Department of Industrial Engineering and Management

CEO Selection and CEO-firm Fit

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Aalto University

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Pardeep Maheshwaree

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Abstract

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Abstract

The upper-echelon framework posits that a match between CEO characteristics and firm's leadership requirements (CEO-firm fit) is beneficial for firm performance. However, we have limited understanding on three key issues related to CEO-firm fit. First, how does the CEO-firm fit come about? That is, how do boards establish leadership needs of the firm in foreseeable future (CEO search criteria). Second, how boards ascertain whether the potential CEO candidates' skills match the search criteria. Third, how does the CEO-firm fit evolve over time. Specifically, what are the CEO characteristics which differentiate CEOs in their ability to adapt over time. Broadly, the dissertation focuses on how boards through their CEO selection decision achieve, and CEOs, mainly though their skills maintain, CEO-firm fit over time.

In the first essay, I draw upon the dynamic managerial capabilities framework which suggests that CEOs differ in their ability to deal with a changing environmental context. In a sample of 3,482 CEOs, I find evidence that CEOs differ in their capacity to respond to changing environment and this adaptive capacity is rooted in their prior experience. Specifically, greater the breadth of CEO's prior work experience higher the CEO's adaptive capacity. It contributes to dynamic managerial capabilities literature by empirically validating its presence at the CEO level.

Second essay focuses on how boards ascertain whether the potential CEO candidate(s) match the CEO selection criteria. Specifically, I theorize that boards use their professional networks to obtain information about external CEO candidates to ensure that CEO profile matches the selection criteria. In a sample of 410 external CEO appointments I find that likelihood of selecting candidate with whom board has a connection is very large. It contributes to CEO succession literature by showing that directors can use professional network as a mechanism to address the information asymmetry problem encountered during CEO selection.

Third essay argues that the degree of uncertainty about the strategic direction of a company is associated with observable CEO selection choices. When a company faces considerable uncertainty at the time of CEO selection, boards are likely to be ambivalent about which CEO characteristics to look for in a new CEO. Consequently, boards' CEO selection decisions are likely to be driven by the criteria of flexibility, ability to monitor CEO and ease of reversibility. These reflect in selection choices of interim CEO and CEO non-duality and result in shorter CEO tenure. Empirically, I find evidence of increased likelihood of selecting an interim CEO and shorter CEO tenure when selected at the time of higher strategic uncertainty. It contributes to CEO succession literature by highlighting the information availability constraints boards may face while selecting a new CEO which can make the possibility of achieving CEO-firm match during succession difficult.

Keywords CEO selection, CEO-firm fit, CEO succession

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Espoo, May 2020
Pardeep Maheshwaree

Contents

List of Abbreviations and Symbols

CEO	Chief Executive Officer
UE	Upper Echelons
ROA	Return on Assets
TSR	Total Shareholder Returns

List of Publications

This doctoral dissertation consists of a summary and of the following publications which are referred to in the text by their numerals

1. Maheshwaree, Pardeep; Schmidt, Jens. 2020. CEO adaptive capacity and performance over time. 33 pages. Working paper.

2. Maheshwaree, Pardeep; Schmidt, Jens. 2020. Better the devil you know than the devil you don't: The role of board ties in outsider CEO selection. 28 pages. Working paper.

3. Maheshwaree, Pardeep; Schmidt, Jens. 2020. Uncertainty About the Strategic Direction of the Company and Boards' CEO Selection Decisions. 27 pages. Working paper.

Author's Contribution

All three essays included in the dissertation are co-authored work. In all three papers, authors wrote the initial drafts and developed hypotheses. The author of this dissertation also collected and linked data from multiple sources and conducted the statistical analyses. Writing of the final manuscript is collective effort of the authors.

1. Introduction

Prior research suggests that a match between CEO characteristics and firm's leadership requirements (CEO-firm fit) is desirable and beneficial for firm performance (Chen & Hambrick, 2012). Moreover, recent research has even found that the influence of CEO on company performance has increased three-fold over the years (Quigley & Hambrick, 2015). This underscores the importance of not only CEO-firm fit per se but also the processes governing this fit. i.e. CEO succession. The argument is that the deterioration of CEO-firm fit typically results in a CEO succession wherein an incumbent CEO is replaced with a new CEO whose skills better align with the firm's leadership requirements and as a result restore CEO-firm fitness. However, this is easier said than done. Significant proportion of the new CEOs leave office within initial four years (Allgood & Farrell, 2003). Thus, suggesting the difficulty of both achieving and sustaining CEO-firm fit.

In a very simplified view, CEO succession can be broken down to two interrelated events of CEO departure (voluntary or involuntary) and CEO selection. Arguments and evidence of CEO departure and specifically involuntary departure have been extensively studied. Most notable factors which increase likelihood of CEO dismissal include poor firm performance during CEO tenure (Fee, Hadlock, Huang, & Pierce, 2015; Jenter & Anderson, 2017), performance expectations (Puffer & Weintrop, 1991), investment analysts' recommendation (Wiersema & Zhang, 2011), power dynamics within top management teams (Shen & Cannella, 2002a), scandals and board characteristics (Ertugrul & Krishnan, 2011). The typical understanding is that CEO-firm misfit, typically observed through firm performance, results in CEO dismissal. Albeit, the timing of which can be influenced by the other contextual factors.

On the other hand, we have limited understanding of CEO selection part of the succession process wherein CEO-firm fit can be restored. Of great interest in this area has been the origin of new CEO, that is, whether the CEO comes from within the firm or is appointed from the outside. The origin of appointed CEO is then inferred as board's desire for continuity (insider CEO) vs. change (outsider CEO) in organizational policies. Poor firm performance generally increases the likelihood of outsider CEO selection. Another area has been the tendency of selecting demographically similar CEOs (either to the board or to the incumbent CEO), i.e. cloning at the top, depending on the power and relational dynamics between boards and incumbent CEOs (Zajac & Westphal, 1996). Notwithstanding the socio-psychological and socio-political issues in selecting the

CEO, the prevalent understanding is that boards do try to match CEO with the leadership requirements of the firm (Henderson, Miller, & Hambrick, 2006; Vancil, 1987) at least ceteris paribus. That is, boards do intend to attain CEO-firm match.

However, achieving the CEO-firm match when selecting a new CEO can be quite difficult. Zajac (1990) contends that boards face constraints in getting the CEO-firm match right due to the information asymmetry between the principal (represented by the hiring board) and the CEO candidates. The reason is that hiring boards know less about the competences of CEO candidates and due to the assumed goal incongruence (i.e. candidates want the job even though their profile might not exactly match the requirement) boards face an informational challenge to be able hire the right CEO for the job (Zhang, 2008). This problem is referred to as adverse selection. Prior literature is generally of the view that information asymmetry problem is more severe when selecting outsider CEOs because boards have less information about the outsider CEO candidates compared to insiders (Zajac, 1990; Zhang, 2008). Moreover, the information asymmetry problem is relatively less severe when boards selects internal candidates through relay succession because the board has more time and opportunities to conduct the focused assessment of the heir (Zhang & Rajagopalan, 2004).

The existing CEO succession literature, focused on the problem of information asymmetry, has analyzed the antecedents and consequences of CEO selection (typically comparing outsider CEO selection to insider CEO selection) but it has not yet explored the mechanisms through which boards could potentially mitigate this problem during CEO succession. Specifically, how boards could validate whether the potential CEO candidate's skill match with the requisite leadership needs of the firm now and in foreseeable future. Also, the prior literature presumes that board is aware of the leadership requirements of the firm when selecting a new CEO. However, that information might not be easily available in the first place because CEO search criteria invariably involves certain forward-looking presumptions about the firm's future which can be highly uncertain. Thus, highlighting a new class of information problems in CEO succession, namely the information availability issues, which have been not been examined (c.f. information acquisition and processing problems studied in CEO succession (e.g., Schepker, Nyberg, Ulrich, & Wright, 2017)).

The dissertation aims to fill these gaps by studying the mechanisms through which boards can acquire information about the potential quality of CEO candidates (i.e. mitigate information asymmetry problem) during CEO succession. It also shows how CEO selection choices of boards can be driven by uncertainty about the future direction of the firm. Moreover, the dissertation also examines evolution of CEO-firm fit over time. Because once matched with the firm, how the CEO-firm fit evolves over time as firm's environment changes is mainly a question of CEO ability rather than the quality of CEO-firm match achieved at the time of succession. Specifically, we look at the characteristics of CEOs which influence their ability to maintain the CEO-firm match (i.e. adapting to changing environment) beyond the succession context.

This summary of the dissertation is organized in six chapters. I first introduce the background and literature which leads to the identification of research gap and the research questions. It is followed by data, research methods and key findings chapter which explains the research setting, the analytical approach and the results of the essays. It then ends with discussion and proposes new directions for research based on the findings of this dissertation.

2. Background

2.1 What does CEO-firm match mean?

The starting point of this dissertation is CEO characteristics matter for firm performance and that boards intend to select CEOs which match with the organizational context during CEO succession. Any explanation of this “matching view” of CEO selection should first define two elements: 1) CEO characteristics and 2) context with which the match occurs. Before we start defining these elements it is worth noting that our characterization of CEO characteristics and that of context is not exhaustive, it merely intends to give an indication of what does match imply.

The term “CEO characteristics” could generally mean any features of CEOs which can be used to distinguish them apart. However, we use it here to denote specifically his personal characteristics which are known in literature to influence strategic decisions of the firm, and not to the features of CEO position or CEO role (Busenbark, Krause, Boivie, & Graffin, 2016). The literature has studied variety of CEO characteristics, they can be categorized into: CEO personality, CEO values and CEO’s prior work experience. However, both CEO personality and CEO values, though influence firm-level outcomes, are noisy and difficult to observe characteristics of CEOs. On the other hand, CEO’s prior work experience is directly observable and information about it is readily accessible. Moreover, it is often the first thing noted in business press when reporting a new CEO appointment. Therefore, this dissertation primarily focuses on CEO’s prior work experience as the key CEO characteristic used in CEO selection.

The term “context” here refers to two types of the environments from firm’s point of view. First is the task environment which includes firm’s linkages to other actors on which its survival is dependent, it typically includes firm’s customers, suppliers, competitors and regulatory groups. Second, it includes the broader institutional environment in which firm operates which can also influence firm’s task environment as well as its strategic choices. A change in firm’s strategy usually corresponds to change in its environment.

The CEO-context match (loosely referred to as also CEO-firm match or CEO-environment match) studied here refers to a situation when CEO characteristics align or “fit” with the context. Consider an illustrative example of deregulation of airline industry in the USA studied in Cho and Hambrick (2006). The authors argue and find evidence that the deregulation changed the airlines main strategic concern from that of efficiency to entrepreneurial issues. The airlines who changed their executive composition to reflect the changing context, specifically by appointing executives who had prior experience in attending to entrepreneurial issues were better suited to adapt the strategy to the new contextual conditions. Note that the change described here primarily originated in the institutional environment, but it is also of nature that does influence every airline's task environment to a varying degree depending on their prior relationship and dependence to other actors in the task environment before deregulation. Therefore, the airlines who had executives with prior experience in attending to entrepreneurial issues, hence resources allocated to attend such issues, had a better match with the context. Similarly, other studies have shown e.g. firms in turnaround context stand to benefit from having CEOs who had prior experience in throughout related function (e.g. operations or finance) because of their emphasis on cost/asset rationalization and operational efficiency which are of prime concern in turnaround context. Thus, a match between CEO characteristics and context is deemed beneficial for the firms.

2.2 How does CEO-firm match come about?

The match begins with the task of CEO selection, which is primarily a responsibility of the board of directors. In addition to CEO selection, monitoring of CEO-firm match over time and dismissal of CEO (if required) are also key responsibilities of boards. Board of directors are the legal custodians of CEO-firm match.

CEO selection process, like any other job, starts with a formal search criterion to which candidates are vetted against. The board of directors might be assisted by the incumbent CEO in identifying and evaluating potential successor. In addition, executive search firms are also typically used to assist the board of directors in reaching out and arranging access to potential CEO candidates.

The resultant selection choice might be influenced by socio-political factors, e.g. demographic similarity between directors and CEO candidates to power dynamics within TMT, but the predominant view is that, ceteris paribus, boards intend to match CEO with requirements of the firm (Finkelstein et al., 2009).

2.3 Theoretical framework

The illustration of CEO-context match presented above resonates well with the processual description of CEO succession literature presented by Finkelstein, Hambrick, and Cannella (2009) with their fit-drift/shift-refit model. The models suggest that when boards select a new CEO it appoints an executive whose skills tend to "align, or fit, with the conditions facing the enterprise at the time and for the foreseeable future" (pg. 210). However, with the passage of time the environment gradually drifts and possibly radically shifts which makes the incumbent CEO skills less appropriate for the new context. The resulting CEO-firm misfit then provides an opportunity to the board to re-align executive skills with the new contextual conditions through CEO succession.

Specifically, by appointing a new CEO whose skills would match better with the leadership requirements of the firm at the time and in near future.

The model presumes that executives have context-specific capabilities and therefore an executive who is well suited to lead a firm during one period may not be well suited to it during the next period (Chen & Hambrick, 2012). Also, that the CEO succession is an adaptational mechanism wherein board can re-align the CEO-firm fit (Virany, Tushman, & Romanelli, 1992; Zhang & Rajagopalan, 2004). Notwithstanding, that there could be difficulties in matching the right CEO with the leadership requirements, but in general the newly selected executive is likely to be more appropriately suited to the requirements than a randomly selected CEO (Finkelstein et al., 2009).

The fit-drift/shift-refit conceptual model comprises three key inter-related research areas corresponding to each of the phases 1) CEO-firm fit ("fit") 2) evolution of the fit ("drift/shift") 3) CEO succession ("refit") which I discuss separately.

2.3.1 CEO-Firm fit

The Upper Echelon (UE) framework propagated the idea that executives have idiosyncratic influence on organizational outcome (Hambrick & Mason, 1984). The executive influence primarily stems from their unique orientation which is a blend of their values, personality and their prior experiences. For example, firms with liberal leaning CEOs are more drawn to CSR initiatives compared to conservatives because of their different takes on property rights and stakeholders. Whereas, hubristic CEOs are less inclined to pursue CSR because they overestimate their capabilities and perceive their firms less dependent on stakeholders such as customers or communities. More generally, executive orientation "serves as the basis from which the executive interprets the strategic situation and decides on a course of action" (pg. 46). Therefore, differences amongst executives could predict different strategic choices by a given firm ceteris paribus. The seminal framework has provided a theoretical base for ever growing studies examining the link between CEO characteristics to strategic choices and firm performance (Bromiley & Rau, 2016; Busenbark et al., 2016; Finkelstein et al., 2009). An obvious implication of upper-echelon framework is that CEOs matter the most to firm performance when their characteristics match the context. That is, CEO-firm fit is desirable from firm's point of view.

The prevalence as well as beneficial consequences of CEO-context fit have been observed at both macro level (e.g. economy as a whole) as well as at the micro level (e.g. individual firms). For example, at the firm-level, throughput background CEOs are found to be better suited for companies in turnaround situation (Chen & Hambrick, 2012). Also, CEO with international assignment experience are beneficial to multinational corporation's performance (Carpenter, Sanders, & Gregersen, 2001). At the sector level, it suggests that the industrial context suits certain types of managerial background, such as output functional background after deregulation because of their tendency to attend to entrepreneurial issues which became salient after the deregulation in airline industry (Cho & Hambrick, 2006). At the macro level, “CEO-environment fit” literature has focused on the match of CEO characteristics with the broader contextual conditions. It suggests, for example, that antitrust laws have increased the proportion of CEOs in the United States with financial background due to the ensuing preference for diversification during 1960s and '70s (Fligstein, 1987). However, which later swung back to a preference for CEOs with productions or operations background during the 1980s and early '90s due to the increasing international competition and declining profitability which consequentially created demanded different set of executive skills (Ocasio & Kim, 1999).

Building on the UE framework, several empirical studies have established that CEO-context fit matters. However, the fit is established at a point of time, specifically during CEO succession, but how does it evolve over time? The typical understanding is that boards appoint a person whose qualifications match the job demands as anticipated at the time of CEO selection. However, once selected for the job, how CEOs adapt over time as firm gradually moves away from the succession context creates interesting dynamics which I discuss next.

2.3.2 Evolution of the fit

The match between CEO and context is beneficial for firms but the match is made at a point in time and yet CEOs preside over the firms for several years, raising the question of what happens to the fit as CEO tenure progresses? Literature on the evolution of the fit takes a dynamic view of the CEO-context fit by theorizing and assessing the outcome of CEO-context fit over CEOs whole tenure in office. It is centered on executive adaptation, since their appointment, as and when the firm environment changes either gradually “drifts” (e.g. emergence of new movie genres over the tenure of movie studio heads (Miller & Shamsie, 2001)) or radically “shifts” (e.g. after deregulation in the airline industry (Cho & Hambrick, 2006)). Two strands of literature focused on executive adaptation are 1) CEO life cycle perspective which tends to highlight key tendencies of CEOs over their tenure 2) managerial dynamic capabilities perspective which is focused on adaptive capacity of executives. Next, I provide an overview of these literatures.

CEO life cycle literature

A key element in CEO life-cycle, from CEO-context fit evolution point of view, is how the interplay of CEO’s motivation and ability influences the adaptation of CEOs to the contextual changes. Hambrick and Fukutomi (1991) put forward a model of “seasons” of CEO tenure in which they identify marked phases during which CEOs emphasize specific issues and behave in a particular way at different phases of their tenure. The typical tendency is that initially in their tenure, CEOs are inclined to learn more about the job and seek diversity of information about the firm and its environment. But over time their adaptive tendency declines due to lower task interest, reduced openness and responsiveness to stimuli, enhanced commitment to status quo and increased power. Thus, making

CEO skills obsolete in their later stages. The discernable seasons highlighted by CEO lifecycle include:

1) "response to mandate", during which CEO's action reflect an implicit[1] or explicit direction accorded to the new CEO by the board
2) "experimentation", exploration of new ways in which organization can be run
3) "selection of an enduring theme", settling on a theme to guide the organization forward
4) "convergence", reinforcing of the theme by incremental action and
5) "dysfunction", obsoleteness of the theme and diminished capacity of CEO to adapt and change.

These behavioral tendencies of CEOs over their tenure result in an inverted-U pattern of firm performance with maximum benefits for the firm occurring during the middle period of CEO tenure which denotes exploitation phase of their tenure after initial on the job learning and adaptation (Henderson et al., 2006).

In general, the reasoning behind the argument that CEO-context match worsens over time rests two logics. First, the context changes over time as has been illustrated for example, in case of technological shifts in NCR from mechanical to electronic register (Rosenbloom, 2000) or in the case of environmental jolts like deregulation as exemplified in airline industry (Cho & Hambrick, 2006). Alternatively, there could be incremental changes in firm's operating context which accumulate over time to the point that demand restructuring changes e.g. in turnaround situations (Chen & Hambrick, 2012). Second, as the tenure of CEOs progresses their ability to scan and interpret significant changes in the environment deteriorate (Miller, 1991) and they get overly committed to status quo (Miller & Shamsie, 2001) due to prior successes in their tenure. Consequentially, firm's product experimentation, technological innovativeness and ability to adapt declines (Hambrick & Fukutomi, 1991; Henderson et al., 2006; Wu, Levitas, & Priem, 2005).

Managerial dynamic capabilities literature

The research in dynamic managerial capabilities (Adner & Helfat, 2003; Teece, 2012), on the other hand, has been prominent about the adaptive response of top management in responding to environment change often of radical sort, essentially underscoring the differences across executives in their ability to renew the organizations. Learning and adaptation by executives is the hallmark of managerial dynamic capabilities framework which defines them as "the capabilities with which managers build, integrate, and reconfigure organizational resources and competencies" (Adner & Helfat, 2003: 1012). It advocates that firms whose managers have superior dynamic managerial capabilities are better able to adapt to environmental change compared to firms whose executives possess lower such capabilities (Helfat & Martin, 2015). Specifically theo-

[1] by mere selection of a CEO with particular background

rizing about CEOs, Kor and Mesko (2013) suggest that CEOs through their attuning of managerial dominant logic[2] vis-à-vis environment realize the evolutionary fitness for their organization. Such an anticipation of viability of existing dominant logic or the need to revitalize it will depend crucially not only on the CEO's understanding of the firm but also that of the evolution of firm's environmental context.

Although there are differences amongst executives in their ability to adapt to environment (i.e. maintain CEO-firm fit), CEO succession is inevitable in an organization's life. The topic has attracted great amount of attention by scholars which I discuss next.

2.3.3 CEO succession

"Chief executive officer (CEO) successions are critical turning points for organizations. They temporarily increase internal disruption, and at the same time they provide an opportunity to adapt a firm's strategy to current and future demands" (Berns & Klarner, 2017: 83). This view of CEO succession is quite pervasive and is also explicitly put forth by fit-drift/shift-refit model which emphasizes that in selecting CEOs boards typically match the candidate with the requirements of the firm and its environment. This is further reinforced by the CEO life cycle perspective which presupposes CEO-firm match as the starting point of a typical CEO job (Henderson et al., 2006). Moreover, several studies have empirically demonstrated the superior outcome of post succession performance of the resulting CEO-firm match (Kesner & Sebora, 1994). The reasoning underpinning this "matching logic" is that CEO succession as such might not be beneficial to firm performance but it may very well be, especially when executive characteristics match the leadership requirements of the firm (Chen & Hambrick, 2012; Govindarajan, 1989).

Particularly intuitive and appealing but the matching view of CEO succession is prone to the problem of adverse selection as noted by Zajac (1990). This specifically arises during the CEO selection because a CEO candidate has more information about her/his skills and preferences compared to the hiring board. This information asymmetry between board and CEO candidates along with the presumed goal incongruence (i.e. CEO candidate may want the job even though his competence profile does not match with the job requirements set by the board (Zhang, 2008)) makes the execution of CEO-context match or the "refit" problematic.

Prior literature is generally of the view that information asymmetry problem is more severe when selecting outsider CEOs because boards have less information about the outsider CEO candidates compared to insiders (Zajac, 1990). Furthermore, higher information asymmetry when selecting of outsider CEOs compared to insiders can also result in early CEO dismissal. The logic is that higher the information asymmetry at the time of CEO selection results in an inadequate match therefore culminating in early CEO dismissal (Zhang, 2008).

[2] "represents management's view of the world, where the firm stands in its business environment, and what it ought to be doing" (Kor & Mesko, 2013: 235)

Also, the severity of information asymmetry problem can vary with the type of CEO succession. For example, there is likely to be relatively low information asymmetry in the selection of an internal candidate through relay succession because the board then has generally more time and opportunities to conduct the focused assessment of the heir (Zhang & Rajagopalan, 2004). Recent research, using the same logic that: outsider CEO selection → higher information asymmetry in selection decision → low quality of match, has also shown that firms hiring outsider CEOs have more variance in their post-succession performance compared to firms who selected an insider as a CEO (Quigley, Hambrick, Misangyi, & Rizzi, 2019).

3. Research gap

Although the matching logic of CEO succession, though theoretically compelling, does not directly address the concern of how board of directors execute the CEO-firm match – a fundamental issue still left unaddressed even though Kesner and Sebora (1994) brought it up nearly 25 years ago. Specifically, the upper-echelon research underpinning CEO-firm fit logic in general and CEO succession research in particular has not yet elaborated on the mechanisms through which boards address the information asymmetry in matching CEO candidates with firm requirements hence posing is a critical challenge in achieving CEO-firm fit to begin with (Zajac, 1990). Although, information asymmetry issue is undoubtedly important but a look into the matching problem suggests that there can also be other informational constraints (e.g. information unavailability) at the time of CEO selection which makes the likelihood or even desire of achieving CEO-firm fit unlikely, a concern also raised by Gupta (1986). Moreover, once matched with the firm we can envisage the evolution of the fit over time through life-cycle perspective in which CEOs passively pass through various stages during their tenure. But, we have limited understanding about the ability of CEOs in influencing the evolution of fit over time (during the "drift/shift" phase) except that such CEOs are presumably rare (Finkelstein et al., 2009; Hambrick & Fukutomi, 1991). Relatedly, focused on executive adaptation over time, the dynamic managerial capabilities framework does suggest that executives have heterogeneity in their propensity to adapt to changing context and hence can influence the evolution of CEO-firm fit. But it has provided limited empirical evidence of such assertion. Instead, empirical demonstration has been more suggestive of CEO succession as an adaptive mechanism (Helfat & Martin, 2015; Rosenbloom, 2000) rather than managerial heterogeneity.

These issues are precisely what the dissertation aims to address. The first essay is about differences in CEO ability to maintain CEO-firm fit over time (executive adaptation and evolution of the fit). The second essay is about board's ability in re-aligning CEO-firm fit by alleviating information asymmetry problem in CEO selection decision. The third essay addresses the information availability constraints boards might face at the time of CEO selection and resulting CEO selection "refit" choices and its consequences.

4. Research question

The focus of the dissertation is on CEO-firm fit over time from the perspective of both CEOs and boards. First, it investigates the key CEO characteristics which influence CEO's ability to maintain fit with the task environment over time. Second, it investigates the ability of boards in re-aligning this fit, as and when required, through CEO succession. Therefore, the overarching question the dissertation aims to answer is:

What is the role of boards and CEOs in maintaining CEO-firm fit over time?

To address this question I draw upon upper-echelon framework which advances the notion that CEO personality, values and background reflect in the company's strategic choices (Hambrick & Mason, 1984). The framework provides the foundation that a match between CEO's background and firm's operating context (i.e. "fit") is desirable and beneficial for firm performance. However, firm's situation and task environment changes over time and therefore incumbent CEOs may be confronted with very different context compared to the one when a given CEO was selected (which typically matches well with their background/skills). Nevertheless, as advocated by managerial dynamic capabilities framework and as supported by empirical evidence that individual CEOs differ in their ability to cope with new situations. Thus, there is likely to be a great deal of variance in the evolution of CEO-firm fit. This leads to my first inquiry which explores differences in CEOs' background which distinguish CEOs with respect to their ability to maintain CEO-firm fit over time? Thus, providing the first sub question:

(1) *What are the key CEO characteristics which differentiate CEOs in maintaining CEO-firm over time?*

To address this question I start with CEO life cycle perspective (Hambrick & Fukutomi, 1991) which suggests that CEOs are selected with a specific mandate which matches their skills but over time they become obsolete as the firm requirements diverge from their mandate, accorded to them at their selection, and consequentially become harmful to company performance and are thus replaced. CEO life cycle descriptions do explain the central tendencies of CEO's tenure but are passive about CEO's ability to adapt and therefore do not explain why some CEOs have been able to maintain CEO-firm fit over extensive periods of time (c.f., Henderson et al., 2006). On the other hand, managerial dynamic capabilities framework's fundamental premise is that managers differ in their ability to maintain congruence with the firm's environment. In my first essay of the dissertation, I bring together both CEO life cycle theories and managerial dynamic capabilities framework to explain differences across CEOs is their ability to adapt to environmental change. Empirically, the essay assesses CEO tenure and performance relationship using fixed effect regressions and specifically accounts for the sample selection bias because CEOs could leave the firm for non-random reasons.

Even though CEOs could differ in their ability to adapt and sustain fit with the firm's environment, CEO succession at some stage is inevitable. From the fit-drift/shift-refit perspective, this brings forth the challenge faced by boards in finding the new CEO which matches the firm requirements (i.e. "refit") to the forefront. The second essay focuses on this topic. Specifically, it examines how boards deal with the information asymmetry problem they face with respect to matching CEO candidate capabilities with the CEO search criteria. It looks into the distinctive phenomenon of external CEO selections which provides a neat context to assess difficulties boards face in validating CEO skills because of severity of information asymmetry compared insider CEO succession (Zajac, 1990). The second sub question I address is:

(2) *How do boards validate CEO skills to match with the requirements of the firm in the context of external CEO succession?*

To address this question, the second essay builds on intra-organizational literature which has identified board network as a conduit of information for directors (Davis & Greve, 1997; Mizruchi, 1996). Empirically, it evaluates the likelihood of appointed as a CEO based on the ties with hiring board and its performance consequences. The second essay focuses on the CEO (skills) side of the match in the CEO-firm equation but presumes that boards know the (leadership) requirements for the firm (i.e. firm side of the CEO-firm match is certain).

However, firms face varying degree of uncertainty about the possible future strategic direction of the company at the time of CEO selection (Gupta, 1986) which can make it difficult for boards to have an equivocal CEO selection criteria let alone find the right CEO. In the third essay, we introduce the concept of strategic uncertainty, denoting the level of uncertainty boards may face in identifying requisite CEO capabilities due to unpredictability of strategic options firms may have, to CEO succession literature and evaluates the CEO selection choices made under such conditions. The third sub-question I address is:

(3) *What CEO selection choices boards make when there is considerably strategic uncertainty about the firm (i.e. board does not know what exactly are firm's leadership requirements thus yielding ambiguous CEO selection criteria) and its consequences?*

To address this question, the third essay builds on the literature which classifies boards as information processing group (Boivie, Bednar, Aguilera, &

Andrus, 2016; Schepker et al., 2017) and examines board's CEO selection choices when faced with uncertainty about the future. Empirically, it assesses the nature of CEO appointment (position) and the quality of match based on the extent of uncertainty faced by the hiring board at the time of CEO selection.

5. Data and methods

5.1 Empirical setting

The empirical context of this dissertation is public listed US companies specifically S&P 1500 indexed companies which roughly makes up 90 percent of market capitalization of US stocks. It provides a good representative sample of all US listed companies. This context has been extensively used in prior studies focused on upper-echelons and therefore provides comparability to most of the prior research.

5.2 Data

All the articles use archival longitudinal data of S&P 1500 companies. The main sources of data vary across the three studies depending on the concepts used. The sources of database used include:

- ExecuComp database for executive identification and characteristics
- BoardEx for board characteristics and network information
- RiskMetrics database for board composition characteristics
- Compustat database for financial information of the firm
- Audit Analytics' Director and Officer Changes database for director and executive, selection and removal details.
- I/B/E/S database for financial analysts' forecasts

5.3 Analytical approach and key findings

5.3.1 Essay 1

Essay 1 analyses the ability of CEO in maintaining CEO-firm fit over time. Specifically, it predicts the influence of CEO ability on firm performance trajectory (which is a manifestation of fit) over CEO tenure. CEO ability is measured as an index based on her prior work experience. The index uses five indicators to estimate CEO's general ability. The indicators include number of different functional positions CEO held during his career, number of firms CEO has worked with during his career, number of industries CEO has worked in, prior CEO experience dummy and prior conglomerate experience dummy. Higher score on the index suggest higher generalist background of the CEO. Due to the nested structure of data, model is estimated using fixed effects regression to test the effects. Fixed-effects estimator takes care of unobserved time-invariant heterogeneity across firms and produces consistent estimates in an unbalanced panel. Moreover, we also correct for the potential sample-induced survival bias in the estimated CEO ability-tenure performance relationship because CEOs leave office for non-random reasons and we only observe CEOs who have survived a certain length of tenure every year. This sample selection bias correction is done following Henderson et al. (2006) approach who also use it in a similar context to estimate a CEO tenure performance relationship. Additionally, we also clarify and test the correlation between selection parameter and the independent variable(s) to estimate the strength of exclusion restriction in the selection model to ensure its efficacy as suggested in recent methodological research (Certo, Busenbark, Woo, & Semadeni, 2016).

Specifically, it tests the following hypothesis:

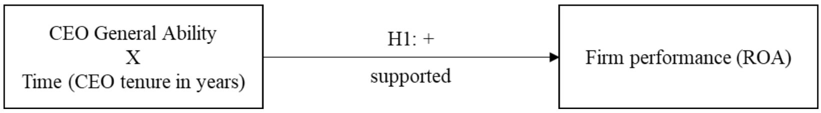

Figure 1. Summary of hypothesis and finding in Essay 1.

Using a large data sample of 16805 CEO-year observations encompassing 3,482 CEOs in 2,094 in S&P 1500 firms, essay 1 finds evidence that CEOs differ in their capacity to respond to changes in their firms' environment. This adaptive capacity, we find, is rooted in the nature of CEOs' prior experience, and it is evident in their performance trajectories over time. Specifically, it finds that greater the breadth of CEO's prior work experience (i.e. Generalist CEOs) higher the CEO's adaptive capacity and hence better the firm performance over CEO tenure.

5.3.2 Essay 2

Essay 2 analyses the ability of board in achieving CEO-firm fitness, by alleviating information asymmetry problem, in the context of outsider CEO selection. Specifically, it emphasizes the role of network ties as a conduit of information between external CEO candidates and selecting board members to predict the likelihood of selecting a CEO. For CEO selection likelihood, it employs the case-control methodology to assess the probability of selecting a particular CEO compared to control group by following the inter-organizational research where it is actively used in studying tie formation (Meuleman, Jääskeläinen, Maula, & Wright, 2017; Sorenson & Stuart, 2001, 2008), by. We identify control group as all the potential candidates who eventually assumed CEO position at different firms within the same industry and within the time frame of three years post-succession at focal company. We also estimate the post-succession performance of these successions and for which we use industry-adjusted performance measures of both ROA and TSR and take the average of three years post-succession performance following the succession year in line with prior research (Kesner Idalene & Dalton Dan, 1994; Shen & Cannella, 2002b).

Specifically, we theorize that boards use their networks to obtain information about external CEO candidates from the perspective of achieving CEO-firm match. We test the following hypotheses:

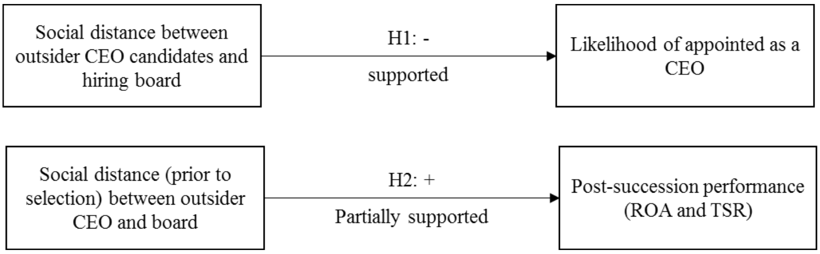

Figure 2. Summary of hypotheses and findings in Essay 2

Our results strongly support our theoretical prediction: Among a sample of approximately 410 external CEO appointments in S&P 1500 firms we find that likelihood of selecting candidate with whom board has a connection is very large. Also, we find that outsider CEOs selected through board connections have better post-succession performance in terms of total shareholder returns.

5.3.3 Essay 3

Essay 3 hypothesizes that boards might not necessarily always know which CEO characteristics to look for in CEO selection. By developing a forward-looking measure of strategic uncertainty faced by the firm at the time of CEO selection it theorizes and empirically test how boards make CEO selection decision when the firm faces considerable strategic uncertainty. The article argues that the degree of uncertainty about the strategic direction of the company is associated with peculiar selection choices made by boards and its consequences during CEO succession. Specifically, boards CEO selection decisions made under uncertainty are likely to be driven by the criteria of flexibility, ability to monitor CEO and ease of reversibility. These reflect in choices of interim CEO selection, CEO duality and shorter CEO tenure. Specifically, we test the following hypotheses:

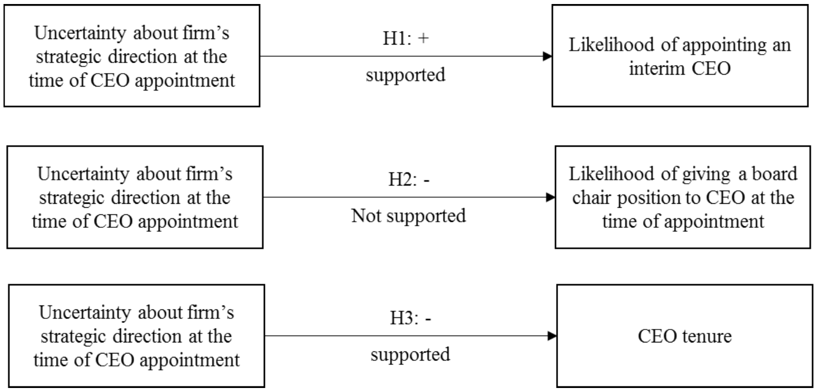

Figure 3. Summary of hypotheses and findings in Essay 3.

We test these predictions in a sample that contains CEO succession events from 2004 to 2015 among the firms listed in S&P1500. It predicts the likelihood of selecting interim CEO and CEO duality which are both dichotomous variables. Therefore, we employ panel logistic regression to assess these choices. Moreover, it also predicts the tenure of CEO in office for which it uses survival model. The survival model uses log logistic distribution which not only fits the data better based on AIC criterion but is also consistent with the theoretical notion of CEO life cycle where dismissal likelihood increases initially and then decreases (Hambrick & Fukutomi, 1991). All the three models use year fixed effects and account for interdependence between observations (i.e. successions) within the same firm by using clustered standard errors in the fixed effect models.

Our results support our arguments about an increased likelihood of selecting an interim CEO and about shorter CEO tenure when strategic uncertainty about the strategic direction of the company was high at the time of CEO appointment. However, we do not find support for a decreased likelihood of giving a CEO chair position when faced with higher uncertainty.

Table 1. Summary of methods.

	Essay 1	**Essay 2**	**Essay 3**
Title	CEO adaptive capacity and performance over time	Better the devil you know than the devil you don't: The role of board ties in outsider CEO selection	Uncertainty About the Strategic Direction of the Company and Boards' CEO Selection Decisions
Dependent variable	Firm performance measured as Return on Assets (ROA)	• Whether a CEO gets selected at the particular firm or not • Post-succession firm performance measured as	• Whether CEO selected is interim or not • Whether CEO selected is also given a board chair position • CEO tenure

		industry adjusted ROA and Total Shareholder return (TSR)	
Focal independent variable	CEO's general ability index	CEO ties to board members	Uncertainty about strategic direction of company
Main data sources used	CEO ability data from Custódio, Ferreira, and Matos (2013) ExecuComp database Compustat database	BoardEx database Compustat database	Audit Analytics' Director and Officer Changes database Execucomp database BoardEx database
Time frame	1993-2007	2004-2013	2004-2015
Statistical methods	Fixed effects regression	Conditional logit OLS regression	Logistic regression Survival model

6. Discussion

Broadly, the dissertation highlights: What is the role of CEOs and boards in maintaining CEO-firm fit over time? It explains how both boards, through their CEO selection decision, and CEOs, through their skills, respectively maintain CEO-firm fit over time. Specifically, it explains:

(1) Which CEO characteristics matter in adapting to the environmental change over time (i.e. maintaining CEO-firm fit over time)? (study 1)

(2) How boards re-align the CEO-firm fit at the time of CEO selection, by ascertaining whether the CEO characteristics match the firm needs. Specifically, board's ability to deal with information asymmetry problem in selecting a new CEO in the context of outsider CEO selections where information asymmetry problem is severe (study 2)

(3) What choices do boards make in CEO selection decision and its consequences when the firm leadership needs are itself uncertain i.e. unclear which CEO characteristics would matter (study 3)

The thesis finds that CEOs who have had a variety of work experience prior to taking up the job are better able to adapt to changes in the firm's environment (study 1). However, when the succession happens, boards can draw upon their professional network to minimize the information asymmetry by ascertaining whether the CEO candidate has the requisite skills (study 2). But the succession can also happen at a time when the boards are uncertain about the future strategic direction of the company, hence conditions are not suitable for "matching" the CEO with strategy because firm's strategic direction is unclear. In these cases, boards use several decision levers which emphasize flexibility in CEO choice, create better information flow for monitoring the quality of match over time, and opt for a protracted succession process with multiple succession events (study 3).

Collectively these results, add to the broader upper-echelon literature and specifically to the succession literature, which I discuss next.

6.1 Contribution to upper-echelon research

Upper-echelon framework provided the premise that CEO characteristics reflect on organizational outcome (Hambrick & Mason, 1984) and several empirical studied attest to fact that CEOs matter a great deal for organizational performance (Hambrick & Quigley, 2014; Quigley & Hambrick, 2015). This logically leads to proposition that CEO characteristics matter the most when organizational characteristics match the CEO background. Such a concurrent match between CEO characteristics and organizational context has been the subject of several inquiries (Chen & Hambrick, 2012; Govindarajan, 1989).

For example, a CEO with international assignment experience is advantageous to MNC performance (Carpenter et al., 2001). Similarly, a CEO having experience in throughput functions is more valuable in turnaround situations (Chen & Hambrick, 2012). However, there is a limited research on which CEO characteristics matter over time. Consequently, an important question of which CEOs are better able to adapt over time to changing context remains underexplored. This is precisely what essay 1 intends to bring the focus on. By showing that CEO characteristics matter not only to the extent that they match the prevailing context but also that they matter over time brings the dynamism in upper-echelon framework. It contributes directly to a stream of literature focused on temporal aspects of CEOs tenure specifically CEO life cycle perspective (Hambrick & Fukutomi, 1991; Miller, 1991) and managerial dynamic capabilities (Helfat & Martin, 2015; Kor & Mesko, 2013).

Essay 1 points to the CEO characteristics which could influence the central behavioral tendencies of a typical CEO during his tenure as suggested by the seasons of CEO tenure research (Hambrick & Fukutomi, 1991). The essay advancing our understanding of the antecedents to observed behavioral tendencies of CEOs over their tenure. From the fit-drift/shift-refit model perspective, it adds to our understanding of evolution of CEO-firm fit (drift/shift phase) by showing that CEOs differ in their ability to maintain CEO-firm fit over time. Specifically, we show that generalist background CEOs are better equipped to deal with changing context and therefore exhibit a different performance trajectory (which is a manifestation of CEO-firm fit evolution since fit is not directly observable).

It also validates the conceptual formulations of managerial dynamic capabilities by showing how differences in executives' ability to adapt and as a result influence firm's performance over time. This is in contrast to prior empirical evidence which is more suggestive of new executives adaptive response to changing environmental context i.e. executive succession (Rosenbloom, 2000) rather than incumbents ability to adapt.

Broadly, such a dynamic perspective of CEO characteristics X Time → firm outcome which we use in essay 1 have implications for the significance of the CEO attributes which are extensively researched in the upper echelon literature (Busenbark et al., 2016) in a cross- sectional way i.e. CEO characteristics → firm outcome. For example, we can conjecture that when we take a look at the influence of CEO characteristics over time it might very well be the case that some of these characteristics (say CEO's functional background) might matter for firm only in short term whereas the other attributes (say CEO's regulatory focus) have more significance in the long-run. Such a dynamic approach to assess executive influence might be useful tool to mitigate an endogeneity problem – specifically how to distinguish executive influence from that of board's selection effect (boards matching of CEO to a given context) noted by Hambrick (2007) – by showing that influence of certain executive characteristics lasts beyond their initial (selection) mandate given to them by boards. Moreover, information on significance of specific CEO attribute to firm performance based on temporal horizon is also likely to facilitate hiring boards in sorting potential CEO candidates in CEO succession.

6.2 Contribution to CEO succession research

The phenomenon of CEO succession when viewed from the fit-drift/shift-refit model suggests that CEO skills are matched with firm requirements during CEO succession but over time CEO skills become obsolete as firm's operating context changes and boards then re-stores the CEO-firm fit by appointing a new CEO whose skills have better match the current context (Finkelstein et al., 2009). This model resonates well with the matching view of CEO succession literature which suggests that CEO succession are beneficial to the company performance as long as CEO characteristics match the characteristics of the firm and its environment (Kesner & Sebora, 1994).

Yet, how CEO-context match comes about remains under researched. Prior literature has examined how succession process might look like in practice (Khurana, 2002) and how the succession process as a whole can be made more effective (Schepker et al., 2017). But how the succession outcome can provide a CEO-context match is unclear, especially when taking into account the information asymmetry constraints boards face in matching CEO candidates with the CEO search criteria (Zajac, 1990). The finding of essay 2 addresses this omission. Specifically, by showing that there could be mechanisms - the use of personal networks by boards – which board can use to alleviate information asymmetry to attain a CEO-firm match.

The research also extends the existing research built on matching logic which has typically taken the CEO search criteria as a given (e.g., Chen & Hambrick, 2012; Finkelstein et al., 2009: Chapter 7) by relaxing the assumption that board have clarity about the future strategic direction of the company and therefore have an unequivocal search criteria . However, this might not always be the case and boards might not have a specific search criterion to begin with depending on the strategic uncertainty facing the firm at the time of CEO succession as shown in essay 3. Thus, highlighting other informational constraints, besides already known information asymmetry (Zajac, 1990; Zhang, 2008), which influence the likelihood of getting CEO-firm match during succession. These findings complement the corporate governance research which has shown information processing constraints boards may face (Boivie et al., 2016; Schepker et al., 2017) by highlighting a new class of constraints boards might face with respect to availability of information in their decision making.

Collectively, these findings are important for two reasons 1) they address the long-standing critique to how the CEO-firm match (which is marred with information asymmetry constraints) can be executed by the decision makers (Kesner & Sebora, 1994) by showing that there are mechanisms through which boards can alleviate the information asymmetry between potential CEO candidates and the boards to achieve a better CEO-context match. Thus, clarifying the execution as well as the applicability of matching logic of succession. 2) they highlight the role of contextual environment during succession as a boundary conditions for achieving CEO-firm match. In doing so, it sheds light on the rarely discussed inherent uncertainty during CEO selection (Gupta, 1986) arising from a forward looking judgement about the future strategy of the company exercised by the board of directors.

6.3 Contribution to practice

There are trillions of dollars of just cash assets on the balance sheet of only non-financial firms. Although, its disposal is admittedly influenced by all the rank-and-file employees of the firms but nevertheless its deployment is ultimately decided by CEOs with the approval of their board. This can give an idea of how "wrong" things can go when the companies don't have the right executive at the top. CEO-context misfit not only destroys shareholder value but also lead to mass lay-offs, for example as happened with Nokia during the past decade or with Apple during John Scully's tenure. A study even put a direct cost of hundreds of billions of dollars on CEO successions gone wrong[3]. This is the backdrop of the motivation of this dissertation for studying CEO-firm fit over time.

The findings of this dissertation aim to not only highlight the issues with respect to how firms get CEO-firm fit right, and how CEO-firm fit evolves over time, but also advance novel take on issues important to board of directors and policy makers. For example, the finding that CEOs with generalist background are able to perform better over time adds to the recent discussions on the tenure of executives by shareholder advisory groups and pension funds which tend to portray longer CEO tenure almost always negatively[4] and therefore seem to underemphasize the differences in ability of CEOs to lead the firm for longer periods. Moreover, the finding that influence of CEO attributes on firm performance varies over time could also assist board of directors in refining their CEO search criteria.

Also, the finding that boards network serves a useful purpose in evaluating potential CEO candidates serves a prompt reminder that a trend towards disappearing board networks might not only hinder the diffusion of innovations across organizations as suggested by Chu and Davis (2016) but it can also impair the very linchpin of board work. That is, selecting the right CEO (Mizruchi, 1983).

[3] https://www.strategy-business.com/article/00327?gko=a813e

[4] https://hbr.org/2013/03/long-ceo-tenure-can-hurt-performance

In addition, the finding that there can be considerable uncertainty about the future strategic direction of the company at the time of CEO selection provides different view on seemingly unpopular CEO selection choices. For example, selection of an interim CEO is typically understood as a weak succession planning on part of board, but it can very well be a good choice on part of the board when company faces considerable uncertainty about its strategic direction. Similarly, an early dismissal of CEO might be the only reasonable course of action a board has to take depending on the timing of CEO selection.

CEO selection decision is a high stake decision not only for firms but also for the hiring board and when gone wrong it has negative consequences for the board (Marcel, Cowen, & Ballinger, 2017). But these findings suggest to also consider constraints in board work when evaluating board decisions as CEO selection decisions involve forward looking element which can be highly uncertain and beyond board's control.

7. Limitation and future research

The research undertaken has several limitations which provide a fruitful way to advance the research. We show how CEO's prior experience shapes her/his adaptive capacity. However, there can be other factors related to CEO's general intelligence (Adams, Keloharju, & Knüpfer, 2017; Helfat & Peteraf, 2015) or CEO personality (Nadkarni & Herrmann, 2010) which can likely influence the adaptation of CEOs to the environmental change as well. Future research can could empirically assess whether these factors influence CEO adaptability directly or whether they are antecedents to CEO's prior jobs. For example, whether executives with a specific type of personality and intelligence are attracted to jobs which provides them with generalist experience.

Also, we show how boards could use network to reduce information asymmetry towards selecting a right CEO candidate. However, the efficacy of resulting CEO-firm match rests on assumption that CEO search criteria developed by board encapsulates the "correct" leadership requirements of the firm given its operating environment. What if, the board gets the requirements wrong? Essentially, exploring the question of "board-firm fit", similar to CEO-firm fit, during the succession could provide useful answers regarding the quality of search criteria. The whole matching logic in CEO succession, that is CEOs on average are likely to be matched with the context, rests on the rarely studied assumption that board have a clear search criteria. We explore one aspect of this by studying the influence of context, strategic uncertainty, at the time of CEO selection on the selection outcome. That is an exogenous constrain, which is beyond board's control during CEO succession. But, the competence of hiring board could also reflect on the quality of criteria and consequentially the CEO-firm match. For example, consider a scenario when a firm might need a product CEO (e.g. Steve Jobs) but the hiring board nevertheless decides to hire a marketing background CEO (e.g. John Scully) even when strategic uncertainty about the future of the company is low.

Also, we show that board's CEO selection choices can be driven by the availability of information but so can be the CEO dismissal decisions. A logical extension of this reasoning would be to have an inquiry on whether the boards can choose to retain an "unfit" CEO rather than going through a knowingly transient succession event. What could be trade-offs or other possible alternatives board can have in such cases when faced with the choices of either retaining an unfit CEO or going through a succession whose outcome is likely to provide a suboptimal CEO-context match as well?

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