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An Evidence-Based Determination of Whether Effective Leadership Competencies are Universal and Transferable.

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Walden University
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Abstract

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MA, Walden University, 2010

BSc., Sussex University, 1974

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

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Abstract

Poor executive leadership of organizations over the last 20 years has resulted in the destruction of stakeholder value, loss of jobs, and in some cases, risk to the entire enterprise. An executive search firm database, encompassing 16,000 leaders from 300 organizations, was analyzed to determine if the commonality and transferability of leadership competences could be used to improve executive assessment. Implicit leadership theory, where leaders are gauged by the individuals that surround them, served as the theoretical foundation. The study also relies on a leadership competency model used by the executive search firm that constructed the database and is based primarily on behavioral-event interviewing method of assessment. Inferential statistics were used to analysis the data with analysis of variance and Tukey post-hoc methods for testing mean differences, and with correlation and regression analysis to test for associations and explained variances. The executive roles were found to show a commonality of competency profiles and transferability across the disciplines studied, with the exception of the chief executive officer (CEO) role. These findings suggest that a new CEO should not be sourced directly from the other executive functions inside or outside the firm. The Outstanding leader database indicates a strong universality and interchangeability of leaders at this higher-ranking level, regardless of discipline and industry; the database is a source of new potential CEOs. Results Orientation is by far the strongest developed of the competencies for all leaders. Social change will result from better selection of top executive leaders with a positive impact for employees and all the stakeholders of the corporation or institution.

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Dedication

I dedicate this dissertation to my family, the wind in my sails, as I persevered through this long process. The support of my wife Carol was most appreciated; she gave me the space and the time to embark on this journey. The loving support provided by my young children Kylen and Ellana was crucial to my success. During the eight years it has taken me to get to this stage my children have grown from a 7 and 9-year-old to quite mature and cherished young adults. My daughter Ellana, over the last few years particularly has shown keen interest and been very supportive of my psychological and doctoral endeavors during my journey.

I would also like to dedicate this study to the loving memory of my parents, to whom I am grateful for life and all of the life lessons that they helped me learn. In particular my beloved mother who taught me that the possibilities were boundless and not to be confined nor constrained by the system or the views of those around me. She helped me develop resilience and a love of the universe; it has stood me in good stead.

Thank you all from the bottom of my heart for helping me achieve the high accolade of PhD.

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A big thank you to my dissertation committee for your help, guidance, and time working with me to get my study to the level required for me to get my PhD. Special thanks to my Chair, Dr. A. Hakim. You have been extremely helpful and supportive throughout my trials and tribulations during this long journey – your upbeat approach has often kept me going. I would like to thank my methodology experts, the late Dr. Pace and Dr. Rounds-Bryant, for your help and guidance. Dr. Carroll, as my most recent URR you helped me regain my sanity and confidence in the system for which I am thankful. I would especially like to thank the firm of Egon Zehnder and the Partners for their generosity in providing such a unique opportunity to access their amazing database for this dissertation. I hope you find the results are useful by way of a thank you.

On a more personal note I would to thank my fellow student Jessica Wilson-Hart (dogsledder extraordinaire) for her support throughout all our course work together and the dissertation process. You have been there with me virtually from the beginning Jessica; it's good to have such a great buddy! A big hug for you Ellana for having the faith and confidence in me and for giving me encouragement.

I must acknowledge and thank the universe for the gifts of patience, endurance, strength and resilience to complete this journey.

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Chapter 1: Introduction to the Study

Background

The success of an organization is connected to the effectiveness of the individual executives filling the top positions of authority (Griesedieck & Sutton, 2007). Analyses of the 2012 job turnover of chief executive officers (CEOs) from the world's largest 2,500 companies indicated that 15% left office; of these, 28% were unplanned (Favaro, Karlsson, & Neilson, 2013). Over 100 of the world's top CEOs were fired for poor performance, as measured by annualized total shareholder returns during the outgoing CEOs period in office. During the 1990s and 2000s, many large companies were put in great danger as a result of leader failures (Charan, 2005).

Leaders destroyed shareholder value; employees lost jobs, and some leaders risked the entire company. These leaders jeopardized all the stakeholders involved, regardless of whether they had a personal or financial interest. In some of the worst cases, such as Enron, WorldCom, and Tyco, executives were found corrupt and went to jail (Bennis, 2007). In the case of Enron, the financial cost to investors and pensioners exceeded $80 billion, with a senior executive taking his own life ("Enron's J Clifford," 2002). The list of companies whose leaders simply failed in their jobs included Home Depot, Xerox, Procter & Gamble, Mattel, Shell, Boeing, Hewlett-Packard, Siemens, Kmart, Coca-Cola, AT&T, Citigroup, Enron, Merrill Lynch, and Bristol-Myers (George, 2008; Conger & Nadler, 2004). Home Depot, for instance, recruited the General Electric (GE) star, Bob Nardelli, as CEO. He failed spectacularly in his running of the company. He was removed as CEO in 2006 after shareholders revolted over his receipt of a $250

million personal compensation package for the prior five years. During this period, Home Depot lost 12% of its stock value. Lowes, an industry competitor and one of its main business rivals, saw its value nearly double during the same period (George, 2008).

The problems of poor performance among firms may be much greater than that seen at the CEO level in large global public companies. Hogan and Kaiser (2008) stated that the number of leaders who derail is on the order of 50%. The authors believed these failed leaders were chosen for reasons other than a demonstrated ability to lead. In addition, the number of managers who are incompetent in everyday corporate life is said to range from 30–50% (Hogan & Kaiser, 2005). These aspects are discussed in greater detail in Chapter 2. As the examples of Home Depot and Enron highlighted, poor leader selection and subsequent underperformance in the job can have serious ramifications for the firm, its workforce, and stakeholders, as well as society in general.

The aim of this dissertation was to examine the attributes and competencies of senior leaders around the globe, across various industries, and in different corporate roles, using a competency-based model. The individual leader's attributes and competency profile are compared against industry and functional role benchmarks. These benchmarks are derived from a large propriety database and are compiled at the average and outstanding leader performance level (defined in Chapter 3). This research on the competency profile of an effective leader could allow the evaluation of a leader's potential performance in a new role. The study includes benchmarks for various executive leadership functional roles across all industries. The study also includes benchmarks leaders of specific industries such as Energy, Airlines and the like. The

results of this dissertation may help inform and improve candidate selection for new leaders recruited from internal and external sources and thus help mitigate the social cost of potential leader failure.

Chapter 1 covers the following topics, the background to the study, the problem statement, details the purpose of the study, a review of the nature of the study, the research questions that are evaluated in the dissertation, and the theoretical basis of the study. Chapter 1 also contains the specific operational definitions, the unique terms used in the dissertation, the study's assumptions, the scope and delimitations, and limitations. Finally, the chapter addresses the significance of the study and the implications of the research for social change.

Problem Statement

There is a lack of business practitioner data on the knowledge, experience, competencies, characteristics and cognitive abilities of leaders in global industrial organizations (Kaiser & Overfield, 2010). The Center for Creative Leadership [add location or affiliation?] found that two out of every five new CEOs fail in the first 18 months of taking on the role (Ciampa, 2005). There is a lack of data on leaders' competencies to allow the effective assessment and selection of potentially successful global leaders at the executive level. The absence of a substantial global database on leadership competency profiles, collected systematically by practitioners and available for academic and research study, is a problem. It means that has been little empirical study on the attributes and competencies of successful leaders across job functions and industries (McGahan & Porter, 1997; Powell, 1996; Cober, Silzer & Erickson, 2009a).

An information gap exists between industrial/organizational (I/O) practice and research in the field of leadership competency assessment and the use of a competency-based model in the selection of effective leaders (Silzer & Cober, 2011). The study filled this gap because it had access to a huge proprietary database of leaders who were assessed against a common competency-based model (made available by a research-producing executive search firm). Use of the archival database, which was collected over the last 12 years, allowed the scientific analysis and assessment of outstanding leaders in different functional roles in culturally diverse companies and institutions across many distinct industry sectors worldwide.

Purpose of the Study

This quantitative study used an archival business practitioner database - a postpositivist, evidence-based approach (Creswell, 2003). Its purpose was to analyze the data in the database on key leadership competencies of leaders in companies and institutions worldwide. The aim was to see whether there was commonality and universality of leadership characteristics among the leadership roles that yields superior job performance and whether these characteristics were transferable. The study was unique in that rarely has such a large, consistently derived, reliable, and valid database been available for scholarly review (Briner & Rousseau, 2011).

This study investigated attributes and effectiveness of leaders using a competency-based model. The aim was to determine whether successful leaders have competencies made up of a attributes, skills, abilities, characteristics, and traits that can be considered universal and relevant to any leadership role. The competency-based model

used in the analysis sought to determine whether a leader's competency profile would allow her or him to transfer to new roles in companies anywhere, without constraints and without concerns about future performance. The set of competencies included in the competency-based model is discussed in detail in Chapter 3. The ability of firms to find and select effective CEOs was examined from both internal and external sources. Leadership candidates based on the competency model were reviewed from within organizations, from external organizations but within the same industry, and from external sources across completely different industries.

The dependent variables were the eight leadership competencies (six core and two-situational/contextual) in the competency-based model contained in the proprietary archival database of practitioners. These competencies are covered in detail in Chapter 3. The primary independent variables in the study were 6 key executive job functions, 12 industrial sectors, outstanding leaders (the top 5–10% of executives), and CEO selection criteria.

Research Question and Hypotheses

This study was based on the following five research questions (RQs) and hypotheses:

RQ1: Are leadership competencies common and universal, allowing a leader to transfer effectively across different functional roles within an organization?

$H_0$1: There is no commonality and universality of six core and two-situational contextual leadership competences among leaders in their senior functional roles of chief executive officer, chief financial

officer, chief information officer, financial services, human resource executives, and transportation heads.

$H_1$1: There is a commonality and universality of six core and two-situational contextual leadership competencies among leaders in their senior functional roles of chief executive officer, chief financial officer, chief information officer, financial services, human resource executives, and transportation heads.

RQ2: Is there a commonality of leadership competencies, such that leaders can successfully transfer across 12 separate and distinct industrial sectors?

$H_0$2: There is no commonality and therefore transferability of six core and two contextual leadership competences among leaders in their senior functional roles across industry sectors. The industrial sectors include airline, banking, automotive, chemicals, construction, construction services, energy, governmental, high-tech manufacturing, insurance, pharmaceuticals, and telecommunications.

$H_1$2: There is a commonality and therefore transferability of six core and two contextual leadership competences among leaders in their senior functional roles across industry sectors. The industrial sectors include airline, banking, automotive, chemicals, construction, construction services, energy, governmental, high-tech

manufacturing, insurance, pharmaceuticals, and telecommunications.

RQ3: Are the competencies for outstanding leaders across all industries [that are] similar to those of specific component industries?

$H_0$3: There is no difference in the six core and two contextual leadership competencies for outstanding leaders across all industries compared with those outstanding leaders from the specific industries of banking, human resources, and manufacturing.

$H_1$3: There is a difference in the six core and two contextual leadership competencies for outstanding leaders across all industries compared with those outstanding leaders from the specific industries of banking, human resources, and manufacturing.

RQ4: Does a firm benefit from selecting a CEO from its industrial sector or should it look outside for one from a different industry?

$H_0$4: There is no discernable benefit from selecting the next CEO from a firms industrial sector verses a different sector.

$H_1$4: There is a discernable benefit from selecting the next CEO from a firms industrial sector verses a different sector.

RQ5: Is there a relationship among the six core leadership competencies in the search firm's competency model?

$H_0$5: There is no relationship between the six core competencies of results orientation, strategic orientation, collaboration and influencing, team

leadership, change leadership, and developing organizational capability among senior corporate leaders according to job function, industrial sector, and outstanding performers.

$H_1$5: There is a relationship between the six core competencies of results orientation, strategic orientation, collaboration and influencing, team leadership, change leadership, and developing organizational capability among senior leaders according to job function, industrial sector, and outstanding performers.

Theoretical Basis

The theoretical basis of this dissertation was implicit leadership theory (ILT) was. ILT provided the framework to evaluate leadership effectiveness and job performance potential in assessing senior management in global corporations and institutions (Hogan, Curphy, & Hogan, 1994; Hogan & Kaiser, 2005). A central assumption of ILT is that the evaluation of a leader is dependent on the perceptions and behavioral rankings of those individuals who surround and are influenced by the leader (Shondick, Dinh, & Lord, 2010). ILT was expanded to add a cultural dimension, which examined the universality of leadership attributes on a global basis, drawing heavily on the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project (House et al., 1999). GLOBE was a 10-year cross-cultural study of leadership across 62 cultures; it was completed in 2012 (Dorfman, Javidan, Hanges, Dastmalchian, & House, 2012). ILT related to the study approach and research questions via the leader assessment process, which used a competency-based model to populate the database (Spencer & Spencer, 1993;

McClelland, 1998). This model provided the database vehicle to allow assessment and ranking of leaders using behavioral–event interviews (BEI, McClelland, 1993). Competency-based assessments predict a leader's performance 2 years in advance at an 80% accuracy level (McClelland, 1998).

Since several competencies in the model are based on contextual elements, Chapter 2 includes a discussion on contingency theory. This theory illustrates how leadership effectiveness and performance can vary in different situations and contexts (Avolio, 2007; Yukl, 2013). Integrated trait-behavior theory (Scott Derue, Nahrgang, Wellman, & Humphrey, 2012) was useful for reviewing and discussing the elements of psychological capital in the competency-based model. Finally, charisma and transformational leadership (Yukl, 2013) are discussed as the predominant styles of effective leaders applying their competencies and characteristics to internal organizational dynamics and the wider business environment.

Rudestam and Newton (2007) made the point that good research is a balancing act between control and meaningfulness. Observation and measurement can be controlled by removing any influence of the confounding variable, while at the other end of the spectrum, the absence of any controls leaves only complex observation of human behavior in the field. This study is quantitative in nature and thus walks this tightrope. The rationale for the research design cannot be classified as truly experimental or quasi-experimental in nature; rather, it is a group differences type of design (Coolican, 2009). The study concentrated on relationships and associations between the variables and made no attempt to manipulate the variables as in experimental design. The study used a

massive, archival, and proprietary business database that captured BEI responses using a proprietary management-assessment process (see Chapter 3 for a detailed discussion). However, use of an existing database meant that participants were not randomly selected nor was there any means to manipulate the independent variables.

The dependent variables were the leader competencies extracted from the competency-based model variables captured in the archival database. The study used six core executive competencies: Results Orientation, Team Leadership, Change Leadership, Collaboration and Influencing, Developing Organizational Capability, Strategic Orientation, Market Insight, and Customer Impact (see Table 6). There were two-situational contextual competencies: Market Knowledge and Customer Impact. The participants were assessed and quantified on a numeric, equal-interval scale of 1-7 (Aron, Aron, & Coups, 2009). Chapter 3 includes a detailed discussion of the executive search firm's competency-based model, the competency-based assessment process, and the leadership competencies.

There were four independent variables in the study: Job Function, Industrial Sector, Outstanding Leaders, and CEO Selection Criteria. The first was job function at the senior management and executive level within organizations. These job junctions include chief executive officer (CEO), chief financial officer (CFO), chief information officer (CIO), senior financial services managers (FinSer), human resource executives (HR), and transportation heads (Trans). The second independent variable was an industry or industrial sector. Industrial sectors include the airline, banking, automotive, chemicals, construction, construction services, energy, governmental, high-tech manufacturing,

insurance, pharmaceuticals, and telecommunications industries. The other two independent variables were Outstanding leaders (defined in Chapter 3) and CEO profile selection criteria.

The data on leadership competencies, which comprises the archival database, has been collected since 2002 by trained management consultants who work for the executive search firm. The data collection, leadership assessment, analysis and codification process are fully described in Chapter 3. The correlational type study was based on a cross-sectional group-differences design (Coolican, 2009). It examined the differences between the variables of members of one of these groups as compared with members of other groups.

Both main branches of statistical methods, descriptive and inferential, were used in the data analysis (Aron, et al. 2009). The former were used to summarize and describe the groups from the study; the latter were used to test the hypotheses, allow conclusions to be drawn, and to make inferences from the sample about the larger population. A one-way analysis of variance (ANOVA) - a single-factor, independent-measures design - tested the existence of differences in multiple group means of the dependent variables. However, the ANOVA did not show where there were any significant differences between the groups. For this, Tukey tests were used and all possible pairings within groups were compared (Gravitar & Wallnau, 2007).

Operational Definitions

The following definitions reveal the intended meaning of a number of terms that were used during the writing of this dissertation proposal. The definitions singled out for

specific mention may go beyond common language (Creswell, 2003), or may have multiple meanings. Thus, these definitions provide meaning in the appropriate context that may not otherwise be clearly understood by the readers of the study.

Competency:

> **"**A competency is an underlying characteristic of an individual that is causally related to criterion–reference effective and/or superior performance in a job or situation. Where 'underlying characteristic' means the competency is a fairly deep and enduring part of a person's personality and can predict behavior in a wide variety of situations and job tasks. 'Causally related' means the competency causes or predicts behavior and performance and criterion-reference means that the competency actually predicts who does something well as measured by a certain standard e.g. profit margin" (Spencer & Spencer, 1993, p. 9).

Cultural contingency: Senior executives lead in a way that is relatively consistent with "leadership prototypes endorsed within their particular culture" (Dorfman et al., 2012). Cultural values and traditions influence the attitudes and behaviors of leaders and followers. The values, beliefs, and traditions of people are internalized and thus the influence will not necessarily be a conscious one (Yukl, 2013).

Etic: various characteristics of organizational and leadership practices that are equivalent and can be compared across cultures using common definitions and metrics (Den Hartog, House, Hanges, Ruiz-Quintanilla & Dorfman, 1999).

Emic: exploring and designating unique cultural specific differences in organizational and leadership practices (Den Hartog et al., 1999).

Evidence-based: the concept of using real world evidence to inform professional practice and be incorporated into practice decisions (Briner & Rousseau, 2011).

Executive search: a process whereby experienced consultants utilize both local and global knowledge and relationships to research and seek out the ideal perspective candidates to fill specific vacancies at executive level in organizations (Egon Zehnder International, 2004).

Leader: the individual or individuals selected for key decision-making roles at the senior or executive level of organizations (Vroom & Jago, 2007).

Leadership effectiveness: is defined in terms of how leaders affect employees and the workforce in terms of their job satisfaction and motivation along with their performance in managing individuals and teams to influence unit or organization results (Kaiser, Hogan, & Craig, 2008).

Structured behavioral-event interview: based on the critical incident job analysis and "organized around behavioral dimensions defined by analysis of the critical incidents" (Motowidlo et al., 1992, p. 572; McClelland, 1998). During the process the candidate's competencies, knowledge, experience, traits, potential and past behaviors, skills, and general abilities will be elicited by the use of directed probing questions (Fernández-Aráoz, 1999).

Trait: often used to describe personality or other similarly observable aspect of an individual. It is sometimes used interchangeably with other notable characteristics in the literature. Yukl (2013) defined 'traits' in terms of a variety of individual attributes of the leader's effectiveness. He included personality, needs, values, temperament, and motives.

Universality: the leadership attributes and behaviors that relate to both employee and team effectiveness, performance and productivity, quality, health, and job satisfaction in organizations (Larsson & Vinberg, 2010, Vroom & Jago, 2007).

Assumptions

Several assumptions were made about the search firm's practices and the data in its database. (a) The consultants' management assessment process to elicit leader competencies was reliable and dependable; the consultants were consistent in their codification of leaders across the database. This assumption is reasonable because the consultants are trained for and experienced in BEI, which is at the center of the appraisal process. (b) The competency model and the leader competencies evaluated were related to job performance and adequately captured. However, a review of the literature and knowledge of the search firm's practices detailed in Chapter 3 suggests the concern is not valid. (c) The data were provided in a format amenable to statistical analysis. (d) The organizational executives interviewed as part of the management assessment process provided dependable information that is truthful, and which establishes credibility (Baglione, 2010). (Aspects of the leaders honestly during the structured BEI process were tested. The honesty of the leader and reliability of the observations and evaluations of the consultants are tested and confirmed by the 360° references involving the leaders' peers, subordinates, and superiors).

Scope and Delimitations

The database used in the study held a representative sample of the population of global business leaders across different types of organizations and multiple diverse

industries. It contained information on public and private companies, governmental institutions and regulatory divisions, and various educational and cultural bodies. The study was constrained by the executive firm's propriety, archival database (ongoing since 2002) and by the processes and practices used in its compilation. The search firm has it roots in Europe but is a global business with 420 consultants in 69 offices in 41 countries. The database consisted of over 16,000 individual management appraisals from 300 global firms across multiple industrial sectors. The leaders assessed were spread geographically: Europe, the Middle East and Africa (73%), North America (13%), and Asia/Pacific region (11%). The appraisals were based on qualitative, structured BEIs performed by at least two highly educated and trained management consultants. The consultants assessed and codified each leader on her or his critical leadership attributes using a competency-based model and a modified Likert-type scale. Leaders were appraised against six core executive and two situational/contextual competences. These were graded by the interviewers on a scale of 1 (*acceptable*) to 7 (*outstanding*) as described in Chapter 3.

The leaders were benchmarked at average and outstanding levels against industry averages using the competency model in the global database. The data collection process performed by the executive search firm met four of the five data collection forms identified by Fink (1995) including interviews, structured record reviews, and structured observations, only self–administered questionnaires were absent (Creswell, 2003). The sample is culturally diverse unlike the usual psychological studies, which are based predominantly on American business leaders, and thus suffers from parochialism (Adler & Gunderson, 2008). The study was not bounded by gender, age, race, or culture. A

cultural discussion is included in Chapter 2 focused on the results of the GLOBE study and the theoretical framework of culturally endorsed implicit leadership theory.

Limitations

The study is to a certain extent limited by the use and nature of the search firm's proprietary database. Individual global companies selected the 16,000 leaders appraised in the database. The companies wished to have their senior management independently assessed for business purposes. The sample was thus not randomly chosen nor was it possible to manipulate the independent variables as in a quantitative experimental study.

The quantitative researcher normally tries to control elements of the study, such as the sample, site, context, and survey instrument (Rudestam & Newton, 2007). This control is certainly true in the experimental laboratory and to a certain extent in quasi-experimental studies. However, in this study, an element of qualitative research was used insofar as the search firm consultants were trying to understand the phenomena of business leadership in each company and industry, and to appraise the managers in the natural context. The search firm did not use any objective measures to collect data during the management appraisals; the process was qualitative and used BEIs. The quantification of the leaders score against a particular competency was based on the leader's performance in the interview and on the perception of the multiple interviewer consultants. After 30 hours of training, the correlation coefficient of interrater reliability is at 80% (Lawton & Borman, 1978); competency-based assessments are reported to predict leaders' performance 2 years in advance at the 80% level (McClelland, 1998). The use of observation and structured BEIs during the firm's data-gathering to

operationalize and codify the individual leaders attributes introduced a small degree of uncertainty (< 20%) into the quantitative research (see Chapter 3).

The firm's incentive model and its hiring and training practices underpin its goal of avoiding bias (Zehnder, 2001), as driven by financial, professional, or personal gain. The problem of bias in a consultant's evaluation is considered implausible.

Significance of Study

This research adds to the literature on the industrial/organizational psychological implications of the assessment and selection of global business leaders. It is expected to help HR departments, boards, and executives from corporations and institutions as they consider filling internal vacancies through internal promotion or via outside candidates. The study identifies which, if any, competences and leadership profiles are universal across job function; it also identifies the industries likely to provide the leaders who can successfully transfer across industrial sectors. The analysis of leadership competencies based on the competency-based model found in this large database provided information and practitioner evidence on the competencies of outstanding leaders. The intent of this study, and its original contribution, was to provide new information to aid in the assessment and selection of new, effective, global leaders at the executive and CEO level. The substantial evidence-based research analysis was undertaken on leadership competencies across business functions and industries identified the profiles of outstanding leaders and the industries most likely to produce them. The leadership profiles produced from the unique access to this previously unseen proprietary evidence-based practitioner information (and the subsequent scholarly review and analysis of the

competency model using the database) could be used by professionals in the field to assess and select leaders who are more likely to be effective and to successfully lead organizations. The results from this study could advance academic research in the field of business leadership. It meets the requirement—recently identified in a Society of Industrial Organizational Psychology survey (Cober, Silzer, & Erickson, 2009b)–which suggested that I-O psychologists use practitioner data for academic and scientific research to help close the gap between practice and science in I-O psychology.

This research could have a positive impact on company employees, shareholders, and all business stakeholders in the marketplace if it leads to the selection and retention of better leaders (Higgs 2001). The number of leaders who derail because they are not chosen for their talent to lead is on the order of 50% (Hogan & Kaiser, 2008). The authors believe that these leaders may have been selected for their technical abilities or for their "perceived ability to handle a single, narrowly defined issue" (p. 22). The implications of the failures are broad and serious. If mitigated, the poor performance and subsequent financial problems leading to people losing jobs, savings, and retirement funds, the negative social changes might be avoided along with the associated ripple effects on the macro economy.

Summary

Chapter 1 introduced this research study investigating the universality and transferability of leadership attributes and competencies across job functions and industrial sectors. The study uses information on leadership competencies from a large unique proprietary practitioner database of 16000 global management appraisals. The

problems addressed are the leadership failures that occur because of poor assessment and selection of executives, and the lack of practitioner based information on which to carry out scientific analysis of the issue. Leaders who fail to effectively run organizations often do so at great social cost. The gap in the research and literature from the lack of evidence-based information on the leadership competencies of effective leaders available for scientific study is addressed. The five proposed research questions are identified and discussed looking at the leaders competency profiles focusing on executive roles, twelve industrial sectors and CEO selection criteria. Chapter 1 discusses the nature and purpose of the study and identifies the theoretical framework of implicit leadership theory that supports the research. The last part of the chapter discussed some of the specific operational definitions used in the dissertation along with the study's assumptions, limitations, and its scope and delimitations. The chapter finishes with a discussion of the significance of the study and social implications for change. The study is significant, as it will aid companies in the selection of successful leaders, and identify whether leadership competencies are universal and thus allow people to transfer effectively between executive roles and across industries. The social implications of the study will be the positive impact on all company stakeholders and macro economy of well-run successful companies.

Chapter 2 reviews the literature on the following topics: (a) leadership theory, style and behavior with supporting concepts surrounding effective leadership competencies based on implicit leadership and contingency theory. (b) The rational for an evidence-based approach to I/O psychology and the gap that exists between practitioners

and researchers that this study helps overcome utilizing the large practitioner database. (c) A review of current leadership attributes and competencies, their applicability on a universal basis, whether they are transferable skills between executive jobs and industries, and whether culture influences and moderates the global concepts of leadership. (d) The current theory and approaches to leadership assessment and selection.

Chapter 3 discusses the research design and the study methodology and analysis. It covers the following topics: (a) a detailed, numerical, and descriptive outline of the firm's proprietary database, (b) the composition, theory and validity of competency-model and the six core and two contextual competencies used. (c) The search firm's management assessment process, how the data was collected, how it was operationalized into leadership competencies, and how it was codified via the BEI methodology and validated.

Chapter 4 presents the results of the analysis, answers the research questions, and discusses the study's findings. Chapter 5 includes a detailed discussion of the findings, draw conclusions from the research questions and subsequent analyses, and makes recommendations for research and action.

Chapter 2: Literature Review

Introduction

The performance of executive-level leadership in many organizations and institutions is poor (George, 2008). The number of managers believed to be incompetent is in the range of 30–75% (Hogan & Kaiser, 2005). Data on the leadership competencies of effective leaders is lacking. Were this information available, firms would be better able to assess and select potentially successful global executive leaders, particularly at the CEO level.

This quantitative research examined the competency profiles of effective leaders from an evidence-based proprietary database. The aim was to determine from the leaders competency profiles whether there is a universality, commonality, and transferability of characteristics between executive roles and industries. Thus the results allowed conclusions to be drawn about whether effective leaders' competencies are universal in nature and whether they are transferable across individual executive positions within one firm and industry and to similar positions in other business, institutional, or industrial business sectors.

Chapter 2 explores the academic literature and practitioner information associated with the attributes and competencies of leader who are effective and successful in their roles. The review includes discussions on following topics: (a) leadership emergence, effectiveness, and performance. (b) The influencing styles of leadership behavior and personality theories. (c) Leadership theories that provide the framework for the study were such as implicit leadership theory and contingency theory. (d) The lack of

evidenced-based approaches to fuel scientific study and debate. (e) The problems surrounding executive recruitment selection.

Literature Search Strategy

The EBSCO portal was used to access a wide range of academic, scientific, and professional database. The following databases were used to identify relevant material: Academic Search Premier, Business Source premier, SAGE Premier, PsycARTICLES, PsycBOOKS, PsycINFO, EBSCO, ProQuest, and SocINDEX.

In addition to academic journals many leading business journals provided relevant referenced articles, which were included as reference work. The websites of several of the larger executive search and management consultancy firms provided information and leads: McKinsey and Co., Booz Allen Hamilton, Korn Ferry, and Egon Zehnder. Key resources were the reference sections of recent research papers and contemporary dissertations, which allowed a trail to be followed along each thread.

The following keywords were used in the search: *leadership, organizational culture, transformational, charismatic, implicit leadership theory, contingency theory, personality, transferability, management skills, universal skills, succession, evidence-based, leadership attributes, executive search, personnel selection, traits, competencies, leadership effectiveness,* and *business*.

Leadership Theory, Style, and Behavior

There is no single definition of leadership today (Bennis, 2007). The act of leadership does not occur in a vacuum, it is not an individual phenomenon, a leader requires willing followers to give the act of leadership meaning (Bennis, 2007).

Executives of large companies tend to be highly intelligent and ambitious, have significant political skills, are known for their hard work and dedication, catching any luck that is available, however, according to Hogan & Kaiser (2005) these executives are not often known for their talent to lead. No one theory of leadership exists but many strive to create an integrated leadership theory from the large number of the complex and subtle models available (Kilburg & Donohue, 2011). Currently, theories like implicit leadership theory and contingency theory, and those behaviors related to charismatic and transformational leadership styles, are thought likely to be parts of this integrated unified theory foundation that are described by Bennis (2007). Such an integrated theory could endorse the concept that many elements of an effective leaders competency profile are universal and transferable (Bass, 1997). This is highly relevant to this study.

Implicit Leadership Theory

Implicit theories of personality have a distinctive relevance to the understanding of leadership and its development (Avolio, 2007). Implicit leadership theory (ILT) suggests individuals have inbuilt theories - values, beliefs, assumptions, stereotypes, schemas, and prototypes about a leader's competencies, characteristics, and behaviors that help them differentiate leaders from non-leaders (Yukl, 2013). An individual's perceptions of effective leadership are guided by implicit leadership theories and development of prototype theory. Implicit leadership theory is also valid in the cultural context (House, Wright, & Aditya, 1997). The shared values that exist between leaders and followers within defined cultural entities results in common etic and emic implicit

theories of leadership specific to those cultures. These cultural effects are discussed in more detail later in the chapter.

To the degree that a leaders' characteristics such as intelligence, personality, traits, values, beliefs, and the like match individuals preconceived ideas of what leaders should look like, the leaders are thought of as effective. Intangible schemas or prototypes represent the information used in developing these preconceived ideas. These prototypes are based on individual cognitive categories made up of composite proto-typical characteristics of many different groupings such as types of people, situations, emotions, and events (Fiske & Taylor, 2008). In general schemas help individuals make sense of the world around them and are often a mental shorthand on which to base quick cognitive assessment decisions. The schemas also allow individuals to reach judgmental decisions on what kind of attributes a leader must display to be effective (Shondick et al., 2010). Indeed, often followers prefer different types of leaders depending on the context and use different leader prototypes (Solano, 2006). Individuals have, therefore, multiple schemas for different leaders. These schemas are based on contextual aspects or situations. For instance, in society there are leaders from many different walks of life such as in politics, at work, in religion, and in the community. Individuals match each of these situational leaders against an appropriate contextual schema or prototype in order to assess whether the leader is effective or not.

In the work context followers have mostly unconscious cognitive representations or schemas of a leader that they hold which help them distinguish leaders from none leaders in their organization (Shondick & Lord, 2010). One might expect that given ILTs

are based on an individual's personal assumptions about leadership derived from their social, work, and other prior experiences, and that they might change over time as the individual grows and matures. However, research shows that schemas once formed tend to endure and are resistant to change even in the face of disconfirming information (Epitropaki & Martin, 2004). The author's study also found that the individual schemas or prototypes of effective leaders remained intact in different work assignments and different stages of their working lives. Epitropaki & Martin (2004) believed this supported the idea that ILTs are possibly holistic perceptions of leadership, which are content and context free. They also stated that their research showed "ILTs represent a stable reference point, benchmarks that employees can use to evaluate their actual managers behavior" (p. 308).

Researchers have shown that the prototypes for effective leadership vary between the executive level and top management, and the lower middle management and supervisory levels (Lord & Maher, 1991; Den Hartog et al., 1999). A specific Dutch study of 22 leader characteristics was conducted with 2161 respondents and found that the implicit theory and prototype held by the followers differed depending on the hierarchical position of the leader (Den Hartog, Koopman, & Van Muijen, 1998). As an example the prototypes for top leaders consisted of personal characteristics and competences based on being more visionary, long-term orientated, innovative, persuasive yet diplomatic, and courageous (Den Hartog et al., 1999). These issues and the discussion are relevant as this dissertation relied on the identification of leader prototypes and attributes at the top management and senior executive level. The differentiation of

prototypes based on the leader's hierarchical position is important in the identification and assessment of the leader's competencies considered.

The use of prototypes and schemas to define leadership categories is also consistent with personality trait research in leadership (Shondick et al., 2010). Consistently identifiable traits in group situations are associated with the team's leadership prototypes or an individual's emergence as a leader (Judge, Bono, Ilies, & Gerhardt, 2002). Other researchers have found various trait-like attributes tied to leadership perceptions and the development of follower prototypes (Hogan, Raskin, & Fazzini, 1990; Judge, Colbert, & Ilies, 2004). The latter researchers found traits that described ILTs in terms of a leader's empathy, likeability, ambition, dominance, and independence (Judge, Colbert & Illes, 2004).

Several researchers have used this linkage between traits and ILTs to measure and evaluate ILTs and determine the degree to which they are generalizable across work groups and situations. One group of researchers (Offerman, Kennedy, & Wirtz, 1994), building on earlier work (Lord, Foti, & De Vader, 1991: Campbell, 1991), use eight distinct, trait-like factors or attributes that they found defined ILT's prototypes of leaders. These trait-like factors included; - charisma, attractiveness, sensitivity, dedication, tyranny, intelligence, strength, and masculinity. These particular trait-like factors were again cross-evaluated a decade later with several different organizational groups by Epitropaki and Martin (2004). They confirmed the earlier research on applicable leadership attributes and generated a second-order factor model of attributes associated with implicit leadership theories. The authors grouped under Leader Prototypes,

Sensitivity (helpful, understanding, and sincere), Intelligence (educated, intelligent, clever, and knowledgeable), Dedicated (motivated, dedicated, and hard-working), and Dynamism (energetic, strong, and dynamic). Epitopaki and Martin (2004) also introduced two Leader Anti-prototypes, Tyranny (domineering, pushy, manipulative, loud, conceited, and selfish), and Masculinity (male and masculinity). The work showed "ILTs are consistent across different employee groups and are stable trait-based stereotypes of leadership" (Epitropaki & Martin, 2004, p. 308). The author's work supported a common set of leadership competencies grounded in implicit leadership theory and the trait-like factors that are built into the competencies that are used in this dissertation to assess and evaluate leaders attributes across different job functions and different industrial sector.

Contingency Theory

The executive leaders of larger organizations face a significant degree of situational complexity which is often not addressed by the normative models of leadership such as charisma, transformational leadership, and more recently emotional intelligence (Congar, 2004). The earlier contingency models were not developed in today's complex multicultural global business world. What is needed is a more sophisticated contingency model that can handle the complexity of the modern business world that includes firm turnarounds, new startups, mergers and acquisitions, and more recent technical market instruments and mechanisms. The evidence today suggests the new paradigm is a world in significant flux and transition, with continual uncertainty in the socioeconomic, political and business environment. Different industries find themselves changing their operating practices to differing degrees depending on how the

changing uncertainty affects them (Avolio, 2007). New versatile leadership styles with correspondingly different leader competencies and behaviors maybe necessary to meet this new complex norm along with flexible approaches to change as the situational circumstances alter. Research reports and empirical studies do support the idea that leaders can operate in such demanding situations, but that it requires different leadership approaches (Zaccaro, 2007).

One of the independent variables for this research study comprises different industrial sectors such as airlines, manufacturing, and energy. A business environment in which each of these industries operates has a high degree of situational variability and they can differ significantly from each other. Follower/leader satisfaction and their teams performance varies according to the different situations, some aspects of which may be under the control of the leader while others may not be in their control (Yukl, 2013). The situational variance has an effect on the follower's prototype of effective leaders in different industries. Follower prototypes may be different for leaders in different industries. Such different follow-up prototypes may inhibit the effectiveness of leaders transferring across industries unless the leaders are able to modify their approach to satisfying the specific followers expectations. Leader competencies used to evaluate leader effectiveness in individual industries must be robust to these situational variables that may alter the follower prototypes.

Charismatic Leadership Style

Attribution theory of charismatic leadership suggests there are universal characteristics associated with leadership attributes (Conger & Kaungo, 1987, 1994).

There are four competencies / characteristics attributed to charismatic leaders. These include; advocating a vision that departs from the norm along with unconventional ways to achieve it; inspiring followers with emotional allure to their beliefs, values, and ideals; making self-sacrifices that benefit the followers, and appearing confident and enthusiastic in their demeanor (Yukl, 2013). Weber (1947) used the word charisma to describe the means of influence followers perceive the leader utilizes in solving a social crisis. The leader appears to have exceptional qualities offering an extreme solution to the crisis that the followers see as radical or innovative. Charismatic leaders, therefore, appear extraordinary, and followers wish to follow their vision and avert the crisis they face. This original definition of charisma provides insight into why charisma is often seen as a universal attribute of effective leaders. The social crisis and the leader's creative solution is likely to be highly contextual in nature and dependent upon the circumstances of the situation at hand. A systematic meta-analysis of 36 studies carried out in the 1980s and 1990s found that the relationship between leader charisma and leader effectiveness is much weaker than was usually contemplated (DeGroot, Kiker, & Cross, 2000). There is a duality about charisma. Charisma has been shown to be culturally specific, a strongly emic characteristic, and yet at the same time can be construed within an overall framework of attributes that are considered universal. Charisma can also be transcultural in character and etic in nature (House, Hanges, Javidan, Dorfman, & Gupta, 2004).

There are both positive and negative aspects of charisma; some research suggests that charisma is not necessarily a beneficial CEO attribute (Yukl, 2013). On the darker side, a charismatic leaders' career may be cut short due to risky decision-making, denial

of problems, overconfidence, impulsiveness, and making enemies (Conger, 2004). Charismatic leaders can present a problem for corporations as the followers may personally identify with the leader rather than with the firm in a cult like manner (Conger & Kanungo, 1994). A charismatic leader's perceived success may be a combination of a business or social crisis and the unique features of the situation. The situation can be organization specific, industry specific, or environmental specific at any given moment in time. Thus, not all charismatic leaders may have the necessary skills to be able to successfully transfer to other firms and to different industrial sectors if the contextual elements in which they thrive are not present.

Transformational Leadership Style

One of the central tenants of transformational and visionary leadership is the way a leader uses the followers' values, beliefs, and emotions to achieve the desired outcome (Yukl, 2013). There are four primary behaviors that have been attributed to transformational leaders (Bass, 1997). The first is inspirational motivation, where the leader shares an inspiring future vision with followers that have associated high expectations that will challenge them to perform. The second is idealized influence (charisma) where the leader acts as a role model displaying characteristics in line with the vision generating confidence, pride, trust, and loyalty, aligning followers to the common purpose. The third is intellectual stimulation where the leader promotes followers to challenge the status quo and seeks their ideas and suggestions on how to change the status quo. The fourth is individualized consideration where the leader shows

attentiveness to the individual followers needs such that they feel uniquely treated which fosters trust and satisfaction (Wang, Oh, Courtright and Colbert, 2011).

Judge and Piccolo (2004) conducted a meta-analysis of research on the relationship between transformational leadership and leadership effectiveness. The data from 87 sources, which consisted of 626 correlations, revealed that transformational leadership has an overall correlation of .44 in with leadership effectiveness. Leaders who use the transformational leadership style motivate their followers to perform at a higher level (Bono & Judge, 2003). If the transformational leadership style is successful it would suggest leaders with the style would have a significant impact on both their team's performance and the organization's performance. Leaders motivate the followers to reach team goals by increasing their level of social identification (Kark, Shamir, & Chen, 2003). On an organizational basis leaders using the transformational leadership style at the executive level can enhance firm performance by increasing team cohesion, goal congruence, and motivation of the top management group (Colbert, Kristoff-Brown, Bradley, & Barrick, 2008). The organizational culture, systems, procedures, and strategies are also likely to be enhanced by the influence of transformational leadership style that will further improve firm performance (Jung, Wu, & Chou, 2003).

Bass (1997) proposed that three components of transformational leadership can be considered nearly universal: idealized influence (charisma), intellectual stimulation, and individual consideration of followers. He found prototypes based on transformational leadership, not transactional leadership, are close in all cultures to everyone's model of the ideal leader. Transformational leadership is more effective than contingent reward,

which is more effective than managing by exception, and he found that laissez-faire leadership is inadvisable. Bass (1997) operationalized an effective leader's behavior as an etic or near general universal phenomenon.

Discussion of Leadership Style

Notwithstanding the foregoing discussion on charisma several significantly sized studies over the last 10 years have provided evidence that CEO charisma may be unrelated to firm performance in some circumstances (Waldman, Ramirez, House, & Puranam, 2001). The size of larger organizations can obfuscate the impact of a CEO and make it difficult to ascertain the effect, if any, a CEO has directly on performance in such firms (Agle, Nagarajan, Sonnenfeld, & Srinivasan, 2006). A study of CEO's performance that uses transformational leadership style in small to medium-sized firms (SME's) found the organizational context (size and complexity) to be important to the leader's effect on firm performance (Ling, Simsek, Lubatkin, & Veiga, 2008). Their study of 121 SMEs in various industry sectors found that CEOs adopting the transformational leadership style had a significant and direct effect on firm performance. Another study of 48 Fortune 500 firms corrected for organizational size and used hierarchical regression analysis to predict the effects of charisma on financial performance using the measure of corrected net profit margin. The results for these 48 firms showed that charisma failed to predict significant variance in financial performance during stable conditions, and could be somewhat dysfunctional in low volatility situations (Waldman et al., 2001). The Waldman et al. study did find, however, that charisma could predict financial performance in times of corporate transition or environmental uncertainty ($R^2 = .74$, $p = < .05$).

Charisma is a necessary element of transformational leadership (Bass, 1985), but charismatic leaders are not necessarily transformational leaders (Yukl, 2013). A study examining transformational leadership in two culturally different military units in the US and Hong Kong, found that transformational leadership lead to superior team performance in both teams. The study results provided further evidence that transformational leadership is etic in nature, common to both individualistic and collective cultures (Bass, Jung, Aviolo, & Berson, 2003). A similar result was achieved in a study undertaken with 218 financial services teams from the same two culturally different locations (Schaubroeck, Lam, & Cha, 2007). The evidence found from this literature research review would suggest that leaders exhibiting the transformational style of management may be able to transfer more easily between functional job roles and across industries with a set of leadership attributes and competencies that are more universally effective. However, Bass (1997) found evidence that would suggest that using a transformational leadership style in selected countries could have an emic variance in some individual organizations and certain different cultural clusters. Thus, while the transformational leadership style allows leaders who use that style to transfer more readily into different functional roles and across different industries there maybe a culturally contingent element at play. Global cultural diversity is a key issue when considering the universality of leadership attributes and one discussed more fully in a subsequent section.

Global Leadership Attributes and Competencies

Leadership itself is a universal phenomenon; no known society exists where it is completely absent (Bass, 1997). With globalization of the marketplace and multi-national corporations working across international boundaries, it has become increasingly important for leaders to be able to manage and influence personnel with different backgrounds, beliefs, and cultural values (Yukl, 2013). Multinational corporations have identified effective global leadership as one of the major critical success factors (Javidan, Dorfman, de Luque, & House, 2006). Workforce diversity and cultural issues influence leadership effectiveness (Ayman & Korabik, 2010; Ospina & Foldy, 2009). The traits and abilities of successful leaders are influenced by race, ethnicity, national origin, religion, gender (House et al., 2004). Cross-cultural and gender are the most studied areas within recent leadership research including their effect him leadership effectiveness (Ayman & Korabik, 2010).

In addition to culture, leadership behavior in a multicultural environment is also influenced by contextual and situational variables (House et al., 2004). Situational variables include the organization type, local industrial sector, and the local and global environmental market forces. It is within this complexity that one needs to review the universality and the transferability of leadership traits and attributes.

The GLOBE Project, Phase 1 and Phase 2

The Global Leadership and Organizational Behavior Effectiveness (GLOBE) project, a three phase major cross-cultural study of leadership across 62 societal cultures that started in 1993 and finished in 2012. The study involved 170 researchers who

collected data from 17,300 managers in the food, banking, and telecommunications industries. The project mission was to see whether an empirically derived theory could be developed that would explain the relationships between leadership, organizational processes, and national culture (House et al., 1999). In addition, the GLOBE project was designed to investigate how leadership and cultural values and beliefs would be affected by other variables of a situational or contextual nature. The key questions investigated, and those relevant to this dissertation study were; whether leadership effectiveness is similar or different across cultures; and whether some leadership attributes and behaviors are accepted as universal and, therefore, allow leaders to transferable globally between organization and industries.

The team that evolved and generated the GLOBE project (referred to as the 'GLOBE team') applied implicit leadership theories to describe leadership attributions and perceptions across cultures. The GLOBE team integrated a number of theories to develop their approach. These theories included implicit leadership theory described by Lord and Maher (1991), implicit motivation theory (McClelland, 1998), value-belief theory of culture (Hofstede, 1980; Triandris, 1995), and structural contingency theory of organizational form and effectiveness (Donaldson, 1993). The concept was that individuals from different cultures each have a cognitive perception of the attributes necessary in their culture for a potentially successful and effective leader that they have developed cognitively into prototypes for those cultures. The individual or follower then compares their leader against this cultural leadership prototype and the degree of fit determines whether are perceived as an effective leader (Den Hartog et al., 1999). Given

that different cultures were likely to differentiate attributes on social and organizational grounds the GLOBE team coined the term 'Culturally Endorsed Implicit Leadership Theory' (CLT) to recognize the new hybrid theory of encompassing potentially cultural distinct leader prototypes.

A questionnaire was designed by the GLOBE team for research during phase one and two to study 112 leader attributes and behavioral items. The data was collected over the period 1994 to 1997 and the final results published in 2004 (House et al., 2004). The questions asked of each participant sort to identify leaders' skills, traits, attributes and behaviors that were thought relevant to leadership emergence and effectiveness according to different cultural prototypes. Some researchers have criticized the nature of the questions as being too western oriented and jargonized to a degree that the results are not without bias (Hofstede, Hofstede, & Minkov, 2010). The analysis of the questionnaires led the GLOBE team to identify six universally shared etic ideas of leadership they called globally culturally endorsed implicit leadership dimensions reflecting on globally differentiated prototypes between leaders who were considered either effective or ineffective (House et al., 2004). These CLT dimensions were in decreasing order of significance, Charismatic/Value-based (M = 5.83, SD = .33) on a scale of 1 - 7), Team Orientated (M = 5.76, SD = .26), Participative (M = 5.35, SD = .41), Humane (M = 4.87, SD = .38), Autonomous (M = 3.86, SD = .45), and Self Protective (M = 3.45, SD = .41) (House et al., 2004).

The CLT dimensions represent a summary of the personal abilities, skills, characteristics, and competencies, that were seen as universal and transculturally valid in

terms of their ability to inhibit or contribute to extraordinary business leaders performance (Dorfman et al., 2012). The country means of the charismatic/transformational, participative, and team orientated leadership dimensions scored above 4.5 on a 1 to 7 scale. These scores lead the GLOBE team to the general belief that these are prototypical dimensions of outstanding leadership in all cultures and, therefore, can be considered universal in nature. The GLOBE team's CLT dimension of charismatic/value-based reflects the ability to motivate and inspire others with the expectation of high performance outcomes based on firmly held core values like integrity, honesty, trustworthiness and performance orientation. The team orientated CLT dimension placed the emphasis on teambuilding and the setting of common team goals. The participative CLT dimension reflected the degree to which leaders collaborate and influence during the implementation of decisions. These findings are important in the consideration of the leader competencies that are used later Chapter 3 during the assessment and evaluation of leaders in the management appraisal database. The GLOBE team (House et al., 2004) found over 20 primary universally endorsed positive attributes and eight universally endorsed negative attributes associated with the etic CLT dimensions. The positive attributes with means above 6 at the 95th percentile were, Integrity (trustworthy, just, and honest), Visionary (foresight and plans ahead), Inspirational (encouraging, positive, dynamic, motive arouser, confidence builder, and motivational), Malevolent (dependable and intelligent), Decisiveness, Diplomatic (effective bargainer and win-win problem-solver), Administratively Competent, Integrator (teams - communicative, informed, coordinator and builder), and Performance

Orientated. The negative attributes with means below 2 were, self-centered (ruthless, asocial, and loner), Malevolent (irritable and non-cooperative), Autocratic, and Egocentric (House, et. al., 2004).

The primary factors scored means of over 6 on the 7-point scale and were thus believed by the GLOBE Team to be universally effective and desirable in most societal cultures (Den Hartog et al., 1999). In addition, there were a further eight attributes that were deemed to be undesirable on a global basis (see Table 3). The most highly rated universal leadership effectiveness attribute in the CLT dimensions derived from the GLOBE data was integrity, which comprised of the individual traits of trustworthy, just, and honest attributes. The other highly rated attributes for outstanding leadership were being; inspirational, visionary, a team-integrator and have a performance orientation. Data from the GLOBE project showed 'performance orientation' is important as primary transcultural global driver in that it was a significant predictor of all six global CLTs at the organizational level (House et al., 2004; Dorfman et al., 2012). The essence of these universally accepted global CLT dimensions and their primary attributes are captured in the competency model and the database. A competency model is the basis of the management appraisal process used to generate the global database that this study used to assess leader's effectiveness in different job functions and across organizations in different industrial sectors. The competencies outlined in Chapter 3 of Results Orientation, Collaborating and Influencing, Developing Organizational Capability, and Team Building are particularly relevant.

Of the 112 attributes surveyed and evaluated in the GLOBE questionnaire, 35 were considered emic or culturally contingent. That is, they varied across cultural clusters and sometimes within them (Dorfman et al., 2012*).* The authors found these were heavily influenced by both national culture and organizational culture. The attributes varied transculturally to differing degrees some of the attributes with major variations were evasive, cunning, elitist, domineering, micro-manager, and individualistic (Den Hartog et al., 1999). The national cultural differences reflected major cultural differences between the main global cultures; this was a similar result to Hofstede (1980, 1997) classic works with IBM in the 1970s. Hofstede introduced the terms individualism versus collectivism, uncertainty avoidance, dimensions of power distance, and masculinity versus feminism to differentiate cultures and peoples globally to describe various aspects of different cultures in a business setting.

The GLOBE Project, Phase 3

The final phase three of the GLOBE project started in 2000 and continued until 2012. This last phase focused on the role of the CEO, their leadership behavior and effectiveness. Some 1060 CEOs were interviewed in 24 countries along with surveys taken from 5000 direct reports in 40 firms on both a qualitative and quantitative basis (Dorfman, Sully de Luque, Hanges, & Javidan, 2010). The research findings indicated that if the CEO determined a leadership style would be effective in a particular societal culture and the leader acted in a manner consistent with that cultures' beliefs and adopted the local leadership prototype, they were deemed effective in their organizations. Leaders who did not behave according to the local cultural expectations and prototypes were

likely to be seen as ineffective. The GLOBE team found that the national culture does not predict leadership behavior. This finding is consistent with the earlier GLOBE team findings and results of phases 1 and 2. However, national cultural beliefs and values are antecedent factors and influence leadership prototypes (Dorfman et al. 2012).

Results from the third phase of the GLOBE team project further revealed that charismatic/transformational and team orientated CEOs tend to make superior leaders as they generally exceed societal expectations. This result was a consistent an etic phenomenon. Data from the study also showed that firms with charismatic/transformational and team orientated CEOs also had better competitive sales performance and greater a competitive return on investment (ROI). The GLOBE phase 3 results showed there are a number of crucial criteria for successful executive leadership at the CEO level. Firstly, there are etic or universal and consistent leadership behaviors that comprise a charismatic/value-based transformational leadership style, and a performance and team orientated approach that is necessary for success. Secondly, to be a successful executive in a global marketplace a leader must exhibit a leadership style and manner that is consistent with the leadership prototypes that are found within the culture in which they are working, in other words, it must adhere to culturally endorsed implicit management theory. Thirdly, emic or cultural contingent elements must be recognized and followed so that the leaders not only can exhibit the necessary behaviors but also must exceed the society's expectations to achieve success (Dorfman et al, 2010).

Innate Abilities, Traits, Behaviors, and Personality

In considering whether a leader's attributes are universal and transferable across a firms job functions and between industrial sectors one needs to consider the leaders innate abilities. These are abilities that one is endowed with at birth. The term innate abilities also include those elements of personality and traits that develop experientially from birth through to adulthood and on during working careers.

Genetics and Personality

Genetic and personality factors influence leadership ability (Arvey, Rotundo, Johnson, Zhang, & McGue, 2006; Arvey, Zhang, Avolio, & Kueger, 2007). In studies of identical and fraternal twins, a genetic factor was found to account for 32% of the variance in leadership role occupancy with the rest of the variance attributed to non-shared environmental effects. Genetic effects are known to contribute to personality variables, using the five-factor model to gauge personality, the authors found heredity accounted for 50% of personality and personality explained 10% of the variance in leadership. A study of 183 identical and 64 fraternal same-sex male and female twin pairs showed that 59% of the variance in aspects of transformational leadership are due to genetic factors (Arvey et al., 2006).

The 70% of unexplained variance between genetics and leadership role occupancy could be attributed to family experiences, schooling and education, role models and mentors, followers, peers, training and development, leadership experiences, previous jobs, personal loss, religion, and opportunities. In most of these aspects, genetics was found to be involved. However, importantly a single factor associated with work

experience development explained 17% of the unexplained variance due to environmental influences (Arvey et al., 2007). This finding means though that there still remains 53% unaccounted variance from environmental influences that are unexplained. Some researchers have suggested that the talent for leadership may develop during youth, adolescence, and young adulthood, and become hard wired by ones mid-twenties (Sorcher & Brant, 2002). The evidence would suggest that genetics, early life, and work experiences predetermines a significant element of leadership effectiveness in later working life and in more senior roles. However, the 53% unexplained variance remains elusive in terms of current understanding. These results are important if one considers the research in this document regarding the universality of leadership attributes. It would imply that only around half of leadership effectiveness might be partly influenced by job function and industry sector as part of the 53% of unexplained variance. It also suggests that in terms of the competences to assess leaders they need to cover a widely diverse spectrum of the skills, abilities, personality, traits, background, knowledge and experience in an effort to capture all the variance in leaders role occupancy.

Personality and Complexity

A leader's effectiveness is determined by their personality (Higgs, 2001; Collins, 2005). In terms of individual differences personality appears to be the strongest single dimension related to leadership (Kaiser & Hogan, 2011). One study for instance showed how 17 top CEOs' personalities affected their firm's top management team's group dynamics (Peterson, Smith, Martorana, & Owens, 2003). Group dynamics is directly related to an organization's performance (Eisenhardt & Zbaracki, 1992). Substantial

research supports the link between the variables that measure personality and leadership (Arvey et al., 2006). Leaders use a differentially small set of skills and core competencies that defines their effectiveness. How these combine together is difficult to specify, but it is linked to the underlying personality characteristics of the individual (Higgs, 2001). The five-factor model (FFM) offers taxonomy of personality traits, which have been shown to be very similar across all cultures offering strong evidence of universality (McCrae, 2001). Indeed, the author found they appear part of human nature and have expression in every culture.

A meta-analysis of 73 samples and 222 correlations using the FFM as taxonomy of personality suggested the multiple overall correlations with leadership emergence and effectiveness is .48 (Judge et al., 2002). The authors suggested that if one organizes traits to follow the FFMs organization there would be strong support for a leader-trait theory to describe leader emergence and effectiveness. Of the individual dimensions of the FFM, the most consistent and the largest single correlate of leadership is Extraversion. Extraversion, (associated with sociability, assertiveness, energy, zealousness and active individuals) is the most essential trait for a leader, it is correlated .33 for leader emergence and .24 for leader effectiveness. Consciousness (associated with achievement and dependability) correlated .33 for leader emergence and .16 for leader effectiveness. Openness-To-Experience (associated with being imaginative, nonconforming, unconventional, and autonomous) correlated .24 for both leader emergence and effectiveness. Neuroticism, (related to low emotional intelligence, insecurity, hostility, and anxiety) was negatively correlated -.24 for leader emergence and - .22 for leader

effectiveness. Agreeableness (being trusting, compliant gentle, and caring) was the least correlated at .05 for leader emergence and .21 for leader effectiveness. There is research evidence that the FFM taxonomy of personality is generalizable in many countries (McCrae & Costa, 1997; McCrae et al., 2008). The FFM was tested using the NEO-PI-R 240 item questionnaire translated into six languages (German, Hebrew, Portuguese, Chinese, Korean, and Japanese) and given to men and women of each nationality. The coefficients factor congruence measured against the American normative structure showed that for each of the six languages and five factors of the model all but 4 of the 30 results had congruence coefficients over 90%. Values of 90% are considered evidence that the factor has been replicated. This value level according to McCrea and Costa (1997) provides evidence "there is a common human structure of personality" (p. 515) on a cross-cultural basis and the suggestion that "personality structure is universal" (p. 515).

Personality traits, although often complex and difficult to conceptualize and measure, help provide an understanding of individual behavior and performance in organizations and across I/O psychology. Personality variables in the workplace predict job, task, and team performance, training and learning performance, skill acquisition, managerial effectiveness, leader emergence and effectiveness, creativity and innovation (Hough & Oswald, 2008). Theoretical research into leadership behaviors, which are volitional or discretionary, has seen renewed interest in aspects of personality traits. Recently more compound and complex personality trait constructs have been introduced such as core self-regulation and integrity (based on other personality elements from the FFM such as consciousness, emotional stability and agreeableness). Collins (2005), in his

11 Fortune 500 top companies analysis, found that Level 5 executives had several complex personality traits and characteristics in common, providing evidence of an element of universality in the compositions of traits of truly successful leaders. Two examples of these more complex traits for instance are; an authentic personal humility blended with intense professional will, and a modesty and willfulness allied with a shy yet fearless approach. There are other characteristics that differentiate Level 5 leaders that they each have in common. For example, they attend to people issues before corporate vision and strategy, they acknowledged the true reality of the company's current performance and abilities (but believe they could prevail in the marketplace), and they work tirelessly to achieve corporate momentum. It is evident from the foregoing that any leadership competency model must have personality dimensions consisting of elements of the FFM and some of these more complex traits referred to by Collins (2005) incorporated in its structure. Personality is strongly associated with leadership effectiveness from the results of the literature review. This relationship suggests that the appraisal of leaders must consider personality an important aspect to be assessed.

An Integrated Trait and Behavior Model of Leadership

Trait-based approaches to leadership have risen to prominence again as a result of increased conceptual methodology and sophisticated statistics (Zaccaro, 2007). The author argued that combinations of traits and attributes integrated together to form complex hybrids, (similar to those found by Collins (2005)) are more likely to predict leadership than the addition of a number of independent single traits. However,

leadership is not influenced by traits alone, a leader's behavior also plays an important role. In addition, a leader's effectiveness will also depend on the organization, and other contingent elements such as situational circumstances and cultural considerations as discussed earlier. In relation to this dissertation, the competency model that is used in the management appraisal process for global leaders assessment included each of the elements (traits, behaviors, organization, situation, and context).

The relationship between traits and behaviors is likely to be complex as they can compliment and supplement each other; the need is for integrated model involving them both (Scott Derue et al., 2011). A leader's behaviors in most organizations are most often associated with task, change, and relational orientations, and are best captured by the transformational-transactional leadership style (Judge & Piccolo, 2004) as previously discussed. Scott Derue et al. (2011) argued that leader traits fall into three categories: demographics, traits related to task competence, and interpersonal attributes. Leader behaviors, on the other hand, they believed could be captured in terms of cost processes, relational dynamics, and change. In order to test their model Scott Derue et al. (2011) carried out a meta-analysis study that looked at 59 prior studies, 13 of which were themselves meta-analyses. The researchers found that leader traits and behaviors explained 31% of the variance in the performance of the group, and 58% of the variance in leadership effectiveness (Scott Derue et al., 2011). Leader behaviors accounted for 62.4% of the total R^2 explained for the group performance. Conscientiousness (17.9%), agreeableness (9.1%), initiating structure (19.6%), transformational (19.6%), and consideration (8.4%) were the main components of the group performance.

Transformational (14.5%), consideration (11.9%), contingent reward (15.8%), laissez-faire (20%), initiating structure (7.8%), extroversion (7%), openness (6.2%), and conscientiousness (6.0%) were the main components of leader effectiveness. Similarly, leader traits and behaviors explained 92% of the variance in follower satisfaction with their leader. Leader behaviors accounted for 93.7% of the total R^2 explained. Consideration (15.5%), transformation (17.7%), MBE-passive (13.6%), and contingent reward (38.7%) were the main components of follower satisfaction. These significant results over 90% would support the previous discussion regarding the usefulness of implicit leadership theory in the assessment of leadership effectiveness by ones followers and peers. The study results showed that in terms of overall leadership effectiveness that the most important traits were Extroversion and Conscientiousness, which cover the spectrum of competence and interpersonal attributes. Leaders' traits explained 22% of the variance in overall leadership effectiveness and traits related to task competence and interpersonal abilities explained 98.6% of the total R^2 explained. Leader behaviors accounted for 47% of the variance. They also recognized that aspects of the transformation leadership style best captured both relational-orientated and change-orientated leader behaviors.

Absence of Evidenced-Based Scholarly Research, Practitioner Databases, and Global Perspective in the Literature

There is an absence of evidence-based scholarly research, particular non-US based, in organizational psychology on whether leadership attributes are universally applicable and transferable across job functions within a firm, across firms, and to other

industrial sectors. A crucial contribution of this dissertation research study is that its analysis and conclusions are derived from a substantial real-world data obtained from practitioners in the workplace. This use of such a database differs from much of the work done in academia where the research is often uses a small samples of white Anglo-American undergraduates or US companies that do not adequately represent the global population of business and institutional leaders. This study uses a practitioner management appraisal database that is global, multiracial, and multicultural in scope. A 'metagrumble' could be removed in I/O psychology (Bartunek, 2011) if more access could be gained to these databases to provide data for research studies.

It is important to understand the current situation as described in the literature regarding the lack of a global perspective in organizational psychology, and the gap between practitioner based and academic-based organizational psychology research and theory. The gap that exists (Cober et al., 2009b) between scientists and practitioners is explored in this section of the literature review along with parochialism and the lack of a global perspective on whether effective leaders can transfer successfully between companies and industries.

American parochialism and lack of global perspective

Americans believe that business can be conducted strictly from an American perspective (Adler & Gunderson, 2008). Adler and Gunderson (2008) commented that less than 5% of articles discussing the behavior of individuals in organizations included the concept of culture, and less than 1% considered people of two or more cultures working together. A survey reported by Adler and Gunderson (2008) in the 1980s of over

11,000 articles published in 24 management journals indicated 80% were focused on US companies and were conducted by US academia. Indeed even the American Psychology Association journals focus the issues very narrowly mostly on Americans who represents only 5% of the worlds population. As a human science psychology cannot be representative of the population if it focuses on such a narrow sample and then results of research generalized on a global population basis (Arnet, 2008). Arnet (2008) suggested that many cultural and international issues remain marginal to the direction and mainstream of American psychological research. Thus, it is difficult to argue that behavioral and industrial-organizational theories representing 5% of the population are necessarily valid globally. This dissertation study addressed this issue by considering and assessing leaders in businesses and institutions around the world. The question of the universality of leadership competencies and the transferability of those competencies when leader moves between global firms and business sectors was studied using an actual world-wide practitioner archival and current database.

The concept enshrined in this study is one of using the systematical acquired practitioner data to inform, via scientific techniques, evidence, observation, and research based on analysis and logic (Pfeffer & Sutton, 2006a). The study results in turn can be fed back to I-O psychology professionals who practice in the business world. Such help could support leader employment decisions (not dictate them) and guide certain courses of action that are more likely to succeed than others (Baughman, Dorsey, & Zarefsky, 2011).

Evidence-based Practice

Evidence-based approaches have become entrenched in a number of areas including medicine, and in particular nursing (Banks & McDaniel, 2011), education, social work, and in the practice of business management (Briner & Rousseau, 2011). In organizational management generally practitioners and not scholars use evidenced-based approaches (Briner, Denyer, and Rousseau, 2009). This use of an evidence-base is an important distinction and one that can be expanded to the arena of leader assessment and selection. Boatman and Sinar (2011) believed that knowledge and experience in regard to the collection of practitioner information on a specific and credible basis regarding leadership and management, is lacking. However, according to Guzzo (2011), in those companies that embrace organizational psychology, the collection of digital information regarding the work place, the people, and their behavior, is rapidly expanding. What is different about this study's database is that it included some of the useful information that is often considered missing. This missing information includes a systematic analysis of an executive's cognitive processes, the subjective view of leaders by the interviewers, their prior work experiences from other firms, and other such individual difference type data.

Within organizations that concentrate on finding people such as executive search firms, there is no lack of cognitive information on leader traits and abilities. It is a major facet of their business. Information is actively sort and acquired during their process of structured interviews with potential job candidates and during management appraisal type assignments. The digital accumulation of information regarding the leader's innate

abilities and those learned through experience are among the key pieces of information gathered in the course of their activity. The business of executive selection and management appraisal requires the collection of information regarding the executive's personality traits, skills, knowledge, competencies, experiences, abilities and behaviors. It also includes a variety of demographic, regional, and cultural information in addition to their education, experience, and career accomplishments. For global firms, such databases are likely to include large amounts of valuable evidence-based I/O psychology information on the universality of leadership attributes and the transferability of leaders across firms and industrial sectors. Such information has been found missing from organizational psychology research as a result of this literature review.

Proprietary Databases and Company Research

Fink (2010) believed that many firms have proceeded down the data acquisition route on their own cognizance. He suggested that out of the public eye firms have developed valid in-house research capabilities to analyze interpret and use digital data on human capital. This capability may, however, be an overestimation at the current time suggesting more sophistication, foresight, and budget funds than may be available today (Guzzo, 2011). Guzzo suggested that some organizations are rich in data and empirically based findings. He believed the challenge would be to put in place and develop mechanisms to evaluate this data. Firms are now positioned to carry out in-house research on their own databases and thus become self-sufficient on a practical basis, but their analysis might be of limited scope, not academically rigorous, and only extensive enough to support their own business practice needs. Most organizations have a future orientation

(Boatman & Sinar, 2011) looking at profit generation from ongoing activities, and only doing targeted research for the generation of new business. Firms are highly unlikely to work for and provide data for purely academic science. Companies do not normally have the resources available to fund scientific research and development budgets that allow a rearward looking research and analysis focus. Firms, therefore, are not able to capitalize on the digital information in their database out of scientific or academic curiosity without a sound business justification. This lack of analysis is a role that scientists can undertake and in the case of this dissertation one such database is analyzed for a common practitioner concern regarding whether firms can select and successfully employ leaders to work across job functions and industrial sectors.

Privacy and Confidentiality

A further issue, which influences why this information is not made available to the public or academia by organizations that do collect the data, is a concern of human resource management departments (HRM) with privacy and confidentiality. Current legal statutes, and professional practices and guidelines, such as the American Psychological Association Ethical guidelines (APA, APA, 2002) require any individual and personal data to be carefully protected. Organizations also want to ensure that the proprietary nature of the data is secured and their commercial edge protected.

Value Added-Approach and Cost Benefit Analysis

Notwithstanding the privacy and confidentially issues, the commercial value of this proprietary data is high regardless of whether the value can and will be capitalized upon by the organization. The fact the data exists yet remains unavailable for academic

based research studies or for the scholar practitioner to perform sound evidenced–based scientific research presents a challenge (Boatman & Sinar, 2011). These authors also suggested that industry in general would welcome further evidence-based approaches to support concepts and ideas involving leadership selection and effectiveness. Boatman and Sinar believe that HRM departments as others within the organization are under pressure to provide value-added programs. The evidence-based approaches to areas like leadership selection based on cross-organizational and industry wide information on the transferability of executive personnel could be highly cost beneficial.

The highest quality evidence-based practice must be used that can be justified by end-user cost benefit analysis (Cronin & Klimoski, 2011). The global practitioner database included in this study forms part of an ongoing business management appraisal activity within a leading executive search firm and so satisfies these criteria. Results derived from the analysis of this database in this study are sound quality and can be applied in the specific contexts of this study by both academia in research and practitioners in organizations. According to ideas presented by Cronin and Klimoski (2011) the quality is enhanced because it is empirically derived, acquired by management professionals, and analyzed by academic organizational psychologists. The study foundation is in theories and models that are themselves scientifically validated by peer review and accepted academic practices. A review of the literature shows practitioners currently lack an evidential scientific basis from research into the transferability of leadership competences based on valid industry data. This research study supports social change initiatives as evidence is provided on some of the speculative issues surrounding

executives moving within firms and across business sectors. A large number of the leaders (believed to be greater than 50%) fail, or prove to be incompetent in their roles (Hogan & Kaiser, 2005).

Personnel Selection and Decision-Making

Within scholarly research, there is a shortage of current business practitioner data that records the knowledge, experience, competencies, characteristics and cognitive abilities of leaders in industrial organizations (Kaiser & Overfield, 2010) to inform leadership selection decisions. In organizations there is evidence that due to time and management pressures and lack of information, executives base important decisions on their expertise, which is fueled by their intuition (Dane & Pratt, 2007). It is often the case that relying on intuition particularly in the assessment and selection of personnel can lead to failure (Highhouse, 2011). I/O psychology research using evidence-based practices and information can assist leaders and organizations in skillfully combining scientific evidence and expert judgment (Hodgkinson, 2011). In most organizations leaders have support networks available and act on the best evidence available in making decisions (Pfeffer & Sutton, 2006a). If leaders are using in-depth cognitive and logical processes to utilize all available facts to the extent possible they are more likely to be effective in their jobs. Within organizations, facts and evidence based on real data tend to cut across hierarchical levels, changing power dynamics, affecting formal authority and intuition-based decisions. Potworowski and Green (2011) argued the various aspects of evidence-based practice and research must be integrated to allow both an understanding of the mechanisms involved and the evolution of the practice into the science and back again.

Briner et al. (2009) believed that by making evidence-based practice more systematic, more explicit and critical it could inform intuition in personal selection and decision-making. The research in this study based on real world evidence will meet this criterion and aid leaders who rely on intuition, and those that require evidence before making decisions (Pfeffer & Sutton, 2006a).

The Gap Between Practice and Science in Organizational Psychology

A Society of Industrial Organizational Psychology (SIOP) survey revealed that, in their members opinion, I/O psychology practice was ahead of scientific research by more than 50% in 14 out of 26 content areas, including consulting, coaching, and talent management. In the fields of leadership development and executive selection, members said I/O practice was ahead of scientific research by 49% and 47% respectively (Cober et al., 2009a). This falling behind of scientific research is a call for more real evidence-based scholarly research. This gap between practice and research in the view of SIOP members is due in the main to; the normal evolution of the field, limited organizational funds and resources, lack of relevance, and different reward systems. In the case of I/O field evolution, the SIOP members suggested that as organizational psychology innovates and evolves in practice new areas will materialize that requires science to investigate. There is an apparent lack of relevance that may result from the fact that practitioners do not find the current science and research findings generalizable to real-world problems. This study, therefore, using practitioner data to evaluate leadership selection issues could be of direct relevance to firms, and provide organizations with new research science in a field of practical interest to them.

In the area of competency modeling on which this study's database is constructed, 36% of the 1005 SIOP members surveyed said practice was ahead, 29% said there is no gap, 34% said science was ahead with 21% saying they did not know (Cober et al., 2009a). This dissertation provided an opportunity for a practitioner based competency model to be understood and used in a scientific research setting. The results of the analysis were of interest and usable in both academic and organizational setting. This combined setting use is in line with one of the recommendations of the SIOP survey – to provide practitioners with scientifically sound research-based analysis of their own real-world data (Silzer & Cober, 2011). Access to organizational proprietary databases is described in the literature as one such opportunity of how scholarly skills can be used to bridge the expanding gap between I/O practice and research science.

Does Industry Matter?

Contingency theory suggests that firms must adapt their internal organizations to meet those that exist in the environment (Rajagopalan, Datta & Guthrie, 2001). This adaptation would require the selection of top executive leaders like CEOs with the appropriate competences, skills, and attributes that would align firms with the industry context (Rajagopalan & Datta, 1996). Thus, the marketplace in which firms operate, the macroeconomic environment and the specific industry context are critical contingency factors that should affect the selection of new leaders in the company (Kesner & Sebora, 2001). Industry context can be best-explained using Porters classical work on competitive strategy (Porter, 1980). Here aspects of the industry's specific structural composition can be defined as the degree of concentration of markets and new entrants, competitors,

customers, suppliers, barriers to entry, and product differentiation. Leaders with specific detailed knowledge of this industrial structure, its past practices, and its present and future threats and opportunities, will have a competitive advantage over those who have to ascend a steep learning curve. In addition, the information relating to the marketplace, in conjunction with specific company knowledge are key attributes for effective leadership and organizational success (Rajagopalan et al., 2001). This conclusion is supported by earlier studies, which found that inferior leadership performance and poor corporate success could be attributable to the selection of outside CEOs who had less specific company and industry knowledge and experience (Dalton & Kesner, 1985; Datta & Guthrie, 1994).

A study that sampled 305 U.S. single business organizations in the manufacturing sector industry found the industrial environment does have an important contingency impact on executive leadership (Rajagopalan et al., 2001). Rajagopalan et al. (2001) found highly concentrated capital-intensive industries (based on the ratio of industry gross book value to the value of annual shipments) tend to have CEOs with high levels of specificity at the function, firm, and industry experience levels. The authors stated that differentiated and high-growth industries (based on average annual growth rate in value of shipments of products in the five years preceding the study period) had CEOs who possess more transferable generic type experiences.

Those CEOs in capital intensive and highly concentrated industries are more likely to have specific industry experience, which is less transferable across industries. Many of the CEO selection studies review the organizational factors involved in the

leader selection process. The Rajagopalan et al. (2001) study into organizational factors explored the interplay of organizational contextual features like strategy, human resource systems, and the firm's outcomes, in CEO performance and selection. In an earlier study of 410 large, single-business, manufacturing orientated firms Rajagopalan and Datta (1996) found an empirically and theoretically underdeveloped link between environmental and CEO characteristics (firm tenure, education functional orientation, and heterogeneity). The authors found industry factors (capital intensity, industry growth, demand stability, product differentiation) are less relevant than firm-specific factors (size, sales growth, and performance) when trying to explain the variations in CEO characteristics and the effect of these variations on performance. As this dissertation researched the ability to successfully transfer executives from one industry into another the conclusions of these two studies are relevant. The studies provide some evidence of contingency elements regarding the specificity of the function, firm, and industry that might affect transferability of executives across business sectors.

As stated earlier, contingency theory would indicate that a firm's internal organization and its top management must take into account the industry context and competitive strategy of those firms that are successful for the industry in its marketplace. It is worthwhile, therefore, reviewing some aspects that differentiate industries. A leader’s effectiveness is measured against metrics that may be very industry-specific rather than strictly leader specific. In terms of performance, it was found that membership of an industrial sector could explain up to 20% of the variance in the firm’s financial performance (Powell, 1996; Rumelt, 1990). The analysis used market and

competitor firm criteria that followed Porters work on the competitive marketplace (Porter, 1980). McGahan and Porter (1997) found a significant direct and indirect influence of industry on a firm's profitability. Their analysis showed 'industry' is responsible for 19% of the variation in business specific profits, and 36% of the variation explained. However, it was noted that the effects differ quite substantially across different broad industry sectors. Industry has a smaller effect in manufacturing on profit variance and a larger proportion in transportation, wholesale/retail trade, services, and entertainment (McGahan & Porter, 1997). These results would suggest that assessment of leaders and the likelihood of their success transferring between industries maybe affected by industry specific aspects as well as on the leaders influence and ability. If the innate or underlying profitability of the leader's new industry is different from, and varies independently of the leader's actions, some leaders may be assessed erroneously.

A related confounding issue in a leaders effectiveness assessment may be the large differences that occur in productivity between firms and by countries that influence performance (Bloom, Genakos, Sadun, & Van Reenen, 2012). One study showed a significant variation in productivity within US manufacturing plants. Some plants measuring productivity on a per employee basis were found to be operating at the 90^{th} percentile and producing up to four times that of plants at the 10^{th} percentile (Syverson, 2004). Only approximately one half of this variance could be attributed to varying inputs like the amount of capital available. One reason attributed for the remaining difference was the variations in leadership practices, like deeper informational, legal, socioeconomic, and technical differences that are industry specific (Bloom et al., 2012).

From the foregoing, it would appear that the industry-specific skills required are important when considering whether a leader moving between industries is likely to be effective. There is evidence here in these reported studies to suggest that industry does matter. It is evident that different industries will have their own technological characteristics, economic context, and marketplace. Familiarity and experience associated with these unique industry characteristics can be acquired through a long period in an organizational setting in that industrial sector. It is likely the executive who transfers to a different industrial sector will find it difficult to perform at an equal high level until they gain extensive technical expertise, new industry contacts, and other industry specific information characteristic of that sector and business environment (Yukl, 2013). In addition, the executive transferring needs to acquire a new set of firm specific skills along with new industry specific skills to achieve the same knowledge base and set of leadership competencies they had previously acquired to become effective.

Leaders Transferring Between Firms and Industries

There is little specific evidence in the literature of research into the success of executives who transferred across companies and industries. One finds many examples in the popular press and in weekly business magazines of company executives whose failure on moving to a new firm or industry is noteworthy. One very recent example is Jack Griffin who was fired after six months as the CEO of Time Inc. due to leadership style clashes and then started as the chief executive of Tribune Co's newspaper publishing division. A second example was Henrique de Castro who lost his job as the chief operating officer of Yahoo after just one year of leaving Google due to personality

clashes with the CEO (Lublin, 2014). Another area where one often finds evidence to measure and assess the likely success or failure of leaders who transfer between firms and industries is in the response of the business environment to such transfers when are reported. One such gauge is the movement of stock market value for the company acquiring a new senior executive or leader. Researchers have found that the stock market generally behaves as if a leader is a transferable commodity across firms within different industries with positive changes in market value of the company (Groysberg, Mclean, & Nohria, 2006).

Groysberg et al. (2006) studied 20 former General Electric (GE) executives who left the company and were subsequently hired as the Chairman, the CEO, or the future CEO, of different companies. In over a third of the cases, the reaction in the marketplace was an average gain in value of $1.1 billion across the group of companies, suggesting that the business and investor community viewed such transfers favorably. The authors theorized that certain personal characteristics, skill sets, competencies, and experience, might be combined and influential when a leader changed jobs. The combinations that Groysberg et al. identified (2006) were strategic human capital, industry human capital (technical and regulatory knowledge unique to the industry), and relationship human capital. These categorizations are supported by, and extensions, of earlier research work which investigated technical, organizational-conceptual, and human skills categorizations (Mintzberg, 1972; Shetty & Peery, 1976). The GE study of the executives who were rehired found 9 of the 20 had a strategic skill match with their new companies and the firm's financial returns increased by 14.1%. The firms who rehired the other 11 GE

executives and who were found to strategically mismatched saw financial returns drop by -39.8%. Examples of the executives' strategic fit with the company would be where the leaders had prior experience of a major business transition, or a turnaround situation, or where specifically either cost cutting or growth expertise is required. Industry human capital reflects the constraints and opportunities that are peculiar to a specific industry sector (Groysberg et al., 2006). Examples would be; the food and drug industry, with the FDA controls; airline industry, with FAA oversight; and the utility and power business, which often has a State government regulatory structure. In these instances, industry specific or relevant knowledge, experience, and relational networks, would have an impact on a leaders performance. The GE executives that moved to similar industries generated an 8.8% increased return whilst those moving to a different industry saw a drop of -29.1%. The research results from the GE study suggested there is a significant industry expertise and knowledge element to the success or failure of new leadership transferring into a firm. This expertise would not be limited to just the regulatory or supervisory environment, but would also depend on other specific knowledge that includes industry, suppliers, competitors, customers, and consumers. Thus, those transferring into an industry without an industry human capital fit are likely to face a steep learning curve and a larger probability of failure. The relationship human capital (or social network) that a leader develops during his or her career is a valuable and necessary asset (Mintzberg, 1973). Mintzberg found that leaders rely a great deal on their face-to-face contacts and personal sources from both inside and outside their firm for much of their decision-making information. As the information can be both industry specific and

firm specific it is very relevant when the studying the transferability of leaders into new firms and potentially industrial sector.

The concept of human capital recognizes those skills, knowledge and experiences that are specific to the company. Company-specific human capital acknowledges the unique processes, procedures, routines, corporate culture, informal networks, and the distinctive management processes and systems that are part of a specific firm. These are considered non-transferable assets often forming an integral part of the organization's culture (Groysberg et al., 2006). The authors studied the 20 new companies that hired the GE executives and 10 resembled GE and in those 10 companies their financial returns increased 17.5%. The financial returns of the other 10 where there was less similarity with GE decreased by 37.7%. Groysberg et al. (2006) therefore concluded that the results of their GE study showed the success of the leaders in their new roles correlated (no figures supplied) directly to degree of similarity of systems and organizational culture between their old and new companies. These results do provide positive research evidence that leaders transferring across industries or to firms who are very dissimilar to those they left are less likely to be effective.

Executive Selection

The ubiquitous need for leadership talent globally is a big issue for multinational firms. This dissertation reviewed a large global management database to analyze whether leader's competences were universal in nature and transferable between top executive management functions within firms and across different industrial sectors. If the analysis provided practitioner evidence to support the concept that leader competencies are

universal and transferable it could open up or shut down the talent pool for a group of leadership candidates. A study by 2014 Stanford University and the Institute of Executive Development reported only 25% of the 20 companies canvassed had an adequate pool of talent ready to move into senior executive positions. Less than half of the companies had a formal process of getting leaders ready to take over the top company roles (Plank, 2014) In a survey of 1380 HR directors of large US firms it was found that there were no succession plans in place for the CEOs replacement (Bower, 2007). A recent study suggested only 15% of US and Asian companies, and 30% of European firms have sufficient qualified successors for key leadership positions (Fernandez-Aráoz, Groysberg, & Nohria, 2011). Bower (2007) analyzed 1800 successions and found significantly better company performance when internal candidates succeeded the CEO. A number of larger companies such as Shell, GE, and Unilever have developed a reputation for their attention to the management of their future leadership talent. These larger multi-national corporations acknowledge the need to produce their own internal future leadership candidates for the executive level. This selection of internal candidates reflects much of the literature, which suggests that company's top leaders are more effective and that organizational performance improves when executives are internally groomed (Collins, 2005; American Psychological Association, 2006; Bower, 2007). The authors contended that these larger firms have clear strategic priorities; they carefully select those candidates of high potential within the organization, and proceed to manage that talent by their development, reward structure, and retention policies (Fernandez- Aráoz et al., 2011). This process of grooming internals candidates is an expensive and time-consuming

exercise. Shell, for example, replaced their CEO Mr. Voser of four years tenure by an internal candidate 31-year veteran Mr. Van Beurden at the beginning of 2014. The markets, investment and oil analysts, and investors were all supportive of this move and the candidate (Scheck, 2014).

The database used in this study was compiled by a global executive search firm over the last 12 years and provided practitioner data to assess how appropriate and effective internal promotions are based on leaders scores against a common set of leadership competencies. This appraisal process provided some insight into how successful internal promotions could use assessments based on the competency model to determine a match with personal already in the functional positions, potential candidates in other positions, and as possible moves of leaders to other industries.

Many firms, particularly the small and medium-sized companies that do not have the internal resources and organizational structure tend to recruit their future leaders and talent from outside the organization; however, it often doesn't work (Groysberg, Nanda, & Nohria, 2004). This tendency among SMEs to recruit from outside was the authors conclusion after studying 1,052,'star' stock analysts working for 78 investment banks from 1988 through 1996. They found that when a star was hired the group or team the person joined showed a sharp decline in functionality, the persons performance dropped, and the company's stock value fell. The data also showed that 46% of the research analysts performed badly in the year they left, their performance dropped on average 20%, and they had not recovered from the fall 5 years later. For the small and medium-size companies, therefore, that have to recruit their talent from outside the organization

the results of this study could be useful as one studies the different leadership competency skill set required to move a leader between firms and into different industries. In addition, this study provided an indication of the likelihood of success for leaders recruited from their own industry who transfer between functions in the top management echelons.

Researchers have found that individuals are rising more quickly to leadership and executive positions and doing so by undertaking fewer experiential jobs on the way than 20 years ago (Cappelli & Hamori, 2005). However, because of flatter hierarchical job structures within firms today Cappelli and Hamori found a large gap between successive job levels and the new leader competencies required at each level differed significantly. Many small to medium size companies have little choice regarding replacement of leaders and must hire their leaders from outside. Internal potential candidates from SME companies do not have the opportunity to acquire the necessary additional skills and experience for corporate leadership because of the difference between the job function levels. An important experiential role on the way to top leadership position is to hold a general manager job with profit and loss responsibility, this experience of being able to run a business is one very apparent transferable attribute (Cappelli & Hamori, 2005).

Leaders Competencies, Characteristics and Selection

The leaders competencies and characteristics that are required for an executive role have been found to be changing (Fernández-Aráoz, 1999). They are becoming more intangible; for example, leaders increasingly need to show flexibility and cross-cultural awareness. The failure to select the right leader during the selection process can often be

attributed to a number of errors by either the HR department, line management, or outside agencies used to facilitate the process. Examples would include stereotyping, when one assumes certain traits are associated with say ethnicity or culture, ignoring aspects of emotional intelligence, using unstructured interviews, and believing references without checking (Fernández-Aráoz, 1999). The survey of 154 executives conducted by the Society of Human Resource Management found only 13% of the executives would describe the work habits of the job candidate to reference seekers, and only 19% of the executives would reveal the reason why a candidate had left a job (Fernández-Aráoz, 1999). Another way of improving the executive selection process is to change one's perspective of the process perhaps to that of a judgment and decision-making problem where I/O psychologists have a place at the table (Hollenbeck, 2009a). The goal is to get the right person on board at the outset; this was the conclusion that Collins reached in his *Good to Great* review of companies and their Level 5 leaders (Collins, 2005). The focus should be on the leader's character firstly, then competence (what people have done and what they can do), and finally the leaders' competencies, in this order, according to Hollenbeck (2009a, 2009b). Ones and Dilchert (2009) supported this approach when they stated that personnel selection should not rely on "amorphous and hard to define competencies' but rather on an executives characteristics" (p. 163). Leader candidate selection reviews typically rely on filling a checklist of competencies and fail to probe the behavioral characteristics of the leader and how they would solve a particular problem (Sorcher & Brant, 2002). The authors noted that often decisions about candidates are influenced by inappropriate metrics and attributes such as; the halo effect, those who are

overtly team players, and by those who overvalue operational proficiency. The eight competencies used in this dissertation as the dependent variables are detailed and easily understood and the process used during interviews designed to avoid these pitfalls.

Inadequate and Ill-Defined Selection Procedures

Research into hiring practices for top-level management has found the selection process can be quite vague and ill defined. Individuals involved in the process often followed organizational traditions unquestioningly relying on own their subjective personal preferences (Fernández-Aráoz, Groysberg, & Nohria, 2009). The results from two major studies the first 2007 study which included interviews with 50 CEO's of major global companies along with their HR managers, and the second 2008 survey of executive search consultants working with 500 firms during selection assignments. The combined findings were that 43% of the consultants stated that their client considered number of years of relevant work experience to be a major deciding factor, with only 24% giving similar weight to the ability to work with teams. Only 11% considered the candidates readiness to learn new things as important (Fernández-Aráoz et al., 2009). Several authors have postulated that many established selection procedures that have been considered and documented are ignored in the selection of a CEO. Company politics for instance are a major factor with boards of directors and can confound the organizations approved selection process. An example would be when CEOs are selected to deal with a limited set of current issues that are poorly defined. Another example is when a CEO is selected based on their demonstrated technical abilities rather than on the basis of demonstrated talent for leadership (Hogan & Kaiser, 2008). The authors believe

that most managers fail for well-defined personality-based reasons many of which are associated with their inability to build and lead a collaborative team. The process of hiring executive level leaders in 30 to 50% of cases end in either firing or resignation (Fernández-Aráoz, 1999).

Assessment and Selection Process

In order to assess and select leadership talent one needs to adopt a variety of methods, which are valid, accurate, and reliable to assess leaders current and future potential. One important aspect of any leadership assessment method and of greatest interest to many organizations is the ability to predict future job performance (Schmidt & Hunter, 1998). This ability to predict future job performance in conjunction with the assessment and selection process is a major part of the executive search firm's rationale for its construction and continual use of their internal proprietary management appraisal database, which is used in this study. On a global basis, many different methods are utilized in the assessment process depending on cultural preferences. An example would be that psychometric tests and personality testing is more commonplace in North America than Asia and Africa to assess and select future leaders. External agencies such as executive search firms offer organizations a bias-free independent leadership assessment of the firm’s top management level. The process used by the executive search firm who supplied this dissertations database (Egon Zehnder) used a competency-based model and a multi consultant structured behavioral interview process described in Chapter 3. The consultant’s analysis is crosschecked by taking 360° references and an industry and job function benchmarking processes (Fernandez-Araoz et al., 2011).

However, in spite of the evidence provided by scientific research into the validity and utility of selection methods there is reluctance in many practitioner quarters to use the full battery of assessment approaches available (Highhouse, 2008). Executive management and boards of directors of firms often rely on their intuition and 'gut feel' in the assessment and selection process and ignore the rigor of processes determined by research to be the most likely to be successful in predicting job performance (Highhouse, 2008). The conventional unstructured interview also has remained one of the most common the used of the selection procedures despite its lower validity than the structured interview (Buckley, Norris, & Wiese, 2000). Research suggests assessment and selection process should include intelligence tests, psychometric tests, personality tests, structured interviews and other predictors to significantly reduce the probability of error in the prediction of leader performance (Schmidt & Hunter, 1998). Their research was a meta-analytic study of over 85 years of research up until 1998 into the validity and utility of various selection methods in personnel selection. The study results showed that general mental ability (GMA, cognitive ability or general intelligence) and structured interviews were the best means of predicting of job performance each with a validity (*r)* = .51. In the assessment process, GMA combined with structured interviews indicates the validity effect rises by 24% enhancing the validity factor significantly, in GMA combined with integrity tests validity increased 27% (Schmidt & Hunter, 1998).

Evidenced-based management information of the documented benefits of a more rigorous selection process might help reduce the alarming number of leadership failures caused by inadequate selection processes if such information can be made available to

more organizations (Pfeffer & Sutton, 2006b). Highhouse (2008) contended that theorists in leadership like Zaccaro (2007) believed "leadership characteristics exhibit complex configural relationships with leadership outcome" (p. 338). A recent study in the UK looked at the selection practices of 579 organizations of different physical size and across multiple industrial sectors (Zibarras &Woods, 2010). The authors found only a small proportion of the firms were using formalized selection methods (psychometric tests, assessment centers, structured interviews) compared with informal methods (CVs, unstructured interviews), and this proportion was lower than found in previous studies. Zibarras and Woods noted that SMEs tended to use ability and aptitude testing, personality testing, and assessment centers while larger organizations did not. This trend is of concern if the large organizations do not use the full battery of assessment processes available, it is consistent with Highhouse's research (2008). However, one positive factor was noted that more organizations were using structured interviews compared with unstructured interviews. In terms of the industrial sector they found public and voluntary sectors were more likely to use the formalized techniques, possibly reflecting a stricter atmosphere of monitoring and accountability for their actions (Boyne, 2004).

Interviews are an importance topic given its prominence in trying to predict future job performance during the selection process, and the use of interviews during the management appraisal process (for example in the compilation of this study's database). A review and meta-analysis derived from 25,244 individuals who were interviewed for employment showed that the validity of an interview depends on how it was conducted, the nature of the criterion and content of the interview (McDaniel, Whetzel, Schmidt, &

Maurer, 1994). In terms of interview content, their study indicated that situational interviews were found to have a higher validity (.50) than either job-related interviews (.39) or psychologically based interviews (.29). For interview structure McDaniel et al. (1994) found structured interviews had higher validity (.44) that unstructured interviews (.33), where the number in brackets represents the estimated population mean based on the distribution of validities analyzed. A more recent study showed a similar result that structured interviews were nearly twice as reliable as unstructured interviews. (Schmidt and Zimmerman, 2004).

Summary

The review in this Chapter 2 explored the academic literature and practitioner information associated with a leader's attributes and competencies and how they are related to the leader's performance and effectiveness in various executive roles within firms and across different industrial sectors. The aim of the review was two fold. Firstly to determine whether the information in the current literature supported the concept of a general universality of leadership attributes and competencies for effective leadership on a global basis. The second aspect was whether a review of the literature would support the idea that leaders could successfully transfer between executive roles within the same firms and also successfully transition into firms in different industrial sectors on a global basis.

The review showed that leadership is not an absolute or an individual phenomenon, it requires other individuals like followers to give it meaning (Bennis, 2007). The review included discussions on leadership emergence, effectiveness, and

performance as means of understanding the components of leadership such as their attributes, characteristics, traits, and competencies. The influencing styles of leadership behavior associated with charismatic and transformational leadership identified in the literature review were the most effective styles of leadership. Transformational leadership is related to leaders, their teams, and organizational levels of performance (Wang et al., 2011). Bass (1997) found three of the four major components of transformational leadership style could be considered virtually universal. The leadership theories discussed and reviewed as the framework for the study were implicit leadership theory and contingency theory (Avolio, 2007). The use of ILTs to guide follower perceptions of prototypes of effective leaders appears universal (Shondick et al., 2010). However, there are variations in the prototypes followers' employ that results from contextual/situational influences, environmental effects and cultures differences. One of the most significant forces that affect follower prototypes and considerations of leadership effectiveness was found to be that of national and regional culture. The GLOBE study of companies and their leaders found 22 primary leadership attributes that could be considered universally effective and desirable in most cultures (House et al., 2004). However, they also found a number of attributes that are organizationally and culturally contingent (Dorfman et al., 2012). The GLOBE results identified a number of CLT dimensions such as charismatic/value-based, team orientated, and participative leadership attributes, which the GLOBE team deemed universally valid (Den Hartog et al., 1999).

The review considered the current situation of evidence-based approaches where the discussion centered around the demonstrated lack of empirical research and

practitioner information that links leaders, leadership, and organizational effectiveness and performance (Kaiser& Overfield, 2010). Very little evidence is available for academic research based on real world practitioner data, which could assess leaders on a globally consistent basis. As a result, there is a significant mismatch between academic research and industrial practice by I/O psychologists and HR departments (Silzer & Cober, 2011). The literature review provided evidence that larger corporations are more effective and perform better when executives are homegrown and the executive's team is recruited from within the firm's talent pool. Small and medium-sized companies, on the other hand, who do not have the resources available, tend to bring leaders in from outside (Collins, 2005). Different industrial sectors may have elements associated with them that are considered unique such as the nature of their markets, the types of technological characteristics, regulatory controls, and their economic environment (Yukl, 2013). In addition, a firm's culture can add a level of specificity that can constrain a leader's attributes and their effectiveness to move across firms or industrial sectors (Groysberg et al., 2006). A review of the literature would suggest that it is difficult for leaders to transition successfully into different industries or indeed to a different type of organization within the same industry (Yukl, 2013). The degree of difficulty is likely to increase if the new role requires extensive regulatory and technical expertise, the marketplace and competitive structure is very different, and a large network of external contacts is necessary to be effective (Shetty & Peery, 1976).

The next Chapter 3 describes the methodology used in this research study. It discusses the design and rationale behind the study and the setting along with the sample

and population information used in the study. The unique archival and current practitioner proprietor database is described along with details on the compilation of the database information. The research questions are posed and the validity of the work discussed.

Chapter 3: Research Method

Introduction

The purpose of the study was to analyze the data in the database on key leadership competencies of leaders in companies and institutions worldwide to see whether there was commonality, universality, and transferability of leadership characteristics between leadership roles that determine superior job performance. The data was extracted from an executive search firm's proprietary database created in 2002 and is ongoing. The database included over 16,000 senior management appraisals carried out by the executive search firm's consultants over the last 14 years. The purpose of this chapter is to review the research design, discuss the sample and population, outline model used to collect the data, the methodology used in the analysis. The study is significant because it represents the first scientific and academic use of data from a large, global database of practitioners.

Chapter 3 includes discussions on following topics: (a) detailed descriptive outline of the competency model and the systematically constructed database. (b) How the executive search firm collected the data, details of how the firm conducted the qualitative structured behavioral-event interviews (BEIs), and codified the outcome for each leader. (c) How the firm operationalized and quantified the competency model; and how the BEI data on each leader's attributes and competencies were evaluated including the reliability and validity of the process and competency model. (d) The requirements for implementation of the quantitative study and begins with a discussion regarding the methodology.

Research Design and Rationale

The quantitative study used a cross-sectional survey methodology (Creswell, 2003)**.** A numeric description of leaders competences held in the practitioner's archival a database is included in Table 2 representing a sample of the global population of leaders. The use of the database allowed for the exploitation of the large sample of global business, nonprofit, and governmental leaders' evaluations pertaining to the eight competencies as shown in Table 2. The study's dependent variables were as follows: six executive core competencies and two contextual/situational competencies. The six core competencies were Results Orientation, Team Leadership, Change Leadership, Collaboration and Influencing, and Developing Organizational Capability, Strategic Orientation. The two-situational/contextual competencies were Customer Impact and Market Insight. The competency model and the competences are discussed in detail later in the chapter.

The independent variables tested in the first two hypotheses were connected to the universality, commonality, and transferability of critical leadership competencies. The variables of job function and industry sector were tested using the competency model and profiles for leaders across different functional roles within the business, within businesses in the same industry, and across businesses in different industrial sectors. The third hypothesis looked at whether a significant difference existed between the competency profiles of all the outstanding leaders in the database versus those profiles from outstanding leaders from several specific industries. The fourth hypothesis tested whether a significant benefit existed from selection of a new Chief Executive Officer from within

the industry or from a different industry based on the CEO competency profile. The fifth hypothesis tested whether any relationships existed between the six core competencies. Inferential statistics were used to test whether any differences existed in the participants in the sample or whether the results could have been obtained by chance alone.

The quantitative design allowed inferences from the sample to be made regarding the total population of leaders worldwide. The variables were tested for support of the overarching thrust of the study that highly effective, and high performing leaders competencies are common and universal, and are transferable regardless of job function, firm, or industry. One of the benefits of using this database in the design was the enormous sample compiled over a long but finite recent period (ongoing since 2002). The use of the database did not represent a constraint to quantitative design choice. On a similar basis the resources collected and compiled in the data where large and global in nature and complete which aided this type of design.

As the sample for the study came from an archival database, the study was not experimental as no random allocation of participants was possible nor did this researcher have control over the variables. The sample participants represented a large somewhat random selection of individuals from various private, public and governmental companies and institutions, but the study design could be considered experimental. The design and data analysis method used a group differences type design (Coolican, 2009). The study design was a single factor, independent–measures, cross-sectional group differences, type design. The design examined the differences between groups where the leadership competencies and profiles for members of one group were compared with

those from members of other groups. The study was also a correlational type design (Coolican, 2009). The term 'correlational' is being used in a generic sense in which a statistical test of differences examines differences between groups. The term is not used in relation to a specific statistical technique. The design focused on the relationships and associations between the variables with no manipulation of the variables possible. The design choice was consistent with a research design needed to advance knowledge in organizational psychology. Qualitative design would not have been appropriate as the data lent itself to scientific and mathematical analysis. The data sample itself is numeric meeting the requirements to allow inferences from the sample in relation to the total population. If the study were starting today: a mixed method approach would have been valid as the main data collection vehicle was the behavioral event interview that is codified. However, as the sample came from archival database sample information was already in numerical form. A quantitative, correlational, cross-sectional group differences design was appropriate and consistent with a research design that advanced academic and scientific knowledge in industrial/organizational psychology.

Setting and Sample

Setting

The archival database used in this study was populated by professional management consultants from a global executive search firm as part of the normal operation of their business. The firm employs over 400 consultants, operating 69 offices in more than 41 countries. The participants were not a random selection or assignment: they are from various global companies' and institutions' senior management and

executive pools of staff. The professional staffs from the search firms' global offices that conducted the BEIs and appraised the individual company leaders have had significant previous business management and consulting careers, and almost all have postgraduate qualifications. Many of the consultants from the firms' global offices are multilingual and multicultural. They have studied or worked in a number of countries and diverse cultures. In addition, the firm has an intensive training and development program, which is discussed later in the Instrumentation and Operationalization section, to ensure consistency and reliability throughout their management appraisal business. This training and development program included the in-house tools, processes and techniques used in the appraisal process that have been proven and tested reliable during their 50-year history and used by many multinational corporations and governments.

.Sample

The entire database consisted of 16,000 leader appraisal data entries taken from the firm's appraisal assignments of senior management and executives from global client companies since 2002. Businesses from all continents (except Antarctica and Greenland) were represented in the dataset. The leaders data gathered from more than 300 global entities with often multiple participants from each entity. Of the 16,000 participants in the database, 76% were from Europe, the Middle East, and Africa; 13% were from America; and 11% were from the Asia Pacific region. The companies represented in the database include some of the largest and most significant businesses in their respective industries (for example the Governments of UK and Germany, Intel, Lufthansa, SONY, GlaxoSmithKline, Mercedes-Benz, Coca-Cola, Dow Chemical, BP). To provide an

example of the scale and coverage of the database it included the following company assignments by industrial sector: 28 from the airline industry, 189 from the energy sector, 64 from the automotive industry, 349 from construction companies, and 106 from the pharmaceutical industry. Some of these industrial sector companies are identified in more details in Table 4. On a job functional basis the following positions, by way of example, were represented by 29 Chief Executive Officers (CEOs), 43 Chief Information Officers (CIOs), 377 Chief Financial Officers (CFOs), 78 Human Resource (HR) Executives, 178 Information Technology execs (IT), and 190 legal executives.

Population and Sample Size

The population of interest in this study consisted of the total number of senior managers and executives that were in top leadership positions running large private and public companies, non-profits, and government agencies around the world. The population of leaders worldwide is large, but although the actual size is unknown, a rough estimate is possible. The Swiss Federal Institute of Technology in Zurich estimate over 43,000 registered companies in stock markets worldwide (Coghlan & MacKenzie, 2011). If each company has five leaders the corporate population would be over 215,000 leaders in registered companies alone. The number of non-profits in the US according to the National Center for Charitable Statistics is over 1.5 million with presumably at least one executive leader each (Foundationcenter, 2012). Therefore, if one included governmental and institutional leaders worldwide the total leader population size is realistically assumed to be in the many hundreds of thousands possibly as many as a couple of million globally at the very senior level. As long as the size of the sample does not exceed a few

percent of the population the mathematics of probability suggest the actual population total is not relevant (Creative Research Systems, 2013). One does not need to know the total leader population if the sample size is adequate, for example if sample size is 300 leaders it is equally useful in examining the leaders characteristics within a the city of 15,000 leaders or a State of 115,000 leaders. The sample size of leaders represented when the database is subdivided into the independent variables to be tested is in total of the order of 16,000, which represents less than 2% of the population. The number of leaders in each job category and the companies represented in each industrial sector (the independent variables) meets or exceeds the sample size criteria outlined below. As an example to justify this point Table 1 shows the number of senior leaders (*N*) used to test the significance of the eight competencies in the model against Job Function, and the numbers of leaders (*N*) in each Industrial Sector.

Table 1

Job Function

Chief Executive Officer	89
Chief Financial Officer	779
Chief Information Officer	58
Financial Services	934
Human Resources	269
Transportation	1009

Industry

Airline	197
Banking (all)	1713
Automotive	347
Chemicals	667
Construction	2166
Energy	2426
Engineering Services	84
Non-profit	352
Hi-tech Manufacturing	160
Insurance	519
Pharmaceuticals	631
Telecom	553

A larger sample size more accurately represents the characteristics of the population. A large sample size increases the power of the statistical analysis and reduces estimation error (Van Voorhis & Morgan, 2007). Often the size is a function of resources, both timing and financial cost tends to increase with sample size and collection issues. As this present study utilized a large commercially derived practitioner archival database, these resource issues were not a concern.

Creative Research Systems (2013) provide a sample size and power calculator to find a sample size that adequately reflects the target population $N > 10{,}000$, with a confidence interval of 10%. The calculator indicates a sample of ($n = 96$) at the 95% confidence level and ($n = 164$) at the 99% confidence level. (Note; the target population in this calculation is insensitive to the actual population as long as it exceeds $N = 10{,}000$). The confidence interval stipulates a value range that could contain the unknown population parameter. The upper and lower bands of confidence limits value range are computed from the available data. The sample size should be selected to make sure that there is a sufficient probability of the population parameter falling into the desired range within a confidence interval (Liu, 2009). Liu noted that the requirement for such probability of achieving a certain range is necessary for confidence intervals having different sample sizes.

Green (1991) proposed two rules of thumb that based on the ratio of cases to independent variables. These rules of thumb can be used to estimate sample size for correlations and regressions. Using m to represent the number of predictors, he suggested

the following formula for testing multiple correlations, $n \geq 50 + 8m$, and for single cases $n \geq 104 + m$

In this study, the total number of predictors is eight. If $m = 8$ it would suggest a sample size for a single case *(n* = 112*)* and test multiple correlations *(n* = 114*)*. In addition, Green (1991) also suggested using; -

$n \geq (8/f^2) + (m\text{-}1)$, where $f^2 = .35, .15, \& .01$,

for large, medium, & small effects respectively.

Green's equation would suggest that for small effect sizes 807 participants are required, 60 participants for medium sized effects and only 29 participants for large effects. Whilst rules of thumb can be useful with regression analysis, sample size will depend on aspects other than just *m* (Bonett & Wright, 2011). Cohen and Cohen (1975) found that for single predictors that correlate in the population with the dependent variables at the .30 level, *n =124* sample size achieves the minimum power level of 80%. If one increases the predictors to five with the same correlation level, then *n=187* participants would be a good sample size.

When considering independent samples t-test or one-way analysis of variance (ANOVA) to detect differences between and among groups, Cohen (1998) suggested for medium to large effect size, 30 participants should provide about 80% power for each group. According to Cohen's conventions an effect size of .80 would be large, .50 for medium, and .20 would be small effects (Lai & Kelley, 2012).

The power of a statistical test is defined as the probability of not making a Type II error (1-β). A Type II error results when one fails to reject the null hypothesis when it is

false in the population. A power value of 80% is considered a minimum for demonstrating a genuine effect (Coolican, 2009). A Type I error results from the rejection of the null hypothesis when it is true. The decision then about how much probability (known as α) of making a Type 1 error is acceptable is related to the level of significance we choose to use in the analysis. There was a trade-off between increasing the power to avoid a Type II error, which calls for a large alpha and the risk of incurring a Type I error that mandates a lower A. In this analysis, a probability value 1in 20 was used (α= .05) which is scientifically and academically acceptable. The larger sample sizes in this research that are available from the database helped ensure the likelihood of finding differences if they existed.

Sample Evaluation Process

The firm's consultants offer a highly professional business service. During the management appraisal assignment they interview, qualify, evaluate, and codify the behavioral characteristics that the leaders employ in their roles using BEIs (McClelland, 1973, 1994, 1998). The firm's consultants used a mix of advanced cognitive abilities, multiple intelligence skills, and behavioral assessment training during BEIs and their subsequent codification which forms part of proprietary management appraisal process (EZI, 2001). The firm believed these skills, and the critical and thoughtful insight the consultants bring to bear on their appraisal assignments were developed from a combination of their former business careers, current firm experience, and the in-house homogeneous training they had undertaken. The EZI training process, competency model and BEI techniques are discussed in detail later in this chapter.

The evaluation process commences with an assessment and confirmation of the managers' prior academic qualifications and professional background for authentication. After the BEI, a further process of validation is performed using extensive referencing by the same interview consultants to inform, modify, and finally solidify the appraisal judgment. These references are usually 360 degrees in scope that means they include confidential discussions with all the personal and employees that have a connection to the leader. The people interviewed consist of the leaders subordinates, peers, and superiors, and sometimes external people (both business and personal) if appropriate, that encircle the leader.

The firm's consultants have evaluated on a worldwide basis over 20,000 senior leaders and executives and completed over 1000 engagements (EZI, 2004). For most specialized industries, the firm has sector specialists organized into various global practice groups such as energy, engineering, consumer, financial services, and industrial. These specialists work alongside and form part of the management appraisal teams. The EZ differentiated model allows both generalists and specialist consultants trained in executive search, leader evaluation, and BEI techniques to work together during the management appraisal interview process with any given individual firm function and/or business sector. Thus, staffing practices ensure both local and global generalists, with an appropriate specialist if required, are likely to be present for the company's leaders structured BEI. The use of several interviewers when conducting BEIs has been shown to increase effective reliability (Spencer & Spencer, 1993). The search firm states that it has a highly developed and sophisticated research capability, and have the technology

platform to hold proprietary information to access the firm's knowledge and integrate the database for use during normal business activity (EZI, 2004). This business model is consistent with many authors' views on the practice of evidence-based practitioners and their approach towards commercial sensitivity and secrecy (Fink, 2010).

Instrumentation and Operationalization of Constructs

Competency model

Competency models have become a useful and valid tool to individuals and organizations in understanding and predicting leadership ability and performance. Within the human resource departments of most major companies the concept of competences has become one of the dominant internal models for assessment, selection, and development systems (Hollenbeck, 2009). Hollenbeck stated "rare is the company that doesn't have a behavioral competency model, either unique to the company or a generic" (p. 136).

A competency-based model is a descriptive tool for identifying the knowledge, skills, attributes, and behaviors needed effectively to perform a leadership role in an organization (Le Deist, Delamare, & Winterton, 2005). Competencies help by providing a framework that can be used to aid in leadership selection, development, and understanding of leadership effectiveness, help by summarizing the knowledge experience and insight of seasoned leaders, and help by specifying a range of useful leadership behaviors (Hollenbeck, McCall Jr., & Siltzer, 2006). Researchers can gain useful insight into the selection of candidates for leadership roles by assessing and measuring leadership competencies in organizations (Yoon, Song, Donahue, & Woodley,

2010). Competency-based assessments have been found to predict a leader's performance two years ahead at 80% accuracy level (McClelland, 1998).

McClelland (1973) is often cited with the creation of the use of competency modeling in management assessment. McClellan's research indicated that knowledge content tests and academic aptitude did not predict high job performance or success in life; however, he found that individual characteristics or competences did predict organizational high performers (Rodriguez, Patel, Bright, Gregory, & Gowing, 2002). Thus, various research institutions and government bodies started to develop measures of competence as alternatives that did not rely on traditional tests of intelligence and cognitive ability that were now held to be poor predictors of job performance (Le Deist et al., 2005). The idea of using competencies or a competency model to identify high-performing leaders and outstanding managers is now widespread in organization's human resource management departments (Boyatis, 1982; Spencer & Spencer 1993). The competencies are discovered by working backward from the criterion of assessing leaders who are considered superior, highly effective, and outstanding in their performance of the job by determining their attributes, characteristics, and behaviors (Spencer & Spencer, 1993). The criteria for determining the high performers can vary between that of the opinion of renown experts or judges in the field, or by using performance metrics that reflect the results of the leaders activity such as return on capital employed, sales, and profit margin, or a combination of these and others.

The U.S. Office of Personnel Management (OPM) conducted a leadership competency study of over 20,000 executives, managers and supervisors in the federal

government in 1992 (Gregory & Park, 1992). The study determined 22 competencies, which later in 1998 were grouped into five categories. These five categories were; - leading change, leading people, building coalitions/communication, results driven, and business acumen. The results of this large government study and the subsequent model used by OPM since that time are consistent with the findings of Spence and Spencer (1993) and their view of what constitutes a competency model as explained in the next section. These five categories also lend considerable support to the validity of the core leader competencies used in the executive search firm's competency model to populate the database used in this study.

A key aspect of the OPM approach that has a bearing on this organizational psychology study involved the development of benchmarks or mastery levels for each of the competencies. The benchmark methodology has now become standard practice to compare leaders within and across organizations. An individual leader can be evaluated by comparing their level of mastery for a particular competency to a pre-existing benchmark level for that job function or industrial sector. The benchmarks can be set at various levels, for instance, average benchmark for a leadership team, or an outstanding benchmark for the exceptionally high performing leaders. Thus, the benchmark level provides a standardized way to define the mastery of the competency for an individual leader. The benchmark ranking used in the codification is itself generated from specific definitions of level/mastery and behavioral examples during the assessment process of an individual leader. Two examples, one generic and one specific, are illustrated in Figures 1 and 2 (Spencer & Spencer, 1993; Rodriguez et al., 2002).

Competency Models

The competency assessment method is the foundation of a job-competency approach. The assessment of the leader is one of looking at the leader-in-the-job; it does not make prior assumptions of abilities, knowledge, skills, or characteristics that are required to perform the job effectively. Using open-ended BEI techniques one determines which human attributes and characteristics are related to high performance and job success (a more detailed discussion follows later in the chapter). High performance in this context is statistically defined as one standard deviation above average - achieved by the top one person out of 10 in any given working situation (Spencer & Spencer, 1993). Criterion validity is emphasized in the competency method, that is, what characteristics lead to high performance and not what aspects most reliably describe all the characteristics of a person? The competency process also identifies competencies that are context sensitive. Competency-based selection predicts superior job performance without any age, gender, race, or demographic bias (McClelland, 1998).

Competencies, according to Spencer and Spencer's seminal work (1993), are the underlying characteristics of leaders and show how they will behave and think across diverse situations. The competencies will endure for a reasonable length of time. Competency models are constructed using BEI-based reviews of the extraordinary characteristics of superior performers in a job. The competences within the model incorporate ordinal scales that capture the levels of mastery of each competency to differentiate the range of average to high performers as discussed earlier. Competency models are organized into groups of distinguishing competencies like the OPM five

categories where each group or category might contain up to five individual competences. Each competency will have a definition with a number of behavioral indicators or behavioral ways of demonstrating that competency in a particular role. Behavioral indicators would typically be derived from the BEIs of superior performers previously identified during benchmark analysis.

The competency groups or categories are derived on the basis of their underlying intent, which can be a level of analysis somewhere between a leader's deep underlying social motives and their superficial behaviors. A specific model will consist of a number of generic type groups. The Spencer and Spencer (1993) book, *Competence at Work – Models for Superior Performance* with its introduction from McClelland, is one of the key pieces of reference work in industrial/organizational psychology. The book describes, with a practitioner orientation, how competency models are constructed and, from the research, what they should contain. Spencer and Spencer suggested that generic groups or categories of competencies should be used in the model. The model should include categories such as, Achievement and Action, Helping and Human Service, Impact and Influence, Managerial (teamwork and cooperation, developing others, team leadership), Cognitive (analytical and conceptual thinking, professional experience), and Personal Effectiveness.

The Egon Zehnder (EZ) Competency Model

Many competency models are constructed within companies following the work of McClelland and Spencer and Spencer but because of business concerns and confidentiality they tend to be proprietary in nature and commercially valuable. This

description of the EZ model is, therefore, limited to protect the commercial and business sensitivity of the firm's proprietary in-house competency model and business approach. The firms main categories used to evaluate leaders during their management appraisal assessments, a significant part of their business, is based on six executive core competencies and two contextual/situational competencies initially. The firm and its consultants developed these competencies over time based on their own proven business knowledge and experiences. In addition, outside agencies were also influential such as the requirements of their client customers, the academic works of researchers such as McClelland, and Spencer and Spencer, and studies like that at the U.S. Federal OPM. The framework consisted of the academic categories suggested by Spencer and Spencer (1993) and outlined earlier and described in Table 2 (Komm, McPherson, Graf Lambsdorff, Kelner, & Renze-Westendorf, 2011). In addition, several competencies have been modified and included with definitions that reflect the situational contextual strategic priorities and tactical aspects found within the business environment. These two competencies are Customer Impact and Market Knowledge. The EZ competencies are Results Orientation, Customer Impact, Team Leadership, Change Leadership, Collaboration and Influencing, Developing Organizational Capability, Strategic Orientation, and Market Knowledge.

Table 2

Leadership Competencies Assessment Matrix

Core executive competencies	Competency description
Developing Organizational Capability	Developing competencies of the organization by attracting top talents and developing the team.
Collaboration and Influencing	Effectiveness in working with peers or partners not in line of command.
Team Leadership	Focusing, aligning, and building effective groups.
Strategic Leadership	Thinking beyond own area and showing complex analytical and conceptual thinking abilities.
Change Leadership	Driving change through people, transforming underlining an organization in a new direction.
Result Orientation	Driving improvement of business results.
Situational/contextual competencies	
Market Knowledge	Strong understanding of the market and how it affects the business.
Customer Impact	Thinking about serving the customer.

Competency Scales

Each of the eight competencies from the EZ competency model's three categories has a competency scale. The overarching logic of the competency scale and a brief description of the core competencies are presented in Figure 1. The scale is divided into three sections reflecting different degrees of mastery over a competency scale of 1(*low*) to 7 (*high*). The first level (grades 1&2) of a specific competency shows a leader being

Reactive with positive and responsive behaviors. The second level (grades 3 and 4) is a leader who is Active with typical average executive behaviors. The third level (grades 5, 6, and 7) is for leaders who are Proactive with transformational competence, highly leveraged impact, and outstanding executive leadership behaviors.

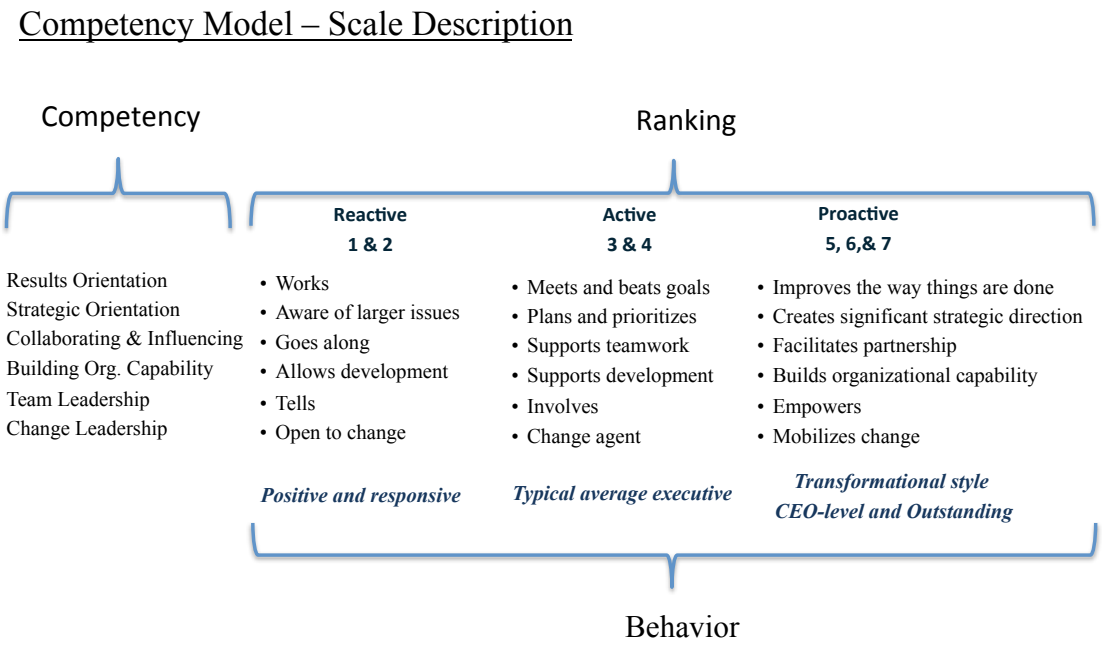

Figure 1. Logic of the competency scales.

Figure 2 shows the Strategic Orientation scale logic as an example of one core executive competency used as the template by the EZ consultants to provide consistency in the grading, assessment, and benchmarking of each leader.

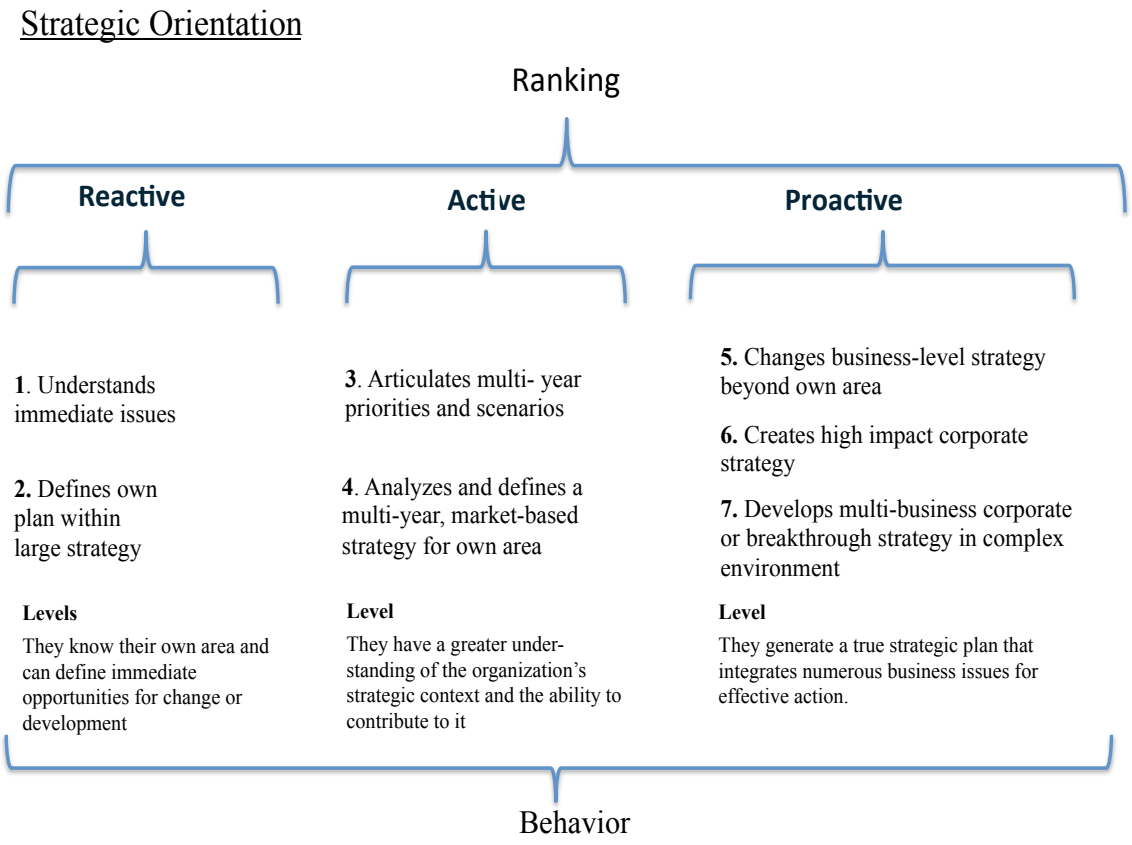

Figure 2. Strategic orientation scale logic.

The EZ management assessment process then provides the consultants a further more detailed explanation of each competency scale component with descriptive breakdowns of each of the individual mastery grades that makeup the three levels of Reactive, Active and Proactive performance. Each competency in the model has a similar logic diagram and descriptive scale to promote consistency in the grading process across the organization.

Figure 3 shows an example of the database output benchmarking exercise (where initials represent each of the competencies). The figure shows the means score for the total database at the Outstanding Leader level and the Average Leader level. In addition, it shows two examples of the independent variables for one job function (Chief Financial Officer), and one industrial sector (Engineering Services).

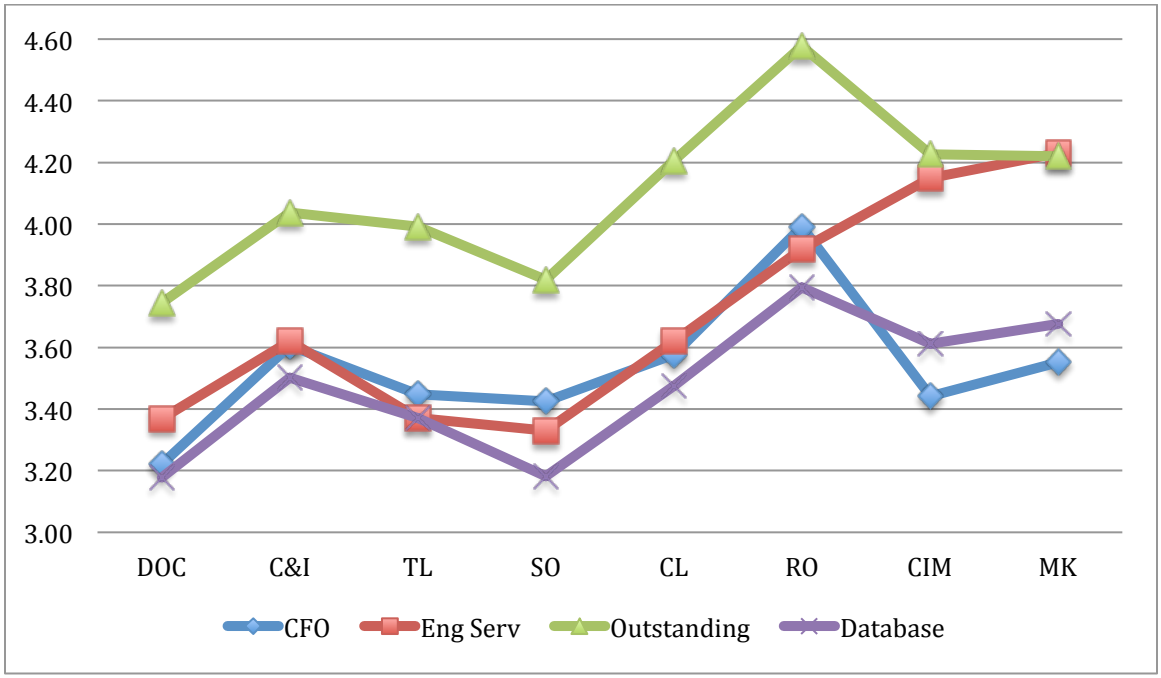

Figure 3. Example of database output for leadership competency scores.

Interview Process –Reliability and Validation

Competence is about what a leader can do and is most often demonstrated by what they have done. The key question in determining whether the leader has a particular competency and their level of mastery revolves around what they have done and from a behavioral standpoint how they did it (Hollenbeck, 2009). The process used by EZ to guide and facilitate the leader assessment process is the BEI developed by McClelland

(1973, 1998) at Harvard. McClelland based his work on a modification of the critical-incident interview proposed by Flanagan (1954), expanded upon by Dailey (1971) and used extensively by Boyatzis (1982). The BEI "consistently shows the highest reliability and validity in predicting future employee performance" (Vathanophas & Thai-ngam, 2007, p. 57). The BEI was designed to determine the difference between those who are considered outstanding performers and those who are typical performers in a benchmarking process. In this nomenclature, the 'outstanding' group has been found to be those leaders in the top 5–10% of executives and the 'typical' group the next 11–25% of the executives (McClelland, 1998).

The consultants using the BEI ask the leaders during the assessment interview process about the most critical situations they have faced in their jobs with a series of questions, which are situation specific. What was the situation? What lead up to the situation? Who was involved? What observations did you made during situation? What were your thoughts and feelings and responses during situation? How did you analyze and understand the situation? What did you do? What was the outcome? Thus, the BEI process in which the consultants are thoroughly trained is an effective method of collecting the narrative data on particular competency (Vathanophas & Thai-ngam, 2007). Using the competency scales developed by the firm discussed earlier the multiple consultants conducting the BEI are able to codify accurately and consistently the leaders level of mastery of each competency they are assessing (Boyatzis, 1982; Spencer & Spencer, 1993). The coding of competencies from BEIs produce leader assessments is reliable and validly linked to the high performance and success of the individual leader

(McClelland, 1973, 1998). McClelland's research (1998) showed training people in BEI procedures and techniques to elicit the data, interpret it, and codify it can achieve inter-worker reliabilities above .9 (Raven & Stephenson, 2001). Inter-observer reliability coefficients are above .75% (Latham, Saari, Pursell, & Campion, 1980), and average inter- judge agreement for trained coders ranges 74% to 80% (Boyatzis, 1982; McClelland, 1998)

The evaluation process commences with an assessment and confirmation of the managers' prior academic qualifications and professional background. The process of validation is performed after the BEI using extensive referencing by the same consultants to inform, modify, and finally, solidify the appraisal judgment. These references are 360 degrees in scope -which means they include confidential interviews and discussions with subordinates, peers, and superiors, and sometimes external people if appropriate, that encircle the leader.

Training Process

The EZ structured behavioral-event interview format follows a prescriptive process as shown in Table 3. The structured process limits discretion of the interviewers by defining a set of pre-agreed questions to elicit a specific set of narrative data reflecting behavioral indicators and responses. It does allow the interviewers the discretion to decide how and whether to probe for additional information and the interpretation of the leaders responses when trying to understand the behavioral indicators necessary to assess their competencies.

Table 3

Consultant Interview Structure

Outline Interview Structure

Timing (minutes)	Interview Steps	Purpose
5-10	1. Introduction	Set scene/ build rapport/ manage expectations of interview
15-20	2. Career History	Evaluate critical experiences, Learning ability & motivation
5	3. Current Role	Understand context for achievements
90	4. Achievements / story telling	Evaluate competencies
20	5. Probing specific competencies and learning ability	Evaluate competencies and learning ability
5-10	6. Aspirations, strengths, development needs, motivation	Understand motivation & self-awareness, evaluate ambition/ drive
5	7. Closing	Clarify next steps
About 3 hours	8. After interview; initial calibration / rating	Capture immediate conclusions about and make tentative ratings

The consultant behavioral-event interviewers will collect sufficient information to allow the evaluation and codification of the leader against the competency model criteria. For each of the EZ competencies example BEI questions would form part of the repertoire used by the consultants assigned to elicit and appraise a leader's mastery level of the competency. This structure and questioning approach, the BEI format described earlier, is taught during in-house training courses within the executive search firm. The consultants who perform the management assessment appraisals attend training courses to sharpen their behavioral assessment, interview, and appraisal skills over time. The first

course for new consultants entering the firm is over 5 days in duration. There are two separate day's spent concentrating specifically on the management appraisal process with the further time spent on practicing behavioral assessments and studying relationship building competencies. Additional weeklong courses during the consultants early years are provided as they progress to principals and pre partners. These courses focus on building interpersonal and intrapersonal skills, and enhancing communication, negotiating, relationship, and behavioral competencies. As an example, one part of the initial management appraisal-training course, role-playing activity is utilized to practice the BEI assessment among participants.

Spencer and Spencer (1993) found during their studies on coding competencies during interviews that reliabilities of .80-.85 are fairly easily achieved using the BEI methodology. The U.S. Air Force Academy of Behavioral Sciences and Leadership found a high correlation coefficient of inter-rater reliabilities at .80 (Pearson's *r*) between coders and experts was attained after 30 hours of training (Lawton & Borman, 1978). Studies of the structured behavioral interview among recruiters from eight telecoms companies who interviewed applicants for management and marketing positions found that the results yielded an inter-rater reliability estimate of .64 ($n = 37$) (Motowidlo et al., 1992). The eight recruiters had no common training only familiarity with the BEI technique. Given that EZ have a rigorous, thorough and uniform training program (briefly explained here) one could logically infer that they could achieve a similar high level of inter-rater reliability in their proprietary Management Appraisal Assessment program.

Executive Search Business and Leader Assessment

In addition to the training courses the ongoing main business of the firm is executive search, which also provides significant on the job training in the continual assessment of new executives for the executive vacancies filled for their clients. Thus, a leaders attributes, skills, and competencies would be routinely be assessed by BEI as part of the senior job candidate evaluation from their normal executive selection work. The consultants are required as part of their work to assess and calibrate individual managers and executives writing detailed confidential reports on each candidate. This assessment and evaluation report process is the mainstay of the consultant's work. The process requires extensive knowledge of their specialty and to be able to compare and contrast their leader candidates against other candidates in the peer group both inside the firm, and in the external marketplace within and outside the clients business sector. The consultants must prove to their clients that the search has been extensive as they seek to find and promote the right candidate for a specific company assignment. The database and benchmarking capability allows the consultants to show the clients how their proposed leader candidate is situated in the context of the marketplace. The consultants and their client company use the final confidential report from the leader's evaluation to select the right person for the job based on a prediction of the individual leaders' likely future performance.

Archival Database and Data Analysis

The Proprietary Database

The database exists within the offices of the executive search firm on its U.S. and European server complex and is supervised by an organizational psychologist within the firm. Access and integration of the database occurred via their in-house proprietary computer software package entitled 'Management Appraisal Database'. This package uses a spreadsheet program using Microsoft Office Excel. Consultants can query the database from their PC's to gain access to in-house servers after passing through internal security protocols. The database can be sampled and accessed in a number of ways, depending on the consultants' needs. (This researcher's access is discussed at the end of the chapter 3.) For the present study, the database has been sub-divided into several categories. One category, for example, was the variable job function such as CEO, CFO, and HR used in testing hypothesis one and four. A second category was the industrial sector such as Energy, Airlines, Pharmaceuticals and the like, used in testing hypothesis two. Table 4 shows an example of some the companies who have had management appraisal assessments performed.

Table 4

Industry and Company Examples Contained in the EZI Database

Airlines	**Automotive**	**Construction**
Lufthansa	Hitachi	Fronterra, Australia
Deutsche Post DHL	Mercedes Benz	ABB
Qantas Airways	RHIAG Milan	MAN
Malaysia Airways	Renault France	Coca Cola
DHL worldwide express	Nissan	Beretta
Government the Fiji	Goodyear	Siemens
Lan airlines	Audi USA	BANG OLUFSEN
Energy	Bosch Corp.	LG Electronics
EON	**Pharmaceuticals**	ICOPAL
ThysennKrupp	ASTRAZENICA	Lloyds
ENI	Bayer Schering	Johnson Controls
Dow Chemical	Banyu Japan	**Hi Tech Manufacturing**
ENEL	GlaxoSmithKline	Intermec Inc.
STATOIL	Bayer Russia	3i
Centrica	Dow Chemicals	PAGESJAUNES, France
Bemis Co Ltd	Astella Pharma Japan	Jabil Circuit
Ahlstrom	Taiko Japan	SONY
Suez Energy	Philips	SAGE Software
Neste Oil	Daiichi Sanko	Infineon
BG Group	Sanofi-Aventis	NXP Holland
Energias Do Brasil		

The broad distribution of the database across senior job function is 39% General Management, 22% Sales/Marketing, 16% Operations, 13% Finance, 6% IT, and 5% HR. The composition of the database in terms of the leader's job level is 58% senior, 29% head of function, 9% middle management, 3% board, and 1% owner/founder. In addition, the database was interrogated in terms of other benchmark type categories such as,

'Outstanding' (used in testing Hypothesis three), or using age criteria, gender, and geographic location. The latter categories did not form part of this study.

Data Analysis Plan

The firms 'Management Appraisal Database' currently exists as a large Excel spreadsheet and held on in-house protected servers. Access is via the firm's unique authorization structure and is password protected. Information in the database was reviewed and any identifying individual names and entities' privileged information removed by this researcher. The Excel spreadsheet information regarding the independent variables and the dependent leadership competencies were imported into the Statistical Package for the Social Sciences (SPSS) for analysis by this researcher.

Initially, descriptive statistics were used to summarize the independent variables of job function and industry sector. Each of the independent variables were broken down into descriptive subdivisions or categories as shown in Table 1, where each of the subdivisions had a number (*N*) of leaders' competency profiles in the database. The data was ordinal; it was not categorical or nominal. Each competency variable had the measurement property of magnitude representing the codified ranking between 1-7 given by the consultants at the time of the BEI and subsequent evaluation during the assessment process. The mean was the measure of central tendency used for each competency as it was a single score and most representative of large samples if there are no extreme scores. The mean is a "fundamental building block for most statistical techniques" (Aron et al., 2009, p. 42). The variability of the data, represented by the distance between each score and the mean, was tested using the standard deviation. The standard deviation

measured the dispersion of the scores within the distribution. Graphical representations of the data were used where appropriate to view 'normality' and other characteristics of the variables assessed during inferential statistical analysis. Whilst descriptive statistics are helpful in reviewing the properties of the sample, the research questions were directed towards the properties of the population. One can make inferences from the sample regarding the larger population using the inferential statistics.

This quantitative research study investigated leadership attributes and leader's effectiveness and performance using a competency based model. The research determined from the archival practitioner database whether successful leaders have a set of attributes, skills, abilities, characteristics, and traits captured in the competencies that could be considered universal, common, and relevant to any leadership role. The specific research questions and hypotheses for this quantitative study were as follows: -

RQ1: Are leadership competencies common and universal, allowing a leader to transfer effectively across different functional roles within an organization?

$H_0$1: There is no commonality and universality of six core and two-situational contextual leadership competences among leaders in their senior functional roles of chief executive officer, chief financial officer, chief information officer, financial services, human resource executives, and transportation heads.

$H_1$1: There is a commonality and universality of six core and two-situational contextual leadership competencies among leaders in their senior functional roles of chief executive officer, chief financial

officer, chief information officer, financial services, human resource executives, and transportation heads.

RQ2: Is there a commonality of leadership competencies, such that leaders can successfully transfer across 12 separate and distinct industrial sectors?

$H_0$2: There is no commonality and therefore transferability of six core and two contextual leadership competences among leaders in their senior functional roles across industry sectors. The industrial sectors include airline, banking, automotive, chemicals, construction, construction services, energy, governmental, high-tech manufacturing, insurance, pharmaceuticals, and telecommunications.

$H_1$2: There is a commonality and therefore transferability of six core and two contextual leadership competences among leaders in their senior functional roles across industry sectors. The industrial sectors include airline, banking, automotive, chemicals, construction, construction services, energy, governmental, high-tech manufacturing, insurance, pharmaceuticals, and telecommunications.

RQ3: Are the competencies for outstanding leaders across all industries [that are] similar to those of specific component industries?

$H_0$3: There is no difference in the six core and two contextual leadership competencies for outstanding leaders across all industries compared

with those outstanding leaders from the specific industries of banking, human resources, and manufacturing.

$H_1$3: There is a difference in the six core and two contextual leadership competencies for outstanding leaders across all industries compared with those outstanding leaders from the specific industries of banking, human resources, and manufacturing.

RQ4: Does a firm benefit from selecting a CEO from its industrial sector or should it look outside for one from a different industry?

$H_0$4: There is no discernable benefit from selecting the next CEO from a firms industrial sector verses a different sector.

$H_1$4: There is a discernable benefit from selecting the next CEO from a firms industrial sector verses a different sector.

RQ5: Is there a relationship among the six core leadership competencies in the search firm's competency model?

$H_0$5: There is no relationship between the six core competencies of results orientation, strategic orientation, collaboration and influencing, team leadership, change leadership, and developing organizational capability among senior corporate leaders according to job function, industrial sector, and outstanding performers.

$H_1$5: There is a relationship between the six core competencies of results orientation, strategic orientation, collaboration and influencing, team leadership, change leadership, and developing organizational

capability among senior leaders according to job function, industrial sector, and outstanding performers.

Inferential statistics helped determine whether any differences between the groups existed in the population or whether the result was one of chance for each of the independent variables. The two independent variables (factors) initially tested were job function and industrial sector. The first factor tested was the hypothesis regarding job function ($H_0$1). Job function was broken down into separate specific executive occupational roles or job types (levels or groups). Each job type consisted of a number (N) of leaders from global entities from within the database for the particular level with their accompanying competency profile (see Table 1). The levels are independent-measures. The levels were Chief Executive Office, Chief Financial Officer, Chief Information Officers, Financial Services, Human Resources, and Transportation. The database contained, for example, 779 chief financial officers who have been evaluated from the companies represented. The dependent variables were the six core executive competencies and two contextual competencies for which the leaders were assessed (see Table 2). These competencies are Results Orientation (RO), Team Leadership (TL), Change Leadership (CL), Collaboration and Influencing (COI), Developing Organizational Capability (DOC), Strategic Orientation (SO), Customer Impact (CI), and Market Knowledge (MK). The results of testing this hypothesis showed which job functions had common or universal competences and how the leadership competency profiles of each job varied.

The ANOVA approach is an appropriate statistical method to test the existence of differences in multiple groups' means. The ANOVA was a single-factor, independent-measures design. The results from the ANOVA of the sample data were used as the basis for drawing the general conclusions about the populations (Gravetter & Wallnau, 2007). Several conditions were met before the ANOVA results were interpreted. Firstly, the residual scores followed an approximately normal distribution and secondly, the groups needed approximately equal variances. The software package SPSS was used to test the residual scores distribution, and a Levene's test conducted to examine the homogeneity of variance. However, for any significant differences found ANOVA would not show where the significant differences were among the groups. Post hoc tests were necessary for this purpose and all possible pairings within groups were compared. The post hoc tests performed could have used independent t-tests, however, that method would have raised the issue of multiplicity, with the resulting increase in the risk of making a Type I error. The risk was overcome by the choice of the Tukey Honestly Significant Test (or Tukey test) as a post hoc test method.

The second factor studied was the industrial sector with a test of hypothesis $H_0 2$. Industrial sector was broken down into separate specific unrelated industries (levels). Each industry consisted of a number (N) of companies from within the database that have had leaders evaluated and their competencies codified (see Table 1). For example within the airline industry sector, 197 leaders had been evaluated from various airlines. The levels were independent-measures. The same core and contextual competencies were used as in $H_0 1$, and the same ANOVA and post hoc test approach adopted to determine

the existence of any group mean differences. The results of the test allowed one to determine which, if any, of the industrial sectors had common competency profiles such that a leader from one industry could effectively transfer into the other. In addition, the results showed that some industries are very good feeders of leaders into other industries whilst some industries maybe more isolated. The third hypothesis $H_0$3 tested with ANOVA and the post hoc approach determined if there were any statistically significant differences between the competency profiles of Outstanding leaders in general from the database of industries versus those Outstanding leaders from specific industries such as banking, human resources, and manufacturing. The outcome illuminated the question of how Outstanding leaders in general compare with those from specific industries. It also helped in the understanding of whether the competency profile of outstanding leaders is non-industry specific and therefore whether the Outstanding leaders may be a transferable commodity. The fourth hypothesis $H_0$4 tested again using ANOVA and the post hoc approach whether there was a statistically significant difference between selecting a new CEO from within the firm's current industry compared with selecting a CEO from a different industrial sector based on leadership competency profiles. The outcome of the analysis could provide a valid data point for both company HR departments and executive selectors to ensure that sourcing future CEOs has the best chance of success. The fifth hypothesis $H_0$5 tested competency relationships using correlation and regression analysis. The group differences design allowed investigation of certain regression relationships between the eight leadership competencies for each of job functions, industry sector, and outstanding performers. Regression analysis allowed

determination of whether one or more of the variables (competences) predicted another competency variable for each of the factors (Hanna & Dempster, 2012). It also helped in determining the amount of the variance in one variable explained by other variables. The goal was to discover whether one or more of the competency variables could predict another for each factor. This ability for prediction could help provide a short cut for executive selectors and recruiters to screen possible candidates using a simpler competency model. It could also indicate some commonality of competencies between the independent variables of job function and industrial sector to allow better and faster selection criteria. The relationship between the competency variable tested as the predictor variables and those competences chosen as the criterion variables for each factor analyzed and *R* the correlation coefficients (or multiple coefficients) determined. The variance *R* Square is important as it accounts for the amount of variance of the predictor variables. The suitability of regression analysis was confirmed by checking that the residuals were normally distributed, linearity existed via a scatterplot, multicollinearity, and any outliers considered.

Validity

The underlying assessment technique used in this quantitative study to compile the database was the behavioral-event interview (BEI, McClelland, 1973,1998). The BEI, when conducted professionally, is a psychometric instrument used to assess individual competencies with correlation coefficients of the order $r = .60$ (Spencer & Spencer, 1993; Janz, 1982; Harel, Arditi-Vogel, & Janz, 2003,). Researchers have found that BEIs used for individual assessments and coded for competencies can achieve inter-rater reliabilities

of ". 80 – .85 are fairly easily established using this method" (Spencer & Spencer, 1993, p. 246; Latham et al., 1980; Motowidlo, et al., 1992).

This research study used a practitioner derived archival database; it required the use of the naturally occurring conditions, the procedures and processes of the executive search firm, and academic theory to determine validity of the methodology employed. The research utilized these conditions rather than research work program and design that had been set up specifically to measure the variables under review. The same conditions applied in a similar way to the participants who were not selected at random but by the companies and institutions that wanted their managers appraised by the selection firm. Thus, the conditions and the participants were not necessarily selected and organized with research interests at the fore but rather for professional, commercial and business reasons. These circumstances presented a number of validity threats (Coolican, 2009) that are not necessarily seen using a conventional controlled experimental design. These threats are, however, the price one must pay when studying and evaluating leadership behavior in a practitioner setting, dealing with real and complex variables that are out with the researchers control. The converse is also be true. This research used large amounts of real practitioner data collected on a professional basis across the globe. The database is eleven years old and is routinely updated with new information from current appraisals. The executive search firm process and their management appraisal assessment services have been audited, appraised, and used by many multinational firms, Government bodies and non-profit organizations over the years. These third party audits and reviews as the part of normal business and government due-diligence imply a high

degree of content, external, and population validity. On a similar basis, given the large number of participants (>16,000) involved in the assessments and the number of companies (>300) who requested and use the results routinely the construct has high face validity at the practitioner level. In addition, given the success of the companies using the appraisal outputs and the repeat business the selection firm performs, the criterion validity is likely deemed high by the various companies educated business leadership and the tests performed by Government bodies. A sample list of the global companies using the EZ Management Appraisal is shown in Table 4.

The question of internal validity is difficult, experience would suggest that there is a causal link between the independent variable and the dependent variables (even if this link is indirect) in this research. The normal threats to internal validity are associated with sampling bias and non-equivalent groups. The nature of a large database and its compilation would suggest that the sample size is both diverse and random in character. Random means here that the database has been constructed over time with no consideration by the firm or the researcher as to which companies or individual leaders will be included or excluded; all the full management appraisals results over the period from 2002 are included. The database comprises such a significant number of companies, government bodies, and institutions (in excess of 300) and represents global, cultural, and industrial diversity. Therefore, no sampling bias and non-equivalent groups issues are likely in utilizing the database.

The Egon Zehnder business model was designed by its founder at the formation of the firm in 1964 to be free as practical from many of the personal issues that were

perhaps inherent in consulting at that time (Zehnder, 2001). The potential problems of reliability and bias, driven by financial, professional and personal gain, were overcome by removing specific individual performance related pay. The consultant's financial remuneration is separated from the work process, as it is not linked to commissions, percentage-based compensation, or even a performance-based merit program. This remuneration policy removes the likelihood of bias and low reliability of results, as there is little or no motivation to falsify results on a case-by-case basis. The consultant's remuneration comes from equal shares of the annual global profits of the company, and its bonus structure is not linked to any billings they are associated with personally. This process is designed to ensure that the management appraisal process and the BEIs are free from financial, performance, and personally driven bias on a case-by-case basis. There is no scientific or academic basis to support this statement. However, this researcher does not believe that this is just conjecture. The justification for this statement is the stated intent of the firm (Zehnder, 2001), its clientele, and the firm's unique business model in the executive search industry. Egon Zehnder is a very successful business (within the top five firms globally) and has passed the professional and commercial business scrutiny of many large multinational business organizations. In addition, one must include the professional vetting of Government bodies, academic institutions, and non-profits that also have exacting standards to be met. These include

- Österreichische Bundesfinanzierungsagentur, Government of Austria;
- Bundesamt für Sicherheit in der Informationstechnik, Government of Germany;
- Cranfield School of Management, UK;

- I.F.R.C., - UK, Algeria, Canada, Bulgaria, Mexico, USA, Switzerland;
- World Economic Forum, - USA, UK, Denmark, Switzerland, Sweden, Japan;
- Fraunhofer Gesellschaft, Germany;
- GAVI Alliance, - Netherlands, South Africa, Uganda, Canada, France;
- Katholieke Universiteit Leuven, Belgium;
- Her Majesty's- Revenue and Customs, Government of UK;
- Centrelink, Government of Austria.

This client base, EZ's culture of problem solving and collaboration, its competency model and BEI technique, and its unique remuneration and incentive model across its global offices add qualitatively to the validity of the database (Zehnder, 2001).

The BEI technique proposed by McClelland (1973,1998) and Spencer & Spencer (1993) is a content valid assessment method for understanding a leaders actual behavior in a job and systematically and coding individual competencies (Vathanophas & Thai-ngam, 2007). Vathanophas and Thai-ngam's research indicated that the BEI "…consistently shows the highest reliability and validity in predicting future employee performance" (p. 57). The assessment of a leader's attributes, behaviors, and characteristics as captured during the EZ management appraisal using the BEI technique to evaluate competencies is one of the highest orders of criterion validity correlations with job performance (Spencer & Spencer, 1993). Of all the methods available to assess leaders only time spent in an assessment center has been found to be superior (Spencer & Spencer, 1993; Harel et al., 2003). Research has shown that assessment centers have high criterion validity correlations with job performance as high .65 (Pearson *r*) while behavioral interviews

have similarly high correlation coefficients *r*-values between .48-.61. In contrast, non-behavioral interviews have low correlation coefficients with *r*-values between .05-.19 (Smith, 1988; Boyle, 1988).

Construct validity is not, therefore, a concern as one can see from the above correlation coefficients and the earlier discussion on competency models and the approach taken by EZ. The six core executive and two contextual competencies used in the search firms competency model for management appraisals and benchmarking business do accurately measure the construct of leadership competencies and attributes which are highly correlated with job performance. The literature review outlined in Chapter 2 describes the emic and etic characteristics, culturally implicit leadership theory, and the universal and culturally contingent traits that define effective leadership globally. These traits, attributes, characteristics and competency are captured in the EZ competency model based on the research work of McClelland (1973,1998) and Spencer and Spencer (1993). Research into leadership aspects such as job performance and effectiveness, and organizational leadership (Hogan & Kaiser, 2005; Kaiser, Hogan, & Craig, 2008) provide further support to the firm's triad framework of competency group categories of business leadership, people and organization leadership, and thought leadership. These three competency categories, which describe the EZ competency model, are valid practitioner tested constructs from the academic theory and the evidence of the multitude of companies and Governments who use their professional consulting services or have adopted their competency model. The BEI technique and competency model are scientifically and academically reliable and valid constructs that measure

leadership competency and attributes that correlate with job performance and effectiveness.

Protection of Human Participants

The firm has provided the researcher confidential access to their proprietary database. A letter agreement (Appendix A) and a confidentiality agreement (Appendix B) were signed with the firm by the researcher. The confidentiality letter restricts access to the data to the researcher and members of Walden University. The individual company participants who were appraised by the firm gave their implicit permission via their employment contracts with their firms as part of their ongoing performance appraisal and assessment process. Their personal information continues to be protected by the search firm's confidentiality contracts with their employing client companies and further legally binding confidentiality contracts such as the one signed by this researcher.

The researcher strictly enforced this requirement in order to maintain the commercial secrecy and sensitivity of the data to protect the consulting firm and its client companies, their employees, and the leadership personnel involved in the confidential client appraisal assignments. Company and individual identities were removed from the data prior to analysis by the researcher. Coding, mainly by assigning numerical values, was used to this end to protect identities. The data obtained from the executive search company's database was manipulated in Microsoft Excel spreadsheets by the researcher using a password-protected PC. This manipulation removed any identification before the data input into the SPSS software package by the researcher for analysis. Identification of the individuals and their companies is impossible now this process is complete. No

records were kept other than one master copy of the database on a separate, encoded, and password protected hard disc under the care of the researcher.

Summary

This chapter describes the methodology used to investigate the research questions of whether a leader's attributes, his business, personal, cognitive and social skills as captured using the EZI competency model, can be considered universal and transferable across job functions and industry sectors. The research study is practitioner orientated, evidence-based, and quantitative in nature using a group differences type design (Coolican, 2009). The large proprietary practitioner database consisting of over 16,000 management appraisals since 2002 has been described, and full exhaustive details provided of the EZ competency model and the competencies that are the variables analyzed. The firm's management appraisal process has been explained, and the data collection via BEIs and validity discussed in detail. The primary inferential statistics for this investigation was ANOVA with post hoc tests, and multiple regression analysis undertaken in Chapter 4, which follows. The database is highly confidential, commercially sensitive and proprietary to EZ. The identity of participants, companies, government bodies, institutions, and non-profits contained in the database was secured.

The next Chapter 4 reviews the data collection process and its input into the software package SPSS. It reviews the results and findings of analysis and the answers to five research questions posed along with the case for acceptance or rejection of the various hypotheses.

Chapter 4: Results

Introduction

The purpose of the study was to analyze the data in the database on key leadership competencies of leaders in companies and institutions worldwide to see whether there was commonality, universality, and transferability of leadership characteristics between leadership roles that determine superior job performance. The purpose of the chapter is to present and review the results and findings of the quantitative study. The analysis was based on a large, proprietary, archival, practitioner database of global management appraisals, which has been compiled over the last 12 years from interviews and assessments of leaders from over 300 organizations. The goal of the study was to determine, via a competency-based model, whether there is a commonality and transferability of leadership competencies between executive roles and across industries. After approval from the Walden University's Institutional Review Board (approval 2-10-15 0070721) the data acquisition commenced.

The purpose of the study was to answer the five research questions (RQ):

RQ1: Are leadership competencies common and universal allowing leaders to transfer effectively across different functional roles within an organization?

RQ2: Is there a commonality of leadership competencies such that leaders can successfully transfer across 12 separate and distinct industrial sectors?

RQ3: Are the competencies for outstanding leaders across all industries similar to those of specific component industries?

RQ4: Does a firm benefit from selecting a CEO from its industrial sector or should it look outside for one from a different industry?

RQ5: Is there a relationship between the six core leadership competencies in the search firm's competency model?

This chapter covers the following topics: (a) the data collection process. (b) The data organization and manipulation (using Excel spreadsheets) into a format for direct analysis using the SPSS software. (c) The results and findings using descriptive and inferential statistical analysis. (d) The answers to the five research questions. The chapter finishes with a summary of the results section.

Data Collection

Archival Practitioner Database

The archival database was first populated in 2002 when the executive search firm, Egon Zehnder, started its management appraisal business. As downloaded, the database contained 16,384 management appraisals from over 300 global organizations. The whole database was downloaded of the individual appraisals. The database also contained various directors that consisted of individuals divided into executive job functions, different industries, Outstanding ranked candidates categories. The breakdown of the numbers of participants within each category is shown graphically in the pie charts in Figure 4 through Figure 7.

The demographics of the participants excluded the names of individuals but included the company or organizational name, industry, functional job position, nationality, and gender. In addition, the rank score from the management appraisal

process for each participant and each competency (see Figure 2) was input into the analysis. Other demographic information in the database including that of nationality and gender was not used in this study.

Descriptive Statistics

The description of the study variables was undertaken in detail in Chapter 3. The downloaded data did not present any difficulties or departures from that described in these earlier Chapter 3 sections. The descriptive statistics for the variables are shown in detail in the appropriate section of the analysis associated with each research questions below.

Missing Data

Not all leaders in the database had necessarily been appraised against all of the six core executive competencies and the two-situational\contextual competencies. The decision as to which competencies were evaluated was taken at the time of the appraisal assignment between the consultancy company and the businesses requesting assessment. As a result, within each competency for the various independent variables there was some missing data. The SPSS software package was programmed to ignore the missing data in the analysis and not assign a missing value (calculated) or a zero to corrupt the statistics. This is seen most obviously in the variation of sample numbers (N) in each competency evaluation for the different independent variables.

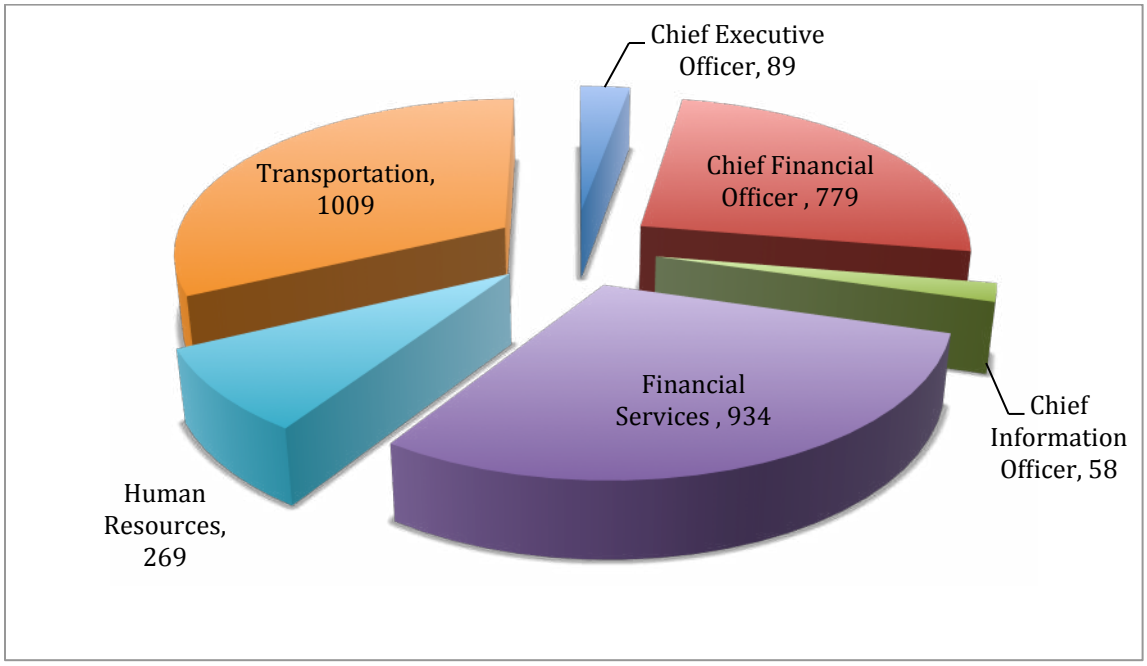

Figure 4. Functional roles.

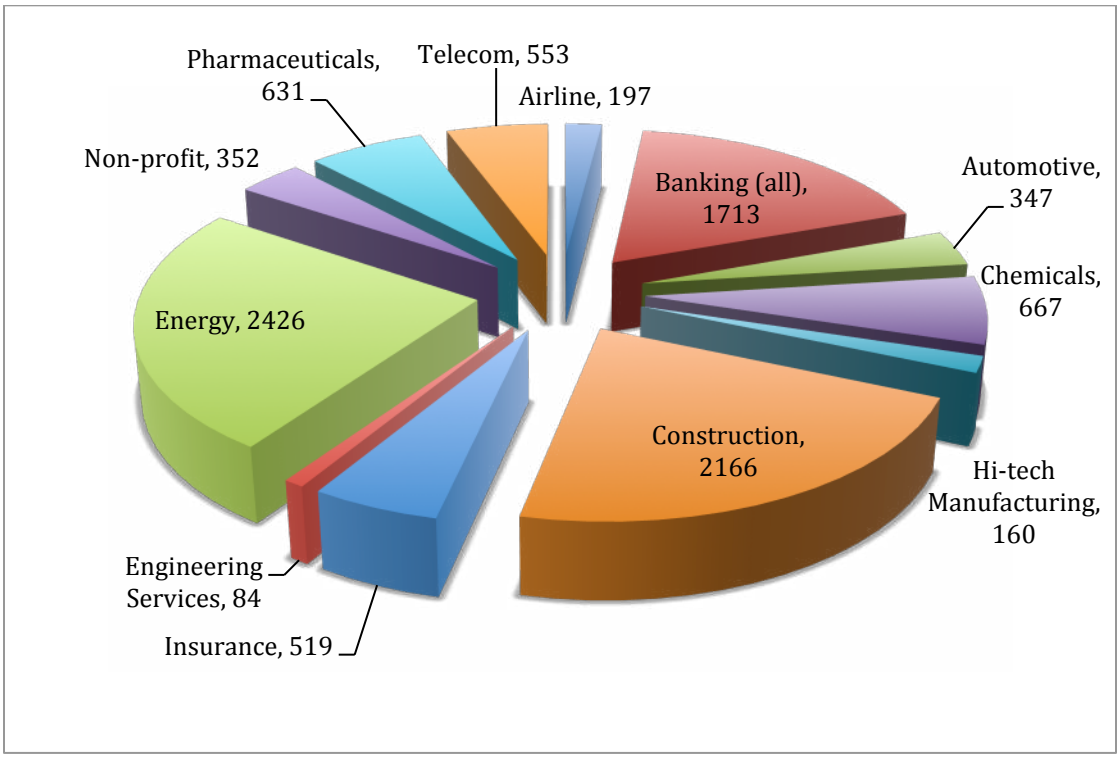

Figure 5. Industry sector database

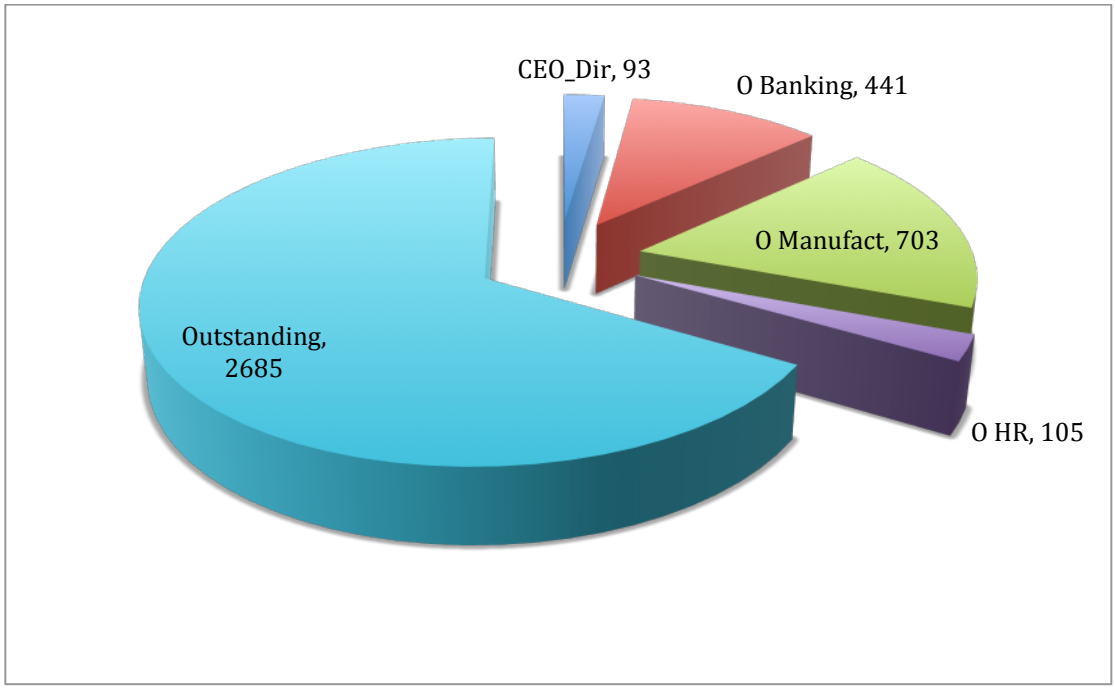

Figure 6. Outstanding leaders database

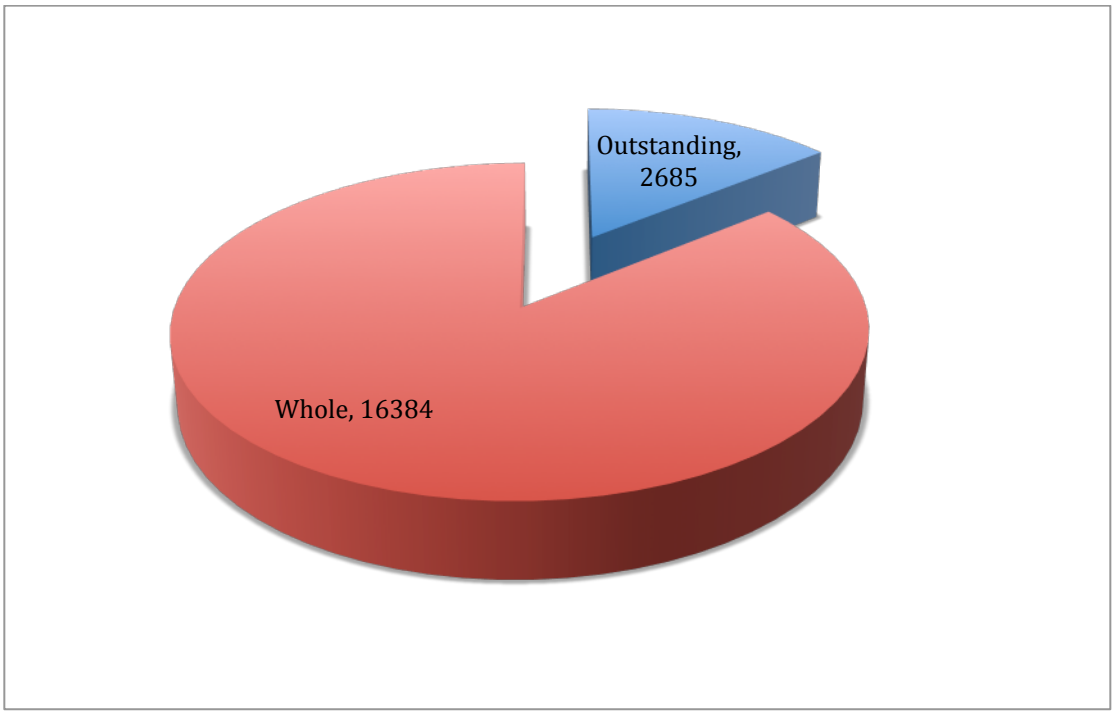

Figure 7. Whole and Outstanding database

Statistical Analysis and Findings

Statistical Assumptions

For a one-way analysis of variance statistical (ANOVA) approach to be valid, certain conditions had to be met.

Data Format

The data were on an interval scale. The competencies are represented by a 1-7 ranking scale, which is discussed in detail in Chapter 3 (Figure 1).

Normal Distribution

A basic assumption relates to the residual scores from the ANOVA test. The residuals must be an approximately normal distribution. In a review of the histograms of the deviation scores for a sample of calculations all data curves appeared normally distributed. This is supported by the central limit theorem that states that sampling distributions are likely to be normal if the population distribution is normal or the sample size is large (Hanna & Dempster, 2012).

Homogeneity of Variance

Groups must have approximately equal variances. Levine's test was performed to test the homogeneity of variance on each competency during the ANOVA. The Levene's test carried out on each of the competences for the industrial sectors had significance values both below and above the 0.05 significance level. If Levene's test were significant one would normally have to consider a non-parametric test like the Kruskal-Wallis test. However, if the samples are large, and the populations are normally distributed and have

equal variances, this variance assumption is not important and ANOVA can be considered valid (Arons et al., 2009; Gravetter & Wallanu, 2007).

Research Questions and Results

Executive Functions

RQ1: Are leadership competencies common and universal, allowing a leader to transfer effectively across different functional roles within an organization?

$H_0$1: There is no commonality and universality of six core and two-situational contextual leadership competences among leaders in their senior functional roles of chief executive officer, chief financial officer, chief information officer, financial services, human resource executives, and transportation heads.

$H_1$1: There is a commonality and universality of six core and two-situational contextual leadership competencies among leaders in their senior functional roles of chief executive officer, chief financial officer, chief information officer, financial services, human resource executives, and transportation heads.

The executive functions analyzed from the database consisted of Chief Executive Officer -Director (CEO_Dir), Chief Financial Officer (CFO), Chief Information Officer (CIO), Heads of Financial Services (FinSer), Human Resources (HR), and Head of Transportation Services (Transport0. The descriptive statistics for the executive functions are shown in Table 5. These executive functions were obtained from the database, the sample number (*N*) for each individual competency varied with a minimum of 1561

leaders appraised for Market Knowledge competency to a maximum of 3396 for the Strategic Orientation competency. The differences in leader sample numbers reflect the nature of the business assignments where not all companies require the full consultant independent management competency appraisal for every leader. Each of the six core executive competencies and two situational competencies for each business functional role were evaluated using ANOVA to determine if the competencies and the leader competency profiles were essentially the same or significantly different.

Collaborating and Influencing

There was a statistically significant difference between the leaders from the six executive functions means for their scores on the collaborating and influencing competency, $F(5, 3132) = 6.31$, $p < .001$. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .010$. As there was a significant difference in the ANOVA result pairwise comparisons were performed between industries using the Tukey HSD post hoc test. This test is considered 'conservative' and the least likely to introduce Type I errors across the multiple pairwise comparisons needed to determine which of the industries means are significantly different (Coolican, 2009). The results of the Tukey HSD post hoc tests are shown in Table 6. The number of samples representing the population for each industry along with its mean and standard deviation for this competency are shown in Table 5. The post hoc tests indicated that the function FinSer ($M = 3.52$, $SD = 0.99$) was significantly lower than CEO_DIR ($M = 3.89$, $SD = 0.91$), HR ($M = 3.78$, $SD = 0.99$), and Transport ($M = 3.71$, $SD = 0.97$)

Team Leadership

There was a statistically significant difference between the leaders from the six executive functions means for their scores on the team leadership competency, F (5, 3393) = 7.29, $p < .001$. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .011$. The Tukey HSD post hoc test results indicated CEO-Dir ($M = 4.05$, SD = 0.89) was significantly higher than all the other executive functions, which appeared similar.

Developing Organizational Capability

There was a statistically significant difference between the leaders from the six executive functions means for their score on the competency developing organizational capability, F (5, 2574) = 6.13, $p < .001$. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .012$. The Tukey HSD post hoc test results indicated HR ($M = 3.60$, $SD = 1.01$) was significantly higher than three of the five other executive functions with the exception of CEO_Dir *(*$M = 3.36$, $SD = 0.76$).

Strategic Orientation

There was a statistically significant difference between the leaders from the six executive functions means for their score on the competency strategic orientation, F (5, 3390) = 3.76, $p < .01$. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .006$. The Tukey HSD post hoc test results indicated CEO-DIR (M = 3.78, SD = 0.93) was significantly higher than four of the five other executive functions.

Change Leadership

There was a statistically significant difference between the leaders from the six executive functions means for their score on the competency change leadership, $F (5, 3292) = 4.57$, $p < .001$. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .007$. The Tukey HSD post hoc test results indicated CEO-DIR ($M = 4.09$, $SD = 0.5$) was significantly higher than four out of the five other executive functions.

Results Orientation

There was a statistically significant difference between the leaders from the six executive functions means for their score on the competency results orientation, $F (5, 3525) = 9.19$, $p < .001$. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .013$. The Tukey HSD post hoc test results indicated CEO-DIR ($M = 4.42$, $SD = 0.89$) was significantly higher than all the other executive functions. HR ($M = 3.74$, $SD = 1.02$) was significantly lower than four out of five executive functions.

Table 5

Executive Functions Descriptive Statistics

	Dev. Org Capability			Team Leadership			Collaborating & Influence		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
CEO	3.36	0.76	64	4.05	0.89	79	3.89	0.91	89
CFO	3.22	0.92	587	3.45	0.93	810	3.60	0.99	779
CIO	3.66	1.04	29	3.44	1.03	62	3.52	0.98	58
FinSer	3.28	0.95	922	3.48	0.97	1100	3.52	0.99	934
HR	3.60	1.01	210	3.56	0.84	262	3.78	0.99	269
Trans	3.35	0.93	768	3.58	0.97	1086	3.71	0.97	1009

	Strategic Orientation			Change Leadership			Results Orientation		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
CEO	3.78	0.93	91	4.08	0.95	88	4.42	0.89	92
CFO	3.42	1.00	823	3.58	0.92	804	3.99	0.97	859
CIO	3.34	1.12	62	3.74	0.95	58	3.79	1.08	63
FinSer	3.37	1.06	1079	3.62	1.06	1082	3.98	1.03	1124
HR	3.28	0.99	278	3.69	1.02	264	3.74	1.02	282
Trans	3.43	1.01	1063	3.69	1.07	1002	4.09	1.02	1111

	Customer Impact			Market Knowledge		
	Mean	S.D.	N	Mean	S.D.	N
CEO	4.15	0.76	73	3.93	0.75	57
CFO	3.44	0.95	583	3.55	0.99	362
CIO	3.54	0.78	41	3.45	0.93	11
FinSer	3.74	1.01	800	3.75	1.02	393
HR	3.52	0.94	174	3.39	0.90	113
Trans	3.92	1.12	674	3.89	1.16	625

Customer Impact

There was a statistically significant difference between the leaders from the six executive functions means for their score on the competency customer impact, F (5, 2339) = 17.92, $p < .001$. The magnitude of the difference effect for the test was large, with the partial eta squared, $\eta^2 < .037$. The Tukey HSD post hoc test results indicated CEO-DIR ($M = 4.15$, $SD = 0.75$) was significantly higher than four out of the five other executive functions.

Market Knowledge

There was a statistically significant difference between the leaders from the six executive functions means for their score on the competency market knowledge, F (5, 1555) = 7.93, $p < .001$. The magnitude of the difference effect for the test was medium to large, with the partial eta squared, $\eta^2 < .026$. The Tukey HSD post hoc test results indicated HR ($M = 3.39$, $SD = 0.90$) was significantly lower than three out of the five other executive functions.

Table 6

Executive Function Analysis – Inferential Statistics (p < .05)*

		DOC			C&I			TL			SO			CL			RO			CI			MK		
		ΔM	95% CI		ΔM	95% CI		ΔM	95% CI		ΔM	95% CI		ΔM	95% CI		ΔM	95% CI		ΔM	95% CI		ΔM	95% CI	
			LB	UB		LB	UB		LB	UB		LB	UB		LB	UB		LB	UB		LB	UB		LB	UB
CEO_	CFO	0.14	-0.21	0.49	0.28	-0.03	0.60	.6031*	0.28	0.92	.3562*	0.03	0.68	.5024*	0.18	0.83	.4321*	0.12	0.75	.7081*	0.35	1.07	0.38	-0.05	0.81
	ClO	-0.30	-0.90	0.30	0.37	-0.10	0.84	.6151*	0.15	1.08	0.44	-0.04	0.92	0.34	-0.15	0.83	.6303*	0.16	1.10	.6141*	0.05	1.18	0.48	-0.52	1.47
	Fin Ser	0.08	-0.27	0.42	.3652*	0.05	0.68	.5734*	0.26	0.89	.4067*	0.09	0.72	.4594*	0.14	0.78	.4462*	0.13	0.76	.4132*	0.06	0.77	0.18	-0.25	0.61
	HR	-0.24	-0.62	0.15	0.11	-0.23	0.45	.4857*	0.14	0.83	.5032*	0.15	0.86	.3902*	0.03	0.75	.6828*	0.34	1.03	.6277*	0.22	1.03	.5404*	0.05	1.03
	Transpt	0.01	-0.34	0.36	0.18	-0.14	0.49	.4733*	0.16	0.79	.3512*	0.03	0.67	.3909*	0.07	0.71	.3384*	0.03	0.65	0.24	-0.12	0.59	0.04	-0.38	0.45
CFO	ClO	-0.43	-0.94	0.08	0.09	-0.29	0.47	0.01	-0.35	0.37	0.09	-0.30	0.47	-0.16	-0.56	0.23	0.20	-0.18	0.57	-0.09	-0.56	0.37	0.10	-0.82	1.02
	Fin Ser	-0.06	-0.20	0.08	0.08	-0.05	0.22	-0.03	-0.16	0.10	0.05	-0.08	0.19	-0.04	-0.18	0.09	0.01	-0.12	0.14	-.2950*	-0.45	-0.14	-0.20	-0.42	0.02
	HR	-.3738*	-0.59	-0.16	-0.17	-0.37	0.03	-0.12	-0.31	0.08	0.15	-0.06	0.35	-0.11	-0.32	0.09	.2507*	0.05	0.45	-0.08	-0.33	0.17	0.16	-0.16	0.49
	Transpt	-0.13	-0.27	0.02	-0.11	-0.24	0.03	-.1298	-0.26	0.00	0.00	-0.14	0.13	-0.11	-0.25	0.03	-0.09	-0.22	0.04	-.4729*	-0.64	-0.31	-.3403*	-0.54	-0.14
ClO	Fin Ser	0.37	-0.13	0.88	-0.01	-0.38	0.37	-0.04	-0.40	0.31	-0.03	-0.42	0.35	0.12	-0.27	0.51	-0.18	-0.56	0.19	-0.20	-0.66	0.26	-0.29	-1.21	0.63
	HR	0.06	-0.47	0.59	-0.26	-0.67	0.15	-0.13	-0.51	0.25	0.06	-0.35	0.47	0.05	-0.37	0.47	0.05	-0.35	0.45	0.01	-0.49	0.52	0.07	-0.89	1.02
	Transpt	0.31	-0.20	0.81	-0.20	-0.57	0.18	-0.14	-0.50	0.21	-0.09	-0.47	0.29	0.05	-0.34	0.45	-0.29	-0.66	0.08	-0.38	-0.84	0.09	-0.44	-1.35	0.48
FinSr	HR	-.3143*	-0.52	-0.11	-.2545	-0.45	-0.06	-0.09	-0.27	0.10	0.10	-0.10	0.29	-0.07	-0.27	0.13	.2366*	0.05	0.43	0.21	-0.03	0.46	.3587*	0.04	0.68
	Transpt	-0.07	-0.20	0.06	-.1901	-0.32	-0.06	-0.10	-0.22	0.02	-0.06	-0.18	0.07	-0.07	-0.20	0.06	-0.11	-0.23	0.01	-.1779*	-0.33	-0.03	-0.14	-0.34	0.05
HR	Transpt	.2463*	0.04	0.45	0.06	-0.13	0.26	-0.01	-0.20	0.17	-0.15	-0.35	0.04	0.00	-0.20	0.20	-.3444	-0.54	-0.15	-.3924*	-0.64	-0.15	-.5034*	-0.81	-0.20

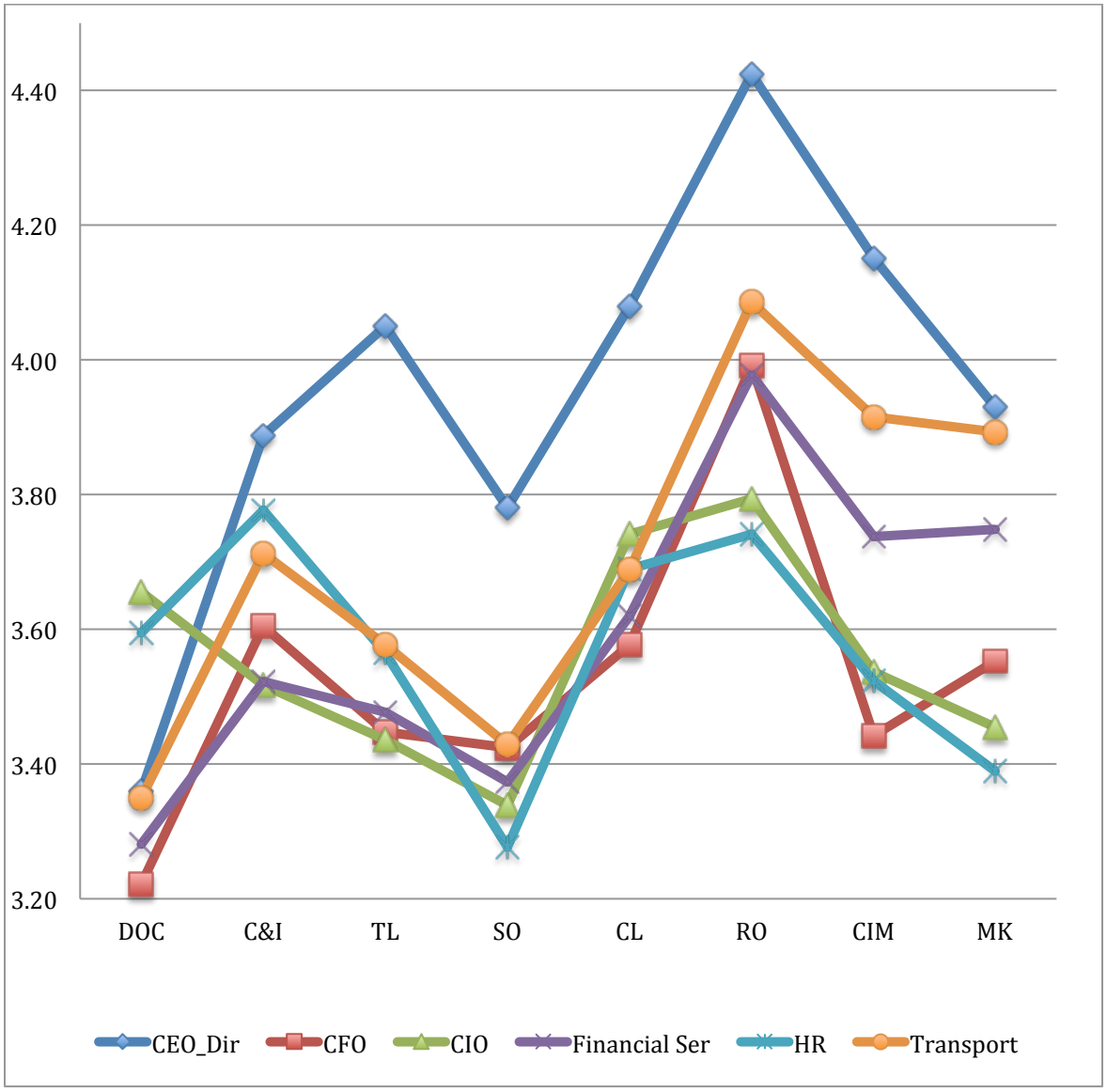

Figure 8. Executive functional role competencies scores and profiles.

Findings

A graphical representation of the results from Table 6 for each executive function is shown as overall competency profiles in Figure 8. The statistical differences discussed above for the individual competences that make up the profiles for the selected executive functions indicate that the null hypothesis as stated in $H_0$1 cannot be rejected. The profile of the CEO_Dir differs significantly from the other executive functions with 60% of its profile statistically different from the other executive and heads of function leadership roles.

If one plots the profile of each individual competency across the executive functions it is interesting to note the shape of the competency profiles for the ranking of scores (Figure 9). Specifically, across all of the executive functions results orientation ranks as the highest and most developed of the core competencies among the leaders followed by change leadership. Strategic orientation and developing organizational capacity on the other hand rank lowest and seem the least acquired competency skills.

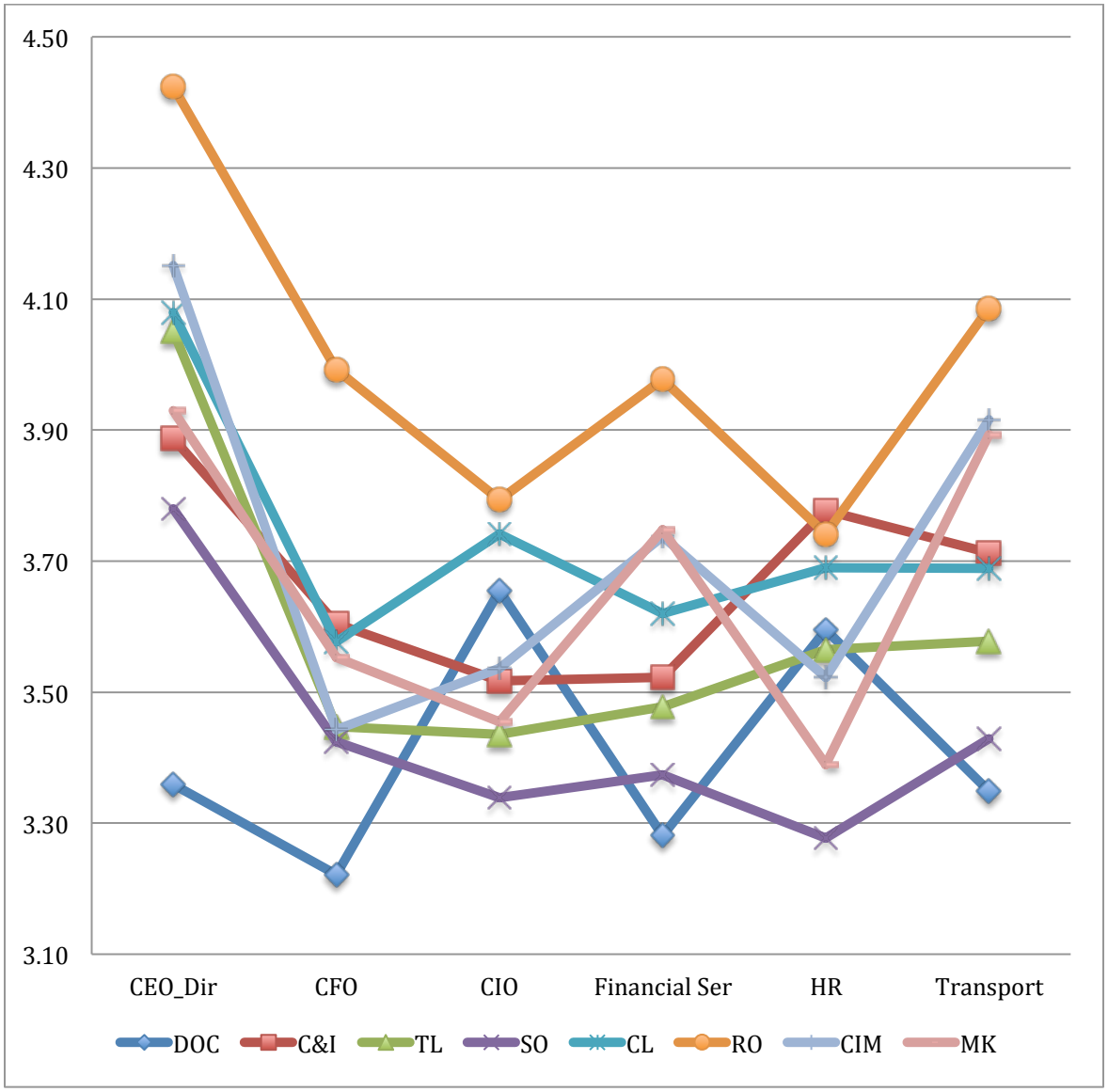

Figure 9. Executive functional role competency profiles.

Industry Analysis

RQ2: Is there a commonality of leadership competencies, such that leaders can successfully transfer across 12 separate and distinct industrial sectors?

$H_0$2: There is no commonality and therefore transferability of six core and two contextual leadership competences among leaders in their

senior functional roles across industry sectors. The industrial sectors include airline, banking, automotive, chemicals, construction, construction services, energy, governmental, high-tech manufacturing, insurance, pharmaceuticals, and telecommunications.

$H_1$2: There is a commonality and therefore transferability of six core and two contextual leadership competences among leaders in their senior functional roles across industry sectors. The industrial sectors include airline, banking, automotive, chemicals, construction, construction services, energy, governmental, high-tech manufacturing, insurance, pharmaceuticals, and telecommunications.

The statistical analysis performed compared the six core executive competencies and two situational competences across 11 specific industrial sectors. One additional and separate industry was included that represented 'government agencies and not-for-profit organizations' (GNFP). The industrial sectors were airline, all banking, automotive, chemicals, construction, energy, engineering services, high tech manufacturing, insurance, pharmaceuticals, and telecommunications. In terms of the size of the individual databases most of the industries had many hundreds of leaders represented in the sample with three (banking, construction, and energy) having of the order of N =2000 participants, with only engineering services having a smaller sample (range 22-84

depending on competency). The number of samples representing the population for each industry and competency along with means and standard deviations shown in Table 7.

Collaborating and Influencing

There was a statistically significant difference between the leaders from the 12 industrial group means for their scores on the collaborating and influencing competency, F (11, 9803) = 10.26, $p < .001$. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .010$. Pairwise comparisons were performed between industries to test for significant differences using the Tukey HSD post hoc test. The results of the Tukey HSD post hoc tests are shown in Table 8. Post hoc test results show that Insurance ($M = 3.23$, $SD = 0.96$) had a significantly lower score in this competency than all of the industries except All Banking ($M = 3.37$, S$D = 0.99$). Chemical ($M = 3.68$, $SD =$. 98) was significantly higher than five of the 12 industries.

Team Leadership

There was a statistically significant difference between the 12 industrial group means for their scores on the team leadership competency, F (11, 9956) = 13.42, $p <$ .001. The effect size of the difference in the means was small to medium, with the partial eta squared, $\eta^2 < .015$. The Tukey HSD post hoc test results (Table 8) indicated Insurance ($M = 3.17$, $SD = 0.95$) and All Banking ($M = 3.27$, $SD = 1.00$) had a significantly lower score than seven of the remaining 10 industries. Chemicals ($M = 3.59$, $SD = 0.99$) and Telecoms ($M = 3.60$, $SD = 0.90$) had significantly higher scores than six out of the 10 remaining industries.

Developing Organizational Capability

There was a significant difference between the competency of developing organizational capability and the 12 industries group means, F (11, 8336) = 20.01, p < .001. The effect size of the difference in the means was large, with the partial eta squared, η^2 = .026. The Tukey post hoc test indicated Chemicals (*M* = 3.65, *SD* = 1.01) was significantly higher than 10 of the 11 industries. Insurance (*M* = 2.98, *SD* = 0.91) was significantly lower than seven of the remaining 11 industries.

Strategic Orientation

There was a statistically significant difference between the 12 industrial group means for their scores on the strategic orientation competency, F (11, 10506) =19.47, *p* < .001. The magnitude of the effect was medium with partial eta squared of η^2 = .02. The Tukey Post Hoc showed Telecoms (*M* = 3.49, *SD* = 1.08) to be significantly higher than six of 11 other industries in this competency. Insurance (*M* = 2.94, SD = 1.08) and all banking (*M* = 3.05, *SD* = 1.06) were significantly lower well below eight out of 10 other industries

Change Leadership

There was a significant difference among the 12 industry means for change leadership, F (11, 10004) = 13.13, *p* < .001. The magnitude of the effect was small, with a partial eta squared η^2 = .014. The Tukey post hoc test indicated that Insurance (*M* = 3.24. *SD* = 0.95) was significantly lower than all the other industries except All Banking (*M* = 3.39, *SD* = 1.07) and Construction (*M* = 3.48, *SD* = 0.93).

Table 7

Industry analysis – Descriptive Statistics

	Dev. Org Capability			Team Leadership			Collaborating & Influence		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
Airline	3.17	0.95	157	3.32	0.97	194	3.52	0.95	197
Banking	3.09	0.98	1553	3.27	1.00	2027	3.37	0.99	1713
Automo.	3.23	0.85	313	3.49	0.93	489	3.61	0.98	347
Chemicals	3.64	1.01	563	3.59	0.99	669	3.68	0.98	667
Construn.	3.18	0.92	1512	3.40	0.92	2048	3.50	0.95	2166
Energy	3.34	0.94	2264	3.34	0.94	2264	3.42	0.97	2426
EngServ	3.37	0.95	46	3.37	0.90	86	3.62	0.99	84
GNFP	3.21	0.87	290	3.24	0.90	327	3.54	0.98	352
HiT Man	3.23	0.83	135	3.60	0.91	156	3.53	0.92	160
Insurance	2.98	0.91	505	3.17	0.95	527	3.23	0.87	519
Pharma.	3.31	1.00	596	3.46	0.98	617	3.48	0.96	631
Telecoms	3.29	0.85	414	3.60	0.90	564	3.59	0.84	553
Total/Av.	3.25	0.95	8348	3.38	0.96	9968	3.47	0.96	9815
	Change Leadership			Strategic Orientation			Results Orientation		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
Airline	3.56	1.04	186	2.99	1.04	198	3.85	0.97	202
Banking	3.39	1.07	1966	3.05	1.06	1945	3.78	0.99	2050
Automo	3.57	0.98	416	3.44	1.00	489	3.97	0.97	459
Chemicals	3.72	0.94	681	3.41	0.94	705	4.05	1.00	701
Construn	3.48	0.93	2025	3.21	0.97	2175	3.76	0.93	2246
Energy	3.43	0.97	2564	3.18	1.01	2669	3.75	0.96	2704
EngServ	3.62	0.89	77	3.33	0.98	75	3.92	0.92	86
GNFP	3.51	1.05	379	3.41	1.09	396	3.67	1.01	396
HiT Man	3.79	0.83	145	3.47	0.86	146	3.97	0.82	146
Insurance	3.24	0.96	526	2.94	1.08	523	3.66	0.94	528
Pharma	3.57	0.92	543	3.23	0.95	665	3.90	0.89	666
Telecoms	3.70	1.04	508	3.49	1.08	532	4.05	0.96	553
Total/Av.	3.48	0.99	10016	3.21	1.02	10518	3.81	0.96	10737

	Customer Impact			Market Knowledge		
	Mean	S.D.	N	Mean	S.D.	N
Airline	3.59	1.08	109	3.78	1.21	58
Banking	3.63	1.01	1521	3.53	1.01	706
Automo	3.53	1.00	371	3.51	1.03	282
Chemicals	3.62	0.96	213	3.83	1.19	417
Construn	3.55	1.01	1232	3.68	0.99	1178
Energy	3.71	0.96	1244	3.55	1.20	1011
EngServ	4.15	0.98	52	4.23	0.92	22
GNFP	3.13	0.86	314	3.10	1.14	51
HiT Man	3.74	0.93	123	3.93	1.04	100
Insurance	3.36	0.93	424	3.52	0.86	315
Pharma	3.67	0.86	596	3.83	0.95	163
Telecoms	3.72	0.99	484	3.86	0.98	157
Total/Av.	3.60	0.98	6683	3.63	1.07	4460

Results Orientation

There was a statistically significant difference between the 12 industrial group means for their scores on the results orientation competency F (11, 10725) = 13.1, $p <$ .001. The magnitude of the effect was small, with a partial eta squared $\eta^2 = .013$ The Tukey post hoc test indicated three industries, Automotive ($M = 3.97$, $SD = 0.97$), Telecom *(*$M = 4.05$, $SD = 0.96$) and Chemicals ($M = 4.05$, $SD = 0.99$) were each significantly higher than nine industries. Insurance ($M = 3.66$, $SD = 0.94$) was significantly lower than five of the remaining 11 industries.

Customer Impact

There was a statistically significant difference between the 12 industrial group means for their scores on the customer impact competency, F (11, 6671) = 13.74, $p <$ .001. The magnitude of the effect was medium to large, with a partial eta squared $\eta^2 =$ .022. The Tukey post hoc test indicated that Engineering Services ($M = 4.15$, $SD = 0.98$)

was significantly higher all the other industries except Energy (M = 3.71, SD = 0.96) and HiTech Manufacturing (M = 3.74, SD = 0.93). GNFP (M = 3.13, SD = 0.86) was significantly lower than every other industry.

Market Knowledge

There was a statistically significant difference between the 12 industrial group means for their scores on the market knowledge competency s significant, $F(11, 4448) = 7.00$, $p < .001$. The magnitude of the effect was medium, with a partial eta squared $\eta^2 = .02$. The Tukey post hoc test indicated that was GNFP (M = 3.10, SD = 1.14) was significantly lower than seven out of 11 other industries.

Findings

A graphical representation of the results for each industry in Table 8 is shown as overall competency profiles in Figure 10. The statistical differences discussed above for the individual competences that make up the profiles for each industry indicates that on an overall basis the null hypothesis as stated in $H_0$2 cannot be rejected. The ranking score of the competencies for certain industries are very different from each other yet the profile shapes are broadly similar. If one plots the profile of each individual competency across the different industries and studies the ranking of scores in the shape of its competency profile one sees a definite ranking of competencies across the database (Figure 11). The pattern is similar to that of the executive functions and suggests a hierarchy of importance placed on the leaders competency development.

Table 8

Industry Sector Analysis- Inferential Statistics (p < .05)*

		DOC			C&I			TL			SO			CL			RO			CI			MK		
		ΔM	95% CI		ΔM	95% CI		ΔM	95% CI		ΔM	95% CI		ΔM	95% CI		ΔM	95% CI		ΔM	95% CI		ΔM	95% CI	
			LB	UB		LB	UB		LB	UB		LB	UB		LB	UB		LB	UB		LB	UB		LB	UB
Airline	Bank	0.07	-0.18	0.33	0.15	-0.09	0.38	0.05	-0.18	0.29	-0.06	-0.31	0.18	0.17	-0.07	0.42	0.07	-0.16	0.30	-0.04	-0.36	0.28	0.24	-0.23	0.72
	Auto	-0.06	-0.36	0.24	-0.10	-0.38	0.18	-0.17	-0.43	0.10	-.4457*	-0.72	-0.17	-0.01	-0.29	0.28	-0.12	-0.38	0.15	0.06	-0.29	0.40	0.27	-0.24	0.77
	Chem	-.4792*	-0.76	-0.20	-0.16	-0.42	0.09	-.2642*	-0.52	-0.01	-.4200*	-0.69	-0.15	-0.15	-0.42	0.12	-0.20	-0.45	0.05	-0.03	-0.40	0.35	-0.06	-0.54	0.43
	Constn	-0.02	-0.27	0.24	0.02	-0.22	0.25	-0.05	-0.45	0.35	-0.34	-0.79	0.10	-0.06	-0.49	0.38	0.09	-0.14	0.32	0.03	-0.28	0.35	-0.45	-1.32	0.42
	Energy	-0.18	-0.43	0.08	0.10	-0.13	0.33	-0.08	-0.31	0.16	-0.22	-0.46	0.03	0.09	-0.16	0.33	0.11	-0.12	0.33	-0.13	-0.45	0.19	0.10	-0.37	0.57
	EngSer	-0.20	-0.72	0.31	-0.10	-0.51	0.31	-0.02	-0.25	0.22	-0.19	-0.44	0.05	0.13	-0.11	0.38	-0.07	-0.47	0.34	-.5667*	-1.10	-0.03	0.22	-0.25	0.69
	GNFP	-0.04	-0.35	0.26	-0.02	-0.30	0.26	0.09	-0.19	0.37	-.4242*	-0.71	-0.14	0.05	-0.24	0.34	0.18	-0.09	0.45	.4566*	0.10	0.81	.6778*	0.01	1.35
	HITECH	-0.06	-0.42	0.30	-0.01	-0.34	0.33	-0.27	-0.61	0.06	-.4759*	-0.84	-0.12	-0.22	-0.58	0.13	-0.12	-0.46	0.22	-0.15	-0.57	0.27	-0.15	-0.73	0.42
	Insuran	0.18	-0.10	0.46	.288*	0.03	0.55	0.15	-0.11	0.41	0.05	-0.22	0.33	.3212*	0.05	0.60	0.20	-0.06	0.46	0.22	-0.12	0.57	0.26	-0.24	0.75
	Pharm	-0.14	-0.42	0.13	0.04	-0.21	0.30	-0.14	-0.40	0.12	-0.24	-0.50	0.03	0.00	-0.28	0.27	-0.05	-0.30	0.20	-0.08	-0.41	0.25	-0.05	-0.58	0.48
	Teleco	-0.12	-0.41	0.16	-0.07	-0.33	0.19	-.2763*	-0.53	-0.02	-.5007*	-0.78	-0.23	-0.14	-0.42	0.14	-0.20	-0.46	0.06	-0.13	-0.47	0.20	-0.08	-0.62	0.45
Bank	Auto	-0.14	-0.33	0.05	-.241*	-0.43	-0.06	-.2220*	-0.38	-0.07	-.3811*	-0.55	-0.21	-.1801*	-0.35	-0.01	-.1849*	-0.35	-0.02	0.10	-0.09	0.28	0.02	-0.22	0.27
	Chem	-.5533*	-0.70	-0.40	-.308*	-0.45	-0.17	-.3181*	-0.46	-0.18	-.3554*	-0.50	-0.21	-.3255*	-0.47	-0.18	-.2646*	-0.40	-0.13	0.01	-0.22	0.25	-.2981*	-0.51	-0.08
	Constn	-0.09	-0.20	0.02	-.127*	-0.23	-0.03	-0.10	-0.44	0.24	-0.28	-0.67	0.11	-0.23	-0.61	0.14	0.02	-0.07	0.12	0.07	-0.05	0.20	-0.69	-1.45	0.06
	Energy	-.2500*	-0.35	-0.15	-0.05	-0.14	0.05	-.1295*	-0.23	-0.03	-.1529*	-0.26	-0.05	-0.09	-0.19	0.01	0.04	-0.05	0.13	-0.09	-0.21	0.03	-0.14	-0.31	0.02
	EngSer	-0.28	-0.74	0.18	-0.25	-0.60	0.10	-0.07	-0.17	0.02	-.1298*	-0.23	-0.03	-0.04	-0.14	0.06	-0.14	-0.48	0.21	-.5266*	-0.98	-0.08	-0.02	-0.19	0.15
	GNFB	-0.12	-0.32	0.08	-0.16	-0.35	0.02	0.04	-0.15	0.22	-.3596*	-0.54	-0.18	-0.12	-0.31	0.06	0.11	-0.06	0.28	.4966*	0.30	0.69	0.44	-0.07	0.94
	HITECH	-0.14	-0.41	0.14	-0.15	-0.41	0.11	-.3253*	-0.58	-0.07	-.4113*	-0.69	-0.13	-.3966*	-0.67	-0.12	-0.19	-0.46	0.08	-0.11	-0.41	0.19	-.3960*	-0.77	-0.02
	Insuran	0.11	-0.05	0.26	0.14	-0.01	0.30	0.10	-0.05	0.25	0.12	-0.05	0.28	0.15	-0.01	0.30	0.13	-0.03	0.28	.2640*	0.09	0.44	0.01	-0.22	0.25
	Pharma	-.2190*	-0.37	-0.07	-0.10	-0.25	0.04	-.1935*	-0.34	-0.05	-.1711*	-0.32	-0.02	-.1794*	-0.34	-0.02	-0.12	-0.26	0.02	-0.04	-0.20	0.11	-0.29	-0.60	0.01
	Teleco	-.1984*	-0.37	-0.03	-.215*	-0.37	-0.06	-.3302*	-0.48	-0.18	-.4361*	-0.60	-0.27	-.3151*	-0.48	-0.16	-.2682*	-0.42	-0.12	-0.09	-0.26	0.07	-.3259*	-0.63	-0.02
Auto	Chem	-.4147*	-0.63	-0.20	-0.07	-0.27	0.14	-0.10	-0.28	0.09	0.03	-0.17	0.22	-0.15	-0.35	0.05	-0.08	-0.27	0.11	-0.08	-0.36	0.19	-.3215*	-0.59	-0.05
	Constn	0.05	-0.14	0.24	0.11	-0.07	0.29	0.12	-0.24	0.48	0.10	-0.31	0.51	-0.05	-0.45	0.35	.2064*	0.05	0.37	-0.02	-0.21	0.17	-0.72	-1.49	0.05
	Energy	-0.11	-0.30	0.07	.195*	0.02	0.37	0.09	-0.06	0.25	.2282*	0.06	0.39	0.09	-0.08	0.26	.2221*	0.06	0.38	-0.18	-0.37	0.00	-0.17	-0.40	0.06
	EngSer	-0.14	-0.62	0.34	-0.01	-0.39	0.38	0.15	0.00	0.31	.2512*	0.09	0.41	0.14	-0.03	0.31	0.05	-0.32	0.42	-.6228*	-1.09	-0.15	-0.04	-0.28	0.19
	GNFB	0.02	-0.23	0.27	0.08	-0.16	0.32	.2574*	0.04	0.48	0.02	-0.20	0.24	0.06	-0.17	0.28	.2931*	0.08	0.51	.4004*	0.16	0.64	0.41	-0.12	0.94
	HITECH	0.00	-0.32	0.32	0.09	-0.21	0.39	-0.10	-0.39	0.18	-0.03	-0.34	0.28	-0.22	-0.53	0.09	-0.01	-0.30	0.29	-0.21	-0.54	0.12	-.4194*	-0.82	-0.01
	Insuran	.2459*	0.03	0.47	.385*	0.17	0.60	.3202*	0.13	0.52	.4968*	0.29	0.70	.3264*	0.12	0.54	.3120*	0.11	0.51	0.17	-0.06	0.39	-0.01	-0.30	0.28
	Pharma	-0.08	-0.29	0.13	0.14	-0.07	0.35	0.03	-0.16	0.22	.2100*	0.01	0.41	0.00	-0.21	0.21	0.06	-0.12	0.25	-0.14	-0.35	0.07	-0.32	-0.66	0.02
	Teleco	-0.06	-0.29	0.17	0.03	-0.19	0.24	-0.11	-0.30	0.08	-0.06	-0.26	0.15	-0.14	-0.35	0.08	-0.08	-0.28	0.11	-0.19	-0.41	0.03	-.3492*	-0.70	0.00
Chem	Constn	.4642*	0.31	0.62	.181*	0.04	0.32	0.22	-0.14	0.57	0.08	-0.32	0.48	0.09	-0.29	0.48	.2862*	0.15	0.42	0.06	-0.17	0.30	-0.40	-1.16	0.37
	Energy	.3033*	0.16	0.45	.262*	0.13	0.40	.1885*	0.05	0.33	.2026*	0.06	0.35	.2356*	0.09	0.38	.3019*	0.17	0.43	-0.10	-0.34	0.14	0.15	-0.04	0.35
	EngSer	0.28	-0.20	0.75	0.06	-0.30	0.42	.2475*	0.11	0.38	.2256*	0.09	0.37	.2849*	0.15	0.42	0.13	-0.23	0.49	-.5388*	-1.03	-0.05	.2792*	0.08	0.48
	GNFB	.4344*	0.21	0.66	0.15	-0.06	0.35	.3535*	0.14	0.56	0.00	-0.21	0.20	0.20	-0.01	0.41	.3728*	0.18	0.57	.4845*	0.20	0.77	.7341*	0.22	1.25
	HITECH	.4151*	0.12	0.71	0.16	-0.12	0.43	-0.01	-0.28	0.27	-0.06	-0.36	0.24	-0.07	-0.37	0.22	0.07	-0.21	0.36	-0.12	-0.49	0.24	-0.10	-0.49	0.29
	Insuran	.6606*	0.47	0.85	.451*	0.27	0.63	.4163*	0.24	0.60	.4711*	0.28	0.66	.4718*	0.29	0.66	.3918*	0.21	0.57	0.25	-0.02	0.52	.3115*	0.05	0.57
	Pharma	.3344*	0.15	0.51	.205*	0.03	0.38	0.12	-0.05	0.30	.1844*	0.01	0.36	0.15	-0.04	0.33	0.14	-0.02	0.31	-0.05	-0.31	0.20	0.00	-0.32	0.33
	Teleco	.3549*	0.16	0.55	0.09	-0.09	0.27	-0.01	-0.19	0.17	-0.08	-0.27	0.11	0.01	-0.18	0.20	0.00	-0.18	0.17	-0.11	-0.37	0.16	-0.03	-0.35	0.30
Constn	Energy	-.1609*	-0.26	-0.06	0.08	-0.01	0.17	0.03	-0.31	0.37	-0.13	-0.51	0.26	-0.14	-0.52	0.23	0.02	-0.07	0.11	-.1619*	-0.29	-0.03	-0.55	-1.30	0.20
	EngSer	-0.19	-0.65	0.27	-0.12	-0.47	0.23	0.06	-0.04	0.15	0.02	-0.07	0.12	0.05	-0.05	0.14	-0.16	-0.50	0.19	-.6011*	-1.05	-0.15	0.13	-0.02	0.27
	GNFB	-0.03	-0.23	0.17	-0.04	-0.22	0.14	0.16	-0.02	0.35	-.2068*	-0.39	-0.03	-0.04	-0.22	0.15	0.09	-0.08	0.26	.4222*	0.22	0.62	.5802*	0.08	1.08
	HITECH	-0.05	-0.32	0.23	-0.03	-0.28	0.23	-0.20	-0.45	0.06	-0.26	-0.54	0.02	-.3067*	-0.58	-0.03	-0.21	-0.48	0.06	-0.19	-0.49	0.11	-0.25	-0.61	0.11
	Insuran	.1964*	0.04	0.35	.271*	0.12	0.42	.2277*	0.08	0.38	.2685*	0.11	0.43	.2362*	0.08	0.39	0.11	-0.05	0.26	.1896*	0.01	0.37	0.16	-0.06	0.38
	Pharma	-0.13	-0.28	0.02	0.03	-0.12	0.17	-0.06	-0.21	0.08	-0.02	-0.16	0.13	-0.09	-0.25	0.07	-.1415*	-0.28	0.00	-0.12	-0.28	0.04	-0.15	-0.44	0.14
	Teleco	-0.11	-0.28	0.06	-0.09	-0.24	0.06	-.2007*	-0.35	-0.05	-.2832*	-0.44	-0.12	-.2252*	-0.38	-0.07	-.2897*	-0.44	-0.14	-0.17	-0.34	0.00	-0.18	-0.48	0.11
Energy	EngSer	-0.03	-0.49	0.43	-0.20	-0.55	0.15	-0.06	-0.15	0.04	-0.02	-0.12	0.07	-0.05	-0.14	0.05	-0.17	-0.52	0.17	-0.44	-0.89	0.01	-0.13	-0.27	0.02
	GNFB	0.13	-0.06	0.32	-0.12	-0.30	0.06	0.11	-0.08	0.29	-.2298*	-0.41	-0.05	-0.08	-0.26	0.09	0.07	-0.10	0.24	.5841*	0.38	0.79	0.45	-0.04	0.95
	HITECH	0.11	-0.16	0.38	-0.11	-0.36	0.15	-0.25	-0.51	0.00	-.2814*	-0.56	0.00	-.3560*	-0.63	-0.08	-0.23	-0.49	0.04	-0.03	-0.33	0.28	-.3771*	-0.74	-0.01
	Insuran	.3573*	0.21	0.51	.190*	0.04	0.34	.1688*	0.02	0.32	.2455*	0.09	0.40	.1868*	0.03	0.34	0.09	-0.06	0.24	.3514*	0.17	0.53	0.03	-0.19	0.26
	Pharma	0.03	-0.11	0.17	-0.06	-0.20	0.08	-0.12	-0.26	0.02	-0.04	-0.18	0.10	-0.14	-0.29	0.01	-.1572*	-0.29	-0.02	0.05	-0.11	0.20	-0.28	-0.57	0.02
	Teleco	0.05	-0.11	0.22	-.169*	-0.32	-0.02	-.2596*	-0.41	-0.11	-.3063*	-0.46	-0.15	-.2745*	-0.43	-0.12	-.3054*	-0.45	-0.16	-0.01	-0.18	0.16	-.3070*	-0.61	-0.01
EngSer	GNFB	0.16	-0.33	0.65	0.08	-0.30	0.46	0.14	-0.24	0.51	-0.08	-0.50	0.34	0.11	-0.29	0.51	0.24	-0.13	0.62	1.0233*	0.55	1.50	1.1292*	0.24	2.02
	HITECH	0.14	-0.38	0.66	0.09	-0.33	0.52	-0.22	-0.64	0.19	-0.13	-0.60	0.34	-0.16	-0.62	0.29	-0.05	-0.48	0.37	0.41	-0.11	0.94	0.30	-0.52	1.12
	Insuran	0.39	-0.09	0.86	.390*	0.02	0.76	0.20	-0.16	0.56	0.39	-0.01	0.80	0.38	-0.01	0.77	0.26	-0.10	0.63	.7906*	0.32	1.26	0.71	-0.06	1.47
	Pharma	0.06	-0.41	0.53	0.14	-0.22	0.51	-0.09	-0.45	0.26	0.11	-0.29	0.51	0.05	-0.34	0.45	0.02	-0.34	0.37	.4844*	0.02	0.94	0.40	-0.39	1.19
	Teleco	0.08	-0.40	0.56	0.03	-0.34	0.40	-0.23	-0.59	0.13	-0.16	-0.57	0.25	-0.08	-0.47	0.31	-0.13	-0.49	0.23	0.43	-0.03	0.90	0.37	-0.42	1.16
GNFP	HITECH	-0.02	-0.34	0.30	0.01	-0.29	0.31	-.3607*	-0.66	-0.06	-0.05	-0.37	0.27	-0.27	-0.59	0.04	-0.30	-0.60	0.00	-.6093*	-0.95	-0.27	-.8320*	-1.43	-0.23
	Insuran	.2262*	0.00	0.45	.306*	0.09	0.52	0.06	-0.16	0.28	.4753*	0.26	0.70	.2712*	0.05	0.49	0.02	-0.19	0.23	-0.23	-0.47	0.00	-0.42	-0.95	0.10
	Pharma	-0.10	-0.32	0.12	0.06	-0.15	0.27	-.2289*	-0.44	-0.02	0.19	-0.02	0.40	-0.05	-0.27	0.16	-.2282*	-0.43	-0.03	-.5389*	-0.76	-0.32	-.7302*	-1.29	-0.17
	Teleco	-0.08	-0.31	0.16	-0.05	-0.27	0.16	-.3656*	-0.58	-0.15	-0.08	-0.30	0.14	-0.19	-0.41	0.03	-.3764*	-0.58	-0.17	-.5905*	-0.82	-0.36	-.7618*	-1.32	-0.20
HITECH	Insuran	0.25	-0.05	0.54	.296*	0.01	0.58	.4235*	0.14	0.71	.5269*	0.22	0.84	.5429*	0.24	0.84	.3173*	0.02	0.61	.3766*	0.05	0.70	.4094*	0.01	0.81
	Pharma	-0.08	-0.37	0.21	0.05	-0.23	0.33	0.13	-0.15	0.41	0.24	-0.06	0.54	0.22	-0.08	0.52	0.07	-0.22	0.36	0.07	-0.24	0.39	0.10	-0.34	0.54
	Teleco	-0.06	-0.36	0.24	-0.06	-0.34	0.22	0.00	-0.29	0.28	-0.02	-0.33	0.28	0.08	-0.22	0.38	-0.08	-0.37	0.21	0.02	-0.30	0.34	0.07	-0.38	0.52
Insuran	Pharma	-.3262*	-0.51	-0.14	-.246*	-0.43	-0.06	-.2917*	-0.48	-0.11	-.2867*	-0.48	-0.09	-.3257*	-0.52	-0.13	-.2471*	-0.43	-0.06	-.3063*	-0.51	-0.10	-0.31	-0.64	0.03
	Teleco	-.3057*	-0.51	-0.10	-.358*	-0.55	-0.17	-.4284*	-0.62	-0.24	-.5518*	-0.76	-0.35	-.4614*	-0.66	-0.26	-.3953*	-0.59	-0.21	-.3579*	-0.57	-0.15	-0.34	-0.68	0.00
Pharm	Teleco	0.02	-0.18	0.22	-0.11	-0.29	0.07	-0.14	-0.32	0.04	-.2650*	-0.46	-0.07	-0.14	-0.33	0.06	-0.15	-0.33	0.03	-0.05	-0.25	0.14	-0.03	-0.42	0.36

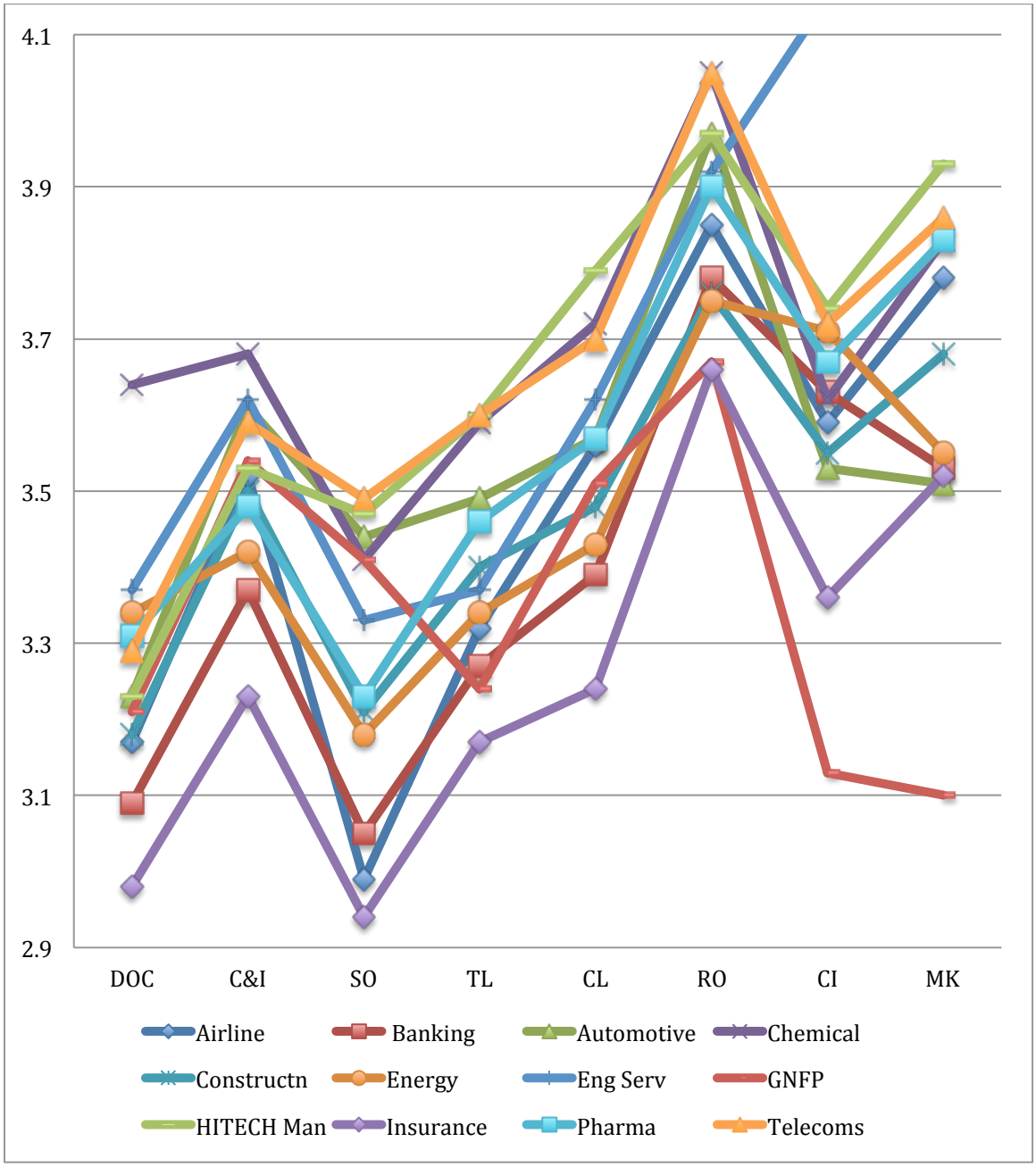

Figure 10. Industry competency scores and profiles.

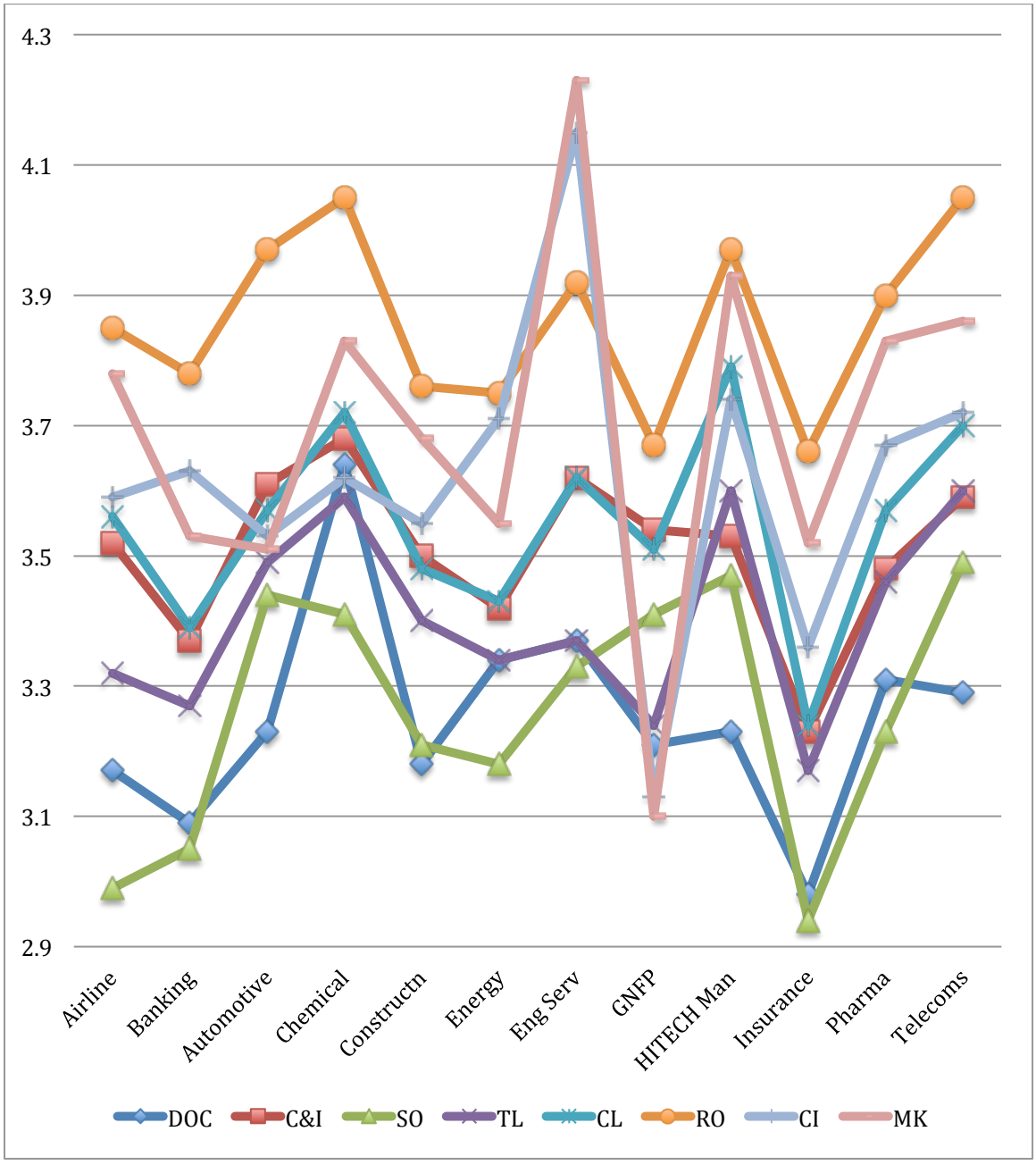

Figure 11. Industrial competency profiles.

Outstanding Leaders

RQ3: Are the competencies for outstanding leaders across all industries [that are] similar to those of specific component industries?

$H_0$3: There is no difference in the six core and two contextual leadership competencies for outstanding leaders across all industries compared with those outstanding leaders from the specific industries of banking, human resources, and manufacturing.

$H_1$3: There is a difference in the six core and two contextual leadership competencies for outstanding leaders across all industries compared with those outstanding leaders from the specific industries of banking, human resources, and manufacturing.

Statistical analysis was performed to compare the six core executive competencies and the two situational competences across the total database of Outstanding leaders with three specific Outstanding leadership functional roles. The three specific outstanding functional roles were human resources (O HR), banking (O Banking), and manufacturing (O Manu). These roles represent a corporate function, a service/operational function, and an operational function respectively.

Developing Organizational Capability

There was no statistically significant difference between the leaders means score from the four Outstanding leader categories for the competency developing organization capability, $F(3, 2843) = .983$, $p > .05$.

Collaborating and Influencing

There was no statistically significant difference between the leaders means score from the four Outstanding leader categories for the competency developing organization capability, F (3, 3455) = 2.04, $p > .05$.

Team Leadership

There was no statistically significant difference between the leaders means score from the four Outstanding leader categories for the team leadership competency, F (3, 3688) = 1.32, $p > .05$.

Strategic Orientation

There was no statistically significant difference between the leaders means score from the four Outstanding leader categories for the strategic orientation competency, F (3, 3723) = 1.205, $p > .05$.

Change Leadership

There was a significant difference between the leaders means score from the four Outstanding leader categories for the change leadership competency, F (3, 3635) = 3.62, $p = .013$. The magnitude of the difference effect for the test was small, with the partial eta squared partial eta squared, $\eta^2 < .003$. The Tukey HSD post hoc test results indicated only significant differences between most of the competencies (Table 11).

Results Orientation

There was a statistically significant difference between the leaders means score from the four Outstanding leader categories for the results orientation competency,

F (3, 3893) = 3.68, p = .012.The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .003$. The Tukey HSD post hoc test results indicated a key significant difference between O HR (M = 4.38, SD = .77) and the three other functional values.

Table 9

Outstanding Leaders & CEO - Descriptive Statistics

	Dev. Org Capability			Collaborate Influence			Team Leadership		
	Mean	Std. Dev.	N	Mean	Sta. Dev.	N	Mean	Std. Dev.	N
O Banking	3.75	0.91	326	4.09	0.91	356	3.98	0.96	439
O HR	3.83	0.99	77	4.25	0.90	100	3.83	0.83	102
O Manu	3.81	0.86	509	4.07	0.93	642	4.02	0.86	638
Outstanding	3.74	0.88	1935	4.04	0.90	2358	3.99	0.90	2513
CEO_Dir	3.36	0.76	64	3.88	0.91	90	4.05	0.89	79

	Strategic Orientation			Change leadership			Results Orientation		
	Mean	Std. Dev.	N	Mean	Std. Dev.	N	Mean	Std. Dev.	N
O Banking	3.84	0.93	416	4.31	0.91	434	4.65	0.78	440
O HR	3.77	0.82	103	4.40	0.86	99	4.38	0.77	103
O Manu	3.89	0.80	660	4.27	0.82	614	4.56	0.76	696
Outstanding	3.82	0.93	2548	4.21	0.88	2492	4.58	0.78	2658
CEO_Dir	3.78	0.92	91	4.08	0.95	88	4.42	089	92

	Customer Impact			Market Knowledge		
	Mean	Std. Dev.	N	Mean	Std. Dev.	N
O Banking	4.31	0.93	342	4.28	0.91	131
O HR	3.96	0.89	67	3.69	0.82	32
O Manu	4.17	0.86	456	4.12	1.02	257
Outstanding	4.23	0.90	1912	4.22	1.02	1133
CEO_Dir	4.15	0.76	73	3.93	0.75	57

Customer Impact

There was a statistically significant difference between the leaders means score from the four Outstanding leader categories for the customer impact competency, F (3, 2773) = 2.67, p = .014. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .004$. The Tukey HSD post hoc test results indicated a key significant difference was between O HR (M = 3.96, SD = 0.90) and the three other functions values.

Market Knowledge

There was a statistically significant difference between the leaders means score for the four Outstanding leader categories for the market knowledge competency, F (3, 1549) = 3.75, $p < .011$. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .007$. The Tukey HSD post hoc test results indicated O HR (M = 3.39, SD = 0.90) was significantly lower than O Banking (M = 4.28, SD = .91) and Outstanding leaders (M = 4.22, SD = 1.02).

Table 10

Outstanding Leaders Analysis –Inferential Statistics

		DOC			C & I			TL			SO			CL			RO			CI			MK		
		ΔM	95% CI		*ΔM*	95% CI		*ΔM*	95% CI		*ΔM*	95% CI		*ΔM*	95% CI		*ΔM*	95% CI		*ΔM*	95% CI		*ΔM*	95% CI	
			LB	UB		LB	UB		LB	UB		LB	UB		LB	UB		LB	UB		LB	UB		LB	UB
Outst	O Bank	-0.01	-0.15	0.13	-0.05	-0.18	0.08	0.01	-0.10	0.13	-0.02	-0.15	0.10	-0.11	-0.22	0.01	-0.07	-0.18	0.03	-0.08	-0.22	0.05	-0.06	-0.30	0.18
	O HR	-0.09	-0.35	0.18	-0.21	-0.45	0.03	0.16	-0.07	0.39	0.05	-0.18	0.29	-0.20	-0.43	0.03	0.20	0.00	0.40	0.27	-0.01	0.56	.5332*	0.07	1.00
	O Man	-0.07	-0.18	0.04	-0.03	-0.14	0.07	-0.03	-0.14	0.08	-0.07	-0.17	0.03	-0.07	-0.17	0.04	0.02	-0.07	0.10	0.05	-0.07	0.17	0.10	-0.08	0.28
O Bank	O HR	-0.08	-0.36	0.21	-0.16	-0.42	0.10	0.14	-0.11	0.40	0.08	-0.18	0.33	-0.09	-0.34	0.16	.2736*	0.05	0.49	.3547*	0.05	0.66	.5949*	0.08	1.11
	O Man	-0.06	-0.22	0.10	0.02	-0.14	0.17	-0.04	-0.19	0.10	-0.04	-0.19	0.10	0.04	-0.10	0.18	0.09	-0.03	0.21	0.14	-0.03	0.30	0.16	-0.12	0.44
O HR	O Man	0.02	-0.26	0.30	0.18	-0.07	0.43	-0.19	-0.43	0.06	-0.12	-0.37	0.13	0.13	-0.11	0.38	-0.18	-0.39	0.03	-0.22	-0.52	0.08	-0.43	-0.92	0.05

($p < .05$)*

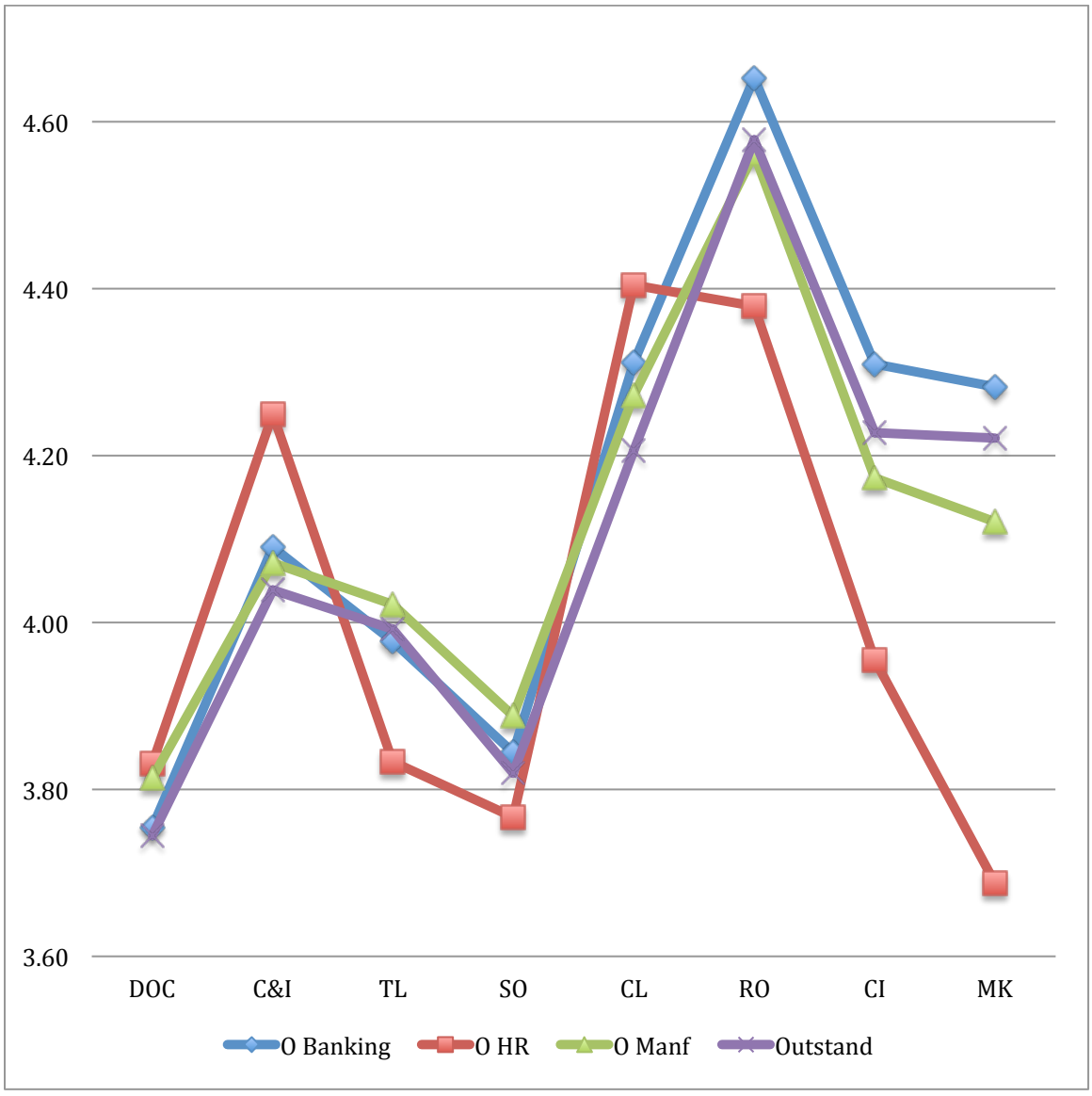

Figure 12. Outstanding leaders competency scores and profiles.

Findings

A graphical representation of the results for each Outstanding functional role in Table 11 is shown via the overall competency profiles in Figure 12. The statistical differences discussed above for the individual competences that make up the profiles for each Outstanding function indicates that on an overall basis the null hypothesis as stated in $H_0$3 must be rejected. If however, one were to ignore the O HR result (40% statistically different) then one would be able to accept the null hypothesis for the profiles of O Banking and O Manu compared to the total Outstanding database. The Outstanding database is representative of two out of the three specific outstanding component functions tested.

If one studies each competency individually strategic orientation (SO), change leadership (CL), collaborating & influencing (C&I) and team leadership (TL) are the same across the Outstanding functions with no significant differences. Only O HR has significant differences with the other Outstanding functional roles. If one plots the profile of each individual competency across the Outstanding functions then one can see a familiar pattern for the ranking of scores and the shape of the competency profile (Figure 13) with those seen earlier. Results orientation is by far the most developed of the competencies followed by change leadership.

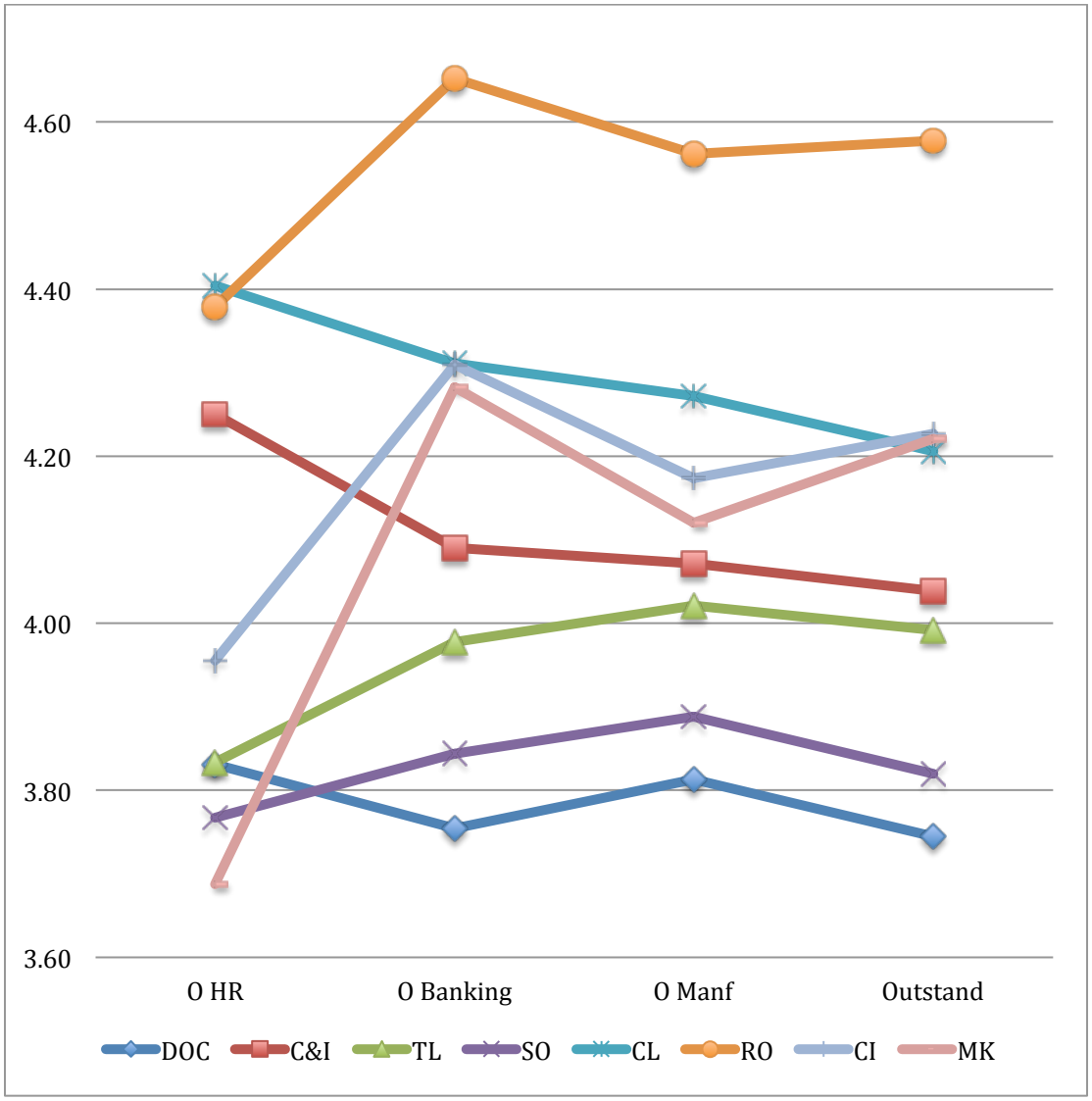

Figure 13. Outstanding leaders - competency profiles.

CEO Selection

RQ4: Does a firm benefit from selecting a CEO from its industrial sector or should it look outside for one from a different industry?

$H_0$4: There is no discernable benefit from selecting the next CEO from a firms industrial sector verses a different sector.

$H_1$4: There is a discernable benefit from selecting the next CEO from a firms industrial sector verses a different sector.

The executive functions analyzed earlier to answer RQ1 consisting of CEO_Dir, CFO, CIO, FinSer, HR, and Transport and their competency profiles were used in the analysis to answer RQ4. The analysis (Table 6) indicated that the CEO_Dir profile was significantly different and more advanced than the other functional roles within firms (shown graphically in Figure 8). The practitioner database has an average of 3220 leaders per competency so could be considered a representative sample of the population. Analysis of the leaders from the selected functions shows they do not have the level of competency and profiles necessary to step up and become CEO_Dirs. The null hypothesis could not be rejected.

Looking at the similarity of the competency profile of the CEO_Dir functional role with the competency scores and profiles found in the Outstanding group investigated in RQ3 an additional statistical test in support of the hypothesis appears warranted.

The additional statistical analysis performed compared the six core executive competencies and two situational competences of the CEO_Dir with the three specific Outstanding leadership functional roles from Banking, Human Resources and Manufacturing and the overall total database of Outstanding leaders of RQ3.

Developing Organizational Capability

There was a statistically significant difference between the CEO_Dir and Outstanding leaders means for the developing organizational capability competency, F (4, 2906) = 3.99, p = .003. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .005$. The Tukey HSD post hoc test results indicated that significant differences were apparent from the pairwise comparisons for CEO_Dir (M = 3.36, SD = .764) and all four Outstanding leader categories

Collaborating and Influencing

There was a statistically significant difference between the CEO_Dir and Outstanding leaders means for the collaborating and influencing competency, F (4, 3541) = 2.38, p = .05. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .003$. The Tukey HSD post hoc test results indicated only one significant difference apparent from pairwise comparisons and that was between CEO_Dir (M = 3.88, SD = .91) and O HR (M = 4.25, SD = .90).

Team Leadership

There was no statistically significant difference between the CEO_Dir and Outstanding leaders means for the team leadership competency, F (4, 3766) = 1.08, p >.05.

Strategic Orientation

There was no statistically significant difference between the outstanding leaders including CEO_Dir means for the strategic orientation competency, F (4, 3813) = .98, p >.05

Change Leadership

There was a statistically significant difference between the CEO_Dir and Outstanding leaders means for the change leadership competency, F (4, 3722) = 3.38, p = .009. The magnitude of the difference effect for the test was small, with the partial eta squared $\eta^2 < .004$. The Tukey HSD post hoc test results however, indicated no significant difference between CEO_Dir and the Outstanding leaders was apparent from pairwise comparisons.

Results Orientation

There was a statistically significant difference between the CEO_Dir and Outstanding leaders means for the results orientation competency, F (4, 3984) = 3.62, p = .006. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .004$. The Tukey HSD post hoc test results indicated however, no significant difference between CEO_Dir and the outstanding leaders was apparent from pairwise comparisons. There was a difference between O HR (M = 4.38, SD = .77) and O Banking (M = 4.65, SD = .78).

Customer Impact

There was a statistically significant difference between the CEO_Dir and Outstanding leaders means for the customer impact competency, F (4, 2849) = 2.80, p =

.025. The magnitude of the difference effect for the test was small, with the partial eta squared partial eta squared, $\eta^2 < .004$. The Tukey HSD post hoc test results indicated no significant difference between CEO_Dir and the Outstanding leaders was apparent from pairwise comparisons.

Market Knowledge

There was a statistically significant difference between the CEO_Dir and Outstanding leaders means for market knowledge competency, F (4, 1609) = 3.85, p = .004. The magnitude of the difference effect for the test was small, with the partial eta squared, $\eta^2 < .010$. The Tukey HSD post hoc test results indicated no significant difference between CEO_Dir and the Outstanding leaders was apparent from pairwise comparisons.

Table 11

*Outstanding Leaders and CEO – Inferential Statistics (*p < .05)*

		DOC			C & I			TL			SO			CL			RO			CI			MK		
		ΔM	95% CI		*ΔM*	95% CI		*ΔM*	95% CI		*ΔM*	95% CI		*ΔM*	95% CI		*ΔM*	95% CI		*ΔM*	95% CI		*ΔM*	95% CI	
			LB	UB		LB	UB		LB	UB		LB	UB		LB	UB		LB	UB		LB	UB		LB	UB
CEO_Dir	O Bank	-.3952*	-0.72	-0.07	-0.21	-0.50	0.08	0.07	-0.23	0.37	-0.06	-0.35	0.22	-0.23	-0.51	0.05	-0.23	-0.47	0.02	-0.16	-0.47	0.15	-0.35	-0.79	0.08
	O HR	-.4718*	-0.88	-0.07	-.3722*	-0.73	-0.01	0.22	-0.15	0.59	0.01	-0.34	0.37	-0.32	-0.67	0.03	0.05	-0.26	0.35	0.20	-0.22	0.61	0.24	-0.36	0.84
	O Man	-.4540*	-0.77	-0.14	-0.19	-0.47	0.08	0.03	-0.26	0.32	-0.11	-0.38	0.17	-0.19	-0.46	0.08	-0.14	-0.37	0.10	-0.02	-0.33	0.28	-0.19	-0.59	0.21
	Outstd	-.3853*	-0.69	-0.08	-0.16	-0.43	0.11	0.06	-0.22	0.34	-0.04	-0.30	0.22	-0.13	-0.39	0.13	-0.15	-0.38	0.07	-0.08	-0.37	0.21	-0.29	-0.66	0.08
O Bank	O HR	-0.08	-0.38	0.23	-0.16	-0.44	0.12	0.14	-0.13	0.41	0.08	-0.19	0.35	-0.09	-0.36	0.17	.2736*	0.04	0.51	.3547*	0.03	0.68	.5949*	0.06	1.13
	O Man	-0.06	-0.23	0.11	0.02	-0.15	0.18	-0.04	-0.20	0.11	-0.04	-0.20	0.11	0.04	-0.11	0.19	0.09	-0.04	0.22	0.14	-0.04	0.31	0.16	-0.13	0.45
	Outstd	0.01	-0.13	0.15	0.05	-0.09	0.19	-0.01	-0.14	0.11	0.02	-0.11	0.15	0.11	-0.02	0.23	0.07	-0.04	0.18	0.08	-0.06	0.23	0.06	-0.19	0.31
O HR	O Man	0.02	-0.28	0.31	0.18	-0.09	0.44	-0.19	-0.45	0.07	-0.12	-0.38	0.14	0.13	-0.13	0.39	-0.18	-0.41	0.04	-0.22	-0.54	0.10	-0.43	-0.94	0.08
	Outstd	0.09	-0.19	0.37	0.21	-0.04	0.46	-0.16	-0.41	0.09	-0.05	-0.30	0.20	0.20	-0.05	0.44	-0.20	-0.41	0.02	-0.27	-0.57	0.03	-.5332*	-1.02	-0.04
O Manu	Outstd	0.07	-0.05	0.19	0.03	-0.08	0.14	0.03	-0.08	0.14	0.07	-0.04	0.18	0.07	-0.04	0.17	-0.02	-0.11	0.07	-0.05	-0.18	0.07	-0.10	-0.29	0.09

Findings

A graphical representation of the results for CEO_Dir and the Outstanding functional roles in Table 12 is shown in Figure 14. If one ignores O HR (as per the comment in RQ3) and the DOC competency there is no significant difference between the profile of CEO_Dir and the other profiles of the Outstanding pool of leaders.

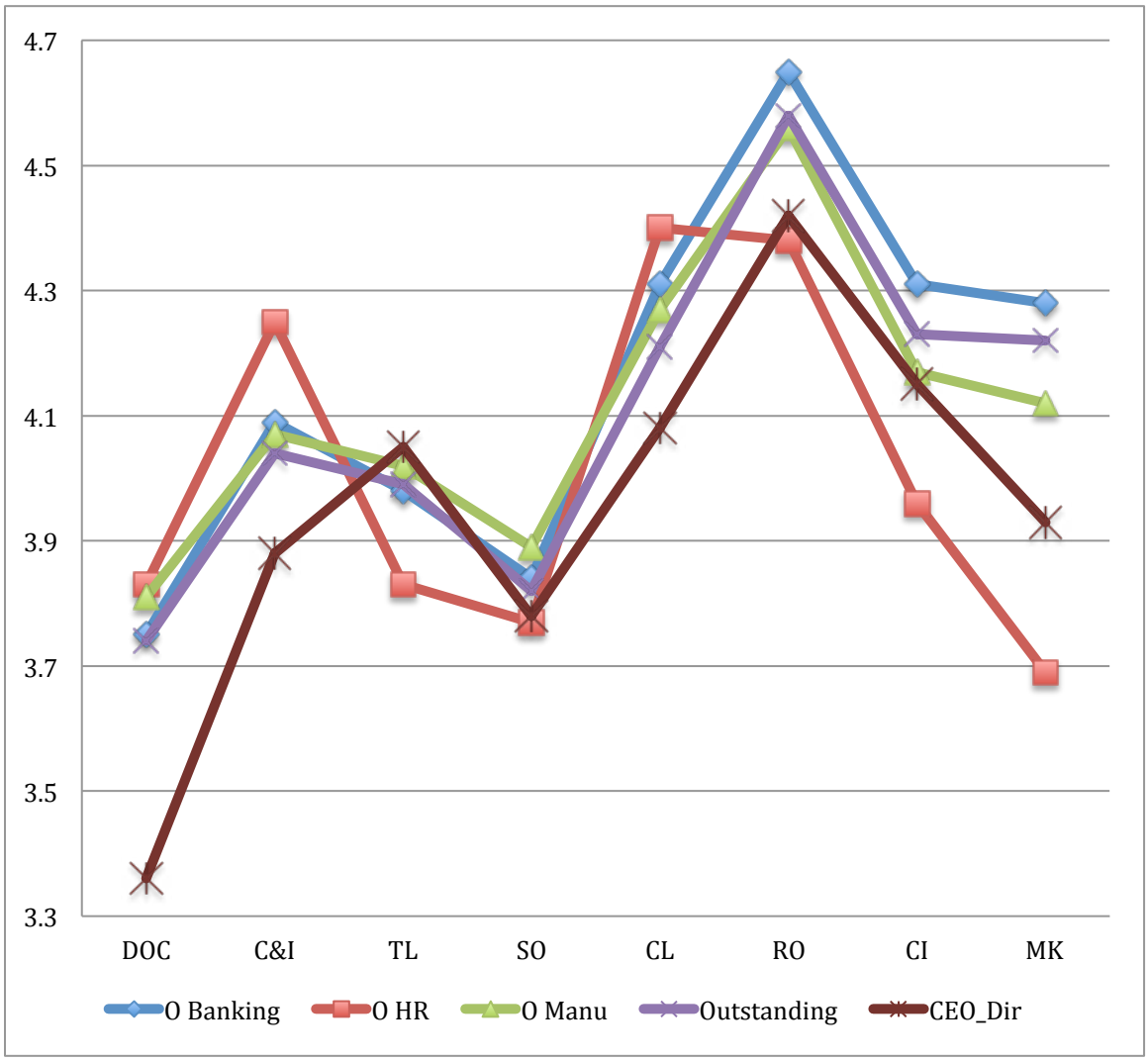

Figure 14. Outstanding leader and CEO_Dir competency scores and profiles.

Correlation and Regression

RQ5: Is there a relationship among the six core leadership competencies in the search firm's competency model?

$H_0$5: There is no relationship between the six core competencies of results orientation, strategic orientation, collaboration and influencing, team leadership, change leadership, and developing organizational capability among senior corporate leaders according to job function, industrial sector, and outstanding performers.

$H_1$5: There is a relationship between the six core competencies of results orientation, strategic orientation, collaboration and influencing, team leadership, change leadership, and developing organizational capability among senior leaders according to job function, industrial sector, and outstanding performers.

The relationship of the six core executive competences, results orientation, strategic orientation, collaboration and influencing, team leadership, change leadership, and developing organizational capability was explored and tested to understand whether any relationship exists between them. If a relationship is found to exist the degree that the criterion can be predicted from the variance of the other variables will be investigated? Table 12 shows the descriptive statistics for the Whole and Outstanding databases for each competency.

Correlations

The relationship between the six core executive competencies for both the Whole database (Table 13) and the Outstanding leader's group (Table 14) were all significantly correlated at the $p < .01$ level (2-tailed). The Pearson *r* correlation coefficient is a measure of effect size. Cohen (1988) suggested the effect size for values for Pearson *r* of .1 = small, .3 = moderate, and .5 = strong. Therefore, based on Cohen's values all the Whole database's correlations for the six competencies were positive and their effect size at least moderate-to-strong in nature. Some correlations (53%) were strong with Pearson *r*'s up to .68. These moderate-to-strong and strong correlations suggest that there is a high degree of predictability between individual core competencies. For example, the competency of change leadership is strongly correlated with results orientation (.66), suggesting 44% of the variance in results orientation is predictable from the variance in the change leadership competency.

The Outstanding leaders group competencies are not as strongly correlated with each other. The moderate-to-strong group represents 87% of the total correlations and only 27% are in strong category. On an individual competency basis only half the competencies for the Outstanding group can be predicted at the 16% level or greater by the variance of any other single competency. There is a moderate-to-strong relationship between the competencies for Outstanding database and a strong relationship between them for the Whole database. Based on these findings the null hypothesis can be rejected and $H_1 5$ accepted.

Table 12

Correlations -Descriptive Statistics

	Dev. Org Capability			Collaborate Influence			Team Leadership		
	Mean	SD	N	Mean	SD.	N	Mean	SD	N
Outstand	3.74	0.88	1935	4.04	0.90	2358	3.99	0.90	2513
Whole	3.18	0.94	11360	3.50	0.95	14349	3.37	0.95	15052

	Strategic Orientation			Change Leadership			Results Orientation		
	Mean	SD.	N	Mean	SD.	N	Mean	SD.	N
Outstand	3.82	0.93	2548	4.21	0.88	2492	4.58	0.78	2658
Whole	3.18	1.02	15447	3.47	0.99	14868	3.80	0.96	16177

Table 13

Whole database Competency Correlations

		DOC	CI	TL	SO	CL	RO
DOC	Pearson Cor.	1	.497**	.680**	.484**	.569**	.499**
	N		9933	10627	11077	10800	11300
CI	Pearson Cor.		1	.513**	.408**	.476**	.391**
	N			13354	13696	13182	14260
TL	Pearson Cor.			1	.482**	.587**	.537**
	N				14346	13807	14956
SO	Pearson Cor.				1	.621**	.563**
	N					14255	15368
CL	Pearson Cor.					1	.658**
	N						14774
RO	Pearson Cor.						1
	N						

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

Table 14

Outstanding Database Competency Correlations

		DOC	CI	TL	SO	CL	RO
DOC	Pearson Cor.	1	.353**	.586**	.351**	.445**	.347**
	N		1694	1822	1908	1863	1927
CI	Pearson Cor.		1	.363**	.293**	.363**	.239**
	N			2235	2279	2203	2344
TL	Pearson Cor.			1	.387**	.507**	.419**
	N				2416	2362	2497
SO	Pearson Cor.				1	.528**	.468**
	N					2400	2533
CL	Pearson Cor.					1	.546**
	N						2476
RO	Pearson Cor.						1
	N						

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

Multiple Regression

There is colinearity among the predictor variables for both databases. All the six core executive competencies in the Whole and Outstanding database correlate with one another (Table 14 and Table 15). A multiple regression can be generated therefore with five of the competencies as the independent variables (x_1 , x_2 , x_3 , x_4, x_5) used to statistically predict the other competency as the criterion variable (y) (Coolican, 2009). The equation takes the form of

$$y = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5$$

With the values of b_i the regression coefficients for each of the predictor competency and b_0 is the constant and intercept.

A series of standard multiple regressions was performed across the Whole database and the Outstanding leaders group database. Each multiple regression used one of the core executive competencies as the dependent or criterion variable (y) and the other five core executive competencies as the independent or predictor variables. Table 15 and Table 16 display the correlations between the variables, the unstandardized regression coefficients (b) and intercept, and the standardized regression coefficients (beta). The multiple correlation coefficients (R & R^2) are shown in Table 17 and Table 18. The R multiple correlation coefficient indicates the overall correlation of the independent predictor variables with the dependent criterion variable. The R^2 value provides evidence of the proportion of the variance that can be attributed to the combined predictor variables together.

In the whole database all the t-values are all significant. This suggests all the predictor variables are adding an important contribution or statistically significant amount of variance to the criterion competency (DV). The beta values indicate that team leadership, change leadership, and results orientation are most often the strongest predictors of the other (criterion) competencies. In the Outstanding database nearly all (87%) of the t-values are all significant. This suggests most of the predictor variables are adding a statistically significant amount of variance to the criterion competency. The notable exceptions are DOC and CI where RO makes no significant contribution and visa versa in RO where DOC and CI make no significant contribution. The beta values indicate that change leadership is often one of the strongest predictors of the other (criterion) competencies in the Outstanding database.

Table 15

Regression Analysis –Whole Database

DV	Predictors	Unstand. Corr.		Stan. Corr.	t	Sig.
		B	Std. Error	Beta		
DOC	(Constant)	0.264	0.034		7.9	0.000
	SO	0.091	0.009	0.099	9.8	0.000
	CL	0.129	0.011	0.138	12.0	0.000
	RO	0.04	0.01	0.041	3.8	0.000
	CI	0.136	0.009	0.137	15.1	0.000
	TL	0.449	0.01	0.454	45.0	0.000
CI	(Constant)	1.182	0.038		31.5	0.000
	DOC	0.189	0.013	0.188	15.1	0.000
	TL	0.217	0.013	0.218	16.9	0.000
	SO	0.08	0.011	0.086	7.3	0.000
	CL	0.18	0.013	0.191	14.2	0.000
	RO	0.029	0.012	0.029	2.4	0.018
TL	(Constant)	0.305	0.033		9.4	0.000
	DOC	0.425	0.009	0.42	45.0	0.000
	SO	0.029	0.009	0.031	3.2	0.002
	CL	0.156	0.01	0.166	14.9	0.000
	RO	0.151	0.01	0.152	15.0	0.000
	CI	0.148	0.009	0.148	16.9	0.000
SO	(Constant)	0.205	0.039		5.3	0.000
	RO	0.269	0.012	0.254	23.0	0.000
	CI	0.077	0.011	0.071	7.3	0.000
	TL	0.04	0.013	0.038	3.2	0.002
	DOC	0.122	0.012	0.112	9.8	0.000
	CL	0.34	0.012	0.337	28.4	0.000
CL	(Constant)	-0.007	0.033		-0.2	0.826
	SO	0.252	0.009	0.255	28.4	0.000
	RO	0.339	0.01	0.323	35.0	0.000
	CI	0.127	0.009	0.12	14.2	0.000
	TL	0.162	0.011	0.153	14.9	0.000
	DOC	0.127	0.011	0.118	12.0	0.000
RO	(Constant)	1.072	0.033		32.7	0.000
	CI	0.022	0.009	0.022	2.4	0.018
	TL	0.169	0.011	0.168	15.0	0.000
	DOC	0.043	0.011	0.042	3.8	0.000
	CL	0.368	0.011	0.387	35.0	0.000
	SO	0.216	0.009	0.229	23.0	0.000

Table 16

Regression Analysis- Outstanding database

DV	Predictors	Unstand. Corr.		Stan. Cor.	t	Sig
		B	Std. Error	Beta		
DOC	(Constant)	0.499	0.121		4.1	0.000
	SO	0.103	0.024	0.105	4.3	0.000
	CL	0.122	0.027	0.124	4.6	0.000
	RO	0.024	0.028	0.022	0.9	0.388
	CI	0.112	0.022	0.114	5.2	0.000
	TL	0.434	0.024	0.439	18.0	0.000
CI	(Constant)	1.845	0.137		13.5	0.000
	RO	0.008	0.034	0.007	0.2	0.820
	TL	0.142	0.031	0.141	4.5	0.000
	DOC	0.158	0.030	0.156	5.2	0.000
	SO	0.078	0.029	0.078	2.7	0.007
	CL	0.170	0.032	0.171	5.4	0.000
TL	(Constant)	0.353	0.118		3.0	0.003
	DOC	0.409	0.023	0.404	18.0	0.000
	SO	0.053	0.023	0.053	2.2	0.025
	CL	0.173	0.026	0.174	6.7	0.000
	RO	0.177	0.027	0.155	6.5	0.000
	CI	0.095	0.021	0.095	4.5	0.000
SO	(Constant)	0.493	0.130		3.8	0.000
	CL	0.322	0.028	0.319	11.6	0.000
	RO	0.234	0.030	0.202	7.9	0.000
	CI	0.063	0.023	0.062	2.7	0.007
	TL	0.064	0.028	0.063	2.2	0.025
	DOC	0.118	0.027	0.115	4.3	0.000
CL	(Constant)	0.153	0.117		1.3	0.191
	RO	0.334	0.026	0.292	13.0	0.000
	CI	0.111	0.021	0.111	5.4	0.000
	TL	0.168	0.025	0.167	6.7	0.000
	DOC	0.112	0.025	0.110	4.6	0.000
	SO	0.257	0.022	0.259	11.6	0.000
RO	(Constant)	1.945	0.099		19.6	0.000
	CI	0.005	0.020	0.005	0.2	0.820
	TL	0.156	0.024	0.177	6.5	0.000
	DOC	0.020	0.024	0.023	0.9	0.388
	SO	0.170	0.022	0.196	7.9	0.000
	CL	0.304	0.023	0.348	13.0	0.000

Table 17

Whole Database - Model Summary

Criterion (DV)	*R*	R^2	Adjusted R^2	Std. Err. of Est.
DOC	0.725	0.526	0.526	0.650
CI	0.594	0.353	0.352	0.766
TL	0.749	0.561	0.561	0.633
SO	0.681	0.464	0.464	0.749
CL	0.771	0.595	0.594	0.644
RO	0.718	0.515	0.515	0.671

Table 18 Outstanding Database - Model Summary

Criterion (DV)	*R*	R^2	Adjusted R^2	Std. Err. of Est.
DOC	0.639	0.408	0.406	0.673
CI	0.437	0.191	0.189	0.797
TL	0.674	0.454	0.453	0.653
SO	0.597	0.356	0.354	0.719
CL	0.691	0.477	0.475	0.643
RO	0.613	0.375	0.373	0.613

Summary

Chapter 4 presented the demographic and descriptive characteristics of the leadership sample contained in the archival practitioner database used in this study. The research tested the significance of six executive core competencies and two situational/contextual competences as the dependent variables against executive functional job roles and industrial business sectors as the primary independent variables. These independent variables formed the basis for the research questions to determine

whether there is a commonality, universality, and transferability of leadership competencies between functional executive roles (RQ1) and across industries (RQ2). The statistical analysis suggested that the null hypothesis for RQ1 and 2 could not be rejected. The analysis for RQ3 utilizing the Outstanding leader database indicated the null hypothesis should be rejected. It was noted that a reframing of the question and exclusion of O HR would have lead to a different result. This will be discussed in Chapter 5. The fourth research question (RQ4) looked at CEO selection. The null hypothesis for RQ4 could not be rejected; firms should not select CEOs from general post holders who hold other executive positions. An additional test to look at the competency profiles of CEOs in relation to the Outstanding leader database showed the profiles to be very similar with little significant differences. In RQ5 the possibility of a correlation and regression relationship between the six core competencies was investigated in the Whole and the Outstanding databases. A relationship was found and therefore the null hypothesis was rejected. The relationship between the six core competences in both databases was at a minimum moderate-to-strong in nature.

Chapter 5 reviews the results of Chapter 4. The results are summarized and the findings interpreted. The chapter sets these findings in the context of the problem statement and the other issues raised in Chapters 1 and 2. The Chapter 5 discussion includes study conclusions, and recommendations on the assessment and selection of senior executives and CEOs. Limitations of the study are reviewed along with recommendations for future research. The potential for positive social change is also reviewed in Chapter 5.

Chapter 5: Conclusions

Introduction

The purpose of the study was to analyze the data in the database on key leadership competencies of leaders in companies and institutions worldwide to see whether there was commonality, universality, and transferability of leadership characteristics between leadership roles that determine superior job performance. In addition, a further problem this dissertation addresses is the lack of evidence-based data on leadership competencies that would allow the effective assessment and selection of potentially successful global leaders at the executive and CEO level.

In Chapter 4, I examined the competency profiles of over16,000 average and outstanding global leaders in executive roles across 12 industries to answer the research questions regarding the universality and transferability of leadership competencies. The analysis indicated this was not the case with the specific questions as proposed. In chapter 5 I will reframe the questions somewhat and look at the analysis further to explore the extant of the conclusions reached and whether the data provides any other insights. Chapter 5 presents a detailed discussion of following topics: (a) the findings in Chapter 4 for each of the individual five research questions. (b) How the data relates to the theoretical framework and literature review. (d) How the analysis can be more widely extrapolated. (c) The implications for leadership selection in the practitioner business environment. The Chapter 5 also includes a discussion of the limitations of the study, recommendations for future research and practice, a review of the implications for positive social change, and final summary.

Interpretation of Findings

RQ1: Executive Functional Roles Discussion

Are leadership competencies common and universal allowing leaders to transfer effectively across different functional roles within an organization?

The findings in Chapter 4 show that the CEO_Dir rankings differ significantly on many (60%) of the individual competencies compared with the other executive team function roles. The CEO_Dir rankings are more developed than the other executive team members being between 80% and 100% higher in five of the eight competencies. These five competencies are team leadership, strategic orientation, change leadership, result orientation and customer impact. The competency profile, therefore, necessary to fulfill the CEO_Dir role is quite different from that seen in the other executive functions. The conclusion one can draw from this analysis is that one is not able to select a new CEO directly from the general ranks of other executive team members. As the database spans multiple industries and business sectors, this conclusion holds for internally or externally sourced candidates based on these eight competencies and the profile used to reflect their leadership or managerial attributes.

If one excludes the profile of the CEO_Dir (average mean value of all the competencies, $M = 3.93$), the patterns of the other executive leadership functional profiles are broadly similar (Figure 8). Analysis of the differences among the other five executive functional leadership profiles show significant differences are apparent in only 20% of the combinations of roles across the eight competencies (Table 6). One functional role that of CIO shows no significant differences with any other functional profile. This

lack of significant differences suggests that based on their common managerial leadership skills, as described by the eight competencies and competency profiles, these high level executive functional roles are universal in leadership terms. Notwithstanding any job-specific or technical knowledge requirements, the leadership roles are interchangeable between Chief Financial Officer (*M* = 3.54), Heads of Financial Services (*M* = 3.54), Chief Information Officer (*M* =3.58), Human Resources (*M* = 3.61), and Head of Transportation Services (*M* = 3.64).

If one plots the profile of each competency across the different executive functional roles and studies the ranking of scores in the shape of the competency profile one sees a definite pattern and hierarchy of competencies. Results Orientation (*M* = 3.92) is by far the most significantly developed leadership competency (Figure 9). The next most significantly developed competency is that of Change Leadership (*M* = 3.66), followed by Collaborating & Influencing (*M* = 3.63). It would seem that all the executives strive to develop an advanced ability in these three areas and place more importance on these three competencies. The least developed competency is Strategic Orientation (*M* = 3.37), followed by Developing Organizational Capability (*M* = 3.42). The two-situational/contextual competencies of Market Knowledge (*M* = 3.61) and the Customer Impact (*M* = 3.63) showed the most diverse levels and significant differences amongst the executive leadership roles. This indicates the development of the competencies necessary for the executive functional roles may be different if the role involves a more outward looking focus to customers and the marketplace.

The dissertation results for RQ1 suggests that implicit leadership theory and the adoption of prototypes may be the reason the profiles for the individual leaders are coincident and approximately parallel to each other. The inbuilt theories people in the organizations hold with reference to the core competencies may be commonly shared in their assessment of what makes a good executive leader (Yukl, 2013; Avolio, 2007). Over time the leaders mirror and adopt that expected behavioral to be deemed successful (Shondick et al., 2010). This practitioner database is global in scope and covers many thousands of leaders across 300 worldwide organizations. It is not surprising then that this conclusion regarding the commonality of the managerial leadership competency profiles agrees with the results from the worldwide GLOBE project discussed in Chapter 2. The GLOBE project proposed Culturally Endorsed Implicit Leadership Dimensions (CLT). These CLTs summarized the personal abilities, skills, characteristics and competencies that were seen as universally and transculturally valid. The CLTs were shown to contribute or inhibit outstanding business leadership performance (Dorfman et al., 2012). While this study supports the GLOBE project results the question of culturally contingent elements is not explicitly answered. It would appear from similarities of the profiles of the executive leader team across the global database that the culturally contingent element might not be differential or relevant in the terms of leadership competencies. The culturally contingent element may not be relevant to the core executive competencies but it might impact the situational/contextual competencies where more differences are apparent. The two-contextual/situational competencies of Customer Impact and Market Knowledge may reflect a more culturally diverse sensitivity

than perhaps the absolute leadership competencies? The five functional executive roles show statistically significant differences of 53% for Customer Impact and 27% for Market Knowledge. These differences are far greater than the six core competencies suggesting a greater sensitivity to the functional roles and their prototypes for these externally focused business situational/contextual competencies. Thus, these two competencies are more likely influenced by a local cultural dimension while the core competencies may be more stable globally across cultures. This concept is supported by the work of House et al. (2004) in the GLOBE project investigation into leadership. The GLOBE project identified external environments and influences such as organizational types, local industrial sectors, local and global environmental factors and market forces. as cultural elements.

However, while this study focuses on the leadership attributes there remains the job-specific and technical skills and experience identified in Chapter 2 that might impede the transferability of leaders among functional roles. These were not addressed directly in this study on leadership competencies. Researchers have generally found that lower level managers often have difficulty transferring between functions where a specialty is markedly different e.g. from transport manager to accounting manager. The new role may require different background and experience, and an alternative skills set (Yukl, 2013). However, Yukl also stated the executive level need for the specialty might be less marked and only more general leadership and managerial competencies required. If this is the case, then the competency profiles from this research suggests from that executive or senior leaders can transfer across functions.

The rank order of the competencies is of interest. Results Orientation is the highest ranked competency and shows no significant difference between the executive functional roles. This finding is also consistent with the GLOBE project finding that performance orientation was an important element of all global leadership expectations (Dorfman et al., 2012). This performance aspect is discussed in more detail later. The six core competencies only show significant differences of up to 30% for the functional executive roles. These differences would suggest that the functional roles with the exception of CEO_Dir appear to have a degree of universality, commonality and transferability across the leaders profiles and competency skills. If the CEO_Dir were excluded from the dataset of executive functional roles the null hypothesis would have been rejected.

RQ2: Industry Analysis Discussion

Is there a commonality of leadership competencies across separate and distinct industrial sectors such that leaders can transfer successfully?

On initial inspection of the competency scores and profiles of the 12 industries, they do not appear to show any obvious, and divergent information across the sectors examined (Figure 10). However, if one looks in more depth at each industry, there are some noteworthy aspects (Table 8). The Insurance industry, for instance, has a leader's profile with all its six core executive competencies lower than any other industry (M = 3.26). The leadership competencies from the whole banking sector in the database, captured by the All-Banking category, is the next lowest (M = 3.33) with 45% of its core competencies significantly lower than the remaining industries. The Chemical industry

leaders have a core competency overall profile that is higher than other industries (*M* = 3.68) with 49% of its competency values being significantly higher.

The remaining industries can be into split broadly in two groups with one group ranking slightly above the other. Group 1 has the least statistical differences (shown in brackets below). They are the closest industries in competency value ranking to each other and include Airline (15%), Engineering Services (18%), Hi-Tech manufacturing (24%), Pharmaceuticals (25%), Construction (25%), and Automotive (28%), (Figure 15).

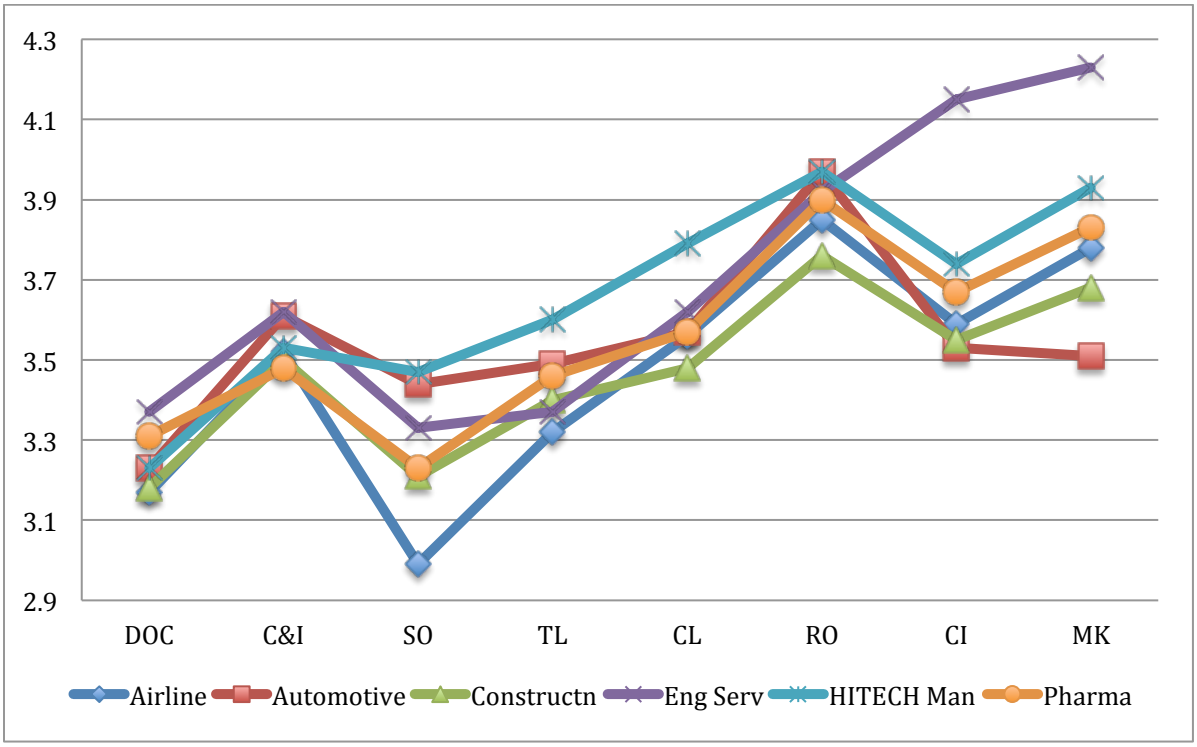

Figure 15 Group 1 industries.

Group 2 scores slightly below Group 1. It also has more statistical differences in individual competency rankings; it includes Energy (34%), Telecoms (36%), and GNFP (39%), (Figure 16). If one recombines the two groups (Figure 17) and focuses on only the

six core executive competencies, the profiles are remarkably similar. The overall difference in the industrial mean ranking scores is only 7-11% (total range 2.94 - 4.05) across each of the six competencies over the whole ranking range (1-7). In fact, on this more limited industry cross section one in Groups 1 and 2 one would have rejected the null hypothesis.

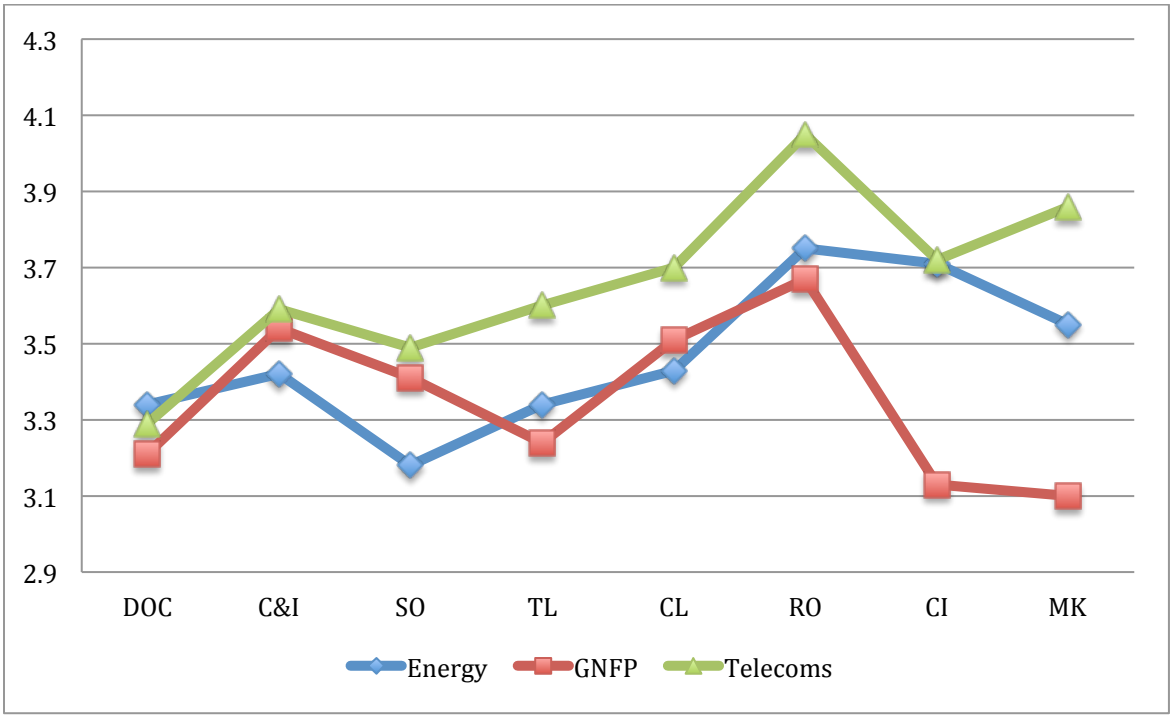

Figure 16 Group 2 industries.

The recombined industrial group (Figure 17) has very similar competency means (the overall average mean value of the six competency means is shown in brackets). This group consists of Construction (*M* = 3.42), Airline (*M* = 3.45), Engineering Services (*M* = 3.45), Energy (*M* = 3.45), GNFP (*M* = 3.45), Pharmaceuticals *(M* = 3.49), Automotive (*M* = 3.55), Hi-Tech Manufacturing (*M* = 3.60), and Telecoms (*M* = 3.62). The group has competency values and profiles that are so similar to each other as to it suggest a

commonality and universality of leadership competencies across these industries. Notwithstanding any specific or technical knowledge required for a post, a new leader vacancy in one of these industries could be filled from one of the others in the Groups and the required leadership competency profile is likely to be met. One would not choose a candidate from either the Insurance (M = 3.20) or All-banking (M = 3.33) industries, and a Chemicals candidate (M = 3.68) is likely to exceed the general specification.

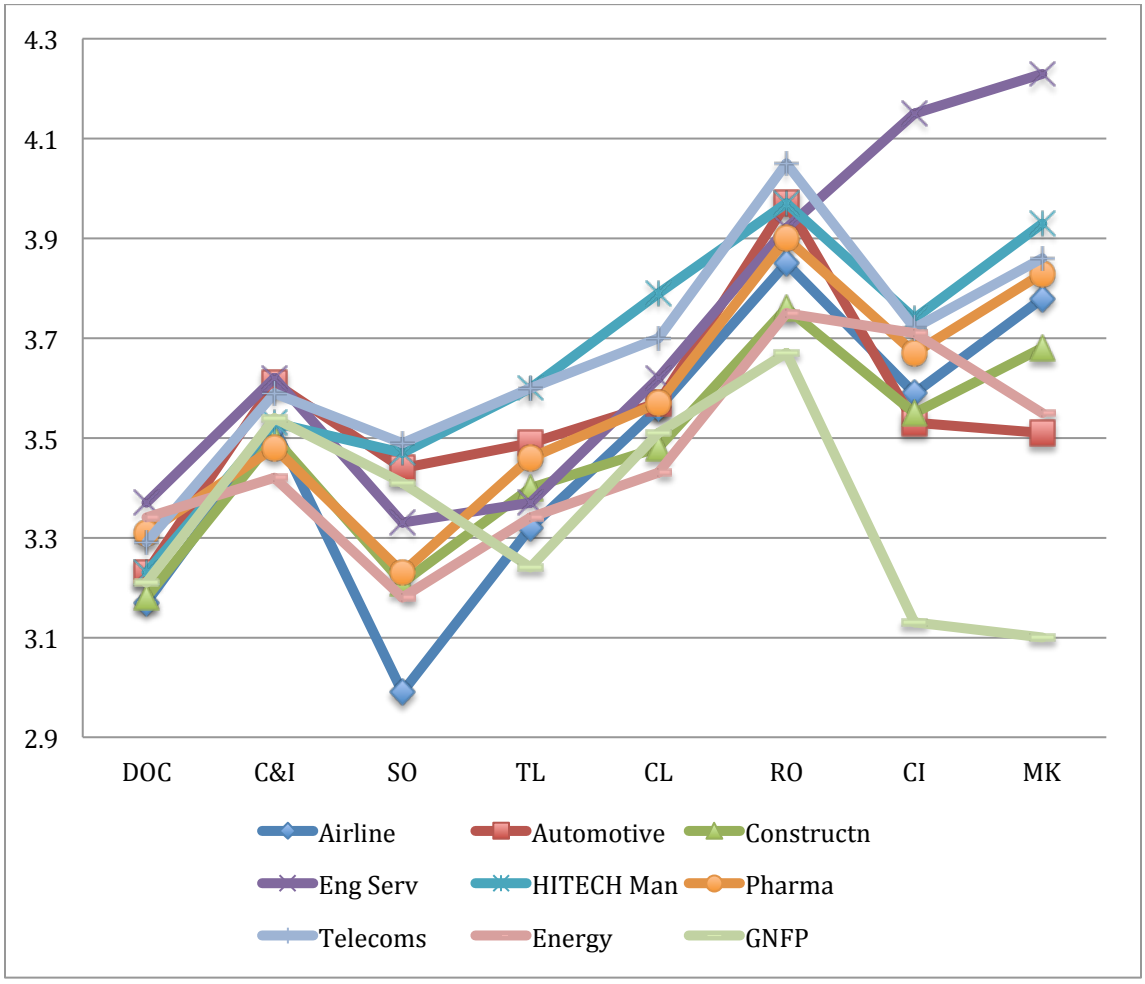

Figure 17 Group 1 and 2 combined.

The two-situational/contextual competencies provide some interesting information from this industrial analysis. It is noteworthy how poorly the 'Government and Not-For-Profit' (GNFP) group score on these two rankings. It shows GNFP maybe more focused on internal matters with little regard, knowledge, or skills in the outside business environment. The GNFP scores on Market Knowledge (M = 3.10) and Customer Impact (M = 3.12) were much lower by far than any other industry. In the two industry groupings discussed earlier the variation across the situational /contextual competencies exceeded that across the other competencies (Figure 15 and 16). In Chapter 2 in the discussion on contingency theory, it was recognized that a high degree of situational variability exists across the different industry business environments. Yukl (2013) stated that the leaders might not have full control of the team or organizational performance due to contingent business environment elements. The current 2015 oil price crash to 50% of its prior value in late 2014 for the Energy industry would an example.

Plotting the profile of each individual competency across the different industries one can examine the ranking of scores. The shape of the competency profile for industries indicates a similar overall pattern to that found in the analysis of the executive functions. The pattern suggests that some competencies are more developed by leaders across the majority of the industries than others. The number of significant differences across the industries in terms of the eight competencies as a percentage of the total does not provide much additional information. The difference values are in the range of 26% to 30% with the exception of strategic orientation, which at 50% is significantly different than the other competencies. Strategic Orientation appears the least important criterion

(M = 3.26) and is the lowliest ranked. Conversely, the highest ranked and most developed of the competencies is Results Orientation (M = 3.86) once more suggesting that internally to firms and from an outside perspective this is the most important leadership attribute by far. When one looks at the individual competency profiles, a definite pattern of separation occurs. Strategic Orientation (M = 3.26), Developing Organizational Capacity (M = 3.25), and Team Leadership (M = 3.40) are the lowest profiles. Results Orientation (M = 3.86), Market Knowledge (M = 3.70), and Customer Impact (M = 3.62) are at the top of the range. The only exception is GNFP, which is very low in the latter two contextual competences (M = 3.10).

One area that needs to be addressed is the technical and specific knowledge, skills abilities (KSAs) and experience that might be required to function in a new executive leadership role or as CEO. Researchers have found that different industries will have their technological characteristics, economic context, marketplace and industrial environment in which the leader will have to operate (Rajagopalan et al., 2001). However, Yukl (2013) stated that leaders could gain the necessary technical expertise, industry contacts, and other specific sector information over time. This study shows that the leadership competency component may well readily transfer universally across industries (albeit some more easily than others). For the executive with the requisite leadership competencies whether he has or can acquire the technical or specific knowledge base may be the deciding factor in his or her success or failure in the new role. This was identified as a major concern in the literature study.

One solution to this problem recommended by George (2008) is to create a robust management development process that focuses on developing leaders before they reach top leadership positions. This concept, coupled with the selection of candidates from the Outstanding leaders group (see comments later), would meet the needs of the industry specific knowledge and technical experience. Some well known and successful companies that use this technique are Johnson & Johnson, General Electric, and Exxon to name a few. An investigation into CEO succession during the period 1993 to 2009 covering 528 firms found the industrial sector role of Information Technology with the most cross hiring between industries. This was followed close behind by the Financial Sector (Jalal & Prezas, 2012).

RQ3: Outstanding Leaders Discussion

Are the competencies for Outstanding leaders across all industries similar to those of specific component industries?

The Outstanding database represents those leaders whose competency scores are between one-half and three-quarters of a ranking point above the average of the whole database. The Outstanding database represents 16% of the whole database. The analysis in Chapter 4 found the competency profiles for the group of component industries consisting of O Banking, O Manufacturing, and O Human Resource are virtually identical with that of the overall profile of the Outstanding database. Only 17% of the mean group comparisons showed significant differences and these all involved the O Human Resources group of leaders. If one focuses on the six core competencies only, then these significant differences are reduced to less than 10%. This low mean group

percentage provides strong evidence that for the Outstanding group of leaders the leadership functional roles are interchangeable. The core competency results suggest the roles are actually universal and common across all industries, corporations, and cultures, and the competency profiles universal.

In Chapter 2 research showed that the prototypes for leadership effectiveness vary between the executive levels in top senior management, and the lower middle management and supervisory levels (Lord and Maher, 1991; Den Hartog et al., 1999). The research would appear consistent with the significant differences between the rankings of the leaders in the Outstanding database and those shown for the executive functional roles and the industrial sector group competency profiles. A composite graph of the entire competency profile rankings highlights this difference (Figure 18). Researchers found implicit leadership theory and the prototypes held by the followers would differ depending on the hierarchical position of the leader (Den Hartog et al., 1998). This research study found that Outstanding leaders do indeed have a superior profile to that of the 'average' leader for the whole database. However, the relative importance of each competency in the profiles for leaders represented by both databases is virtually identical. This matching would suggest followers' prototypes of leaders arising from implicit leadership theory are quite similar and only the level or ranking of the expertise in the competency is different.

The pattern of the profiles for each competency across the categories in this Outstanding group suggests a clear and definitive hierarchy of competency development. Furthermore, the ranking across the core competencies is common and universal across

the Outstanding functions with the mean levels consistent for each group. For the Outstanding functional group Developing Organizational Capability is the lowest (*M* = 3.79), followed by Strategic Orientation (*M* = 3.89), then Team Leadership (*M* = 3.96), and Market Knowledge (M = 4.08). Again the top-ranked competency is Results Orientation (*M* = 4.54), followed by Change Leadership (*M* = 4.30), Customer Impact (*M* = 4.17) and Collaborating and Influencing (*M* = 4.11). The O HR function profile is statistically different from the other functions particularly in the two-situational/contextual competencies of market knowledge and customer impact. This result for O HR is not unexpected as the primary focus of HR is likely inside the firm rather than outside competitors and the business-orientated environment. Results Orientation was found by Spencer and Spencer (1993) in their research to be the "single most frequent distinguishing characteristic of superior technical contributors" (p. 162).

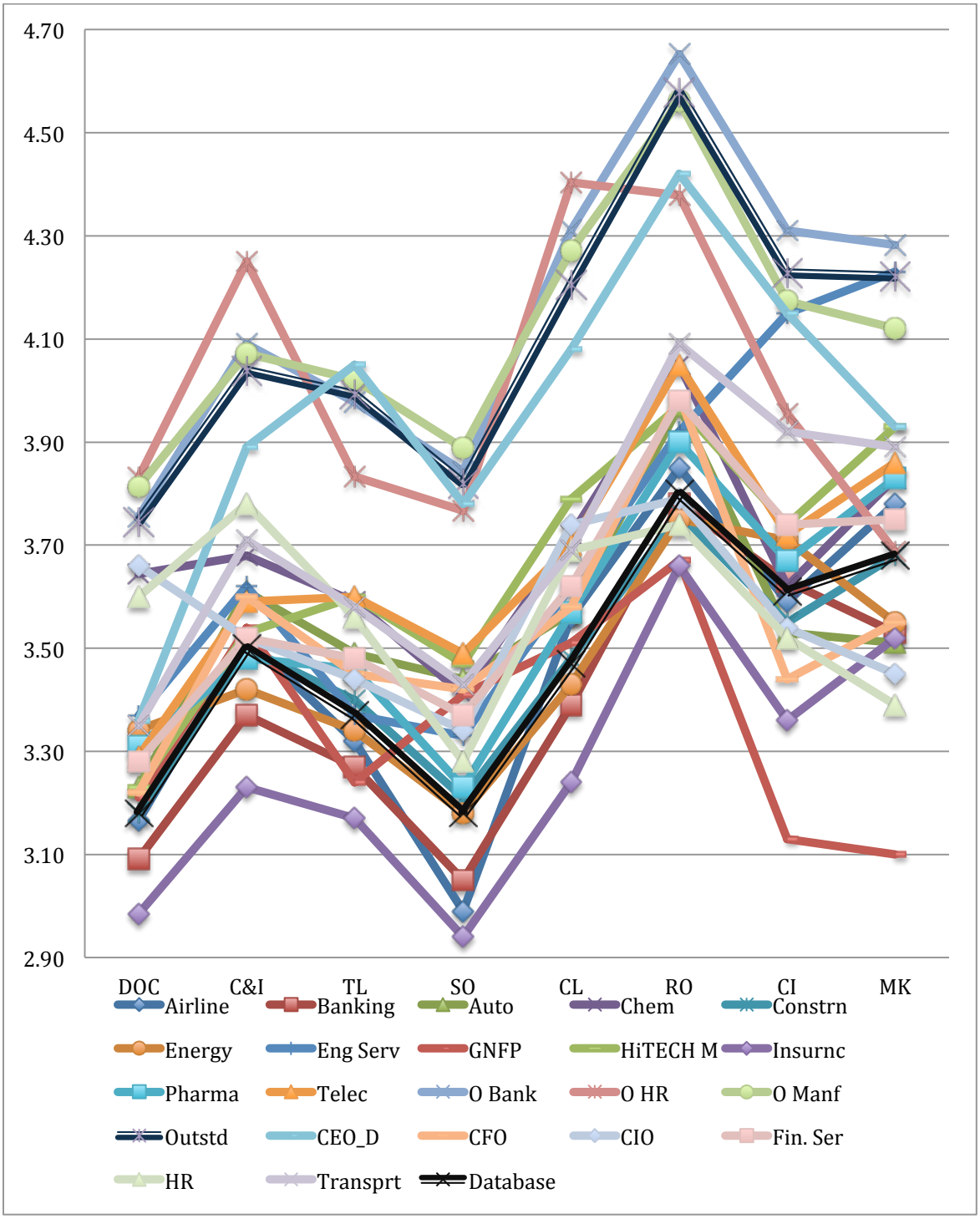

Figure 18. Total database.

In Chapter 3 the logic and structure of the EZ competency scales was discussed (Figure 1). One saw that transformational competence equates to outstanding behaviors and performance at the executive level with scores in the range 4+. In Chapter 2 the relationship between transformational leadership and leadership effectiveness was found to be an overall correlation of .44 (Judge & Piccolo, 2004). The leaders who use transformational leadership tend to motivate their followers to perform at a high level (Bono & Judge, 2003). Transformational leadership significantly impacts the teams and organizations performance (Colbert et al., 2008). These research results help explain why Results Orientation is the top ranking and most highly developed competency among all the leaders in the database that's formed part of this research study. The GLOBE project found Performance Orientation reflects "the extent to which a community encourages and rewards innovation, high standards, and performance improvement" (House et al., 2004, p. 239). As discussed earlier, of all the GLOBE cultural dimensions Performance Orientation values ranked the highest (M = 5.94, range 4.92 - 6.58 on a scale of 1-7). This high ranking is consistent with the conclusion in this global leadership competency study. The GLOBE project found performance orientation was universal as a "cultural driver of all global leadership expectations" (Dorfman et al., 2012, p. 506) and was positively related to the other CLT's. GLOBE project researchers found those who strive for continuous excellence and set high standards are effective leaders. In this dissertation, across the whole of the archival database, Results Orientation was pre-eminent and scored the highest ranking consistently among the 16,000 leaders. The 2685 Outstanding

leaders ranked Results Orientation the highest all of the competencies by a large factor (Figure 13).

RQ4: CEO Selection and Outstanding Leaders Discussion

Does a firm benefit from selecting its next CEO from within its industry or should it look outside for a CEO from a different industry?

Analysis of the executive corporate functional roles in Chapter 4 showed the competency profile of the CEO_Dir to be significantly different from other members of the executive team. The differences were great enough to suggest that the general members of the executive team, as derived from the database sample, do not have the level of competency development to step up directly into the CEO_Dir role. This takes no account of any technical or special knowledge that may be required for the CEO_Dir. It means only that other members of the corporate executive team do not have the leadership capability as assessed in the competency model (Figure 8).

However, during the analysis of the Outstanding leaders a similarity was noted between the CEO_Dir competency profile and those of the Outstanding leader's competency profiles. The CEO_Dir profile information was therefore added to those being examined (Table 11). The findings showed that if one ignores several outliers (O HR and DOC) the CEO_Dir competency profile meshes with the Outstanding group with no apparent significant differences present (Figure 14). One can conclude from this additional analysis that while the CEO_Dir cannot be directly sourced internally or externally from the general level of executive corporate team members, Outstanding leaders would be a good CEO competency fit. The fact that the Outstanding leaders

profile is such a good fit means almost any internal or external candidate assessed at this level has the necessary leadership competencies and profile to undertake a CEO role with few exceptions.

During 2012, 15% of the world's 2,500 largest public companies made a CEO change (Favaro, Karisson, & Neilson, 2013). The CEOs hired from different industries was about equal to the number of CEOs selected from the same industry during the period 1993 to 2009 (Jalal & Perzas, 2012). The authors also found that companies who hire from the same industry sees post succession stock performance improvement. The stock market reaction to the CEO change for those firms who employ outside CEOs is one of stock performance improvement in later years. The market perceptional difference is that for stable firms insiders do not bring significant change but maintain more the status quo. The firms who employ new CEOs from an outside industry often need a catalyst for change and these firms subsequently experience better future growth, lower expenditure, and greater profitability. This outcome was confirmed in another study by Citrin and Ogden (2010) who found insiders were more successful if the firm was doing well: outsiders were better, however when the firm was in crisis. The results of this dissertation study suggest that both types of replacement CEO can have the necessary leadership competencies to be successful leaders. The differences between insiders and outsiders for the CEO position, therefore, must lie elsewhere and not with their capacity and ability to lead. Citrin and Ogden suggested that these failures might be because insiders are captive of the internal culture that lead to the problems in the first place, but outsiders bring a fresh perspective and the freedom to act.

RQ5: Correlation and Regression Discussion

Is there a relationship among the six core leadership competencies in the search firm's competency model?

The strength of a relationship, as measured by the Pearson *r,* relates to the degree to which one variable tends to vary with another (Coolican, 2009). The correlations in Chapter 4 between all of the core competencies were statistically significant for both the Whole database and the Outstanding database. The moderate-to-strong and the strong positive relationships seen in the Whole database analysis between the core competencies suggest that they are all closely correlated. The coefficient of determination (r^2) is a measure of estimate variance. It is a measure of the proportion of variability in one core competency that is determined from a relationship with another core competency. Tables 19 and Table 20 show the r^2 values for the databases. The values of the variance estimates mostly exceed $r^2 = 0.25$ for the core competencies indicating a large correlation and a high degree of predictability. For example, 43% of the variability in Results Orientation can be predicted from its relationship with Change Leadership in the Whole database.

Table 19

Whole database Competency Correlations, r^2 -Variance Estimates

	DOC	CI	TL	SO	CL	RO
DOC		25%	46%	23%	32%	25%
CI			26%	17%	23%	15%
TL				23%	34%	29%
SO					39%	32%
CL						43%
RO						

Table 20

Outstanding Competency Correlations, r^2 -Variance Estimates

	DOC	CI	TL	CL	SO	RO
DOC		12%	34%	20%	12%	12%
CI			13%	13%	9%	6%
TL				26%	15%	18%
SO					28%	22%
CL						30%
RO						

The ability to use one core competency to make an accurate prediction about another competency (Gravetter & Wallnau, 2007) could prove extremely useful in a corporate environment for occupational psychologists. For example, in the selection process to fill vacancies for leadership candidates these strong correlations between the various competencies could be used to predict certain outcomes regarding other competencies. The correlation results could also be used to crosscheck the reliability of competency scores during behavioral event interviewing.

The multiple regressions were run using each competency as a criterion variable to be able to predict statistically its value using the known correlations between the other competency variables (Coolican, 2009). The above results indicate that there are strong individual correlations between the competencies. The multiple regression equation for Results Orientation, for example, shows that:

RO = 1.07 +. 02CI + .17TL + .04DOC + .37CL + .22SO

If one selects Financial Services from the executive profiles, then the equation gives an RO value of $M = 3.94$, the actual value was $M = 3.98$. If one had selected Human Resources, then the predicted RO is $M = 3.99$, and the actual value was $M = 3.74$.

The multiple regression analysis produced a multiple correlation coefficient (R), which shows the overall correlation of the predictor variable with the criterion variable. The R^2 values in Table 20 show the amount of variance in the criterion variable from all the predictor variables taken together. The R^2 numbers indicate that for four of the six core competencies (DOC, TL, CL, RO) the predictor variables account for approximately half the total variance in the criterion variable for the Whole database of leaders. Using the formula, $f^2 = R^2 / (1 - R^2)$ to estimate effect size for the multiple regressions (Coolican, 2009, p. 467), results in $f^2 = .02, .15$ and $.35$ representing small, medium and large effects respectively. The calculated core competency scores were DOC = 1.11, C&I = 0.55, TL = 1.28, SO = 0.87, CL = 1.47, and RO = 1.06 indicate that for the Whole database all effect sizes were large. In the Outstanding database (Table 20) the R^2 values indicates that for most of the six core competencies the predictor variables account for well between a third and a half of the total variance in the criterion variable. This variance contribution is smaller than the values found in the Whole database. The calculated core competency scores DOC = 0.69, C&I = 0.24, TL = 0.83, SO = 0.55, CL = 0.91, and RO = 0.60 indicate that with the exception of C&I all effect sizes were large in the Outstanding database multiple regressions.

In the practitioner world the regression analysis would allow one to make a reasonable prediction of competencies not evaluated or assessed if others were available.

The beta values or coefficients for each competency give a strong indication of how powerfully each of the other competencies influences a particular criterion competency. Practitioners who use competency models and have utilized knowledge, skills, and ability (KSAs) dimensions in employee selection and job assessment are aware that KSAs are interactive (Hollenbeck, McCall Jr., & Silzer, 2006). It was expected then that competences within the competency model are highly correlated with each other, the strength and degree of the interaction, however, is still somewhat surprising.

Top CEOs personality has been shown to affect the firm's top management team group dynamics. In turn it has been found that this is directly related to the organization's performance (Peterson et al., 2003; Eisenhardt & Zbaracki, 1992). Personality variables were shown to predict a large variety of individual and team performance and effectiveness parameters (Hough & Oswald, 2008). In the earlier discussion one saw that leaders use a differentially small set of skills and core competencies that define their particular effectiveness. What was unknown was how these skills and competencies combine other than it might be linked to the underlying personality characteristics of the leader (Higgs, 2001)? The core competencies here, in a similar way to the results of the GLOBE project, provide a proven and internally consistent set of correlated and linked leader competencies. The leadership competencies are valid universally across industry and executive functional roles differing only in their degree of development.

Limitations of the Study

The study is valid as the evidence supports the interpretations of the data and the data is accurate. The use of the data in deriving the conclusions is both logical and

appropriate, and it measures what it purports to measure (Rudestam & Newton, 2007). The BEI technique was identified previously as a potential limitation introducing a small degree of uncertainty into the quantitative research. However, on the execution of the study and working with the database in Chapter 4 and 5, it does not appear that this uncertainty should be of concern. The reason for the lack of concern is the nature, type, and volume of the data, its internal consistency and the subsequent results obtained. With such a large sample size and the consistency of the results, the study is considered externally valid. One is able to confidently expand the results to include the leader population under study (Creswell, 2003). The BEI technique is a content valid assessment method of measuring an individual's actual behavior in a post showing strong reliability and validity in predicting an employee's future performance (Vathanophas & Thai-ngam, 2007).

Some limitations to the BEI procedure will remain. The BEI approach in an individual company in isolation may generate a set of competencies that are apparently unique to that job, company, or organization. The problem comes more from languages and cultures used within organizations to communicate ideas rather than any changes in generic competencies for a particular job (McClelland, 1998). The fact that this was a global and colossal database of 300 companies indicates that this limitation is not likely a problem. One justification for the use of the BEI technique is its predictability of future job performance (McClelland, 1998). Such a future prediction relies on a set of competencies that were derived from supposed performance in today's environment. The environment may, however, not be the same in the future. The BEI procedure for

evaluating leaders competencies is highly time involved and, therefore, a costly process. This expense will limit its use of on widespread basis and particularly at the lower levels in organizations. Overall, the BEI and the EZI management assessment procedure and the process is considered trustworthy and reliable in the manner it has been adopted and exercised by the firm in generating the database over the last thirteen years.

The study focuses on managerial and leadership competencies only and does not necessarily involve any in-depth investigation into the technical or special KSAs that might be involved in the leader's role. This lack of specific and technical KSAs may not be as big a limitation as it at first seems. The BEI and the assessment process focus on the leader in his current role. The technical and special KSAs associated with that position are included obliquely in the overall competency assessment as they form an integral part of an individual's current activity (Bartram, 2004; Spencer & Spencer 1993).

Recommendations for Future Research

There were a number of areas identified for possible future study during the research. The primarily focus in the study was on the six core competencies and two situation/contextual competencies. Expanding the analysis out to include other competences included in the database would prove interesting and likely beneficial. This expansion could include more competencies in the area of situational and contextual contingency theory including those involving the business marketplace and outside environment.

The possibility of a more detailed examination into combining the various leadership core competencies and situational/contextual competencies to determine

interactions and relationships would be an area for future review. One example would be to see whether the strong correlations that exist within the core competencies could be extended out to other areas of investigation. The results of the correlation and multiple regression analysis suggest it might be worth exploring more relationships with complex algorithms. This algorithm approach might aid criterion prediction based on a more diverse set of competencies. The competency model could be expanded to include the interactions between competencies, situations, and outcomes (Hollenbeck, McCall Jr., & Silzer, 2006). Given the strength of the Results Orientation competency for all the leaders across the database perhaps the desired leadership outcomes could be extended beyond those of the purely financial results in quarterly earnings? Several additional studies could be performed to explore how the Outstanding database differs from the Whole database, and how other groups and functions compare with this study's results. One could look at other available data subsets such as gender and nationality to compare profiles and ranking of the results.

Implications for Social Change

A review of the available literature indicated that there is a problem with the way organizations, and their boards chose leaders to run their companies (George, 2008). In Chapter 1 it was noted that the Center for Creative Leadership found that two out of every five new CEOs fail in the first 18 months of taking on the role (Ciampa, 2005). The primary cause is using the wrong criteria for choosing new leaders (George, 2008). The net result of these poor leadership choices at the CEO and executive level in organizations is the subsequent loss of value in these companies accompanied by

hardship for all its stakeholders. Poor leadership choices are not limited to just the senior levels of firms but occur across all the management levels. The number of managers who are incompetent in everyday corporate life is stated to range from 30% to 50% (Hogan & Kaiser, 2005). The number of leaders who derail is of the order of 50% (Hogan & Kaiser, 2008). This failure inevitably leads to the lives of many employees being affected and undue psychological, physiological, and financial harm experienced with the suffering of their families that often follows.

The results of this study will help inform those parties involved in the candidate assessment and selection process for new leadership positions whether it is at the CEO level or lower down in the organization's executive leadership chain. The results will help bridge the gap recently identified in a Society of Industrial Organizational Psychology survey (Cober et al., 2009b). This survey suggested I-O psychologists use more evidence-based practitioner data for academic and scientific research into issues such as leadership selection processes. The conclusions of this dissertation study will be useable by I/O psychology professionals in the field. It will aid practitioners to assess and advise on the selection of leaders who are more likely to be effective and go on to successfully lead their organizations.

The potential impact on social change from this research is positive. The impact of this study will come from a positive effect on company employees, shareholders, and all business stakeholders in the marketplace if better leaders are selected and retained (Higgs 2001). If the poor leadership choice that lead to failures are reduced the negative social changes such as firms' poor performance and subsequent financial problems can be

reduced. The diminished negative social changes will in turn lead to fewer people losing jobs, and more people retaining their savings and growing safer retirement funds. The knock-on effect on the general economy will be positive, and the associated negative ripple effects on the macro economy avoided.

Recommendations for Practices

The results show that selection of new CEOs from the companies executive group is unlikely to meet the competency profile necessary for the job unless those leaders are already at the Outstanding competency level. The choice of a new CEO from inside or outside the company is more likely based on the stability of the firm or whether it is in crisis (Jalal & Perzas, 2012). CEO's and executive leaders with an Outstanding competency profile are the best candidates and have the highest Results Orientation, Market Knowledge, and Customer Impact focus in the rankings and are most likely to be successful.

In a survey quoted in Chapter 2 of 1380 HR directors of large US firms there were no succession plans in place for CEO replacement (Bower, 2007). For those companies who have no plans for the CEO or executive leader succession but want to select an internal candidate this is a problem. The adoption of an internal competency-based model and behavioral event interviewing process offers these companies a potential solution. Introduction of a planning process would also avoid the tendency to promote good technical people into leadership positions without a demonstrated talent and competency base for CEO leadership (Hogan & Kaiser, 2008). It would, for example, be feasible to interview the senior managers and subordinates on a 360° basis surrounding the job post

to elicit the prototypes necessary to construct the competency profile for the potentially vacant leadership role. One would also be able to look at the background, knowledge, and experience of the specific and technical aspects of the job as well as the necessary leadership attributes and competency profile. By collating and constructing these profiles and aligning them with the industry and executive functional profiles seen here as benchmarks one would be able to determine the selection criteria for candidates. McClelland (1998) believed that because competencies are fundamentally behavioral they could be leant through training and development. In addition, therefore, the training and development process could be engineered to instill in the candidates creativity and freedom of spirit to help avoid the cultural trap often suffered by promoted insiders. Potential internal candidates could be assessed continuously, along with attendance at training and development programs. These programs could be constructed to develop their KSA's and the competencies necessary to reach the levels shown in the Outstanding profile and competency rankings (Fernandez-Araoz et al., 2011). If this process is not feasible the next best choice might be leader selection from the pool of outside candidates. If such candidates were chosen from the same or similar group industries it would reduce the learning/development time for technical or specific KSAs. The profiles in this study in the industrial, executive, and Outstanding database analysis indicate that the leadership competencies profiles are generic and universal. The profiles, therefore, should be usable in any executive leader selection process as benchmarks for most industries and executive functions including that of a CEO.

Summary

The main purpose of the study was to examine a large evidence-based practitioner archival database to investigate whether there is a commonality, universality, and transferability of leadership competencies between senior roles that determine superior job performance. The database includes over 300 companies and institutions worldwide and 16,000 global leaders assessments. The results of the study show that executive leaders at the senior level do have a common and universal competency profile. The shape, pattern, and ranking of the competency profile across the global database for executives (at both the general and Outstanding levels) and for many different industries are very similar. The analysis of the functional executive roles shows a commonality of profiles and transferability across the disciplines studied with the exception of the CEO_Dir role. It is evident that a new CEO_Dir cannot be sourced directly from the other executive functions based on leadership competencies. The profiles of leaders of the 12 industries, when compared with each other show some grouping characteristics. Broadly the industries of Airline, Automotive, Construction, Engineering Services, HiTech Manufacturing, and Pharmaceuticals have similar profiles, as do Energy, GNFP (excluding CI and MK), and Telecoms. If sourcing leaders from outside industries as say change agents then first look at an industry from a closer competency group. The two lowest ranked and least favored, as sources of leaders are the Insurance and All Banking industries.

The database of Outstanding leaders suggests a strong universality and interchangeability of leaders at this higher-ranking level based on leadership

competencies regardless of discipline and industry. The Outstanding profile also shows a similarity with the CEO_Dir competency profile such that Outstanding leaders group from whichever discipline and industry are a good source of high performing candidates. The rankings and profile of the six core leadership competencies and the two-situational/contextual competencies are similar across discipline roles and industrial sectors. Results Orientation is by far the strongest developed of the competencies for all leaders with Market Knowledge and Customer Impact (the situational/contextual competencies) also highly ranked along with Change Leadership. Strategic orientation and Developing Organizational capability are consistently the lowest ranked.

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Appendix A: Letter Agreement for Use of Orchestra Management Appraisal Database

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EgonZehnder

Reference: John Slade, Doctoral student;- Bachelor to PhD Psychology-Organizational Psychology, Walden University, A00070721.

To Whom It May Concern 12/30/2012

Please be advised that the above graduate student has been given permission to use the Orchestra Management Appraisal Database, Candidate profile and assessment data, and all that is confidential and proprietary information related to the operations and procedures of Egon Zehnder International.

This is subject to the Confidential Agreement signed between John Slade and Egon Zehnder International on the 30th December 2012.

The information is provided for academic research purposes only no confidential information shall be disclosed to anyone other than John Slade's academic institution Walden University. It is our understanding that this information will be used in the pursuance of his doctorial studies and dissertation.

EgonZehnder

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Appendix B: Confidentiality Agreement

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EgonZehnder

Confidential Disclosure Agreement:

This Agreement is entered into this **29th day of November, 2012** by and between **John Michael Slade** (hereinafter "Recipient") and **Egon Zehnder International**, with offices at **13355 Noel Road, Suite 2018, Dallas, TX 75240** (hereinafter "Discloser").

WHEREAS Discloser possesses certain ideas and information relating to **Orchestra, Management Appraisal Database, Candidate profile and assessment data, and all information related to the operations and procedures of Egon Zehnder International** that is confidential and proprietary to Discloser (hereinafter "Confidential Information"); and

WHEREAS the Recipient is willing to receive disclosure of the Confidential Information pursuant to the terms of this Agreement for the purpose of academic research;

NOW THEREFORE, in consideration for the mutual undertakings of the Discloser and the Recipient under this Agreement, the parties agree as follows:

1. Disclosure. Discloser agrees to disclose, and Receiver agrees to receive the Confidential Information.

2. Confidentiality.

2.1 No Use. Recipient agrees not to use the Confidential Information in any way, or to manufacture or test any product embodying Confidential Information, except for the purpose set forth above.

2.2 No Disclosure. Recipient agrees to use its best efforts to prevent and protect the Confidential Information, or any part thereof, from disclosure to any person other than Recipient's **academic institution Walden University** having a need for disclosure in connection with Recipient's authorized use of the Confidential Information.

2.3 Protection of Secrecy. Recipient agrees to take all steps reasonably necessary to protect the secrecy of the Confidential Information, and to prevent the Confidential Information from falling into the public domain or into the possession of unauthorized persons.

3. Limits on Confidential Information. Confidential Information shall not be deemed proprietary and the Recipient shall have no obligation with respect to such information where the information:

(a) was known to Recipient prior to receiving any of the Confidential Information from Discloser;

(b) has become publicly known through no wrongful act of Recipient;

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(c) was received by Recipient without breach of this Agreement from a third party without restriction as to the use and disclosure of the information;

(d) was independently developed by Recipient without use of the Confidential Information; or

(e) was ordered to be publicly released by the requirement of a government agency.

4. Ownership of Confidential Information. Recipient agrees that all Confidential Information shall remain the property of Discloser, and that Discloser may use such Confidential Information for any purpose without obligation to Recipient. Nothing contained herein shall be construed as granting or implying any transfer of rights to Recipient in the Confidential Information, or any patents or other intellectual property protecting or relating to the Confidential Information.

5. Term and Termination. The obligations of this Agreement shall be continuing until the Confidential Information disclosed to Recipient is no longer confidential.

6. Survival of Rights and Obligations. This Agreement shall be binding upon, inure to the benefit of, and be enforceable by (a) Discloser, its successors, and assigns; and (b) Recipient, its successors and assigns.

IN WITNESS WHEREOF, the parties have executed this agreement effective as of the date first written above.

DISCLOSER (_____)

Signed: C. Singleton Slade
Print Name: C. SINGLETON SLADE
Title: GLOBAL HEAD, ENERGY
Date: 12/1/2012

RECIPIENT (John Slade)

Signed: _____
Print Name: John Slade
Title: Graduate Student
Date: 11/30/2012