Prior Firm Performance and a CEO's Ability to Find an Equivalent Job

Abstract:

Employing a sample of voluntary CEO turnovers selected from S&P 500 firms over the period 2004-2010, we investigate the impact of prior firm's performance on the CEO's potential of being hired on an equivalent job in a similar company. We find that the better the performance of the previous firm, the shorter the time it takes for the CEO to be hired by another firm. The result prevails even in the presence of control variables, such as CEO's education, tenure, age, and gender. The performance of the firms that hire superior functioning CEOs improves significantly in the post-hire period.

JEL: G30, G39

Key words: CEO quality and firm performance, Voluntary CEO turnover, CEO performance and future employment potential, Job market for CEOs

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1. INTRODUCTION

One of the primary roles of a corporate board is to hire a chief executive officer (CEO) with superior abilities. An obvious question facing the board is: What makes a CEO tick? To put it differently, are there some inherent qualities that differentiate high-potential CEOs from low-potential ones? The answer to this question is not easy because measuring a person's potential as CEO is difficult, imprecise and expensive as evidenced by considerable resources that are expended in the CEO search process and the growth of the "executive search" industry.

The search process becomes slightly easier when a potential hire has a track record. Fee and Hadlock (2003) propose a model of managerial ability that predicts a positive relationship between prior firm performance and the likelihood that a manager moves to a superior position at another firm. They produce empirical evidence that is broadly consistent with the managerial ability model they propose Following Fee and Hadlock (2003), we hypothesize that a) a CEO of a superior-performing firm is likely to find an equivalent job faster than a CEO of a relatively poor-performing firm, and b) a CEO in the former group will employ his/her superior skill-set to improve the performance of the new firm that hires him/her. In testing these hypotheses, we first identify the CEOs who had voluntarily resigned from S&P500 firms during the 2004-2010 period. We then calculate the time that is elapsed between resignation of the CEOs at the previous firm and their employment with similar firms. The elapsed time is

regressed against the performance of the previous firm along with relevant control variables. The results are largely consistent with the hypotheses: a) the better the previous firm performance, the quicker the CEO lands an equivalent job with a similar company, and b) these CEOs continue to outperform their poorer counterparts in the new jobs.

The remainder of this study is organized as follows. Section 2 describes the sample and methodology, while Section 3 presents results. Section 4 concludes.

2. SAMPLE, METHODOLOGY, VARIABLES AND DATA

2.1. Sample:

Our sample originates from the firms listed in the S&P 500 over 2004-2010. We collect the information about CEO turnovers for these firms from ExecuComp database. All CEO turnovers are cross-checked with the Wall Street Journal Index (WSJI) to get exact date of the announcement of the change as well as the reason given by the company for the change.

Appendix 1 presents the annual frequencies of CEO turnovers. There are 356 cases of CEO turnovers during this period, consisting of 341 cases of voluntary and 15 involuntary turnovers[1, 2] We drop 292 cases from the initial sample because these turnovers result from reasons other than finding a similar position with another firm (e.g., retirement, death, illness etc). Of the remaining 49 cases, we drop 4 more CEOs as they

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[1] A CEO turnover is considered as voluntary when it occurs due to planned succession, retirement, voluntary resignation, stepping down, bad health, death, or interim replacement. An involuntary turnover occurs when a CEO is fired, forced to resign, or resigned due to scandal, accounting conflicts, and poor performance.

[2] It appears from Table 1 that the frequency of involuntary turnovers is on the decline in recent years.

do not seek employment with another firm for different reasons.[3] Our final sample consists of the remaining 45 cases, 25 of which find equivalent jobs within six months and 20 takes more than 6 months.

2.2. Model

Our basic hypothesis is that the time expired between when a CEO resigns from one firm and gets hired by another depends primarily on this person's job performance in the previous firm. We test this hypothesis in presence of control variables reflecting CEO and firm characteristics as well as the job market for CEOs

2.2.1. Dependent variable

We measure the length of time (LENGTH) in months that expires between resignation at the previous firm and resuming the CEO (or equivalent) position with the current firm: it is equal to 1 if the time elapsed is 6 months or less and 0 when the elapsed time is between 6 and 24 months.

2.2.2. Main Independent Variable: Performance

According to Fee and Hadlock (2003), an employing firm considers the performance record of a person over a fairly long period to facilitate its decision to hire a CEO. Accordingly, in measuring a CEO's performance quality, we examine a 5-year performance history of the firm where the CEO was previously employed. We employ three measures to gauge the performance quality (**PRFORM**) of a CEO (i.e., the performance at the previous firm). Two of the measures are accounting-based---return on assets (ROA) and return on equity (ROE) and one is market-based---price to book (P/B). In defining these three variables, we follow previous studies (Smith (1990), Smith and

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[3] One CEO resigned and later became a regular employee, one resigned to pursue other interests, one was charged with multiple counts of fraud after resignation, and the remaining one retired subsequent to tendering resignation.

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Watts (1992), Denis & Denis (1995), Yermack (1996), Shin and Stulz (1998), Allgood and Farrell (2000), Palia (2000), Anderson and Reed (2003), Dezso (2005); and Gottesman and Morey (2006) and others).

- o **ROA** is earnings before interest, tax, depreciation, and amortization (EBITDA)[4] over the book value of total assets.

- o **ROE** is EBITDA over total equity at the start of the year,

- o **M/B** is book value of assets plus market value of common stock less the book value of common equity divided by the book value of assets.

2.2.3. Control variables (CEO attributes)

Many researchers have attempted to identify some objective and relatively easily measurable characteristics that are better able to predict how successful a person is likely to be as a CEO. Four characteristics that are commonly identified in literature are education, tenure, age, and gender of the applicant.

Education

Bhagat, Bolton, and Subramanian (2010) propose that education could influence a CEO's ability to perform in three ways. First, education provides the CEO with the knowledge about new techniques and concepts and how to apply them in the real world. Second, higher education can help the CEO solve and overcome challenges more quickly and intelligently. Finally, the social networks acquired in college and graduate school are helpful in professional development. However, they do not find a strong connection between the level of education of the CEO and his/her ability to perform. Nevertheless,

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[4] Since operating income does not include taxes, dividends, or interest income received, nor any dividends paid to stockholders, it is argued to be less subjected to managerial manipulation and, therefore, a robust measure of changes in the operating performance of an organization (Smith, 1990; Denis & Denis, 1995).

we employ the level of education (**EDU**) as a possible indicator of a CEO's chances of being rehired. We use EDU as a binary variable that takes on a value of 1 if a CEO has a master's degree or higher, and 0 otherwise.

Tenure

Some scholars predict a positive relation between a CEO's length of tenure and the firm performance. For example, Gabarro (1987); and Hambrick and Fukutomi (1991) argue that increased knowledge of the organization and superior ability to compete actually allow CEOs with longer tenures to perform better. Wagner, Pfeffer, and O'Reilly (1984), Salancik and Pfeffer (1985), Boeker (1992); and Finkelstein and Hambrick (1995) provide an alternative argument as to why CEOs with long experience might perform better. They argue that poor performing CEOs are weeded out early and, consequently, stronger performers survive. We define tenure (**TNUR**) as the number of years a CEO has served in this capacity prior to resigning from the prior job.

On the other hand, several studies raise the potential of a non-linear relationship between a CEO's tenure with the previous firm   and the firm's performance. Miller and Shamie (2001) conclude that managers' performance declines after 15 years in office due perhaps to their declining propensity to creativity. This view is shared by Katz (1982), Sonnenfeld (1988), Hambrick, and Baumrin (1988), Fredrickson, Hambrick and D'Aveni (1992), Hambrick et al (1993); Miller (1990), (1991), (1994), and Walsh (1995), who suggest that executives who stay on the job too long become 'stale in the saddle'—overly committed to the status and thus less effective. We employ $(TNUR)^2$ in consideration of the possibility of a non-linear relation between the tenure of a CEO and the firm's performance

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Age and Gender

Some researchers have proposed and studied possible linkages between a person's age or gender and his/her chances of being hired as the CEO of another firm. Regarding the age of the CEO, Gibbons and Murphy (1992) suggest that the performance of a CEO varies with his/her career concerns which in turn vary with age. At younger age, the CEO is not too concerned about the career and is willing to take more costly unobservable actions (such as leaving their job voluntarily without having a guaranteed job somewhere else). As the age advances, the CEO's career concerns increase initially but decline as the CEO approaches retirement.

Following Bhagat et al (2010), we define age (**AGE**) as the age a CEO attains at the end of the fiscal year in which he/she resigns from the previous company. In order to see the combined impact of tenure and age on the firm performance[5], we also introduce an interactive term between AGE and TNUR. Blease, Elkinawy and Stater (2009) suggest that female executives are more likely than male executives to depart their positions voluntarily, and women are less likely than men to depart voluntarily as firm size increases or board size decreases. To control for this possibility, we employ gender **(GNDR)** as an attribute that affects a CEO's chances of being rehired. GNDR is a dummy variable that takes on a value of 1 when the CEO is a male, 0 when CEO is a female.

2.2.2. Control Variables: other factors---the firm, the industry, and the economy

Relative Size

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[5] Since operating income does not include taxes, dividends, or interest income received, nor any dividends paid to stockholders, it is argued to be less subjected to managerial manipulation and, therefore, a robust measure of changes in the operating performance of an organization (Smith, 1990; Denis & Denis, 1995).

If the size of the new firm is equal to or smaller than the previous firm, it might take a CEO shorter time to secure the new position. We use relative size (RELSIZ) of the two firms (---the size of the old company divided by the size of the new company--- where size is defined as natural log of book value of total assets for the fiscal year).

Similar Industry

If the new firm is in the same (or similar) industry as the old, it enhances the chance for the CEO to get hired. We use SIMIND to indicate if the new firm is in the same industry as the old one. It is a binary variable that equals 1 if a CEO finds a job in the same industry.

National Economic Environment

During the recessionary period, a firm is more likely to promote CEO internally rather than hiring someone externally. Consequently, even a CEO with a good record of performance might find it difficult to find an equivalent position with a comparable company. Therefore, to separate the effect of the overall job market from the effect of prior performance record of a CEO, we control for the economic condition by using unemployment rate (UEMPRT) as a proxy.

Industry-specific Outlook

Economic outlook of a specific industry might also affect the length of time a CEO might need to find a similar job in this industry. We apply unemployment rate of the industry (UEMIND) to control for industry effect on the job market for the CEO.

2.2.3. The Final Model

The final empirical model we test here is the following:

$$LENGTH = \beta_0 + \beta_1 * PRFORM + \beta_2 * EDU + \beta_3 * TNUR + \beta_4 * (TNUR)^2 +$$
$$+ \beta_5 * AGE + \beta_6 * (AGE * TNUR) +$$
$$+ \beta_7 * GNDR + \beta_8 * RELSIZ + \beta_9 * SIMIND$$
$$+ \beta_{10} * UEMPRT + \beta_{11} * UEMIND + \varepsilon ....(1).$$

Appendix II presents a summary of the definitions of the above variables.

2.3. Data

We collect CEO-specific information (tenure, age, and gender,) from the Register Executives publication provided by Standard and Poor's NetAdvantage database for S&P 500 firms during the period 2004-2010. We cross-check the data derived from above sources with two other sources--Execucomp, and website www.spencerstuart.com.

We obtain educational background information (EDU) from spencerstuart.com which provides the name of the educational institution as well as the type of the degree received (e.g., Bachelor's, MBA, law degree, etc.). Education includes not only the degrees obtained before obtaining a CEO position but also those obtained during the tenure as CEO,

Compustat is used to gather accounting information such as total assets, total sales, M/B, ROA, ROE. Occupational unemployment rates were collected from the Current Population Survey's monthly estimates, at http://ferret.bls.census.gov/cgi-bin/ferret.

3. RESULTS

3.1. Summary Statistics

<div align="center">[INSERT TABLE 1]</div>

Panel A of Table 1 compares CEO and firm attributes between firms which experience strictly voluntary CEO-turnovers (Group--VTO) and those that undergo forced CEO-turnovers (Group--FTO B). CEO attributes are the CEO's age, tenure, gender, while firm attributes in this table focus on accounting as well market returns---- the firm's total assets, return on assets (ROA), return on equity (ROE) and market-to-book ratio (M/B). The panel shows that there are no statistically significant differences in CEO attributes between the two groups. In terms of firm attributes, however, VTO-Group significantly outperforms FTO-Group, in terms of ROA and M/B.

Panel B of Table 1 compares the CEO and firm attributes between the cases where a CEO finds a similar job within 6 months of resigning from the previous firm (Group 1) and where it takes 7-24 months for a CEO to find an equivalent job (Group 2). The panel shows that although there are no significant differences in the CEO attributes between the two groups, the firms in Group 1 outperform those in Group 2, in terms of ROE and ROA. In other words, the better the prior firm's performance, the shorter is the length of time it takes for a CEO to find an equivalent job.

3.2. The Time it takes a CEO to Find an Equivalent Job and His Prior Performance

3.2.1 Univariate Analyses

<div align="center">{INSERT TABLE 2]</div>

Table 2 compares the performance of previous firms for the two groups –the group that finds job within 6 months and the group that takes longer. It shows that on average, firms associated with the former group significantly outperform the firms associated with group 2. For example, during the time window (-Y3, 0), the difference in ROE between group 1 and group 2 is 0.13%, significant at 5%, and during the time window (-Y1, 0), the difference in M/B between group 1 and group 2 is 0.09%, significant at 5%.

3.2.2. Multivariate Analyses

[INSERT TABLE 3]

In this section we examine the association between the quality of performance of the previous firm a CEO who voluntarily resign from a previous firm and the time it takes for this CEO to find an equivalent job with another firm. We employ Probit analysis in which LENGTH takes on a value of 1 when a CEO finds a new job within six months and 0 when the time expired between two jobs is more than six but less than 24 months. Results are presented in Table 3. Column 1, column 2 and column 3 employ ROA, ROE, and M/B respectively as measures of firm performance.

As Table 3 shows, there is a positive association between prior firm performance and CEO's potentials for getting hired quicker (ROA and ROE significant at the 5% and M/B significant at the 10% levels). Better performance at the previous firm increases the chance of a CEO being rehired. The results are consistent with the findings of Huson, Malatesta, and Parrino (2004) who report in that better firm performance (i.e., higher ROA, higher ROE and higher M/B) increases the probability of CEOs finding an equivalent job. A CEO's academic background has a positive effect on his/her chances of

being hired quickly, meaning that CEOs with master degree or higher can find an equivalent job faster than those without (Column 2). One's experience in the position of a CEO is also helpful in him/her getting more quickly hired. A CEO's age and gender do not seem to affect a CEO's hiring potential. The industry unemployment rate has a positive effect on a CEO finding a job faster: the higher the industry unemployment rate, the higher the potential that a CEO will be rehired quicker. This particular result occurs irrespective of which one of the three performance measures belongs in the equation: this result might imply that the CEO market operates differently from the overall job market.

3.4. Post-hire Performance of the firms that hire the CEOs

3.4.1. Pre-hire vs. Post-hire Performance

Do firms that hire better-quality CEOs do better than the firms that hire good-quality CEOs? Table 4 presents pre- and post-hire performances---ROA, ROE, and M/B--- and compares them between the two groups of firms.

[INSERT TABLE 4]

Table 4 shows that both groups perform better in the post-hire period than in the pre-hire period. However, the improvement rendered by the better-quality CEO-group is superior to the improvement engendered by the good quality CEOs.

3.4.2.. Long-term Market Response to Pre- vs. Post-hire Performances

We also examine the long-term market response around hiring announcements.. As before, our total sample consists of 45 CEOs, with 25 of these CEOs being in Group 1 and 20 being in the second group. We measure abnormal returns by employing a four factor model comprising of market risk premium (the spread between CRSP value-weighted market return and risk-free rate), SMB (the return spread between portfolios of

small and big capitalization stocks), HML (the return spread between portfolios of high and low book-to-market stocks), and a momentum factor. Table 5 reports average abnormal stock returns over six window periods around the announcement [-Q7, -Q1], [-Q4, -Q1], [-Q1], [+Q1], [+Q1, +Q4], [+Q1, +Q7]. The market model parameters are estimated with data over the 24-month period seven quarters before the quarter the hiring occurs.

[INSERT TABLE 5]

Table 5 shows that firms in both groups perform poorly in the pre-hiring period. Abnormal returns are negative (although not always significant) for all of the windows preceding the hiring of the CEOs The situation turns around, as reflected in positive abnormal returns, after the new CEOs are hired. The improvement occurs irrespective of whether the CEO belongs to Group 1 or 2. However, firms associated with Group 1 CEOs perform significantly better for the (+Q1 to +Q4) window, indicating that firms that hire the best quality CEOs fare significantly better than firms that hire Group 2 CEOs. These results are consistent with the findings of Denis and Denis (1995), Huson et al (2004)).

4. CONCLUSIONS.

We extend the existing literature on the relation between a CEO's performance with the current firm and the probability of him being hired by another firm in a similar capacity. We hypothesize that CEOs with better performance are likely to be rehired faster.

By focusing on strictly voluntary turnovers (i.e., resigning voluntarily from one company in order to seek a job with another) among the CEOs of S&P 500 firms during

the period 2004-2010, we first divide turnovers in two groups---CEOs that find jobs within 6 months of their resignation from previous firms and those who require more than 6 months but less than 24 months to find similar jobs. Then we go back and examine the performance history (in terms of ROA, ROE, and Price-to-Book) with the firms from which these two groups resigned. By performing both univariate and multivariate tests, we establish that firms with the former group (i.e., CEOs who find jobs within 6 months) perform significantly better than the firms with the second group. Control variables that also decrease the time elapsed between the two jobs include the following ; a Master's or a higher degree, more job experience, and a combination of age (older) and experience as a CEO. We also find that superior-performing CEOs continue to outperform the other group in the new firms with which they are employed.

Appendix 1: Frequencies of CEO Turnovers—Forced vs. Voluntary

The sample is obtained by identifying any change in the set of individuals occupying the positions of Chief Executive Officer (CEO) for the S&P 500 firms included during the period 2004-2010. CEO changes are identified from ExecuComp database and confirmed in the Wall Street Journal, WSJ Index and the website www.spencerstuart.com. A CEO change is classified as a voluntary CEO turnover when it occurs due to planned succession, retirement, voluntary resignation, stepping down, bad health, death, or interim replacement. A forced turnover occurs when a CEO is fired, or resigned due to scandal, accounting conflicts, and poor performance.

| Years | Voluntary | | Forced | | Total |
	Number	%	Number	%	Number
2004	61	91.04%	6	8.96%	67
2005	67	97.10%	2	2.90%	69
2006	58	95.08%	3	4.92%	61
2007	56	96.55%	2	3.45%	58
2008	61	96.83%	2	3.17%	63
2009	38	100.00%	0	0.00%	38
Total	341	95.79%	15	4.21%	356

Appendix II: Definition of Variables

Variables	Definitions
Dependent variable LENGTH	represents the length of time that expires between resignation at the previous firm and resuming the CEO (or equivalent) position with the current firm: it is equal to 1 if the time elapsed is less 6 months or less and 0 when the elapsed time is between 6 and 24 months.
Independent variables ROA	is earnings before interest, tax, depreciation, and amortization (EBITDA) over the book value of total assets.
ROE	is EBITDA over total equity at the start of the year,
M/B	is book value of assets plus market value of common stock less the book value of common equity divided by the book value of assets.
EDU (education)	is binary variable that takes on a value of 1 if a CEO has a master's degree or higher, and 0 otherwise.
TNUR (tenure)	as the number of years a CEO has served in this capacity prior to resigning from the prior job.
AGE	as the age a CEO attains at the end of the fiscal year in which he/she resigns from the previous company
GNDR (gender)	is a dummy variable that takes on a value of 1 when the CEO is a male, 0 when CEO is a female.
RELSIZ (relative size of the two firms)	is the size of the old company divided by the size of the new company--- where size is defined as natural log of book value of total assets for the fiscal year
RELSUB(number of subsidiaries)	is the number of subsidiaries of the old firm divide by the number of subsidiaries of the new firm (the number of subsidiary is defined as the number of 4 digit subsidiaries for each firm)
SIMIND(same industry)	is a binary equals 1 if a CEO finds a job in the same industry.
UEMPRT (unemployment rate %)	is the unemployment rate when a CEO resigns from the previous company.
UEMIND (unemployment rate of the industry %)	is the unemployment rate of the industry to which a sample firm belongs

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Table 1: Descriptive Statistics

Panel A of this table compares statistics of CEOs who voluntarily resign (VTO) with CEOs that are forced to resign (FTO) across some relevant firm and CEO characteristics. Panel B compares attributes between CEOs that are hired within six months (GROUP 1) and those that are hired between six months and two years (GROUP 2) subsequent to their resignations from previous firms. Refer to appendix 2 for definitions of variables

Panel A			
	VTO	FTO	DIFF
	(1)	(2)	(1)-(2)
Variables	Mean	Mean	Mean
CEO age	55.01	54.89	0.12
CEO tenure	6.32	6.23	0.09
CEO gender	0.9	0.91	-0.01
CEO education			
Percentage with a master degree or higher	0.77	0.74	0.03
ROA	12.63	12.02	0.61*
ROE	15.33	15.11	0.22
M/B	2.41	2.22	0.19**
Firm size, millions	81,575	80,878	697

Panel B			
	GROUP 1	GROUP 2	DIFF
	(4)	(5)	(4)-(5)
Variables	Mean	Mean	Mean
CEO age	55.01	55.01	0
CEO tenure	6.29	6.35	-0.06
CEO gender	0.89	0.91	-0.02
CEO education			
Percentage has a master degree	0.82	0.71	0.11
ROA	12.64	12.62	0.02*
ROE	15.35	15.31	0.04**
M/B	2.42	2.4	0.02
Firm size, millions	82,434	80,716	1718
RELSIZ	0.95	0.97	-0.02
RELSUB	1.01	1.03	-0.02

***, **, * denote the significance level of 1%, 5%, 10%, respectively.

Table 2: Performance Comparison of Previous Firms

Table 2 reports old firm performance over three year window periods in the pre-turnover (-Y3), (-Y2) and (-Y1) for two groups. Group 1 includes all current firms that CEOs can find an equivalent job within 6 months. Group 2 includes all current firms that CEOs can find an equivalent job beyond 6 months. Firm performances are measured by ROA, ROE and M/B. Refer to the appendix 2 for definitions of variables.

PERIOD	GROUP 1			GROUP 2			DIFF		
	ROA	ROE	M/B	ROA	ROE	M/B	ROA	ROE	M/B
	(1)	(2)	(3)	(4)	(5)	(6)	(1) - (4)	(2) - (5)	(3) - (6)
-Y3	12.50%	15.90%	2.50	12.61%	15.77%	2.34	-0.11%	0.13%(**)	0.16
-Y2	12.73%	16.21%	2.44	12.70%	16.32%	2.58	0.03%	-0.11%	-0.14
-Y1	12.80%	16.26%	2.54	12.75%	16.04%	2.45	0.05%	0.22% *	0.09 **
Average	12.68%	16.12%	2.49	12.69%	16.04%	2.46	-0.01%	0.08%**	0.04*

***, **, * denote the significance level of 1%, 5%, 10%, respectively.

Table 3: Result from PROBIT regression (1)
Refer to the appendix 2 for definitions of variables

$$LENGTH = \beta_0 + \beta_1 * PRFORM + \beta_2 * EDU + \beta_3 * TNUR + \beta_4 * (TNUR)^2 +$$
$$+ \beta_5 * AGE + \beta_6 * (AGE * TNUR) +$$
$$+ \beta_7 * GNDR + \beta_8 * RELSIZ + \beta_9 * SIMIND$$
$$+ \beta_{10} * UEMPRT + \beta_{11} * UEMIND + \varepsilon\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1).$$

Coefficient	(1)	(2)	(3)
Intercept	0.0351	0.00934	0.00545*
	0.98	0.31	1.53
ROA	0.0712**		
	1.95		
ROE		0.05874**	
		2.71	
M/B			0.02989*
			2.62
EDU	0.09733	0.02689*	0.05672
	0.77	1.96	0.14
TNUR	0.00569	0.00381*	0.00732**
	0.72	2.01	2.74
$(TNUR)^2$	0.00877*	0.00565	0.00552*
	1.99	0.79	2.03
AGE	0.00356	-0.00236	-0.00545
	0.32	-0.36	-0.44
TNUR*AGE	-0.00276	0.00645	-0.08721
	-0.42	0.87	-0.22
GNDR	-0.00767	0.00458	-0.03872
	-0.01	0.12	-0.09
RELSIZ	0.00453	-0.02343	-0.00523
	0.31	-0.35	-0.54
SIMIND	0.00676*	0.00821	0.08925**
	1.94	0.03	2.87
UEMPRT	0.00343	0.00767**	-0.00564
	0.55	2.56	-1.02
UEMIND	0.00683*	0.00478**	0.00655*
	1.97	2.85	1.99

***, **, * denote the significance level of 1%, 5%, 10%, respectively. T-statistics are reported in Italics.

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Table 4: Performance Comparison of New Firms

Table 4 reports new firm performance over three year window periods in the pre-turnover and post turnover (-Y3,0), (-Y2,0), (-Y1,0) and (0,+Y1), (0,+Y2) (0,+Y3) for two groups. Group 1 includes all current firms that CEOs can find an equivalent job within 6 months. Group 2 includes all current firms that CEOs can find an equivalent job beyond 6 months. Industry-adjusted firm performances are measured by subtracting the industry performance from the firm performance. Firm performances are measured by ROA, ROE and M/B. The industry average is based on all firms that have the same 4-digit SIC code as the sample firm. Refer to appendix 2 for definition of variables.

PERIOD	AdjROA			AdjROE			AdjM/B		
	GROUP 1	GROUP 2	DIFF	GROUP 1	GROUP 2	DIFF	GROUP 1	GROUP 2	DIFF
	(1)	(2)	(1)-(2)	(3)	(4)	(3)-(4)	(5)	(6)	(5)-(6)
(-Y3,0)	-12.11%	-12.38%	0.27%	-5.17%	-5.02%	-0.15%	2.2	2.41	-0.21
(-Y2,0)	-13.01%	-12.96%	-0.05%	-5.96%	-5.42%	-0.54%*	2.01	1.95	0.06
(-Y1,0)	-13.55%	-13.07%	-0.48%*	-6.50%	-5.91%	-0.59%	1.99	2.1	-0.11
(0, +Y1)	2.27%	1.99%	0.28%	4.43%	2.53%	1.9%*	2.23	2.11	0.12
(0, +Y2)	3.89%	2.15%	1.74%*	5.95%	3.12%	2.83%	2.4	2.32	0.08*
(0, +Y3)	5.67%	2.21%	3.46%**	7.01%	3.78%	3.23%*	2.5	2.47	0.03

***, **, * denote the significance level of 1%, 5%, 10%, respectively.

Table 5: Abnormal Stock Performance Around CEO Turnover Announcements

This table reports abnormal stock performance over six window periods in the pre-turnover and post-turnover around the announcement [-Q7, -Q1], [-Q4, -Q1], [-Q1], [+Q1], [+Q1, +Q4], [+Q1, +Q7] for two groups. Group 1 includes all current firms that CEOs can find an equivalent job within 6 months. Group 2 includes all current firms that CEOs can find an equivalent job within 6 to 24 months. Stock returns are adjusted by a four factor model that includes the market risk premium (the spread between CRSP value-weighted market return and risk-free rate), SMB (the return spread between portfolios of small and big capitalization stocks), HML (the return spread between portfolios of high and low book-to-market stocks), and a momentum factor. The market model parameters are estimated with data over the 24-month period seven quarters before the turnover announcement quarter.

Abnormal returns around CEO turnover announcement for two groups

PERIOD	GROUP 1	GROUP 2	DIFF
	(1)	(2)	(1) -(2)
-Q7 to -Q1	-15.34%*	-17.89%**	2.55%*
-Q4 to -Q1	-12.12%**	-15.59%	3.47%
-Q1	-11.34%	-14.45%	3.11%**
+Q1	8.09%	5.4%	2.69%
+Q1 to +Q4	3.13%***	2.78%*	0.35%*
+Q1 to +Q7	2.35%	1.02%	1.33%

***, **, * denote the significance level of 1%, 5%, 10%, respectively.