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CEO Succession and Strategic Change

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List of abbreviations

CEO	Chief Executive Officer
cf.	Confer
Coeff.	Coefficient
Δ	Difference (delta)
EADS	European Aeronautic Defence and Space Company
EBIT	Earnings before interest and tax
e.g.	Example given
FDI	Foreign direct investments
GDP	Gross domestic product
GLS	Generalized least squares
HDAX	Stock index of the Deutsche Börse
HR	Human resources
IBM	International Business Machines Corporation
i.e.	Id est
LSSC	Leadership succession strategic change
MBA	Master of business administration
N	Number of observations
No.	Number
OLS	Ordinary least squares
p	P-value
P&E	Plant and equipment
R^2	Coefficient of determination
R&D	Research and development
ROI	Return on investment
ROA	Return on assets
s.d.	Standard deviation
SGA	Selling, general and administrative expenses
SE	Standard error
S&P	Standard and Poor's
TMT	Top management team
UNCTAD	United Nations Conference on Trade and Development
US	United States
WHU	Wissenschaftliche Hochschule für Unternehmensführung

1 Introduction

1.1 Research questions

Apart from the central role company management plays in most theories of the firm (cf. Hutzschenreuter, 2006 for an overview) few people would ever question the importance of the chief executive officer (CEO) and his effects on company outcomes. Both the academic literature and the popular press have reinforced the belief that the CEO is the single most powerful player in any firm (Berson, Oreg, & Dvir, 2008; Favaro, Karlsson, & Neilson, 2010; Finkelstein, Hambrick, & Cannella, 2009; Hansen, Ibarra, & Peyer, 2010). Hence, due to their substantive and symbolic importance the event where the incumbent CEO leaves the position and a new CEO takes over control can be regarded as one of the most crucial and defining events in the life of any firm (Finkelstein & Hambrick, 1996; Kesner & Sebor, 1994).

Since the 1960s academic research has shown great interest in the phenomenon of CEO succession (Grusky, 1960, 1963) looking at the topic from various angles and in different levels of detail (Giambatista, Rowe, & Riaz, 2005). Overall, most research in this field can be grouped into three broad areas, namely succession antecedents, the succession event itself, and the consequences, as Kesner and Sebor (1994) show in their extensive review on the literature of this field. Yet, one topic that has received only limited attention in the past is the question of the choice of the successor. While those studies that can be found primarily focus on the dichotomous differentiation between inside and outside successors or the CEO-firm fit (Ocasio, 1994; Ocasio & Kim, 1999), little is known about why successor CEOs exhibit the characteristics they do and especially why successor CEOs often show highly similar characteristics to their predecessors (Zajac & Westphal, 1996). This, however, is an important question to understand, because not only do all successors differ to some extent but earlier research has also taught us that certain CEO characteristics can affect the CEOs' choices, behavior, and eventually company outcomes (e.g. Boeker, 1997a). Hence, understanding why successor CEOs exhibit the characteristics they do and especially why some CEOs show more similarity to their predecessors than others will be an important prerequisite for understanding the effects a CEO succession has on company outcomes.

Following from this the first research question this study will address is:

(1) What determines the similarity of incumbent and successor CEOs?

Whereas the antecedents of CEO successions and the succession events themselves can be regarded as recognized knowledge, the field is still inconclusive concerning the consequences of CEO successions. In the past the majority of studies looking at the consequences of succession have looked at the performance effects and survival. Yet, the results show a mixed picture, with some studies showing positive, others showing negative, and again other showing no effects on company performance at all (Giambatista et al., 2005; Kesner & Sebor, 1994). Even though the question of the performance consequences may be very important to many people and much has been done to resolve methodological issues that may cause these mixed findings, the root for the inconclusiveness may lie in the underlying chain of causality in the CEO succession firm performance relationship. Almost by definition studies linking CEO succession to firm performance exhibit a mediated design (Finkelstein, Hambrick, & Cannella, 2009). While CEO succession may influence company performance, this link is not direct, but it is mediated by the strategic changes the incoming CEO initiates. Hence, considering the chain of causality between CEO succession and company performance, we first of all need to understand the succession strategic change relationship before addressing the question of performance. Therefore, before addressing the succession performance relationship, we need a thorough understanding of the mechanism behind it, i.e. the succession strategic change relationship.

However, today the picture of the succession strategic change relationship is still very unclear. First attempts by Giambatista and colleagues (2005) to review the findings of the field only gave a rough idea. Yet the picture drawn did by no means fully resemble the work that has been done in this field so far. Furthermore, scholars are left without an overarching framework that can make the research of the field more effective. Hence, in order to address this shortcoming and refine the theoretical basis and empirical findings of the field, the second research question that this study will focus on is:

(2) What do we know about the CEO succession strategic change relationship?

Most studies that have investigated on this relationship so far have taken an approach that explains strategic changes after succession based on the level of the individual, i.e. the CEO. Earlier research has shown that CEO demographic characteristics are linked to strategic changes such as company reorientation (Keck & Tushman, 1993), innovation (Miller & Shamsie, 2001; Wu, Levitas, & Priem, 2005), product diversification (e.g. Boeker, 1997a; Song, 1982) and firm internationalization (Athanassiou & Nigh, 2002; Matta & Beamish,

2008). The underlying premise of studies on the succession strategic change relationship was that a new CEO is likely to bring different demographic characteristics to the decision making situation. This in turn is likely to lead to different cognitive maps, perceptions, and interpretations which then leads to different decisions and ultimately drives strategic change (Hambrick & Mason, 1984).

Yet, while this relationship has repeatedly been shown and predictions can be made of whether strategic change will happen or not, we still know little about the degree of strategic change that is going to happen and what the determinants of the different levels of strategic change are. However, since different demographic characteristics are associated with changes in strategy, it is reasonable to assume, that the level of strategic change after the succession event will depend on the degree of difference between the predecessor and the successor CEOs. This study will therefore approach this gap by addressing the following question:

(3) Do high levels of dissimilarity between predecessor and successor CEOs lead to greater differences between pre-succession and post-succession strategic change?

While answering this question will help us understand the findings of earlier studies, the theoretical approach will still center on the cognition argument and its premise that different demographic characteristics will ultimately lead to different decisions, which will then determine strategic change. Based on this argumentation one would expect successor CEOs who are very similar to their predecessors to initiate less strategic change than highly dissimilar successors. Yet, examples from the business world show that successors who have been build up by the company, who have been socialized within the company, and who are co-responsible for past strategic changes sometimes make major strategic changes upon entering office. This happens even though they show very similar demographic characteristics to their predecessors. Hence, while the cognition argument may explain post-succession strategic change to a certain degree, there must be other underlying mechanisms that cause successor CEOs to change strategy.

For over two centuries the human mind has been divided into three broad categories, namely cognition, conation, and affection (Hilgard, 1980). Yet, for many years now most research on the human mind has drawn extensively on cognition to explain human behavior, thereby ignoring conation and affection. Only recently did a growing body of literature reintroduce affection into the discussion (Baron, 2008; Seo & Bartunek, 2004). These studies show that

feelings and emotions affect cognition through attention allocation, perception, alertness, creativity, use of heuristics, and memory (Baron, 2008; Forgas & George, 2001; Maitlis & Ozcelik, 2004). Hence, rather than basing the arguments on an information processing perspective these studies show that human behavior and decision making is also affected by occurring emotions. Information processing and affection are inextricably linked processes that determine the way leaders perceive and respond to stimuli. Therefore, approaching the succession strategic change relationship from an affection approach may help explain the CEO behavior that the cognition argument has not been able to explain yet. Therefore, based on these findings the fourth research question this study aims to address is:

(4) How does affection affect post-succession strategic change?

1.2 Research approach

This study comprises a large scale empirical investigation on the top management team (TMT) of large German companies between the years of 1985 and 2007. It is based on a panel dataset that has been collected by the Chair of Corporate Strategy and Governance of Prof. Dr. Thomas Hutzschenreuter at the WHU – Otto Beisheim School of Management (Vallendar), and it comprises data on all TMT members (Vorstandsmitglieder) of 91 German companies listed in the HDAX index. Furthermore it includes data on all expansion steps (investments and divestments) of all these companies throughout the entire period of investigation.

The present study comprises four main segments which are based on four manuscripts of the joint authors Prof. Dr. Thomas Hutzschenreuter, Assistant Prof. Dr. Ingo Kleindienst, and Claas André Greger. For this reason the first person plural is used throughout the entire manuscript. Each manuscript forms one chapter of this study, addressing the research questions from above chronologically. Preceding this introduction the next chapter (chapter two) addresses the first research question. Drawing on an informal power perspective this chapter delivers an explanation for the causes of CEO similarity. Building on socio-psychological arguments, according to which CEOs are likely to favor successors who have characteristics similar to their own, a theoretical framework is developed that shows incumbent CEOs' influence on successor characteristics. For this a new measurement for comparing CEOs based on the CEOs' entire professional work history is developed, thereby advancing the established binary comparison of individuals. In addition we incorporate company external influences by studying the moderating effects environmental changes may

have on the informal power of predecessor CEOs and hence on the CEO characteristics eventually selected during the succession process.

Chapter three is based on a manuscript that has been submitted to *The Leadership Quarterly*, a highly recognized peer-reviewed business journal, and is under review in the third round at the date of submission of this work. It is a literature review that critically analyses the progress made by research on the leadership succession strategic change relationship. Based on the questions WHY, WHAT, HOW, and WHEN a framework is build that explains the theoretical reasoning put forth in the succession strategic change relationship, the contingency factors, the form strategic change may manifest itself in after succession, as well as the temporal dimension of the relationship. An extensive research agenda is drawn that stresses the importance for future research to leave the trusted terrain of approaching the topic under investigation.

Chapter four is tied to earlier studies on the succession strategic change relationship. Drawing on a cognitive psychology approach the chapter investigates the difference in cognition between predecessor and successor CEOs and the influence this difference has on the difference in pre- and post-succession levels of strategic change. In particular it looks into the effect CEO dissimilarity has on changes in product scope and geographic scope of the companies under investigation. This chapter aims at contributing to the third research question, by providing an explanation for possible reasons for changes in the level of strategic change around succession events, while keeping the link to findings of existing studies. This approach not only allows putting our own results into perspective, but permits us to close research gaps that prior studies were not able to address.

Chapter five addresses the succession strategic change relationship differently. While the previous chapter explained strategic change by comparing predecessor and successor CEOs, chapter five investigates on the CEO himself, i.e. on an individual level. Based on a behavioral approach this chapter aims to answer the fourth research question from a social psychological direction. While also drawing on CEO similarity as trigger for post-succession strategic change, it introduces a motivational component into the discussion. In particular we investigate on the type of divestments the successor CEO does in the early years of his tenure.

Chapter six closes the discussion by providing a brief summary of the findings and drawing a conclusion.

2 What determines similarity between incumbent CEOs and their successors: A CEO informal power perspective¹

2.1 Introduction

Barnard (1938) and Selznick (1957) established a rationale for including executives in analytical investigations of companies. In the decades since, the CEO has often been a focus of organizational research, and CEO succession a topic of considerable interest (see Giambatista et al., 2005; Kesner & Sebor, 1994 for comprehensive reviews). Indeed, both the academic literature and the popular press have reinforced the belief that the CEO is the single most powerful player in any firm (Berson, Oreg, & Dvir, 2008; Favaro, Karlsson, & Neilson, 2010; Finkelstein et al., 2009; Hansen, Ibarra, & Peyer, 2010), and few would now question that selecting a CEO is of crucial importance as that choice has far-reaching consequences.

Researchers have sought to identify and explain a wide range of antecedents leading up to CEO succession, and to isolate its economic and strategic consequences (Giambatista et al., 2005). A relatively small stream of research has evolved that recognizes the significance of differences in the characteristics of CEOs stepping down and their successors, most of it focusing on whether the successor is a company (Ocasio, 1999; Puffer & Weintrop, 1991) or industry insider or outsider (Zhang & Rajagopalan, 2003). Few studies have directly explored the demographic characteristics of successors (Datta & Guthrie, 1994; Zajac & Westphal, 1996). Datta and Guthrie (1994) found that there is a relationship between a company's R&D intensity and an incoming CEO having a technical functional background and a higher level of education. Ocasio and Kim (1999) looked at large U.S. manufacturing companies between 1981 and 1992 and found that poorly performing ones tend to select successors with operations backgrounds.

Notwithstanding the theoretical and practical relevance of the topic, still little is known about *why* successors exhibit the demographic characteristics they do. This is all the more surprising given that *why* is the most important question in theory development (Whetten, 1989). However, besides the landmark study of Zajac and Westphal (1996) research to date has, by and large, failed to address this important question.

¹ This chapter is based on Hutzschenreuter, Kleindienst and Greger, What determines similarity between incumbent CEOs and their successors: A CEO informal power perspective, unpublished manuscript

Taking a relative board power perspective, Zajac and Westphal (1996) find that powerful boards are associated with successors' demographic similarity to the board. They also find that outside successors are more likely to be demographically similar to the board, and dissimilar to incumbent CEOs. Being the first study to address why successors exhibit the demographic characteristics they do, the contribution of the study is undeniable.

The objective of the present study is to complement and extend the findings of Zajac and Westphal (1996). Taking a CEO informal power perspective rather than a relative power perspective, the present study acknowledges that various stakeholders beyond the board try to make use of their power to influence the choice of successor CEOs. As such, we extend the scope of the study. We also make a methodological contribution in developing a measure of similarity, which enables us to assess similarity continuously rather than dichotomous as done by Zajac and Westphal (1996). This more fine grained measure of similarity takes into account a CEO's entire educational and career background.

Our core assumption is that CEOs are usually reluctant to hand over the reins of control, especially when a decision of such strategic importance as CEO succession is under consideration. CEOs often want to preserve the legacy they have built up by influencing the choice of a successor (Sonnenfeld, 1986). Therefore, CEOs who are stepping down usually involve themselves in decisions about their successors (Cannella & Shen, 2001; Vancil, 1987). We argue that socio-psychological processes lead CEOs to favor successors with characteristics similar to their own. Moreover, we propose that CEOs rely on personal, situational, and relational sources of informal power (Greve & Mitsuhashi, 2007), that is, powers that do not come directly from the authority vested in the top position, but that grow out of personal attributes, given situations and relationships, to influence who will be appointed in line with their own best interests. We test our hypotheses by comparing the demographic characteristics of incumbent and successor CEOs in 137 CEO successions in 67 German companies between 1985 and 2007.

2.2 CEO influence on the process of selecting a successor

Research on the relationship between CEOs' power and corporate strategic decisions has, by and large, modeled and tested direct associations between power and the outcome of strategic decisions (Bigley & Wiersema, 2002). However, as we will elaborate in more detail below, power represents simply an ability to bring about an intended effect. Power does *not* specify the outcome of the decision. Thus, before elaborating on the theoretical linkage between CEOs' power and the outcome of strategic decisions, it is necessary, to understand CEOs'

intentions, that is, what specific outcomes they intend to bring about by influencing corporate strategic decisions.

Accordingly, the theoretical framework we subsequently develop is two-tiered. In the first part, we draw on psychological and social psychological literatures to argue that socio-psychological processes lead incumbent CEOs to favor successors with characteristics similar to their own. In the second part, we then turn to CEOs' sources of informal power that may enable CEOs to influence the outcome of the successor decision in their best interests.

2.2.1 CEO preference for similarity in a successor

Consistent with socio-psychological research (Goldberg, 2005), we assume that CEOs will favor a successor with demographic characteristics similar to their own. In other words, we propose that social psychological processes explain the preference CEOs often show for candidates similar to themselves. We build on social-identity theory (Tajfel, 1974; Tajfel & Turner, 1979) and on similarity-attraction theory (Byrne, 1971) both of which have been shown to be extremely powerful in explaining a preference for similarity in various contexts including the job interview (Graves & Powell, 1995), the evaluation of the performance of subordinates (Tsui & O'Reilly III, 1989), and in CEO succession (Zajac & Westphal, 1996).

Social-Identity. According to social-identity theory (Tajfel, 1974; Tajfel & Turner, 1979), individuals enhance their self-esteem by seeing themselves as part of a given social environment (Festinger, 1954), which they systematize and simplify by categorizing others, for instance, according to their gender, religion, age, or voluntary affiliations, such as membership in an organization (Ashforth & Mael, 1989). Such categorizations provide personal orientation, a kind of self-referencing, that creates and defines an individual's place in society and helps to answer, at least in part, Who am I? (Ashforth & Mael, 1989).

Social groups are made up of individuals who perceive themselves as being in the same social category, sharing an emotional involvement, and achieving a degree of social consensus about the group and their membership in it. According to Tajfel and Turner (1979: 40), "Social groups, understood in this sense, provide their members with an identification of themselves in social terms. These identifications are to a very large extent relational and comparative: they define the individual as similar to or different from, as 'better' or 'worse' than, members of other groups." Individuals maintain a positive identity by consistently maintaining a more favorable evaluation of group members than of outsiders (Goldberg, 2005). In other words,

including oneself in a particular social group leads one to see other members of that group more positively than persons not in the group.

Similarity-Attraction. Similarity-attraction theory as developed by Byrne (1971) is closely related to social-identity theory in that it explains the process by which one perceives another as being similar to oneself and the forming of a favorable assessment of others based on that. In essence, similarity-attraction theory posits that individuals who are similar will be mutually attracted to one another. Several studies have shown that such mutual attraction is likely to lead to biases in decision-making (Goldberg, 2005; Perry, Kulik, & Jing, 1999).

Although initially Byrne (1971) explored similarity in terms of the attitudes of individuals, subsequent research has shown that easily observable attributes, such as demographic characteristics, are also likely to affect interpersonal attraction. For example, Tsui and O'Reilly (1989) and also Ferris, Judge, Rowland, & Fitzgibbons (1994) have shown that supervisors tend to have a positive opinion of subordinates when they share similar demographic characteristics. This is also the case in the evaluation of job applicants by recruiters (Goldberg, 2005; McCarthy, Iddekinge, & Campion, 2010). Zajac and Westphal (1996) have shown that the bias in favor of candidates with similar demographic characteristics also holds true in the case of CEO succession. As Zajac and Westphal (1996: 83) have put it “deep-seated psychological tendencies toward in-group favoritism can lead both CEOs and board members to favor demographically similar CEOs.”

Thus, both social-identity theory and similarity-attraction theory postulate that individuals favorably evaluate others who share their own group membership, that is, who exhibit similar demographic characteristics (McCarthy et al., 2010). Hence, applied to CEO succession decisions, these theories predict that incumbent CEOs are likely to exhibit a preference for similarity in a successor and so are more likely to use their power to influence the naming of a successor who has similar demographic traits.

2.2.2 Sources of informal power

Finkelstein (1992: 502) defined power as “the capacity of individual actors to exert their will”, and Salancik and Pfeffer (1977) as “the ability to get things done the way one wants them to be done”, while Emerson (1962) has argued that power is a relational concept that can only be understood in a particular context. Hence, the notion of power is only meaningful in relative terms, some individuals being more powerful than others (Greve & Mitsuhashi, 2007). A powerful CEO, for instance, has the ability to control the behavior of other important stakeholders in the firm (Somech & Drach-Zahavy, 2002).

A distinction between the formal and informal power of a CEO is often made. Formal CEO power is vested in the top position through the giving of authority and resources, while informal CEO power is derived from accumulated personal, situational, and relational characteristics (Greve & Mitsuhashi, 2007). We focus on how a CEO's informal power can affect the demographic characteristics of their successors, concentrating in particular on (1) the impact of the tenure and expertise of the incumbent CEO (personal attributes), (2) company performance (the situation), and (3) the incumbent CEO's social capital (relationships).

Tenure. Newly appointed CEOs face considerable challenges. First, the top job usually entails significant changes in both responsibilities and in the task environment (Kotter, 1982), and, when first appointed, CEOs may not only lack experience, but also resources and a favorable reputation. There is often a lot of pressure to adjust to the demands of the job quickly and to develop good working relationships with other powerful inside and outside stakeholders, from members of the top management team, to those who sit on the board of directors, to customers (Shen & Cannella, 2002b; Vancil, 1987). At the same time, CEOs need to hit the ground running if they are to build a consensus behind their own plans (Miller, 1993; Miller & Shamsie, 2001). One solution is to share decision-making with other executives and to open extensive channels of communication in an effort to win political support and have access to crucial information (Hambrick & Fukutomi, 1991; Miller, 1993).

CEOs are often vulnerable during their early years in the position. They may have rivals among the other executives in the firm, and they know that until they have a chance to prove themselves the board of directors that appointed them and other powerful stakeholders will need to be convinced of their abilities and be monitoring what they do (Vancil, 1987). In fact, Shen and Cannella (2002b) found that CEOs have a higher risk of dismissal during their first five years than at any other time in their tenure.

Normally CEOs stick close to the mandate they are given when they are appointed while they develop a track record, gain legitimacy, and get a political foothold, in short, while they establish their authority and consolidate their power (Gabarro, 1987; Henderson, Miller, & Hambrick, 2006). Over time, and assuming good performance, the board of directors and various stakeholders will have more confidence in the appointment that has been made, and become less vigilant in their monitoring (Shen, 2003). CEOs may see this as a sign that they may increase their discretion (Hambrick & Finkelstein, 1987), and take steps to extend their power. One of the things they might do is support the candidature of persons they would like

to see on the board of directors, or at least who they believe would be passive in serving on the board (Westphal & Zajac, 1995). They may also attempt to mold the top management team according to their own needs, promoting persons they believe will be loyal and supportive and attempting to force out anyone they think would criticize or challenge them (Pfeffer, 1981). For example, when Daimler and Chrysler merged in 1998 the combined executive board was made up of 17 members, seven of whom were from Chrysler. Daimler's CEO, Jürgen Schrempp, became the CEO of the newly formed company. Schrempp began weeding out outspoken critics of the direction in which he was taking the company and by 2000 only two former Chrysler executives remained on the board.

Once initial measures have been taken, the accumulation of power gains momentum, and CEOs will tend to increasingly centralize decision making (Hambrick & Fukutomi, 1991). To do so, they establish control over the channels of communication that deliver the information needed for critical decisions, withholding information when it is to their benefit, and making it possible for them to set the agenda for board meetings, thus increasing still further their power (Hill & Phan, 1991). In increasing their scope for action (Hambrick & Fukutomi, 1991), CEOs even get involved in routine details, stretching their authority from strategic to operating decisions (Miller, 1993).

The more CEOs make use of their power, the more they build up a reputation for being powerful which creates an aura that discourages resistance or opposition. All of this takes time. Hence, we see the authority and legitimacy of CEOs increase with their tenure until their power becomes institutionalized (Pfeffer, 1981) to the point that their authority is not questioned and their power taken for granted to such an extent that other executives no longer contest them (Ocasio, 1994; Shen, 2003). As their position solidifies, CEOs of long tenure are often able to make strategic decisions purely on their own authority, as can be seen by long-tenured CEOs designing their own compensation packages (Hill & Phan, 1991), instituting golden parachutes for themselves (Singh & Harianto, 1989), and insulating themselves from any consequences of poor performance (Wowak, Hambrick, & Henderson, forthcoming).

In sum, long tenure as CEO is generally associated with greater power, and that power can be used to influence strategic decisions, some of which can directly benefit the CEO, the selection of a successor included (Boeker & Goodstein, 1993; Cannella Jr. & Lubatkin, 1993). Considering this and also that socio-psychological processes lead CEOs to exhibit a preference for similarity in succession decisions, we propose:

Hypothesis 1: The longer the tenure of the incumbent CEO the greater the similarity between predecessor and successor.

Expertise. One of the arguments made in extant research is that CEOs derive power from their ability to cope with uncertainty (Daily & Johnson, 1997; Finkelstein, 1992; Ocasio, 1994), regardless of whether that uncertainty stems from within the firm or its external environment (Finkelstein, 1992). Over the course of their career CEOs deal with a variety of different customers, suppliers, competitors, and governmental representatives, developing contacts and establishing relationships, that can prove invaluable in effectively managing uncertainty (Thompson, 1967). The greater the breadth of a CEO's career-long managerial assignments, the better the CEO will be at coping with uncertainty, and ultimately, the more power he or she will have to wield (Finkelstein, 1992).

The power of CEOs does not lie solely in their ability to cope with uncertainty. Finkelstein (1992) found that CEOs with considerable experience in a particular area come to be seen as experts in that area. French and Raven (1959) argue that attributing an individual with an expertise can serve as a source of power for that individual as it can change the cognitive perceptions of others vis-a-vis that expertise. Simply put, experts are turned to for advice, be that expert an attorney when one has a legal problem or simply a local when one is a tourist (French & Raven, 1959). In an organizational context CEOs are turned to for advice when strategic choices need to be made (Finkelstein, 1992). One indicator of the degree of expertise of a CEO is the breadth of that CEO's assignments over the years, the greater the scope of assignments, the more other members of the organization will trust the advice. The wider the range of organizational members seeking a CEO's advice, the more issues that CEO can influence. Hence:

Hypothesis 2: The greater the expertise of the incumbent CEO, the greater the similarity between predecessor and successor.

Performance. It is generally accepted that company performance is an indication of a CEO's leadership capabilities (Puffer & Weintrop, 1991; Weisbach, 1988). Hansen, Ibarra, and Peyer (2010) used company performance as an indicator of CEO performance in a study they entitled *The Best-Performing CEOs in the World*. The popular press consistently attributes both positive and negative company performance to the CEO. It is likely then that company performance is another source of CEO power (Daily & Johnson, 1997). Indeed, reviews of the CEO succession literature show that the consensus is that the rate of CEO turnover is

negatively associated with company performance, and that the probability of CEO turnover increases when performance declines (Furtado & Karan, 1990; Giambattista *et al.*, 2005). There are a variety of explanations for why, and how, company performance is linked to CEO power. First, agency theorists have argued that CEOs will attempt to maximize their own utility at the expense of shareholders (Eisenhardt, 1989; Jensen & Meckling, 1976). Such thinking legitimizes the need for boards of directors to exert control over CEOs, indeed, some have argued that the primary role of boards is to check CEO opportunism and ensure that top executives act in the best interest of shareholders (Fama & Jensen, 1983). As good performance increases shareholder utility, the members of the board take it as an indication that the CEO is acting in the best interest of shareholders, and as a result, will less closely monitor the CEO's actions (Lorsch & MacIver, 1989; Shen, 2003). This means that good performance can lead to an increase in CEO discretion, and in turn, an increase in power. On the other hand, poor performance can cause a downward spiral in CEO power (Ocasio, 1994). Poor performance undermines the confidence of members of the board in the selection they have made. They may come to believe that the problem is that the CEO is acting opportunistically, reducing shareholder utility (Jensen & Meckling, 1976). They will be mindful of the fact that others may eye the firm as a potential target (Manne, 1965) and fear a takeover attempt. They may also see their own reputations, and hence their own job prospects, as being at risk because poor performance may be attributed to their inadequate monitoring (Fama, 1980). All of this will lead them to increase their scrutiny of the CEO, reducing the CEO's discretion, and as a result, his or her power.

Second, good organizational performance adds to the charisma of a CEO (Agle, Nagarajan, Sonnenfeld, & Srinivasan, 2006; Waldman & Yammarino, 1999). Charismatic CEOs are trusted. Others will be personally attracted to them, share in their beliefs, and have confidence in their abilities. As Tosi *et al.* (2004: 406) put it, "Charisma is based on the feeling of oneness that a person has with another, the desire for that feeling, or the personal attraction to be like the other: the stronger the attraction, the stronger the power." This is consistent with the notion of romanticized leadership (Meindl, Ehrlich, & Dukerich, 1985), whereby a charismatic CEO has the ability to influence organizational members. The effect of CEO charisma is not limited to the company's internal environment. CEOs represent their company to outside stakeholders. They engage in politics, are the company's face vis-a-vis public institutions and other companies (Pfeffer & Salancik, 1978). As Fanelli and Misangyi (2006: 1053) noted, CEO charisma serves to "increase identification among external stakeholders with CEOs and, by extension, their organizations." Charismatic CEOs are thus able to extend

the reach of their power to external stakeholders (Fanelli & Misangyi, 2006). The late Steve Jobs is a good example. One of the most charismatic CEOs in the world, Jobs has been able to win over consumers, suppliers, and investors alike. Just as good performance bolsters the charisma of a CEO, poor performance undermines the attractiveness of a CEO, may even make it vanish altogether (Waldman & Yammarino, 1999). Other members of the organization may interpret poor performance as a sign of weakness and contest the CEO's power (Ocasio, 1994). Even those who have previously been allies may seize the opportunity to take advantage of the CEO's weakness, undermining the CEO's position still further.

Third, good performance creates slack resources (Cyert & March, 1963), and CEOs with abundant resources tend to have considerable discretion (Hambrick & Finkelstein, 1987). Uncommitted and transferable resources such as cash reserves or unused debt capacity expand the potential scope of action of CEOs, including actions that may increase their own power base (Cyert & March, 1963). Conversely, poor performance reduces available slack resources (Cyert & March, 1963), restricts potential courses of action, and puts at risk the ability to extend power, or even to retain it. These arguments lead us to propose:

Hypothesis 3: The better the performance of the company under the incumbent CEO, the greater the similarity between predecessor and successor.

Social capital. Obviously, CEOs do not run companies alone. They are usually part of a top management team (TMT) the members of which have clearly defined roles and responsibilities (Hambrick, 1994). As such, they are embedded in a network of personal relationships (Granovetter, 1985; Qing, Maruping, & Takeuchi, 2006). The position of the CEO within these relationships provides them with the power of social capital (Coleman, 1988), the “goodwill that is engendered by the fabric of social relations and that can be mobilized to facilitate action” (Adler & Kwon, 2002: 17). Individuals may use that goodwill in their own best interest. Coleman (1988: S102) puts it this way:

“If A does something for B and trusts B to reciprocate in the future, this establishes an expectation in A and an obligation on the part of B. This obligation can be conceived as a credit slip held by A for performance by B. If A holds a large number of these credit slips, for a number of persons with whom A has relations, then the analogy to financial capital is direct. These credit slips constitute a large body of credit that A can call in if necessary-unless, of course, the placement of trust has been unwise, and these are bad debts that will not be repaid.”

Over the years CEOs are likely to build up a considerable number of reciprocal obligations, especially among members of the TMT. This begins with the CEO having a hand in naming those who will be on the team, and hence will gain in status, authority, and income. Moreover, as the central decision maker, the CEO has a say in all of the company's substantial strategic issues. While they may not be responsible for each and every one, CEOs usually have the power to veto the initiatives of TMT members, and they also usually control the purse strings. CEOs also are at the apex of the company's informational nerve centre (Barkema & Pennings, 1998; Pfeffer, 1992; Qing *et al.*, 2006). This gives them an informational advantage and, as we have noted, the right to set the agenda of meetings. Thus, CEOs are in a position to supply team members with critical information, and they can set the agenda in a way that is useful to, or could hurt, one of them (Coleman, 1988). In sum, it is in the interest of CEOs to win the loyalty of members of the TMT, and they have the tools to do it.

Game theory suggests that it is not rational for TMT members to defect, that is, not to repay their social debts. The interaction between CEOs and team members can be conceptualized as an infinitely repeated Prisoner's Dilemma game, and, with no fixed last period, players are likely to continue to cooperate in order to ensure the future support of the CEO.

TMTs also exhibit a property of social relationships called closure that is common in networks of strongly interconnected members (Coleman, 1988). Every member in such a network is connected and so no member can escape the notice of the others. Thus, network closure facilitates and enables collective sanction, making it less risky for network members to trust one another (Burt, 2001). In other words, social pressure more or less guarantees that a TMT member who receives a favor will not defect, but will return the favor. Hence, network closure effectively institutionalizes the norm of reciprocity, as members of the network "are *obligated* to future repayments of favors, gifts, invitations, and so forth" (Pfeffer, 1992: 106, italics in the original).

Based on these arguments we assume that the longer CEOs work with TMT members the more social capital they build up and, as a logical extension, the more favors they can call in, including when a successor is being considered. Hence, we propose:

Hypothesis 4: The longer the relationship between the incumbent CEO and TMT members, the greater the similarity between predecessor and successor.

So far, we have focused on incumbent CEOs' informal power. Given, however, that a firm is embedded in its environment, and that it has been argued that the environment exerts influence on a firm's strategic choices – including CEO selection – we subsequently incorporate the firm's environment into our considerations.

Environmental change. One of the primary assumptions within the strategic management literature has been that in order to ensure long-term survival and growth, a firm must align with its environment (Chakravarthy, 1982). Hence, the firm – most notably the CEO – copes with changes in the firm's environment through the choice of an appropriate strategy and the design of a matching structure (Andrews, 1971). The process of alignment, however, is aggravated by the fact that the firm's environment undergoes constant change, resulting in the need for continuously adapting the firm to the changing environment.

A prerequisite of alignment is that the firm is able to learn, unlearn, or relearn based on its past behaviors. The degree, to which the firms are forced to do so, is thereby contingent upon the degree of environmental change. In relatively stable environments, the pressure is rather low, since the firm's knowledge possessed today will, to a fair degree, also apply tomorrow. Conversely, in dynamic environments, that is, environments characterized by substantial changes, the firm's knowledge possessed today is likely to become severely obsolete and inappropriate tomorrow (Henderson *et al.*, 2006). Thus, to the degree that a firm's environment changes novel knowledge is required to sustain the firm-environment alignment.

Research has shown that CEOs tend to possess finite and relatively fixed mental models of how the environment behaves, what strategic choices are feasible, and how the firm should be run (Henderson *et al.*, 2006; Kiesler & Sproull, 1982). As such, CEOs are likely to have difficulties to learn, unlearn, or relearn even if environmental conditions exert pressure to do so (Virany, Tushman, & Romanelli, 1992). The context of CEO succession therefore provides a unique possibility to introduce new knowledge and, by that, new perspectives and new ties to the firm's environment.

As we have argued above, the incumbent CEO is likely to make use of his informal power to appoint a successor with similar characteristics. Similar characteristics, however, imply similar mental models and as such similar perspectives on what strategic choices are feasible and how the firm should be run (Hambrick & Mason, 1984). Thus, while the incumbent CEO strives to appoint a successor with similar characteristics, environmental changes call for the opposite: the appointment of a successor with dissimilar characteristics and, by that, new knowledge and new perspectives (Gupta, 1988; Virany *et al.*, 1992).

Environmental changes may thus weaken an incumbent CEO's power base (Ocasio & Kim, 1999). While in times of environmental stability the incumbent CEO's informal power may bolster him or her from contesters, in times of environmental change his or her qualities may be questioned and the powerbase and by that his or her influence in the successor selection process may fade. In sum, the degree to which an incumbent CEO may influence the appointment of a successor CEO may not only depend upon his or her informal power but also upon the degree of environmental changes. Thus, we propose:

Hypothesis 5: The relationships between CEO tenure, CEO expertise, change in company past performance, and social capital and the similarity between predecessor and successor is negatively moderated by the degree of environmental change.

2.3 Methodology

2.3.1 Sample and data collection

We tested our hypotheses using a pooled data set of CEO successions at German companies listed on the HDAX index of the German stock exchange that took place between 1985 and 2007. There is no comprehensive database that captures all of the executives of German firms and gives background information on them. We drew on data from multiple data sources. We began with company annual reports which allowed us to gather information on all of the CEO successions that took place at the companies during our time window. We obtained demographic data on the CEOs from Hübner's Who is Who and the Lexis Nexis online database. These sources and other such listings also gave us information on the career paths of the CEOs. We also used several different encyclopedias (e.g. Sutter's International Red Series Who's Who in Germany) and the Munzinger online archive to complement our data. Remaining gaps were closed, and the reliability of the data we uncovered verified, through direct contact with the companies. In a few cases the information we were seeking could not be found in company archives so we contacted individuals directly. Overall, we ended up with complete demographic background information for 137 incumbent-successor CEO pairs at 67 companies.

We were also able to determine the composition of the top management team at each company for each year by looking at the Vorstand, the German equivalent of the managing board (Crossland & Hambrick, 2007). We obtained the annual segment sales of the companies from their annual reports and from direct contact with the companies. We gathered data on

several financial variables from Thomson Reuters Datastream database and on industry and foreign direct investments (FDI) from the EUKlems and UNCTAD database.

2.3.2 *Dependent Variables*

In this study we investigate why succeeding CEOs exhibit the demographic characteristics they do, that is, why they may mirror the characteristics of their predecessors. Hence, we are less interested in the specific characteristics of a successor, than in a change in the kind of CEO following a succession. For this we compared the demographic characteristics of incumbent and successor. CEOs are likely to look at potential successors based on observable demographic characteristics. Previous studies have shown biographic similarity based on information taken from resumes is likely to be subject to in-group bias (Zajac & Westphal, 1996). We look at four different observable demographic characteristics that can be found in the resumes of CEOs: educational background, and functional, industry, and international experience (Boeker, 1997a; Herrmann & Datta, 2002; Wiersema & Bantel, 1992). We look at each of these four separately as well as in combination in a single composite measure. In addition, while other studies have used binary measures, such as whether two individuals come from the same industry or have the same functional background, we make more detailed distinctions. We calculate the demographic distance between the incumbent and successor of each CEO pairing as an n-dimensional vector space that can include multiple values for the demographic characteristics under investigation.

We measure *educational similarity* by comparing the fields of study and apprenticeships of the incumbent and incoming CEO. We use Bunge's (1967) system of sciences which clusters scientific fields into different groups and shows the degree of relationship between them. For instance, if both CEOs studied business they would obviously be similar in terms of their education. If one studied business and the other economics there would be a difference, but a smaller one than if one studied business and the other physics. The distance measure we applied is similar to the diversification measure applied by Haleblan and Finkelstein (1999). We used a hierarchical classification according to which distances increase with the increase of level of intercept point between disciplines categories, as shown in Figure 2-1. The distances we applied were as follows: 0 for the same field of study; 1 for intercept at the first level; 2 for intercept at the second level; and so on for the third and fourth level.

Our *similarity measure* is an adapted euclidean distance measure of the kind used in previous research on organizational demography (e.g. Wagner, Pfeffer, & O'Reilly, 1984; Westphal & Zajac, 1995):

$$\sqrt{\sum_{i=1}^n \left[\frac{(A_i - B_i)^2}{n} \right]}$$

with A_i (B_i) being the number of years a predecessor or successor spent in a function, industry, or country i , n being the total number of functions, industries, and countries.

While other studies have applied this measure to groups of managers to compare individuals on the basis of one specific characteristic, e.g. age, we apply it to compare multiple values of one characteristic for each pair. This approach allows us to better distinguish between the incumbent and incoming CEO by taking into account that they may well have made different career steps, or that they may have spent appreciably different amounts of time in those steps. Thus we are able to show more accurately differences in experience. We apply a weighing scheme that takes this into account by giving a value to each career step in an overall portfolio. We extended measure (1) with a weighing factor that takes into account the number of years in a position:

$$\sqrt{\sum_{i=1}^n \left[\frac{(A_i - B_i)^2}{n} \times \frac{(A_i + B_i)}{\sum_{i=1}^n (A_i + B_i)} \right]}$$

At this point, a note on the measure is in order: The measure above calculates the distance between incumbent and successor CEO. In other words, it shows larger values the more dissimilar the pair is, i.e. it reflects the *dissimilarity* between incumbent and successor CEO. Since we are interested in the *similarity* and not the dissimilarity between incumbent and successor CEO we multiplied the resulting distances by minus one.

In Table 2-1 we give an example of how we calculate the similarity and the weighted similarity measure using the difference between the functional experiences of two hypothetical CEO pairs.

Figure 2-1: Hierarchical classification of scientific disciplines based on Bunge (1967)

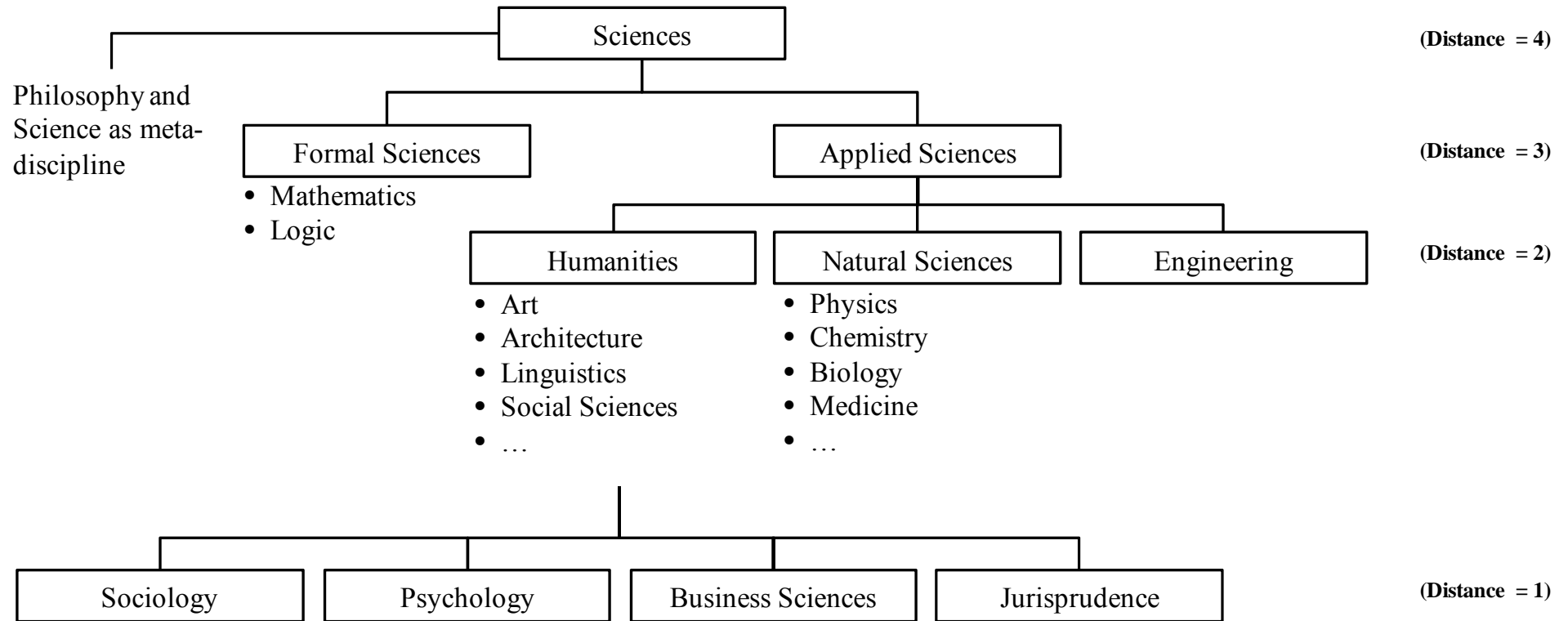


Table 2-1: Hypothetical example illustrating computation of CEO functional similarity

	Procurement	Production	Sales & Marketing	Finance & Accounting	Research & Development	Human Resources	Similarity without weighing	Weighted similarity measure
Pair 1								
CEO A	3	0	1	1	0	10	-4.8132	-2.6920
CEO B	1	7	2	1	2	1		
Pair 2								
CEO C	3	0	1	30	0	10	-4.8132	-1.5543
CEO D	1	7	2	30	2	1		

This table shows the number of years that four individuals (two incumbent successor pairs) spent in six different functions. By weighing the values of both pairs, the true in-pair similarities become apparent. The weighted measure accounts for the large number of overlapping years the two individuals in pair two spent in finance & accounting and make it clear that pair one and pair two diverge in the degree of their similarity. The unweighted measure, on the other hand, treats both pairs as if they were identical. It should be noted that the time spent in finance & accounting by the individuals in pair one contributes much less to that pair's overall functional experience. The modified measure accounts for this and assigns pair two's overlapping experience in finance and accounting greater significance. The similarity between the individuals making up pair two is much greater (that is less negative) than the similarity between the individuals in pair one even though both pairs show the same euclidean distance to each other.

To measure *functional background similarity* we used a functional classification comparable to that of Hambrick, Cho and Chen (1996), and evaluated the functional backgrounds of each CEO pair. We considered the functions in which each incumbent and successor had worked and over how many years. We then compared the function-duration portfolio using the weighted measure described above.

We measured *industry background similarity* using the same modified euclidean distance measure as for functional similarity. We used the first two digits of the primary industry of the companies in which the incumbent and successor had worked over the course of their careers and the number of years they had spent in each of those industries. We calculated *international experience similarity* along these same lines. We looked at the time spent by the CEOs outside of Germany and applied the same euclidean distance measure as for the other two. We used country clusters similar to Rugman and Verbeke (2004) to take into account that countries may not be equally distant to each other in terms of their cultures.

Finally, we developed a composite measure indicating change in CEO characteristics across multiple dimensions. We did this to account for the possibility that individuals may diagnose similarity on the basis of multiple instead of individual characteristics.

2.3.3 *Independent Variables*

Our variable *incumbent CEO tenure* is simply the number of years that the incumbent CEO held the top job. To measure *CEO expertise* we followed Finkelstein (1992) and Daily and Johnson (1997) and counted the number of different functions performed by CEOs over the course of their career. Good performance is a relative concept. We measure *company past performance* using the percentage change in return on assets (ROA) over the two years prior to the naming of a new CEO (Fredrickson, Hambrick, & Baumrin, 1988; Huson, Parrino, & Starks, 2001). Looking at a change in the ROA allows us to account for the fact that the expected ROA in some industries would be seen in others as quite good, and in still others as unsatisfactory. A window of two years takes in past performance and yet is recent enough to serve as a reasonable frame of reference (Fredrickson et al., 1988). We consider tenure overlap to measure *social capital*, taking the mean number of years members of the TMT have worked with the incumbent CEO.

2.3.4 Control Variables

The control variables we use take into account the reason behind a succession, whether the CEO will continue to be with the company in a different capacity after stepping down, whether the successor is an insider, and a variety of different factors directly related to the company itself. Previous research has suggested that the reason for a change in CEO can have an effect on the type of successor (Fredrickson et al., 1988), with forced successions leading more often to the selection of a candidate from outside the company. The variable *succession reason* indicates whether the incoming CEO has had time to build up a relationship with the preceding one (Zhang, 2008), in which case it is likely that the individual who is named to the top post will have similar characteristics as the CEO stepping down, in part due to the attraction of similar traits (Byrne, Clore, & Worchel, 1966). We code forced successions with one, and all other reasons for succession with zero.

A CEO who will take a place on the company's supervisory board after stepping down may have more influence on the CEO selection process than one who will be leaving the company altogether. The *transition to supervisory board* variable is important as a CEO who will stay on with the company will not lose power altogether, as contacts made and social capital built up over the years will ensure some degree of continuing influence. However, if a new role within the company is not taken on, power will leach away. We used a binary variable that takes the value of one if the CEO took a position on the supervisory board, zero if not.

A successor chosen from inside the company is more likely to exhibit characteristics similar to the dominant coalition inside that company. As we have discussed, similarity enhances interpersonal attraction. It can also lead to biased candidate evaluations (Westphal & Fredrickson, 2001). We take this effect into account by controlling for *inside succession*, considering insiders to be persons who have been with the company at least three years.

We include *company performance* as a control variable because companies that are performing well may be less willing to rock the boat by altering the kind of CEO they choose while companies performing poorly may try a new kind of CEO in the hope of a turnaround (Shen & Cannella, 2002a). We use ROA in the year before the succession event to gauge company performance.

The age of the company may affect CEO selection. Different life cycle stages of companies can call for different types of CEOs (Smith, Mitchell, & Summer, 1985). Long-established companies may become somewhat inert (Hannan & Freeman, 1984), calling for a CEO whose leadership style fits a bureaucratic structure, while startups and less-established companies

may look for a CEO who can cope with rapid growth. Our control variable *company age*, operationalized as the square root of the number of years since its founding, takes this into consideration.

There is both theoretical and empirical work that suggests that company size is associated with the kind of CEO chosen (Dalton & Kesner, 1983; Guthrie & Olian, 1991; Pfeffer & Moore, 1980). Larger companies are more likely to choose a successor who is an insider (Guthrie & Olian, 1991), of long tenure, and older (Guthrie & Datta, 1997). This may be because larger companies have a bigger pool of internal candidates from which to choose, and presumably persons with long tenure are older. A long-time insider is likely to share many characteristics with the CEO who is stepping down as years of socialization and selection can result in a homogeneous group of managers (Kanter, 1977). We measure *company size* by looking at the volume of sales.

We also control for *change in company size*. Companies grow at different rates, smaller ones often more rapidly than larger ones which tend to remain stable in size over longer periods of time. As we point out above, different kinds of CEOs are needed for different sizes of companies, hence one would expect there to be dissimilarities between the kinds of persons appointed to the top job based on company growth. We control for change in company size by looking at change in company sales over the two years prior to a change in CEO.

Change in the level of international diversification can call for different leadership. Whether a company has internationalized extensively over the last few years under the previous CEO or is intending to increase the level of international operations under the new one, it seems likely that international experience will be high on the list of requirements. To control for these effects we consider *change in cultural diversity*. We use the same two-year window. Our cultural diversity measure is based on the weighted average relatedness measure used by Teece, Rumelt, Dosi, and Winter (1994), which we calculated as the sum of cultural distances between all pairs of a company's subsidiaries divided by the total number of pairs. We calculated cultural distance using the Kogut and Singh index (1988) based on Hofstede's (1980) scores and the GLOBE dimensions. Despite its extensive use in the international business literature (Gómez-Mejía & Palich, 1997) Hofstede's four cultural dimensions have been subject to criticism. To address these concerns we complemented this index with scores for the nine cultural dimensions identified in the GLOBE projects (House, 2004).

Product diversification may likewise affect CEO choice. We computed *change in product diversification* using the Berry-Herfindahl index (Berry, 1971) used in previous research, e.g.

Mahoney (1992). This allows us to take into account changes in the breath of a company's business portfolio during the two years prior to a succession. Finally, we operationalized *environmental change* as change in FDI across a firm's portfolio of businesses. We followed Hutzschenreuter and Gröne (2009) and calculated the change in the business-segment-sales-weighted average FDI across a firm's business segments to represent environmental change – most notably foreign competition – across a the firm's entire portfolio of businesses.

2.4 Data analysis and results

We used OLS multiple regression to test our hypotheses. Table 2-2 shows the descriptive statistics for the dependent, independent, and control variables. Taking into account only those variables that appear in the same regression model, none of the correlations coefficients is greater than 0.5 and therefore below the critical threshold level of 0.8 (Kennedy, 2008). The variance inflation factors for all variables are also considerably lower than the generally accepted critical value of 10 (Tan & Tan, 2005). This indicates that our results are not driven by multicollinearity. We used the Huber/White sandwich estimator because Breusch-Pagan (1979) and Cook-Weisberg (1983) tests reveal the presence of heteroskedasticity.

Table 2-2: Descriptive statistics

	Mean	S.D.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.
1. Educational background similarity	1.64	1.45	1.00																		
2. Functional background similarity	5.07	3.03	0.13	1.00																	
3. Industry background similarity	7.43	5.13	0.10	0.07	1.00																
4. International background similarity	2.33	6.38	0.04	0.04	0.07	1.00															
5. Composite measure	0.21	0.12	0.87 ***	0.36	0.39 ***	0.97 ***	1.00														
6. Incumbent CEO tenure	7.60	6.59	-0.11	-0.15 †	-0.10	0.08	-0.18 *	1.00													
7. CEO expertise	2.71	1.37	-0.03	-0.33 ***	-0.05	-0.04	-0.09	-0.08	1.00												
8. Company past performance	-3.51	327.52	-0.18 *	-0.01 †	0.01 *	0.03	-0.14 †	-0.03	0.01	1.00											
9. Social capital	9.18	7.66	-0.02	-0.07	0.02	0.00	-0.04	0.24 ***	0.17 *	-0.01	1.00										
10. Succession reason	0.32	0.47	-0.08	0.09	-0.20 *	0.00	-0.12	-0.27 ***	0.00	0.06	-0.21 **	1.00									
11. Transition to board	0.43	0.50	-0.02	-0.08	0.21 **	0.02	0.01	0.26 ***	0.09	-0.06	0.15 †	-0.50 ***	1.00								
12. Inside successor	0.58	0.49	-0.18 *	0.04	-0.14	-0.01	-0.16 †	0.19 *	-0.19 *	-0.06	0.40 ***	-0.15 †	0.17 *	1.00							
13. Company performance	0.07	0.06	-0.04	0.11	0.02	0.03	0.00	0.06	-0.12	-0.07	0.13	-0.27 ***	0.09	0.21 **	1.00						
14. Company size	10784.75	18520.89	0.04	-0.16 †	0.01	-0.03	0.00	-0.04	0.33 ***	-0.01	0.40 ***	0.03	0.10	0.12	-0.08	1.00					
15. Change in company size	10.49	28.56	0.02	-0.01	0.00	-0.03	-0.01	0.06	0.05	-0.01	0.21 **	0.07	0.02	0.21 *	0.15 †	-0.03	1.00				
16. Company age	9.82	3.20	-0.16 *	-0.05	-0.13	0.07	-0.20 *	0.04	-0.03	-0.17 *	0.20 *	0.04	0.03	0.03	0.05	0.04	-0.08	1.00			
17. Change in cultural diversity	2.19	18.72	-0.05	0.08	-0.03	0.00	-0.04	0.01	0.04	-0.37 ***	0.13	-0.08	0.08	0.14	0.04	0.02	0.20 *	0.16 †	1.00		
18. Change in product diversity	2.59	22.04	-0.04	0.10	-0.04	0.05	-0.04	-0.08	-0.03	0.00	0.02	0.17 *	-0.08	-0.14	-0.05	-0.05	0.06	-0.13	-0.11	1.00	
19. Environmental change	42.45	82.83	-0.08	0.02	0.14	0.05	0.04	-0.10	0.11	-0.02	-0.09	0.07	-0.15 **	-0.09	0.01	0.06	0.02	-0.02	0.00	0.00	1.00

*** p<0.001, ** p<0.01, * p<0.05, † p<0.1

Table 2-3 shows the results of the regressions explaining similarity between incumbent and successor CEO. Models 1, 4, 7, and 10 show the effects the control variables have on the different similarity measures. In Hypothesis 1 we argue that the longer the tenure of the CEO stepping down, the greater the similarity between predecessor and successor CEO. We receive support for this hypothesis, as the coefficients in Models 2, 5, and 8 have a positive sign and are significant at the 5%, 1%, and 1% level respectively (+0.306, +0.023, and +0.037), indicating that longer tenure in the top post leads to more similarity between predecessor and successor. In Hypothesis 2 we propose that CEOs with greater expertise will be followed by CEOs similar to themselves. We receive partial support for this hypothesis, as the coefficients in Models 2 and 5 are positive and significant at the 10% and 1% level (+1.699 and +0.223). The coefficients in Models 8 and 11 are insignificant. In Hypothesis 3 we predict that when a company has done well under a CEO, that CEO's successor will share similar characteristics. We received partial support for this hypothesis as well. The coefficient of company past performance is positive and significant at the 0.1% level in model 2 (+0.121), indicating an effect on educational similarity between incumbent and successor CEO. However, all other coefficients are insignificant. In Hypothesis 4 we argued that as CEO social capital increases, the similarity between the incumbent and successor increases. We find no support for this hypothesis as the coefficients are insignificant in all models. In Hypothesis 5 we argued that environmental change negatively moderates the effect of CEO power on successor similarity. Only one of sixteen moderations is significant, and this only at a 10% level and a positive directions (Model 6: +0.098), hence the hypothesis is not supported. Finally, the results of model 14 in which the dependent variable is a composite measure of similarity, show that informal power originating from personal and situational characteristics, that is from longer tenure and recognized expertise, and from company performance, increase the likelihood of predecessor and successor CEOs sharing similar characteristics. All coefficients are positive (+0.099, +0.502, and +0.031) and significant at the 5%, 5%, and 0.1% level. However, the coefficient for social capital is insignificant.

Table 2-3: OLS regression models

VARIABLES	Educational Background Similarity			Functional Background Similarity			Industry Background Similarity			International Background Similarity			Composite Measure		
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)	Model (12)	Model (13)	Model (14)	Model (15)
Controls															
Event level															
Succession reason	0.433 (0.345)	0.389 (0.337)	0.382 (0.355)	-0.025 (0.021)	-0.021 (0.022)	-0.017 (0.022)	0.035 (0.024)	0.036 (0.027)	0.042 (0.028)	0.185 (1.648)	0.353 (1.964)	0.372 (1.977)	0.116 (0.088)	0.109 (0.086)	0.111 (0.090)
Individual level															
Transition to board ^c	1.530 (3.060)	0.340 (2.990)	0.060 (2.990)	0.056 (0.195)	-0.058 (0.193)	-0.035 (0.197)	-0.372 (0.274)	-0.509 † (0.291)	-0.496 † (0.298)	4.798 (16.403)	(3.591)	3.147 (16.030)	1.503 (4.246)	0.839 (4.111)	0.668 (4.116)
Inside successor	0.597 (0.277)	0.812 * (0.317)	0.842 (0.320)	-0.013 (0.017)	0.029 (0.015)	0.006 (0.015)	0.052 * (0.024)	0.067 * (0.032)	0.069 * (0.034)	-0.049 (1.057)	-0.264 (1.210)	-0.340 (1.248)	0.146 (0.268)	0.154 (0.311)	0.144 (0.319)
Company level															
Company performance	0.802 (2.352)	1.622 (2.266)	1.913 (2.319)	-0.214 (0.155)	-0.167 (0.152)	-0.138 (0.147)	-0.030 (0.151)	0.019 (0.153)	0.082 (0.152)	3.875 (4.704)	4.542 (5.439)	5.435 (5.708)	0.138 (0.611)	0.369 (0.588)	0.487 (0.597)
Company size ^b	-0.575 (0.754)	-0.458 (0.969)	-0.369 (1.027)	0.078 *** (0.029)	0.041 (0.035)	0.025 (0.041)	0.025 (0.046)	-0.015 (0.059)	-0.029 (0.062)	-1.085 (1.189)	-0.238 (1.593)	-0.454 (1.797)	-0.129 (0.185)	-0.101 (0.243)	-0.884 (0.259)
Change in company size ^d	-0.373 (0.459)	-0.446 (0.469)	-0.370 (0.478)	0.031 (0.031)	0.021 (0.031)	0.020 (0.032)	-0.021 (0.035)	-0.022 (0.036)	-0.021 (0.037)	-0.797 (1.830)	-0.881 (2.258)	-0.925 (2.357)	-0.081 (0.116)	-0.104 (0.119)	-0.083 (0.121)
Company age ^c	0.673 † (0.372)	0.962 * (0.386)	0.952 * (0.390)	0.021 (0.024)	0.026 (0.025)	0.027 (0.025)	0.049 (0.035)	0.061 (0.041)	0.058 (0.042)	1.545 (3.264)	1.639 (3.098)	1.526 (3.149)	0.195 * (0.097)	0.269 *** (0.098)	0.265 *** (0.099)
Change in cultural diversity ^d	0.201 (0.676)	0.992 † (0.529)	1.180 * (0.552)	-0.064 * (0.032)	-0.072 * (0.032)	-0.065 † (0.034)	0.010 (0.062)	0.021 (0.074)	0.031 (0.074)	0.135 (1.499)	1.211 (1.338)	1.282 (1.311)	0.040 (0.176)	0.244 † (0.132)	0.302 * (0.136)
Change in product diversity ^d	0.476 (0.384)	0.805 * (0.374)	0.844 * (0.363)	-0.041 ** (0.016)	-0.029 † (0.017)	-0.027 (0.018)	0.027 (0.022)	0.047 † (0.025)	0.048 † (0.028)	1.771 † (1.006)	1.972 † (1.043)	1.955 † (1.097)	0.123 (0.092)	0.212 * (0.090)	0.224 *** (0.085)
Industry level															
Environmental change ^d	-0.098 (0.162)	-0.118 (0.178)	0.068 (0.403)	0.002 (0.009)	-0.001 (0.008)	-0.051 * (0.021)	0.019 (0.013)	0.017 (0.012)	-0.018 (0.046)	0.470 (0.392)	0.527 (0.471)	0.703 (0.9445)	-0.020 (0.039)	-0.026 (0.044)	0.003 (0.096)
Independent Variables															
Incumbent CEO tenure ^c		0.306 * (0.153)	0.394 ** (0.151)		0.023 † (0.013)	0.019 (0.013)		0.037 ** (0.012)	0.033 * (0.013)		0.906 (0.723)	0.953 (0.778)		0.099 * (0.039)	0.120 ** (0.039)
CEO expertise ^c		1.699 † (0.945)	1.887 † (1.037)		0.223 ** (0.069)	0.191 * (0.077)		0.153 (0.112)	0.110 (0.014)		-1.528 (2.688)	-2.174 (2.865)		0.502 * (0.250)	0.528 † (0.277)
Change in company past performance ^d		0.121 *** (0.027)	0.139 *** (0.026)		-0.937 (1.904)	-0.000 (0.001)		0.001 (0.003)	0.003 (0.003)		0.013 (0.118)	0.145 (0.119)		0.031 *** (0.007)	0.037 *** (0.007)
Social capital ^d		-3.071 (2.011)	-3.890 † (2.261)		-0.091 (0.123)	-0.103 (0.135)		-0.252 (0.234)	-0.002 (0.003)		-1.389 (7.086)	1.068 (7.031)		-0.830 (0.518)	-1.016 † (0.573)
Moderations															
Environmental change * Incumbent CEO tenure ^a			-0.349 (0.373)			0.019 (0.015)			0.014 (0.027)			-0.361 (0.637)			-0.087 (0.090)
Environmental change * CEO expertise ^a			-0.327 (0.972)			0.098 † (0.055)			0.115 (0.099)			1.294 (2.159)			-0.020 (0.240)
Environmental change * Change in company past performance ^b			-0.180 (1.820)			-0.101 (0.083)			-0.167 (0.104)			-1.518 (2.532)			-0.598 (0.433)
Environmental change * Social capital ^a			0.198 (0.329)			0.105 (0.104)			-0.015 (0.018)			-0.582 (0.703)			0.466 (0.784)
R ²	0.087	0.184	0.200	0.079	0.177	0.211	0.126	0.182	0.201	0.016	0.028	0.032	0.090	0.198	0.219
Increase in R ²		0.102 ***	0.016		0.098 *	0.034 **		0.057 *	0.027		0.022	0.039 †		0.108 ***	0.022

Robust standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05, † p<0.1 n = 137

^aCoefficient and standard error have been multiplied by 1000.

^bCoefficient and standard error have been multiplied by 100.000.

^cCoefficient and standard error have been multiplied by 10. ^dCoefficient and standard error have been multiplied by 100.

Robustness Test

We performed several additional tests that are not reported here to verify the robustness of our findings. First, we used different weighing schemes for educational similarity, a linear increasing scheme (0,1,2,4,8) and an exponentially growing one (0,1,4,9,16). This did not affect the magnitude or the sign of our coefficients. We used alternative measures for our independent variables. We ran the regressions again using alternative measures of company performance (change in EBIT, in return on sales, and in return on equity). This did not significantly affect our results. Third, we used alternative operationalizations for our control variables. We measured company size by assets and number of employees instead of sales, and obtained similar results. An outside successor who comes from the same industry as the company where a succession is taking place may show more similarity to the incumbent CEO than a successor from a different industry, as certain industries may favor specific CEO types. Thus, in a separate model not reported in Table 2-3 we tested for the effect this may have had on CEO similarity, using an additional control variable, *industry insider*. As before, the direction and magnitude of the effects did not change. However, due to the high correlation between the two insider measures, we chose to exclude the latter to lay to rest any concerns that our results might be driven by multicollinearity.

2.5 Discussion

We set out with this study to further our understanding of one of the most crucial decisions any company will make – the choice of a CEO. Our study contributes to theory development within the CEO succession field by explicitly addressing an important, yet previously under-researched question: Why do individuals succeeding to the position of CEO exhibit the demographic characteristics they do? To answer this question we developed a theoretical framework based on socio-political, socio-psychological and power arguments. We began with the core assumptions that incumbent CEOs influence the choice of a successor in an attempt to safeguard what they have built by seeing that they are replaced by someone similar to themselves, and that they use whatever power they have to do that.

In general, our results show that the informal power of the CEO who is stepping down is a good predictor of the degree of similarity between the predecessor and successor. More specifically, our findings indicate that significant informal CEO power drawn from personal attributes, given situations and social relationships, is generally associated with a higher degree of similarity between the incumbent and successor.

Previous research has found that power dynamics at the top have an impact on various organizational outcomes such as strategic change (Greve & Mitsuhashi, 2007), executive compensation (Pollock, Fischer, & Wade, 2002), CEO dismissal (Shen & Cannella, 2002b), the fortune of CEO heirs apparent (Cannella & Shen, 2001), diversification (Finkelstein, 1992) and CEO succession (Zajac & Westphal, 1996). The findings of this study extend our understanding of such power on organizational outcomes, in particular, the accumulated informal power of CEOs that can be brought to bear when a successor is being considered.

In one of the first studies to address the question at hand Zajac and Westphal (1996) find that the demographic of CEO successors depend on the relative power of CEOs vis-à-vis their boards. More powerful boards are more likely to name a successor whose demographic characteristics better fit the demographic profiles of members of the board than the incumbent CEO. While the study's contribution is undeniable, the relative board power perspective may only apply in specific corporate governance systems. The objective of the present study is therefore to complement and extend the findings of Zajac and Westphal (1996).

Taking an informal power perspective rather than a relative board power perspective, the present study acknowledges that apart from incumbent CEOs and boards of directors other powerful stakeholders are likely to influence successor decisions. Thus, in order to be able to name successor CEOs with similar demographic characteristics, incumbent CEOs must not only win out over their boards of directors, but also over other powerful stakeholder groups that may wish to influence successor decisions in their best interest. Moreover, the informal power perspective is not limited to US-like corporate governance systems and frees the arguments from organizational form and structure. For example, within the German corporate-governance system, the separation of the executive board and the board of directors is a legal requirement. Likewise, in Japan it is unusual that the same person serves as CEO and chairman of the board (Dalton & Kesner, 1987). As a result, many of the characteristics identified by Zajac and Westphal (1996) as a source of CEO power such as '*independent outside directors*' or '*separation of CEO and board chair*' are not applicable to these corporate-governance contexts. In order to delimit the measure of power from the context the present study uses sources of power that are independent of corporate governance systems. It is important, however, to note that this is not to imply that either approach is superior. In fact, it would be interesting to apply both approaches to one sample and see to what degree both approaches yield similar or different results.

The results confirm our reasoning that greater informal power originating from personal and situational characteristics is associated with a higher degree of demographic similarity between a predecessor and successor. However, we did not find evidence of any impact stemming from a CEO's social capital. Hence, contrary to what we expected, interaction between CEOs and TMTs do not lead to the creation of a sufficient amount of social capital to later allow CEOs to influence the demographic profile of their successors. There are two possible reasons for such a counterintuitive finding. First, it may be that CEOs do not accumulate enough of what Coleman (1988) calls credit slips to cover a request as significant as the naming of the next CEO. CEOs are undoubtedly the central TMT actors (Hambrick, 1994), but they still need the backing of others on the team from time to time. Thus, while they may be granting favors that engender obligations, they are also cashing in their chips as the need arises, possibly leaving them with a shortfall when it comes to CEO succession. Second, TMTs usually "consist of people who have demonstrated significant and sustained accomplishments during their careers, who are relatively aggressive and achievement-oriented, and who, as a result, expect some considerable degree of autonomy and discretion in the conduct of their affairs" (Hambrick, 1994: 176). It may well be that the implicit positive connotation of a 'team' implies more cohesion, group identity, support, and trust-based and favorable interaction than actually exists. The members of TMTs have to depend on the CEO to carry through their initiatives. This may lead to dissatisfaction on the part of team members. Moreover, while members who owe their place on the TMT to the CEO may be allies, other members may see the CEO as a rival, indeed some may have had the ambition to become CEOs themselves. In any event, it is far from certain that the CEO could ever generate enough social capital to win over every member of the team to get support for the candidate the CEO would like to see take over.

We argued that socio-psychological processes lead CEOs to favor demographically similar successors. Our results are consistent with prior studies in the tradition of social-identity (Tajfel, 1974; Tajfel & Turner, 1979) and similarity-attraction theory (Byrne, 1971, 1997) and corroborate previous research that has found that demographic similarity may lead to selection bias (Zajac & Westphal, 1996). Like Zajac and Westphal (1996) we find support for the idea that CEOs are not likely to see a candidate as similar to themselves based on a single demographic characteristic. Our results point to the importance of an overall picture.

However, the findings also show that the extent to which CEOs' informal power determines demographic characteristics of successors is different for different characteristics. Put

differently, it seems that the different measures of similarity are not equal in their importance to incumbent CEOs. Overall, our results indicate that incumbent CEOs use their informal power to ensure similarity in educational and functional background. However, our results lend support to the assumption, that they do not attach the same importance to similarity in industry and international experience.

In light of our core assumption according to which incumbent CEOs strive to preserve the legacy they have built up by appointing successor CEOs with similar characteristics, our results suggest that incumbent CEOs assess different characteristics differently with regard to their importance and impact on strategic choices. Formal education and practical training within a specific field boil down to teaching incumbent CEOs ways to approach issues and tasks; and the prescribed approaches differ field to field. Hence, education is likely to be of outstanding importance when it comes to CEO competence and CEOs' impact on strategic choices. After all, an engineer will approach a problem differently than an accountant. Therefore, incumbent CEOs are likely to set great value upon appointing successor CEOs with similar educational background. Likewise it seems that incumbent CEOs carefully select successors with similar functional background. Given that functional background has been shown to significantly influence CEOs' strategic orientation it is evident that incumbent CEOs choose successors with similar functional background (Waller, Huber, & Glick, 1995). Similarity in functional background is likely to lead to similar strategic orientation, and as such ensures the legacy of incumbent CEOs. Given that functions are likely to be not too different across industries, it seems that industry experience loses in importance in the successor selection decision. In other words, incumbent CEOs are likely to attach greater importance to functional rather than industry experience.

At first sight our results indicate that incumbent CEOs do not place great emphasis on similarity in international experience. However, this result seems odd given that international experience has increasingly been recognized by both academic research as well as CEOs as having significant impact on company performance (Carpenter & Fredrickson, 2001; Carpenter, Sanders, & Gregersen, 2000; Magnusson & Boggs, 2006). A potential explanation may be that incumbent CEOs are aware of the increasing importance of international experience and therefore *intentionally* aim at appointing successor CEOs with *more* international experience – which results in less similarity for this characteristic. In order to verify our assumption, we performed additional analyses with regard to international experience. The results show that indeed incumbent CEOs have statistically significant

($p < 0.05$) *less* international experience than their successors. Therefore, it may be that the non-significant results we find for international experience are not because incumbent CEOs do not attach great importance to this characteristic but rather *because* they do attach great importance to this characteristic, they strive to appoint successors with more international experience, which results in less similarity – and non-significant results in our analysis.

Finally, we obtained counter-intuitive results concerning the influence of the firm's environment. Contrary to what we hypothesized, our data reveal that environmental contingencies do not influence the incumbent CEO's ability to choose a successor CEO. In other words, the incumbent CEO's informal power base appears to be left untouched by contingencies external to the firm. This findings is surprising given that mainstream literature suggests that environmental change may bring about a change in CEO characteristics (Virany et al., 1992). In order to ensure the validity of our results, we performed several robustness checks, operationalizing environmental change as change in imports as well as change in industry value-added. Again, the results indicate that environmental change does not have an impact on the incumbent CEO's influence on successor decisions.

Our study also makes several methodological contributions. First, previous research has, by and large, used binary distinctions to explore demographic similarity, insider or outsider, having an MBA or not (Ocasio & Kim, 1999; Zajac & Westphal, 1996). We extend and complement this stream of research by using a continuous measure of similarity. For instance, we applied a more finely grained measure that does not look at just a CEO's field of study but also takes into account functional, industry, and international experience, complemented by looking at the duration of single steps. This approach reflects the fact that the length of time a CEO has spent in various functional positions, industries, and foreign countries is important when calculating similarity. Moreover, we show that it is not successor demographic characteristics per se that matter, but how similar they are to those of the incumbent (Tsui, Egan, & O'Reilly III, 1992; Tsui & O'Reilly III, 1989).

Second, our continuous measure includes a variable that has not previously been explored in the CEO succession literature. Hence, the inclusion of international experience as a demographic characteristic extends prior research with a measure that captures the global mindset CEOs carry with them. With increasing globalization, international experience has been, and will continue to be, important in managerial practice. In fact, other research has revealed that foreign assignments affect the strategic decisions of CEOs, hence, international

experience is likely to be a variable of increasing importance (Herrmann & Datta, 2002; Reuber & Fischer, 1997).

2.6 Limitations and future research directions

No single study can embrace all aspects of an issue. We acknowledge here limitations of ours. First, the generalizability of our findings may be limited due to the nature of our sample made up of large publicly-owned companies. The availability and quality of data was an overriding consideration, and while it might be argued that our findings may not be unconditionally transferable to small and privately-held companies, it is also true that we would not have been able to get the same data for them. Second, while we argue that CEOs actively engage in political processes by exercising their informal power, our longitudinal large-sample study design does not allow us to directly observe the political processes that ultimately lead to the succession decision. Third, we use four demographic variables to measure CEO similarity. However, these four may not fully capture how incumbent CEOs perceived similarity. The longitudinal large-sample design of our study prevented us from performing the in-depth analyses on the personality and cognition of the incumbent CEO necessary to obtain such information.

Future research may be able to address some of these shortcomings. By contrasting the effects informal CEO power has in varying organizational contexts such as different company sizes, the presence of other powerful stakeholders, different corporate governance systems, or different national cultures, we may be able to begin to better understand the *why* of CEO predecessor-successor similarity. By contrasting high and low discretion environments we may also gain additional insight into the degree to which CEOs can apply their informal power to influence the CEO selection decision. There may be other factors that also affect the choice of a CEO, such as the presence of founder board members, the company being family-owned, the company's geo-strategic and political importance to name a few. Political considerations too can play a role. We saw this when Germany and France jointly decided on the selection of a CEO for the aeronautic, defense, and space giant EADS. In many of these cases, the CEO is unable to leverage any informal power no matter what.

We have looked at similarity that might be reflected in a resume. Future research might also explore other dimensions of similarity. Oftentimes successors are already known to the incumbent CEO and the old-boys network may impinge on the selection. While prior studies have included Ivy-League university degrees as a form of group membership, scholars may also include club memberships such as at country-clubs, political party affiliation, or student

club memberships as an indicator to how much selection decisions are based on similarity-attraction biases. Future research might also consider how like social milieu, shared work experience, even individuals having sat together on the boards of different companies may affect the impressions of persons who can influence successions. Similarly ties between family members and friendships or other commonalities that contribute to regular socialization and interaction may be factors that contribute to a positive evaluation of the successor candidate's appropriateness.

In some cases CEOs hand-pick a potential successor years before the planned end of their term. These heirs apparent are sometimes able to begin building social capital with stakeholders long before they take the helm. A study on these kinds of attempts to influence the eventual succession process could provide valuable insights into the characteristics CEOs look for in their successors and why.

3 How new leaders affect strategic change following a succession event: A critical review of the literature²

3.1 Introduction

Research on leader succession has a long history. Driven by the work of Grusky (for example, 1960, 1961) in the 1960s, leader succession has become a topic of interest across a variety of scientific disciplines such as strategy, organization, finance, and leadership. Reviewing over thirty years of succession research Kesner and Seborá (1994) concluded that there are four key components to the succession event: (1) antecedents, (2) the event itself, (3) consequences, and (4) contingencies. While the range of antecedents, event characteristics, and contingencies under investigation has been broad and varied, research on the consequences of leader succession has tended to focus on performance (Giambatista et al., 2005). However, notwithstanding this emphasis we have also witnessed an increasing interest on strategic change as a consequence of leader succession over the past two decades.

Research addressing the leaders succession strategic change (LSSC) relationship is generally grounded in the key theoretical perspective that leaders, in particular CEOs, are charged with determining strategic choices and setting organizational context (Child, 1972). Hence, given this pivotal role it is reasonable to expect that leader succession entails strategic change. Academic interest in the LSSC-relationship is further fueled by numerous real-world examples, providing this research topic with high face validity. Jorma Ollila at Nokia, Lou Gerstner at IBM, or Jürgen Schrempp at Daimler are but a few well known CEOs that have initiated substantial strategic change upon taking office.

Given the theoretical and practical importance of leaders' impact on strategic change, in particular in the context of succession events, it is surprising that to date no comprehensive review has been done on this particular research stream. Though Kesner and Seborá (1994) as well as Giambatista et. al (2005) reviewed the CEO succession literature, their broad approach to reviewing the entire literature has prevented them to spend considerable space to individual research streams such as the LSSC-relationship. Thus, to date no in-depth summarization has been done critically reflecting on existing knowledge and uncovering critical gaps with regard to leaders' impact on strategic change in the context of leader succession.

² This chapter is based on: Hutzschenreuter, Kleindienst & Greger, How new leaders affect strategic change following a succession event: A critical review of the literature, unpublished manuscript

We address this shortcoming and by building on a framework that addresses the WHY-, WHAT-, HOW-, and WHEN-questions aim at reflecting the current state and progress of research on the LSSC-relationship. Moreover, with the review provided in this article and areas identified for future research, we enable researchers to build on existing literature more meaningfully and further advance our understanding of the LSSC-relationship.

We proceed as follows: In the next section, we argue why it is important and appropriate to focus on the CEO as the executive leader being most responsible for strategic change. In the third section, we lay the foundation of a common understanding by defining CEO succession and providing a definition of strategic change. In the fourth section, we describe how we identified the relevant literature. We present our theoretical framework that we used to review the literature as well as the results of our review in section five. We end with a short conclusion in section six.

3.2 Why focus on the CEO?

Early theoretical work by Barnard (1938) and Selznick (1957) established a rationale for including executives in analytic investigations of companies. The role that CEOs in particular have in shaping the companies they head was emphasized by the Harvard model (Andrews, 1971) and by the strategic choice perspective (Child, 1972). An increasing body of theoretical and empirical literature has since recognized the CEO as the principal leader and architect of the firm, as the individual ultimately responsible for the formulation and implementation of company strategy.

Obviously the CEO is not alone in running the company. First, CEOs are usually part of a top management team (TMT) whose members have clearly defined responsibilities. As such, the CEO shares some tasks and, to some extent, power with other team members (Hambrick, 1994). Second, theoretical reasoning and empirical evidence suggest that middle and frontline managers substantially influence the course of the company (Wooldridge, Schmid, & Floyd, 2008). Given that so many persons are involved in managing a company, why is it that it is often assumed that the CEO has greater impact than other leaders in the company on strategic actions and performance?

Theoretical support for this assumption may be derived from both the formal and the symbolic power of the CEO (Gupta, 1988). First, the CEO's position at the top of the organizational chart, indeed the very title "Chief Executive Officer" provide CEOs with the authority to dictate the substance of strategic decisions. Moreover, in some cases the CEO has the power to appoint or remove members of the TMT (Ocasio, 1994), making the CEO the

architect of the company's TMT and responsible for the actions or inertia of its members. Second, the symbolic role of the CEO can potentially serve as a source of power in shaping corporate behavior. The media, for example, tend to focus almost exclusively on the CEO while other members of the TMT receive considerably less attention. For instance, Harvard Business Review publishes a ranking of The Best-Performing CEOs in the World (Hansen et al., 2010). Empirical studies have shown close links between a company's CEO and its strategy (Jensen & Zajac, 2004). Researchers have explored the impact that the CEO can have on company reorientation (Keck & Tushman, 1993), innovation (Miller & Shamsie, 2001), product diversification (Smith & White, 1987), internationalization (Matta & Beamish, 2008), and entry-mode decisions (Reuber & Fischer, 1997). All of these studies, and many more, have shown that CEOs have substantial impact on strategy.

Thus, both theoretical rationale and empirical evidence lend support to the idea that the CEO is a company's preeminent executive leader, and as such can make a major impact on its strategy. This is not to deny that others, such as members of the TMT, and middle and front-line managers influence the company's direction. However, the CEO exerts a distinct influence (Jensen & Zajac, 2004; Papadakis & Barwise, 2002). Accordingly, a change in who holds the CEO position is likely to substantially affect the strategy of the company, thus, leading to strategic change.

3.3 Defining the domain of the review

Before proceeding further, it may be useful to define the domain of this review by addressing two basic questions: What is strategic change? and What is CEO succession?

One of the most widely shared assumptions in the strategic management literature is that strategy determines the fit, or match, between company and environment (Zajac, Kraatz, & Bresser, 2000). At the same time, change refers to differences in form, quality, or state in an organizational entity over time (Van de Ven & Poole, 1995). Thus, strategic change can be defined as a difference in form, quality, or state in an organizational entity over time that alters the company's alignment with its environment. Rajagopalan and Spreitzer (1996: 49) argue that changes in the company-environment alignment encompass either direct changes in company strategy or changes in the company that will ultimately lead to the initiation and implementation of change in strategy. In other words, change that does not ultimately result in change in company strategy is not strategic change. Furthermore, strategic change may be single activities, repeated activities, or single activities that influence each other (Ancona, Okhuysen, & Perlow, 2001b).

CEO succession is easily defined, it is a pivotal act or process in a company's history by which a new actor, an incoming CEO, takes the place of another actor, an outgoing CEO, and inherits all the rights and responsibilities of the position. If a company is in existence long enough, sooner or later there will be a succession.³

3.4 Identification of the literature

Although both the succession literature and the strategic change literature are huge, only a relatively small subset of each has focused on the effect CEO succession has on strategic change. In deriving the literature to be reviewed we limited ourselves to articles published in refereed journals. Our rationale in doing this is that peer reviewed work can be considered certified knowledge and so is likely to have the most impact on the field (Podsakoff, MacKenzie, Bachrach, & Podsakoff, 2005). We also decided to apply a systematic database search in order to identify relevant literature. However, unlike previous reviews that have focused on a pre-selected set of journals and years, we conducted an open computerized search of the complete literature within both the Business Source Complete Database and the ScienceDirect Database using a set of keywords referring to CEO succession and strategic change.⁴

The database search returned 132 hits, originating from 116 separate articles. We read the abstracts of those articles to determine which ones address CEO succession and strategic change in some way. In this way we created a working list of 68 articles which we then looked through quickly but systematically. This allowed us to identify for elimination articles that did not have appropriate themes and non-empirical studies.⁵ At the same time we added articles that the database search did not identify but that the authors of clearly relevant articles repeatedly referred to. Our final list consists of 33 articles. Table 3-1 provides a comprehensive overview of the studies included in our review.

³ We do by no means deny that leaders have substantial impact on strategic change in other contexts than CEO successions. Nor do we claim that all changes new leaders initiate are strategic. However, we limit our literature review to studies that have explored leaders' impact on strategic change in the context of CEO successions. In the context of this article, we use the terms 'leader' and 'CEO' interchangeably.

⁴ The search string that we used to search within the abstracts of the literature contained in the Business Source Complete Database and the ScienceDirect Database consisted of 15 variations of CEO succession and 8 variations of strategic change. The complete search string used for our review was: "executive succession" OR "CEO succession" OR "Chief Executive Officer succession" OR "leader succession" OR "managerial succession" OR "executive turnover" OR "CEO turnover" OR "Chief Executive Officer turnover" OR "leader turnover" OR "managerial turnover" OR "executive migration" OR "CEO migration" OR "Chief Executive Officer migration" OR "leader migration" OR "managerial migration" AND "Change" OR "Reorientation" OR "Modification" OR "Alteration" OR "Variation" OR "Transformation" OR "Adjustment" OR "Shift".

⁵ Two non-empirical articles were identified by key-word search: Fondas and Wiersema (1997) and Sliwka (2007).

Table 3-1: Overview of the studies included in the review

Author(s)	Industry focus/ regional focus	No. of companies	No. of successions	Period / Method	Key findings
Barron et al. (2011)	- USA	2664		1992-2006 Secondary data	CEO turnover significantly increases the likelihood of new discontinued operations.
Barker and Duhaime (1997)	Manufacturing USA	38	-	1974-1988 Survey	The extent of strategic change enacted in a successful turnaround attempt is positively associated with the replacement of a firm's CEO.
Bigley and Wiersema (2002)	- USA	61	112	1990-1994 Secondary data	Increasing heir apparent experience of newly appointed CEOs diminishes the CEOs' use of power to initiate corporate strategic refocusing.
Boeker (1997a)	Semiconductor USA	67	361	1976-1993 Secondary data	Organizations that recruit higher ranked managers and managers with longer industry experience are more likely to enter into product markets the new manager's former firm is active in, than lower ranked or short-tenured managers. The effects of executive migration are influenced by attributes (functional and industry experience) of the successor.
Boeker (1997b)	Semiconductor USA	67	-	1978-1992 Secondary data	Long chief executive tenure is associated with greater levels of strategic change.
Datta et al. (2003)	Manufacturing USA	118	132	1977-1990 Secondary data	There is a negative relationship between CEOs' openness to change and post-succession strategic persistence. This relationship is significant in high-discretion industries, but not in low-discretion industries.
Denis and Denis (1995)	- USA	-	581	1985-1988 Secondary data	Incoming CEOs frequently reverse decisions of their predecessors.
Farrell and Whidbee (2002)	- USA	66	66	1982-1992 Secondary data	In addition to influencing new director selection, new CEOs may also influence committee assignments of individual directors. Forced CEO turnover does lead to changes in committee assignments for individual directors, but not to overall committee structure.

Author(s)	Industry focus/ regional focus	No. of companies	No. of successions	Period / Method	Key findings
Friedman and Saul (1991)	Industrial, Service USA	222	-	1983 Survey	Outside succession results in relatively greater post-succession executive turnover than inside succession. Compared to long predecessor tenure top management turnover will be smaller when the tenure of the prior CEO was short.
Goodstein and Boeker (1991)	Hospital USA	327	-	1980-1986 Secondary data	The interaction of changes in ownership and board with change in CEO positively influences the number of service additions and divestitures hospitals initiate.
Gordon et al. (2000)	Computer, Furniture USA	120	-	1987-1993 Secondary data	CEO turnover is a precursor to strategic reorientation.
Greiner and Bhambri (1989)	Liquid gas USA	1	1	- Case study	The succession of the CEO is the initiating force that creates a political uncertainty which leads to change in process characteristics and is needed for gaining momentum for change.
Helmich and Brown (1972)	Chemicals USA	208	204	1959-1969 Secondary data	Organizations with inside succession exhibit less organizational change in the executive role constellation than organizations with outside succession.
Keck and Tushman (1993)	Cement USA	104	-	1900-1986 Secondary data	CEO succession is associated with increased team change and heterogeneity.
Kesner and Dalton (1994)	- USA	84	-	1980 Secondary data	Outside succession is positively related to the level of turnover in upper level management positions in the post-succession period.
Kraatz and Moore (2002)	Colleges USA	631	-	1971-1985 Survey	Controversial program adoption is more likely when led by presidents who recently migrated either from colleges that had such programs or from lower-status colleges.
Lant et al. (1992)	Computer, Furniture USA	80	-	1984-1986 Secondary data	CEO turnover increases the likelihood of strategic reorientation in the dynamic computer industry, but not in the stable furniture industry.
Li et al. (2008)	- China	607	-	2002 Survey	CEO turnover frequency has an inverted-U-curvilinear impact on firm entrepreneurial orientation.

Author(s)	Industry focus/ regional focus	No. of companies	No. of successions	Period / Method	Key findings
Lin and Liu (2011)	- Taiwan	-	160	2000-2005 Secondary data	Firms that experience outside succession or where there is a difference between successor CEO and existing chairman will opt for higher levels of change on an international scale. This relationship is positively moderated by organizational slack.
Miller (1993)	- USA	36	-	- Secondary data	Succession is followed by an adaptation of numerous strategy process characteristics in order to obtain political support of incumbent managers.
Ndofor et al. (2009)	Sports (NFL) USA	28	60	1983-1992 Secondary data	Successors from different cognitive schools carry out more changes immediately after succession.
Romanelli and Tushman (1994)	Minicomputer USA	25	-	1967-1969 Secondary data	The installation of a new CEO significantly increases the likelihood of revolutionary transformation.
Sakano and Lewin (1999)	Nonfinancial Japan	162	81	1988-1993 Secondary data	CEO succession is <i>not</i> associated with radical strategic and organizational change.
Shen and Cannella (2002a)	- USA	300	228	1988-1994 Secondary data	Succession type interacts with post-succession senior executive turnover.
Shimizu and Hitt (2005)	- USA	70	-	1988-1998 Secondary data	Arrival of a new outside CEO increases the likelihood of divesting a previously acquired poorly performing unit.
Simons (1994)	10 industries USA	10	10	- Case study	Incoming CEOs use control systems as a lever for shaping and implementing their own strategic agendas.
Weisbach (1995)	- USA	200	227	1971-1982 Secondary data	At the time of management change there is an increase in probability of divesting an acquisition at a loss or one considered unprofitable by the press.
Wen (2009)	- USA	93	1053	1984-1999 Secondary data	Inside successors are more likely to break the status quo in the succession year.
Wiersema (1992)	Manufacturing USA	146	86	1973-1985 Secondary data	The nature of executive succession has substantial consequences for corporate strategy. Outside succession is associated with an increased likelihood of strategic change, while inside succession is associated with less change in corporate strategy.

Author(s)	Industry focus/ regional focus	No. of companies	No. of successions	Period / Method	Key findings
Wiersema (1995)	Manufacturing USA	87	-	1977-1986 Secondary data	Executive succession events are linked to the extent and nature of corporate restructuring activity. Non-routine turnover is linked to subsequent corporate strategic direction.
Yokota and Mitsubishi (2008)	Textile Japan	36	-	1980-2004 Secondary data	Executive succession does not trigger strategic change unless succession entails change in the values and interests of executives embedded in their demographic traits.
Zhang and Rajagopalan (2003)	Non-diversified USA	200	220	1993-1998 Secondary data	Strategic persistence is positively associated with intra-firm succession. Intra-industry succession is positively associated to the firm's conformity to industry tendencies.
Zuniga-Vicente et al. (2005)	Banking Spain	134	-	1983-1997 Secondary data	Succession firms are more likely to experience changes in strategic groups.

3.5 Review of the literature

For any literature review to further the understanding and provide a valuable contribution to the comprehension of a topic it is important to analyze the literature systematically (Ginsberg & Venkatraman, 1985). To do so, we chose to analyze the identified literature by means of different questions. According to Whetten (1989) the building blocks of any theory can be broken down to six simple questions: WHAT, HOW, WHY, WHEN, WHO, and WHERE.

Given that the present study addresses the topic of leader succession and strategic change, the latter two questions seem self explanatory and seem to deserve no further elaboration. WHO and WHERE may at first sight be answered by: the leader within a firm. The former four questions, however, are more complicated and shall be answered by analyzing the identified literature. WHY addresses the *theoretical arguments* that are used in the literature to explain the phenomenon of leaders' impact on strategic change following succession events. WHAT addresses the moderators, that is, the *contingency factors* that have been argued to facilitate or hamper leaders' impact on strategic change. HOW addresses the way, in which strategic change following a succession event *manifests itself* within a company. Finally, WHEN addresses the *temporal dimension* of strategic change.

These four questions form the core building blocks of the framework depicted in Figure 3-1 that we used to review the literature. A careful analysis of the body of literature revealed that the WHY, WHAT, and HOW building blocks could further be structured along more fine-grained perspectives. In the following section, we review the literature along our framework. In Table 3-2 we provide an overview of the streams, in which the studies within our sample are contained.⁶ We outline crucial findings, contradictions, and gaps in the literature and bring together what we have learned so far.

⁶ A study may cover a wide range of research questions that take in more than one category. To overcome potential ambiguity associated with classification we each independently prepared a table of how we believed the studies should be classified. In cases where we differed in our classification we discussed our reasoning until we reached a consensus on the appropriate theme.

Figure 3-1: Framework used to review the literature

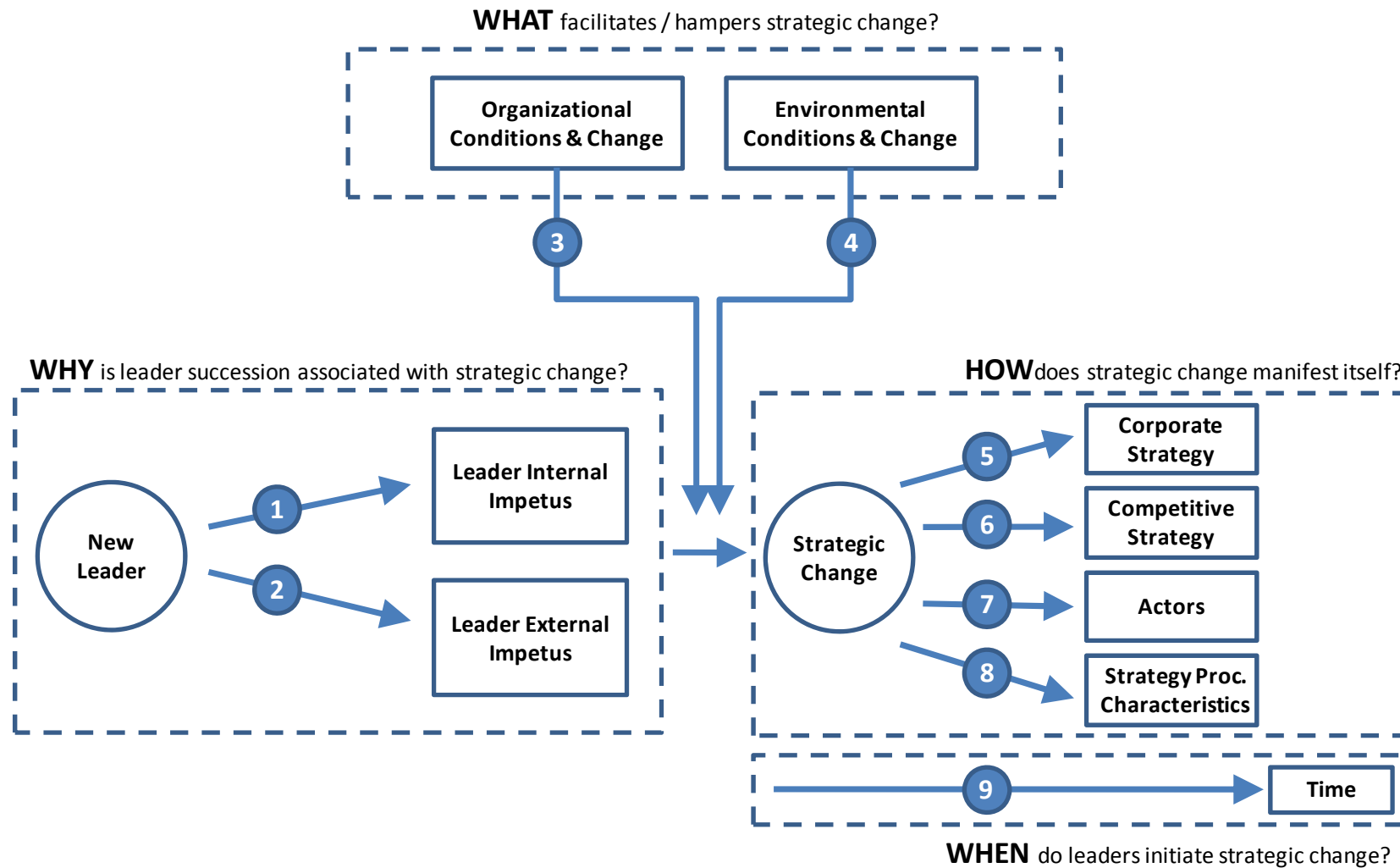


Table 3-2: Classification of the studies included in the review

No.	Author(s)	WHY?		WHAT?		HOW?				WHEN?
		Stream 1: Leader Internal Impetus	Stream 2: Leader External Impetus	Stream 3: Organizational Conditions & Change	Stream 4: Environmental Conditions & Change	Stream 5: Corporate Strategy	Stream 6: Competitive Strategy	Stream 7: Actors	Stream 8: Strategy Process Characteristics	Stream 9: Time
1	Barker & Duhaime 1997	X		X		X				
2	Barron et al. 2011		X			X				
3	Bigley & Wiersema 2002	X				X				
4	Boeker 1997	X	X	X		X				
5	Boeker 1997	X		X		X				
6	Datta et al. 2003	X			X		X			
7	Denis & Denis 1995					X				
8	Farrell & Whidbee 2002	X						X		
9	Friedman & Saul 1991	X		X				X		
10	Goodstein & Boeker 1991		X	X		X				
11	Gordon et al. 2000	X	X				X			
12	Greiner & Bhambri 1989	X	X						X	
13	Hayes et al. 2005							X		
14	Helmich & Brown 1972	X						X		
15	Keck & Tushman 1993			X				X		
16	Kesner & Dalton 1994	X						X		
17	Kraatz & Moore 2002	X			X	X				
18	Lant et al. 1992	X			X		X			
19	Li et al. 2008	X							X	
20	Lin & Liu 2011	X	X	X		X				
21	Miller 1993	X	X						X	
22	Ndofor et al. 2009	X					X			
23	Romanelli & Tushman 1994	X	X				X			
24	Sakano & Lewin 1999				X	X				
25	Shen & Cannella 2002		X					X		
26	Shimizu & Hitt 2005	X				X				
27	Simon 1994			X					X	
28	Weisbach 1995	X	X							
29	Wen 2009	X				X		X		
30	Wiersema 1992	X	X			X				
31	Wiersema 1995	X				X				
32	Yokota & Mitsuhashi 2008	X				X				
33	Zuniga-Vicente et al. 2005		X				X			

3.5.1 WHY? *Untangling the rationale for the LSSC-relationship*

We encountered a variety of theoretical rationales for the LSSC-relationship, and highlight subsequently those that have attracted most research attention. To do so, we distinguish two perspectives that have been put forth to explain the aforementioned relationship. The first perspective, which we label *leader internal impetus*, builds on the assumption that strategic change following a succession event originates from factors residing within the new leader. In contrast, the second perspective, labeled *leader external impetus*, rests on the assumption that while it is the new leader who initiates strategic change, the impetus to do so originates from factors external to the new leader. Table 3-3 provides a summary of the WHY-question.

Table 3-3: Overview of the WHY-question

STREAM	ARGUMENT	ACCORDING TO THIS ARGUMENT ...	EVALUATION OF THE WHY-STREAM	FUTURE RESEARCH AGENDA
1. Leader internal impetus	Cognition	... cognitive differences exist between incumbent and successor, which ultimately lead to different information-processing and decisions. These differences will be reflected in strategic change.	Though a number of theoretical arguments have been put forth to explain the WHY of the LSSC-relationship, most of these arguments are in rather early stage of development.	<i>Moving beyond cognitive psychology</i> The human mind is more than mere cognition. Thus, include affection and conation into future studies, acknowledging that an individual's emotions and will significantly affect strategic decision making.
	Cognitive commitment	... leaders are not uniformly open-minded about strategic change. Progressive institutionalization and amplified cognitive biases cause incumbents to be committed to prior courses of actions, while successors are willing to change strategy.	One exception is the cognition argument that has clearly been the dominant argument in the literature under review. While the virtue of the cognition argument is its advanced theoretical development, this has also been a major obstacle for the development of the field.	<i>Extending the cognition argument</i> Other factors than conventional demographics are likely to influence leaders' information processing. Thus, future studies should, for example, focus on the decision situation, leaders' perceptions of power relationships, or personality traits.
	Matching	... different leaders have different skill sets. After succession leaders skills and assets are matched, which is likely to lead to strategic change.	It is imperative for the field to extensively invest in theory building, developing extant rudiments as well as uncovering new theoretical explanations for the LSSC-relationship.	<i>Incorporating leadership styles into the LSSC-relationship</i> To date the effect of leadership styles on the LSSC-relationship has not been explored. However, by affecting the behavior of followers, leadership styles are likely to possess strong explanatory power for the LSSC-relationship
2. Leader external impetus	Mandate	... the new leader may be given instructions or missions by the board of directors to change strategy. Change may happen even if based on his cognition the new leader would not have done so.		<i>Questioning CEO life cycle theory</i> Studies have long taken for granted that leaders pass through a life cycle. However, there are theoretical arguments that contradict the inherent assumptions of CEO life cycle theory. Thus, future reserach should question and move beyond life cycle theory and be open minded to novel arguments.
	Expectancy	... the new leader perceives that strategic change is expected, even without an explicit formulation of these expacatations.		
	Environmental pressure	... changes in the firm's environment may affect leader's perceptions concerning the need for strategic change.		<i>Considering institutional isomorphism and imitation</i> Leaders may be subject to herding behavior, feeling the pressure to act in accordance to their peers. Future reserach may want to investigate how institutional isomorphism and imitation may explain the LSSC-relationship
	Power relationships	... succession events lead to change in power relationships. These changes provide the external impetus for the successor to imitate subsequent strategic change.		

3.5.1.1 *Stream 1: Leader internal impetus*

The overwhelming majority of studies contend that the reasons for post-succession strategic change reside within the new leader. Notwithstanding that different arguments have been developed within this perspective, it is striking that most of the LSSC-relationship research is grounded in cognitive psychology. In particular, the basic assumption of the respective research is that cognitive differences exist between incumbent and successor – differences that are ultimately responsible for different information-processing and decisions and, by that, post-succession strategic change (Barker & Duhaime, 1997; Boeker, 1997a, 1997b; Wiersema, 1992, 1995).

The root of the *cognition argument* is to be found in the concept of bounded rationality (Cyert & March, 1963). Given their limited capacity to deal with all information within their environment, leaders are said to superimpose what has been called a cognitive map on their environment (Walsh, 1995). This cognitive map serves as a mental template used to transform a complex information environment into a traceable one, giving it form and meaning. The fact that cognitive maps develop as a result of leaders' experiences and accumulation of knowledge, thus reflecting historical environments rather than current ones (Kiesler & Sproull, 1982), has been the cornerstone of the cognition argument: Since it is reasonable to assume that incumbent and successor do not share the same experiences and knowledge they employ different cognitive maps. As Wiersema (1992: 77) has reasoned, these differences in cognitive perspectives affect all aspects of the strategic decision-making process such as attention allocation, issue identification, information search, alternative specification, and finally selection of the course of action.

Given the difficulties to directly assess leaders' cognitive maps, research has, by and large, relied on observable leader characteristics (Hambrick & Mason, 1984). Most often research has put forth the insider-outsider distinction intended to capture differences in cognitive perspectives between incumbent and successor (Friedman & Saul, 1991; Helmich & Brown, 1972; Wen, 2009; Wiersema, 1992), arguing, for example, that inside successors bring only little variation to the position of the CEO, while outside successors are supposed to bring with them new perspectives that yield strategic change (Friedman & Saul, 1991; Wiersema, 1992).

While the insider-outsider distinction has been and continues to be one of the major concepts within leader succession research, its validity has increasingly been questioned (Zajac, 1990). It is unlikely that by artificially dichotomizing a very complex and multidimensional construct such as the cognitive map, the basic insider-outsider distinction is able to fully capture

differences in the cognitive maps for incumbent and successor (Giambatista et al., 2005; Ndofor, Priem, Rathburn, & Dhir, 2009).

Notwithstanding methodological problems, the cognition argument has substantially advanced our understanding of the LSSC-relationship by uncovering the impact leaders' cognitive maps have on strategic change. However, it is also important to consider how studies building on the cognition argument have typically been conducted. By and large, these studies have refrained from establishing a theoretical link between leaders' cognitive perspectives and the kind of strategic change following succession events. Put differently, it is not theoretically specified what kind of strategic change the succession events imply. Strategic change is defined only in the methods section.

A notable exception in this context is the study by Boeker (1997a), in which he explores the relationship between successors' prior exposure to product markets and subsequent product-market entry decisions by the leaders' new firms. He theoretically argues and empirically finds that leaders' prior exposure to product markets is significantly related to the leaders' new firms' entry in the respective product markets. Thus, in order to further substantiate the cognition argument within the LSSC-relationship research, we call scholars to conduct more future research in the vein of Boeker (1997a).

Closely related is the *cognitive commitment argument*. According to this reasoning, leaders are not uniformly open-minded about strategic change (Hambrick, Geletkanycz, & Fredrickson, 1993). In particular, research has argued that incumbents may be cognitively committed to prior courses of action (Barker & Duhaime, 1997; Datta, Rajagopalan, & Zhang, 2003), fostering organizational inertia and inhibiting continuous adaptation to the environment (Ndofor et al., 2009). Progressive institutionalization and amplified cognitive biases are the reasons that leaders become increasingly averse to strategic change. As Staw (1981) has argued, the commitment to prior courses of action originates from leaders' need to justify previous decisions and explains why leaders are more committed when they were actually responsible for the initial decision that leads to a certain course of action.

The succession event is considered an important vehicle for overcoming organizational inertia (Miller, 1993). As new leaders are not responsible for the prior course of action they have lower levels of psychological investments into these strategies (Lant, Milliken, & Batra, 1992; Romanelli & Tushman, 1994; Wiersema, 1992, 1995) and are thus likely to initiate strategic change in order to realign the firm with its environment.

The cognitive commitment argument is based on two implicit assumptions. First, the argument presumes that commitment to prior courses of action leads to organization - environment maladaptations. However, in stable environments leaders' commitment to prior courses of action are unlikely to lead to a significant mismatch (Henderson et al., 2006). Second, the argument assumes the validity of CEO life cycle theory (Hambrick & Fukutomi, 1991). But, given that life cycle studies are still not prominent (Giambatista, 2004), generalizability of CEO life cycle theory has to be treated with care.

The cognition argument and the cognitive commitment argument account for the overwhelming majority of studies arguing that the reason for post-succession strategic change is to be found within the leader. Only sporadically, alternative arguments have been put forth. One notable argument is the *matching argument* by Weisbach (1995). Taking an agency perspective he argues that the optimal set of assets to be owned by the firm will vary across leaders as different leaders have different sets of skills. Since leaders and assets are 'matched', it is evident that a succession event is likely to lead to change in assets and, as such, to strategic change.

3.5.1.2 *Stream 2: Leader external impetus*

Research pertaining to the leader external impetus perspective contends that strategic change following a succession event may be the result of external factors that drive the new leader to take actions. These factors stem from factors surrounding the new leader and are directly linked to the succession event. Thus, while both the leader internal and external perspectives are based on the assumption that the leader takes action, they diverge with regard to the origin of the driving factors.

The most frequently mentioned external driver is the new leader's *mandate* to implement change. It is argued that when taking the position of the CEO, the new leader may be given a certain instruction or mission by the board of directors to change strategy (Barron, Chulkov, & Waddell, 2011; Boeker, 1997b; Shen & Cannella, 2002a). This may happen either because the predecessor was unable or unwilling to implement certain changes, the succession follows a change of ownership and the new owners follow a different strategy, or the succession is just the consequence of poor performance and a change in strategy is seen as the first step of a turnaround (Greiner & Bhambri, 1989). Whatever reason underlies the mandate, it is assumed that as new leaders enter the job of the CEO with a clear-cut mandate to change strategies, they do so even if they would not have done so from a cognitive perspective.

The mandate argument is noteworthy as it sheds a significantly different light on the role of the CEO. While it is common to conceptualize the CEO as being the company's preeminent executive leader responsible for its strategy, the mandate argument strictly speaking reduces the CEO to a person employed in performing an obligation. In other words, the new leader is merely a means to an end employed by the board of directors to achieve strategic change (Hambrick, 2007).

Somewhat similar to the mandate argument is the *expectancy* argument. While the mandate argument is based on a clearly formulated assignment that the board of directors gives the new leader, the expectancy argument focuses on the new leader's perception. It is argued that new leaders often start their jobs in an atmosphere, where they feel that they are expected to initiate strategic change, even though this expectation was never explicated (Romanelli & Tushman, 1994). The perceived expectation to initiate strategic change, however, is likely to drive new leaders, for example, to divest poor performing units, reverse decisions of their predecessors, or undertake high-profile investments. In doing so, new leaders aim at fulfilling what they perceive powerful stakeholders expect them to do.

In a similar way, it has been argued that industry factors may represent a form of leader external impetus as they may affect leaders' perceived need to change strategy. Accordingly, *environmental pressure* originating from changes in the technical environment as well as external dependence relationships have been argued to affect leaders' perceptions concerning the need of strategic change (Gordon, Stewart, Sweo, & Luker, 2000; Kraatz & Moore, 2002; Lant et al., 1992).

It has also been reasoned that the CEO succession process unfreezes organizational norms and as such provides a unique opportunity for existing *power relationships* to be altered (Goodstein & Boeker, 1991; Kesner & Dalton, 1994). It is these changes in existing power relationships and structures that is argued to provide the external impetus for the new leader to initiate strategic change (Shen & Cannella, 2002a; Zuniga-Vicente, de la Fuente-Sabate, & Suarez-Gonzalez, 2005). Albeit the power argument seems plausible it is important to note that alteration in existing power relationships is but a necessary condition for strategic change to occur. The sufficient condition, however, that has to be met is that new leaders bring with them new strategic perspectives (Goodstein & Boeker, 1991). Thus, the power argument is inextricably coupled with the cognition argument.

The power argument sheds light on an important implicit assumption of studies building solely on the cognition argument. Although new leaders may well bring with them new

strategic perspectives, their ability to implement these changes largely depends upon their power (Kraatz & Moore, 2002). Hence, the simultaneous presence of different strategic perspectives and adequate power is necessary in order for strategic change to occur (Bigley & Wiersema, 2002). Yet, the vast majority of work using the alteration in cognition arguments as key drivers for strategic change has ignored this fact. Rather, it has implicitly built on the disputable assumption that the new leader is equipped with a power base strong enough to initiate strategic change to the degree that new leaders employ a different cognitive perspective than their predecessors.

3.5.1.3 Evaluation of findings

Overall our assessment of the theoretical foundation of the field is mixed. On the one hand we find it encouraging for the field that the LSSC-relationship is approached through diverse theoretical arguments. This is likely to substantially advance our knowledge in the field. On the other hand, however, it is conspicuous that the theoretical development is not always well advanced. Except for the cognition argument, which represents the most widely used rationale in our sample, most theoretical arguments are in a rather early stage of development. Amongst others, this assessment is supported by the fact that arguments such as *mandate*, *expectancy*, *environmental pressure* or *power relationships* are hardly used as a stand-alone explanation. Rather, these arguments are often alleged as an additional argument at the very end of an elaborated discussion of the cognition argument.

In our view, however, the virtue of the cognition argument, that is, its advanced theoretical development, has also been an obstacle for the development of the field. Grounded in the Carnegie School (Cyert & March, 1963) and upper-echelons perspective (Hambrick & Mason, 1984) the cognition argument is by now widely accepted throughout the strategy and organization literatures. As a result numerous studies have been devoted to always the same old story: Differences in demographic characteristics result in different cognitive maps, perceptions, interpretations, and decisions that ultimately drive strategic change. This, in turn, has hampered the development of new and innovative research questions. Yet the contradicting findings and still existing knowledge gaps in the LSSC-relationship suggest that the cognition argument - and in particular the predominance of studies based on demographic characteristics - does not sufficiently provide an explanation for the LSSC-relationship, but that other factors that so far were neglected may be the way to go for future research.

One exceptional study that has extended the theoretical reasoning is the study by Ndofor et al. (2009). Though based on the cognition argument the authors do not rely on demographic

characteristics. Arguing that it is not certain that differences in demographic characteristics between incumbent and successor may necessarily lead to cognitive differences, the authors introduce the concept of cognitive communities that are made up of a common set of socially-shared beliefs. In doing so, their study provides an innovative and more textured examination of incumbents' and successors' cognitive differences than is common in most of the literature on the LSSC-relationship.

In sum, succession research in general has often been criticized in the past for being atheoretical (Giambatista et al., 2005). While this criticism may be too harsh for the LSSC-literature, we believe that it is imperative for the field to extensively invest in theory building. By theory building we refer to both further developing extant rudiments as well as uncovering new theoretical explanations for the relationship at hand. In doing so, the field will benefit in various ways. First, and most importantly, sound theories provide the ground for interesting and non-intuitive research questions. Being able to draw on multiple, even competing theories is likely to enable researchers to engage in particularly interesting studies, addressing research question that go far beyond what is considered today helping to more fully understand the LSSC-phenomenon. Second, to date the field's theoretical base may best be described as being fragmented. Moreover, while the cognition argument is the predominant theory in the field, it was not originally developed to explain the LSSC-relationship. Rather, it was borrowed unchanged from another field of research. Thus, investing in theory building may eventually yield a theory, genuinely developed to explain the causal mechanisms underlying the LSSC-phenomenon. This, in turn, is likely to increase the field's legitimacy and invalidate criticism of being atheoretical. Third, while other research streams such as the one on CEO pay and incentives have recognized that CEOs may take actions that are in their own best interests rather than stockholders' interests, we have seen no study relying on personal interests as one potential explanation for the LSSC-relationship. Nonetheless, anecdotal evidence suggests that new leaders' urge to increase short term results and manage the impression of CEO excellence are strong motivators for new leaders to initiate strategic change. For example, in their meta-analytic review of the empirical literature on the determinants of CEO pay Tosi, Werner, Katz, and Gomez-Mejia (2000) found that firm size account for more than 40% of the variance in total CEO pay. From this finding, however, it follows that it is likely that strategic change following a succession event that leads to an increase in size may also be explained by the CEO's agenda to increase his or her compensation. For the remainder of this section we provide suggestions for future research to guide the field beyond trusted reasoning.

3.5.1.4 Suggestions for future research on the WHY-question

Moving beyond cognitive psychology

To date, research has mostly relied on the cognition argument to explain leaders' impact on strategic change. However, while using cognitive psychology to explain leaders' behavior has proven to be extremely useful in the past, it is only half the story: The human mind is more than mere cognition.

For over two centuries the study of human mind has been divided into three broad categories: cognition, affection, and conation (Hilgard, 1980). Over the past five decades, however, the study of human mind has become overly engaged with the cognitive aspect at the expense of affection and conation. As a consequence, research exploring leaders' behavior has almost exclusively focused on cognitive psychological issues, in particular representations and computations (Stubbart, 1989). Only recently research has recognized that affection and conation are important complements in explaining leaders' behavior.

Research has shown that affection, that is, feelings and moods individuals experience have a direct effect on many aspects of cognition and, by that, on behavior. Amongst others, feeling and emotions were found to influence cognition through their impact on attention allocation, perception, alertness, creativity, use of heuristics, and memory (Baron, 2008; Forgas & George, 2001; Maitlis & Ozcelik, 2004) and have been argued to be central to charismatic and transformational leadership (Johnson, 2009). For example, positive affection may act as an energizer and increase leaders' perceptual field and their capacity to notice a wide range of issues, whereas negative affection may reduce leaders' perceptual field and decrease their capacity to notice issues (Baron, 2008).

Cognitive and affective processes are inextricably linked in the way leaders perceive and respond to stimuli. However, feelings and emotions not only affect leaders' cognition, but also followers' perception of leaders, followers' performance and followers' affect through emotional/mood contagion (George, 1995; Johnson, 2008). Johnson (2009), for example, found that leaders expressing positive mood were attributed greater levels of charismatic leadership than leaders expressing negative mood and that leaders expressing positive mood elicit better performance and more positive mood from followers. Thus, it is evident that affect provides substantial explanatory power in explaining the impact of leaders on strategic change. Therefore, we argue for a reintegration of cognition and affection in future studies in the field and based on the preceding reasoning propose

Proposition 1: Affection moderates the impact of cognitive factors previously shown to affect the LSSC-relationship. In particular positive affection is likely to enhance and negative affection is likely to reduce the extent of strategic change following a leader succession through (a) its effect on new leaders' cognition and opportunity perception and (b) its effect on followers.

While cognition and affection help to explain a great deal of the underlying causal mechanisms linking leaders to strategic change, it is conation that addresses the motivational dimension underlying the relationship at hand. Conation refers to the volitional dimension of leaders' behavior and, by that, is an important concept in explaining behavioral idiosyncrasies of different leaders (Bird, 1988). According to the cognitive perspective, leaders' demographic characteristics determine behavior after taking office. Thus, this perspective provides a mechanist, machine-like concept of the individual where demographics represent some kind of program according to which the individual acts. The cognitive perspective conceptualizes leaders as individuals with no will – as individuals executing predefined programs. The conative perspective, in contrast, contends that whether or not an action is taken depends upon leaders' intentions, that is, their personal *desire* and *belief* about the respective action. Desire represents the motivational dimension and describes a certain state of affairs or end to be achieved. Belief is the counterpart of desire. It encompasses all that an individual holds to be true, with knowledge being an important subset. Thereby, it represents the means with which desires, or ends, are achieved.

Since humans differ in their desire and their beliefs it is evident that strategic change following a succession event may also differ – even though leaders may exhibit similar demographic characteristics. It is the intention that directs leaders' thinking towards a desired end and that can be used to explain differences between similar leaders and their respective strategic choices or, in the sense elaborated before, the strategic change initiated after taking office. As Pastin (1985: 300) stated: “Two managers may share views of how things stand. One may decide the situation is hopeless, while the other launches a plan for market dominance. The difference is in the intentions.” Put differently, in the conative perspective the individual's will occupies center stage.

Conation is likely not only to directly influence the relationship between leaders and strategic change, but also – as in the case of affect – through its effect on followers. For example, sharing intentions with followers may create ‘we-feelings’ and as such may help reduce or even avoid intra-organizational conflict and friction. Thus, shared intentions are likely to

positively affect followers' willingness to support their leader and also positively affect followers' individual performance.

Thus, unexplained variance in strategic change following a succession event may capture important unobserved and to date under-researched effects of conation. Therefore, future research should consider conation as an important complementary explanatory factor in addressing leaders' impact on strategic change. Based on the previous reasoning we suggest the following proposition

Proposition 2: New leaders' intentions will be related to post-succession strategic change. In particular, the scope of leaders' contextual desire-belief complexes will be positively related to the extent of post-succession strategic change as (a) intentions constitute the precursor of leaders' strategic choices and (b) as shared intentions may positively affect followers' willingness to support post-succession strategic change.

Extending the cognition argument beyond conventional demographic characteristics

Besides the conventional demographic characteristics important other factors are likely to influence leaders' information processing, such as social relations or organizational politics which, by and large, have been neglected (Watson, 2003). Central to the discussion of information processing are three forms of knowledge structures (Ammeter, Douglas, Gardner, Hochwarter, & Ferris, 2002): First, the *situated self-identification*, which reflects how leaders perceive themselves and how they are perceived by others in specific situations (Schlenker, 1985). This affects leaders' behavior by influencing the interactive goals they aim for and the tactics they choose to use for influencing their targets in order to reach their goals (Gardner & Avolio, 1998). Second, the mental models of power that leaders perceive for themselves to have and the power leaders believe for others to hold, that is, *identity and reputational power mental models* (Fiol, O'Connor, & Aguinis, 2001). These determine the political behavior and the leadership approach new CEOs choose to apply for achieving their goals. Third, the *memory of events, objects, roles, sentiments*, and the outcomes of political events (Gioia & Poole, 1984), which determine the behavior of leaders in political situations based on their experiences.

The latter form of knowledge structures is closely related to the cognition argument presented above. The former two forms of knowledge structures, however, provide the opportunity to account for leaders' internal evaluation processes. Considering internal evaluation processes

introduces conscious information processing into the decision-making situation, with a focus on the decision-situation rather than the content of the decision.

Prior studies have included power arguments. However, using objective demographic characteristics as an indicator of power, their discussion centered on the *alleged* rather than on the *perceived* power of new leaders. This difference, however, is important. The formal and informal power leaders possess determines their influence on the enforcement of strategic change. However, it is the perceived degree of power that is likely to substantially affect leaders' decision to initiate or omit strategic change.⁷ Put differently, the leaders' perception of an appropriate amount of power is the necessary condition for strategic change to be initiated in the first place. Thus, perceived power is likely to hold more explanatory power than objectively assessed, that is, alleged power. After all, as Pfeffer and Leblebici (1973: 273) have reasoned "the perceptions of the chief executive are important in understanding why organizations are structured as they are." Thus, we propose

Proposition 3: New leaders' perceived power will be related to post-succession strategic change. In particular, leaders' perceived amount of power will be positively related to the extent of post-succession strategic change.

Ever since Hambrick and Mason (1984) suggested that given the difficulty of obtaining data on actual psychological characteristics, demographic characteristics can serve as substitutes for individuals' cognitive bases, researches have been using these characteristics as proxies for cognition. However, the evidence for a relationship between individuals' cognitive bases and demographic characteristics is equivocal at best (Markoczy, 1997). Accordingly, researches have called for more direct measures of individuals' cognitive bases (Hambrick, 2007; Markoczy, 1997). The CEO psychology literature (for example, Chatterjee & Hambrick, 2007; Resick, Weingarden, Whitman, & Hiller, 2009) has yielded several personality traits such as core-self evaluation or narcissism that may prove important in increasing our understanding of the LSSC-relationship. Though there is empirical support for the contention that these personality traits may affect the LSSC-relationship (Hayward & Hambrick, 1997; Miller & Toulouse, 1986) it seems even more promising to use comprehensive and valid psychological frameworks to investigate the relationship between new leaders' personality traits and strategic change following a succession event.

⁷ We acknowledge that power does not equal influence and that the boundaries between the two remain unclear (Bass, 1990). Yet, for matter of simplicity we assume for the moment power to result in influence.

One such framework is the five-factor model consisting of extraversion, agreeableness, conscientiousness, emotional stability and openness to experience (McCrae & Costa, 1987). Extraversion represents an individual's tendency to be sociable, assertive, active, and experience positive affects such as energy, zeal, and excitement (Boudreau, Boswell, Judge, & Bretz, 2001). Extraverted leaders have no difficulties engaging in social interactions, getting to know new people, and introducing people to each other. Extraverted leaders are articulate, expressive, and dramatic and are able to persuade, influence, and organize others (Judge & Bono, 2000). Agreeableness is the tendency to show personal warmth, a preference for cooperation over competition, and trust and acceptance of others (Peterson, Martorana, Smith, & Owens, 2003). Agreeable leaders pay special attention to neglected groups in their firm, treat each subordinate as an individual, express appreciation for a job well done, and focus on employee empowerment. Conscientiousness reflects the degree to which individuals show dependability, responsibility, perseverance, achievement orientation, and concern with following established rules (Peterson et al., 2003). Typically, highly conscientious leaders are intolerant for ambiguity. They strive for structure and derive satisfaction from having control over their environment and tend to be task-focused rather than interpersonally or relationship-focused. Emotional stability reflects individuals' capacity for emotional adjustment and self-confidence (Nadkarni & Herrmann, 2010). Emotionally stable leaders are capable of adjusting their emotional states to varied situational demands. In particular, such leaders remain calm, even tempered, and relaxed in stressful situations (Bono & Judge, 2004). Accordingly, emotional stability has a positive effect on leaders' ability to adapt to unpredictable and changing situations. Openness to experience reflects the degree to which individuals value intellectual matters, have broad interests, exhibit a preference for variety, are interested in unusual thought processes, and are often seen as thoughtful and creative (McCrae & Costa, 1987). Because of their multifaceted interests and their preference for variety, leaders with high openness to experience are likely to be receptive to a broad range of issues and options. Together these five factors shape new leaders' fields of vision, their selective perception, and their interpretation of perceived cues (Nadkarni & Herrmann, 2010). Thus, we propose

Proposition 4: New leaders' personality traits will be related to post-succession strategic change. In particular, extraversion, agreeableness, emotional stability and openness to experience will be positively related to the extent of post-succession strategic change whereas conscientiousness will be negatively related to the extent of post-succession strategic change.

Incorporating leadership styles into the LSSC-relationship

Studies in our sample have neglected the effect of leadership styles on strategic change. However, we believe that incorporating leadership styles into studies on the LSSC-relationship will significantly increase our understanding of the topic at hand. For example, charismatic leadership is said to radically change strategy and culture of firms. Theories of charismatic leadership emphasize emotions and values (Yukl, 1999). As such, the impact of this approach to leadership may be similar to the effect of affect as discussed above. The difference is, that while affect focuses on the leader and the influences on his decisions, leadership styles focus more on the effects leaders have on followers. Thus, leadership styles may contribute to the LSSC-relationship by uncovering how different leadership styles affect whether and/or to what degree leaders' visions, intentions, and plans are carried out by followers. Charismatic leaders affect their followers in such a way that they carry new leaders' decisions and help implement them (Conger & Kanungo, 1998; Shamir, House, & Arthur, 1993). As such, it can be understood as the process through which new leaders cause strategic decisions to be transformed into strategic change.

Similarly, transformational leadership determines leaders' behavior to affect followers (Bass, 1985, 1996). It is the process of motivating followers to perform tasks in a certain direction. Hence it is leaders' influence on subordinates to support the strategic directions decided upon and help implementing them. Transformational leadership involves behaviors such as inspiring, developing, supporting, empowering, amongst others (Yukl, 1999).

To date, research on the LSSC-relationship has neglected leadership style as an important explanatory factor. While the discussion on leader internal impetus has shown a variety of different factors that influence new leaders to initiate strategic change, it has been ignored how these changes are communicated and implemented throughout the firm. Yet, the findings of the leader internal impetus may only deliver an incomplete picture of the causes of strategic change without grasping how new leaders are able to achieve strategic change. Hence, in order to fully understand the effects succession events have on the strategic direction of firms it is indispensable to understand the process of change. Thus, we propose

Proposition 5: New leaders' leadership styles will be related to post-succession strategic change. In particular, leadership styles that empower followers to support their new leader – such as charismatic leadership or transformational leadership – will be positively related to the extent of post-succession strategic change.

Questioning CEO life cycle theory

The time a CEO has spent in office has been subject to many studies. Researchers exploring leader tenure have usually drawn on the idea of a CEO life cycle in which there are discernible phases of a leader's tenure (Giambatista, 2004; Hambrick & Fukutomi, 1991; Miller & Shamsie, 2001). These phases are characterized by distinct patterns of leader thought and behavior and, as an extension, by distinct patterns of strategic change.

Research in the CEO life cycle tradition has clustered around one major idea: long tenured leaders are less likely to initiate strategic change (Finkelstein et al., 2009). This argument is based on the assertion that inertia grows with tenure. The result of long-tenured leaders' resistance to initiate strategic change is a growing misalignment between their company and the external environment (Henderson *et al.*, 2006). Accordingly, when a new leader takes office following a long-tenured CEO more strategic change is necessary in order to achieve a fit between the company and the external environment, and vice versa.

Life cycle theory draws on learning and inertia to argue the dynamics of a leader's tenure. Early in their tenures CEOs work at learning a strategy and the skills to implement it, thereby engaging in a great deal of experimentation. As years go by, CEOs have typically acquired a good deal of experience and knowledge about their businesses. Eventually, though, it is argued that after some time the positive effects of learning are superimposed by the negative effects of inertia (Henderson et al., 2006). Hence, it is argued that the longer the tenure of a leader in a company, the more rigid his or her cognitive structure becomes, and the less likely he or she is to promote strategic change. Long tenure is associated with rigidity and commitment to a chosen course of action (Miller & Shamsie, 2001; Staw, 1981).

Interestingly, CEO life cycle theory has received almost unreserved approval in the literature. Perhaps due to the conclusive and easy to follow reasoning, the life cycle theory has been taken for granted. This, however, is of serious consequences as researchers have precluded themselves to come up with alternative patterns of leader thought and behavior. But what we do not study may be of equal or even greater importance than what we do study. Hence, rather than aiming at studies that corroborate life cycle theory, researchers should be open minded and engage in the search of alternative patterns of leader thought and behavior over time.

From a theoretical view, for example, it may also be argued that a leader's tenure may be considered as an indicator of a leader's effectiveness in dealing with changing environmental conditions and necessary strategic change. The longer the leader's tenure, the more experience, knowledge, and discretion he or she has accumulated, which in turn enables the

leader to effectively respond to future environmental changes by initiating strategic change. In this perspective, the development of a broader knowledge and skill base is a necessary condition for ensuring the long-term survival of the company and, by that, the ongoing tenure of the leader. Hence, long tenure may in fact be considered as evidence of a leader's ability to exploit accumulated experience in order to initiate appropriate strategic change rather than inhibiting the actions the leader ought to take. In fact, apart from research by Zuniga-Vicente, de la Fuente-Sabate, & Suarez-Gonzalez (2005) who found strong support for this reasoning, support is also provided by a recent survey of Spencer Stuart, a US-based executive search consulting firm. The survey reveals that 28 CEOs of companies in the Standard and Poor's 500 stock index have held office for more than 15 years, the average tenure in the sample being 6.6 years. Twenty-five of those 28 CEOs have ensured their company's total shareholder return to exceed the S&P index performance during their tenures. In other words, long tenure may in fact have no negative effect on company performance and a CEO's willingness to initiate strategic change. Quite the contrary, long tenure may in fact have positive consequences for company performance and the willingness and ability of a CEO to initiate appropriate strategic change. This discussion shows that while long tenure is often associated with less strategic change we also find empirical evidence for the contrary. Hence, given that the relationship between leader tenure and strategic change has a fundamental effect on the link between leader succession and strategic change, and this relationship is somewhat ambiguous, we summon future research to question and challenge the assumptions of the CEO life cycle theory as explanation for post-succession strategic change and provocatively propose

Proposition 6: Long tenure may reflect leaders' ability and willingness to continuously initiate appropriate strategic change. As a result, new leaders following long tenured predecessors may find their firm better aligned to the environment than new leaders following shorter termed predecessors, reducing the need for post-succession strategic change.

Considering institutional isomorphism and imitation

Research has shown that companies imitate the actions, which have been taken by large numbers of other companies. They do so, because the legitimacy of any practice is enhanced with the number of companies adopting the respective practice (DiMaggio & Powell, 1983; Keister, 2002). The imitation may occur because the practice becomes taken for granted (March, 1981). However, the imitative behavior may also occur actively. Specifically,

DiMaggio and Powell (1983: 152) have argued that companies model themselves after others, which they perceive to be more legitimate or successful, such as those that are more profitable. The imitation of a specific practice further increases, if managers perceive the practice to be responsible for the other company's profits. In this context Haveman (1993), for example, has shown that companies may imitate large and particularly successful companies by entering into similar markets.

One of the main forces that drive companies to imitate is uncertainty. When means-ends relations are ambiguous, leaders are likely to model their company on other companies, in particular, those perceived to be more legitimate and successful. Thereby the sources of uncertainty may be manifold including amongst others organizational and environmental conditions that cause ambiguity or simply leaders' lack of knowledge. Hence, whenever leaders face situations with ambiguous means-ends relations or unclear solutions, the initiated search process may yield imitation as a viable solution (DiMaggio & Powell, 1983). In other words, perceiving high degrees of uncertainty, leaders are likely to seek models upon which to build (Kimberly, 1980). Thus, in line with research on institutional isomorphism and imitation and the reasoning laid out above, the following proposition might be set forth

Proposition 7: Strategic change following a leader succession will be greater (a) the more the focal company deviates from its leading peers and (b) the more the new leader perceives uncertainty originating from organizational and environmental conditions or lack of knowledge.

3.5.2 *WHAT? Uncovering contingency factors*

Our review indicates that only about one third of the sample studies take into account that the LSSC-relationship is context-dependent, that is, that the LSSC-relationship may be moderated by certain factors. Thus, these studies acknowledge that conditions in the broader contexts in which succession events take place either facilitate or hamper subsequent strategic change. The literature we reviewed can broadly be classified into two streams: organizational conditions and change, and environmental conditions and change. Thereby, *organizational conditions and change* refer to company-specific factors. Conversely, *environmental conditions and change* refers to factors that are external to the firm. It is important to note at this point that organizational and environmental conditions and change may have multiple roles. Performance, for example, may be an antecedent as well as a consequence of succession and even a moderator of the LSSC-relationship (Kesner & Sebor, 1994). Given the focus of

the present review on the LSSC-relationship, the subsequent sections are concerned with the moderating role of organizational and environmental conditions and change, only. Table 3-4 provides a summary of the WHAT-question.

Table 3-4: Overview of the WHAT-question

STREAM	MODERATOR	THIS MODERATOR ...	EVALUATION OF THE WHAT-STREAM	FUTURE RESERACH AGENDA
3. Organizational conditions and change	Pre-succession performance	... is the most widely explored factor to moderate the LSSC-relationship. Pre-succession performance is an indicator for the need of strategic change after the succession event.	Overall, only a limited number of studies has considered moderating factors. Moreover, even fewer studies engage in an in-depth theoretical discussion. Thus, research on the contingency factors may be described as being in its infancy.	<i>Considering executive job demands</i> Executive jobs vary in the difficulty they pose for their incumbents. However, the degree to which leaders perceive their jobs as difficult is likely to affect strategic decision making.
	Top management team	... acknowledges that the CEO is not alone in running the firm. The ability to initiate strategic change is likely to be dependent upon characteristics of the TMT and the new leader's ability to create momentum.	However, the results of these studies provide strong evidence that organizational and environmental conditions and change significantly moderate the LSSC-relationship.	<i>Integrating anagerial discretion theory</i> Some studies have incorporated discretion on an industry level. However, discretion may also arise from firm factors, individuals factors, or even from a macro level, that is, national level.
	Governance structures	... takes into account governance structures may be a source of inertia inhibiting strategic change. Hence, changes in the governance structure , such as board of directors of ownership, that occur in a timely manner to the succession event may allow for change to be implemented.	The LSSC-relationship is not as simple as some of the studies under review pretend it to be. Rather, the LSSC-relationship is the result of a complex interplay of a multitude of influencing factors. Therefore, future studies should place great emphasis on incorporating moderating factors.	<i>Taking an organizational path-dependency perspective</i> Bygones are rarely bygones, meaning that rather than being unlimited, new leaders' choices to initiate strategic change are likely to be historically conditioned. Hence, the degree to which a firm is subject to path-dependency moderate the LSSC-relationship. <i>Exploring the impact of cultural context</i> Culture has been shown to be an important factor in decision making. Thus, studies should move beyond U.S. firm samples and explore how national culture and cultural identity moderate the LSSC-relationship.
4. Environmental conditions and change	Managerial discretion	... different industrial environemnts may provide new leaders with different latitudes of action. Hence, the degree of strategic change initiated after a succession event is moderated by the new leader's ability to act, that is, his managerial discretion.		<i>Incorporating the competitive context</i> Specific aspects of competitive stratgy are likely to be important moderating factors. For example, foreign based competition or multimarket relationship are likely to affect post-succession strategic change.

3.5.2.1 Stream 3: Organizational conditions and change

The most widely explored organizational factor to moderate post-succession strategic change is *pre-succession performance*. Given that when incumbents underperform the likelihood of a succession event increases, the leaders that follow most often find organizational situations that call for an improvement of performance. This, however, is likely to involve more substantial adaptations of their firms' strategy as compared to situations with good pre-succession performance (Boeker, 1997b; Lant et al., 1992). Wiersema (1995), for example, showed that non-routine successions, which are typically preceded by poor firm performance, entail more strategic change than routine successions. Facing the threat of bankruptcy new leaders are motivated to initiate more strategic change as compared to when firm performance is at an acceptable level (Barker & Duhaime, 1997; Friedman & Saul, 1991; Wiersema, 1995). This may either be because new leaders strive to show improvement quickly in order to legitimize themselves or because poor performance is an initiator for increased search for problems, solutions, and subsequent strategic change (Cyert & March, 1963).

Apart from firms' economic performance research has also acknowledged that individuals within the firm represent important organizational factors to be considered. Thus, given that the CEO is not alone in running the firm the *top management team* is argued to be an important organizational factor to either facilitate or hamper post-succession strategic change. In order for strategic change to be successfully executed the firm must unlearn, that is, break with old cognitive frames (De Holan & Phillips, 2004; Keck & Tushman, 1993; Simons, 1994). Yet, the success of unlearning depends on the TMT, its characteristics, and the new leaders' ability to create momentum for strategic change within the TMT (Boeker, 1997a; Simons, 1994).

In a similar vein, Goodstein and Boeker (1991) argue that new leaders' ability to change strategy is dependent upon changes in *governance structures*. In firms where governance structures have been stable over time, new leaders might find it difficult to implement ideas. In contrast, changes in boards of directors or changes in the ownership structure are likely to positively affect new leaders' ability to initiate strategic change as there are less inertial tendencies prevalent. Thus, changes in boards of directors and ownership structure are likely to foster new strategic perspectives, increasing new leaders' latitude to alter strategy.

Overall, research acknowledging organizational conditions and change as contingency factors within the LSSC-relationship has relied on firm performance and actors. While we believe

that more studies incorporating firm performance and actors as contingency factors are needed to further our understanding of the LSSC-relationship, we also see value in taking into account further organizational factors. One such factor refers to firms' recent history of change. Research has shown that firms are capable of digesting only a certain amount of change per unit of time (Penrose, 1959). Thus, firms that experienced substantial strategic change immediately before the succession event may not be capable to perform any significant post-succession strategic change. Likewise, pre-succession strategic change may have led to an organization–environment fit that reduces the need for post-succession adaptations. We believe that incorporating additional organizational factors will yield additional insights that will help to better understand the LSSC-relationship.

3.5.2.2 *Stream 4: Environmental conditions and change*

A small subset of studies have theorized and empirically shown that *managerial discretion* (Hambrick & Finkelstein, 1987) originating from firms' environments is an important contingency factor in the LSSC-relationship. The degree of managerial discretion available to successors first and foremost determines the potential range of strategic options that the CEO may act upon in order to initiate strategic change (Datta et al., 2003; Sakano & Lewin, 1999).

In general, studies have focused on firms' industries in order to assess the degree of new leaders' managerial discretion. These studies find that CEO successions lead to strategic change only when firms are active in high discretion industries (Datta et al., 2003; Lant et al., 1992). In a noteworthy study, Sakano and Lewin (1999) considered firms' institutional contexts as a source of managerial discretion and found that contrary to CEO succession in US firms, CEO succession in Japanese firms did not imply strategic change. Cross-holdings of equity, main bank relationships, and a nonexistent market for mergers and acquisitions that is characteristic for the Japanese institutional context reinforce long-term orientation, evolutionary adaptation, and strategic continuity. As a result, new leaders' latitude to initiate strategic change after taking office is limited.

Despite the consistent finding that the degree of managerial discretion available to successors is an important contingency factor, only a small number of studies have controlled for this effect or even directly tested an interaction effect. This is all the more surprising given that managerial discretion theory (Hambrick & Finkelstein, 1987) is prominent throughout the management and organization literatures and has shown to affect a wide variety of organizational phenomena (Boyd & Gove, 2006).

3.5.2.3 *Evaluation of findings*

Overall, research has provided strong evidence that environmental conditions and change significantly moderate the LSSC-relationship. However, given the small number of studies as well as that the samples' restriction to specific industries (Gordon et al., 2000; Lant et al., 1992) or even limitation to one specific industry (Kraatz & Moore, 2002), the generalizability of these findings to other industries may be limited. Consequently, we would encourage researchers to conduct more studies integrating environmental conditions and change as important contingency factors within the LSSC-relationship.

Moreover, notwithstanding that the number of studies incorporating moderating factors is limited, even fewer studies engage in an in-depth theoretical discussion concerning the impact of the respective factors (Datta et al., 2003; Kraatz & Moore, 2002). The remainder of studies covers the topic rather marginally and a thorough theoretical discussion cannot be found. Hence, similar to our assessment of the WHY-question, our assessment is also mixed for the WHAT-question. We applaud those studies that have incorporated organizational and environmental moderators, showing that these factors affect strategic change following a succession event. However, it is also true that research on the contingency factors within the LSSC-relationship is in its infancy.

We believe that studies incorporating contingency factors are crucial to understanding strategic change following a succession event. After all, the LSSC-relationship does not take place in isolation. Rather, numerous factors are likely to either facilitate or hamper strategic change following a succession event. As such, research taking a contextual approach by incorporating contingency factors is inevitable in terms of unraveling the complexity of the phenomenon. In our view, the LSSC-relationship is not as simple as some of the studies we reviewed pretend it to be. In fact, quite the contrary is true. The LSSC-relationship is a result of the complex interplay of several influencing factors. It is important therefore to not draw conclusions based solely on associations with arguments such as cognition, commitment, mandate, or power. Rather, researchers should conduct studies that allow observing how the basic LSSC-relationship interacts with organizational as well as environmental factors. For the remainder of this section we suggest possible avenues for future research.

3.5.2.4 *Suggestions for future research on the WHAT-question*

Considering executive job demands

Research on leaders' impact on strategic change has consistently disregarded that executive jobs vary in the difficulty they pose for their incumbents (Ganster, 2005; Hambrick, Finkelstein, & Mooney, 2005). In other words, research has assumed that leaders face constant job difficulties – independent of environmental and/or organizational conditions. However, it is evident that this is an overly simplistic assumption. Leaders may head firms operating in stable industries, having well-fortified competitive positions, and being financially well-cushioned. In contrast, other leaders may be responsible for firms operating in turbulent industries, facing hyper-competition, and being financially distressed. Thus, given that environmental and/or organizational conditions may vary along a variety of dimensions, it is reasonable to assume that job difficulties vary as well (Finkelstein et al., 2009).

While there are studies that accounted for the industry differences, for example, by directly exploring the effects in different industries, or by incorporating industry-level control variables (Gordon et al., 2000; Lant et al., 1992), the *perceived* job difficulty for new leaders has not been addressed by LSSC-research yet. Given leaders' bounded rationality (Cyert & March, 1963), it is reasonable to assume that the extent to which leaders perceive their work challenging is likely to affect strategic decision making and leadership behaviors. To the degree that perceived job demands increase, leaders will be able to process and comprehend an increasingly smaller proportion of the information related to a strategic situation. As such, increasing perceived job demands may lead to less rationality in leaders' strategic decision making. Thus, in order to economize on their scarce resources, leaders are likely to rely on shortcuts to arrive at their decisions (Hambrick et al., 2005), including drawing on what has worked for them before or imitating strategic actions of other firms (Haveman, 1993; Mizuchi & Fein, 1999). We believe that executive perceived job demands is a crucial, yet omitted variable in research on the LSSC-relationship, and urge scholars to consider perceived job demands in future studies.

Integrating managerial discretion theory

The implications of managerial discretion theory for the LSSC-relationship are straightforward: if there is considerable discretion, the incoming leader will have considerable latitude in initiating strategic change and the strategic actions taken by the leader will be a reflection of that leader's personal characteristics (Hambrick, 2007). Conversely, if discretion is lacking, the incoming leader will be restricted in initiating strategic change, and the

personal characteristics will be of no consequence. Hence, managerial discretion theory provides a convincing explanation for variations in findings. Despite its explanatory power, researchers looking at the relationship between CEO succession and strategic change have but for few exceptions (for example, Datta et al., 2003; Lin & Liu, 2011) almost entirely ignored managerial discretion theory. We believe that integrating discretion theory into research on the LSSC-relationship may yield new and valuable insights. For example, as corporate cultures differ from country to country, leaders working in one locale may have to contend with a different degree of constraint on their latitude of action than those working in another (Crossland & Hambrick, 2007). Future research might explore managerial discretion theory at a macro, that is, national level, combining research on cultural context and on discretion to explain the LSSC-relationship in different locales.

Taking an organizational path-dependency perspective

Research has shown that past strategic actions have an impact on future strategic actions (Booth, 2003; Sydow, Schreyogg, & Koch, 2009). Given that “bygones are rarely bygones” (Teece, Pisano, & Shuen, 1997: 522) and that history matters (Nooteboom, 1997), leaders are likely to be restricted in their choice of strategic actions. In other words, rather than being unlimited, new leaders’ choices to initiate strategic change are likely to be historically conditioned. According to Sydow et al. (2009) coordination-, complementarity-, learning- and adaptive expectation effects lead to path-dependency, that is, a lock-in situation where the scope of options is restricted. Thus, taking a path-dependency perspective, it is reasonable to assume that as new leaders take office, the scope of strategic change they will be able to initiate is to a large degree determined by their predecessors as well as other historical events within and outside the firm (Booth, 2003; Teece et al., 1997). Path-dependency will most likely restrict the scope of potential actions new leaders are able to initiate. Hence, even though new leaders may be aware of potential strategic actions to take their ability to do so may be limited by timeworn routines and structural inertia (Sydow et al., 2009). Considering path-dependency and lock-in effects within the LSSC-relationship may contribute to the understanding of the scope and intensity of strategic changes after leadership successions.

Exploring the impact of cultural context

The strategic management literature has shown that cultural traits are an important contingency factor in strategic decision making (Kogut & Singh, 1988). For example, national culture influences responses to environmental uncertainty (Schneider & De Meyer, 1991), and the weight assigned to objective criteria by executives (Hitt, Dacin, Tyler, & Park, 1997), as

well as competitive positioning (Song, Calantone, & di Benedetto, 2002), and foreign market entry (Chang & Rosenzweig, 1998). The time is ripe for research on the impact of culture on the LSSC-relationship. Future research might explore the impact of culture at the company level, and at that of the individual leader.

To date, research on CEO succession and strategic change at the company level has by and large been done using US-firm samples. There are notable exceptions. A study by Sakano and Lewin (1999), for example, uses a sample of Japanese firms and shows that the consequences of CEO succession may be different in different cultural contexts. We believe that there may be great value in exploring the effects of CEO succession on strategic change in different cultural settings, especially in terms of magnitude, speed, and content of strategic change.

Furthermore, to the best of our knowledge, there is virtually no research that addresses the influence that an incoming leader's cultural identity may have on the LSSC-relationship, and yet, with globalization the chances are that the cultural background of an incoming leader will differ from the cultural setting of the firm he or she heads. The CEO of Deutsche Bank is Swiss-born Josef Ackermann, that of Sony the Welsh-born American Howard Stringer, and the CEO of Renault/Nissan is Brazilian-born Carlos Ghosn. Hence, future research could start by investigating on the cultural identity and its effect on strategic changes after leadership succession.

Finally, future research may also turn to the effect of broader social changes that occur over time within one system. Research in sociology has long acknowledged that changes are inherent in social systems (Eisenstadt, 1964). Firms, however, are inclined to create programs and routines that repeat their successes (Nelson & Winter, 1982). Hence, firms prefer stable social environments and top managers, in particular, CEOs are prone to misperceive events in the social environment and perceive more environmental stability than actually exists. This, however, will lead to resistance to change. However, as Starbuck (1983) has elaborated CEOs may block changes within their firm, but they have little influence on social changes outside their firm. Hence, to the degree that adaptation is inhibited, broader social changes may make the CEO appear out of step leading to his or her dismissal (Pfeffer & Salancik, 1978). Thus, future research may explore how strategic change following a succession event is moderated by broader social changes that occurred prior to the succession event, but which the incumbent leader did not acknowledge through appropriate organizational adaptation.

Incorporating the competitive context

We encourage researchers to explore specific aspects of competitive strategy such as multimarket competition (Stephan, Murmann, Boeker, & Goodstein, 2003), and foreign competition (Wiersema & Bowen, 2008). Stephan et al. (2003), for example, have shown that longer-tenured leaders are guided by their company's multimarket relationships, while leaders with less tenure do not seem to adopt a forbearance approach toward multimarket competitors. Wiersema and Bowen (2008) have explored the corporate-level reactions of companies that face an increase in foreign-based competition. Future researchers might extend this line of research and bring leader succession into theories of multimarket competition and foreign competition. We are not aware of any research to date that addresses whether leader succession has an impact on how a company might react to an increase in foreign-based competition at the competitive-strategy level. Chen, Su, and Tsai's (2007) Awareness-Motivation-Capability framework could prove to be a promising starting point.

3.5.3 HOW? Substantiating the notion of strategic change

Strategic change is a rather vague expression. Hence, answering the HOW-question is intended to substantiate the notion of strategic change. Technically spoken, the HOW-question explores how strategic change as a dependent variable has been operationalized.

Our review indicates that studies on the LSSC-relationship have taken a variety of perspectives to address how strategic change reifies within the firm. A thorough analysis of these different perspectives revealed that researchers have followed the classic distinction within the strategic management literature: the distinction between *strategy content* and *strategy process* (Schendel & Hofer, 1979). While strategy content focuses on the specifics of what was decided, strategy process addresses in what context and how such decisions are achieved, including the responsible actors (Fahey & Christensen, 1986; Huff & Reger, 1987).

In order to obtain a further refinement, we additionally classified the studies contained within each of the two broad categories of strategy content and strategy process. Studies within the strategy content category could further be classified according to the level-criterion. Studies are concerned either with how strategic change reifies at the *corporate level* or at the *competitive level* (Andrews, 1971; Porter, 1980). With regard to studies contained within the strategy process category, we follow Hutzschenreuter and Kleindienst (2006) and classified the studies as either being concerned with change in *actors* or change in *strategy process characteristics*. Table 3-5 provides a summary of the HOW-question.

Table 3-5: Overview of the HOW-question

Perspective	STREAM	FORM OF CHANGE	EVALUATION OF THE HOW-STREAM	FUTURE RESEARCH AGENDA
<i>Strategy content</i>	5. Change in corporate level strategy	<i>Single measures of product scope changes</i> - firm specialization ratio - shift in firm core business - diversification level - divestiture of businesses	Reserach has shown that leader successions entail a variety of strategic changes. Most reserach, however, has focused on corporate level changes, in particular, changes in firms' product portfolio.	<i>Distinguishing intended change from observable change</i> The studies under review focus on observable strategic change. However, as reserach has shown decisions taken by the leader may not be realized as intended, or actions may be taken without the intention of the leader. In order to further improve our understanding of the LSSC-relationship, future research should establish a link between intended and observable strategic change. To do so, longitudinal and in-depth studies are necessary.
	6. Change in competitive level strategy	Change in a <i>composite measure</i> capturing a variety of factors that have been argued to be part of firms' competitive strategy	Data availability is likely to be the main driver behind the dominance of studies focusing on corporate level strategic change. Some operationalizations of strategic change seem problematic as the change in the respective variable may be driven by events that are not associated with the leader succession but, for example, changes in the firm's broader economic environment.	
<i>Strategy process</i>	7. Change in actors	Change in the composition of the TMT, distribution of responsibilities within the top ranks, and TMT turnover Distinction between forced and voluntary TMT turnover	Studies rely predominantly on secondary data. Interviews, surveys, and other rich sources of data have hardly been used in the studies under review.	<i>Attributing strategic change to the new leader</i> Strategic change takes time to materialize. Often, years pass between the internal decision to initate change and the external visibility of the respective change. Accordingly, researchers may attribute strategic change to the new leader though it was initiated by the predecessor. While using time-lags may take into account this problem, too long time-lags may go along with non-observation of strategic change initiated by the new leader. Since a potentially wrong attribution of strategic change to the new leader may bias the results, future research should place greater emphasis on this topic.
	8. Change in process characteristics	<i>Change in specific process characteristics</i> - centralization - power distribution - formal control systems - entrepreneurial orientation		

3.5.3.1 Stream 5: Change in corporate level strategy

Change in corporate level strategy, product scope change in particular, is the most researched consequence of leader succession in our sample (e.g. Boeker, 1997a; Kraatz & Moore, 2002; Sakano & Lewin, 1999; Yokota & Mitsuhashi, 2008). While some researchers looked at changes in the company's specialization ratio (Wiersema, 1992) others investigated on shifts in the company's core business (Wiersema, 1995), the diversification (Bigley & Wiersema, 2002; Boeker, 1997a, 1997b; Kraatz & Moore, 2002; Sakano & Lewin, 1999), or divestiture of businesses (Barron et al., 2011; Denis & Denis, 1995; Shimizu & Hitt, 2005; Weisbach, 1995).

The findings of these studies suggest that leader successions are usually associated with change in corporate strategy, in particular, with change in firms' product scope. At first glance, it seems plausible that succession events entail changes in corporate strategy. After all, new leaders mold their firms according to their cognitive maps, which, as we have argued above, are different than their predecessors'. However, taking a closer look on how change in corporate strategy is often operationalized gives rise to doubts concerning the unrestricted validity of these findings.

A considerable number of the studies operationalize change in product scope as change in segment sales data (for example, Bigley & Wiersema, 2002; Boeker, 1997b). Changes in segment sales data reflect shifts in the importance to a company of its various businesses. Their importance is also likely to reflect incoming leaders' attentional focus. While this operationalization is straightforward, it has to be treated with care. Changes in segment sales may be caused by leaders' decisions, but can also be the result of developments in firms' external environments, such as economic crises, technological breakthroughs, etc. Hence, the measure does not unequivocally reveal whether strategic change is driven by leaders' intended change in the relative importance of company businesses or by developments in the external environment that are beyond leaders' control.

Other studies use a count measure to operationalize product scope, basically evaluating whether products and/or services are added or abandoned in the course of a succession (Goodstein & Boeker, 1991; Wiersema, 1995). Whereas change in segment sales may be the result of external factors, changes in the number of products and services are less dependent on firms' external environments and therefore more likely to truly reflect incoming leaders' intended strategic change.

Finally, we would like to draw the attention to two studies that are noteworthy with regard to their methodological approach. Both Wiersema (1992) and Friedman and Saul (1991) stand out from the rest of the studies in that they compare pre-succession and post-succession levels of strategic change. In other words, both studies do not explore whether or not CEO succession leads to strategic change, but whether or not a change in who holds the top job is associated with more or less strategic change. At first this may seem to be a minor difference, but the comparison of pre-succession and post-succession levels of strategic change provides a more detailed picture of strategic change as a consequence of leader successions.

3.5.3.2 Stream 6: Change in competitive level strategy

Six of the studies in our sample explored the effect of incoming leaders on change in competitive level strategy. As in the case of corporate strategy, change in competitive level strategy, often referred to as strategic orientation, was operationalized in different ways. Interestingly, however, unlike corporate strategy, competitive strategy tends to be operationalized based on composite measures. These composite measures capture a wide variety of factors that have been shown to be part of firms' competitive strategy (Finkelstein & Hambrick, 1990; Virany et al., 1992).

At first sight, the findings of the studies are largely consistent in indicating that leader succession is associated with change in competitive level strategy. For example, the results of Lant et al. (1992) and Gordon et al. (2000) are consistent with those of Romanelli and Tushman (1994) who find that a change in leader increases the probability of 'revolutionary transformation' which they defined as a change in firm strategy, structure, and power distribution. However, taking a closer look at the studies of Lant et al. (1992), Gordon et al. (2000), and Datta et al. (2003) the role of the industrial environment becomes obvious. Rather than indicating an unconditioned relationship between change in leader and change in competitive strategy, these studies suggest that the relationship may only hold for turbulent, high growth, and less capital intensive industries, that is, high discretion industries.

Two studies explore the movement between different strategic groups as a result of a succession event (Ndofor et al., 2009; Zuniga-Vicente et al., 2005). Both studies find that during succession strategic groups are likely to be switched (Zuniga-Vicente et al., 2005) and that this is especially true when pre-succession performance is low (Ndofor et al., 2009).

Studies on change in competitive level strategy are particularly noteworthy for drawing the attention to the influence of the industrial environment. Falling back upon one-product firms, these studies are able to show how and to what degree the industrial environment moderates

the LSSC-relationship. This is a clear advantage over studies addressing change in corporate level strategy that generally rely on diversified firms making it considerably more challenging to explore the effect of the industrial environment. However, as in the case of corporate level strategy, operationalizations have to be treated with care. For example, the composite measure used by Datta et al. (2003) consists of six factors: (1) advertising intensity (advertising/sales), (2) research and development intensity (R&D/sales), (3) plant and equipment newness (net P&E/gross P&E), (4) non-productive overhead (SGA expenses/sales), inventory levels (inventories/sales), and (6) financial leverage (debt/equity). Though being an established measure in the literature, it is also true that four of the six factors may be caused by leaders' decisions, but can also be the result of developments in firms' external environments. Hence, as in the case of change in segment sales, this operationalization of strategic change may not be independent from developments the new leader cannot control.

3.5.3.3 Stream 7: Change in actors

Many studies have shown that the composition of the TMT is linked to strategic decision making and, thus, to the content of company strategy (Geletkanycz & Black, 2001; Jensen & Zajac, 2004). Changing the composition of the TMT therefore is likely to lead to strategic change. The studies in this theme support this view and show that CEO succession is likely to lead to strategic change through change in the composition of the TMT. For instance, a number of studies have investigated whether CEO succession affects the composition of the TMT (Keck & Tushman, 1993) and the distribution of responsibilities within the top ranks (Helmich & Brown, 1972), including the board of directors, and if it does, to what extent. Other studies explored the relationship between a company's performance and executive turnover following a CEO succession (Friedman & Saul, 1991; Kesner & Dalton, 1994) or used the classic distinction between insider and outsider CEO succession and concluded that there is more turnover in the executive suite when an outsider takes on the top job because there are no lingering social ties and allegiances (Helmich & Brown, 1972; Kesner & Dalton, 1994).

The overall finding of these studies is that incoming leaders are likely to affect TMT turnover. However, while some studies argue new leaders may take actions to force out TMT members, some studies have taken a different perspective.

The event of a CEO succession is far reaching not only for the incumbent and the new leader, but also for other organizational members, as it may disrupt traditional patterns of accepted values and behavior, thereby creating a sense of instability and insecurity within

organizational members (Friedman & Saul, 1991). Drawing on the ideas of the Barnard-Simon theory of organizational equilibrium according to which an organizational member will continue to participate in an organization only so long as the inducements offered are as great or greater than the contributions s/he is asked to make (March & Simon, 1958: 104), these studies have put forth the idea that a succession event may lead to *voluntary executive turnover* (Helmich & Brown, 1972; Kesner & Dalton, 1994).

This literature suggests different determinants of executives' propensity to withdraw from the company. First, the feeling of being passed over in the selection process may demoralize executives, prompting them to leave the company as the new leader takes office (Helmich & Brown, 1972). Second, Friedman and Saul (1991) have argued that executives may be particularly loyal to the incumbent CEOs and thus unable or unwilling to stay and work for their successors. Finally, Hayes et al. (2006) reason that executives may be endowed with skills that are complemented by those of other executives, in particular the CEO, thus facilitating productive interactions. In case of a succession event this complementarity is expected to vanish, thereby leading executives to leave the company.

From a methodological point of view Friedman's and Saul's (1991) approach is particularly noteworthy. Conversely to the overwhelming majority of studies, they use primary data which they gather by surveying human resources officers rather than relying on secondary sources such as annual reports, 10-K filings, or commercial databases. This approach to obtaining data can be better tailored to meet the needs of the researcher and may help in uncovering relationships not yet researched.

3.5.3.4 *Stream 8: Change in process characteristics*

Research has shown that a firm's strategy depends on the configuration of its strategy processes (Hutzschenreuter & Kleindienst, 2006). Process characteristics such as centralization, formalization, comprehensiveness, and rationality are idiosyncratic to each company and are closely linked to the individuals responsible for strategy formulation and implementation, such as to their cognitive ability, tolerance for risk, or their propensity to act (Wally & Baum, 1994). Since a change in CEO means a priori that the personal characteristics of the individual in the top job will be different, an adaptation in strategy process characteristics is likely to be not only the result of political considerations, but also of personal preferences and habits.

Miller (1993) is among the best-known works on the organizational consequences of CEO succession. Same as Greiner and Bhambri (1989), Miller (1993) uses a political argument to

explain why an incoming CEO may change process characteristics. By reducing centralization, increasing the power of executive team members (Greiner & Bhambri, 1989), and increasing information processing, incoming CEOs may be able to gain the support of established managers. Simons' (1994) findings add to this discussion by showing that incoming CEOs use formal control systems as a lever for shaping and implementing their agenda. Management control systems help to overcome organizational inertia, communicate the substance of their strategy, set implementation timetables and targets, ensure the continued organizational attention through incentives, and focus organizational learning on resolving uncertainties associated with their strategy.

Being more specific with regard to the type of process under investigation Li and colleagues (2008) focus on entrepreneurial orientation as a strategy process characteristic. Thus, while turnover may reduce organizational inertia, bring in new skills, and enhance a company's entrepreneurial orientation, too frequent turnovers may lead to risk aversion and organizational instability, ultimately hampering entrepreneurial orientation.

Although the impact of leaders on process characteristics is obvious, to date the topic has received limited attention. With only four of the studies in our sample addressing change in strategy process characteristics as a consequence of leader succession this research stream appears to be in its infancy. Nonetheless, the findings of those studies show that leader succession is likely to result in adaptation of strategy process characteristics. Thus, we urge researchers to pay more attention on how leaders affect firms' strategy processes.

3.5.3.5 Evaluation of findings

Our review reveals that leaders indeed have a multifaceted impact on firms' strategic change. However, we were surprised to find that the overwhelming majority of research has concentrated on corporate level changes, in particular, changes in firms' product portfolio. We believe that this predominance is the result of methodological rather than theoretical considerations.

Data on firms' product portfolio are readily available through commercial databases such as COMPUSTAT or can be relatively easily gathered using segment reporting in annual reports. In contrast, gathering data needed to explore strategic change, for example, in terms of change in strategy process characteristics is likely to be more difficult and time consuming. For example, the case study reported by Greiner and Bhambri (1989) is the result of the two authors being present during much of the strategic change taking place within the firm, participating both as consultants and researchers. We recognize that the data issue is not an

easy problem to resolve and that not all researchers are able and/or willing to engage in complex and time-consuming data gathering. Nonetheless, we believe that future studies will increasingly have to come up with other forms of strategic change than change in product portfolio in order to provide a significant contribution to the literature.

The data gathering issue may also – at least to some degree – explain why we have seen a predominance of the cognition argument at the expense of alternative theoretical arguments such as power or mandate. While the cognition argument may be tested using public secondary archival data, other arguments clearly need to be supplemented by richer sources of internal dynamics, such as interviews or non-public archival data (Pettigrew, 1990). Consistently, we found only very low reliance on survey and interview methods (for exceptions see, for example, Friedman & Saul, 1991; Greiner & Bhambri, 1989), which we believe offer substantial potential for furthering our understanding on how strategic change manifests itself within the firm.

3.5.3.6 Suggestions for future research on the HOW-question

A broad array of dependent variables was employed in the literature. Nonetheless, there is certainly no lack of dependent variables deserving future research attention. However, we believe that identifying a set of variables is of incremental value to the field only. Hence, we subsequently bring to researchers' awareness some more fundamental issues that deserve attention in future research on the LSSC-relationship.

Distinguishing intended change from observable change

The studies we have reviewed and studies on the consequences of leader succession in general, have centered their discussion on the *observable* changes that materialize as a result of new leaders taking office. While the types of changes investigated vary a lot they all have in common that they are observable and that they actually took place.

However, crucial for the understanding of succession consequences and the degree of influence leaders have on these changes is to acknowledge that by doing so we do not capture the entire picture of the intent of the new leaders, but we overlook possible decisions they made, but which were not implemented for a variety of reasons. While new leaders taking office might have formulated certain strategic changes only a fraction of these might have been implemented or are apparent to the observer. A considerable proportion of strategic decisions in organizations fail due to implementation rather than formulation reasons (Hickson, Miller, & Wilson, 2003). Likewise, research has also shown that strategies may be realized despite, or in the absence of, intentions (Mintzberg & Waters, 1985). Thus, in order

to gain a better picture of the link between leader succession and strategic change, future research should try to capture the full range of strategic changes leaders decided upon, the later outcome of these changes, and most importantly the influencing factors that lead to a deviance between the formulated and the implemented strategies. In other words, future research may draw on Mintzberg and Water's (1985) notion of intended, deliberate, unrealized, emergent, and realized strategy, extending the investigation onto the implementation quality (Raes, Heijltjes, Glunk, & Roa, 2011) rather than focusing merely on the observable consequences.

Instead of point-wise measurements on changes future studies should apply longitudinal research designs that rescind from snapshots, but see strategic changes through from the formulation to the implementation. That way we will not only gain insights about the degree to which strategies are actually implemented in the way they are formulated, but also how much they change or are abandoned. While leaders' awareness of events and the informational foundation of their decisions is limited, during the implementation of strategic decisions new information might be gathered that calls for a reevaluation of the decisions (Mintzberg & Waters, 1985). This can start as early as the passing down of decisions from the leader to the middle management, that might have a much clearer picture of a current market situation and hence supports a reassessment of the decision by providing additional information to the leader. As a first step toward uncovering the implementation quality of post-succession strategic changes case-research imposes itself.

Attributing strategic change to the new leader

It has been customary in the field to attribute the entire strategic change that materializes after a succession event to the new leader. However, it is evident that due to the strategic nature of the changes under observation, there may be a substantial time-lag between the initiation and the materialization of strategic change. For example, more than two years after Jürgen Schrempp took office at Daimler in 1995 the automotive company visibly entered new product markets, extending its product portfolio from mid-range and large executive cars to compact cars. While the strategic change materialized only after Schrempp took office, the strategic change was initiated by his predecessor Edzard Reuter. In other words, it is likely that researchers would attribute this change in the firm's product portfolio to the successor, while indeed it was initiated by the predecessor.

Erroneous attribution may result from the fact that a considerable time lag exists between internal initiation and external visibility of strategic change. Additionally, erroneous

attribution may also originate in measures of strategic change that are not independent from factors other than the new leader. As elaborated above, changes in segment sales data may be the result of strategic change intended by the leader. However, it may also be simply the result of changes in the firm's economic environment that result in a shift in the relative importance of the firm's segments.

Given that erroneous attribution is likely to result in biased results, we urge future research to place greater emphasis on measures to circumvent such problems. Some researchers have employed time lags between the succession event and the beginning of the observation period of strategic change. However, doing so raises the question of the appropriate length of the time lag. A too short time lag is likely to result in the erroneous attribution of strategic change to the new leader, while a too large time lag may result in the non-observation of strategic change initiated by the leader. Since there is no theoretically derived optimal length of the interval, researchers must pay attention to this inherent trade-off and discuss their results accordingly. Likewise, future research should aim at operationalizing strategic change in a way that is independent from developments outside the firm.

3.5.4 WHEN? Adopting a temporal lens on the LSSC-relationship

3.5.4.1 Stream 9: Timing of strategic change

According to Van de Ven and Poole (1995: 512) change is an empirical observation of a difference in form, quality, or state over time in an organization. Hence, the authors conclude that the construct of change comprises two distinct dimensions – a *content* dimension and a *time* dimension. Our review reveals that the studies within our sample have placed great emphasis on explaining the WHY, WHAT, and HOW of the LSSC-relationship. As such, these studies are concerned with one or more aspects of the content dimension of leaders' impact on strategic change.

However, none of the studies in our sample has emphasized the time dimension of the LSSC-relationship. This is all the more out of all reason given that a temporal lens provides a powerful way to view organizational phenomena such as strategic change (Ancona, Goodman, Lawrence, & Tushman, 2001a). The temporal lens puts time and timing of strategic change front and center. As such, adopting a temporal lens is likely to enrich our theoretical understanding of leaders' impact on strategic change in the context of succession events. Prior studies have recognized that the proximal and environmental temporal context are important when investigating leadership outcomes (Bluedorn & Jaussi, 2008). Das (1987),

for example, has shown that a leaders planning horizon is positively related with his time horizon. Hence, the findings would suggest, that depending on the individual time horizon of the new leader, strategic change may happen early or later in the new leaders tenure. Therefore, developing theory and testing ideas taking a temporal lens is likely to include notions of cycles, rhythms, paces, or (ir-)regularities (Ancona & Chong, 1996; Bluedorn & Jaussi, 2008; Vermeulen & Barkema, 2002). Thus, adopting a temporal lens on the LSSC-relationship will require asking new questions and thinking about time and method in more elaborate and precise ways (Mitchell & James, 2001).

Given the absence of the temporal lens in the theory section of the studies under review, we expected the topic to be at least an issue in the methodology section. Therefore, we reviewed the studies again, focusing on how the studies under review dealt with time in their methodology section. We found that, by and large, researchers place little emphasis on the choice of observation window for post succession strategic change, even though as Day and Lord (1988) have pointed out the choice of the observation window is likely to affect results. Within our sample, observation windows vary between one and five years. The fact, that in general no theoretical justification is given on the appropriateness of the used observation window, may give rise to the impression that observation windows are arbitrarily chosen. However, as strategic change may consist of single activities, repeated activities, or single activities that influence each other (Ancona et al., 2001b), the importance of the observation window and with that the significance of time increases (Giambatista et al., 2005).

Overall, we find that to date researchers have emphasized the content dimension at the expense of the time dimension. However, we believe that applying different lenses on a given phenomenon – such as the LSSC-relationship – highlights different aspects of that phenomenon, much like the fable of the blind men and the elephant by John Godfrey Saxe. Therefore, we strongly encourage researchers to adopt a temporal lens in future studies on leaders' impact on strategic change in succession contexts.

3.5.4.2 Suggestions for future research on the WHEN-question

Exploring the timing of strategic change

Some studies explore the impact of leaders over the course of their tenure (Giambatista, 2004; Henderson et al., 2006). These studies suggest that leaders pass through a life cycle. Throughout their life cycle, critical leader characteristics such as activity, information gathering, and commitment to a paradigm may change. Gabarro (1987, 2007) directly addresses the dynamics of *taking charge* using evidence of the timing of strategic change.

Although his findings provide important initial insights on the timing of strategic change following leader succession, more research on the sequential and temporal implementation of strategic change is needed, as well as its determinants. Entrainment, polychronicity, pace/speed, and temporal depths (Bluedorn & Jaussi, 2008) are but a few interesting avenues that would provide valuable insights into the LSSC-relationship.

Choosing the observation window

Most authors place little emphasis on the choice of observation window, even though it is likely to have an impact on the results. For example, studies that explore corporate-level strategic change have frequently used change in segment sales as the dependent variable. Changes in segment sales data, however, may take several years to materialize, and this is likely to vary from industry to industry. Hence, using different observation windows is likely to yield different results (Day & Lord, 1988; Giambatista et al., 2005).

To belie impression of a randomly or opportunistic chosen observation window, future studies on the LSSC-relationship should provide a distinct rationale for the choice of window. Moreover, there is need for research that directly addresses the influence of varying observation windows. Researchers might address whether the observation of a particular kind of strategic change requires a window of a particular length, or whether there is a theoretical rationale for an ‘optimal’ observation window. How can researchers deal with the fact that strategic initiatives that the outgoing leader has initiated can become effective well after a succession has taken place, in which case it is the decisions of the departing leader and not those of the new one that matter? Answering such questions is likely to increase the validity of results.

Acknowledging temporal personality

Time is commonly defined as a nonspatial continuum that is measured in terms of events which succeed one another from past through present to future (for example, Merriam-Webster Online Dictionary). Although this definition emphasizes the objective, physical component of time, research has shown that leaders, and indeed all individuals, may differ with regard to their temporal perception and personality. According to Ancona et al. (2001b) a temporal personality is “the characteristic way in which an actor perceives, interprets, uses, allocates, or otherwise interacts with time [...]. In other words, it is the manner in which an actor understands and acts with respect to the temporal continuum.” Accordingly, leaders’ temporal personalities are likely to affect the time dimension of strategic change.

For example, temporal orientation, that is, what part of time (past versus present versus future) is important to leaders is likely to affect both timing and intensity of strategic change (Das, 1987). Leaders with a temporal orientation in the present may initiate substantial strategic change shortly after taking office, while leaders with a future orientation may generally take up time and spread strategic change over a longer time period. Thus, we believe that incorporating leaders' temporal personalities will enhance our understanding of the time and timing of strategic change. For example, researchers might want to investigate on the pace and rhythm of change as a function of the temporal perception of new leaders. This will add to our understanding of the regularity and timely manifestation of change inside companies.

3.6 Conclusion

We have reviewed literature on leaders' impact on strategic change in the context of CEO succession events. Overall, we find the field to be still in an immature phase. Moreover, we have seen that while various theoretical perspectives have been taken to explain the LSSC-relationship, the dominance of the cognition argument has hampered the field's theoretical development. Therefore, we call researchers to first and foremost invest in theory building explaining the causal mechanisms underlying the LSSC-relationship. Given that leaders' impact on strategic change is heavily influenced by contextual factors, we additionally encourage studies to take a contextual perspective. Together, new theoretical insights and contextually embedded studies are likely to provide a more holistic picture of the LSSC-relationship. Thus, we hope that the review provided in this article and the suggestions for future research will enable researchers to help keeping the field progressing.

4 What difference do differences make? CEO succession and the effects of demographic differences on the level of strategic change⁸

4.1 Introduction

How does CEO succession affect a company's level of strategic change? Explaining how CEO succession affects strategic change is one of the fundamental issues in research on CEO succession. Much of the research on the relationship between CEO succession and strategic change has been grounded in Hambrick and Mason's (1984) upper echelons theory which posits that observable demographic characteristics of top executives can be valid proxies for their cognitions, values, skills, and knowledge base. Building on the premise of bounded rationality (Cyert & March, 1963; March & Simon, 1958), a central tenet of upper echelons theory is that complex and uncertain situations cannot be completely and objectively assessed, rather, they are interpreted. This means that CEOs construe their own reality according to their individual cognitive base and consequently make strategic choices specific to them (Carpenter, Geletkanycz, & Sanders, 2004; Hambrick, 2007).

There has been extensive research carried out over the past three decades on a wide range of issues related to CEO succession. While this research has substantially increased our understanding of the processes and ramifications of a key organizational decision, as reviews of the literature have highlighted (Finkelstein et al., 2009; Giambatista et al., 2005; Kesner & Sebor, 1994), there are still many gaps. One of the most important ones is how CEO dissimilarity during succession affects change in the pre-succession and post-succession levels of strategic change. We address this shortcoming. We take a cognitive psychology perspective to explain variation in the level of strategic change following a succession. Our central argument is that greater cognitive dissimilarity between an outgoing and incoming CEO will lead to a greater difference in the level of strategic change. We contend that persons having different educational backgrounds and occupational experiences will approach issues differently because they will apply different cognitive frameworks, and as a consequence, the strategic changes they will make will be different. The greater the differences, the greater the subsequent variation in the level of strategic change.

We show that differences in the level of strategic change before and after CEO succession may be driven by the extent of dissimilarities in CEO demographic characteristics. We track

⁸ This chapter is based on: Hutzschenreuter, Kleindienst & Greger, What difference do differences make? CEO succession and the effects of demographic differences on the level of strategic change, unpublished manuscript.

the level of strategic change in 76 companies over a 22-year period. In the next section, we set out our assumptions and present our core concepts. In section three we develop hypotheses regarding how the extent of dissimilarity between predecessor and successor CEO affect the level of strategic change. We detail our research methods in section four, and present our results in section five. Finally, in sections six and seven, we discuss our findings, their implications and limitations, and provide directions for future research.

4.2 Background and assumptions

4.2.1 CEO succession and strategic change

Early theoretical work by Barnard (1938) and Selznick (1957) established the rationale for including executives in analytic investigations of companies. Since then an increasing body of literature has recognized that the CEO is a company's principal architect who is responsible for the formulation and implementation of its strategy. While CEOs do not run companies alone, there is considerable evidence that more than any other individual the CEO has the most impact on strategic actions and performance.

CEOs have both formal and symbolic power. First, the formal authority that comes with the CEO title and the CEO's position within the hierarchy provides the legitimacy needed to dictate the substance of strategic decisions (Ocasio, 1994). Second, the symbolism associated with the role of the CEO can serve as a real source of power in shaping corporate behavior. Steve Jobs, Jack Welch, and Warren Buffet to name a notable few, use their role as the top executive to shape the expectations and values of stakeholders both inside and outside the company (Gupta, 1988). That the CEO is the preeminent leader of a company is further supported by empirical evidence. Studies have shown that CEOs have a major impact on the strategy of the companies they head and also that CEO characteristics are linked to strategic reorientation (Keck & Tushman, 1993), innovation (Miller & Shamsie, 2001; Wu et al., 2005), product diversification (Boeker, 1997a; Song, 1982), company internationalization (Athanassiou & Nigh, 2002; Matta & Beamish, 2008), and company performance (Guthrie & Datta, 1998; Koyuncu, Firfiray, Claes, & Hamori, 2010).

Given that both theory and empirical evidence lend strong support to the assumption that CEOs exert a distinctive influence on company strategy, it is reasonable to conclude that a change in CEO is likely to be reflected in company strategy. Indeed studies have shown that CEO succession leads to change in various strategic dimensions such as product diversification (Boeker, 1997a; Wiersema, 1992), divestiture activity (Shimizu & Hitt, 2005; Weisbach, 1995), strategic orientation (Datta et al., 2003; Gordon et al., 2000), top

management team composition (Friedman & Saul, 1991; Hayes et al., 2006), and strategy process characteristics (Greiner & Bhambri, 1989; Miller, 1993).

Despite numerous studies that have found a link between CEO succession and strategic change, there is no reason to believe that merely a change in CEO is enough to explain subsequent strategic changes, and especially not differences between pre-succession and post-succession levels of strategic change (Friedman & Olk, 1995). Rather, as Yokota and Mitsuhashi (2008) have argued, CEO succession is unlikely to trigger strategic change unless the succeeding executive's strategic framing, knowledge base, view, and interests differ from those of the predecessor. In other words, not every succession will prompt a change in the level of strategic change. Rather, it is when an outgoing CEO is replaced by an individual who will approach strategy-setting with a different set of cognitive processes that a variation in the level of strategic change is likely.

Previous research has explored succession effects by differentiating between insider and outsider successors often reasoning that successors from within the company have different prior experiences and organizational backgrounds than outsiders, and that this has a distinctive effect on cognitive processes that influence subsequent strategic change (Wiersema, 1992). There is convincing evidence that CEOs brought in from outside the company are more likely to initiate strategic change than those promoted from within (Kraatz & Moore, 2002; Wiersema, 1992). Yet, while extant literature has shown the relevance of CEO characteristics, the rough insider-outsider distinction is unlikely to fully capture whether a succession brings about a difference in strategic framing, knowledge base, view and interests. A finer-grained approach is needed to explore whether succession brings about changes in CEO cognitive processes, and if so, how.

4.2.2 CEO dissimilarity

We look at the effect of CEO succession on the level of strategic change through the lens of cognitive psychology which is founded on two key principles: (1) the response of an individual to stimuli is mediated by information processing; and (2) individuals need a selection mechanism because their ability to process information is limited (Kabanoff & Brown, 2008; Moors & De Houwer, 2006). According to cognitive psychology models, the mechanism for selection is attention (Broadbent, 1958; Kahneman, 1973). Organizational theorists have built on cognitive psychology in proposing a tripartite information-processing sequence, involving attention, interpretation, and action to explain the behavior of executives (Abrahamson & Hambrick, 1997; Daft & Weick, 1984).

CEOs, like all of us, live in a world too rich in stimuli. Information is not the most scarce resource in companies, the amount of attentional resources is, and especially the attentional resources a CEO can allocate to a continuous stream of information that impinges on his or her mind (Dutton & Jackson, 1987). To deal with the wealth of information available to them, CEOs employ a tripartite information processing sequence. First, they selectively ignore certain information to focus attention on the information deemed most relevant. The information to which they do attend is interpreted, and then infused with additional meaning. Finally, their interpretations influence their actions.

The cognitive map, as a simplified representation of the world in which knowledge and expectations are organized into still abstract structures (Kiesler & Sproull, 1982), is central to this tripartite information-processing sequence. CEOs, like all of us, attempt to superimpose their cognitive map on their environment. The cognitive map serves as a mental template used to transform a complex informational environment into a traceable one, giving it form and meaning, in short, it allows us to make sense of information (Walsh, 1995; Weick & Bougon, 1986). In fact, to a large degree our cognitive map determines to what we pay attention and what we choose to ignore in the first place. Thus, we devote our limited information-processing capacity to what, according to our own cognitive map, is most relevant (Kiesler & Sproull, 1982). Clearly then, the cognitive map of a CEO determines to a considerable extent what actions he or she will take (Pfeffer, 2005).

An executive's cognitive map consists of the knowledge and expectations he or she uses to understand organizational situations (Weick & Bougon, 1986), including (a) factors perceived to be important to the organization's success or failure, (b) the interrelationships between those factors, and (c) expected bivariate or multivariate contingencies linking combinations of factors to organizational success in various situations (Ndofor et al., 2009). As cognitive maps are formed by age, experience, professional training, educational background, and career patterns (Finkelstein *et al.*, 2009; Porac & Thomas, 2002), it is reasonable to expect that executives who share similar characteristics in such areas will share similar cognitive maps (Ndofor et al., 2009). By extension, executives with similar cognitive maps are likely to pay attention to similar kinds of information, to draw similar conclusions from that information, and to take similar action based on it. The central role of cognitive maps indicates that similarity, and by the same token dissimilarity, between an outgoing and an incoming CEO may be an important factor in explaining differences between pre-succession and post-succession levels of strategic change.

4.3 Development of the hypothesis

CEOs are information handlers who spend time absorbing, processing, and disseminating information about issues and opportunities. Given that they have limited attentional resources, one of the most fundamental challenges they face is determining what information they should consider and what they can ignore. Accordingly, whatever the nature of the matter at hand, its perceived importance is the outcome of the CEO's decision process (Bruner, 1957). As do all decision processes, the perceptual decision process involves the use of discriminatory cues.

Dearborn and Simon (1958: 140) have argued that when "presented with a complex stimulus, the subject perceives in it what he is "ready" to perceive; the more complex or ambiguous the stimulus, the more the perception is determined by what is already "in" the subject and the less by what is in the stimulus." In short, a CEO's selective attention, and selective ignorance as well is a learned and internalized response stemming from some past history captured in that CEO's cognitive map (Sutcliffe & Huber, 1998). Thus, what is captured in a CEO's cognitive map is, in turn, important as it determines to a large degree the behavior of that CEO.

Social background, religion and formative life experiences affect our cognitive maps. Demographic characteristics too are likely to substantially affect the cognitive maps of CEOs and, by that, their perceptual processes. There is both theoretical and empirical evidence suggesting that educational background, and functional, industry, and international experience shape the cognitive map of a CEO considerably (see, for example, Andrews & Welbourne, 2000; Boeker, 1997a; Hambrick et al., 1996; Hambrick & Mason, 1984; Herrmann & Datta, 2002).

Wiersema and Bantel (1992) showed that the advanced education of top executives is reflective of their personalities, attitudes, and cognitive styles, and Hitt and Tyler (1991) that there is a link between the perspective, outlook and strategic decision making of executives and their educational background. For instance, as Bertrand and Schoar (2003) found, CEOs who have an MBA pursue more aggressive strategies and have a stronger tendency to engage in diversification than other CEOs. Similar observations have been made by Grimm and Smith (1991), who found that executives with an MBA are more likely to engage in strategic change, and Tyler and Steensma (1998) who found that executives with more technical educational backgrounds perceive greater opportunities in technical alliances than other

executives, because they have a more positive attitude toward innovation (Barker and Mueller, 2002). Thus, a CEO's educational specialization affects his or her cognitive map and impacts his or her strategic decisions.

The cognitive maps of executives are further developed by their work-related experiences. Despite being presumed to have a generalist view (Hambrick & Mason, 1984), usually CEOs have a functional specialization (Gupta, 1984) and bring with them the knowledge, skills and perceptions of their primary functional areas. For example, Waller, Huber, and Glick (1995), found that CEOs are more likely to be aware of a change in organizational effectiveness if the change is in an area related to their own functional background, and Hitt and Tyler (1991) that the strategic evaluation of possible acquisitions by executives depends on their functional backgrounds. Such empirical results show that functional experience can influence CEO perceptions and the postures they take on important strategic decisions. Chaganti and Sambharya (1987) and Govindarajan (1989) also show that there is a significant relationship between a company's competitive strategy and the functional background of its CEO. Other empirical studies show that the functional background of the CEO is a reliable predictor of a company's product diversification (e.g. Jensen & Zajac, 2004; Song, 1982), internationalization (Wright, Locken, & Pruthi, 2002), choice of foreign market entry mode (Herrmann & Datta, 2002), and even the people/performance balance in IPO firms (Andrews & Welbourne, 2000). Smith and White (1987) show that there is a relationship between the functional background of a succeeding CEO and company diversification strategy. Hambrick and Mason (1984) show that CEOs with significant experience in output functions such as R&D, engineering, marketing, and sales emphasize growth via new products and markets, a finding reinforced by Boeker (1997a) who provides evidence that a CEO with output function background is more likely to emphasize entry into new product markets than CEOs from other functions, and by Barker and Mueller (2002) who found that CEO experience in output functions is positively related to R&D spending, that is, internal growth rather than growth through acquisition. On the other hand, CEOs with experience in throughput functions such as production, process engineering, and accounting emphasize efficiency improvement (Hambrick & Mason, 1984).

Like functional background, industry background shapes a CEO's cognitive map and so decision-making process (DiMaggio & Powell, 1983; Porac, Thomas, & Baden-Fuller, 1989). In a study looking at determinants of executive perceptions of the environment, Sutcliffe and Huber (1998) found that executive are likely to share the beliefs of other executives within the

same industry. Gabarro (1987) showed that industry-insiders make on average twice as many changes after succession than industry-outsiders, which suggests that experience in an industry may have an impact on the strategic actions of CEOs.

Finally, researchers have shown that other characteristics of executives influence the level of international diversification (Herrmann & Datta, 2005; Tihanyi, Ellstrand, Daily, & Dalton, 2000), international strategic posture (Carpenter & Fredrickson, 2001), and even international alliance formations (Lee & Park, 2008). Hence international experience has been shown to be positively related to international diversification (Athanassiou & Nigh, 2002; Sambharya, 1996; Tihanyi et al., 2000). The experience of living in a foreign country determines CEO's knowledge of this market. One would expect that such experience lowers the degree of uncertainty and ambiguity associated with international operations and increases networks that can be used in exploring new frontiers or extending existing ones. Moreover, the ties a CEO has outside the home country can lower the information barrier that can keep companies from entering new countries. International experience and first-hand information about potential markets raises the confidence level of a CEO and contributes to a more accurate estimation of risks and gains of international diversification (Herrmann & Datta, 2005). Hence, the more international experience a CEO has, the more likely it is that he or she will follow an internationalization strategy (Athanassiou & Nigh, 2002). Thus, prior empirical work does suggest that diverging degrees of international experience are likely to lead to different cognitive maps and as a result to different strategies.

CEOs are particularly attentive to issues, opportunities, and problems that they perceive as being strategic, that is that potentially affect organizational outcomes (Marcel, Barr, & Duhaime, 2010). As we have spelled out in the preceding discussion, theory and empirical evidence suggest that what is "in" a CEO, educational background, and functional, industry, and international experience, shape that CEO's attention, affects his or her interpretations, and by extension affects the response to perceived strategic issues, opportunities, and problems. Since no two individuals are identical, any CEO succession will mean that what was "in" the previous CEO will not be to the same extent "in" the new one. Differences between successive CEOs will depend on the degree of overlap of their cognitive maps (Ndofor et al., 2009). Thus, it is logical to expect that the degree of dissimilarity between an outgoing and incoming CEO will determine the degree of difference in attention, interpretation, and response to perceived strategic issues, opportunities, and problems.

If the outgoing CEO and incoming CEO have similar cognitive maps it is likely that the issues, opportunities, and problems perceived as strategic by one will be similarly perceived by the other and so the responses planned or already initiated by the predecessor will meet with the approval of the successor, and of course the reverse will be true, so less cognitive map overlap will mean that it is unlikely that the successor will agree with the appropriateness of any planned or initiated moves (Adner & Helfat, 2003; Marcel *et al.*, 2010). For this reason, we expect that the greater the dissimilarity between the cognitive maps of the outgoing and incoming CEO, the greater the difference between pre-succession and post-succession levels of strategic change. Therefore, we propose:

Hypothesis 6: The greater the dissimilarity in educational background between the preceding and succeeding CEO, the greater the difference between the pre-succession and post-succession level of strategic change.

Hypothesis 7: The greater the dissimilarity in functional experience between the departing and the succeeding CEO, the greater the difference between the pre-succession and post-succession levels of strategic change.

Hypothesis 8: The greater the dissimilarity in industry experience between the departing and the succeeding CEO, the greater the difference between the pre-succession and post-succession levels of strategic change.

Hypothesis 9: The greater the dissimilarity in international experience between the departing and succeeding CEO, the greater the difference between the pre-succession and post-succession level of strategic change.

4.4 Methodology

4.4.1 Sample and data collection

We tested our hypotheses using a pooled cross-sectional data set of German companies listed in the HDAX index⁹ of the German stock exchange. The HDAX index includes the companies with the highest market capitalization in Germany. Following previous research we excluded financial institutions, pure financial holdings, real estate companies, and retailers, as well as cross-listed non German companies (e.g. Vermeulen & Barkema, 2002). This resulted in a list of 135 companies that were listed since the inception of the HDAX. We

⁹ The HDAX is a combined index consisting of the DAX30, MDAX, and TecDAX and thus contains the largest firms of the Prime Standard of the German Stock Exchange.

tried to collect data on the CEOs of these firms and on all expansion steps taken by these firms, both across industries and across countries, over the 1985-2007 period. Our inability to obtain data on expansions for at least six consecutive years for each succession reduced our sample to 91. Fourteen of those 91 companies had no succession during the consecutive years for which we could obtain data on our dependent variable. One further company had a succession, but there was a considerable time lag between the departure of the predecessor and a new CEO being appointed. All 15 companies were excluded, leaving us with a sample of 76 companies which experienced 177 CEO successions in total. Of these 177 succession events 29 had to be excluded from further analysis because they were at the end of our observation window and calculation of our dependent variable was not possible. An additional 32 successions had to be dropped due to lack of data, leaving us with a final sample of 76 companies and 116 CEO succession events.

We created a database for the companies in our sample that includes a complete list of their subsidiaries at the beginning of the observation period as well as a count of new subsidiaries (both greenfield and acquisitions) established each year until the end of the period. We also collected yearly data on all subsidiaries that were divested during the observation period. This procedure allowed us to determine the entire portfolio of subsidiaries for each company for every year. To exclude purely financial investments we only included majority-owned subsidiaries. Information on the subsidiaries was taken from the parent companies' annual reports, obtained through direct contact with the companies, and from the Thomson One Banker Deals database.

We added data on the companies' CEOs. Since there is no comprehensive database of German executives, we collected data from multiple sources. We started by identifying all CEOs in the period under investigation for our sample companies using information provided in the companies' annual reports. We then gathered demographic data and information on the career path of each CEO using sources such as Hübner's Who is Who, the Lexis Nexis online database, and various encyclopaedias such as Sutter's International Red Series Who's Who in Germany, Wer ist Wer? Das Deutsche Who's Who, IBP Who's Who Germany, Who's Who in European Business and Industry, as well as the Munzinger online archive. In a next step we searched archives and databases of prominent newspapers (Frankfurter Allgemeine Zeitung) and magazines (Der Spiegel, Business Week and ManagerMagazin). To close remaining gaps and to test the reliability of the data we collected, we contacted the companies directly. In the

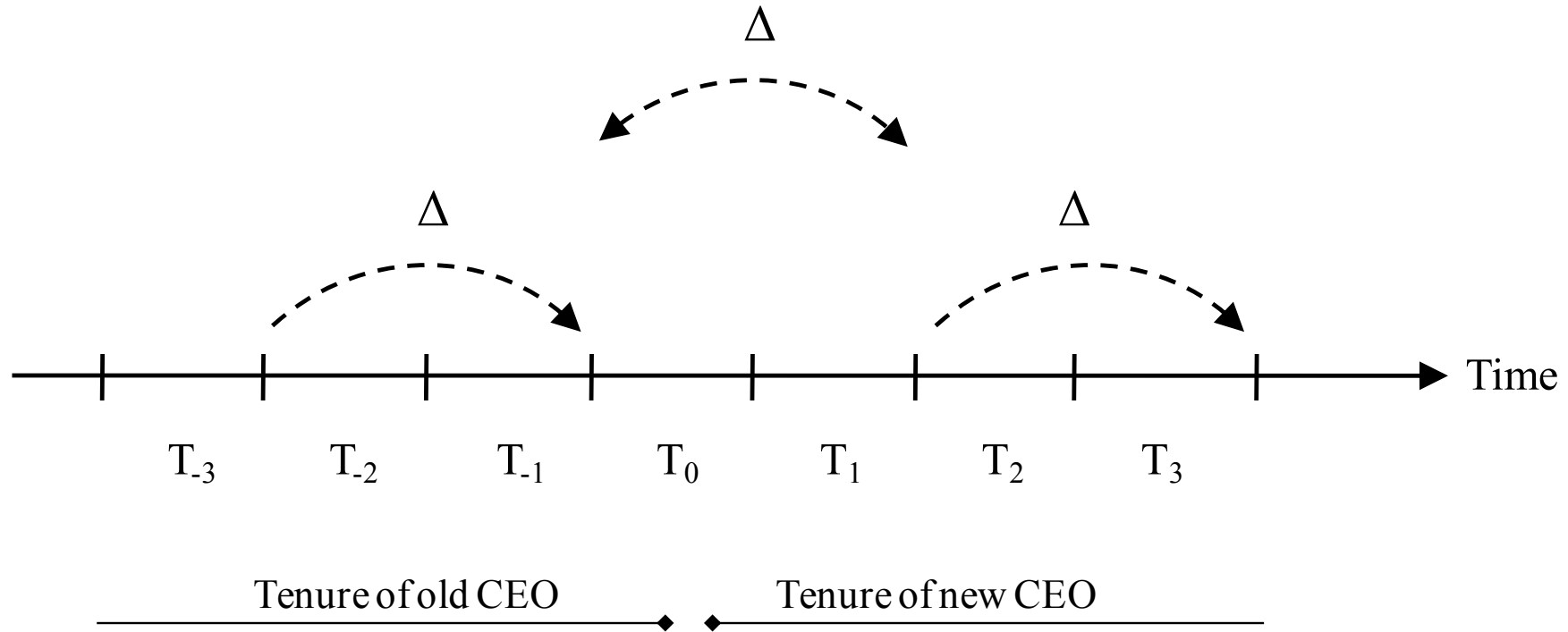
few cases where company archives did not contain the relevant information but provided contact details for the CEOs, we contacted them directly.

4.4.2 *Dependent variable*

The aim of this study is to investigate the effect of dissimilarities between an outgoing CEO and an incoming CEO on the level of strategic change. We compared the number of strategic changes initiated by a CEO prior to a succession with the number subsequently made by his or her successor. Hence, we compared the level of strategic change before and after a CEO succession, rather than merely observing the level of strategic change after a succession (Friedman & Saul, 1991; Wiersema, 1992). A number of different operationalizations for strategic change have been used in previous studies. Some studies have used dummy variables for entries into new product categories (e.g. Boeker, 1997a; Kraatz & Moore, 2002), others the percentage change in diversification (Boeker, 1997b) or specialization ratios (Wiersema, 1992). We chose to examine the absolute number of investments and divestments over the period of observation, a two-year window on either side of the succession (e.g. Romanelli & Tushman, 1994; Shen & Cannella, 2002a). Because our dependent variable compares the strategic changes of a predecessor to that of his or her successor, we have two observation windows for each succession. We show in Figure 4-1 the count of investments and divestments of an outgoing CEO during the two years prior to the succession as periods t_2 and t_1 , and the count of those of the successor during the two years following the succession as periods t_2 and t_3 . For the successor we applied a one year lag as theory suggests that a CEO needs a certain familiarization period before starting to make major strategic changes such as investments and divestments (Gabarro, 1987).

In addition to this overall measure of strategic change, we also tested our hypotheses on changes in product investment and divestment (change in product scope) and international investment and divestment (change in international scope). We measured change in product scope by the change in the number of different industry codes in a company's portfolio and change in international scope by the change in the number of foreign subsidiary investments and divestments. We used the observation windows described above.

Figure 4-1: Temporal model structure



4.4.3 Independent variables

We measured CEO dissimilarity by comparing demographic characteristics that have been shown in earlier research to influence managerial decision making. We did not combine those characteristics into a single composite measure, but looked at them independently, as this allows us to identify separate effects.

We measured *educational background dissimilarity* by comparing formal fields of study and/or apprenticeship. To do this we used a system based on Bunge (1967) that clusters different scientific fields into groups and shows how they are related to each other. For example, two CEOs who both have an MBA would be seen as sharing a more similar educational background than if one had an MBA and the other was an engineer. To measure the distance between fields we applied an approach similar to that used by Halebian and Finkelstein (1999) to measure diversification. We used the same simple hierarchical classification as shown in Figure 2-1 of chapter 2 (p.34), with distance set as 0 if the field of study was at the same level, 1 for a difference of one level, 2 for two-level differences, and so on.

Same as in chapter 2, in order to measure *functional, industry and international experience dissimilarity* we used an adaptation of the euclidean distance measure used in other research on organizational demography (Wagner et al., 1984; Westphal & Zajac, 1995). Unlike earlier studies, however, we do not compare groups of managers, but compare pair by pair the values of one characteristic at a time, namely the industries, functions, and foreign countries in which two individuals have worked. This approach is new, in that we don't appoint primary industries, functions or countries to the individuals, but we take a *path-related perspective* acknowledging that in order to determine the dissimilarity between the CEOs the complete history of both individuals has to be considered. This resulted in a need for a modification in the established measure. Most CEOs heading companies today have over the course of their career worked in more than one function and industry and worked abroad, but the amount of time they have worked in a given function, particular industry and outside their home country differs. Because of this we used the amount of time spent in each position as a weight:

$$\sqrt{\sum_{i=1}^n \left[\frac{(A_i - B_i)^2}{n} \times \frac{(A_i + B_i)}{\sum_{i=1}^n (A_i + B_i)} \right]}$$

where A_i (B_i) is the number of years an outgoing or incoming CEO has spent performing a function i , or within an industry i , or working in foreign country i , and n is the total number of functions, industries and foreign countries between them. In chapter 2 Table 2-1 (p.37) shows a hypothetical example for calculation of the dissimilarity and the weighted dissimilarity measure for differences in the functional experiences of two different CEO pairs.

To measure *Functional dissimilarity* we compared the functional backgrounds of the CEOs in our sample. We registered the functions in which each CEO had worked and tallied the number of working years per function. Using similar functional classifications to those of Hambrick, Cho and Chen (1996), we compared the portfolio of functions and time spent performing different functions of each CEO pair using the same weighted measure described above.

We measured *Industry dissimilarity* much as we measured functional dissimilarity. We registered the companies for which a CEO had worked over the course of his or her career and the number of years spent with each of those companies, then grouped companies according to the first two digits of their primary industry classification. This allowed us to compare the industry portfolios of each CEO pair.

Finally, to measure *International experience dissimilarity* we compared the international portfolios of each pair. Each CEO's international portfolio includes all of the countries outside Germany where the executive resided for six months or more over his or her lifetime. As we are interested in the impact of foreign experience we made no differentiation between the kinds of activities in which an individual was engaged while abroad; hence we included time spent studying, training and working abroad.

4.4.4 Control variables

We used a variety of control variables to control for the effect of succession motivation, individual CEO characteristics and company characteristics.

4.4.4.1 Motivation

Previous research has shown that the motivation for a succession can have an effect on strategic changes initiated by a succeeding CEO (Wiersema, 1995). When a CEO is forced to resign his or her successor may be prompted to deviate significantly from past strategic directions (Friedman & Olk, 1995). The motivations for the departure of a CEO are not always clear. Companies are often reluctant to disclose the true motivation for a succession,

as are CEOs themselves. The authors of this paper, along with two carefully trained research assistants, looked at what was written about CEOs stepping down in annual reports and press releases, but also what appeared in independent print media. There were just five cases where we differed on the motivation for a succession. We discussed these cases at length and were able to concur on the genuine motivation for the succession. *Forced succession* was coded one and non-forced successions zero.

4.4.4.2 *Individual CEO characteristics*

The dummy variable *company insider* takes into account that insiders may have taken part in past decisions and so be reluctant to reverse them, thus they are likely to be committed to current company strategy. On the other hand, a CEO brought in from outside the company will have less vested interests in past decisions and hence may be more willing to substantially alter company strategy. Moreover insiders may fall prey to corporate inertia while outsiders may bring in new approaches which may mean that they will bring about more strategic change than insiders (Guthrie & Datta, 1998; Wiersema, 1992). We coded insiders with one and outsiders with zero.

We controlled for the *departing CEO tenure*. Garbarro's (1987, 2007) studies into the dynamics of taking charge have shown that CEOs take the reins differently at different stages of their tenure in office (Garbarro, 1987, 2007). Other theoretical and empirical evidence suggests that CEOs may take some time to settle in office, and that during that time they may initiate few strategic changes (Hambrick & Fukutomi, 1991; Miller & Shamsie, 2001). After having had time to orient themselves, executives start making strategic decisions. At a certain point, the rules and routines the executive puts in place bring about corporate inertia and, as we pointed out earlier, this leads to a decrease in strategic actions (Garbarro, 1987, 2007). Hence, as the tenure of a CEO increases, the level of strategic change is likely to decrease. To control for this effect, we include the outgoing CEO's tenure and its square. We measured CEO tenure as the number of years spent in the top position.

Many of the CEOs in our sample took on another role at their company after stepping down as CEO. In Germany top executives often serve on their company's supervisory board following their stint as CEO. Originally we also controlled for this transition, however the departure reason is highly correlated to whether the CEO goes on to serve on the supervisory board. We tested our models both including and excluding such a transition and the results were virtually identical. In order to sidestep any concerns that our results might be driven by

multicollinearity we decided to follow a more conservative approach and excluded transition to the board as a control variable.

4.4.4.3 *Company characteristics*

Company-level controls were included to capture company-specific effects including changes in company size, company age, and also changes in company performance, and the company's cultural and product diversity.

Company size has been shown to influence executive turnover (Pfeffer & Moore, 1980) and the degree of strategic change (Kelly & Amburgey, 1991). Larger companies may well have more resources and this may allow them to cope with more strategic change. Nonetheless, smaller companies often experience rapid growth and hence greater levels of strategic change. We take this into account by controlling for change in company size using change in sales over the two years prior to a succession.

Company age has also been shown by previous research on strategic change to affect the level of strategic change. Older companies tend to be more inert as over time rules and routines become established that inhibit strategic change, while younger companies tend to be more agile and make more dramatic changes (Hannan & Freeman, 1984). On the other hand, less established companies might hesitate to make significant strategic changes that could jeopardize fragile links with customers and suppliers (Boeker, 1997b). We take these effects into account by including company age as a control.

Company performance can facilitate or inhibit strategic changes (Keats & Hitt, 1988). Faced with overall poor performance a CEO might attempt to rectify the situation by divesting non-core activities or business units that are not doing well. If on the other hand a company is successful a CEO might have the confidence to redirect excess resources in order to acquire or develop new businesses. We include return on assets (ROA) as well as change in ROA over the two years prior to a succession in order to account for strategic changes caused by changes in company performance.

Company cultural diversity is an indicator of a company's level of international diversification, thus we controlled for its possible effects on strategic change. If a company has already reached a high level of international diversification there might be less need to further expand, i.e. less strategic change will take place. On the other hand, if the company is not very diversified internationally, there might be more leeway to further expand, and hence

the level of strategic change might change more drastically. This control variable reflects the cultural diversity the company's network of subsidiaries has in the year prior the succession.

We computed each company's cultural diversity with the formula used by Rumelt, Dosi, and Winter (1994) to measure product diversification. We obtained measures of cultural distance from Hofstede and from the GLOBE study.¹⁰ Using the Kogut and Singh formula (Kogut & Singh, 1988) we then calculated the cultural distance scores between all pairs of subsidiaries the year before the succession. We then took their sum and divided it by the total number of pairs.

Company product diversity reflects company breadth in terms of industries. This variable takes into account the impact of a company's degree of product diversity on strategic changes. A broadly positioned company might see little advantage to further expanding an already diversified product scope, while a more narrowly focused company might enter new product markets as a viable means of growing. Following Mahoney (1992), we used a Berry-Herfindahl index (Berry, 1971) to take into account the breath of a company's business portfolio.

4.4.5 Analysis

Table 4-1 presents the descriptive statistics for the dependent, independent, and control variables. None of the correlations coefficients of the independent variables within a single model is greater than 0.5, therefore they are all well below the conservative critical threshold level of 0.8 (Kennedy, 2008) indicating that multicollinearity is not a problem.

We tested the hypotheses using multivariate negative binomial regressions models. Our dependent variable of strategic change was measured as the absolute value of the difference in the pre-succession and post-succession number of investments and divestments in the respective two-year periods. This measurement results in a limited range of positive integer values for the dependent variable. OLS and GLS regression methods cannot account for the non-negativity of such event-counts and for the discontinuous nature of the count data. This can lead to asymptotically biased and inconsistent estimates of the regression coefficient (Greene, 1997). Poisson regression models have been widely used to solve these problems.

¹⁰ Hofstede's proposal for calculating cultural distances has been extensively used in the international business literature (Gómez-Mejía & Palich, 1997). Criticism of Hofstede's four cultural dimensions prompted us to complement this index with nine dimensions and scores of the GLOBE project (House, 2004). In this way we were able to incorporate more cultural aspects.

Poisson models are basically nonlinear regressions. A major shortcoming of the Poisson regression is that it assumes that the expected number of expansion steps in the observation window equals the variance of the number of expansion steps in that observation window. “Overdispersion”, the condition where the variance exceeds the mean, is a frequent problem stemming from the presence of interdependence amongst the expansion steps (Greene, 1997). A model that is well suited to handle overdispersion is the negative binomial regression model (Hausman, Hall, & Griliches, 1984). A likelihood-ratio chi-square test revealed that the response variable is over-dispersed and that it is not sufficiently described by a simpler Poisson distribution. Hence, a negative binomial regression is in our case more appropriate than a Poisson regression. We used STATA’s nbreg command with the robust option in order to obtain robust standard errors for the regression coefficients.

Table 4-1: Correlation Matrix

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Δ Strategic change (combined)	8.63	11.06	1															
2 Δ Strategic change (product)	1.79	2.67	0.28	1														
3 Δ Strategic change (international)	5.95	7.60	0.86	0.21	1													
4 Δ Educational background	1.59	1.42	0.19	0.22	0.16	1												
5 Δ Functional experience	5.31	3.19	-0.05	-0.09	-0.03	0.25	1											
6 Δ Industry experience	7.81	5.81	0.08	-0.06	0.03	0.21	0.23	1										
7 Δ International experience	4.43	8.68	0.22	-0.02	0.29	0.12	0.13	0.10	1									
8 Company insider	0.27	0.44	0.02	0.03	0.00	0.16	-0.12	0.13	-0.04	1								
9 Departing CEO tenure	7.80	6.90	-0.06	-0.06	-0.01	-0.13	-0.15	-0.13	-0.15	-0.11	1							
10 Forced succession	0.28	0.45	-0.17	0.19	-0.25	-0.02	-0.02	-0.25	0.00	0.15	-0.26	1						
11 Δ Company size	16.72	56.44	-0.13	-0.09	-0.10	0.06	-0.05	-0.01	-0.11	-0.11	-0.05	-0.01	1					
12 Company age	9.55	3.21	-0.06	-0.09	0.00	-0.11	-0.04	-0.12	-0.02	0.11	0.13	-0.01	-0.23	1				
13 Δ ROA	4.47	348.52	0.01	-0.03	-0.03	-0.18	-0.02	0.00	-0.04	-0.09	-0.04	0.04	0.01	-0.19	1			
14 ROA	0.07	0.06	-0.07	0.13	-0.01	-0.09	0.12	0.06	0.01	-0.05	0.03	-0.23	-0.15	0.04	-0.11	1		
15 Cultural diversity	0.70	0.32	-0.01	-0.02	0.15	0.06	-0.13	-0.08	0.26	0.14	-0.05	-0.06	-0.11	-0.03	-0.15	0.26	1	
16 Product diversity	0.67	0.24	0.10	0.21	-0.03	0.05	-0.07	-0.18	-0.24	-0.11	0.20	0.00	-0.02	0.20	0.01	0.03	-0.41	1

4.5 Results

Table 4-2 shows the results of the regressions explaining strategic changes. Models 1, 3, and 5 show the effects of the control variables on the difference in the number of investments and divestments before and after a CEO succession. We have argued that the more a predecessor and successor differ in terms of their educational backgrounds, the greater the difference in the level of strategic change. In models 2, 4, and 6 the coefficient of educational dissimilarity is positive and significant at the 5%, 1%, and 10% level respectively (0.153, 0.219 and 0.139), thus Hypothesis 6 is supported. We have also argued that the more an outgoing CEO and incoming CEO differ in terms of particular kinds of experience the greater the difference in the level of strategic change will be. In Hypothesis 7 we predict that the level of strategic change will be greater when there is greater dissimilarity between the previous and the subsequent CEO in functional experience, and in Hypothesis 8 when there is greater dissimilarity in industry experience. The coefficients for dissimilarity in functional experience and in industry experience in models 2, 4, and 6 are not significantly different from zero, thus Hypotheses 7 and 8 are not supported. In Hypothesis 9 we predicted that greater dissimilarity in international experience between the CEO stepping down and his or her successor will be reflected in a greater difference in the pre-succession and post-succession level of strategic change. Models 2 and 6 support this hypothesis with the coefficients of international experience taking the predicted positive sign (0.029 and 0.026) at the 1% and 5% significance level, respectively.

Robustness tests

To confirm the robustness of our results we performed a number of additional tests. First, we applied alternative weighing schemes for our educational dissimilarity variable. We used other linear increasing schemes (0,1,2,4,8) and exponentially increasing ones (0,1,4,9,16). This did not affect the sign and size of the coefficients. Second, prior research has found that older executives have more conservative decision making styles (Bertrand & Schoar, 2003) and may forego risky behaviors that can jeopardize their financial security (Wiersema & Bantel, 1992). Hence, they are likely to initiate fewer strategic changes. To take this effect into account we entered CEO age as an additional control variable. There were no changes in the size and sign of the coefficients. Third, we experimented with alternative event windows to calculate the changes in prior performance and company size (such as one or three years). Again the results confirmed the robustness of our findings. Fourth, we also used different operationalizations for company size: company assets and number of employees. Both

operationalizations delivered the same results. Fifth, as Rugman and Verbeke (2004) have shown, company strategies are affected by economic conditions in their domestic markets. Hence, we controlled for changes in Germany's GDP. Again, this did not affect our results. Finally, we also checked whether there is less difference in the level of strategic change when the predecessor CEO is named to the company's supervisory board, that is, remains affiliated to the company, but our results show that this is not the case.

Table 4-2 – Determinants of changes in the level of strategic change after CEO succession^a

VARIABLES	Δ Strategic Change		Δ Product Scope		Δ International Scope	
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
Dissimilarity in						
Educational background		0.153 (0.074)*		0.219 (0.079)**		0.139 (0.077)†
Functional experience		-0.037 (0.033)		-0.051 (0.032)		-0.051 (0.035)
Industry experience		-0.009 (0.017)		-0.004 (0.017)		-0.020 (0.020)
International experience		0.029 (0.011)**		0.001 (0.008)		0.026 (0.01)*
Controls						
Motivation						
Forced succession	-0.710 (0.222)**	-0.626 (0.249)*	0.571 (0.263)*	0.533 (0.258)*	-0.954 (0.252)***	-0.922 (0.275)***
Individual CEO characteristics						
Company insider	0.037 (0.221)	-0.006 (0.217)	0.124 (0.210)	-0.026 (0.216)	-0.100 (0.235)	-0.114 (0.237)
Departing CEO tenure	-0.012 (0.030)	-0.000 (0.029)	0.015 (0.032)	-0.007 (0.029)	-0.015 (0.029)	-0.009 (0.031)
(Departing CEO tenure) ²	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
Company characteristics						
Δ Company size	-0.003 (0.001)*	-0.003 (0.001)*	-0.005 (0.006)	-0.005 (0.005)	-0.002 (0.001)	-0.002 (0.001)
Company age	-0.034 (0.033)	-0.019 (0.033)	-0.089 (0.028)**	-0.067 (0.026)*	-0.005 (0.030)	0.006 (0.028)
Δ ROA	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
ROA	-2.516 (1.797)	-2.017 (1.469)	1.330 (2.228)	1.771 (1.888)	-2.328 (2.195)	-1.756 (1.860)
Cultural diversity	0.084 (0.423)	-0.213 (0.406)	0.258 (0.333)	-0.004 (0.351)	0.761 (0.430)†	0.391 (0.451)
Product diversity	0.965 (0.544)†	1.039 (0.437)*	1.694 (0.431)***	1.229 (0.435)**	0.565 (0.510)	0.460 (0.437)
Constant	2.274 (0.655)***	1.992 (0.671)**	-0.305 (0.478)	-0.050 (0.592)	1.440 (0.614)*	1.614 (0.762)*
Alpha	0.921 (0.112)***	0.827 (0.109)***	0.451 (0.141)***	0.36 (0.115)***	0.905 (0.112)***	0.818 (0.106)***
Log pseudolikelihood	-362.91	-357.12	-197.45	-192.95	-321.46	-316.70
Chi-squared	46.58	75.93	33.37	44.17	36.85	49.25

Robust standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05, † p<0.1 ^a n = 116

4.6 Discussion

We were motivated to carry out our study by our realization that there is an important gap in the CEO succession literature, namely how CEO dissimilarity during succession affects change in the pre-succession and post-succession level of strategic change. Previous research has shown that CEO succession significantly impacts companies. While the type of succession and CEO characteristics have been shown to be linked to strategic change, no empirical work of which we are aware has examined the driving forces behind diverging levels of pre-succession and post-succession strategic change. We do examine those drivers by comparing characteristics of predecessor and successor CEOs. Taking a cognitive psychology approach we argued that CEOs with different cognitive maps will take different strategic directions. Hence if predecessors and successors differ significantly in certain key characteristics, then the level of strategic change they initiate is likely to substantially vary as well. Drawing on diverse demographic characteristics to approximate CEO dissimilarity we have been able to provide new insights on the link between CEO succession and the strategic change that may, or may not, emerge.

Our findings offer partial support for our prediction that greater cognitive dissimilarities between an incoming and outgoing CEO increase the difference between pre-succession and post-succession levels of strategic change. We provide evidence that greater dissimilarity in the educational background of CEOs and in their international experience is associated with a greater difference between pre-succession and post-succession levels of strategic change. Our measure of educational background dissimilarity had a positive effect on our three operationalizations of strategic change, the combined measure of product and geographic scope investments and divestments, the separate measure of product scope changes, as well as changes in the number of foreign investments and divestments. Dissimilarity in the international experience of the outgoing and the incoming CEO had a positive effect on the combined measure as well as on the international scope change measure but not on the product scope measure. As previous research has indicated, the international experience of managers does indeed influence their readiness to enter foreign markets and by extension their strategic decisions about international investments and divestments (e.g. Athanassiou & Nigh, 2002), though our results show that such experience has less of an influence on product scope change. We predicted that differences in functional experience as well as differences in industry experience would have an impact on the number of investments and divestments, but our results did not bear us out. A significant difference between CEOs in either of these

characteristics did not lead to an appreciable difference in any of our three operationalizations of strategic change. Although we suspected that industry experience dissimilarity would not have much effect on international scope changes, we did think that we would find that when succeeding CEOs come from different industries it leads to some degree of change in the level of product scope. In fact, we found no support for our prediction about the outcome of differences in industry experience, nor did we find support when we used the combined measure that includes both product and international investments and divestments. What possible explanations are there for our findings showing that dissimilarity between CEOs in terms of education and international experience result in differences in the level of strategic change, but that differences in functional and industry experience do have not?

It may be that formal education and practical training boil down to teaching us ways to approach issues and tasks, and the prescribed approaches differ field to field. In other words, education has more influence on the formation of the cognitive map. In the end, an engineer will approach a problem differently than an accountant. Undoubtedly functional experience too is advantageous, but as executives climb the career ladder they usually play a number of different functional roles and so by the time they become the top executive they have developed what might be seen as a multi-functional, or rather general type of approach. In other words, while functional dissimilarity might be visible and important in specific cases, general managerial decisions at the corporate strategic level are probably not affected by it to any traceable extent. The lack of evidence of a clear link between CEO dissimilarity in industry experience and difference in the level of strategic change can be explained in a similar way. Many of the challenges faced by CEOs are not industry specific. Moreover, many companies are active in several industries. Hence, while experience in a given industry might be advantageous in realizing specific opportunities, generally speaking, industry specificity does not come into play when it comes to the better part of a CEO's responsibilities. International experience is somewhat different. Daily, Certo and Dalton (2000) argue that international experience is inimitable and nonsubstitutable. Time abroad goes hand in glove with exposure to other cultures, and culture has been shown to affect cognition to a considerable degree. Clearly a CEO's cognitive map does influence his or her decision making. For instance, Reuber and Fischer (1997) show that international experience leads to higher levels of internationalization. Hence CEOs that are dissimilar in terms of international experience are likely to have formed more profoundly different cognitive maps.

Our study makes several contributions to the literature on CEO succession and the strategic change. First, while previous studies have looked at how CEO succession leads to strategic change, we consider the impact of succession on changes in the level of strategic change. By comparing pre-succession and post-succession levels of strategic change, we are able to more accurately predict what effect a new CEO might have on a company's strategic choices and thereby contribute to a growing understanding of the factors behind strategic change in companies. Second, with few exceptions (see for example Ndofor *et al.*, 2009), previous research has not directly examined differences in the demographic characteristics of outgoing and incoming CEOs. Our results show that it is not only the characteristics of successors that are important determinants of post-succession strategic outcomes, but also differences between predecessors and successors. This finer grained comparison allows us to go beyond prior binary distinctions, such as those between insider and outsider, and to move the focus to the cognitive processes of CEOs and its determinants. By examining the dissimilarities between the CEOs we delve deeper into the effects changes in cognitive maps that accompany succession events have on company strategy. Third, we complement previous work by applying a broad measure of dissimilarity that takes into account a CEOs' educational background, and his or her life-long functional, industry, and international experience. By including the amount of time a CEO has spent in a function, industry, or foreign country we can account for differences in the amount of influence past experience is likely to have had on the shaping of that CEO's cognitive map. This approach contributes to the discussion on demographic dissimilarity and offers a more detailed comparison of individuals. Although this approach requires considerable work, it allows us to compare individual characteristics in much finer detail because it is not only the number of such experiences but also their duration influences a CEO's cognitive map. Fourth, most of the research on CEO succession and strategic change has been done on U.S. companies. Our study is one of the few using a non-U.S. sample (Li *et al.*, 2008; Sakano & Lewin, 1999; Yokota & Mitsuhashi, 2008; Zuniga-Vicente *et al.*, 2005). Yet cultural context and traits are important contingencies in strategic decision making (Hitt *et al.*, 1997). Market monitoring and block holding equity ownership are prevalent in the U.S. Newly appointed CEOs there might feel pressured to initiate drastic change, while CEOs in other business contexts might take their time with a more evolutionary approach to change (Chang & Rosenzweig, 1998). In a similar vein, cultural contexts affect the amount of discretion executives have (Crossland & Hambrick, 2007), and so how much strategic change they might be able to initiate. Hence, our sample of German companies casts new light on the findings of studies using U.S. company data. Fifth, by using the number of

investments and divestments as our measure of strategic change we are able to capture strategic change that might otherwise have gone unnoticed. After all, major strategic change is not only a question of adding or cutting entire business segments (Boeker, 1997a), but can involve expanding or contracting existing segments. While a company's industry portfolio may stay the same, shifts in the relative importance of single segments can represent significant strategic change (Wiersema, 1992). Our measure captures such movements and so captures a greater variety of strategic change than previous research (Boeker, 1997a).

4.7 Implications for practice

Our results also have important practical implications. Selecting a CEO is a key organizational decision which has ramifications for company strategy and performance. It is important then that those responsible for naming a CEO understand the potential consequences of the kind of choice they make.

Companies in crisis tend to bring in a CEO from outside (Guthrie & Datta, 1998) in the hope that an outsider will be more free to initiate needed strategic change. While there may be reason to believe that an outsider will initiate strategic change, our results reveal that a better predictor of whether a succeeding CEO will initiate dramatic strategic change is the degree of dissimilarity between him or her and the CEO being replaced in terms of strategic framing, knowledge base, view, and interests. Even more importantly, our results show that dissimilarity in education and in international experience is what really matters. Companies that want the CEO they name to initiate significant changes in strategy would be well advised to select a candidate with demographic attributes that are deeply dissimilar to those of the CEO being replaced. Hence, our results corroborate Pfeffer's (2005) reasoning according to which a far-reaching change in the mental models of those in charge of the company is needed in order to substantially alter a company's strategy. Hence, these insights can be of importance whenever the company faces a need for far-reaching strategic change.

Moreover, our findings suggest that companies should constantly be revising the role the CEO should play. In other words, companies should continuously engage in strategic succession planning, screening for potential candidates and ascertaining their dissimilarity to the incumbent CEO. Relying on broad categories such as insider/outsider may not be appropriate. We second the advice of Guthrie and Datta (1998) according to which HR executives should be more involved in the CEO selection process. As they are engaged in decisions about the filling of lower level positions, HR executives have unique skills in assessing the fit between

candidates and the tasks the company wants performed. Those skills are likely to be very valuable in assessing the weight that should be attached to different elements of the differences between the CEO who is stepping down and the persons being considered for the top job. After all, as we have shown, the outcome of the naming of a particular individual to the post of CEO can bring about a significant change in strategy – or not.

Finally, firms may get an early warning of the likelihood of a competitor's major post-succession strategic change by looking at the dissimilarity between its predecessor and successor CEO.

4.8 Limitations and directions for future research

No single study can embrace all aspects of an issue. We acknowledge here limitations of our study. First, the nature of our sample may limit generalization of our findings. Nonetheless, we decided to look at CEO succession at large publicly owned companies as this allowed us to access extensive and verifiable information both on the CEOs and on the companies. Our sample ensured that exhaustive longitudinal information was available on the respective companies' investments and divestments as their size meant that we had annual reports and different kinds of communication with shareholders as well as and media archives.

Second, while we controlled for several important factors that influence willingness and ability to persist with a strategy or to make a change, like the predecessor's tenure as CEO and company size, age, and performance, we were unable to control for the impact that a company's supervisory board may have on the ability of a successor to initiate strategic change, a non-negligible factor explored in the extant strategic change literature (Westphal & Fredrickson, 2001). The companies in our sample are subject to German corporate law that is more restrictive than U.S. corporate law with regard to board governance. According to Crossland and Hambrick (2007) CEO/board chair duality, meaning that the CEO chairs the board that is supposed to monitor him or her, is the prevailing practice among U.S. companies. In contrast, German corporate law dictates a two-tiered board system and heavy employee representation on the supervisory board. The two-tiered board system consists of a managerial (executive) board lead by the CEO (which is similar to the U.S. top management team) and a supervisory board. To ensure effective monitoring, no company executive, not even the CEO, is permitted to sit on the supervisory board. Rather, the supervisory board is comprised of shareholder, debt holder, and employee representatives. Depending upon company size and industry, employee representatives make up half of the supervisory board

members (Dinh, 1999). While it is usually possible to know who sits on the board, German law does not require that information about those individuals be published and data can be quite limited and difficult to come by – in particular for employee representatives.

Third, we used four demographic variables as a proxy for the construct of CEO dissimilarity. These demographic variables may not fully capture the cognitive variables that more directly tap into the CEO dissimilarity construct. Personality characteristics, such as narcissism, hubris, locus of control, or need for achievement have been shown to affect the behavior of CEOs. Such characteristics may contribute to the kind of dissimilarity between a predecessor and successor that impacts strategy (e.g. Chatterjee & Hambrick, 2007; Li & Tang, 2010; Miller, Kets de Vries, & Toulouse, 1982; Miller & Toulouse, 1986). But, as pointed out by Pfeffer (1983) and Hambrick and Mason (1984), demographic data has the advantages of being objective and available from secondary sources.

Additional studies that focus on various aspects of CEO dissimilarity are clearly needed. A first step might be to replicate and refine this study. Replication is possible in a number of ways. Future studies might explore the effect of CEO dissimilarity in varying contexts. According to Hambrick and Finkelstein (1987) a CEO's influence on strategy is contingent upon organizational context, company size or the power of stakeholders. The effects observed in this study should be much more pronounced whenever CEOs have a substantial amount of discretion. By contrasting the effects of CEO dissimilarity across varying organizational contexts, it might be possible to uncover whether the influence of respective demographic characteristics is contingent upon context, and if so to what degree. In other words, it may well be that in different organizational contexts the effects of CEO dissimilarity are driven by different demographic characteristics. Cultural context too has been shown to affect a CEO's influence on company strategy and strategic change (Crossland & Hambrick, 2007; Sakano & Lewin, 1999). Future researchers may want to explore whether cultural context affects the impact of CEO dissimilarity, and if it does, to what degree. In addition to this, researchers might replicate this study using additional demographic characteristics beyond the four used in this study, or the personality characteristics mentioned earlier.

We look at strategic change on a corporate level. Other research has shown that CEO succession may trigger different kinds of strategic change (Giambatista et al., 2005). Hence, future research might replicate our study using alternative operationalizations of strategic change, for example, with regard to actors, strategy processes, and competitive strategy.

It would also be possible to refine our study in a number of ways. We adopted an organizational demography approach (Pfeffer, 1983) to establish a link between CEO dissimilarity and pre-succession and post-succession levels of strategic change. Others might apply more direct measures of CEO perceptions and beliefs. For instance, instead of using demographic characteristics, future research might directly measure cognitive maps and the differences between them (Calori, Johnson, & Sarnin, 1994; Hodgkinson, Maule, & Bown, 2004). While measuring the cognitive maps of CEOs is likely to require a qualitatively oriented research design and a small sample, the insights generated by such research might significantly add to our understanding of CEO dissimilarity and its effects on company outcomes.

Future research might use broader measures of CEO dissimilarity. Research linking CEO characteristics to organizational outcomes has traditionally focused on characteristics that are, by and large, associated with the CEO's role within the organization. However, it is obvious that a CEO's perceptions and beliefs are shaped not only by job-related characteristics, but also by the broader social context in which the CEO is embedded (Watson, 2003). Thus, in a more fine-grained approach to CEO dissimilarity, future research might incorporate CEO characteristics that are not directly work related, such as the social milieu in which the CEO is embedded, political opinions, pastimes, religion, and so on. Similarly, future research might build upon the concept of cognitive communities (Ndofor et al., 2009; Porac et al., 1989).

In sum, we believe that there are many other aspects of CEO dissimilarity that might impact strategic change. We hope that our findings will stimulate future research on this fascinating topic.

5 Seeking uniqueness through divestments ¹¹

Nothing is so common-place as to wish to be remarkable.

Oliver Wendell Holmes,

The Autocrat of the Breakfast Table

I will not choose what many men desire,
Because I will not jump with common spirits
And rank me with the barbarous multitudes.

Shakespeare,

The Merchant of Venice

Among the most central, fundamental needs of individuals is the one to be distinctive and special. As the two quotes above indicate, being unique contributes to self-identity, attracts attention of others, and enhances self-esteem and social status (Lynn & Snyder, 2002; Maslow, 1962; Snyder & Fromkin, 1980). Simultaneously, individuals also have a need for similarity. Similarity reduces subjective uncertainty, provides validation of perceptions, attitudes, emotions, and behaviors and enhances empathy, helping, and liking (Byrne, 1971; Hogg, 2001; Tajfel & Turner, 1979). The needs for uniqueness and similarity oppose one another. As interpersonal difference becomes more and more accomplished, the need for uniqueness is satisfied but the need for similarity is activated; conversely, as interpersonal difference decreases, the similarity need is reduced but the need for uniqueness is activated. These competing drives hold each other in check and ensure that interests in one need are not consistently sacrificed to interests in the other need (Leonardelli, Pickett, & Brewer, 2010).

Although both needs are characteristic for individuals, the strategy and management literatures have emphasized the need for similarity (see, for example, Barsade, Ward, Turner, & Sonnenfeld, 2000; Nielsen, 2009; Tsui & O'Reilly III, 1989; Westphal & Zajac, 1995; Zajac & Westphal, 1996). In contrast, the need for uniqueness has been neglected. In this study, we address this deficiency in the literature. We build on uniqueness theory (Snyder & Fromkin, 1980) to explain behavioral responses of successor CEOs to information about their

¹¹ This chapter is based on Hutzschenreuter, Kleindienst & Greger, Seeking uniqueness through divestments, unpublished manuscript.

similarity to their predecessors. We posit that CEOs are individuals exhibiting a high need for uniqueness. Accordingly, successor CEOs' perceptions of extreme interpersonal similarity to their predecessors are experienced as being unpleasant. As a result, successor CEOs take actions directed at reducing similarity and re-establishing uniqueness. In particular, we propose that in their pursuit of uniqueness incoming CEOs deliberately divest organizational units their predecessors had invested in. We test our hypothesis using a unique sample of 157 succession events of 71 large German firms and find considerable support for our theory.

Our study is organized as follows. First, we introduce social psychology theory on individuals' need for uniqueness. Next, we argue that CEOs exhibit a high need for uniqueness. We then develop hypotheses regarding the relationship between interpersonal similarity and divestment of organizational units, including the common firm insider/outsider as well as forced/non forced distinctions. Then, we present the methodology and results of our study. Finally, we close with a discussion and short conclusion.

5.1 Theoretical background

5.1.1 Uniqueness Theory

Uniqueness theory, developed by Snyder and Fromkin (1980), addresses individuals' emotional and behavioral reactions to information about their similarity to others.¹² The central tenet of uniqueness theory is that individuals strive to establish a sense of moderate self-distinctiveness. Individuals do so, because perceptions of either extreme similarity or extreme distinctiveness are experienced as being unpleasant. Accordingly, the more individuals perceive similarity between themselves and others, the more they become motivated to reaffirm their distinctiveness (Lynn & Snyder, 2002). Basically, there are two ways for individuals to reaffirm their distinctiveness. First, individuals may disregard similarity-enhancing information, focusing instead on uniqueness-verifying information. Second, individuals may increase the distinctiveness of their attitudes and behaviors. Hence, if an individual acquires information leading to perception of high similarity to another individual the focal individual should become highly sensitive to opportunities to re-establish uniqueness, engaging in behavior that emphasizes his or her differences (Snyder & Fromkin, 1980).

In their pursuit of uniqueness individuals may choose among an abundant set of attributes to differentiate themselves from others. However, Snyder and Fromkin (1980), propose that

¹² Closely related to uniqueness theory is work on individuation (Maslach et al., 1985), optimal distinctiveness (Brewer, 1991), and social differentiation (Lemaine, 1974)

individuals' motivations to seek uniqueness is stronger for attributes that are important to their self-concepts than for attributes that are perceived as being less self-relevant (Lynn & Snyder, 2002). However, though individuals experience a strong urge for distinctiveness, their uniqueness striving is constrained by their need for social approval. Hence, individuals seek uniqueness on attributes that do not lead to social rejection and in ways that are socially acceptable over socially risky attributes and ways. In other words, individuals seek uniqueness that does not result in social disapproval (Snyder & Fromkin, 1980).

Though uniqueness theory posits that all individuals strive to establish a sense of moderate self-distinctiveness, Snyder and Fromkin (1977; 1980) also argue that there are individual differences in the strength of this need. The stronger the need for uniqueness, the more sensitive the individual is to similarity information. Thus, the stronger an individual's need for uniqueness, the more pronounced the negative emotions experienced in response to information about their similarity to others and the behavior to re-establish a sense of specialness (Snyder, 1992). Hence, the behavior of individuals characterized by a strong need for uniqueness is typically characterized by actions directed at accentuating differences.

5.1.2 CEOs as high-need-for-uniqueness individuals

Research has found a particularly high need for uniqueness among individuals whose personal circumstances are likely to make them experience a sense of specialness (Lynn & Snyder, 2002). CEO related research, in turn, has shown that individuals operating at the strategic apex of a firm are likely to exhibit characteristics that distinguish them from the general population (Hiller & Hambrick, 2005), inducing a sense of specialness.

Typically, top managers, in particular CEOs, have a long history of significant and sustainable accomplishments. From the outset of their careers they have been measured against the best, making the elite their group of reference. They are the winners of a long lasting rally for the top job, during which their qualities and competencies have been approved and recognized. They are driven by strong internal forces, making them ambitious, power- and achievement-oriented, and striving for autonomy and high discretion in their job (Kotter, 1982; Miller & Toulouse, 1986).

Many CEOs draw strength and satisfaction from being a member of the elite circle of managers and long for recognition by their peers and the public. It is the affirmation, applause, and adulation that motivates them and keeps them going (Wallace & Baumeister, 2002). While it may be a mistake to conclude that CEOs are subjects to uniformly high levels of narcissism, CEOs have been argued to show above average levels of narcissism and hubris,

which can lead them to take bold actions to gain recognition by their peers (Chatterjee & Hambrick, 2007; Hayward & Hambrick, 1997).

CEOs are said to be special, and their long history of success and sustainable approval makes them believe they are. Accordingly, they tend to be confident of their abilities and have a positive self image, which they very much want others to have of them too. Hence, CEOs tend to be sensitive to how they are perceived by their firms' internal and external stakeholders; not only because this image determines their value on the job market (Sliwka, 2007) or their direct compensation (Hayward, Rindova, & Pollock, 2004), but also because they draw satisfaction from meeting standards of excellence, accomplishing difficult tasks, and achieving their goals (Miller & Dröge, 1986). From the above arguments, we conclude that CEOs exhibit a high need for uniqueness. As a result, CEOs should be very sensitive to similarity-related information and experience particularly negative emotions in response to information about their similarity to others. Thus, it is likely that as a reaction to perception of similarity, CEOs take action directed towards re-establishing distinctiveness.

5.2 Hypotheses development

The substantive and symbolic importance of the CEO position and the disruptive nature of changes in the top job makes CEO succession one of the most crucial events in the life of any firm (Giambatista et al., 2005; Kesner & Sebor, 1994). It is also a far-reaching event for both the predecessor and the successor. For the predecessor, retirement may be a confession of personal limits, threatening his or her belief in the future (Sonnenfeld, 1986). For the successor, it is an event that entails considerable challenges. Lacking experience, resources, and a favorable reputation, newly appointed CEOs are under enormous pressure to adjust to the demands of the job quickly (Shen & Cannella, 2002b; Vancil, 1987). Being vulnerable during their early time in office, successors strive to prove themselves to the board of directors and other powerful stakeholders within and outside the firm. Emphasizing their uniqueness, they aim at gaining legitimacy, authority, and political foothold.

A succession event is highly visible to the public making it subject to extensive media coverage (Graffin, Carpenter, & Boivie, 2011). Though the media may cover a wide variety of issues associated with the succession event, a particular focus of media coverage is typically the interpersonal comparison of predecessor and successor. Despite being preoccupied with the challenges imposed by the new jobs, successors nevertheless perceive information on the interpersonal comparison published in the media. While information on interpersonal differences to the predecessor is perceived favorably and contributes to

successor's self-identity, information on interpersonal similarity evokes negative emotions (Snyder & Fromkin, 1980). As a reaction to the negative emotions aroused by the perceived loss of uniqueness, successors take actions to distance themselves from their predecessors.

To re-establish a sense of distinctiveness, successors may take a wide variety of actions. In particular, successors may choose to divest organizational units their predecessors had invested in. They do so, for various reasons. First, conversely to investments whose success is easily observable, divestments are hard to evaluate later in a CEO's tenure – it is impossible to estimate the hypothetical outcome if a divestment had not taken place. Second, firms' investments and divestments are generally covered by the media, making such decisions visible to stakeholders within and outside the firm. Third, corporate restructuring including divestments are common after succession events. As such, divestments are socially acceptable and do not result in social disapproval. Finally, as such divestments constitute a direct reversal of decisions they establish a clear-cut distinction between predecessors and successors. Hence, divesting organizational units the predecessor had invested in is an effective means to re-establish uniqueness. Therefore:

Hypothesis 10: The higher the similarity between predecessor and successor, the more likely will the successor divest organizational units his or her predecessor had invested in.

5.3 Methodology

5.3.1 Sample

To test our hypothesis, we compiled a unique dataset consisting of CEO successions occurred in firms listed in the HDAX segment of the German stock exchange over the years 1985-2007.¹³ In particular, we gathered two sets of data: (i) data concerning predecessors' investments and successors' divestments as well as (ii) data concerning the succession events.

First, we created a database on each firm's portfolio of subsidiaries, encompassing a base portfolio at the beginning of the observation period as well as all investments and divestments during the respective period. We gathered information on firms' portfolios of subsidiaries using annual reports, direct contacts with the firms, and Thomson One Banker Deals database. Overall, we were able to obtain data for at least 5 consecutive years for 91 firms. Fourteen of those 91 firms had no succession during the consecutive years for which we could obtain data

¹³ The HDAX index includes the companies with the highest market capitalization in Germany.

on our dependent variable. One further firm had a succession, but there was a considerable time lag between the departure of the predecessor and a new CEO being appointed. All 15 firms were excluded, leaving us with a sample of 76 firms which experienced 177 CEO successions in total. Another eleven firms were dropped due to data availability, leaving us with a final sample of 65 firms and 108 CEO succession events that experienced a total of 906 divestments in the two years after the succession event.

Second, we added data on the firms' CEOs and the respective succession events. Given that no commercial database of German executives is available, we collected data from multiple sources. We started by identifying all CEOs in the period under investigation for our sample firms using information provided in the firms' annual reports. We then gathered data of each CEO using sources such as Hübner's Who is Who, the Lexis Nexis online database, and various encyclopaedias such as Sutter's International Red Series Who's Who in Germany, Wer ist Wer? Das Deutsche Who's Who, IBP Who's Who Germany, Who's Who in European Business and Industry, as well as the Munzinger online archive. In a next step we searched archives and databases of prominent newspapers (e.g. Frankfurter Allgemeine Zeitung) and magazines (e.g. Der Spiegel, Business Week and ManagerMagazin). To close remaining gaps and to test the reliability of the data we collected, we contacted the firms directly.

5.3.2 Dependent variable

The dependent variable is a binary variable that differentiates between the divestment of subsidiaries that the predecessor had invested in during his tenure as CEO and those divestments of subsidiaries that were invested prior to the predecessor's tenure. We assign a 0 to those divestments of subsidiaries that were not invested by the predecessor and a 1 for divestment of subsidiaries the successor had invested into. The dependent variable includes all divestments within the 2-year period following the succession event.

5.3.3 Independent variable and controls

The independent variable is the interpersonal similarity between predecessor and successor. To assess interpersonal similarity, we compared the respective educational-, functional-, industry backgrounds of predecessors and successors, as well as their age. In order for our findings to be able to be compared to and also complement earlier findings we chose to stick to these measures, which are most often discussed in the literature. Similar to Zajac and Westphal (1996) we used dichotomous measurements to measure similarity. The next three of the following variables were coded as 1 if the predecessor and successor CEO possessed the

same demographic trait and 0 otherwise. Educational similarity was measured via the subject of educational specialization. A succession where the predecessor had e.g. an engineering degree and the successor a business degree was coded 0, while a succession where both CEOs had e.g. a law degree was coded 1 (Zajac & Westphal, 1996). Functional background similarity was measured by comparing the primary functional background of both CEOs. The CEOs' primary function is the function they spend the majority of their career in. We based our classification of functional area on Hambrick and Mason's (1984) categorization. Industry background specialization was measured as the industry (first two digits of the industry classification code) where they spend the longest time during their career. Age similarity was measured as the absolute difference in age between both CEOs. The rationale to use these characteristics is that unlike information on other key determinants such as personal fit, leadership style, or personal character, information on the four chosen characteristics is readily available. They are prominent characteristic that can easily be used by the media to compare predecessors and successors. Stangor, Lynch and colleagues (1992) show that individuals use immediate apparent features of others as basis of categorization. Hence, CEOs may use these observable characteristics to compare themselves with their predecessors.

We include several controls in the regression analysis. First, we use a dummy variable to control for the type of succession (Wiersema, 1995). This variable equals 1 for forced successions and 0 for non-forced successions. Second, we included a dummy variable reflecting the firm insider/outsider distinction (Wiersema, 1992). This variable equals 1 for firm insiders and 0 for firm outsiders. Third, we also controlled for predecessors' tenure, measured as the number of years spent in the firm's top position (Gabarro, 1987). Fourth, we used sales as a proxy for firm size as well as change in sales over the two years prior to the succession event as a proxy for change in firm size. Fifth, we controlled for company age. Sixth, we included return on assets (ROA) as well as change in ROA over the two years prior to the succession event as a proxy for company performance and change in company performance, respectively. Furthermore, we used a Berry-Herfindahl index (Berry, 1971) to control for firm's product diversity. Finally, because the divestment activity may also depend upon the general investment and divestment intensity of the company, we include controls for the investments and divestment rate of the company, calculated as the number of investments respectively divestments during the 2-year period after succession divided by the number of subsidiaries in the year of succession. Table 5-1 provides the means, standard deviations, and bivariate correlations for all variables.

Table 5-1: Correlation Matrix

	Mean	S.D.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. Investment reversal	0.51	0.5	1.00															
2. Educational background similarity	0.2	0.4	-0.06 **	1.00														
3. Functional background similarity	0.43	0.5	-0.03	0.20 ***	1.00													
4. Industry background similarity	0.35	0.48	0.40 ***	-0.03 +	-0.08 **	1.00												
5. Age similarity	8.03	5.66	0.11 ***	-0.03 *	-0.06 **	0.04 *	1.00											
6. Forced succession	0.21	0.41	-0.05 *	0.34 ***	0.03 *	-0.25 ***	-0.22 ***	1.00										
7. Inside successor	0.52	0.5	0.30 ***	0.05 *	-0.33 ***	0.44 ***	0.23 ***	-0.07 ***	1.00									
8. Tenure	7.8	4.54	0.41 ***	0.01 +	-0.08 **	0.53 ***	0.02 +	-0.28 ***	0.32 ***	1.00								
9. Δ Company size	4.75	38.92	0.11 ***	-0.07 **	0.11 ***	0.09 **	0.11 ***	-0.05 **	0.17 ***	-0.03 +	1.00							
10. Company size	19962.3	18788.06	-0.13 ***	-0.23 ***	-0.08 **	0.2 ***	-0.32 ***	-0.31 ***	-0.02 +	0.11 ***	-0.12 ***	1.00						
11. Company age	117.99	49.03	0.02 +	-0.01 +	-0.04 *	0.27 ***	-0.13 ***	0.03 *	0.17 ***	0.08 **	-0.13 ***	0.06 *	1.00					
12. Δ ROA	-8.78	243.83	0.07 **	0.01 +	-0.13 ***	-0.10 ***	0.25 ***	-0.17 ***	-0.10 ***	-0.13 ***	0.03 *	-0.01 +	-0.23 ***	1.00				
13. ROA	0.07	0.05	0.26 ***	-0.04 **	-0.17 ***	0.53 ***	-0.05 *	-0.32 ***	0.29 ***	0.40 ***	-0.09 ***	0.23 ***	0.30 ***	-0.09 **	1.00			
14. Product diversity	0.83	5.61	0.07 **	-0.11 ***	0.21 ***	-0.02 +	-0.04 *	-0.03 *	-0.03 *	-0.05 **	0.08 **	-0.15 ***	0.04 *	-0.07 **	0.07 **	1.00		
15. Inverse Mills ratio	0.53	0.13	0.02 +	-0.13 ***	-0.11 ***	0.40 ***	-0.24 ***	-0.32 ***	0.12 ***	0.31 ***	-0.19 ***	0.64 ***	0.19 ***	-0.33 ***	0.73 ***	0.11 ***	1.00	
16. Investment rate	0.17	0.18	-0.18 ***	-0.22 ***	0.37 ***	-0.07 **	-0.15 ***	-0.17 ***	-0.19 ***	-0.17 ***	0.09 **	0.28 ***	0.06 **	0.02 *	0.11 ***	0.04 *	0.15 ***	1.00
17. Divestment rate	0.2	0.14	0.13 ***	-0.08 **	-0.20 ***	0.19 ***	-0.32 ***	0.10 ***	0.14 ***	0.22 ***	-0.09 **	0.05 *	0.29 ***	-0.19 ***	0.35 ***	0.07 **	0.26 ***	0.06 **

***p<0.001, ** p<0.01, * p<0.05, + p<0.1; N=906

5.3.4 Analysis

Because we were only interested in divestments after the succession event, there was a possibility of a selection bias, since not all new CEOs divested subsidiaries during our observation window. One procedure that allows correcting for this is the Heckman selection model (Heckman, 1979). It is a two-stage estimation procedure that in a first stage estimates the probability of a divestment happening in the two years after the succession and then incorporates these estimates of parameters into a second stage. Although the results from the first stage are not displayed in this paper, it took the following form:

$$\text{Divestment} = \alpha + \beta_1 \Delta \text{Company size} + \beta_2 \text{Company size} + \beta_3 \text{Company age} + \beta_4 \Delta \text{ROA} + \beta_5 \text{ROA} + \beta_6 \text{Product diversity} + \varepsilon$$

Based on this estimation we calculated the inverse Mills ratios and added these parameters to our second stage model. For both estimation stages we used the probit regression method. This is the econometrical preferred procedure as our dependent variable is not operationalized by a continuous variable but by a limited dependent variable that has only two outcomes, zero or one (Greene, 2008). Due to the intrinsic nonlinearity of our limited dependent variable model the coefficients of our independent variables cannot be used to detect the true nature of the relationship in our model, but an additional analysis of the value and significance of the explanatory variables' marginal effect is required. Following Wiersema and Bowen's recommendation we additionally report for each model the marginal effects of each variable in Table 5-2. Model 1 is the base model that considers only the effects of the control variables. Model 2, 3, and 4 consider the respective effects of the educational-, functional-, and industry background similarity on the reversal of incumbent investments. Model 5 considers the effects of the age difference between predecessor and successor CEO and its effect on post-succession divestments. Model 6 considers the effects of the all four independent variables on divestments. We used STATA's 'probit' command and the "margins" post-estimation procedure with the data means option for our calculations. The Huber/White sandwich estimator was used to correct for nonindependence. The two-stage Heckman selection method was done manually.

5.4 Results

The models in Table 5-2 show the probability that a subsidiary that is divest during the 2-year period after the succession event had been invest by the predecessor during his tenure as CEO. Model 2 shows that educational background similarity has a highly significant negative

effect on the divestiture of the predecessor's investments. Graph (a) in Figure 5-1 shows the plot of the z-statistic values associated with the marginal effect against the predict value of the dependent variable (i.e. the probability of divesting an investment of the predecessor CEO). For each of our 906 observations the marginal effects and the z-statistics are plotted. The grey dots represent the marginal effects (scaled on the left y-axis) and the black crosses the z-statistics (scaled on the right y-axis). The marginal effects of educational similarity range from -0.199 to -0.056. Except for one z-statistic the absolute values associated with the marginal effects are below -1.96. The summary measure in model 2 computes a value of the marginal effect of -0.157 with a standard error of 0.04 and a z-statistic of -3.98 ($p < 0.001$). These results suggest that contrary to what we expected educational background similarity does not trigger negative emotions that call for reestablishing a higher degree of uniqueness. But instead, the higher the degree of similarity is the smaller is the probability of divesting the predecessor's investments. Model 3 shows the effect of functional similarity on the divestment of predecessor investments. The associated graph (b) shows that the marginal effects range from 0.037 to 0.130. The z-statistics are all greater than 1.96, except for very high probabilities. The marginal effect of model 3 has a value of 0.089, a standard error of 0.037, and a z-statistic of 2.40 ($p < 0.01$). These results show support for the hypothesis that high levels of similarity lead to greater probabilities of predecessor investments being

Table 5-2: Determinants of divestments after CEO succession

VARIABLES	Model (1)		Model (2)		Model (3)		Model (4)		Model (5)		Model (6)	
	Coefficient	Marginal	Coefficient	Marginal	Coefficient	Marginal	Coefficient	Marginal	Coefficient	Marginal	Coefficient	Marginal
Independent variables												
Educational background similarity			-0.537 ***	-0.157 ***							-0.799 ***	-0.219 ***
Functional background similarity					0.302 *	0.089 *					0.522 ***	0.143 ***
Industry background similarity							0.763 ***	0.218 ***			0.692 ***	0.190 ***
Age similarity ^a									0.212	0.063	-0.640	-0.176
Control variables												
Forced succession	0.266 +	0.079 +	0.459 **	0.134 **	0.231	0.068	0.276 +	0.079 +	0.275 +	0.081 +	0.475 **	0.130 **
Inside successor	0.349 **	0.103 **	0.362 ***	0.106 ***	0.439 ***	0.129 ***	0.223 *	0.063 *	0.341 **	0.101 **	0.423 **	0.116 **
Tenure	0.116 ***	0.034 ***	0.119 ***	0.035 ***	0.110 ***	0.032 ***	0.092 ***	0.026 ***	0.116 ***	0.034 ***	0.088 ***	0.024 ***
Δ Company size ^a	0.186	0.055	0.176	0.052	0.162	0.047	0.059	0.017	0.186	0.055	0.015	0.004
Company size ^b	0.965 *	0.287 *	0.561	0.164	0.973 *	0.287 *	0.644	0.185	0.993 *	0.296 *	-0.009	-0.002
Company age ^a	-0.201 +	-0.059 +	-0.185 +	-0.054 +	-2.01 +	-0.059 +	-0.313 **	-0.089 **	-0.200 +	-0.059 +	-0.285 *	-0.078 **
Δ ROA ^b	0.998	2.97	2.017	5.900	2.527	0.745	0.838	0.240	0.871	0.259	5.453 +	1.500 +
ROA	14.033 ***	4.167 ***	14.187 ***	4.149 ***	13.766 ***	4.056 ***	11.738 ***	3.362 ***	14.050 ***	4.180 ***	11.531 ***	3.171 ***
Product diversity ^c	0.385 ***	0.011 ***	0.308 ***	0.090 ***	0.332 ***	0.097 ***	0.376 ***	0.011 ***	0.386 ***	0.011 ***	0.173 +	0.047 +
Inverse Mills ratio	-6.038 ***	-1.796 ***	-5.593 ***	-1.635 ***	-5.765 ***	-1.698 ***	-5.951 ***	-1.704 ***	-6.049 ***	-1.799 ***	-4.743 ***	-1.304 ***
Investment rate	-1.062 ***	-0.316 ***	-1.204 ***	-0.352 ***	-1.375 ***	0.405 ***	-0.989 ***	-0.283 ***	-1.062 ***	-0.316 ***	-1.758 ***	-0.483 ***
Divestment rate	0.263	0.078	0.086	0.025	0.530	0.156	0.413	0.118	0.283	0.084	0.545	0.149
Intercept	1.264 **		-0.538 **		1.019 *		1.516 ***		1.243 **		1.001 *	
Pseudo log-likelihood	-476.202		-467.493		-473.768		-459.405		-476.18		-442.759	
Chi-square	281.98 ***		281.88 ***		305.68 ***		302.85 ***		282.96 ***		343.84	
Pseudo R-square	0.241		0.255		0.247		0.268		0.242		0.295	

Note: Marginals show marginal effects at variable means; ***p<0.001, ** p<0.01, * p<0.05, + p<0.1; N=906

^a Coefficient and standard error have been multiplied by 100

^b Coefficient and standard error have been multiplied by 10.000

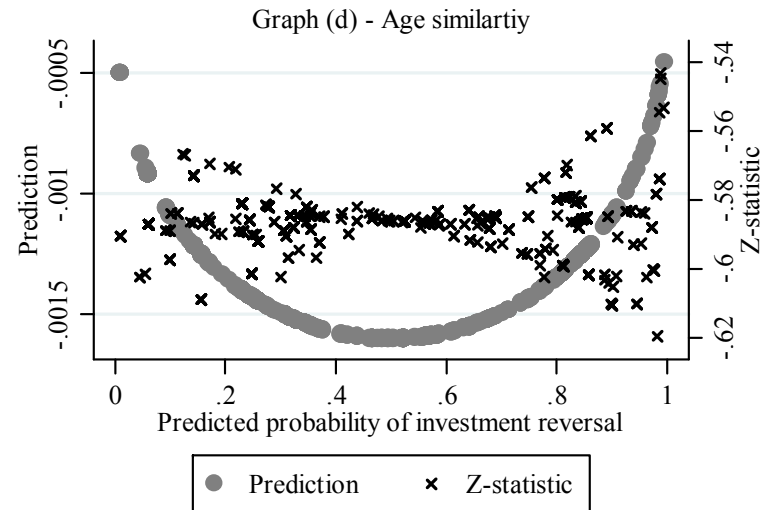
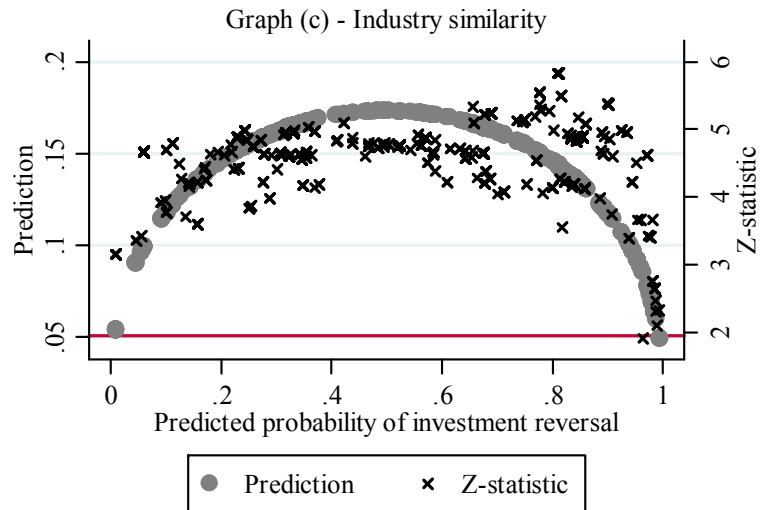
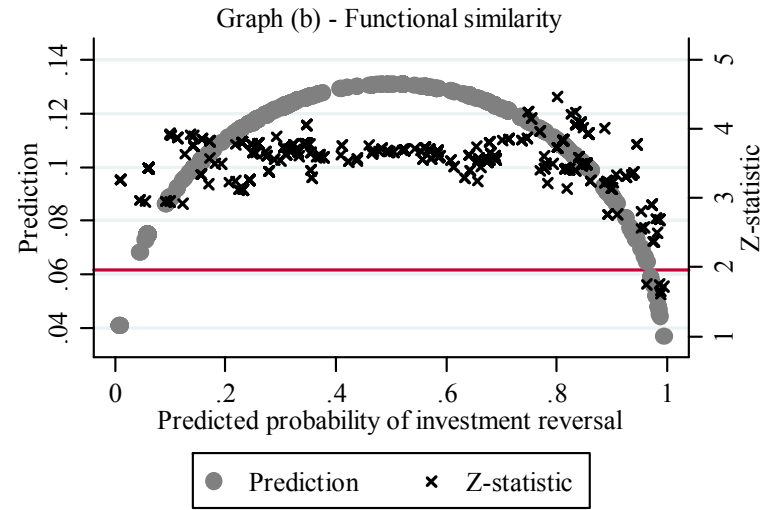
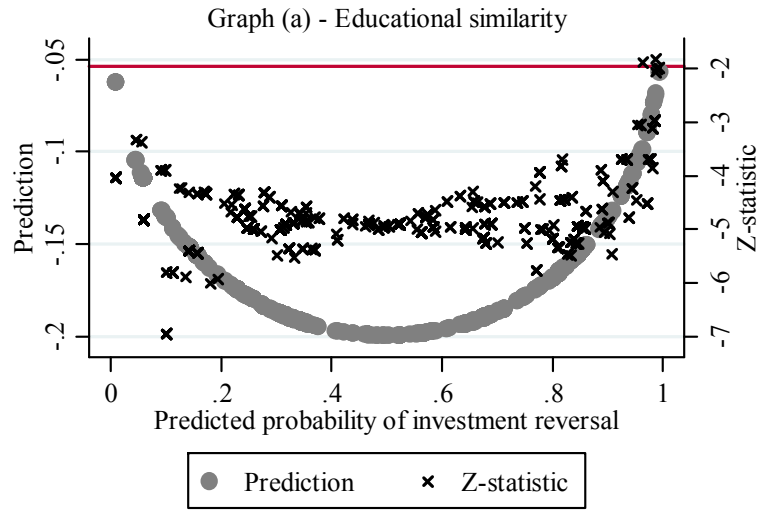
^c Coefficient and standard error have been multiplied by 10

divested by successor CEOs. Graph (c) shows the marginal effects of industry similarity on the probability of divestments. The marginal effects range from 0.049 to 0.173. Again the z-statistics are all greater than 1.96 except for high probabilities. The marginal effect in model 4 has a value of 0.218 with a standard error of 0.038 and a z-statistic of 5.64 ($p < 0.001$). These results show support for our hypothesis. Graph (d) shows the marginal effect of a similar age of predecessor and successor CEO on the probability that the successor divests investments of the predecessor. The marginal effects range from -0.002 to -0.0004. The z-statistics, however, take only values between -0.619 to -0.543, the summary measure in model 5 shows a marginal effect of 0.063, a standard error of 0.003, and a z-statistic of 0.21 ($p > 0.1$). Hence the results of model 5 are insignificant. Model 6 is the full model. The effects are consistent to the single models. Overall, the results show that educational similarity has a negative effect and functional- and industry-background similarity have a positive effect on the probability of the successor divesting his predecessor's investments. Age similarity shows not have an effect on the divestment probability in our sample firms.

5.5 Discussion and Conclusion

This study set out to further our understanding of CEO behavior in the context of CEO succession by introducing individuals' need for uniqueness from pioneering work in social psychology (Snyder & Fromkin, 1980). We have argued that CEOs are high-need-for-uniqueness individuals, and as such particularly receptive to information about their similarity to others. Given that similarity-related information arouse negative emotions we have argued that upon receiving similarity-related information with regard to their predecessors, successors are likely to take actions that re-establish their distinctiveness, for example, by divesting those organizational units their predecessors had invested in.

Figure 5-1: Analysis of marginal effects on the probability of investment reversal



According to Snyder and Fromkin (1980) individuals evaluate their distinctiveness along a number of self-related dimensions, which they perceive as important. We based our analysis on four different dimensions, which prior studies have suggested or shown to be important dimensions in the evaluation of group membership and comparison with other individuals. Our findings have different outcomes for our four operationalizations of CEO similarity. The results suggest that the age difference between predecessor and successor has no effect, functional and industry background experience similarity have a positive effect, and educational background similarity appears to have a negative effect on the probability that the successor divests and investment of his predecessor. The results therefore partially support our hypothesis that greater similarity between predecessor and successor leads to a higher probability of divesting investments of the predecessor CEO after succession. Contrary to what we expected educational similarity affects the divestment behavior in the opposite direction. Other than functional and industry experience CEOs gather their educational experience much earlier in their career. In many cases two or three decades will have passed by the time they are appointed to the position of CEO. Hence, education may either not be a characteristic that is of immediate importance for the successors evaluation of similarity, or the self-identification with the educational background may be so strong that the threshold-level of similarity is too high that even high level of similarity do not cause CEOs to take action for reestablishing uniqueness.

The paper thus aims to contribute to the literature in several ways. First, focusing on individuals' need for uniqueness, we complement existing research, which to date has consistently focused on the counterpart, namely, individuals need for similarity (Nielsen, 2009; Tsui & O'Reilly III, 1989). While this research has stressed that individuals receive satisfaction from being similar to others, our study has pointed to the dark side of being too similar to others. Second, most studies on CEO behavior are in the tradition of upper echelon theory (Hambrick & Mason, 1984). CEO behavior is explained through an information-processing perspective, with demographic variables determining what information is attended to. Thus, according to upper echelon theory higher interpersonal similarity should lead to similar actions. In contrast, this study takes a motivational rather than an information-processing perspective, by arguing that negative emotions aroused in response to similarity-related information motivate successors to take actions to re-establish their distinctiveness. As such, our study also contributes to the growing body of research dedicated to the impact of affection in behavior and decision making (Baron, 2008; Seo, Barrett, & Bartunek, 2004). Third, our study also contributes to the literature on corporate divestitures (Shimizu & Hitt,

2005; Weisbach, 1995). While prior studies have, by and large, focused on economic and agency theoretical arguments, we provide additional distinctive theoretical arguments that may explain corporate divestitures.

The suggestions for future research directly extend from the limitations of our study. First, the sample is made up of publicly-owned large German firms. The availability and quality of data was an overriding consideration, and while it might be argued that our findings may not be unconditionally transferable to small and privately-held companies, it is also true that we would not have been able to get the same data for them. Thus, future research may, for example, want to explore the effect of individuals' need for uniqueness in small firms. Second, Snyder and Fromkin (1980) argue that the need for uniqueness may be context dependent. While Western cultures encourage freedom and reward independence, Eastern cultures are characterized by a subjugation of the individual to the family and group. Hence, it may be worth to explore to test the ideas developed in this study in other cultural settings.

We believe that the time has come to shed new light on interpersonal similarity research, in particular considering individuals' need for uniqueness. With the present study, we have aimed at starting this new line of inquiry. Considering both fundamental needs of individuals – similarity and uniqueness – will eventually yield better explanations of behavior.

6 Conclusion

We began our study with the question of why new CEOs often show similar characteristics to their predecessors, and how the strategy of company changes with new successors stepping into office. To aim at answering these questions we empirically investigated on CEO succession events based on a dataset covering the top management teams and corporate level expansion processes of 91 German companies listed in the German HDAX index between the years 1985 and 2007. We believe our work makes the following contributions.

First, we examine the sources of informal power incumbent CEOs have that originate in personal, situational, and relational characteristics, and show how that power may enable them to put in place demographically similar successors. Second, unlike researchers who have dichotomized the complex and multidimensional construct of similarity between predecessor and successor CEOs on the basis of insider and outsider distinction, we consider four distinct demographic characteristics and develop a measure of similarity that considers the whole work history of the managers under investigation. Third, in addition to providing a thorough review of the CEO succession strategic change literature, we provide an extensive future research agenda in which we highlight theoretical and empirical gaps, outline several future research possibilities that may advance the research stream, and provide some new theoretical approaches to CEO succession and strategic change. Fourth, by considering the dissimilarities in the knowledge base and cognitive orientations of both predecessor and successor CEOs, rather than simply looking at the characteristics of an incoming CEO, we delve deeper into the effects changes in cognitive maps during succession events have on a company's strategy. Fifth, by comparing the pre-succession and post-succession levels of strategic change, we are able to show how much change can be expected, while most prior work was only able to predict whether change was going to happen, without being able to tell the extent of change that could be expected. Sixth, although CEOs with similar cognition may be expected to follow similar strategies, we show that they may well follow completely different strategies. Basing the arguments on a motivational rather than an information-processing perspective we show that highly similar CEOs may be motivated to reverse their predecessor strategies based on negative emotions that were aroused by similarity-related information. Furthermore, this study contributes to the literature on CEO succession by looking at non-US sample companies. We thereby enrich the literature by putting another light on some of the findings of earlier research that predominantly looked at US companies.

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