadership position, years in leadership position, years with the organization, type of industry, proportion of products or services the organization sells abroad, the number of countries the organization does business with, or leader's age.

Post hoc analysis on global leadership determined that leaders working in organizations with 100-499 employees measured greater means on global leadership than leaders working in organizations with fewer than 100 employees. Leaders in organizations that do business with 10 or more foreign countries scored greater global leadership means than leaders in organization with no foreign business contacts. Global leadership seems to be moderated by leaders' age and level of education. The study found that leaders who were 60 years and older measured greater means in global leadership than leaders 29 years and younger. Leaders with master's degrees scored greater global leadership means than leaders with a baccalaureate degree. Indications for greater means of the global leadership score were observed for leaders

in higher leadership positions, but these findings were not statistically significant. The means of the global leadership score did not moderate for leader's years in leadership position, years with the organization, for-profit or not-for-profit status of the organization, type of industry, proportion of products or services the organization sells abroad, or leader's gender.

The effect of leaders' race on the correlative servant and global leadership relationship was not analyzed due to the small number of minority participants. The large majority of participants were White/Caucasian and only a small number of participants other than White/Caucasian.

### **Chapter Conclusion**

This chapter presented an overview of the data collection process, the target population, and the demographics of the sample. The chapter continued with the discussion of the assumptions requisite for parametric data analysis. It included the assessment of normality, the analysis of the internal consistency estimate of reliability, the instruments' intercorrelations, and the confirmatory factor analysis of the instruments used in this study. The chapter concluded with the results of each hypothesis testing and a summary of the research findings.

## **Chapter 5**

### **Discussion**

#### **Summary of the Research Problem and Research Methodology**

Servant leadership may hold great promise to meet the distinctive leadership challenges that global communities face (Irving, 2010a). Patterson, Dannhauser, and Stone (2007) opined that servant leadership must be considered as a viable option in the global marketplace and encouraged further research to help organizations succeed in their quest for effective leaders and leadership outcomes in a global environment.

This study focused on the relationship between servant leadership and global leadership, the relationship between their individual attributes, and the moderation by demographic factors. The research employed the servant leadership instrument, SLQ, developed by Barbuto and Wheeler (2006) and the global leadership instrument, GLFI, developed by Goldsmith et al. (2003). The independent variables were leaders' leadership position, years in a leadership position, duration with the organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or services the organization sells abroad, number of countries the organization does business with, leader's gender, age, level of education, and race. The sample included 413 leaders and executives of organizations in northeast Indiana in the United States.

The statistical treatment used in evaluating the hypotheses included independent-samples *t* test, ANOVA, MANOVA, bivariate linear regression, multiple linear regression, Pearson product-moment correlation coefficient, Pearson product-moment partial correlation coefficient, canonical correlation coefficient, and the test

for equality for multiple correlations. Cronbach's alpha coefficient and confirmatory factor analysis were employed to measure to the reliability of the instruments.

### **Review and Discussion of the Principal Conclusions of the Study**

A strong, positive, and statistically significant association was found between servant leadership and global leadership among the participating leaders and executives. The primary contributors to the canonical variates were persuasive mapping and organization stewardship from the servant leadership instrument and anticipating opportunities and creating a shared vision from the global leadership instrument. A majority of individual servant and global leadership attributes associated statistically significant and positively in zero-order correlations. Stepwise multiple linear regression analyses determined multiple contributors for the individual servant and global leadership attributes.

A comparative analysis of correlation coefficients revealed a greater strength of correlative relationship between servant leadership and global leadership for leaders in executive management versus middle management, and male leaders versus female leaders. The study found non-statistically significant indications that a leader's years in the leadership position as well as a leader's age may affect the correlative relationship. No statistically significant differences between the correlation coefficients were found when moderated by leader's years with the organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or service the leader's organization sells to foreign countries, the number of foreign countries the organization does business with, and the leader's level of education.

Post hoc analyses indicated greater means on the servant leadership scale for leaders employed in not-for-profit than for-profit organizations and working for organizations with 100 or more employees versus fewer than 10 employees. Greater means on servant leadership was found for female leaders versus male leaders and for leaders with master's degrees versus leaders with less than baccalaureate degrees.

Greater means on the global leadership scale were determined for leaders working in organizations with 100–499 employees versus organizations with fewer than 100 employees and working in organizations that do business with 10 or more foreign countries versus no foreign business. Greater means in global leadership was also found for leaders 60 years and older versus leaders 29 years and younger, and for leaders with master's degrees versus baccalaureate degrees. There was a non-statistically significant indication that a leader's leadership position may moderate global leadership scores.

Leader's years in the leadership position, leader's years in the organization, type of industry, or proportion of products or services the organization sells abroad did not moderate the means of servant leadership or the means of global leadership. The effect of a leader's race on the correlative relationship between servant leadership or global leadership was not analyzed due to the small number of minority participants.

Barbuto and Wheeler's (2006) servant leadership SLQ instrument exhibited acceptable internal reliability. Goldsmith et al.'s (2003) global leadership GLFI instrument showed acceptable reliability across the majority of its individual dimensions and holds great promise describing the many skills and talents that global leaders may exhibit.



**Research question and hypothesis 1: Association of servant leadership and global leadership.** The first research question and hypothesis examined the relationship of the overall presence of servant leadership and global leadership in leaders and executives in organizations.

- H<sub>10</sub>: There is no statistically significant correlative relationship between the overall presence of servant leadership characteristics and the overall presence of global leadership characteristics.
- H<sub>11</sub>: There is a statistically significant correlative relationship between the overall presence of servant leadership characteristics and the overall presence of global leadership characteristics.

**Results.** The first hypothesis was confirmed. The Pearson product-moment correlation coefficient determined a statistically significant and positive association with  $r(411) = .621, p < .001$ , indicating a large effect size with 39% of the variance of one leadership variable accounted for by the other leadership variable. A bivariate linear regression analysis confirmed the linear relationship between the composite SLQ and the composite GLFI score at the  $p < .001$  significance level. The canonical correlation coefficient was computed to  $R_c = .721, p < .001$ , with the servant leadership SLQ subscales persuasive mapping and organizational stewardship and the global leadership GLFI dimensions anticipating opportunities and creating a shared vision as the major contributors to the canonical variates.

**Discussion and Implications.** The research findings of this study will add to the research to clarify and refine the construct that may help establish servant leadership as the best fitting leadership model for future organizations that Sendjaya

(2010) claimed. The findings support Irvin's (2010a) and Patterson et al.'s (2007) quest for more research to advance the understanding and practice of servant leadership within the global context. Senjaya (2010) clarified that meeting global leadership challenges will require the understanding of the relational, ethical, emotional, and spiritual sides of followers. Trompenaars and Voerman (2010) explained that it is the integration of serving and leading in servant leadership that will lead to a stronger synthesis. It can be used to bridge opposing values and viewpoints, that especially leaders in a global environment and different cultures will experience (Trompenaars & Voerman, 2010).

The research findings not only demonstrated a strong and positive association between servant leadership and global leadership attributes. This findings may also indicate (a) the relevance of certain servant leadership attributes for organizations operating in the global environment, and (b) the relevance for certain global leadership attributes when extending the servant leadership paradigm globally. The findings pointed to the combination of persuasive mapping and organizational stewardship of servant leadership, and anticipating opportunities and creating a shared vision of global leadership that may be especially powerful in strengthening the relationship between these two leadership models.

**Research question and hypothesis 2: Association of individual servant leadership and global leadership attributes.** The second research question and hypothesis examined the relationship of individual servant leadership and global leadership attributes in leaders and executives in organizations.

- H<sub>20</sub>: There is no statistically significant correlative relationship between individual servant leadership attributes and individual global leadership attributes.
- H<sub>21</sub>: There is a statistically significant correlative relationship between individual servant leadership attributes and individual global leadership attributes.

**Results.** The second hypothesis was confirmed for a large majority of servant leadership and global leadership attributes. Pearson product-moment correlation coefficients were conducted to compute the zero-order correlations between the five servant leadership subscales and the 15 global leadership dimensions. A significance level of  $p < .67E^{-3}$  ( $.05/75 = .67E^{-3}$ ) was required for the Bonferroni (1936) correction method for Type I errors across the 75 ( $5 \times 15 = 75$ ) cross correlations. Of the possible 75 cross correlations between servant and global leadership attributes, 61 correlation were statistically significant and positive at  $p < .67E^{-3}$ , with 57 correlations reaching significance levels of  $p < .13E^{-3}$  and 50 attaining  $p < .13E^{-4}$ . Out of 61 statistically significant correlations, 54 exhibited correlation coefficients of  $r(411) > .2$ , 32 with  $r(411) > .3$  and 10 with  $r(411) > .4$ . Multiple linear regression analyses with a stepwise selection procedure revealed the individual regressors for the servant leadership subscales and the global leadership dimensions.

**Discussion and Implications.** Globalization, with the emergence of the global economy, increased global competition and rapid technology changes, provides opportunities and threats for many organizations (Hitt, et al., 2010). It requires the development of global leaders who can respond to challenges of the complexity

presented by globalization (Mendenhall, 2008). Organizations need leaders with abilities and competencies to lead globally (Patterson, et al., 2007).

The stepwise multiple linear regression analyses determined that the servant leadership subscale persuasive mapping is the leading contributor to nearly all global leadership dimensions, followed by organizational stewardship. The servant leadership attributes of altruistic calling, emotional healing, and wisdom showed lesser roles across the various global leadership dimensions. Referring to Barbuto and Wheeler's (2006) definition, persuasive mapping will encourage leaders to use sound reasoning in conceptualizing and communicating the organization's future and opportunities, whereas organizational stewardship will support leaders in preparing their organizations to make a positive contribution to society and take responsibility for the well-being of the community in which the organization exists. Global leaders with improved persuasive mapping aptitudes may enhance their capabilities to respond to global challenges, see opportunities for their organizations, and communicate these to their employees, colleagues and global business partners. Global leaders with enhanced organizational stewardship aptitudes may be able to shift their leadership capabilities from a strict organizational focus to a global perspective to include incorporating the global community and global partners in their business decisions. The enhancement of persuasive mapping and organizational stewardship aptitudes for global leaders may be provided through servant leadership training and is discussed more fully later in this chapter.

The research findings showed that certain global leadership capabilities may enhance the effectiveness of servant leaders operating within the global context. The

servant leadership attribute altruistic calling found its largest contributors with the global leadership dimensions sharing leadership and encouraging constructive dialogue, but determined a negative regressor with creating a shared vision. The servant leaders' attribute of altruistic calling will be enhanced through sharing leadership with less hierarchy and empowered individuals and, with encouraging constructive dialogue, the ability to listen and welcome constructive feedback (Goldsmith, et al., 2003). A further examination of the negative regressor creating a shared vision dimension determined that its five items focused on creating, communicating, people committing to the vision of the organization, and involving people in decision making and identifying priorities. These items are driven by organizational goals and objectives and likely counteract to altruistic calling, the deep-rooted desire to make a positive difference in others' lives (Barbuto & Wheeler, 2006). A servant leader's first responsibility is relationships and people, which takes precedence over tasks and products (Patterson, et al., 2007). Altruistic calling will not be enhanced with a focus on business, but rather with the focus on the individual, the follower.

A servant leader in a global context may improve emotional healing attitudes by improving on the global leadership attribute ensuring customer satisfaction that includes viewing business processes from the customer perspective, delivering on commitments to customers, including the appreciation of customer preferences in different cultures (Goldsmith, et al., 2003). It supports Hunter's (1998) leadership model with the customer on top of the inverted servant leadership pyramid, as presented earlier in Figure 2.1. Both, a servant leader's attitudes in wisdom and

persuasive mapping may be improved through the global leadership dimension anticipating opportunities that investigates and recognizes future trends and prepares leaders to develop ideas to meet the needs of the new environment (Goldsmith, et al., 2003).

The largest contributor to a servant leader's persuasive mapping is the global leadership dimension creating a shared vision that, as indicated earlier, is primarily focused on the organization, including setting priorities creating and communicating the strategy and vision for the organization. Servant leaders that may want to improve their organizational stewardship capabilities to achieve higher effectiveness when operating in the global context, may need to focus on the global leadership dimensions appreciating diversity and demonstrating integrity. Appreciating diversity may include the understanding of the economic, legal, social, and behavioral differences in the different parts of the world (Goldsmith, et al., 2003). Goldsmith et al. (2003) explained that demonstrating honesty and ethics in both personal and business values will help establishing trusting relationships with workers, peers, competitors, and customers.

**Research question and hypothesis 3: Correlation of servant leadership and global leadership segmented by demographic factors.** The third research question and hypothesis examined the relationship of servant leadership and global leadership in leaders and executives in organizations when segmented by demographic factors.

- H3<sub>0</sub>: There is no statistically significant difference in the strength of the correlative relationship between servant leadership and global leadership, when

segmented by demographic factors that include a leader's leadership position, years in the leadership position, duration with an organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or services the organization sells abroad, number of countries the organization does business with, leader's gender, age, level of education, or race.

- H3<sub>1</sub>: There is a statistically significant difference in the strength of the correlative relationship between servant leadership and global leadership, when segmented by demographic factors that include a leader's leadership position, years in the leadership position, duration with an organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products or services the organization sells abroad, number of countries the organization does business with, leader's gender, age, level of education, or race.

**Results.** The third hypothesis was confirmed for the demographic factors of a leader's leadership position and gender. The test for equality of independent correlation coefficients based on Fisher's r-to-z transformations (W. L. Hays, 1963) determined a greater strength of correlative relationship between servant leadership and global leadership for leaders in executive management,  $r_{\text{President, CEO}} (68) = .76, p < .01$  and  $r_{\text{Executive, COO, CFO, VP}} (137) = .75, p < .01$  versus leaders in middle management,  $r_{\text{Middle Management}} (66) = .35, p < .01$  with  $\chi^2 (3, N = 394) = 19.67, p < .01$ . A stronger correlative association between servant and global leadership was found for male leaders,  $r_{\text{Male}} (247) = .68, p < .01$ , versus female leaders,  $r_{\text{Female}} (162) = .50, p <$

.01, with  $z = 2.73$ ,  $p < .01$ . The analysis indicated a greater association between servant and global leadership with a leader's years in the leadership position and a leader's age, but these findings were not statistically significant after applying the Bonferroni (1936) correction method. There were no statistically significant differences in the strength of the correlative relationship when moderated by the leader's years with the organization, for-profit or not-for-profit status of the organization, type of industry, size of the organization, proportion of products and services the organization sells abroad, the number of countries the organization does business with, or the leader's level of education.

Post hoc independent-samples  $t$  tests, ANOVAs and MANOVAs were employed to measure the leaders' servant leadership and global leadership scores moderated by demographic control variables. These revealed that leaders employed in for-profit organizations ( $M = 91.03$ ,  $SD = 9.56$ ) scored on average slightly lower means on servant leadership than leaders employed by not-for-profit organizations ( $M = 93.94$ ,  $SD = 9.81$ ) with  $t(411) = -2.70$ ,  $p < .01$  and a small effect size of  $\eta^2 = .03$ . Leaders in organizations with 100 or more employees, as represented by group 500 or more ( $M = 94.55$ ,  $SD = 6.59$ ) and 100–499 employees ( $M = 94.25$ ,  $SD = 9.38$ ), measured greater means on the servant leadership than leaders in organizations with fewer than 10 employees ( $M = 89.22$ ,  $SD = 9.70$ ) with  $F(3, 409) = 6.79$ ,  $p < .01$  and medium effect size  $\eta^2 = .05$ . Male leaders ( $M = 90.34$ ,  $SD = 10.24$ ) exhibited lower means on servant leadership than female leaders ( $M = 94.02$ ,  $SD = 8.36$ ) with  $t(392.43) = -4.01$ ,  $p < .01$  and low to medium effect size  $\eta^2 = .04$ . Female leaders scored greater means on the SLQ subscales emotional healing and organizational



stewardship. Leaders with master's degrees ( $M = 93.82$ ,  $SD = 8.62$ ) scored greater servant leadership means than leaders with less than a baccalaureate degree ( $M = 89.27$ ,  $SD = 10.65$ ) with  $F(3, 409) = 3.90$ ,  $p < .01$  and a small effect size  $\eta^2 = .03$ . Leaders' scores on servant leadership did not moderate statistically significantly for leadership position, years in leadership position, leader's years with the organization, type of industry, proportion of product and services an organization sells abroad, the number of countries the organization does business with, or the leader's age.

Leaders measured greater means on global leadership when employed in organizations with 100–499 employees ( $M = 292.48$ ,  $SD = 27.14$ ) versus leaders working in organizations with fewer than 100 employees, as represented by group 10–99 ( $M = 279.77$ ,  $SD = 24.96$ ) and fewer than 10 ( $M = 277.38$ ,  $SD = 25.84$ ) with  $F(3, 409) = 8.63$ ,  $p < .01$  and a medium effect size  $\eta^2 = .06$ . Leaders in organizations that do business with 10 or more foreign countries ( $M = 290.40$ ,  $SD = 23.84$ ) scored greater means on global leadership than leaders in organizations with no foreign business ( $M = 277.44$ ,  $SD = 28.73$ ) with  $F(3, 409) = 5.29$ ,  $p < .01$  and a small to medium effect size of  $\eta^2 = .04$ . Leaders who were 60 years and older ( $M = 287.55$ ,  $SD = 23.47$ ) measured greater means in global leadership than leaders who were 29 years and younger ( $M = 267.17$ ,  $SD = 24.36$ ) with  $F(4, 408) = 3.40$ ,  $p < .01$  and a small effect size of  $\eta^2 = .03$ . Leaders with master's degrees ( $M = 289.90$ ,  $SD = 22.23$ ) also scored greater global leadership means than leader with baccalaureate degrees ( $M = 281.53$ ,  $SD = 26.02$ ) at  $F(3, 409) = 4.14$ ,  $p < .01$  and a small effect size of  $\eta^2 = .03$ . The study found a non-statistical significant indication that the leader's leadership position may affect global leadership measures. Leaders' scores on global leadership

did not moderate statistically significantly for leader's years in leadership position, years with the organization, for-profit or not-for-profit status of the organization, type of industry, proportion of product and services the organization sells abroad, or the leader's gender.

***Discussion and Implications.*** Leaders in executive management, president, CEO and executive, COO, CFO, and VP groups, exhibited a stronger association between servant leadership and global leadership than leaders in middle management. Hopen (2010) explained that top managers in 21st century companies no longer view their leadership position as part of a hierarchy, but rather as a position of significant responsibility to a larger number of stakeholders with whom these leaders are empowered to work with as partners. The research findings may already recognize the change in leadership approach as predicted by Hopen.

The observed gender dependent association between the servant and global leadership for male versus female leaders will require more research. Post hoc analysis showed that a large number of male leaders exhibited a lower servant leadership score that, combined with their lower global leadership scores, demonstrated a closer alignment to the regression line and thus a higher correlation coefficient. Future studies will need to show if male leaders exhibit greater global leadership scores in regions with more international influence, such as New York, Toronto, or Los Angeles that would lower the correlation coefficient when combined with lower servant leadership scores.

The post hoc findings aside from the three hypotheses encourage further discussion. Leaders employed at not-for-profit organizations exhibited greater means

in servant leadership than leaders at for-profit organizations. This may reflect the typical mission and people-oriented objectives of not-for-profit organizations versus organizational and performance objectives that take precedent at many for-profit organizations. Servant leadership may need to be considered as an appropriate and effective leadership style for not-for-profit organization (Schneider & George, 2011). Schneider and George (2011) explained that intrinsic motivators are more important in not-for-profit organization compared to the traditional exchange of performance for compensation found in for-profit organization.

Leaders employed in organizations with a larger number of employees demonstrated greater means in servant leadership than leaders in smaller organizations. This finding may indicate that leaders in larger organizations deal with a larger number of employees and, therefore it is likely they interact with increased internal diversity and external business complexity in working with more customers, clients, and outside business partners. Trompenaars and Voerman (2010) explained that servant leaders know how to bring people with different viewpoints together. Servant leaders understand how to transform resulting tension into a productive dynamic. De Pree (1992) claimed that servant leaders are comfortable with the ambiguity that business complexity can bring. However, no research could be found that examined servant leadership in leaders based on the size of their organization.

The study found higher servant leadership scores for female leaders than male leaders. The observed gender difference in servant leadership scores coincided with Fridell, Belcher, and Messner's (2009) findings of greater servant leadership scores for female principals in midwestern U.S. public schools versus their male counterparts.

Washington, Sutton, and Field (2006) also confirmed greater means on servant leadership scores for female than male supervisors in three public agencies in the United States, but cautioned regarding the need for more research on gender differences.

Additional statistical analyses found that female leaders scored significantly higher on the servant leadership subscales emotional healing and organizational stewardship. Sanches-Nunez, Fernandez-Berrocal, Montanes, and Latorre (2008) found no clear gender differences in overall emotional intelligence. Their findings confirmed Goleman's (1998) earlier assertion that there are more similarities than differences between men and woman when viewing the total emotional intelligence. However, Goleman pointed to specific competencies in emotional intelligence that seem to show gender differences: "Women, on average, tend to be more aware of their emotions, show more empathy, and are more adept interpersonally" (Goleman, 1998, p. 7) than men. This study and its analysis of gender differences on the emotional healing subscale supports that notion. For Barbuto and Wheeler (2006), leaders who use emotional healing are highly empathetic and great listeners, making them adept at facilitating the healing process. No other research has established or analyzed the cause for gender differences in the servant leadership subscale organizational stewardship.

The research found greater means in global leadership for leaders in larger organizations by size of employees than smaller organizations. With the need for increasing sales for their products and services, many companies explore the international markets (Hitt, et al., 2010). With the increase of sales and size of the

business, many organizations face the increased challenges of globalization, such as market differences in cultures, languages, law, economies, and business customs (Bellin & Pham, 2007) and the need to integrate and manage a culturally diverse workforce (Levy, et al., 2007). Thus, with the increase and size of their businesses, leaders may face increased challenges from globalization, requiring greater global leadership competencies.

In another finding of this study, leaders in organizations that do business with a large numbers of foreign companies scored greater means in global leadership than leaders in organizations with no foreign business contacts. However, the proportion of products and service sold to foreign countries did not exhibit different means on the global leadership score. The complexity of globalization is apparent with the complex system of human interaction when dealing with increasingly diverse and cross-cultural competitors, customers, employees, governments, and other stakeholders (Lane, et al., 2004). Greater global leadership competencies are driven by these human interactions, and not dominated by the sales of products or services internationally.

Leaders aged 60 and older exhibited greater means in global leadership than leaders at age 29 and younger. So did leaders with master's degrees versus baccalaureate degrees. The findings of this study point to greater global leadership competencies for leaders with more experience by age and more knowledge by education. Leaders in the age group 60 years and older may have travelled more internationally, have worked in a larger number of organizations, and may have experienced more cross-cultural challenges in their careers than leaders in their twenties. Additional education may allow leaders to reach higher positions in

management, with additional demands for global leadership to face the increased challenges of globalization.

At present, this study is the first published empirical research study employing a global leadership instrument across organizational and leader specific demographics. Thus, no comparable research exists to confirm these findings.

### **Analysis of Internal Consistency Estimate of Reliability and Factor Analysis of Instruments.**

The discussion of the internal reliability and dimensionality of the instruments may provide additional insight for future research. Researchers need reliable and valid instruments as tools to collect, measure, observe, and document data for answering research questions or addressing research hypothesis (Creswell, 2008).

**Servant leadership SLQ instrument.** The internal consistency estimate of reliability for composite SLQ instrument was determined at a Cronbach's alpha coefficient of .89, with all individual subscales exhibiting Cronbach's alpha coefficients greater than .82. A confirmatory factor analysis via Varimax rotation and Kaiser normalization confirmed Barbuto and Wheeler's (2006) five SLQ factors.

**Global leadership GLFI instrument.** The internal consistency estimate of reliability for composite GLFI instrument was determined at Cronbach's alpha coefficient of .95. All but one individual GLFI dimension exhibited Cronbach's alpha coefficients greater than .70. The GLFI dimension sharing leadership exhibited a Cronbach's alpha coefficient of .65. A confirmatory factor analysis via Varimax rotation and Kaiser normalization confirmed 12 of Goldsmith et al.'s (2003) 15 GLFI dimensions. An examination of the factor loading of individual items led to the

following suggestions to improve the principle component factor loading and internal consistency estimate of reliability: The researcher suggested combining items of the GLFI dimension creating a shared vision with two items from other GLFI dimensions and renaming it focusing on business success. This may establish the 13th dimension for a revised global leadership instrument. Remnants of the GLFI dimension maintaining a competitive advantage with one item of the GLFI dimension sharing leadership may result in a 14th dimension, which could encase topics of cost effective partnerships and outsourcing. In addition, survey items that loaded at more than one component or did not align to other items, may require different expressions in their item statement. This may enhance the clarity of the construct and improve the survey results. These suggestions will require more research and were not implemented for subsequent analysis in the research study.

**Conclusions.** The research supported the internal reliability of Barbuto and Wheeler's (2006) servant leadership SLQ instrument. The Goldsmith et al.'s (2003) global leadership GLFI instrument showed acceptable reliability across the majority of its individual dimensions. Additional research will be required to improve the instrument for use in global leadership research. This is an important finding because this research study is one of the first published research studies employing the GLFI instrument. It proved to be a promising instrument with its multitude of dimensions describing the many skills and talents that global leaders may exhibit. The increase of global leadership research and the rising number of global leadership programs worldwide will require the establishment of a global leadership instrument. Future research may establish the GLFI instrument's role in overcoming the absence of an

agreed-upon definition of global leadership (Mendenhall, 2008). It may also carry the answer to Mendenhall et al.'s (2008) question: "What are the skills that global leaders should possess in order to be successful" (p. xi)? The GLFI instrument may also serve as a foundation to a time and task adaptable global leadership instrument that, continuously and successively progressing, can respond to the challenges of globalization (Hitt, et al., 2010) and the dynamics of global integration, rapidly changing conditions, new competitors, and cultural diversity in the global market (Cateora, et al., 2011; Friedman, 2006; Northouse, 2009).

### **Limitations of the Study**

This research was conducted among executives and leaders of organizations in northeast Indiana in the United States. The participants were not selected randomly, but conveniently sampled among members and associates of the Greater Fort Wayne Chamber of Commerce and the Northeast Indiana Regional Partnership. Thus, the results cannot be generalized across these organizations or the northeast Indiana region.

The research findings are limited to the leadership instruments employed in this study. Both instruments were employed in their self-rater version. The leaders' self-reporting leadership characteristics may not have accurately reflected their actual behaviors. Some items, such as "demonstrates honest, ethical behavior in all interactions" may have found different scores in the self- and other rater version in light of Gregory's (2003) quote: "Where I see a moral quandary, you see nothing to excite moral concern" (p. 69).



Knowing that the survey was conducted under the direction of Indiana Tech's Global Leadership PhD program may have influenced subjects' decision to participate and the answers to the leadership items. In addition, as Howell et al. (2010) claimed, internet surveys may have a bias toward participants who are young, educated, and of middle to high socioeconomic status.

After thoroughly reviewing and analyzing the dataset, the researcher decided to conduct correlational statistical procedures assuming a parametric dataset. Abbott (2011) claimed that many statistical procedures are robust and can provide meaningful results even if there are minor violations to primary assumptions. It is at the discretion of the researcher to review the data and decide on appropriate statistical procedures to answer the research questions and hypothesis.

This study is the first published empirical research study employing Goldsmith et al.'s (2003) global leadership instrument across organizational and leader specific demographics. Thus, no comparable research exists to confirm the reliability or validity of this instrument.

### **Operational Application of Findings**

The findings of this study augmented a better understanding of the attributional relationship between servant leadership and global leadership. The found positive association between servant and global leadership attributes may encourage other organizations to embrace servant leadership in their operational endeavors in the global context and join the ranks of successful global companies that apply servant leadership principles. It may help improve the development and training of global leaders in organizations to succeed in the complex global competitive environment

and overcome the challenge of globalization. The findings may assist organizations in the development and training of servant leaders facing the challenges of a complex global world. It may also inform in particular human resource departments when selecting or recruiting candidates for global leadership position or engage in succession planning in global companies.

**Leadership training and development.** Many organizations struggle with preparing their leaders and executives to succeed in the global environment (Robinson & Harvey, 2008). Patterson et al. (2007) identified the need for modern organizations to find novel, less traditional ways to identify and train global leaders who will succeed in complex environments. This research demonstrated the close association between servant leadership and global leadership. Servant leadership is based on universal values and is adaptable to different cultures (Keith, 2010). Servant leadership is especially applicable for leaders facing global challenges, when opposing viewpoints, concepts, and value systems that need to be integrated and for cross-cultural complexities to be bridged (Trompenaars & Voerman, 2010). Sendjaya (2010) differentiated servant leadership training programs with an emphasis on character instead of focusing on skills or concepts of other programs.

This study found that the servant leadership components persuasive mapping and organizational stewardship are the primary contributors to global leadership. Thus, servant leadership development and training for global leaders may need to emphasize especially these characteristics.

The research results also suggested that servant leaders with the need to operate globally may benefit from developing their skills and attitudes in appreciating

diversity, sharing leadership, encouraging constructive dialogue, anticipating opportunities, demonstrating integrity, and creating a shared vision for the organization. Focusing on these global leadership dimensions may improve the effectiveness of servant leaders operating in the global context.

*Accentuation of persuasive mapping.* Persuasive mapping includes the use of sound reasoning and mental frameworks when mapping issues and conceptualizing greater possibilities (Barbuto & Wheeler, 2006). Leaders with great persuasive mapping characteristics are compelling when articulating opportunities. They encourage others to recognize the organization's future and persuade them toward greater performance to accomplish the objectives without formal authority.

The ability to persuade rather than coerce others to complete tasks and achieve goals and objectives forms the basis for persuasive mapping. Farling et al. (1999) argued that persuasive communication is an important element of influence. A leadership program that accentuate persuasive mapping will allow leaders to learn how to build consensus, share their wisdom, and develop understanding without manipulation, coercion, and control of others (Russell & Stone, 2002).

*Accentuation of organizational stewardship.* Organizational stewardship involves the ability to view the organization as an entity that positively contributes to society as a whole and toward the well-being of the community (Barbuto & Wheeler, 2006). It includes the development of team culture and cooperative spirit at the workplace. In order to make a positive contribution in the community and society, Searle and Barbuto (2011) suggested that organizations may accomplish this objective by reaching out to the community through community development programs,

implementing outreach activities, and facilitating company policies that would benefit the surrounding community, society, and the environment. A leadership development and training program accentuating organizational stewardship will need to include these aspects.

An example for the need to accentuate persuasive mapping and organizational stewardship as the primary contributors to global leadership is the case study of Synovus Financial Corporation, an international entity headquartered in Columbus, Georgia in the United States. Hamilton and Bean (2005) described the firm's attempt to export the servant leadership concept and leadership training program to its U.K. operations. Based on their description, the initial training program concentrated heavily on the altruistic calling attributes. However, this research study showed that altruistic calling contributes only little to the global leadership dimensions. Not surprisingly, the Synovus management training program found antipathy and initial rejection among British managers.

Hamilton and Bean (2005) concluded that Synovus's leadership trainers had to reframe the training content to improve interaction and communication of shared meanings. The authors pointed to the importance of recognizing the ethics, values, and beliefs of training participants. Expanding internationally, servant leadership training content needs to consider the training context in which ethical and moral foundations are expressed differently (Hamilton & Bean, 2005). The findings of this research study showed that a focus on persuasive mapping and organizational stewardship could have possibly supported the implementation of the servant leadership paradigm in Synovus's foreign subsidiary.

*Accentuation of appreciating diversity.* Effective global leaders are able to manage across cultural diversity (Manning, 2003) and are flexible enough to work with people from other cultures (Adler & Gundersen, 2007). The respect for diversity is a core principle for servant leaders (Trompenaars & Voerman, 2010).

Many diversity training programs have become “cultural competence initiatives” (Bennett, 2009, p. 96) reflecting global thinking. Bennett (2009) described the Developmental Model of Intercultural Sensitivity (DMIS) that could form the basis for intercultural training design. The DMIS is comprised of six stages of increasing sensitivity to cultural differences. It is based on the underlying assumption that the learners’ intercultural competence increases when the experience of difference becomes more sophisticated and cognitively complex. The first three phases include ethnocentric stages—denial, defense, and minimization—with the last three comprising ethnorelative stages—acceptance, adaptation, and integration. Successful global leaders are able to unleash the power and wealth of multicultural diversity and create synergy of productive collective performance (Carey, et al., 2004).

*Accentuation of sharing leadership.* Goldsmith et al. (2003) described sharing leadership as the ability to maximize all human resources in an organization by empowering its employees. With the increases in business complexity due to globalization, the responsibilities for individual leaders have become too great. Sharing leadership allows for the creation of flatter organizational structures in which power, authority, and decision making are more widely and deeply dispersed (Goldsmith, et al., 2003). Engaging in team building efforts, fostering collaboration,

understanding individuals' strengths and capabilities, and delegating decision-making power are components of training leaders in sharing leadership.

*Accentuation of encouraging constructive dialogue.* Effective global leaders encourage constructive dialogue from different sources and “appreciate and understand the many different viewpoints and perspectives of his or her own culture as well as the many cultures around the world” (Goldsmith, et al., 2003, p. 204). Millar and Choi (2010) explained that today’s global, diverse, and cross-cultural setting increases the complexity of communication with differences in cross-cultural interpretations, informational constraints, and communication distortions.

A training and development program for global leaders with the goal to improve encouraging constructive dialogue should emphasize the improvement of abilities to accept different viewpoints and listen to feedback from different sources. It may include face-to-face dialogues and feedback surveys from different sources such as the leader’s managers, team members, customers, and colleagues (Goldsmith, et al., 2003).

*Accentuation of anticipating opportunities.* A myriad of new social, political, cultural, and environmental issues and trends in the external business environment offer risks and opportunities for many organizations (Gitsham, 2008). Organizations’ leaders and managers are tasked with engaging and empowering their employees to utilize the vast opportunities and deflect the immense threats of the global competitive environment (Hitt, et al., 2010).

Goldsmith et al. (2003) suggested that global leaders should focus on (a) investigating future trends, (b) anticipating future opportunities, (c) inspiring people to

focus on future opportunities, and (d) developing ideas to meet the needs of the new environment. This includes constant pursuit of knowledge to identify future trends and recognizing customer needs and changes in the industry and organization. A training and development program to accentuate anticipating opportunities may need to emphasize components guiding global leaders to conduct research and obtain knowledge on critical market forces, industry related trends, competitors' product and service offering, and strategic planning. It should include tools to help global leaders engage and involve employees in thinking strategically and seeking new opportunities for the organization.

*Accentuation of demonstrating integrity.* Pusch (2009) argued that global leaders maintain clarity and integrity in complex situations with different worldviews and perspectives and when dealing with uncertainty and managing stressful circumstances. Hernez-Broome and Hughes (2004) identified the increasing interest in the integrity and character of leaders as important aspects in the future understanding and practice of leadership and leadership development.

Global leaders need to be able to build trust and respect in order to motivate and lead (Goldsmith, et al., 2003). Trust cannot be achieved without demonstrating integrity, honesty, and ethical behavior. Global leaders need to understand their personal values and beliefs, and integrate these with compatible organizational values and business practices. A training and development program to accentuate demonstrating integrity will start with the definition of high ethical standards, followed by development of an organizational code of ethics, and implantation of ways to communicate these principles to all stakeholders. It will also include

coaching on the codes of conduct and different business practices across global markets.

***Accentuation of creating a shared vision.*** Global leaders need to create a clear and compelling vision to inspire others across geographic borders and organizational boundaries, promote collaborative decision making, adapt to changing global trends, and motivate and empower culturally diverse workforces (Carey, et al., 2004; Goldsmith, et al., 2003). Osland and Gaines (2011) described global leadership as “the process of influencing the thinking, attitudes and behaviors of a global community to work together synergistically toward a common vision and common goals” (p. 3).

A training and development program to accentuate creating a shared vision begins with the development of the organization’s mission, setting priorities, and implementing the critical strategy of aligning the vision among the organization’s employees, customers, and other stakeholders. Sharing the vision will include the utilization of various communication tools, such as the Internet, blogs, and video conferencing. These will allow global leaders to become capable and comfortable in communicating a shared vision to a multitude of stakeholders.

**Recruiting talent and succession planning.** Globally operating organizations face unique challenges across world markets given the differences in cultures, languages, laws, economies, and business customs (Bellin & Pham, 2007). Human Resources personnel are tasked with providing global organizations with needed talent. The need for global leaders who can navigate these worldwide marketplaces is imperative (Patterson, et al., 2007). The close association between servant and global



leadership, as presented by the findings of this study, may allow Human Resources personnel to evaluate candidates for global leadership positions on certain servant leadership attitudes as these relate to potential success in a global leadership role. Likewise, Human Resources personnel may be interested in evaluating servant leaders on particular global leadership attributes when assigned to roles in a complex global environment. Human Resources personnel need to determine whether current processes and approaches to leadership development are sufficient to build the required leadership qualities and skills and which learning methods need to be utilized (Gitsham, 2008). Gitsham (2008) advocated for current and aspiring leaders to identify their current strengths and ask themselves which qualities and skills they should prioritize as these may apply to their future work and career.

### **Implications for Future Research**

More research is required to analyze the strength of the correlative relationship between servant leadership and global leadership in different regions of the United States and globally to confirm the findings of this study. Confirming these findings will allow organizations to develop servant leadership and global leadership training programs and enhance recruitment efforts for servant and global leaders.

This research study was based on an exploratory research design (Creswell, 2008) to examine the extent to which servant leadership and global leadership scores and their individual attributes co-vary. Post hoc statistical analyses identified primary contributors to the leadership scores and potential regressors to the individual leadership attributes, but further research is required to analyze predictor variables and related causality.

Further research is required to validate Goldsmith et al.'s (2003) global leadership instrument for future research in the field of global leadership. In addition, organizations could benefit from research that would extend this cross-sectional research design to a longitudinal study.

Organizations may benefit from further research into applied global leadership and servant leadership attributes. Future research is required to develop, provide, and apply various leadership training and development processes on particular attributes. The training and developing of leaders on servant leadership attributes and examining the differences in gained global leadership capabilities may find strong application in globally operating organizations. It will support the continuous needs for developing effective global leaders.

### **Conclusions and Summary**

The business world is becoming increasingly global and the cultures of the world are becoming more interconnected (House, 2004). Global leaders face an environment, that is “increasingly volatile, uncertain, complex, ambiguous, culturally diverse, intricately intertwined, and advancing technologically at breakneck speed” (Hoppe, 2007, p. 21). Successful global leaders will cross geographic and cultural boundaries to inspire a shared vision, promote collaborative decision making, adapt to changing global trends, and motivate and empower culturally diverse workforces (Carey, et al., 2004).

This research study answered Irvin's (2010a) call for “the great need and opportunity for future research” (p. 129) to advance the understanding and practice of servant leadership within the global context. It followed Patterson et al.'s (2007)

encouragement for more research to examine the relationship between servant leadership and global leadership.

The research employed a correlational, hypothetical-deductive, cross-sectional quantitative research strategy with two instruments to measure servant leadership and global leadership attributes. The sample included 413 leaders and executives of organizations in northeast Indiana in the United States.

The first hypothesis confirmed a close association between servant leadership and global leadership. The second hypothesis confirmed the close association between a majority of servant leadership attributes and global leadership attributes. The third hypothesis found that the strength of correlative relationships between the two leadership constructs was dependent on the leader's leadership position and leader's gender. Post hoc analysis revealed differences in servant leadership by leader's gender, as well as type and size of organizations the leader was employed at. Differences in global leadership were found in leaders when moderated by size of organization and the number of countries the organization does business with, but not the proportion of products or services an organization sells to foreign countries. The findings indicated differences in global leadership associated with leader's age and level of education but more research is required to confirm.

The findings of this study advance the understanding of the attributional relationship between servant leadership and global leadership. These findings may assist organizations in the training, development, and recruitment of leaders to succeed in the complex global competitive environment and overcome the challenge of globalization.

The findings of this study may help mitigate the need for further clarification and refinement of the servant leadership construct as a best fitting model of leadership to the unprecedented challenges of today's leaders (Sendjaya, 2010). In an era of globalization with increased cultural diversification within and surrounding organizations in the global market place, servant leadership, with its emphasis on service and follower-orientation, has the potential of meeting today's unique leadership needs (Irving, 2010b).

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## Appendix A

### Online Survey (16 Pages)

#### Introduction

As our world becomes more complex and connected, the need for strong leaders has never been greater. Indiana Tech has built a foundation for leadership training through the bachelor's and master's degrees in organizational leadership. In 2009, the university took that commitment of developing leaders one step further with the debut of the Ph.D. in Global Leadership.

The following questionnaire is part of a doctoral dissertation and leadership research at Indiana Tech. Your answers to this anonymous survey are completely confidential. Your participation will greatly enhance leadership research at Indiana Tech and in Northeast Indiana. The estimated time to complete the survey is 12 minutes.

If you are interested receiving a personal copy of your survey results free of charge, you can enter your contact information at the end of the survey. With your personal copy, you will receive your scores on various leadership dimensions, and see how these compare to the entire group of participants.

We thank you for your participation.

Indiana Tech  
College of Professional Studies  
PhD Program in Global Leadership

(Appendix continues)



**INFORMED CONSENT FORM**

I state that I am over 18 years old and wish to participate in a program of research conducted by Dr. Rauch, Director of Global Leadership PhD program, at Indiana Tech, Fort Wayne, Indiana. The purpose of this research is to measure leadership characteristics. The research involves one online questionnaire. All information collected in this study is confidential to the extent permitted by law. I understand that the data I provide will be grouped with the data others provide for reporting and representation and that my name will not be used. The questionnaire is not designed to help me personally, but to help the investigator learn more about leadership. I am free to ask questions or withdraw from participation at any time and without penalty. The investigator is Dr. Kenneth Rauch, Director of Indiana Tech Global Leadership PhD program, 1600 East Washington Blvd., Fort Wayne, Indiana 46803, (260) 422-5561.

**Please agree and acknowledge the above Informed Consent Form**

I agree

I don't agree with the Informed Consent Form and I am not interested in participating in this survey

(Appendix continues)

## Demographic Questions

**Describe your leadership position:**

- President, CEO
- Executive, COO, CFO, VP
- Director, Senior Management
- Middle Management
- Other

**How many years have you been in this position?**

- 10 years or more
- 5-9 years
- 1-4 years
- Less than 1 year

**How many years have you been with the company/organization?**

- 10 years or more
- 5-9 years
- 1-4 years
- Less than 1 year

**Describe your company/organization:**

- For-profit
- Not-for-profit

**Describe the type of industry of your company/organization: (choose closest match)**

- Mining and Farming
- Refining, Construction, Manufacturing
- Services, Distribution
- Research, Design and Development
- Not-for-profit Activities

**What is the number of employees in your organization?**

- 500 or more
- 100-499
- 10-99
- less than 10

(Appendix continues)

**What is the percentage of products or services your organizations sells to foreign countries?**

- 50% or more
- 20-49%
- 5-19%
- 1-4%
- 0%

**What is the number of countries your organizations is doing business with (including customers, clients, suppliers)?**

- 10 or more
- 4-9
- 1-3
- 0

(Appendix continues)

**Consider your own effectiveness. Rate yourself.**

**How satisfied are you with the way you...**

|   | Highly Dissatisfied   | Dissatisfied          | Neither Satisfied nor Dissatisfied | Satisfied             | Highly Satisfied      |
|---|-----------------------|-----------------------|------------------------------------|-----------------------|-----------------------|
| Ask people what they need to do their work better                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Give people the freedom they need to do their job well                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Strive to acquire the technological knowledge needed to succeed in tomorrow's world | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Genuinely listen to others  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Accept constructive feedback in a positive manner (avoid defensiveness)             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Strive to arrive at an outcome with others (as opposed to 'for' others)             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Encourage creativity and innovation in others                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Defer to others when they have more expertise                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Inspire people to commit to achieving the vision                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Effectively anticipate future opportunities   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |

(Appendix continues)

| <b>How satisfied are you with the way you...</b>  |                       |                       |                                    |                       |                       |
|---|-----------------------|-----------------------|------------------------------------|-----------------------|-----------------------|
|   | Highly Dissatisfied   | Dissatisfied          | Neither Satisfied nor Dissatisfied | Satisfied             | Highly Satisfied      |
| Successfully eliminate waste and unneeded cost  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Ask people what you can do to improve   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Are a role model for living your organization's values (leads by example)                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Avoid political or self-serving behavior  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Ensure that the highest standards of ethical behavior are practiced throughout the organization | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Involve people who have strengths that you do not possess                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Help others understand the impact of globalization  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Embrace the value of diversity in people (including culture, race, sex or age)                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| See change as an opportunity, not a problem   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Courageously "stand up" for what you believe in   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |

(Appendix continues)

| <b>How satisfied are you with the way you...</b>   |                       |                       |                                    |                       |                       |
|--|-----------------------|-----------------------|------------------------------------|-----------------------|-----------------------|
|  | Highly Dissatisfied   | Dissatisfied          | Neither Satisfied nor Dissatisfied | Satisfied             | Highly Satisfied      |
| Consistently deliver on commitments to customers   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Inspire people to focus on future opportunities (not just present objectives)                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Provide developmental feedback in a timely manner  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Make decisions that incorporate global considerations  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Strive to gain the variety of experiences needed to conduct global business                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Treat co-workers as partners, not competitors  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Build effective alliances with other organizations   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Actively expand your knowledge of other cultures (through interaction, language study, travel, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Build effective partnerships across the company  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |
| Provide effective coaching   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>              | <input type="radio"/> | <input type="radio"/> |

(Appendix continues)

| <b>How satisfied are you with the way you...</b>                |                       |                       |                                       |                       |                       |
|---|-----------------------|-----------------------|---------------------------------------|-----------------------|-----------------------|
|   | Highly Dissatisfied   | Dissatisfied          | Neither Satisfied nor<br>Dissatisfied | Satisfied             | Highly Satisfied      |
| Recognize the value of diverse views and opinions               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Develop ideas to meet the needs of the new environment          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Hold people accountable for their results                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Trust people enough to let go (avoid micro-management)          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Successfully recruit people with needed technological expertise | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Create a network of relationships that help to get things done  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Develop an effective strategy to achieve the vision             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Effectively translate creative ideas into business results      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Invest in learning about future trends                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Build people's confidence                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |

(Appendix continues)

| <b>How satisfied are you with the way you...</b>  |                       |                       |                                       |                       |                       |
|---|-----------------------|-----------------------|---------------------------------------|-----------------------|-----------------------|
|   | Highly Dissatisfied   | Dissatisfied          | Neither Satisfied nor<br>Dissatisfied | Satisfied             | Highly Satisfied      |
| Effectively motivate people from different cultures and backgrounds                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Deeply understand your own strengths and weaknesses   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Willingly share leadership with business partners   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Achieve results that lead to long-term shareholder value  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Demonstrate effective emotional responses in a variety of situations                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Demonstrate honest, ethical behavior in all interactions  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Communicate a positive, "can do" sense of urgency getting the job done                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Demonstrate self-confidence as a leader   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Ensure that people receive the training they need to succeed                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| View business processes from the ultimate customer perspective (have an "end to end" perspective) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |

(Appendix continues)



**How satisfied are you with the way you...**

|   | Highly Dissatisfied   | Dissatisfied          | Neither Satisfied nor<br>Dissatisfied | Satisfied             | Highly Satisfied      |
|---|-----------------------|-----------------------|---------------------------------------|-----------------------|-----------------------|
| Thrive in ambiguous situations (demonstrate flexibility when needed)                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Recognize the impact of globalization on your business  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Create and communicate a clear vision for your organization                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Clearly identify priorities   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Help others appreciate the value of diversity   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Inspire people to achieve high levels of customer satisfaction                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Encourage people to challenge the status quo  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Create an environment where people focus on the larger good (avoid sub-optimization or "turfism") | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Effectively involve people in decision-making   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Challenge the system when change is needed  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Consistently treat people with respect and dignity  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |

(Appendix continues)

| <b>How satisfied are you with the way you...</b>                                    |                       |                       |                                       |                       |                       |
|---|-----------------------|-----------------------|---------------------------------------|-----------------------|-----------------------|
|   | Highly Dissatisfied   | Dissatisfied          | Neither Satisfied nor<br>Dissatisfied | Satisfied             | Highly Satisfied      |
| Provide products/services that help your company have a clear competitive advantage | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Unite your organization into an effective team                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Regularly solicit input from customers  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Provide effective recognition for others' achievements                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Invest in ongoing personal development  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Discourage destructive comments about other people or groups                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Strive to understand the "other person's" frame of reference                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Effectively manage the use of technology to increase productivity                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Demonstrate the adaptability required to succeed in a global environment            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Understand the competitive options available to your customers                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |
| Take risks in letting others make decisions   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                 | <input type="radio"/> | <input type="radio"/> |

(Appendix continues)

This questionnaire portion is to describe your leadership behaviors and attitudes as you perceive them. Please answer all of the questions.

**Rate yourself. Please indicate how well each of the following statements describes you.**

|   | Not at all            | Once in a While       | Sometimes             | Fairly Often          | Frequently, if not Always |
|---|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|
| I put others' best interests ahead of my own                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I do everything I can to serve others                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I am someone who others will turn to if they have a personal trauma | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I am alert to what's happening around me                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I offer compelling reasons to get others to do things               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I encourage others to dream "big dreams" about the organization     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I am good at anticipating the consequences of decisions             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I am good at helping others with their emotional issues             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |

(Appendix continues)

**Please indicate how well each of the following statements describes you.**

|   | Not at all            | Once in a While       | Sometimes             | Fairly Often          | Frequently, if not Always |
|---|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|
| I have great awareness of what is going on                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I am very persuasive  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I believe that the organization needs to play a moral role in society | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I am talented at helping others heal emotionally                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I am in touch with what is going on                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I am good at convincing others to do things                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I believe that our organization needs to function as a community      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I sacrifice my own interests to meet others' needs                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |

(Appendix continues)

**Please indicate how well each of the following statements describes you.**

|   | Not at all            | Once in a While       | Sometimes             | Fairly Often          | Frequently, if not Always |
|---|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|
| I can help others mend their hard feelings                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I am gifted when it comes to persuading others                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I see the organization for its potential to contribute to society           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I encourage others to have a community spirit in the workplace              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I go above and beyond the call of duty to meet others' needs                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I know what is going to happen  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |
| I am preparing the organization to make a positive difference in the future | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     |

(Appendix continues)

Describe yourself:

**Gender**

- Male  
 Female

**Age**

- 60 years or older  
 50-59 years old  
 40-49 years old  
 30-39 years old  
 29 years or younger

**Education (highest degree)**

- Doctoral degree  
 Masters degree  
 Baccalaureate degree  
 Less than Baccalaureate degree

**Race**

- White  
 Black or African-American  
 Asian  
 Hispanic  
 Other

(Appendix continues)

Final Page

**If you are interested in receiving a personal copy of your confidential survey results, please provide the following information:**

Your Name:

Your Email Address:

**Do you have any questions regarding the survey or the Indiana Tech Global Leadership PhD program?**

**If you would like to recommend a leader or executive in your organization or in another organization, who you feel would benefit from participating in this survey, please enter name and contact info:**

End of Survey

Thank you for participating in this survey.

**Appendix B****Institutional Review Board Approval****INDIANATECH**

Fort Wayne, Indiana

December 4, 2011

Dr. Ken Rauch and **Erik Magner**,

The IRB application of **Erik Magner** for the project titled “A Quantitative Correlative Analysis: Attributional Relationship between Servant Leadership and Global Leadership” **has been approved (as submitted)** by the Institutional Review Board of Indiana Tech. This research project, as submitted, **is exempt** from further human subjects review by the IRB Committee of Indiana Tech. Please note the following limitations of this approval for exempt status for this IRB application.

This approval of the IRB Committee of Indiana Tech extends only to the research plan as outlined in this specific IRB. This approval extends only to those aspects of this research project as presented in this specific IRB application including issues related but not limited to selected subjects, intervention procedures, risks and/or benefits to the subjects, confidentiality, information provided to the subjects and related consent forms, issues of privacy, and potential conflicts of interest. This approval does not extend 1) to any exempt research interventions or activities not outlined within or beyond the scope of this specific application, 2) nor to any non-exempt issues which have not been presented in this specific IRB application, nor to non-exempt issues which might develop during or as a result of this research project, nor to any further research projects proposed by the investigator and/or co-investigator of record for this IRB application.

If "substantive" changes are made to this research plan an amended application needs to be submitted to the IRB Committee of the University.

Speaking for the IRB committee I thank you for submitting your Application to the IRB Committee and wish you the best in your research project.

James B. Schaffer, PhD  
Full Professor  
IRB Committee, Indiana Tech  
Chairperson



### Appendix C

#### Random Sequence for GLFI Instrument Items

|          |          |          |          |
|----------|----------|----------|----------|
| 1. GL30  | 19. GL54 | 37. GL27 | 55. GL9  |
| 2. GL37  | 20. GL52 | 38. GL58 | 56. GL63 |
| 3. GL11  | 21. GL66 | 39. GL59 | 57. GL48 |
| 4. GL45  | 22. GL61 | 40. GL35 | 58. GL23 |
| 5. GL46  | 23. GL33 | 41. GL7  | 59. GL25 |
| 6. GL22  | 24. GL4  | 42. GL39 | 60. GL55 |
| 7. GL57  | 25. GL3  | 43. GL20 | 61. GL29 |
| 8. GL21  | 26. GL14 | 44. GL72 | 62. GL71 |
| 9. GL26  | 27. GL18 | 45. GL42 | 63. GL15 |
| 10. GL60 | 28. GL10 | 46. GL49 | 64. GL65 |
| 11. GL70 | 29. GL16 | 47. GL68 | 65. GL34 |
| 12. GL44 | 30. GL32 | 48. GL43 | 66. GL40 |
| 13. GL53 | 31. GL8  | 49. GL31 | 67. GL17 |
| 14. GL51 | 32. GL62 | 50. GL64 | 68. GL47 |
| 15. GL50 | 33. GL69 | 51. GL56 | 69. GL13 |
| 16. GL41 | 34. GL38 | 52. GL1  | 70. GL2  |
| 17. GL5  | 35. GL12 | 53. GL24 | 71. GL67 |
| 18. GL6  | 36. GL19 | 54. GL28 | 72. GL36 |