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An Empirical Investigation on CEO Turnover in IT Firms and Firm Performance

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ABSTRACT

Drawn upon upper echelon theory and organizational theory, this research proposes to examine the impact of CEO turnover in IT firms on firm performance in terms of both sustainable accounting performance and market performance. We find that CEO turnover is a significant determinant of firm performance, especially in IT firms. This paper contributes to the IS literature by investigating the CEO turnover impact in IT firms compared to other industries. This study also has practical implications by providing the guideline for IT firms on the CEO turnover policy. Such firms should place additional emphasis on their succession planning efforts.

Keywords: Information technology, CEO turnover, Firm performance, IT business value

INTRODUCTION

Upper Echelon theory has identified the role of senior executives such as the CEO to be pivotal in the successful operation of organizations, and indicated that senior management teams are significant determinants of firm performance. Executives' managerial knowledge, skills, experiences, values, and personalities greatly impact their interpretations of the situations and facilitate formulation of appropriate strategic alternatives (Carpenter, 2004; Hambrick & Mason, 1984). Hannan and Freeman (1984) found evidence that the organizational change, including leadership turnover, is disruptive rather than adaptive. The introduction of new senior executives including the CEO is more likely to disrupt organizational routines and relationships, which result in decreasing in firm performance (Boyne et al., 2011; Hannan & Freeman, 1984).

The relationship between executive turnover and firm performance remains one of the most interesting problems for organizations. Prior research has extensively examined the relationship (Adams & Mansi, 2009; Boyne et al., 2011; Hamori & Koyuncu, 2015; He et al., 2011; Huson et al., 2004; Lin et al., 2008; Shen & Cannella, 2002). Results have had mixed findings. Some

suggested a positive relationship; some claimed a negative relationship; while others found that there is no association between CEO turnover and firm performance.

Furthermore, little research has been done on the impact of CEO turnover on firm performance on distinctive industries or areas. For example, He et al. (2011) examined the impact in the property-liability insurance industry, and found that such firms with a CEO turnover experience more favorable performance changes. Kacmar et al. (2006) studied the impact in fast food, and found that CEO turnover is related to a reduction in firm performance.

Likewise, the effect of CEO turnover in IT specific firms on firm performance remains under-researched. IT firms play an important role in today's environment. They are focused on technological activities and have developed innovative products, services, and processes. IT firms have specific characteristics that make them distinct from non-IT firms, for example, the fast pace of technological change and their low cost of entry (Banker et al., 2009). As such, the CEO is an important character for these organizations. Their responsibilities include making timely strategic decisions in response to both changes in technology as well as changes in the market. Therefore we believe that these firms are more likely to experience negative impacts when there is CEO turnover, motivating our desire to study the impact of CEO turnover in IT firms.

The research of the impact of CEO turnover in IT firms on firm performance is limited. To fill this research gap and gain a deeper understanding of CEO turnover impact on firm performance, especially in IT firms, we intend to address the following research question: *how is CEO turnover in IT firms related to firm performance*. To answer this question, we draw upon the prior literature that examines the relationship between CEO turnover and firm performance to develop our research model. We propose to empirically investigate the association between CEO turnovers on IT firm performance. Further, we compare the IT firm relationship to the more general relationship of CEO turnover to firm performance using the same model.

We empirically validate our proposed model using data from 3726 firms collected from the Compustat database over a 23 year period (1990 to 2013). Our results find that CEO turnover in IT firms has a negative effect on firm performance as well as on firms in general.

The remainder of this paper is organized as follows. Section two presents a relevant literature review. Section three introduces the theoretical background, and derives hypotheses. Section four describes the definition of variables, and presents the proposed research model. The research methods and data collection procedures are then illustrated in section five. Section six summarizes the empirical findings. The final section discusses the implications of this study, and provides concluding comments, including limitations of the effort, and possible directions for future research.

LITERATURE REVIEW

In the management, finance, accounting, and economics research areas, a number of studies have dealt with the effect of CEO turnover on firm performance (Adams & Mansi, 2009; Boyne et al., 2011; Chen & Thompson, 2015; Davidson et al., 1990; Denis & Denis, 1995; Eisfeldt & Kuhnen, 2013; He et al., 2011; Huson et al., 2004; Hutchison, 2014; Intintoli et al., 2014; Lin et al., 2008; Karaevli, 2007; Park & Shaw, 2013; Rhim et al., 2006; Shen & Cannella, 2002). The results remain

mixed. Adams and Manse (2009) examined the impact of CEO turnover announcements on bondholder wealth, stockholder wealth, and overall firm value. Their results indicated that CEO turnover announcements are associated with lower bondholder values and higher stock holder values. He et al. (2011) investigated the impact of CEO turnover on firm performance in the property-liability insurance industry, and found that such firms with a CEO turnover experience more favorable performance changes. Rhimn et al. (2006) looked at the effect of CEO succession on stock and financial performance, and suggested that the stock market reacts more favorably to the unanticipated announcement of CEO turnover than to anticipated announcements. They also provided evidence that the market reaction to unanticipated CEO succession between good and poor performing firms was not significantly different. Boyne et al. (2011) studied the impact of management turnover on organizational performance in British government entities, and found evidence that changes in top management lead to improvements when initial performance is bad, but result in deterioration of performance when initial performance is good. Hutchinson (2014) examined the impact of CEO turnover on firm performance and the likelihood of bankruptcy, and found that financial performance or bankruptcy is not significantly associated with CEO turnover. Chen and Thompson (2015) concluded that founder turnover was not unambiguously associated with better subsequent performance. Intintoli et al. (2014) found that interim successions are negatively associated with operating performance, but there is no impact on market performance. Park and Shaw (2013) provided evidence that turnover rates are negatively related to organizational performance.

Research on CEO turnover in IT firms and firm performance is exceptionally limited. Lin et al. (2008) investigated the impact of CEO turnover in the Taiwanese electronic industry, and found evidence that a change of executive turnover negatively affects organizational performance. The lack of prior research creates an opportunity to achieve a deeper understanding of CEO turnover impact in IT firms.

THEORETICAL BACKGROUND AND HYPOTHESES

Based on Upper Echelon theory, senior executives such as the CEO, play a critical role in creating organizational outcomes. Executives' managerial knowledge and skills, experiences, values, and personalities greatly impact their interpretations of the situations and facilitate formulation of appropriate strategic alternatives (Carpenter, 2004; Hambrick & Mason, 1984). Their major responsibility is to make effective and efficient strategic planning decisions to achieve organizational goals. Thus, the change of CEO is an important issue that has potential impact on firms' strategies, and in turn on firm performance.

Organizational theory highlights that the impacts of change are disruptive. Baron and Hannan (2001) used this theory to examine employee turnover, and they suggested that changes in employment increase turnover, and thus might impact firm performance. They also argued that turnover related to organizational change mostly affects senior executives (Baron & Hannan, 2001). Hannan and Freeman (1984) indicated that all organizational change, including leadership succession, is disruptive rather than adaptive (Boyne et al., 2011; Hannan & Freeman, 1984).

Based on the existing literature (Adams & Mansi, 2009; Boyne et al., 2011; Hamori & Koyuncu, 2015; He et al., 2011; Huson et al., 2004; Lin et al., 2008; Shen & Cannella, 2002), we expect to see a linkage between CEO turnover and firm performance. Many public organizations' operations are exercised by the top management team, especially the chief executive. Managerial knowledge has been determined to be a valuable corporate asset (Ashrafi & Mueller, 2015; Bhatt & Grover, 2005; Civi, 2000; Kearns & Lederer, 2003). Knowledge resources (i.e. procedures, business processes, strategies, and their competitors) help instantiate a firm's capabilities and enhance its ability to generate competitive advantages over its competitors (Ashrafi & Mueller, 2015; Marchand et al., 2000). If firms are involved in CEO turnover, organizational relationships may be destabilized, the accepted routines might be disrupted, and the business processes or procedures may be reengineered. In addition, stakeholders, such as investors and business partners, may become concerned regarding the potential consequences of a CEO turnover, which may result in the loss of market opportunities, and in turn a reduction on firm performance.

Currently, the vast majority of CEO turnover research focuses on the global dependent variable of firm performance, usually measured by an accounting measure, typically Return on Assets, Return on Sales or some variation. Consistent with previous literature (Barua et al., 1995; Bharadwaj, 2000; Bharadwaj et al., 1999; Chung & Pruitt, 1994; Dehning & Stratopoulos, 2003; Floyd & Wooldridge, 1990; Hamori & Koyuncu, 2015; Hitt & Brynjolfsson, 1996; Lim et al., 2011; Masli et al., 2014; Rai et al., 1997; Tam, 1998), we measure firm performance using average return on assets and return on sales over three years. We take an extra step by also measuring firm performance using the market value measure of Tobin's q. This is done to provide a balance to the traditional accounting measures.

Therefore, to validate our proposed model we put forward the following hypotheses:

H1a. CEO turnover will be negatively associated with sustainable accounting performance.

H1b. CEO turnover will be negatively associated with market value performance.

The evolution and prevalence of IT combined with the speed of technological change has resulted in modern organizations facing a variety of new opportunities and challenges. In contrast to more mature industries, such as agriculture, IT companies face rapid technological change that can disrupt the IT industry status quo every few years. Additionally, low start-up costs ensure a steady stream of competitors based on new technologies (Banker et al., 2009). This results in IT firms having to make timely strategic decisions in response to changes in technology and the markets to maintain and/or gain distinctive advantages. For example, to stay competitive, mobile phone companies upgrade their phone offerings approximately every two years in terms of processor speed, screen size, display resolution, battery capacity, design, number of cores, camera, and so on. When HTC, Samsung, and LG launched phone lines with a larger screen, Apple Inc., countered with the launch of the 4.7-inch iPhone 6 and 5.5-inch iPhone 6 plus. Another example comes from social network companies such as Facebook and Pinterest. These companies operate as a social platform with their major revenue generated from advertisement or commerce. Therefore, in order to succeed, senior executives make strategic and tactical planning decisions that must provide value to demanding advertisers and merchants amid continuously shifting individual member interests.

This rapid transitioning nature of IT has resulted in a desire to better understand the impact of IT on company operations, including CEO equity and firm performance. Masli et al. (2014) suggested that CEO equity incentives and IT investments are complementary in creating market value of a company (Tobin's q). They provided evidence that "firms with CEO incentives and IT intensity in the top 25 percent of the sample distribution have a Tobin's q that is 36 percent larger on average than firms with CEO incentives and IT intensity in the bottom 25 percent of the sample distribution" (Masli et al. 2014, p. 44).

Due to the nature of technology, IT firms themselves are expected to be characterized by high technological volatility and dynamism when CEOs leave. When the CEO of an IT firm exits, it leaves the organization in greater turmoil and instability as compared to a firm in general. For example, CEOs in IT firms need to have IT skills as well as business knowledge to achieve IT and business alignment. Previous studies have suggested that well-trained IT managerial skills generate firms' business value (Armstrong & Sambamurthy, 1999; Ashrafi & Mueller, 2015; Bhatt & Grover, 2005; Dehning & Stratopoulos, 2003; Mata et al., 1995). Based on Resource-based theory, intangible resources including IT human resources, knowledge resources, and relationship resources, help create strategic value for a firm (Ashrafi & Mueller, 2015; Kohli & Grover, 2008; Nevo & Wade, 2010; Powell & Dent-Micallef, 1997). "These intangible resources take a long time to develop, are unique in an organization, and cannot be imitated or replaced easily" (Ashrafi & Mueller, 2015, p. 16).

Therefore, we expect that IT firms experiencing CEO turnover are more likely to have effects on firm performance, and propose the following hypotheses:

H2a. CEO turnover in IT firms will be more negatively associated with sustainable accounting performance.

H2b. CEO turnover in IT firms will be more negatively associated with market value performance.

VARIABLE DEFINITIONS

Dependent Variables (measurement of firm performance)

The vast majority of succession research typically uses the accounting measures of Return on Assets, Return on Sales or some variation to evaluate firm performance. In this study, we measure firm performance from both an accounting performance as well as a market value perspective. By using these two measures of firm performance this paper provides a more comprehensive analysis when compared to previous studies. In this paper we contend that CEO turnover at a firm not only affects actual sustainable future earnings, but that it is also associated with market expectations for future earnings. To better provide a comparison to previous research, we use return on sales (ROS) and return on assets (ROA) to measure accounting operating performance (Barua et al., 1995; Bharadwaj, 2000; Dehning & Stratopoulos, 2003; Floyd & Wooldridge, 1990; Hamori & Koyuncu, 2015; Hitt & Brynjolfsson, 1996; Rai et al., 1997; Tam, 1998). In addition, to capture the long-term and sustainable profitability, we use the average of ROA and ROS over three years as the measure of sustainable accounting performance similar to other previous research (Denis & Denis, 1995). The consideration of multiple years into the future allows for a possible time lag

between CEO change and firm performance (Muhanna & Stoel, 2010). This is an improved measurement of firms' sustainable accounting performance. Average ROA over three years (AROA) is calculated as $(ROA_t + ROA_{t+1} + ROA_{t+2})/3$, and average ROS over three years (AROS) is calculated as $(ROS_t + ROS_{t+1} + ROS_{t+2})/3$.

In addition, we measure a firm's market value using Tobin's q which is forward-looking, risk-adjusted, and less susceptible to changes in accounting practices. By using Tobin's q, which has been widely used to represent the market expectations of future firm performance, we can capture and represent IT's contribution to intangible value (Bharadwaj et al., 1999; Lim et al., 2012; Masli et al., 2011). Consistent with previous literature (Bharadwaj et al., 1999; Chung & Pruitt, 1994; Lim et al., 2012; Masli et al., 2011), Tobin's q is a ratio of market value to book value of total assets, and is calculated as: $Tobin's\ q = (MVE + PS + DEBT) / TA$,

where

MVE = market value of equity = (closing price of share at the end of the fiscal year) * (number of common shares outstanding);

PS = liquidating value of the firm's outstanding preferred stock;

DEBT = (current liabilities – current assets) + (book value of inventories) + (long term debt);

TA = book value of total assets.

Therefore, AROA, AROS, and Tobin's q serve as the dependent variables in this study.

Independent Variables

CEO turnover is coded as 1 if there is CEO turnover, 0 for continuing CEO from the previous year.

Control Variables

Succession research has typically acknowledged influencing factors and identify control variables for organization age (Karaevli, 2007), organization size (Hamori & Koyuncu, 2015; Karaevli, 2007; Shen & Cannella 2002), industry (Hutchison, 2014; Shen & Cannella, 2002), and others.

Based upon a review of succession research and prior studies on firm performance (Boyne et al., 2011; Geringer et al., 2000; Hamori & Koyuncu, 2015; He et al., 2011; Huson et al., 2004; Ravichandra et al., 2009), we control for firm size, age, and possible halo effects of prior performance which may have an impact on current performance. This would lead to biased findings if we omit prior performance in the model to explain current performance (Boyne et al., 2011). In addition, we control for advertising (ADV), research and development (R&D), and capital (CAP) expenditures that are potentially value-relevant intangible assets not included on the balance sheet, and might predict firm performance (Bharadwaj et al., 1999). We further control firm leverage for potential debt (He et al., 2011). Table 1 summarizes the definition and description of the variables in our model.

Variables	Observable measures	Definition and description
Tobin's q		A ratio of market value [(fiscal year-end market value of equity) + (liquidating value of the firms' outstanding preferred stock) + (current liabilities)-(current assets) + (book value of inventories) + (long-term debt)] to book value of total assets.
AROA		Average return on assets over three years.
AROS		Average return on sales over three years.
CEOTurn		1 if there is CEO turnover, 0 for continuing CEO from the previous year
CEOTurn_IT		1 if there is CEO turnover in IT firms, 0 for continuing CEO from the previous year
TechDummy		1 if the firm is IT firm, 0 otherwise
Control variables	SIZE	Firm size: the natural logarithm of the total assets of the firm.
	AGE	Firm age: the log of the number of years the firm has CRSP data.
	ROA(t-1)	One-year-lagged return on asset: earnings before extraordinary income/assets for firm j in year t-1.
	ROS(t-1)	One-year-lagged return on sales: net income before interest and tax/net sales for firm j in year t-1.
	ADV	Advertising expense/sales.
	R&D	Research and development expense/sales.
	CAP	Capital expenditures/sales.
	Leverage	long-term debt / total capital (debt+equity).
AROA = Average return on assets AROS = Average return on Sales ε = the model error term		

Table 1: Definition of variables.

RESEARCH MODEL

Our research model is defined as:

$$\text{Firm performance} = \beta_0 + \beta_1 * \text{CEOTurnover} + \beta_2 * \text{TechDummy} + \beta_3 * \text{CEOTurnover} * \text{TechDummy} + \beta_4 * \text{Size} + \beta_5 * \text{Age} + \beta_6 * \text{Prior Performance} + \beta_7 * \text{ADV} + \beta_8 * \text{R\&D} + \beta_9 * \text{CAP} + \beta_{10} * \text{Leverage} + \varepsilon.$$

DATA COLLECTION PROCEDURE AND METHODOLOGY

We begin with the initial Compustat list of firms that experienced CEO turnover from year 1990 to 2013. This includes a total of 3726 firms composed of 3097 non-IT firms and 629 IT firms. The Compustat data is augmented by CEO turnover data from S&P's Execucomp database (Coates & Kraakman, 2010), where we code CEO turnover as 1 if there is a turnover in year t , or 0 for a continuing CEO from the previous year. This data set is then supplemented with financial and firm performance data from the annual Compustat database and firm stock data from the CRSP database (Coates & Kraakman, 2010; Hamori & Koyuncu, 2014; Huson et al., 2004; Shen & Cannella, 2002).

Consistent with previous research, we identify IT firms as those firms that engage in computer hardware and/or software, telecommunications, networking, and semiconductors (Baron & Hannan, 2001). We select the non-IT firms by matching the firm size as determined by total sales. An ordinary least squares (OLS) regression will be used to predict firm performance after screening the data to check for missing values, outliers, multicollinearity, and normality of the distribution.

DATA ANALYSIS

Descriptive Statistics and Pearson Correlation Analysis

Table 2 provides descriptive statistics and the Pearson correlations among the variables. From the correlation matrix, most of the values of correlations are small, falling below ± 0.3 . Some variables are correlated with one another. The largest correlation is 0.432 between age and size, followed by 0.395 between ceoturn and ceoturn_tech, 0.382 between rd and tech, -0.365 between rd and size, and 0.325 between tech and ceoturn_tech. To examine the possibility of multicollinearity, the Variance Inflation Factor (VIF) was calculated and found to be less than 2, which is far less than 10. This indicates that the independent variables in the model have distinct features and therefore no multicollinearity problems.

	Mean	Std.Dev	ceoturn	tech	ceoturn _IT	size	age	adv	rd	cap	leverage
ceoturn	.104	.306	1.000								
tech	.146	.353	.024***	1.000							
ceoturn_ IT	.018	.132	.395***	.325***	1.000						
size	7.175	1.621	.026***	-.175***	-.053***	1.000					
age	23.211	18.690	.031***	-.160***	-.042***	.432***	1.000				
adv	.010	.024	.006	-.007	-.0002	.031***	-.0005	1.000			
rd	.039	.093	.013**	.382***	.129***	-.365***	-.143***	.002	1.000		
cap	.097	1.567	.011**	.006	.032***	-.067***	-.008	-.007	.046***	1.000	
leverage	.355	.275	.018***	-.275***	.074***	.275***	.177***	-.037***	-.222***	-.005	1.000

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

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

* . Correlation is significant at the 0.1 level (2-tailed).

a. Listwise N = 3726

Table 2: Descriptive statistics and Pearson's correlation analysis.

Empirical Results

An OLS estimation is performed in this paper to test our hypotheses. Table 3 provides the OLS results according to three different measures of firm performance: Tobin's q, AROA, and AROS. Table 3 - Panel A shows the results based on using Tobin's q as the dependent variable; Table 3 - Panel B provides the results based on AROA; and Table 3 - Panel C provides the results based on AROS. We find negative relationships between CEO turnover and firm performance in terms of Tobin's q, AROA, and AROS, with coefficients $-.084$ (p-value <0.01), $-.005$ (p-value <0.01), and $-.006$ (p-value <0.05), respectively. These indicate that firms with CEO turnover in the previous year are likely to experience negative impacts in both market valuation and sustainable accounting performance. The results provide strong support for Hypothesis 1. Consistent with our Hypothesis 2, we find a negative relationship between technology firms with CEO turnover and firm performance in terms of Tobin's q, AROA, and AROS, with coefficients $-.383$ (p-value <0.01), $-.015$ (p-value <0.01), and $-.016$ (p-value <0.1) respectively, which suggests that CEO turnover in IT firms experience more negative firm performance with respect to both market valuation and sustainable accounting performance than non-IT firms.

With respect to control variables, we find that firm performance in the prior year has a significant impact on firm performance in the current year, and sustainable performance in three years. Leverage is negatively related to firm performance. Further, the results indicate that firm size and age are positively associated with sustainable accounting performance (AROA and AROS) which is expected since size and age are proxies for a firm's development and life cycle stage. In the early stages of firm development, smaller sized (i.e. growing stage), firms tend to spend more in an effort to build business while tending to be less profitable compared to firms in more mature and larger stages. Therefore, more mature and larger firms are more likely to bring actual future earnings.

However, it seems that firm size and age are negatively linked to market value expectation (Tobin's q). One possible explanation is that, unlike a more objective measure of accounting profitability, the capital market based measure Tobin's q is subject to the capital market sentiment. For example, the capital market traditionally has given a high valuation to technology stocks (i.e., high market-to-book ratio or high price-to-earnings ratio), and many IT leaders are from the technology sector, which reduces the variability in Tobin's q with respect to the age variable.

In addition, advertising, R&D, and capital expenditures are positively associated with Tobin's q but negatively related to AROA and AROS. One plausible explanation is that advertising, R&D, and capital expenditures are considered as intangible assets as well as expenses. It might thus take a longer time for them to be reflected in actual future earnings. These results highlight the importance of using different measures to assess firm performance.

	Predicted Sign	Model 1	Model 2	Model 3
		(Firm performance: Tobins'q)	(Firm performance: AROA)	(Firm performance: AROS)
		Coefficient(Std. Err)	Coefficient(Std. Err)	Coefficient(Std. Err)
A: OLS regression				
Intercept		1.762 (0.037)	.004 (.002)	.150 (.005)
ceoturn	-	-.084 (0.020)***	-.005 (.001)***	-.006 (.002)**
Tech dummy		.153 (.029)***	.002 (.002)	.025 (.003)***
ceoturn_IT	-	-.383 (.063)***	-.015 (.006)***	-.016 (.009)*
lagroa			.407 (.009)***	
lagros				.395 (.012)***
size		-.013 (.005)**	.005 (.0003)***	.006 (.001)***
age		-.005 (.0003)***	.00008 (.00002)***	.0002 (.00003)***
adv		6.798 (.370)***	-.039 (.022)*	-.075 (.035)**
rd		2.563 (.137)***	-.208 (.009)***	-.522 (.025)***
cap		.014 (.008)**	-.001 (.0004)***	-.046 (.009)***
leverage		-.756 (.032)***	-.047 (.002)***	-.047 (.003)***
R ²		12.7%	40%	47.1%
N		32801	28641	28625

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

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

*. Correlation is significant at the 0.1 level (2-tailed).

a. Listwise N = 3726

Table 3: OLS results.

CONCLUDING REMARKS AND DISCUSSION

This paper empirically investigates the impact of CEO turnover in IT firms on firm performance using a sample of U.S. firms collected from the Compustat database during 1990 - 2013. This study shows that there is a negative relationship between CEO turnover and firm performance, and this negative relationship is more pronounced for IT firms than non-IT firms in terms of both market value performance and sustainable accounting performance.

This research makes several contributions to the literature on CEO turnover and firm performance. First, this is one of the first attempts to examine the CEO turnover influence in IT firms. In particular, this paper examines how CEO turnover in IT firms is linked to firm performance, while empirically validating the negative impact of CEO turnover in such firms. Second, it highlights potential differences between IT firms and non-IT firms. Third, by comparing traditional accounting performance measures of ROA and ROS with Tobins q, which is more forward looking and risk adjusted, a more comprehensive understanding of firm performance can be achieved across industries. This will provide an improved justification for the type of measure to be used for future research. This will be especially important if it is shown, as expected, that the IT firms are different when compared to other industries.

Further, this paper identifies several practical implications for IT firms' management. To begin, IT companies that better understand the negative impact of CEO turnover could better manage their CEO succession policies. Second, studies such as ours could help organizations better justify firm performance measures.

A potential limitation of this study is that we examine the CEO turnover in IT specific firms, not technology intensive firms. Future work would consider a study on the impact of CEO turnover in technology intensive firms and/or a study that compares numerous individual industries. Future research may also consider a more focused project that includes a study of the impact of specific characteristics of the CEO such as education, experience, etc. on IT firm performance.

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