

Original Paper

The Development of an Instrument for Measuring Role

Perceptions of U.S. Chief Executive Officers

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Abstract

This paper presents the development and initial validation of an instrument intended to measure Chief Executive Officers' (CEOs) perceptions about their roles. Additionally, the instrument was used to gather data about how much time CEOs spent in six categories of roles. This research describes instrument development using preliminary validity assessments with Exploratory Factor Analysis (EFA). Constant comparative analysis was also utilized to group 31 roles of CEOs into six categories of roles for purposes of requesting time estimates. It is concluded there is good preliminary evidence for emerging factor structures however more data needs to be collected from CEOs in locations other than the United States to support further development of a predictable instrument.

Keywords

chief executive officers, CEOs, role of CEO, instrument development, factor analysis

1. Introduction

Chief Executive Officers (CEOs) serve a critical role in business today. Some U.S. CEOs lead companies with economies larger than small countries, and the decisions they make may impact the United States' and global economies for many years in the future (Boatright, 2009; Edersheim, 2007; Cunningham, Lynham, & Weatherly, 2006). Research on the role of CEO is outdated and we rely on theories dating back to the 1970's and 1980's to help us understand this important role. Such theories do not consider the complexity and globalization of business as it is conducted today (Breene, Nunes, & Shill, 2007; Hales, 1986). Additionally, instruments developed during the 1970's and 1980's to collect data on CEO role perceptions do not reflect major shifts in the global economy or the drastic changes that have occurred in the way that work is done today.

CEOs serve many stakeholders including, but not limited to, the Board of Directors, employees, consumers, and the general public. In the United States CEOs are frequently criticized for large salaries that do reflect the success (or failure) of the organizations they lead. Because of the impact CEOs may

have on their stakeholders, organizations, and the United States' and global economies, it is important to understand what the CEO does and should be doing at work.

Role perception is important for understanding exactly what is done at work (Biddle & Thomas, 1966). Furthermore, how a CEO views the value of specific roles is likely to influence how much time they spend in that role. The ability of CEOs to perform effectively and efficiently may have significant impacts on the organizations they lead and their stakeholders, yet management research has not focused on the role of CEO for several decades (Edersheim, 2007; Hales, 1986; Hart & Quinn, 1993; Lafley, 2009; Matsumura & Shin, 2005; Mintzberg, 1973). In a 2003 interview Peter Drucker commented that "the role of CEO needed to be the next focus of management research" (Edersheim, 2007, p. 40).

This paper describes the development and validation of a survey instrument designed to measure the CEO's perception of their role and to gather data about how CEOs allocate their time to six categories of roles. As existing instruments are outdated and not supported with validity and reliability testing, this instrument has potential for adding value to the study of CEOs in the future.

2. Method

2.1 Problem Statement and Research Question

Research on the role of CEO is outdated and conflicted and how CEOs spend their time is a construct that is seldom, if ever, studied. Prior studies based on structured observation attempted to create a theory about the role of CEO however, structured observation as an empirical research method is criticized for its small sample sizes, weak reliability and validity, inconsistency in coding, narrow perspectives, and lack of theory supporting the research method (Martinko & Gardner, 1985). In prior studies the following constructs related to CEO roles were measured: time in Mintzberg's roles (Whitely, 1978), impact public interviews and speeches have on CEO roles (Steiner, Kunin & Kunin, 1981), and the perceptions of Mintzberg's 10 roles on international CEOs and on CEOs in academic and public libraries (Carter, 1982; Pugliese, 1985). The purpose for development of an instrument about CEO role perception was to survey CEOs about their roles and how they spend their time. The purpose of this research is to answer the following research question: can a survey instrument be developed that measures the role of CEO and how CEOs spend their time?

2.2 Theoretical Framework

A gap in the research and literature on the role of CEO created the need for this research project. Theories supporting the role of CEO include theories of leadership and Mintzberg's seminal research on what managers, and specifically CEOs, do at work. Theories of leadership are important because it is believed that the leadership role may be the most important role of a CEO (Goleman, Boyatzis & McKee, 2002; Mintzberg, 1973; Steiner, et al., 1981). Included in these theories are strategic leadership theory, transformational leadership theory, theories of responsible leadership for performance, and Mintzberg's theory of the role of CEO. These theories are described in more detail in the following

section.

2.2.1 Leadership Theories

Strategic leadership theory is known for its emphasis on the ability of leaders to change, *adaptive capacity* (Cummings & Worley, 2009) and their ability to learn, *absorptive capacity*. Clearly the ability to change in a constantly changing business environment is critical to the success of a CEO. Absorptive capacity or the ability to learn from small failures and the ability to engage in *double-loop learning* are important for today's CEO (Argyris & Schon, 1978; Boal & Hoojberg, 2001). Transformational leadership theory which stresses the development of all members of an organization into leadership roles along with servant leadership, evolved from the theory of strategic leadership (Bass, 1990). Additional theories such as complexity theory and cognitive complexity emerged from transformational leadership theory (Hart & Quinn, 1993; Zaccaro, 2001). Role conflict may evolve from theories that require both exceptional firm performance and selflessness (Lynham, 1998). Theories of responsible leadership for performance focus on both performance of the firm and selfish needs of leaders (Antonioni, 2003; Block, 1993; Lynham, 1998; Zaccaro, 2001). Theories of leadership have failed to address the specific roles of the CEO however Mintzberg's work was the start of the development of a theory on the role of CEO.

Mintzberg's research is the result of his interest in what his father did at work. Mintzberg hoped to understand what it was that managers actually did while at work by observing five CEOs performing their jobs. From his research Mintzberg identified ten *timeless* roles of the CEO (Mintzberg, 1968, 1973). The informational roles he identified included monitor, disseminator, and spokesperson. The interpersonal roles included the role of leader. The decision making roles included entrepreneur, disturbance handler, resource allocator, and negotiator. Finally, Mintzberg identified two diplomacy roles including figurehead and liaison. Mintzberg's research was extended throughout the 1980's by several researchers trying to confirm the ten roles. An attempt to continue and refine his theory seemed to stop abruptly in the 1990's while research on CEOs shifted focus to research on CEO compensation and CEO succession plans.

There has not been a theory introduced to update Mintzberg's theory or integrate a complete set of roles describing an effective executive (Hart & Quinn, 1993; Howe, 1988; Mintzberg, 1973, 2009; Snyder & Wheelen, 1981). Peter Drucker seemed to be obsessed during the last few years of his life by the role of CEO (Edersheim, 2007). His comment that "the CEO role needed to be the next focus of management research" succinctly describes the need to continue research on the role of CEO and to understand how CEOs spend their time (Edersheim, 2007, p. 40). To further empirical research on the role of CEO a valid and reliable instrument is necessary.

This research describes the development and validation of an instrument to measure CEO role perception. The instrument was developed as part of a research study to understand the role of CEO, how CEOs estimate they spend their time in six categories of roles, and to argue that theory on the role

of CEO needs refinement and updating. This study used a sample of 1,202 CEOs from organizations in the United States to report the validity and reliability of the instrument. The sample was obtained through professional relationships and two databases of United States companies containing CEO e-mail addresses. The accessible population comprised 28,018 possible study participants. The survey was sent via e-mail. A total of 1,768 surveys were started, 1,237 were completed, and 1,202 were considered usable, for a total response rate of 4.29%. This response rate is considered acceptable for e-mailed surveys (Dillman, Smyth, & Christian, 2009).

2.3 Instrument Foundations

The work of several researchers informed the development of the initial instrument and the roles described as CEO roles. Henry Mintzberg (1968; 1973) deduced ten roles of the CEO as a result of his structured observation research. Initially 31 roles of the CEO were identified in the literature. These 31 roles are summarized in Table 1.

Table 1. 31 CEO roles identified in the literature

Role	Description	Researcher
Monitor	The CEO receives and collects information enabling the development of a thorough understanding of the organization.	Mintzberg, 1973.
Disseminator	The CEO transmits special information into the organization.	Mintzberg, 1973.
Spokesperson	The CEO disseminates the organization's information into the business world.	Mintzberg, 1973.
Commander	The CEO gives orders to employees.	Gulick, 1937 (as cited in Mintzberg, 1973).
Leader	The CEO leads and motivates subordinates.	Mintzberg, 1973.
Motivator	The CEO creates and sets a sense of excitement and vitality in the organization, challenging people to gain new competencies and achieve higher levels of performance.	Hart & Quinn, 1993.
Director	The CEO makes sure the right people are in the right place at the right time doing the right things.	Gulick, 1937.
Entrepreneur	The CEO initiates change within the organization.	Mintzberg, 1973.
Disturbance handler	The CEOs takes charge of the organization when it is threatened.	Mintzberg, 1973.
Conflict handler	The CEO handles conflicts that arise between individuals	Castaldi, 1986.

	and outside organizations.	
Resource allocator	The CEO decides when the organization will expend efforts and resources.	Mintzberg, 1973.
Task master	The CEO has a strong focus on results, or getting the job done.	Hart & Quinn, 1993.
Staffer	The CEO makes sure the right people are hired for the right positions.	Gulick, 1937.
Negotiator	The CEO is compelled to enter negotiations on behalf of the organization.	Mintzberg, 1973.
Problem solver	The CEO serves to solve the organization's problems.	Lau, Pavett, & Newman, 1979.
Organizer	The CEO makes sure deadlines are met.	Fayol, 1916 (as cited in Mintzberg, 1973).
Analyzer	The CEO focuses on efficient management of the internal operating system in the interest of serving existing products/markets.	Hart & Quinn, 1993.
Controller	The CEO makes sure projects are completed on time.	Fayol, 1916.
Operator	The CEO makes sure day-to-day operations are being completed in a satisfactory manner.	Howe, 1988.
Technical expert	The CEO is the expert on product and market.	Lau et al, 1979.
Consultant	The CEO provides advice on issues that arise within the organization.	Lafley, 2009.
Coordinator	The CEO makes sure all efforts are coordinated towards the goals and strategic plan of the organization.	Fayol, 1916; Gulick, 1937.
Innovator	The CEO guides the organization into new cycles of innovation in U.S. and overseas markets.	Galambos, 1995.
Planner	The CEO does both short-term and long-term planning for the organization.	Fayol, 1916; Gulick, 1937.
Vision setter	The CEO creates the sense of identity and mission for the organization.	Hart & Quinn, 1993.
Strategist	The CEO crafts the organization's strategy.	Stata, 1988.
Transformer	The CEO transforms the organization as markets and the external environment change.	Galambos, 1995.
Creator & maintainer of culture	The CEO establishes and ensures the organization's culture is consistent with its strategic focus and plan.	Sashkin&Fullmer, 1988.
Link/statesperson	The CEO links the external world to the world inside the	Lafley, 2009.

	organization.
Figurehead	The CEO represents the organization in all formal matters. Mintzberg, 1973.
Liaison	The CEO interacts with peers and others outside the organization to gain favors and information. Mintzberg, 1973.

Using the process of constant comparative analysis, these 31 roles were grouped into six categories of roles and appear as Table 2.

Table 2. Roles by role category

Role Category	Roles
Informational Roles:	Monitor, Disseminator, Spokesperson, Commander
Interpersonal Roles:	Leader, Motivator, Director
Decisional Roles:	Entrepreneur, Disturbance handler, Conflict handler, Resource allocator, Task master, Staffer, Negotiator, Problem solver
Operational Roles:	Organizer, Analyzer, Controller, Operator, Technical expert, Consultant
Strategic Roles:	Coordinator, Innovator, Planner, Vision setter, Strategist, Transformer, Creator and maintainer of culture
Diplomacy Roles:	Link/statesperson, Figurehead, Liaison

2.4 Research Design

The research design used in this study was an e-mailed survey. Using Qualtrics, a survey tool available through the School of Education at Colorado State University, the survey was e-mailed to approximately 28,000 CEOs in the United States. All participants received the same survey via e-mail. There is not a control group. Principal axis factor analysis is the quantitative method used for analyzing the data.

2.4.1 Sample

The sample represented the entire accessible population of CEOs. A database containing 100,000 companies was purchased from Lead411.net, based on its' estimate that the database contained approximately 30,000 CEO e-mail addresses. Accessibility to CEOs was one of the primary concerns when designing the study. An attempt was made to snowball a sample of CEOs from the researcher's personal contacts, resulting in approximately 125 CEOs. A minimum of 384 responses was desired (Dillman, 2007).

2.4.2 Data Collection

The survey asked the participants to rate their agreement with 31 CEO roles using a five-point Likert

scale of Strongly Agree (1) to Strongly Disagree (5). The survey also asked the CEOs to estimate the amount of time spent each week in six categories of roles: Informational, Interpersonal, Decisional, Strategic, Operational, and Diplomacy. The following demographic data were also collected: age, gender, years in current job, years as CEO, last degree earned, major of last degree earned, company size in employee numbers and in sales revenues, type of company/industry, private or publicly held, any additional titles, other C-level executives reporting to the CEO and the titles held by these C-level executives.

Data collection was conducted between October 28, 2010 and November 24, 2010. E-mails were sent out in groups of approximately 7,000 over the course of two weeks. Reminder e-mails were sent within seven days of the original e-mail.

3. Discussion

3.1 Exploratory Factor Analysis

During the early stages of instrument development exploratory factor analysis (EFA) is the preferred method of factor analysis “to explore the underlying factor structure and to determine how measurement items load on factors that have not been clearly revealed” (Yang, 2005, p. 185). EFA was used to examine the reliability and validity of the instrument. Principal component factor analysis (PCA) was run with Varimax, or orthogonal rotation. Rotation is defined as the “mathematical alignment” of variables where “variables that cluster closely together on some axis are presumably related to each other” (Leong & Austin, 2006, p. 251). Additionally, principal axis factor analysis (PAA) was also run with Promax, or oblique rotation resulting in data that were not substantially different than PCA. There was an adequate sample size for performing factor analysis. It is recommended that the survey be administered to at least five times as many participants as the number of questions on the survey (Leong & Austin, 2006). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was also evaluated in order to estimate how likely it is that correlations among the variables can be explained by the common factors (Leong & Austin, 2006). The KMO score for this instrument was .892. A small KMO value (less than .50) may indicate that correlations are cannot be explained by the common factors. A score of .80 has been explained as “meritorious” (Leong & Austin, 2006, p. 250).

A loading of .40, considered appropriate for a new instrument, was used (Yang, 2005). The 31 items (CEO roles) were sorted into seven components, and 27 items were retained. Three roles used in the instrument, entrepreneur, conflict handler, and consultant, did not load. A fourth role, commander, was not a logical fit in the diplomacy role category, and thus, was excluded. Six factors were requested because the instrument was designed to assess 31 roles that *fit* within six role categories: informational, interpersonal, decisional, operational, strategic, and diplomatic. After rotation the first factor accounted for 22.2% of the variance, the second factor accounted for 8.5%, the third factor accounted for 5.9%,

the fourth factor accounted for 4.6%, the fifth factor accounted for 4.3% of the variance, and the sixth factor accounted for 3.7% of the variance. The seventh factor, comprised of only two roles, accounted for 3.4% of the variance and this category was not retained. Overall, principal component analysis revealed seven components comprising 52.4% of the total variance (Table 3).

Three role categories were left completely intact as a result of PCA. Interpersonal (component #5), strategic (component #2) and diplomacy (component #4) role categories were left intact. One role category, the decisional roles, decreased from eight to four roles. Previously included in the decisional role category, entrepreneur and conflict handler did not load. Problem solver and negotiator loaded with the spokesperson and technical expert roles and created a new informational (component #3) role category.

Table 3. Rotated component matrix^a

Role	Component						
	1	2	3	4	5	6	7
Monitor							.768
Disseminator							.756
Spokesperson			.713				
Negotiator			.501				
Problem Solver			.646				
Technical Expert			.524				
Commander				.567			
Link				.714			
Figurehead				.683			
Liaison				.617			
Coordinator		.463					
Innovator		.626					
Planner		.477					
Vision Setter		.517					
Strategist		.563					
Transformer		.697					
Creator/Maintainer of Culture		.484					
Leader					.739		
Motivator					.805		
Director					.448		
Entrepreneur							

Disturbance Handler		.430
Conflict Handler		
Resource Allocator		.521
Task Master		.521
Staffer		.531
Organizer	.749	
Analyzer	.683	
Controller	.819	
Operator	.720	
Consultant		

^aRotation converged in 13 iterations

Additionally, the operational role category was reduced to four roles from six because the consultant role did not load and the technical expert role moved to the informational role category. A seventh component was eliminated only containing two items contributing 3.4% of the variance (Table 4). All seven components had eigenvalues greater than 1.0, meaning that the component is useful. An eigenvalue less than 1.0 indicates the factor “explains less information than a single item would have explained” (Leech, Barrett, & Morgan, 2005, p. 82). With the decision to eliminate the seventh category, six role categories remained utilizing 25 of the 31 original roles. The six remaining role categories closely reflected the original six role categories. The data collected on time approximations were made according to the original six role categories and the data were reported as such.

Table 4. Eigen-values and variances explained

Component	Initial Eigen-values			Cumulative %	Rotation
	# of Items	Total	% of Variance		Total
1	4	6.869	22.157	22.157	3.178
2	8	2.631	8.488	30.645	2.849
3	4	1.821	5.875	36.520	2.406
4	4	1.413	4.558	41.078	2.399
5	3	1.341	4.327	45.405	1.962
6	5	1.138	3.672	49.077	1.894
7	2	1.040	3.356	52.433	1.567

Note. Extraction method: Principal component analysis.

Internal consistency for each factor was assessed using Cronbach’s alpha. Cronbach’s alpha, the normal test of reliability, was .88 for all 31 components. To provide support for internal consistency reliability

alpha should be .70 or larger, and a positive number (Morgan, Leech, Gloeckner, & Barrett, 2011). By component Cronbach's alpha ranged from .43 (component #7) to .82 (component #1) (Table 5). Confirmatory factor analysis was not run because this is the first time the instrument was utilized in a research study.

Table 5. Component means, standard deviations, reliabilities, variances, and item loadings for the CEO role survey

Factors and Items	M	SD	α	Item Loading	Variance Explained
Factor 1 – Operational Roles	2.49	.74	.82		22.16%
Organizer: I make sure deadlines are met				.75	
Analyzer: I focus on efficient management of the internal operating system in the interest of serving existing products/markets.				.68	
Controller: I make sure projects are completed on time.				.82	
Operator: I make sure that day-to-day operations are being completed in a satisfactory manner.				.72	
Factor 2 – Strategic Roles	1.78	.47	.75		8.49%
Coordinator: I make sure all efforts are coordinated towards the goals and strategic plan of the organization.				.46	
Innovator: I guide the organization into new cycles of innovation.				.63	
Planner: I do both short-term and long-term planning.				.48	
Vision Setter: I create a sense of identity and mission for my organization.				.52	
Strategist: I craft the organization's strategy.				.56	
Transformer: I transform the organization as markets and the external environment change.				.70	
Factor 3 – Informational Roles	2.64	.75	.75		5.88%
Spokesperson: I disseminate the organization's information into the business world.				.71	
Negotiator: I am compelled to enter negotiations on behalf of my organization.				.50	
Problem solver: I am the person who solves the organization's problems.				.65	
Technical expert: I am the expert on product and market.				.52	

Factor 4 – Diplomacy Roles	2.01	.64	.63	4.56%
Link: I link the external world to the world inside the organization.			.71	
Figurehead: I represent the organization in formal matters.			.68	
Liaison: I interact with peers and others outside the organization to gain favors and information.			.62	
Factor 5 – Interpersonal Roles	1.51	.45	.60	4.33%
Leader: I lead and motivate my subordinates.			.74	
Motivator: I create and set a sense of excitement and vitality in the organization, challenging people to gain new competencies and achieve higher levels of performance.			.81	
Factor 6 – Decisional Roles	1.54	.41	.57	3.67%
Disturbance handler: I take charge when my organization is threatened.			.43	
Resource allocator: I decide where my organization will expend efforts and resources.			.52	
Task Master: I have a strong focus on results or getting the job done.			.52	
Staffer: I make sure the right people are hired for the right positions.			.53	

Note. Response scale for the CEO Role Survey (1 = strongly agree, 2 = agree, 3 = neither agree nor disagree, 4 = disagree, 5 = strongly disagree).

3.2 Research Limitations

This study was limited to CEOs in the United States so the study cannot be considered applicable to middle or lower-level managers or to CEOs in other countries. It is unclear whether or not this instrument would provide valid and reliable data if used with CEOs outside the United States. This study was also limited by the response rate which impacts the ability to generalize the results. The study may also have been limited by socially responsible responses, that is, it is possible that CEOs chose responses they believed to be desirable, rather than responding to all questions candidly. Confirmatory factor analysis was not conducted because this is the first time the instrument was administered in a research setting.

3.3 Further Research

This research is the beginning of the development of an instrument to survey CEOs about their role perceptions and about how they spend their time. Instrument development is an on-going process. Further research from a qualitative perspective including interviews with CEOs may provide additional

clarity about the roles and the role categories, and may identify new or updated roles not included in this instrument. New studies on the role of CEO may help to refine and update Mintzberg's theory of the role of CEO, providing more clarity about what CEOs do at work in today's chaotic business environment.

An additional step would be to conduct the survey again after making changes consistent with the results of this exploratory factor analysis and after interviewing CEOs to identify additional roles. It would be necessary to re-run factor analysis for further validity and reliability confirmation. Use of the instrument to study CEOs in countries outside the United States would also address one of the limitations of this study. Utilizing the instrument in new studies would provide additional data that may increase the statistical power of the results, providing proof that the instrument can be used with confidence in its validity and reliability. Confirmatory factor analysis is another step that would provide additional support for the instrument.

3.4 Conclusions

The results of this research establish reliable and valid scores from the survey of CEO role perceptions and time spent in role categories. The factor structure was validated within reasonable parameters and internal consistency scores were within acceptable ranges. It is reasonable to state that the Role of CEO survey has promise as a potentially useful research tool; however there is much more work left to do before the consistency and accuracy of the instrument is predictable.

Results indicate that the survey measures 25 CEO roles within six role categories with some level of accuracy and consistency. Further studies will increase the level of confidence that researchers can place in the survey instrument. There were no research hypotheses specifically addressed in this study; the purpose of this research was to answer the research question, *Can a survey instrument be developed that measures the role of CEO and how CEOs spend their time?* It is apparent that the instrument developed for this study has some ability to measure the role of CEO and how CEOs spend their time.

This article explained the research in detail, provided the results of tests for examining the validity and reliability of survey instruments, and identified research limitations. Overall, this paper provides a tool that can be used in future research studies of CEOs.

References

- Antonioni, D. (2003). Leading with responsibility. *Industrial Management*, 45(61), 8-15.
- Argyris, C., & Schon, D. (1978). *Organizational learning: A theory of action perspective*. Reading MA: Addison-Wesley.
- Biddle, B. J., & Thomas, E. J. (Eds.) (1966). *Role theory concepts and research*. New York, NY: John Wiley & Sons.
- Block., P. (1993). *Stewardship: Choosing service over self-interest*. San Francisco, CA: Berrett-Koehler.

- Boal, K. B., & Hooijberg, R. (2001). Strategic leadership research: Moving on. *Leadership Quarterly*, *11*, 515-549.
- Boatright, J. R. (2009). From hired hands to co-owners: Compensation, team production, and the role of the CEO. *Business Ethics Quarterly*, *19*(4), 471-496.
- Breene, R. T. S., Nunes, P. F., & Shill, W. E. (2007). The chief strategy officer. *Harvard Business Review*, *85*(10), 84-93.
- Carter, J. E. (1982). Variations among executive role strengths in U.S. firm at different levels of international involvement (Doctoral dissertation). Retrieved from Proquest Dissertations and Theses database. (UMI No. 8308819)
- Castaldi, R. M. (1986). An analysis of the work roles of CEOs of small firms. *American Journal of Small Business*, *11*(1), 53-64.
- Cummings, T. G., & Worley, C. G. (2009). *Organization development and change*. Mason, OH: South-Western Cengage Learning.
- Cunningham, P. W., Lynham, S. A., & Weatherly, G. (2006). National human resource development in transitioning societies in the developing world: South Africa. *Advances in Developing Human Resources*, *8*(1), 62-83.
- Dillman, D. A. (2007). *Mail and Internet Surveys: The Tailored Design Method* (2nd ed.). Hoboken, NJ: John Wiley & Sons, Inc.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys: The tailored design method*. Hoboken, NJ: John Wiley & Sons, Inc.
- Edersheim, E. H. (2007). Peter Drucker's "unfinished chapter:" The role of the CEO. *Leader to Leader*, *45*, 40-46.
- Galambos, L. (1995). The authority and responsibility of the chief executive officer: Shifting patterns in large U.S. enterprises in the twentieth century. *Industrial and Corporate Change*, *4*(1), 187-203.
- Goleman, D., Boyatzis, R., & McKee, A. (2002). *Primal leadership learning to lead with emotional intelligence*. Boston, MA: Harvard Business School Press.
- Hales, C. P. (1986). What do managers do? A critical review of the evidence. *Journal of Management Studies*, *23*(1), 88-115.
- Hart, S. L. & Quinn, R. E. (1993). Roles executives play: CEOs, behavioral complexity, and firm performance. *Human Relations*, *46*(5), 543-574.
- Howe, M. (1988). A test of Mintzberg's (1973) assertion that all managers perform all managerial roles, in addition to an investigation of the psychometric properties of the Pavett & Lau (1983) questionnaire (Doctoral dissertation). University of Toronto, Toronto, Canada.
- Lafley, A. G. (2009). What only the CEO can do. *Harvard Business Review*, *87*(5), 54-62.
- Lau, A. W., Pavett, C. M., & Newman, A. R. (1979). The nature of managerial work: A comparison of public and private sector jobs. *Academy of Management Proceedings*, *Detroit, MI*, 339-343.

- Leech, N. L., Barrett, K. C., & Morgan, G. A. (2005). *SPSS for Intermediate Statistics* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Leong, F. T., & AU. S.tin, J. T. (Eds.) (2006). *The Psychology Research Handbook* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Martinko, M. J., & Gardner, W. I. (1985). Beyond structured observation: Methodological issues and new directions. *The Academy of Management Review*, 10(4), 676-695.
- Matsumura, E. M., & Shin, J. Y. (2005). Corporate governance and CEO compensation: Intended and unintended consequences. *Journal of Business Ethics*, 62(2), 101-113.
- Mintzberg, H. (1968). The manager at work—Determining his activities, roles, and programs by structured observation (Doctoral dissertation). Massachusetts Institute of Technology, Cambridge, MA.
- Mintzberg, H. (1973). *The Nature of Managerial Work*. New York, NY: Harper & Row, Publishers, Inc.
- Morgan, G. A., Leech, N. L., Gloeckner, G. W., & Barrett, K. C. (2011). *SPSS for introductory statistics use and interpretation* (4th ed.). New York: NY: Routledge.
- Pugliese, P. J. (1985). The nature of managerial work: The extent Mintzberg's roles are required by the chief executives in academic and public libraries (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 8603906)
- Sashkin, M., & Fulmer, R. M. (1988). Toward an organizational leadership theory. *Emerging Leadership Vistas*, 51-65.
- Snyder, N. H., & Wheelen, T. L. (1981). Managerial roles: Mintzberg and the management process theorists. *Academy of Management Proceedings*, 249-253.
- Stata, R. (1988). The role of the chief executive officer in articulating the vision. *Interfaces*, 18(3), 3-9.
- Steiner, G., Kunin, E., & Kunin H. (1981). The new class of chief executive officer. *Long Range Planning*, 14(4), 10-20.
- Whitely, W. T. (1978). Nature of managerial work revisited. *Academy of Management Proceedings, San Francisco, CA*, 195-199.
- Yang, B. (2005). Factor analysis methods. In R. A. Swanson and E. F. Holton (Eds.), *Research in organizations: Foundations and methods of inquiry*. (pp. 181-199). San Francisco, CA: Berrett-Koehler Publishers, Inc.
- Zaccaro, S. J. (2001). Behavioral complexity theories: Conceptual review and evaluations. In *The nature of executive leadership: A conceptual and empirical analysis of success* (pp. 123-147). Washington, DC: American Psychological Association.

APPENDIX A

Role of CEO

Please participate in this confidential survey. Your perspective on the role of CEO is important to

research on this topic. Please read each role description and indicate your level of agreement/disagreement as it relates to your role as a CEO. You are provided a space to add and describe any roles that are missing from the survey. Please indicate the approximate number of hours you spend on each role category per week. As a final step please provide some background demographic information about yourself and your company. Thank you for your participation in this research.

Informational Roles:

1. I receive and collect information enabling me to develop a thorough understanding of my organization.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

2. I transmit special information into the organization.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

3. I give orders to employees.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

4. I disseminate the organization's information into the business world.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

Interpersonal Roles:

5. I lead and motivate my subordinates.

- Strongly Agree
- Agree

- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

6. I create and set a sense of excitement and vitality in the organization, challenging people to gain new competencies and achieve higher levels of performance.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

7. I make sure the right people are in the right place at the right time doing the right things.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

Decisional Roles:

8. I initiate changes within the organization.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

9. I take charge when my organization is threatened.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

10. I handle conflicts that arise between individuals and outside organizations.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

11. I decide where my organization will expend efforts and resources.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

12. I have a strong focus on results or getting the job done.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

13. I make sure the right people are hired for the right positions.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

14. I am compelled to enter negotiations on behalf of my organization.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

15. I am the person who solves the organization's problems.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

Operational Roles:

16. I make sure deadlines are met.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

17. I focus on efficient management of the internal operating system in the interest of serving existing products/markets.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

18. I make sure projects are completed on time.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

19. I make sure that day-to-day operations are being completed in a satisfactory manner.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

20. I am the expert on product and market.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

21. I provide advice on issues that arise within the organization.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

Strategic Roles:

21. I make sure all efforts are coordinated towards the goals and strategic plan of the organization.

- Strongly Agree
- Agree
- Neither Agree nor Disagree

- Disagree
 - Strongly Disagree
23. I guide the organization into new cycles of innovation.
- Strongly Agree
 - Agree
 - Neither Agree nor Disagree
 - Disagree
 - Strongly Disagree
24. I do both short-term and long-term planning for the organization.
- Strongly Agree
 - Agree
 - Neither Agree nor Disagree
 - Disagree
 - Strongly Disagree
25. I create a sense of identity and mission for my organization.
- Strongly Agree
 - Agree
 - Neither Agree nor Disagree
 - Disagree
 - Strongly Disagree
26. I craft the organization's strategy.
- Strongly Agree
 - Agree
 - Neither Agree nor Disagree
 - Disagree
 - Strongly Disagree
27. I transform the organization as markets and the external environment change.
- Strongly Agree
 - Agree
 - Neither Agree nor Disagree
 - Disagree
 - Strongly Disagree
28. I establish and ensure the organization's culture is consistent with its strategic focus and plan.
- Strongly Agree
 - Agree
 - Neither Agree nor Disagree

- Disagree
- Strongly Disagree

Diplomacy Roles:

29. I link the external world to the world inside the organization.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

30. I represent the organization in formal matters.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

31. I interact with peers and others outside the organization to gain favors and information.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

Please feel free to describe any roles you engage in that are not listed above and please include an estimate of the time spent in these roles on a weekly basis:

Approximately how many hours do you spend in an average week on the individual role categories?

_____ Informational Roles

_____ Interpersonal Roles

_____ Decisional Roles

_____ Operational Roles

_____ Strategic Roles

_____ Diplomacy Roles

Please provide some demographic information about yourself and your organization:

My age is:

My gender is:

- Male
- Female

Years in current job

Years as CEO

Last degree earned

- High School
- Associates Degree
- Bachelors Degree
- Masters Degree
- PhD
- Professional
- Other _____

Major of Last degree earned or majority of industry experience

- Operations
- Finance
- Public Relations
- Technical/Engineering
- Other _____

Company Size (Employee Number)

Company Size (Sales Revenues)

What industry are you currently working in?

Is your company privately or publicly-held?

- Private
- Public

Do you have an additional title?

- Yes
- No

What other titles do you have?

Do you have other C-level executives working for you?

- Yes
- No

What are the titles of the other C-level executives that work for you? (for example, COO or CFO)