

## CEO succession and the CEO's commitment to the status quo

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**Abstract** Chief executive officer (CEO) commitment to the status quo (CSQ) is expected to play an important role in any firm's strategic adaptation. CSQ is used often as an explanation for strategic change occurring after CEO succession: new CEOs are expected to reveal a lower CSQ than established CEOs. Although widely accepted in the literature, this relationship remains imputed but unobserved. We address this research gap and analyze whether new CEOs reveal lower CSQ than established CEOs. By analyzing the letters to the shareholders of German HDAX firms, we find empirical support for our hypothesis of a lower CSQ of newly appointed CEOs compared to established CEOs. However, our detailed analyses provide a differentiated picture. We find support for a lower CSQ of successors after a forced CEO turnover compared to successors after a voluntary turnover, which indicates an influence of the mandate for change on the CEO's CSQ. However, against the widespread assumption, we do not find support for a lower CSQ of outside successors compared to inside successors, which calls for deeper analyses of the insiderness of new CEOs. Further, our supplementary analyses propose a revised tenure effect: the widely assumed relationship of an increase in CSQ when CEO tenure increases might be driven mainly by the event of CEO succession and may not universally and continuously increase over time, pointing to a “window of opportunity” to initiate strategic change shortly after the succession event. By analyzing the relationship between CEO succession and CEO CSQ, our results contribute to the CSQ literature and provide fruitful impulses for the CEO succession literature.

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## 1 Introduction

Numerous empirical examples, such as Dieter Zetsche at Daimler, René Obermann at Deutsche Telekom, and Josef Ackermann at Deutsche Bank, as well as a considerable amount of research literature [for an overview, see Hutzschenreuter et al. (2012)] provide empirical evidence for strategic change occurring after the chief executive officer (CEO) succession event. The CEO's commitment to the status quo (CSQ) is regularly used as one explanation for the positive relationship between CEO succession and strategic change (Hutzschenreuter et al. 2012). Defined as “a belief in the enduring correctness of current organizational strategies and profiles” (Hambrick et al. 1993: p. 402), CSQ is assumed to be a cognitive component of strategic rigidity (McClelland et al. 2010). Due to their detachedness to any prior strategic decisions—new CEOs are neither responsible for the strategic decisions of the former CEO nor have they any psychological or emotional investment in the prior course of action—new CEOs are expected to have a low CSQ, and therefore initiate strategic change. In other words, the cognitive explanation for strategic change occurring after CEO succession is that long-tenured, highly committed CEOs are replaced by successors who are less committed to the current strategy. Although generally accepted, this intervening mechanism of CSQ in the link between CEO succession and strategic change has been imputed but as of yet remains unobserved.

To offset this paucity of evidence and advance our understanding of the role of CSQ in strategic management settings, we analyze the relationship between CEO succession and CEO CSQ. In particular, we ask the following research questions: (1) whether new CEOs reveal a lower CSQ than established CEOs, and (2) whether new CEOs differ in their CSQ depending on the circumstances of the CEO succession event. CEO succession entailing strategic change is always a decisive moment for a firm with far-reaching consequences, such as stock price reactions and firm performance (Jalal and Prezas 2012; Denis and Denis 1995; Hillier and McColgan 2009; Furtado and Rozeff 1987; Warner et al. 1988; Helfat and Bailey 2005; Huson et al. 2004). Thus, we respond to calls for more research on the link between CEO succession and strategic change (Hutzschenreuter et al. 2012; Miller 1993). The aim of our research study is to get a better understanding of the intervening element CSQ, that is, to analyze the role CEO succession plays for CSQ. Therefore, we analyze the relationship between CEO succession and CSQ instead of strategic change, acknowledging the difference between intended and realized change (Hutzschenreuter et al. 2012; Hambrick and Fukutomi 1991).

We ground our research on the upper echelons perspective and CEO life cycle theory to theorize and test the relationships between different forms of CEO succession and CEO CSQ. Our central contention is that the new CEO's view of the current strategy is affected not only by the time in office but also by the circumstances of being appointed as new CEO. The CEO's commitment to this

strategy is shaped by this view, as well as his or her feeling of responsibility for and psychological and emotional investment in the current strategy.

Acknowledging the critical role CEO CSQ plays in firms' strategic adaptation in general and the role it is assumed to play in the link between CEO succession and strategic change, we strive for a twofold contribution of our research study. First and foremost, we add to the CSQ literature by providing insights on the explanatory power of CSQ in the CEO succession context. By analyzing the relationship between CEO succession and CSQ, we provide empirical evidence that overall CEOs show lower levels of CSQ right after being appointed as new CEO, thus indicating that low levels of CSQ might explain strategic change occurring after CEO succession. We refine this evidence by additionally taking into account the circumstances of the succession and their influence on the successor's CSQ. Thus, our research enriches the CSQ literature by underlining that contextual factors shape the level of CSQ.

Second, critically questioning the CEO life cycle theory and referring to an argumentation provided by Hutzschenreuter et al. (2012), we argue and empirically illustrate that the CEO succession effect differs from a pure duration of the CEO being in office. Our research results point to a window of opportunity<sup>1</sup> to initiate strategic change based on an inner conviction of the CEO, that is, a short time frame of low-level CEO CSQ right after the succession event. Thus, our research provides impulses to challenge the widely accepted tenure effect on CEO CSQ. This also contributes to a differentiated picture of the sources of inertial forces in organizations. Our study will sharpen our understanding of CSQ and consequently enrich our knowledge of the microfoundations of strategic change.

In the next section, we elaborate on prior CSQ research and the underlying theoretical framework to develop our hypotheses. In the third section, we present our research method and model design. In the fourth section, we present our findings followed by discussion. After explaining the limitations of our findings, we suggest future directions for CSQ research and close with a brief conclusion.

## 2 Theory and hypotheses

### 2.1 Research on CSQ

CEO CSQ is expected to play a vital role in firms' adaptation to changing environmental conditions and is assumed to be a cognitive component of strategic rigidity (McClelland et al. 2010). The CEO is crucial to the strategic orientation of the firm (Carpenter et al. 2004; Hambrick 2007). As "chief cognizers and decision makers" (Nadkarni and Herrmann 2010: p. 1050), the CEO's mind-set can be decisive for the medium- to long-term fate of the firm. Following this, the CEO's CSQ is expected to figure prominently in either organizational inertia or change (Hambrick et al. 1993). A CEO with a high CSQ is convinced that the current

<sup>1</sup> We gratefully thank an anonymous reviewer for proposing the term "window of opportunity" to illustrate one of our findings.

strategy is correct and thus perceives little or no need for any adjustments, even in the case of essential changes of environmental conditions (Geletkanycz and Black 2001). Consequently, the CEO would not initiate the necessary strategic change or, in the worst case, even would actively prevent it. In contrast, a CEO with low CSQ is expected to challenge the current strategic positioning and, if necessary, align it to the changing environmental conditions. The CEO will meet the responsibility as “champion[s] of change” as Geletkanycz and Black (2001: p. 4) call it. In contrast, overly radical shifts in strategies and practices initiated by the CEO “...may waste valuable organizational resources [...] resulting in impaired performance” (McClelland et al. 2010: p. 1257).

This attributed importance to the CEO for the strategic outcome of the firm reflects the main idea of the upper echelons perspective that an organization is a reflection of its top managers (Hambrick and Mason 1984; Carpenter et al. 2004). Introduced in 1984 by Hambrick and Mason, the upper echelons perspective has been a decisive catalyst for the rise of Top Management Team (TMT) research and especially research on CEO personality and mental cognition (Priem et al. 1999; Carpenter et al. 2004). This main proposition of the upper echelons perspective is based on two central premises: (1) executives’ values, experiences, and cognition influence their information processing and, as a result, influence their strategic choices; and (2) executives’ values, experiences, and cognition are associated with their observable demographic characteristics, such as age, tenure, or work experience (Carpenter et al. 2004; Priem et al. 1999; Hambrick and Mason 1984). These premises provide the basis for analyzing executives’ psychological orientation by demographic proxies (Hambrick and Mason 1984; Carpenter et al. 2004), and indeed earlier research has shown that the personal characteristics of top managers can explain much about firms’ business strategies (reviewed by Carpenter et al. 2004). Since the introduction of the upper echelons perspective, demographic characteristics have been the dominant tools in TMT research (Priem et al. 1999; Carpenter et al. 2004). However, this research practice comes with criticism, specifically that the presumed intervening psychological processes remain in a “black box” (Lawrence 1997; Priem et al. 1999). For example, Finkelstein and Hambrick (1990) discussed CSQ as one possible explanation for the association between long tenure and strategic persistence; however, they left the role of CSQ in this relationship imputed but unobserved.

An important step toward overcoming this criticism was taken by Hambrick et al. (1993) when they assessed the direct impact of observable characteristics on CEO CSQ. New to their study was that they analyzed the relationship between demographic characteristics and psychological orientation instead of the relationship between observable demographic characteristics and firm outcome. They were the first to use CSQ as an explicit variable and not as an imputed intervening mechanism. By directly examining the determinants of CSQ, they shed new theoretical and empirical light on CEOs’ psychological orientation with relevance to the adaptation of the firm. Based on a large-scale survey, they found empirical evidence for a positive relationship between firm performance and CSQ, as well as partial support for a positive association between tenure and CSQ. A limited number of other studies extended the research into the determinants of CSQ. Geletkanycz

(1997) used a survey among senior executives in 1988 to measure their CSQ via a five-point scale that tested the effects of the country's cultural value score for individualism, uncertainty avoidance, masculinity, power distance, and long-term versus short-term orientation on the managers' CSQ. She was able to show that all cultural values, except masculinity, were significant predictors of the executives' CSQ. Furthermore, Geletkanycz and Black (2001) used a survey-based international sample to test the impact of work experience in functional tracks (e.g., marketing or finance) and educational level on CSQ. Their results provide evidence that experience in certain functional tracks relates positively with CSQ, whereas graduate education does not seem to have an influence. Most recently, McClelland et al. (2010) used computer-aided text analysis (CATA) to assess CEO CSQ by analyzing CEO letters to shareholders. They built on the original study of Hambrick et al. (1993) and found that determinants of CSQ are multilevel, ranging from the individual CEO (age and tenure) to the organizational (size and financial slack) and environmental (industry discretion) levels.

## 2.2 CEO succession and CSQ

CEO successions are often far-reaching milestones in firms' development and have been the focus of academic research for decades (Hutzschenreuter et al. 2012; reviewed by Giambatista et al. 2005). Based on the assumption that top managers are crucial to firms' strategic profiles, the literature has shown a close link between CEO succession and the pursuit of strategic change (reviewed by Hutzschenreuter et al. 2012). Later studies deepened this finding by focusing on the context of the succession event (Shen and Cannella 2002) and strengthening the result that CEO succession is a meaningful, often change-initiating event for firm strategy (Zhang and Rajagopalan 2010; Barron et al. 2011; Du and Lin 2011; Westphal and Fredrickson 2001).

To explain this positive relationship, prior studies have provided a number of arguments without explicitly analyzing the empirical validity of these arguments (Hutzschenreuter et al. 2012). In their literature review, Hutzschenreuter et al. (2012) classify the explanatory arguments under the *leader internal impetus perspective*, assuming that strategic change as a consequence of a CEO succession event has its source in factors residing within the new leader. Among the cognition argument and the matching argument, the CSQ<sup>2</sup> argument pertains to the *leader internal impetus perspective*. The mandate to implement change, expectancy argument, environmental pressure, and power relationships are grouped under the *leader external impetus perspective*, assuming that strategic change occurring after CEO succession is the result of external factors that motivate the new CEO to take action.

Although the CEO succession literature assumes a low level of CEO CSQ after CEO succession, valid arguments might also exist for a high level of CSQ after CEO succession. Indeed, there are prominent examples of CEOs revealing high

<sup>2</sup> Hutzschenreuter et al. (2012: p. 735) call it the "cognitive commitment argument" and refer to the CSQ literature.

levels of CSQ directly after being appointed as new CEO, such as Wolfgang Büchele who followed Wolfgang Reitzle as CEO of Linde and stated that he is convinced of the validity of Linde's current strategy and wants to continue the current course of action (Manager Magazin 2014), thus revealing a high level of CSQ. For example, when taking over a well-positioned firm, as in the case of Linde, or taking over a firm acting in a stable environment where no real changes of the strategy are needed, the new CEO might not question the current strategy and instead reveal a high level of CSQ. Further, the new situation and the new task might be so complex that the new CEO needs some time to fully comprehend the situation and question the strategy and thus might, at the beginning of his or her time in office, reveal a high level of CSQ.

However, the basic rationale behind the assumption that differences in the CSQ between the outgoing CEO and the successor explain strategic change occurring after CEO change is that the new CEO is not committed to prior courses of action and thus questions the current strategy (Miller 1993; Wiersema 1992, 1995). In contrast, the incumbent or outgoing CEO is committed to prior courses of action and inhibits strategic adaptation to changing environmental conditions (Ndofor et al. 2009; Hambrick et al. 1993). This commitment of the incumbent CEO arises from the CEO's responsibility for prior decisions and the need to justify these decisions (Staw 1981). The CEO has a lot invested psychologically and even emotionally in the current strategy, making it difficult to take into consideration any other strategic alignment of the firm (Hambrick et al. 1993; Hambrick and Fukutomi 1991). Because new CEOs are not responsible for the current strategic positioning of the firm when taking office and have a low level of psychological and emotional investment in the prior course of action (Wiersema 1992, 1995; Romanelli and Tushman 1994), they are assumed to reveal lower levels of CSQ. Therefore, we formulate our baseline hypothesis as follows:

**Hypothesis 1** Newly appointed CEOs reveal a lower CSQ than established CEOs.

It is important to note that this hypothesis is strongly related to the tenure hypothesis tested by Hambrick et al. (1993) and McClelland et al. (2010), assuming higher CSQ with increasing tenure, but it does state a slightly different relationship. The tenure hypothesis argues that tenure has a positive monotonic relation with CSQ at all states of a CEO's tenure. Likewise, previous studies argue and partially support the view that CEO tenure positively affects CEO CSQ (Hambrick et al. 1993; McClelland et al. 2010). The assumption of a positive relationship between CEO tenure and CEO CSQ is based on the CEO life cycle theory because previous studies mostly found an association between top executives' tenure and absence of strategic change (e.g., Finkelstein and Hambrick 1990; Grimm and Smith 1991). Long tenure is associated with strategic rigidity and a high commitment to the current course of action (Staw 1981; Miller and Shamsie 2001). The arguments suggesting a positive relationship between CEO tenure and CSQ can be divided into two groups: (1) long-tenured CEOs often do not question established processes and structures (Staw 1981) but rather are convinced about their enduring correctness due to an inner conviction of the validity of their action and due to a nonobservance of alternatives; and (2) long-tenured CEOs often become rigid (Staw 1981) due to a

certain kind of organizational “blindness.” Consideration of alternatives and shifts to new directions are less likely with increasing tenure because CEOs’ basis for decision-making is biased by their earlier experiences and decisions in the same position (Eisenhardt and Zbaracki 1992; Katz 1982; Miller 1991). Long tenure usually stands for successful actions on the part of the CEO (Hambrick and Fukutomi 1991; Huson et al. 2004; Salancik and Pfeffer 1980). Their success record confirms their course of action. They do not see any inducement to challenge or even to change the strategy. This might even lead to a certain kind of overconfidence (McClelland et al. 2010; Hambrick and Fukutomi 1991; Miller 1991) but at the least a high CSQ.

Hutzschenreuter et al. (2012) challenge this argumentation and question the validity of the assumption of the CEO life cycle theory<sup>3</sup> that long-tenured CEOs are less like to initiate strategic change. Usually, a long CEO tenure is only possible if the CEO is successful and is responsible for good firm performance. Firm performance, however, is dependent on the firm’s strategic positioning within its external environment; when environmental conditions change, the firm’s strategy needs to be realigned (Pfeffer and Salancik 1978; Geletkanycz and Black 2001). To continuously realign a firm’s strategy to changing environmental conditions, the CEO needs a low CSQ that causes him or her to question and challenge the firm’s current strategic positioning. The experience accumulated over the long CEO tenure, as well as the respective knowledge and discretion, can be an advantage when positioning the firm for future challenges. Following this argumentation, Hutzschenreuter et al. (2012) propose that long tenure might not stand for strategic rigidity but rather for an ongoing willingness to continuously initiate strategic change. A more detailed comparison and some deeper analyses of both related hypotheses will be made when presenting our results in the Sect. 4.2.

To more precisely analyze the relationship between CEO succession and strategic change, researchers have focused on and gained insights into the differences between inside and outside successors (Rowe et al. 2005; Helfat and Bailey 2005; Zhang and Rajagopalan 2010). Outside successors are believed to initiate more change than internal successors (Kesner and Dalton 1994; Friedman and Saul 1991; Wiersema 1992). Again, explanations of this asymmetric change are found frequently in mental cognition arguments such as CSQ. The arguments of responsibility for and psychological and emotional investment in prior courses of actions could hold true for inside successors to some extent. Like incumbent CEOs, inside successors are expected to succumb to self-justification. As leaders with exposed positioning, for example, as members of the board, they also have responsibility for major strategic decisions made in the past (Wiersema 1992; Wiersema and Bantel 1992). A low CSQ and a high willingness to undertake radical changes would imply abandonment of structures they implemented themselves. In contrast to outside successors, inside successors share at least a certain amount of experience and knowledge with the former CEO. Interaction, discussions, and mutual decision-making create internally shared perspectives (Pfeffer 1983). The

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<sup>3</sup> We gratefully thank an anonymous reviewer for bringing our attention to CEO life cycle theory and the questioning by Hutzschenreuter et al. (2012).

result is a “social construction of reality” (Burrell and Morgan 1979; Hambrick et al. 1993), making it difficult for the members of the TMT or, more specifically, the inside successor, to consider alternative views (Pfeffer 1983) or to envision anything other than the status quo (Hambrick et al. 1993). In addition, due to socialization and self-selection, individuals who are successful and move up in the hierarchy of an organization become convinced of the correctness of the organization’s view (Hambrick et al. 1993). Inside successors have invested a lot and fought for years to achieve their outstanding position and to be selected as CEO. Inside successors have been judged appropriate for the position of CEO, as internal successors. In contrast to outside successors, they stand for and represent the firm’s current strategic positioning. Thus, they have more to lose than to gain when initiating strategic change and are committed to the status quo (Hambrick and Fukutomi 1991; Hambrick et al. 1993). We assume that these differences between inside and outside successors manifest in differences of their CSQ. In contrast to inside successors, outside successors reveal a lower CSQ and greater impetus to undertake strategic change. We hypothesize as follows:

**Hypothesis 2** Outside successors reveal lower levels of CSQ than inside successors.

The reason for succession is the second crucial characteristic of CEO successions in the context of CSQ. The degree of a new CEO’s commitment to the firm’s current strategy is influenced by the reasons for the CEO’s appointment. Frequently, forced CEO turnovers are intended to overcome organizational inertia (e.g., Furtado and Rozeff 1987) and improve shortcomings that result in poor performance (e.g., Huson et al. 2004; Rowe et al. 2005). Firms likely select candidates they believe are not committed to the existing strategy, providing the necessary mind-set for the intended turnaround. New CEOs are often appointed with a mandate to take certain actions (Romanelli and Tushman 1994; Hambrick and Fukutomi 1991). This mandate argument becomes more valid when the new CEO assumes the office after a forced CEO dismissal. Expectations from the board of directors or shareholders and an explicit change mission are more likely when the former CEO has been dismissed (Hambrick and Fukutomi 1991). As Gordon and Rosen (1981: p. 239) argue, “Newly appointed leaders do not function totally independently of their sponsors and of how those around them expect them to function.” Therefore, we assume that these expectations affect the successor’s mind-set and increase the probability that the new CEO will question the current course of action. Previous research provided evidence that external factors, such as firm performance, induce CEOs to challenge the current course of action and thus shape CSQ (Hambrick et al. 1993; McClelland et al. 2010). In the same vein, a mandate for change will have similar effects on the CEO CSQ. In long and intensive discussions with the new CEO, the board of directors will outline their view on the current situation and explain their arguments for a necessary strategic change. Taking the concerns of the board of directors seriously, the new CEO will at least evaluate these arguments and critically analyze the situation. The discussion with the board of directors, their insights, and information provided should increase the probability that the new CEO critically assesses the situation and also comes to the conclusion that the strategy



needs to be adapted, thus revealing a low CSQ. Without such a mandate for change, the motive and evidence to critically challenge the current strategy will be lower, and thus the CEO CSQ might be higher.

In contrast, a voluntary turnover generally happens when the incumbent CEO reaches a certain age or after a predefined period. The fact that the outgoing CEO was able to fulfill his or her contract and was not forced to leave office up front can be interpreted as a signal of shareholder satisfaction. The new CEO takes office in a well-positioned firm and thus has no direct reason to actively question the current strategy. When taking office, the new CEOs will believe that they were selected on the basis of the appropriateness of their abilities to the firm's current situation (Hambrick et al. 1993; Hambrick and Fukutomi 1991), fostering their commitment to the current strategy. Therefore, we expect the following:

**Hypothesis 3** Successors after a forced CEO turnover reveal lower CSQ than successors after a voluntary turnover.

### 3 Methods and model design

#### 3.1 Sample

Our sample consisted of all firms listed on the German stock market index HDAX (including DAX, MDAX, and TecDAX, containing the 80 largest German firms and the 30 largest German technology firms) from 2002 to 2011. Firms were included in the sample starting with their first year of listing in one of the covered indices, and, to avoid survivorship bias, they were excluded later only in cases of bankruptcy, loss of independence, or other situations leading them to stop publishing annual reports. We excluded firms from the financial sector because the vocabulary used in their shareholder letters—the data source for measuring CSQ as described later—is highly specific and differs from that used by all other firms. Consequently, these firms' shareholder letters are not comparable. In sum, our sample includes 149 different firms with up to 10 observation years.

#### 3.2 Measuring CSQ

##### 3.2.1 Content analysis of CEO letters to shareholders

We followed the approach of McClelland et al. (2010) and conducted a quantitative content analysis of the CEOs' letters to shareholders to measure the individual CEO level of CSQ. McClelland et al. (2010) were the first to use CATA to measure CEO CSQ and provided strong empirical evidence for its suitability. Content analysis can be defined as “a research technique for making replicable and valid inference from texts (or other meaningful matter) to the contexts of their use” (Krippendorff 2013: p. 24). This technique permits assessing the degree to which a CEO is committed to a firm's current strategy. CATA is especially advantageous for CSQ research. First, differing from surveys, CATA can capture attitudes and attention patterns that

people are not aware of and that they do not actively control (Gamache et al. 2015). Particularly for mental constructs such as CSQ, people might not be able to provide accurate self-evaluation. However, their degree of CSQ will still be reflected in their choice of words and the way they express themselves (Duriiau et al. 2007; Abrahamson and Hambrick 1997; Cho and Hambrick 2006). Second, the answers given in surveys, interviews, or CEO speeches might be colored deeply by a CEO's temporary mood (Eggers and Kaplan 2009). If CEOs give answers after a successful meeting, for example, their level of commitment might be higher than after receiving bad news. Therefore, we chose to use CEO letters to shareholders inside our sample as the subjects of our CATA method. Because these letters are parts of annual reports, they are easily available and offer good comparability between different data points (as compared to interviews) (Gamache et al. 2015; Eggers and Kaplan 2009). The level of CSQ in a letter to shareholders should be less biased and more sophisticated. As the frequency of keywords used with a certain meaning and content can be taken as a proxy for the importance of the content (Krippendorff 2013), content analysis provides an appropriate approach to measure mental constructs such as CSQ (Abrahamson and Hambrick 1997; Cho and Hambrick 2006).

Although widely disseminated and despite numerous demonstrations of validity (Gamache et al. 2015; Chen and Nadkarni 2017; Nadkarni and Narayanan 2007; Abrahamson and Hambrick 1997), doubt remains regarding measuring mental constructs such as CSQ via CATA in letters to the shareholders. Therefore, we briefly discuss these concerns against the backdrop of our study. First, there is the concern that CEOs might not be the actual authors of their letters to the shareholders, and, therefore, this medium would not be suitable to measure CEO CSQ. However, several researchers have provided evidence that CEOs take strong personal responsibility for their letters and undertake much effort in outlining, proofreading, and shaping them to their taste (Bowman 1984; Duriiau et al. 2007). By signing the letters, CEOs also take legal responsibility for their content. Therefore, a CEO “could not easily disclaim the contents of a letter he signed and published” (Salancik and Meindl 1984: p. 243). CEO letters belong to the parts of the annual reports most frequently read by the public. It is hard to believe that CEOs completely delegate the task of writing this powerful vehicle of communication (Craig and Amernic 2011). Finally, empirical evidence exists that letters to shareholders contain strong predictive power (Gamache et al. 2015) about organizational outcomes, such as strategic actions and strategic change (Nadkarni and Barr 2008; Nadkarni and Narayanan 2007) or innovative behavior (Kaplan 2008; Yadav et al. 2007). This predictive power on such important organizational phenomena would be hard to explain if the letters were written completely without CEO involvement (Gamache et al. 2015). Second, our approach assumes that the content, especially words in the letter to the shareholders, reflects the actual mind-set and the underlying beliefs of the CEO. As letters to the shareholders are important communication tools, other researchers question this assumption and rather assume that these letters are used instead for expectation management to persuade and influence important stakeholders. By referring to the arguments outlined above, we would like to moderate this concern. Precisely because these

letters represent an important medium of communication, we assume that most rationally and responsibly acting CEOs would not write and sign something that they did not believe in or were not convinced of. Misleading shareholders, analysts, or the board of directors would cause great harm (McClelland et al. 2010), as many prominent examples of corporate fraud have shown. However, finally, we have to acknowledge that we are only able to measure what McClelland et al. (2010: p. 1261) called “revealed CSQ.” Any thoughts not disclosed in the letter to the shareholders cannot be captured by our methodology.

### 3.2.2 Implementation

Our first step was to develop a dictionary of keywords divided into categories for the purposes of this research. Based on the logic of McClelland et al. (2010), the first category was strategic change. We focused on the words CEOs used to describe organizational changes and initiatives for strategic turnaround—such as the German equivalents for “restructure” and “turnaround.” Exemplary keywords contained in the dictionaries can be found in Table 5 in the Appendix. Expanding on McClelland et al. (2010), we introduced a second keyword category, called CSQ, indicating that a CEO is committed to the current strategy regarding the CSQ concept and trusts that this strategy will continue to be ideal in the future (e.g., the German equivalents for “tradition,” “continue,” and “established”). This second category includes complements to the contents of strategic change (category 1) and enables a broader evaluation of the CEO mind-set than the study of McClelland et al. (2010), which used only one change-related category.

The German language is characterized by many more inflections than English, resulting in a higher number of word forms, so we decided to follow a bottom-up approach to developing the dictionary. Two coders (one author and an undergraduate student blind to the purpose of the study) independently coded a list with all the words used more than once in the shareholder letters of the sample firms (approximately 27,000 words). They used previously designed guidelines and criteria for classifying the words.

As a sign of sufficient objectiveness in the coding process, we achieved an intercoder reliability of 98.7%; that is, both coders classified 98.7% of all words the same way. Further confirming reliability, Cohen’s kappa and Scott’s pi were both 53.4%, indicating sufficiently high congruence (Landis and Koch 1977). A third coder (the other author) decided whether differently coded expressions should be classified. The completed dictionary contained 137 keywords for CSQ and 162 for strategic change. Although this number of words seems extremely high at first glance, especially when compared to McClelland et al. (2010), the larger dictionary reflects the different characteristics of the German language.

This coding process provided two main advantages. First, German contains more variation in the endings and conjugations of words than English does, so a dictionary based on chosen keywords would be fragmentary and inaccurate. Computer-aided analysis of the letters with only predefined keywords using a top-down approach could find only one standard form of a keyword and could not take into account all the derivatives. Second, language evolves over time (McClelland

et al. 2010; Duriau et al. 2007). The bottom-up coding process ensured consideration of variations in linguistic usage. After building the net effect of CSQ orientation versus change orientation, we controlled for the total length of the letters to correct for higher absolute scores in longer statements (Abrahamson and Amir 1996). Finally, the CSQ variable was as follows<sup>4</sup>:

$$\text{CSQ} = \frac{\text{number of CSQ - related words} - \text{number of change - related words}}{\text{Total number of words in the letter to shareholders}} \times 1000.$$

Thus, we offer a more detailed measurement of CSQ because our CSQ variable is generated by a net calculation instead of a gross statement. However, for a robustness test, we computed the proxy for CSQ in several ways, including the approach chosen by McClelland et al. (2010). None of the alternative calculations of CSQ resulted in remarkable deviations from the results using our proxy for CSQ, as discussed later. All robustness analyses mentioned in the paper are available upon request.

### 3.3 Measuring CEO succession

To analyze the relationship between CEO succession and CSQ, we introduced a dummy variable, *CEO succession*, which took the value 1 in the case of CEO turnover and 0 in all other cases. Next, years with CEO succession were separated into the dimensions of *successor* and *reason*. Consistent with earlier research (Lubatkin et al. 1989; Reinganum 1985), *successor* was divided into *inside successor* and *outside successor* based on an analysis of annual reports and press articles. We considered successors internal if they had been members of the executive board or the supervisory board before appointment as CEO. If new CEOs had no such relation to the firm, they were treated as *outside successors*. This very strict definition of the *inside successor* category fits our theoretical reasoning that inside successors are assumed to identify themselves with prior board decisions. A subsequent check of our data set showed, however, that all firm-related successors were also *inside successors* in the sense of our definition; that is, the “critical” case did not occur of a firm-related successor with any relation to the firm other than a board mandate. We created the dummy variables *inside successor*, which took the value 1 in cases of inside successors and 0 otherwise, and *outsider successor*, taking the value 1 in cases of outside successors and 0 otherwise. Regarding the *reason* for CEO succession, we distinguished between *forced* and *voluntary* events. Determining whether a succession is voluntary has challenged researchers, who have addressed the question in different ways. For instance, some scholars have relied on age-based classification, which assumes that turnover is voluntary or routine if the departing CEO is older than a certain threshold, such as age 63 (Wiersema 1995; Shen and Cannella 2002). In our study, we relied on information collected from firms’ annual reports and press releases. Unfortunately, firms usually discuss

<sup>4</sup> As the resulting quotient is usually very small—CSQ and change-related words are rare compared to the total number of words in a letter—and regression coefficients would be extremely close to zero and therefore hard to read, we multiplied the whole term by 1000.

dismissals euphemistically and report forced turnovers as voluntary retirements (Denis and Denis 1995; Weisbach 1995; Pitcher et al. 2000). Therefore, we also considered independent press articles. If press articles indicated that a CEO turnover was a dismissal instead of a voluntary retirement, we coded it as such. Again, we specified a dummy variable, *voluntary succession*, with a value of 1 for voluntary turnovers and 0 for forced dismissals.

In sum, we identified 122 CEO successions in the sample with complete data. In 81 cases, an inside successor was chosen (resulting in 41 outside successors), and 51 turnovers were classified as succession after forced dismissal (resulting in 71 voluntary turnovers).

### 3.4 Control variables

Prior research on determinants of CSQ has argued and provided partial evidence that CEO CSQ might be influenced by organizational factors such as past performance, slack resources, and firm size (McClelland et al. 2010; Hambrick et al. 1993); therefore, we include these variables as controls. Among firm characteristics, *past performance* was measured using the 1-year return on assets (ROA). To correct for outliers occurring in the data, ROA was winsorized at the 1% level. To check for robustness, we varied the performance measure in two ways. First, *changes* in performance might be more relevant in shaping the board's perception of "good" or "bad" performance than the actual *level* of performance (Fredrickson et al. 1988). Thus, we replaced the simple ROA with its difference to the average ROA of the previous 4 years. Second, the return on equity (ROE) was used instead of ROA. When running the same model with these alternative measures, the results did not change significantly. *Firm size* was captured by total assets and corrected by adjusting the natural logarithm for a skewed distribution. Again, robustness was tested by the total number of employees. To measure *slack resources*, research has shown that distinguishing between short- and long-term slack is advantageous (Bourgeois 1981; Hambrick and D'Aveni 1988). We measured short-term slack using the quick asset ratio and long-term slack using the leverage ratio (total debt/equity, logged because of a strongly skewed distribution) multiplied by  $-1$ ; that is, *high* debt–equity ratios are used as indicators of *few* free resources available. For our Sect. 4.2 where we compare the effects of CEO succession and CEO tenure, we also collected the data for *CEO tenure*, measured in years. Data were extracted from firms' annual reports and, in the case of missing information, from press articles. The tenure variable showed strong right-tailed skewness, which we adjusted by adding the shift parameter  $+1$  and taking the natural logarithm.

Research has further shown that CSQ will also be affected by environmental factors, such as by the level of managerial discretion in the respective industry (McClelland et al. 2010). Thus, we included dummy variables for the different industry sectors in all our models. The classification was based on the German DAX sectors available on the German stock exchange. Furthermore, because the language used in the shareholder letters may vary over time, we also included yearly dummies in all our models.

### 3.5 Data analysis

To test our hypotheses, we performed several multivariate regression models. Our research, based on a time frame of more than one year, required a model that takes into account the resulting panel structure. Given this data structure, we used random-effects models (REMs), including a generalized least square (GLS) estimator, with the single firms treated as sources of unobserved heterogeneity. Conventional ordinary least square (OLS) regression would ignore CEO- and firm-specific influences, so REMs were employed to account for these individual influences. A panel-robust version of the Hausman test (Greene 2008; Wooldridge 2009) recommended this model specification over fixed-effects models (FEMs) and pooled OLS regression (detailed test results are available upon request). Furthermore, REMs allow us to also take into account the between variance across different CEOs. This is necessary because all CEOs in our sample are appointed only once, that is, considering the within variances only (as in a FEM) would not allow us to test for the differences across different types of succession (e.g., forced vs. voluntary).

Nevertheless, we further calculated several robustness checks and alternately ran a FEM and a pooled OLS regression with standard errors clustered at the firm level. Additionally, we varied the model by taking the single CEOs as sources of unobserved heterogeneity. None of the robustness models showed drastic deviations. Each model used cluster-robust standard errors for the calculation of significance to avoid bias due to cluster building or serial correlation.

For the analysis of CEO succession characteristics, we also used the subsample of firm years in which a CEO succession took place. Dummy variables for voluntary turnovers and internal successors were first included and tested in separate models and afterward included in a common model. We thus tested whether CSQ differences in CEO succession and within the set of CEO successions can be explained by the characteristics of the reasons for succession and the origins of the successors.

## 4 Results

### 4.1 Results of testing hypotheses

Table 1 provides an overview of the descriptive measures and the pairwise correlations of each variable. As an early indication confirming our hypotheses, we observed a significant negative ( $-0.127$ ) correlation between CEO succession and CSQ. Voluntary succession and internal successor both show a significant positive correlation with CSQ, which arouses our curiosity for the multivariate regression analyses. Regarding firm-related variables, past performance shows significant positive correlations with CSQ. Firm size does not seem to have a significant association with CSQ. In line with the vast majority of literature arguing for an increase in CSQ when CEO tenure increases (Hambrick et al. 1993; McClelland et al. 2010), we observed a significant positive correlation ( $0.124$ ) between CEO

**Table 1** Means, standard deviations, and pairwise correlations

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
[1] Past performance	1								
[2] Slack resources (short term)	0.031	1							
[3] Slack resources (long term)	<b>0.105</b>	<b>0.161</b>	1						
[4] Firm size	<b>0.121</b>	− <b>0.086</b>	− <b>0.390</b>	1					
[5] CEO tenure	<b>0.063</b>	<b>0.067</b>	<b>0.096</b>	− <b>0.143</b>	1				
[6] CEO succession	− <b>0.073</b>	− 0.024	− 0.035	0.022	− <b>0.640</b>	1			
[7] Voluntary succession	<b>0.264</b>	0.128	0.142	− 0.065	− 0.017	n/a	1		
[8] Internal successor	<b>0.237</b>	0.055	0.139	0.080	0.088	n/a	<b>0.208</b>	1	
[9] CSQ	<b>0.073</b>	0.039	0.061	0.003	<b>0.124</b>	− <b>0.127</b>	<b>0.253</b>	<b>0.190</b>	1
Mean	2.451	1.912	− 2.609	7.654	1.509	0.131	0.567	0.664	− 0.122
Standard deviation	8.858	12.227	1.118	1.944	0.911	0.338	0.497	0.474	0.240

Significant correlations at  $p < 0.05$  are marked in bold

tenure and CSQ. Interestingly, CEO tenure also shows a significant positive correlation with firm performance (0.063). Miller (1991) argues that as CEO tenure increases, the CEO is less able to match organizational strategy and environmental change, finally resulting in lower firm performance. However, in our sample, positive effects of CEO tenure, such as increased task knowledge (Hambrick and Fukutomi 1991), seem to lead to a positive correlation. We assess this finding as an early indication that the CEO tenure effect is not as straightforward as assumed in a large body of literature, especially the CEO life cycle theory (Hambrick and Fukutomi 1991; Miller 1991; Miller and Shamsie 2001). We will discuss this aspect later in our supplementary analysis regarding the CEO tenure effect on CSQ.

To test our hypotheses, we calculated four regression models (I.1–I.4), which each included robust standard errors, random effects, and dummy variables for year and industry. Table 2 presents the results of the regression analysis.

To test our baseline hypothesis that CEO CSQ is lower after a CEO succession, we added the dummy variable *CEO succession* to model I.2, as shown in Table 2. This regression shows significant evidence supporting Hypothesis 1 because the succession variable is significant at  $p < 0.01$ . Thus, we find support for our baseline hypothesis: newly appointed CEOs reveal a lower CSQ than CEOs with tenure of at least 1 year.

Additionally, we expected the circumstances of a CEO succession to be relevant to the commitment of the new CEO. To test the corresponding hypotheses, we first replaced the general *succession* variable in model I.2 with more detailed dummies for *inside successor* and *outside successor* (model I.3). The residual case where both dummies equal 0 represents data points with no CEO succession. Thus, the dummies show the effect of the underlying impact relative to a scenario without CEO succession. The results are also presented in Table 2. Subsequently, we replaced the succession variable with dummies for *voluntary succession* and *forced succession* in model I.4. Again, effect size is relative to cases without succession.

In model I.3, both regression coefficients estimated for the dummy variables *inside successor* and *outside successor* are negative, consistent with the negative overall succession effect in model I.2. However, only the effect of *outside successor* is significant ( $b = -1.495$ ,  $p < 0.01$ ). Furthermore, we conducted a Wald test to determine whether the effect of *outside successor* is not only significantly different from 0 but also significantly different from the effect size of *inside successor*. The result was significant at  $p < 0.1$  ( $\chi^2 = 3.52$ ). Thus, we find the first but somewhat weak support for Hypothesis 2. In model I.4, the coefficients for both succession dummies (*voluntary succession* and *forced succession*) are negative, but again, only the effect of *forced succession* significantly differs from 0 ( $b = -1.533$ ,  $p < 0.01$ ). Again, a Wald test showed that the effect of *forced succession* is not only different from 0 but also differs significantly from the effect of *voluntary succession* ( $p < 0.05$ ,  $\chi^2 = 4.73$ ). This supports Hypothesis 3.

Because it can be assumed that the reason for the succession and the nature of the successor are not independent from each other (external successors are supposed to be appointed particularly after forced dismissals), we saw a need to test both hypotheses in the same model, that is, to test both effects while controlling for the other. For this purpose, we took a subsample that included all firm years where a



**Table 2** Results of regression models for analysis of the effect of CEO succession characteristics on CSQ

Dependent variable	CSQ		CSQ		CSQ		CSQ	
	I.1		I.2		I.3		I.4	
Model								
Variable	Coeff. ( <i>t</i> value)	Sign.	Coeff. ( <i>t</i> value)	Sign.	Coeff. ( <i>t</i> value)	Sign.	Coeff. ( <i>t</i> value)	Sign.
Past performance	0.036 (3.03)	***	0.032 (2.89)	***	0.029 (2.71)	***	0.027 (2.59)	***
Slack resources (short term)	0.006 (3.63)	***	0.005 (3.59)	***	0.005 (3.77)	***	0.005 (3.44)	***
Slack resources (long term)	0.233 (2.05)	**	0.228 (2.08)	**	0.215 (1.99)	**	0.216 (2.06)	**
Firm size	− 0.031 (− 0.53)		− 0.026 (− 0.45)		− 0.029 (− 0.50)		− 0.021 (− 0.35)	
CEO succession			− 0.792 (− 3.17)	***				
Inside successor					− 0.443 (− 1.49)			
Outside successor					− 1.495 (− 3.27)	***		
Voluntary succession							− 0.308 (− 1.28)	
Forced succession							− 1.533 (− 3.06)	***
Regression constant	− 0.959 (− 2.57)	**	− 0.857 (− 2.32)	**	− 0.869 (− 2.35)	**	− 0.900 (− 2.47)	**
Observations	949		949		949		949	
<i>R</i> <sup>2</sup> (overall)	0.07		0.08		0.09		0.09	
<i>R</i> <sup>2</sup> (within)	0.04		0.04		0.05		0.05	
<i>R</i> <sup>2</sup> (between)	0.18		0.21		0.22		0.24	
Max. variance inflation factors	4.28		4.33		4.34		4.33	
Cluster-robust standard errors	Yes		Yes		Yes		Yes	
Year dummies included	Yes		Yes		Yes		Yes	
Industry dummies included	Yes		Yes		Yes		Yes	
Type of panel model	Random effects		Random effects		Random effects		Random effects	

\**p* < 0.10, \*\**p* < 0.05, \*\*\**p* < 0.01, *t* values in parentheses

succession occurred ( $N = 122$ ). We then subsequently included the dummies for *outside successor* (I.6) and *forced succession* (I.7) and finally included both in the same model (I.3). The results are shown in Table 3.

In model I.6, the coefficient of the variable *outside successor* was negative but not significant. We, therefore, find no significant evidence for Hypothesis 2 that outside successors reveal lower levels of CSQ than inside successors. In model I.7,

**Table 3** Results of regression models for analysis of the effect of CEO succession characteristics on CSQ using a reduced sample of years with CEO successions only

Dependent variable	CSQ		CSQ		CSQ		CSQ	
	I.5		I.6		I.7		I.8	
Model								
Variable	Coeff. ( <i>t</i> value)	Sign.	Coeff. ( <i>t</i> value)	Sign.	Coeff. ( <i>t</i> value)	Sign.	Coeff. ( <i>t</i> value)	Sign.
Past performance	0.069 (2.31)	**	0.063 (2.00)	**	0.061 (2.12)	**	0.057 (1.88)	*
Slack resources (short term)	0.519 (1.96)	*	0.541 (1.91)	*	0.532 (1.90)	*	0.547 (1.86)	*
Slack resources (long term)	0.345 (1.13)		0.284 (0.87)		0.288 (0.97)		0.245 (0.78)	
Firm size	0.285 (1.69)	*	0.277 (1.65)	*	0.312 (1.86)	*	0.306 (1.83)	*
Outside successor			− 0.512 (− 0.80)				− 0.376 (− 0.57)	
Forced succession					− 1.216 (− 2.11)	**	− 1.171 (− 1.97)	**
Regression constant	− 0.485 (− 0.46)		− 0.398 (− 0.39)		− 0.548 (− 0.53)		− 0.481 (− 0.47)	
Observations	122		122		122		122	
$R^2$ (overall)	0.30		0.31		0.33		0.33	
$R^2$ (within)	0.13		0.13		0.16		0.15	
$R^2$ (between)	0.41		0.41		0.42		0.43	
Max. variance inflation factors	6.95		7.08		7.02		7.13	
Cluster-robust standard errors	Yes		Yes		Yes		Yes	
Year dummies included	Yes		Yes		Yes		Yes	
Industry dummies included	Yes		Yes		Yes		Yes	
Type of panel model	Random effects		Random effects		Random effects		Random effects	

\* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ , *t* values in parentheses

the dummy variable for *forced succession* is negatively associated with CSQ and significant at  $p < 0.05$ , which is consistent with the results of the regressions run on the full sample. In model I.8, the results for a joint regression with both dummy variables do not change: the effect of *forced succession* is significantly less than 0, whereas the effect for *outside successor* is not. We, therefore, find evidence for Hypothesis 3 that new CEOs are less committed after forced dismissals than after voluntary and regular turnovers, but we find no evidence for a difference between inside and outside successors when controlling for the reason of the succession.

## 4.2 Supplementary analysis

The results presented thus far support our argumentation that the event of a CEO succession is pivotal in shaping CEO CSQ. However, there is a proximity to CEO tenure, or, conversely, CEO succession might be regarded as a special case of very short CEO tenure. Thus, one could argue that the results are based on a tenure effect already found in prior studies. Hutzschenreuter et al. (2012) challenge the underlying view based on CEO life cycle theory that long-tenured CEOs are less likely to initiate strategic change and have a higher CSQ. Following their argumentation, Hutzschenreuter et al. (2012) propose that long tenure might not stand for strategic rigidity but rather for an ongoing willingness to continuously initiate strategic change. We argue that this willingness is only given if CSQ is low.

Against the backdrop of this argumentation, it might be possible that the relation between CEO tenure and CSQ partially found in previous studies is based on effects actually stemming from the one-time event of CEO succession. If CEOs' CSQ was lower after their initial appointment and higher after at least 1 year of tenure, which is supported by our results, regression analysis testing the effects of *tenure* would yield the result that ongoing tenure progressively increases CSQ—although the underlying effect stems only from the succession event. Misleadingly, the results would indicate that, for instance, the difference between 2 years of tenure and 3 years would cause an increase of CSQ similar to the difference between the year of appointment and 1 year of tenure.

Trying to gain deeper evidence of the importance of CEO succession and tenure, respectively, in shaping CSQ, we ran a model that tests the influence of tenure—model I.9—and then we corrected the sample for firm years with CEO successions—model I.9b. Thus, we tested whether a sample consisting of CEOs with at least 1 year of tenure also shows the tenure effect found previously. Table 4 presents the results of both models I.9 and I.9b.

On a reduced sample without CEO succession events (model I.9b), CEO tenure is no longer significantly related to CEO CSQ. Surely, this cannot be taken as proof that the tenure effects shown in other samples are caused only by CEO successions included and that the tenure effect is basically a “succession effect.” However, it gives some evidence to revise the tenure effect and that an increase of CSQ occurs especially in the early stages of CEOs' tenure. In later stages, tenure might not be that pivotal. When analyzing the predictors of CEOs' CSQ, their tenure might be less important when the first period after their appointment has expired.

**Table 4** Results of regression model to test CEO tenure effect on CSQ after excluding cases of CEO successions from the sample

Dependent variable	CSQ		CSQ	
	1.9 <sup>†</sup>		1.9b <sup>†</sup>	
Variable	Coeff. ( <i>t</i> value)	Sign.	Coeff. ( <i>t</i> value)	Sign.
Past performance	0.033 (2.83)	***	0.023 (2.01)	**
Slack resources (short term)	0.005 (3.46)	***	0.005 (4.31)	***
Slack resources (long term)	0.224 (2.01)	**	0.161 (1.81)	*
Firm size	− 0.010 (− 0.17)		− 0.040 (− 0.69)	
CEO tenure	0.256 (2.28)	**	0.090 (0.64)	
Regression constant	− 1.076 (− 2.95)	***	− 1.003 (− 2.56)	**
Observations <sup>†</sup>	949		827	
<i>R</i> <sup>2</sup> (overall)	0.08		0.06	
<i>R</i> <sup>2</sup> (within)	0.04		0.03	
<i>R</i> <sup>2</sup> (between)	0.19		0.16	
Max. variance inflation factors	4.38		4.26	
Cluster-robust standard errors	Yes		Yes	
Year dummies included	Yes		Yes	
Industry dummies included	Yes		Yes	
Type of panel model	Random effects		Random effects	

\* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ , *t* values in parentheses

<sup>†</sup>Model 1.9 tests CEO tenure effect based on the original sample; model 1.9b tests CEO tenure effect after excluding cases of CEO successions from the sample

## 5 Discussion

Although CSQ is believed to play a pivotal role in strategic change and strategic rigidity, a limited number of studies have sought to identify the most important antecedents of top executives' CSQ. Thus, the knowledge on CSQ remains fragmented, and researchers have emphasized the need for more empirical evidence. Because CSQ is widely used as an explanation for strategic change occurring after a CEO succession event—so far, imputed but unobserved—we focused our research study on the relationship between CEO succession and CEO CSQ. With our study, we intended to enrich the academic discussion about CSQ. We aimed to extend our understanding of CSQ by taking into account the event of CEO succession and its

characteristics. By doing so, we further were able to challenge the tenure effect on CEO CSQ.

The results of our hypothesis testing provide evidence for a general negative relationship between CEO succession and CEO CSQ, thus supporting our baseline hypothesis. However, when taking into account further characteristics of CEO succession, we find a differentiated picture. While our results provide support for our third hypothesis and point to a lower CSQ of CEOs after a forced turnover when compared to CEOs after a voluntary turnover, we do not find support for our second hypothesis arguing that external successors reveal a lower CSQ than internal successors. While these findings support in general the research pointing to *leaders' internal impetus* as an important cause of strategic change occurring after CEO succession, we interpret these findings as a signal that it needs more than just being a new CEO. Our results regarding the forced CEO turnover point to the importance of external impetus. A forced CEO turnover in general comes with a clear mandate for change from the board of directors or at least with the implicit expectation of a strategic change. External influences—in our case, the reason for CEO turnover—can affect new CEOs' attitudes toward strategic change. Therefore, to explain strategic changes after CEO successions, a clear distinction between CEOs' internal and external driving forces might not be entirely conclusive. Factors usually understood as external to CEOs, such as a mandate for change after a CEO dismissal, can significantly influence their mental attitudes. Thus, for a broader understanding of CEO strategic cognition, future studies should take into account one-time events, such as CEO succession.

We also would like to point to our nonfinding. The results did not support the hypothesis expecting higher CSQ among internal successors when compared to external successors. Although it is reasonable to argue that internal successors might be more committed than external ones, ongoing research (Giambatista et al. 2005; Zajac 1990) has produced evidence that this distinction might not be complex enough to comprehensively describe CEOs' mind-sets: “the insider/outsider distinction continues to be elusive” (Giambatista et al. 2005: p. 985). Giambatista et al. (2005) call for a more accurate method to assess what they call the “insiderness” of new CEOs, taking into account more complex factors, such as time in the same industry, personal relations with other board members, and experiences related to the new firm. Whether a successor comes from inside or outside the firm might be a valid factor in CEO commitment, but it is only a small aspect and, at least in the present study, barely observable. At the same time, we think that this nonfinding provides hints for TMT researchers to challenge the assumption that TMTs really act as a team and reach strategic decisions mutually. At least in our research setting, we do not find clear indications that members of the executive team feel more responsible for the strategic course of the prior CEO than new external CEOs. Another argument explaining this nonfinding might be that, irrespective of being an internal or external successor, the new CEO might take over the leadership of a well-positioned company that does not require the CEO to actively question the current strategy. Or, the new situation might be so complex, especially for outside

successors, that it takes a while to analyze and capture the new situation fully before being able to really question the strategy,<sup>5</sup> thus revealing a low level of CSQ.

Finally, the results of our hypothesis testing together with our supplementary analysis suggest a revised tenure effect: our results support our baseline hypothesis that CEOs in their first year after their appointment show lower CSQs than CEOs with at least 1 year of tenure. This is still consistent with the idea of a universal, CSQ-increasing tenure effect. However, when cases of CEO successions are excluded from the sample, a tenure effect on CSQ no longer occurs. Taken together, these results might point to a picture of a specific window of opportunity to initiate strategic change shortly after CEO successions. CSQ does not increase continuously over time—as suggested by previous studies—but it alters after a first short stage of incumbency due to “newness” in the CEO position and does not increase significantly in later stages.

Overall, our research study emphasizes the dynamic nature of CSQ and its development over time. Thus, it provides a state-like understanding of CSQ: CEOs’ cognition of and attitude toward change vary over time and depend on the CEOs’ history and the circumstances they face.

## 6 Limitations, future research, and conclusion

As is always the case, several factors limit the explanatory power of the findings of this research study. First, our sample setting of large, publicly traded firms in Germany marks a step toward a more general understanding of CSQ. However, we think it is necessary to always challenge the applicability or generalizability of the results to other contexts. Further research could address this question by replicating more varied samples (e.g., different firm sizes, ownership structures, and countries) and especially challenge what we called the revised tenure effect. Second, we follow the methodological approach of McClelland et al. (2010) and several other research studies (e.g., Gamache et al. 2015; Nadkarni and Chen 2014; Yadav et al. 2007) and assume that CEOs’ stakeholder letters are suitable indicators of their mind-sets. As we critically challenged the methodology, and many prior research studies have put forth heroic efforts to validate this assumption, we are convinced that this is a legitimate approach. As outlined in the Sect. 3, this methodology has several advantages compared to surveys. However, we are aware of the skepticism regarding the usability of letters to shareholders. Despite valid arguments that CEOs are the main drivers of the letter contents (Bettman and Weitz 1983; Salancik and Meindl 1984), we cannot fully eliminate the possibility that other parties (e.g., board members, important shareholders) influence CEOs’ impact on the communicated content. As CSQ is a psychological orientation, we suggest further validating our results with methodologies of psychological research, such as multi-item scale measures or a combination of approaches based on surveys and content analysis, to get the best out of the two different methodological worlds.

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<sup>5</sup> We gratefully thank an anonymous reviewer for providing this valuable possible explanation for our nonfinding.

In addition to the possible research questions arising from these methodological limitations, we propose other directions for further research regarding both the causes and consequences of CSQ. First, additional factors might affect CEO CSQ. Specifically, we showed that the CEO succession event affects CEO CSQ. It can be assumed that other experiences and events, such as economic downturns, regulatory changes, new technologies, prior restructuring experience, and changes in competitors' structure, might also influence executives' mental cognition. In this context, it might be interesting to look closer at the extremes, namely which circumstances induce a CEO with a generally high CSQ to suddenly question the status quo, or what kind of effects make a generally open-minded CEO become inert.

A second highly promising line of inquiry concerns the meaning and consequences of CSQ. As stated, few studies have investigated the antecedents of CSQ. To our knowledge, only McClelland et al. (2010) have analyzed the consequences of CSQ specifically for future firm performance. An analysis of further consequences could also provide interesting results regarding, for example, the impact on the CEO's level of managerial discretion. The question of how much CEOs matter to overall organizational outcomes and performance is not new, and wide-ranging answers have been proposed (Finkelstein and Boyd 1998; Huson et al. 2004; Westphal and Fredrickson 2001). However, research on how and in what specific situations CEO CSQ affects firms' strategic actions—acknowledging the differences between intended and realized change—has yet to be completed. In this context, it could also be interesting to analyze the impact of CEO CSQ on important strategic decisions, such as mergers and acquisitions, divestitures, strategic alliances, internationalization, or research and development.

Finally, this study focuses exclusively on CEOs. Research has shown that TMTs and their composition are also crucial in decision-making processes, so extending this research method to focus on these effects in the context of CSQ could be interesting. Our research study also provided hints that analyzing the insiderness of TMT members should be scrutinized further in this context.

The findings of our study led us to view the concept of CSQ as a promising but not yet fully mature line of research. We showed that CEO succession should be taken into account when analyzing CSQ because (1) new CEOs have different CSQ than established CEOs, and (2) circumstances surrounding their appointment impact their CSQ. Overall, we consider the effects of CEO succession on CEO mind-sets and particularly their CSQ to be worthwhile subjects for future research.

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## Appendix

See Table 5.

**Table 5** Exemplary keywords (result of coding process)

Exemplary keywords contained in the dictionaries for “CSQ” and “Strategic change”	
CSQ	Strategic change
Continuously	Action
Continue	Beginning
Keep	Brave
Perpetuate	Change
Preservation	Changing
Protect	New
Proven	Renewal
Stabilize	Reposition
Stable	Restart
Sustain	Revolution
Tradition	Transformation

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