Koch Center for Family Business Research Brief

Family CEOs, Turnover, and Firm Performance

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1 Executive Summary

- CEO performance has a significant impact on the likelihood of forced turnover.
- Family CEO successors remain CEO for longer and are almost never forced out.
- Insiders (both family and non-family) tend to be appointed in more profitable companies than outsiders. Insider CEOs appear to outperform outsiders as a result.
- Family insiders are younger and have more experience in the firm at time of appointment than unrelated insiders.
- Founders are more likely to be forcibly removed from office by year two than any other CEO type.

2 Introduction

Family businesses are some of the most unique organizations in terms of growth and structure. It is for this reason that our research aims to answer the following question: what is

the effect of family CEOs on firm performance? Different CEO types (ex. family CEOs, outsiders, founders) may bring different insights and skill sets to their firms, and may even have different underlying motivations. For example, a family CEO may have a longer-term view of the firm in hopes that they establish a lasting positive family legacy. The managerial strategy of an outsider CEO on the other hand may be more responsive to short-term stock market fluctuations. Such differences will likely be reflected in the firm's bottom line. Performance differentials, differing levels of entrenchment, and other nepotic tendencies within a family business may also induce different patterns with respect to CEO turnover. Given that there are different turnover and profitability patterns across CEO types, understanding which forces drive this is important because it can help us understand if hiring within the family has a positive or negative impact on the health of the firm and can potentially guide relevant public policy decisions. Nepotism is a common practice in family businesses and often regarded as a negative part of these organizations; our research aims to understand whether this intuition is true, or if hiring family members can offer a unique leadership style that contribute positively to the growth of the organization.

The current literature suggests that nepotism is nuanced, and its impact on profitability is fairly ambiguous. Some studies show a negative relationship between family successors and financial performance. For example, a study by Peréz-González (2006) used operating return on assets (OROA) and market-to-book ratio (MB)[1] as measures of financial performance and concluded that family CEOs had worse financial performances than their unrelated CEO counterparts. Much of this performance gap could be attributed to family CEOs who did not attend prestigious universities, possibly indicating that they were not selected due to business skill or merit.

This conclusion that family CEOs perform worse than unrelated CEOs is not a consensus in the literature. A study by Anderson and Reeb (2003) determined that financial performance is stronger when a family member serves as CEO rather than a non-family member. The researchers suggest that family ownership is an effective organizational structure because family members have a better understanding of the business than outsiders, and see themselves as stewards of the firm. Regardless of the inconclusive literature on the effectiveness of family CEOs vs unrelated CEOs, what is more conclusive is that firm-CEO match quality has a significant impact on firm performance. As Black (2019) suggests, family CEOs may have a more long-term view of firm operations, in hopes that they leave a lasting positive family legacy. Decision making based upon a CEOs long-term strategies, rather than short-term impact, may lead to better firm performance. However, a survey by Bertrand

[1]OROA is defined as earnings before interest, depreciation, and taxes divided by total assets. MB is defined as the market value of assets divided by the book value of assets

and Schoar (2006) points out an important caveat with this theory. CEOs wishing to build a family legacy may have a desire for the firm to survive at all costs, even if it means choosing sub-optimal long term strategies (ex. excessive risk aversion). Thus, the literature suggests that while there could be positive aspects to hiring a family-related CEO, there are incredible risks that could prove detrimental to a firm.

Regarding our second objective of studying CEO turnover, this paper serves as an extension to the research presented in Taylor (2010); Taylor asks why CEOs are so rarely forced from their positions. He constructs a Bayesian learning model in which the board of advisors has imperfect information about CEO match quality, which they must learn about over time through profitability signals. When the assumed CEO match quality drops below a threshold, it is optimal for the board to fire the current CEO and hire a new one. This new CEO has a match value drawn from some distribution of CEO quality. Taylor determines that CEO entrenchment makes this threshold rather difficult to reach. Entrenchment is represented as the cost to the board of firing the CEO; the more entrenched a CEO is within the company, the higher the cost to remove said CEO, and the smaller the likelihood of that CEOs removal. Our paper serves to refine this conclusion by determining whether the level of entrenchment may differ across different types of CEOs. These types may differ in terms of observable characteristics, perceptions of quality, or non-pecuniary costs/benefits to the board of hiring or firing. We explore the differences between types in the next section.

3 Data

We consider four distinct CEO types which we define below:

- **Outsider** - A person with two or less years of experience at the firm at time of appointment
- **Founder** - The founder or co-founder of the firm
- **Family Insider** - A person with more than two years of experience at the firm at time of appointment, who is not a founder and is directly related (by blood or by marriage) to a board member, a previous CEO, or the founder
- **Unrelated Insider** - A person with more than two years of experience at the firm at time of appointment, who is not a founder and has no evidence of relevant family relations

Of the 4,601 CEOs in our sample, 1,880 (about 41%) are classified as outsiders, 2,261 (about

49%) are classified as unrelated insiders, 219 (about 5%) are classified as family insiders, and 241 (about 5%) are classified as founders.

3.1 CEO Demographic Information

Data on CEO demographic information and tenure were collected through Execucomp, with our sample being restricted to only CEOs of publicly traded North American companies. Execucomp reports both the dates an executive joined the company and the date they became CEO. This is key for designating executives as either insiders or outsiders; an executive is classified as an insider if they have more than two years of experience at the firm prior to being appointed CEO. These insiders are then classified as founders, family, or unrelated insiders. In order to increase external validity and statistical power, we hand-collected information on when CEOs joined their company for those for whom this variable was missing and supplemented it with the Execucomp data. The main source used was NNDB.com, which would provide the date in which a CEO joined their company. It is important to note that this source provided information if a person was involved in a company prior to various mergers and acquisitions that resulted in their appointment to CEO, including company name changes. If the date a CEO joined the company was not available at NNDB, then Linkedin, Bloomberg, and investor relations pages were checked. For those which were still not available on the aforementioned sites, SEC filings and relevant articles in the business press were searched. Summary statistics for the four CEO types are presented in Table 1.

3.2 CEO Turnover Data

Instances of turnover are classified as either forced or voluntary. We follow Parrino (1997) criteria to classify successions as forced:

1. All successions for which the Wall Street Journal reports that the CEO is fired, forced from the position, or departs due to unspecified policy differences are classified as forced.

2. All other successions in which the departing CEO is under age 60 are reviewed to identify cases in which the Wall Street Journal announcement of the succession either (1) does not report the reason for departure as involving death, poor health, or the acceptance of another position (elsewhere or within the firm), or (2) reports that the CEO is retiring, but does not announce the retirement at least six months before the succession. These cases are also classified as forced successions.

3. The circumstances surrounding departures that are classified as forced in the previous step are further investigated by searching the business and trade press for relevant articles. These successions are reclassified as voluntary if the incumbent takes a comparable position elsewhere or departs for previously undisclosed personal or business reasons that are unrelated to the firms activities.

After discarding observations with missing variables, we observe 2,406 cases of turnover in our sample; 601 are classified as forced while 1,805 are classified as voluntary.

Table 1: Summary Statistics

	Outsiders	Insiders		Founders
		Family	Unrelated	
Age	55.40	54.18	55.56	56.59
	(.068)	(.194)	(.057)	(.231)
% of shares owned	2.480	7.029	1.644	9.320
	(.096)	(.289)	(.064)	(.315)
Salary ($1,000s)	669.11	690.46	767.43	646.02
	(3.320)	(8.637)	(3.255)	(15.298)
Tenure	7.926	11.496	6.473	16.243
	(.069)	(.184)	(.044)	(.221)
Firm assets	11995.23	7896.29	21791.98	3636.24
	(919.39)	(540.32)	(996.99)	(253.94)
OROA	.104	.133	.132	.121
	(.003)	(.002)	(.001)	(.003)
Industry-adjusted OROA	-.015	.018	.016	-.007
	(.003)	(.002)	(.001)	(.003)
MB	2.188	1.752	1.885	2.496
	(.032)	(.029)	(.012)	(.053)
Industry-adjusted MB	.138	-.218	-.092	.293
	(.031)	(.029)	(.012)	(.053)
Stock Price (end of fiscal year)	31.557	38.382	122.733	33.137
	(.414)	(1.482)	(23.020)	(1.245)
Observations	10,906	1,974	14,003	2,234

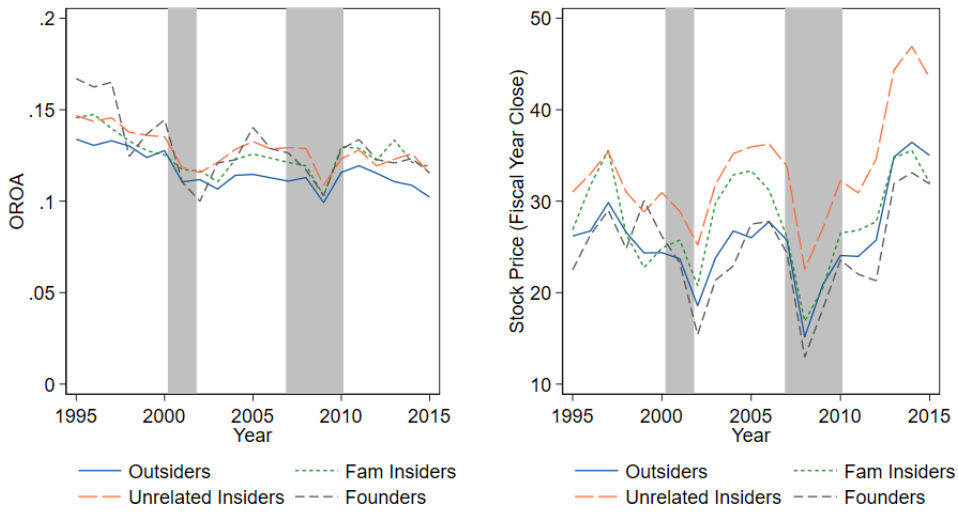
Notes: "% shares owned" refers to the percent of total shares of the firm owned by the executive. "Tenure" is the cumulative number of years each executive has served as CEO. "OROA" is the operating return on assets (defined above) of the firm at which the executive served as CEO. "Industry-adjusted OROA" is the raw OROA subtracted by the industry mean. "MB" is the market-to-book ratio (previously defined) of the firm at which the executive served as CEO. "Industry-adjusted MB" is the raw MB subtracted by the industry mean.

4 Descriptive Statistics

4.1 Firm Performance

To begin addressing the question of whether CEO type has a significant impact on firm performance, we first plot median performance by year for each of the four CEO types. The performance measures are operating return on assets (OROA) and stock price. Figure 1 plots median OROA over the 1995-2015 period in the left panel and median stock price in the right. Shading indicates either the 2001 or 2008 financial crisis.

Figure 1: Performance by CEO Type



Notes: The left panel plots median OROA over the time period spanned by the sample separately for each type of CEO. Similarly, the right panel plots median stock price over time separately for each CEO type.

Looking at the OROA plot, we see that outsiders tend to perform more poorly than insiders (family, non-family, and founders). No difference in performance is evident between the three types of insiders. When it comes to stock price, unrelated insiders appear to outperform the other CEO types. To further investigate the impact of CEO type on firm performance, we constructed simple regression models using OROA and stock price as the outcome variables. We included additional controls for the CEO's tenure, age, and type. We also include indicator variables for each year to account for macroeconomic trends, and indicator variables for the firm's industry. Coefficients for the year and industry indicators are not reported here but are available upon request. Additionally, the models include a one year lag of the dependent variable to test for persistence in performance.

Table 2: Performance Regressions w Year & Industry Fixed Effects

	OROA	Stock Price
Family	.003	-6.206
	(.004)	(5.582)
Founder	-.010	-10.342
	(.007)	(9.775)
Insider	.017**	6.808
	(.007)	(5.842)
Age	.000	-.274
	(.000)	(.285)
CEO Tenure (÷ 10)	-.000	7.560
	(.004)	(6.235)
Lag (1 year)	.453***	.916***
	(.111)	(.007)
Observations	26,471	26,165

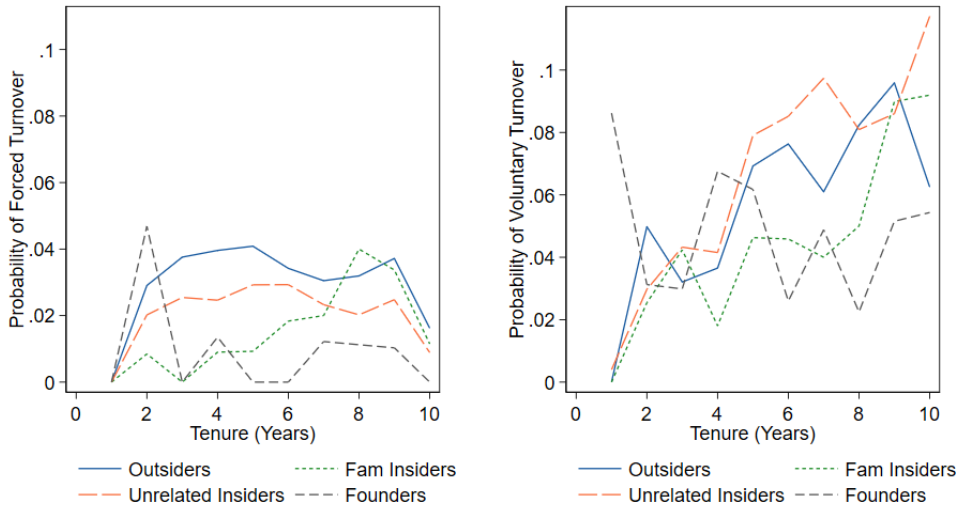
Notes: * denotes significance at the 5% level, ** denotes significance at the 1% level, and *** denotes significance at the .1% level. Standard errors are clustered by firm.

Our regression results in Table 2 are consistent with Figure 1, showing that insiders tend to outperform outsiders, though there is no difference in performance for family vs non-family insiders or founders. This could be because insiders tend to have more knowledge of the company that benefits the firms performance, whereas outsiders require a learning period before they can contribute positively to the company. These results are simply meant to be descriptive, and significant effects should not be interpreted as causal.

4.2 Turnover

Next, we investigate the sensitivity of CEO turnover to firm performance and CEO type. Figure 2 plots the hazard rates associated with forced turnover in the left panel, and voluntary turnover in the right. The hazard rate measures the probability of turnover after a certain number of years, having survived in the position up to that point. Hazards are plotted separately by CEO type.

Figure 2: Hazard Rates



Notes: The left panel plots the probability of forced turnover by CEO tenure. Similarly, the right panel plots the probability of voluntary turnover.

Starting with forced turnover, we see that founders are most likely to be fired in year 2. This may be due to a number of factors, though one hypothesis is that many growing companies often replace their founders as CEOs once the company goes public. We also observe that it typically takes 1-2 years for the board to begin to consider replacing the CEO, and that the tendency to fire CEOs drops after 10 years. With this, we see that family insiders are much less likely to be fired until they have worked 7 or 8 years. It appears that family insiders are given a longer grace period before being judged negatively by the board than other types of CEOs. This is a benefit that outsiders do not receive, as they have a much higher probability of getting fired right away than family insiders; in fact, they are the most likely to be fired out of all our CEO types. A thorough understanding of the forces producing this result will require further analysis.

We now move to voluntary turnover. CEOs may voluntarily leave their position for any number of reasons including retirement or the acceptance of a position elsewhere. In this instance, we see that family insiders are the least likely CEO type to quit, though they also are more likely to quit as time goes on just like the other types. Reasons for this could be that they wish to uphold the family legacy until a successor is chosen, or they may recognize that their family connection does not make them a competitive candidate in the job market. Outsiders and unrelated insiders are much more likely to voluntarily leave in nearly any year. One potentially important reason for this is that outsiders and unrelated insiders tend to be older at the time of appointment than family insiders, so may be closer to retirement age. Founders do not follow this pattern of near-monotonic growth, however, as we note

various peaks and dips throughout their tenure. Further research is needed to understand why founders exhibit such a different pattern of voluntary turnover than other CEO types.

Table 3: Likelihood of Turnover

	Forced Turnover			Voluntary Turnover		
	(1)	(2)	(3)	(4)	(5)	(6)
Tenure (÷ 10)	-.003	-.001	-.002	.039***	.039***	.039***
	(.005)	(.008)	(.005)	(.008)	(.009)	(.008)
Tenure^2 (÷ 10)	-.000	-.000	-.000	-.001***	-.001***	-.001***
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
Family insider	-.019***	-.017*	-.018***	-.021**	-.021*	-.022***
	(.005)	(.007)	(.005)	(.007)	(.009)	(.007)
Unrelated insider	-.008***	-.012***	-.008***	.003	-.002	.004
	(.002)	(.003)	(.002)	(.004)	(.005)	(.004)
Founder	-.025***	-.020*	-.025***	-.052***	-.026**	-.054***
	(.007)	(.009)	(.007)	(.008)	(.009)	(.008)
Stock Price Δ	-.004**	-.003*	-.001	.000	.000	.001**
	(.001)	(.001)	(.001)	(.000)	(.000)	(.000)
Adjusted OROA	-.005*	-.003	-.004	-.001	.041	-.000
	(.002)	(.003)	(.002)	(.008)	(.029)	(.009)
Performance Residual	-.018**	-.018*	-.006	.049**	.037	.045*
	(.006)	(.008)	(.007)	(.018)	(.031)	(.020)
OROA*(Unrelated Insider)			-.069***			-.013
			(.013)			(.026)
OROA*(Family Insider)			-.028			-.006
			(.037)			(.065)
OROA*(Founder)			.037			.121
			(.045)			(.067)
(Stock Δ)*(Unrelated Insider)			-.021***			-.014**
			(.004)			(005)
(Stock Δ)*(Family Insider)			-.019			.001
			(.012)			(.008)
(Stock Δ)*(Founder)			.012			.013
			(.012)			(.010)
Termination Payment		-.003**			-.008***	
($10 m)		(.001)			(.002)	
N	23,976	12,665	23,976	23,976	12,665	23,976

Notes: * denotes significance at the 5% level, ** denotes significance at the 1% level, and *** denotes significance at the .1% level. "Adjusted OROA" is the industry-adjusted OROA defined above. "Performance Residual" are the cumulative average residuals generated from the performance regression above with OROA as the dependent variable. These are taken to be proxies for CEO ability.

For a more structured look at the turnover data, we present Probit regressions of the

probability of turnover in Table 3 below. We include controls for tenure (and its square), year over year change in stock price, industry-adjusted OROA, and CEO type. Outsiders are used as the base group. We also include residuals from the OROA regressions above; these are to be interpreted as proxies for the CEO's managerial skill. Columns 2 and 4 also include estimated severance payments in the case of involuntary turnover. These are reported separately because this variable is missing for many executives so reduces our sample size significantly.

Based on their negative coefficients, we observe that family insiders, unrelated insiders, and founders are less likely to be fired than the outsider CEO based on their performance. Looking at the firm performance measures, we see that as stock price increases and OROA have a negative relationship with forced turnover. This means that better performing firms are less likely to fire their CEO. The OROA residuals also have a negative coefficient, meaning that a CEO with high perceived ability is less likely to be fired than a CEO with low perceived ability. Termination payments also exhibit a significant effect, indicating that the probability of forced turnover is sensitive to firing costs.

Based on columns 3 and 4, we see that the probability of voluntary turnover has an increasing, concave relationship with CEO tenure as the figure above suggests. We also see that family insiders and founders are less likely to voluntarily leave their post than other CEO types. The OROA residuals display a positive effect in the case of voluntary turnover, perhaps indicating that CEOs wait until they have demonstrated their managerial competence before quitting or retiring. Termination payments display a negative coefficient, which is less intuitive in this case. Further study is warranted to understand the mechanisms generating this result.

To investigate whether the sensitivity of turnover to performance varies by CEO type, we add several interaction variables to the regressions above. These results are reported in Table 4.

Looking at the coefficients for the OROA and stock change interaction terms, it is evident that the probability of forced turnover is especially sensitive to performance for unrelated insiders. Further investigation is necessary to understand this asymmetry across CEO types.

5 Conclusion

Our preliminary analysis shows some interesting relationships between CEO types, turnover rates, and firm performance. We note that the likelihood of voluntary turnover increases with tenure for all types, while the likelihood of forced turnover exhibits some less linear effects with tenure. If the decision makers, most commonly "the board," is uncertain about

CEO ability, it may be optimal to wait until their beliefs are refined before firing a CEO. If firm performance and CEO ability are positively correlated, the certainty of the boards hiring/firing decision will increase over time and unqualified CEOs will eventually be replaced. The average board seems much more willing to fire an outsider than an insider; determining whether this is due to uncertainty about CEO competence, entrenchment, or some other structural feature of the environment warrants further study. We also observe that tenure has significant predictive power when it comes to voluntary turnover, but not forced turnover; this holds true for all CEO types.

An interesting note is that family CEOs are consistently less likely to face turnover, both forced and voluntary. In the case of forced turnover, if the CEO has family members on the board or in the firm, it is reasonable to expect that the board may have political or non-performance-based reasons for keeping them in their position. In the case of voluntary turnover, family CEOs tend to have stronger loyalties to their firm and wish to hold onto office until a familial or worthy successor is found. Founders, though perhaps as knowledgeable about a company as any other insiders, are highly likely to be removed at year two as shown in Figure 2. This is may be due to the board seeking a strategic shift in management, particularly after the company undergoes an IPO. Founder CEOs voluntary turnover patterns substantially differ from those of other CEO types. More research on founder CEOs is needed to determine what can be concluded from this.

Looking at the effect of firm performance across CEO types, we examine industry-adjusted operating returns on assets (OROA). This has an unsurprising negative relationship with forced turnover; the better the financial performance of a firm, the less likely their CEO will be fired. This suggests that CEO performance, as indicated through firm financial performance, is an important determinant of forced turnover. In the case of voluntary turnover, we see that as financial performance increases, the likelihood of voluntary turnover increases. If the firm is healthy, it is relatively more likely that the CEO's departure will be voluntary, not forced. If the firm is not performing well, the opposite holds true.

For a more careful examination of profitability trends, we report performance regressions in Table 2. The most stable result is the persistence in profitability over time. Though insiders appear to outperform outsiders, no difference is evident between family insiders, unrelated insiders, or founders. There are at least two ways to interpret this result given the discussion so far. First, insiders tend to be appointed in more profitable firms; if a firm is operating smoothly, it is reasonable to expect that a board may be more willing to hire from its own internal talent pool rather than look externally. Second, insiders possess more firm-specific knowledge when they are appointed which may lead to stronger performance than candidates who lack such firm-specific knowledge. Further research is necessary to

disentangle these two processes.

The results presented in this document represent only a sample of the analyses conducted thus far. Additional research is required to truly understand the economic mechanisms at play here. More in depth results are available upon request.

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