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PLANNING FOR FUTURE LEADERSHIP: PROCEDURAL RATIONALITY, FORMALIZED SUCCESSION PROCESSES, AND CEO INFLUENCE IN CEO SUCCESSION PLANNING

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Despite substantive organizational ramifications, surprisingly little theory explains executive succession planning processes. A firm's board of directors has the fiduciary responsibility to select CEOs, but, historically, boards have failed to exercise this authority. Increasing focus on corporate governance has prompted directors to become more engaged in organizational management, but boards face significant barriers to gathering and processing information. However, there is a dearth of research examining how boards overcome informational barriers to enhance decision-making effectiveness. Accordingly, the current study integrates procedural rationality in decision-making with research on boards as information-processing groups to explore how and why boards conduct succession planning processes. Procedural rationality results in formalized processes designed to collect essential information about CEO succession candidates; these processes, in turn, lead to a greater quantity and quality of CEO succession candidates. We also illustrate how CEOs can influence the effectiveness of board information gathering and processing. The tests of the theoretically generated hypotheses rely on in-depth qualitative interviews, coupled with unique survey and archival data from 355 firm-year observations of 218 large organizations, collected over three years.

An increasing focus on corporate governance has heightened board involvement in firm management (Withers, Hillman, & Cannella, 2012); however, boards face informational barriers that affect their ability to gather and process information (Boivie, Bednar, Aguilera, & Andrus, 2016). Extensive research explores how board characteristics influence firm outcomes, but findings are mixed (e.g., Bhagat & Black, 2002; Boivie et al., 2016; Dalton, Daily, Ellstrand, & Johnson, 1998). This has led researchers to reconceptualize how boards affect and monitor firms, focusing, in part, on the board's role as an information-processing group (e.g., Khanna, Jones, & Boivie, 2014). "Information processing" refers to processes that involve gathering, analyzing, and using information to inform decisions (Hinsz, Tindale, & Vollrath, 1997). Despite the importance of these processes, we know little about how boards overcome information barriers that impede vital decision-making. This omission is critical as researchers have begun to question the value of board involvement because of the board's perceived limited ability to oversee managerial behavior effectively (e.g., Boivie et al., 2016; Gillespie & Zweig, 2010).

In contrast to this perspective, we build theory to explain how boards overcome barriers to gathering and processing information through using procedurally rational systems. Procedural rationality theory describes how processes help ensure that decisions

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follow a systematic, rigorous framework that enables leaders to consider alternatives prior to reaching a decision to enhance decision-making effectiveness (Dean & Sharfman, 1993, 1996). In particular, we focus on a key fiduciary responsibility of boards: CEO succession planning (Sundaram & Inkpen, 2004). Applying procedural rationality to the boardroom, we illustrate how formalized succession planning processes enacted by a board can affect the quality of succession planning outcomes by obtaining more objective information about succession candidates.

Chief executive officer (CEO) succession is inevitable in a firm's life cycle (Finkelstein, Hambrick, & Cannella, 2009) and carries substantive firm consequences (Quigley & Hambrick, 2014). Most CEO succession studies examine immediate causes or consequences of succession, without carefully explaining the ongoing process, in part because existing theory cannot explain, and scholars rarely observe, succession planning processes in action. Consequently, we do not know how boards manage the process, nor does extant research offer guidance for best practices (Finkelstein et al., 2009). This omission is critical, because such activities determine how firms identify and select CEO talent.

Boards face a difficult task in managing CEO succession processes. They lack in-depth knowledge of the firm and its executives (Khuranna, 2002; Lorsch & MacIver, 1989), and must rely on the CEO for information about and access to succession candidates (Zajac, 1990). Thus, research traditionally conceptualizes CEO succession as primarily influenced by the outgoing CEO (e.g., Vancil, 1987) or fraught with tension between the CEO and the board (e.g., Zajac & Westphal, 1996). Largely absent from succession research, however, is a focus on how boards perform their fiduciary duty. To enhance decision-making effectiveness and overcome these informational barriers, we suggest that formalized succession processes allow for systematic information generation and analysis by the board (Sundaramurthy & Lewis, 2003). Further, we leverage prior research on influential CEOs (e.g., Zajac & Westphal, 1996) to illustrate the role that CEOs may play in facilitating or disrupting this information processing.

This leads to four primary theoretical and empirical contributions. First, we integrate theory on procedural rationality in decision-making to a growing body of literature exploring boards as information-processing groups to explain how boards overcome significant information barriers that limit decision-making effectiveness. Using procedural rationality, we address the causal mechanisms by which boards can neutralize their information deficits. These barriers were highlighted in an interview with a corporate board member and former CEO who observed, "Boards spend limited time with the company, so the CEO has a significant advantage when it comes to ongoing insights and has control of a lot of information." Second, we generate systematic insights into the secretive activities conducted by boards in CEO succession planning, which addresses Quigley and Hambrick's (2012) warning that succession research fails to acknowledge institutional realities. Existing theory cannot explain when or how boards establish processes to solve information shortfalls and how such processes influence succession planning (cf. Tihanyi, Graffin, & George, 2014). Prior research focuses almost exclusively on the role of the CEO and how CEOs influence the process; however, little attention has been paid to the board's role in succession planning. The need to understand succession planning is underscored by our interview of a former CEO of two large, publicly traded companies who also served on seven different corporate boards when he said, "Succession planning is really where the board can make an impact on the company." Third, we explore succession planning as a process. Succession planning was once the private purview of the CEO (Vancil, 1987), but recent legal changes in corporate governance guide boards to take responsibility and to continually manage succession planning, rather than waiting until a departure is imminent. Fourth, we address calls for research into the microfoundations of firm strategy (e.g., Foss, 2011) by integrating psychological perspectives (e.g., decision-making) with strategy research (e.g., boardroom dynamics), thereby creating unique insights into the role of individual-level factors and relationships during the CEO succession planning process.

To achieve these insights, we performed in-depth, in-person, semi-structured interviews with top management team and board members who had been involved formally and intimately in multiple succession events. We also held informational meetings and interviews with one retired CEO, 22 board members (many of whom were former CEOs), and 40 chief human resource officers (CHROs) to understand the critical succession planning challenges firms face. After inductively building theory from these interviews, we conducted surveys with top management team members over three years and combined these data with archival financial and corporate governance data.

THEORY AND HYPOTHESES

The responsibility for CEO succession rests with the firm's board (Mace, 1971), whose goal is to select

the successor most likely to maximize the firm's future performance (Sundaram & Inkpen, 2004). Adverse selection is a critical problem (Zajac, 1990; Zhang, 2008), resulting from a lack of objective information about succession candidates (Khuranna, 2002; Zajac, 1990). To increase understanding of board decision-making effectiveness, recent research has focused on boards as information-processing groups (e.g., Khanna et al., 2014) that must collect and analyze information as inputs to yield desired outcomes (Hinsz et al., 1997).

Board members, however, face barriers in their ability to effectively gather and process information (Boivie et al., 2016). Boards lack information because they spend little time with one another or the firm (Monks & Minow, 1995) and have limited access to internal candidates (Carter & Lorsch, 2004; Demb & Neubauer, 1992; Fernández-Aráoz, 2015; Lorsch & MacIver, 1989). Further, the severe costs associated with information gathering (Alam, Chen, Ciccotello, & Ryan, 2014) may lead directors to allocate their limited time and attention to other commitments (Masulis & Mobbs, 2014), reducing director engagement in decision-making.

Board information may also be biased, as CEOs can filter candidate information through three means (Mallette & Fowler, 1992). First, CEOs often control the board's working and meeting agendas (Finkelstein & D'Aveni, 1994). Second, CEOs can direct whom the board accesses (Mace, 1971) and where the access may occur. For instance, the CEO may make candidates with strong presentational abilities available in the boardroom, while those with strong relational skills, but poor presentational skills, may not be brought into the boardroom but board members may be directed to visit them in the field. Third, the CEO can influence succession plans presented to the board, including highlighting specific candidate strengths and weaknesses. These challenges are exacerbated when the CEO is the lone focal firm executive serving on the board (Joseph, Ocasio, & McDonnell, 2014). As one survey respondent noted, the three largest challenges boards face in regards to CEO succession are "getting a sufficiently objective view of internal candidates, . . . getting an appropriate overview of external candidates, [and] clarifying [the] skill sets and capabilities needed of [the] next CEO aligned with [the] long-term strategic plan."

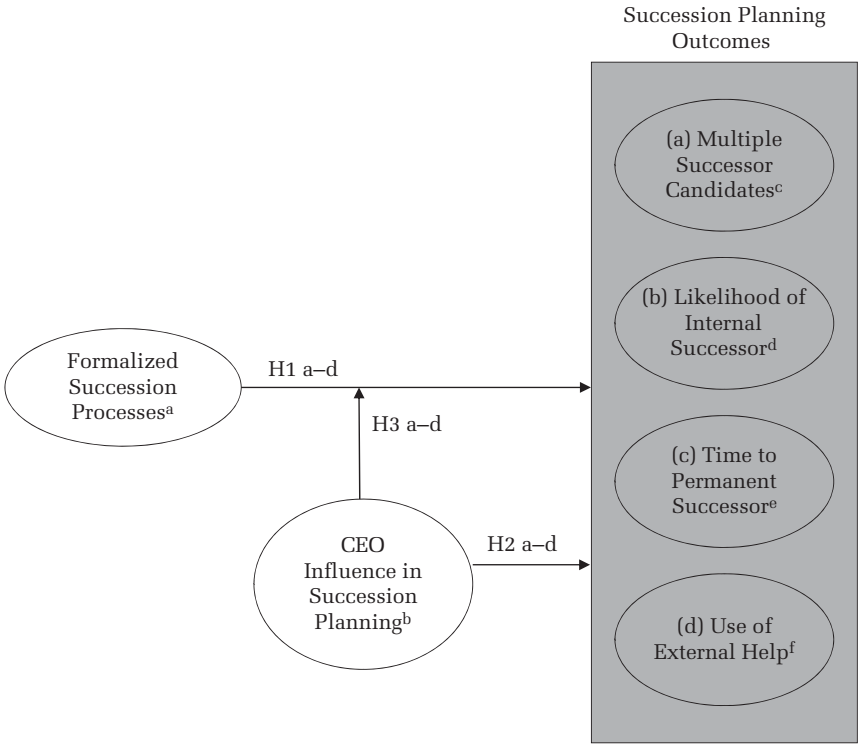
Thus, boards face severe decision-making challenges: they are responsible for selecting the CEO, but they often rely on others to provide the critical information necessary for good decision-making. These challenges constrain the board, even when there are motivated board members (Boivie et al., 2016). To overcome informational barriers, the board must devise systems and processes to access information necessary to make effective selection decisions.

For directors to add value to the firm, they must be able to acquire the appropriate information, process it clearly, and analyze it as a group, considering both the focal firm and its broader environment (Boivie et al., 2016; Hambrick, Misangyi, & Park, 2015; Makri, Lane, & Gomez-Mejia, 2006). To accomplish these tasks and overcome barriers to information processing, we draw upon procedural rationality in decision-making theory to show how boards that establish systematic, rigorous selection processes will achieve better decision quality. "Procedural rationality" is defined as the extent to which a decision process includes collecting relevant information and uses a systematic approach to analyze that information (Dean & Sharfman, 1996: 373). It requires defined, comprehensive systems that support the exploration of alternatives. The resulting scripts help evaluate decision-making alternatives (Cohen, March, & Olsen, 1972) while limiting political conflict (Ocasio, 1999), thus promoting systematic evaluations to overcome information asymmetry and bounded rationality. For CEO succession planning, it suggests a board should establish a comprehensive set of activities designed to decrease the likelihood of adverse selection (Khuranna, 2002).

Our qualitative data suggest three main categories of board succession planning activities. First, boards outline the planning process by distinguishing roles and responsibilities. Second, boards determine the skills necessary to drive the firm's future (Khuranna, 2002). This forward-thinking behavior builds a candidate profile by identifying capabilities needed for a future CEO, rather than previously beneficial skills. Third, the board can create plans to develop successor candidates; for example, providing challenging growth assignments. These activities help to overcome the board's lack of information by formalizing information gathering and processing systems, providing access to objective information sources, and creating a systematic evaluation process. This process also should mitigate the influence of common decision-making challenges, such as being enamored with a candidate's history or charisma (e.g., Khuranna, 2002).

Figure 1 shows our theoretical model. The increased procedural rationality, exemplified by formalized succession processes, influences succession planning outcomes. "Formalized succession processes" refer to the systematic, formalized processes designed to collect and analyze relevant information to promote comprehensive and systematic succession

FIGURE 1
Relationship among Formalized Succession Processes, CEO Influence, and Succession Planning Outcomes



[a] *Formalized succession processes* are the systematic, formalized processes in place designed to collect and analyze relevant information to promote comprehensive and systematic succession planning outcomes. We measured this using 10 succession planning activities.

[b] *CEO influence in succession planning* is the degree of influence the CEO holds in the succession process. We measured this by asking about the amount of influence the CEO had versus that of the board.

[c] *Multiple successors* is whether the board is considering more than one successor as a replacement for the CEO.

[d] *Likelihood of internal successor* is the level of confidence that, if the current CEO stepped down, the next CEO would be chosen from the internal pool of candidates.

[e] *Time to permanent successor* is the amount of time that it would take to identify and name a permanent successor if the CEO stepped down today.

[f] *Use of external help* is whether the company is using external help in the succession process.

planning outcomes. Simultaneously, we leverage prior research (e.g., Zajac & Westphal, 1996) that suggests CEOs affect succession planning, and, to the extent that CEOs strive to influence this outcome, they will mitigate the effectiveness of formalized succession processes.

Formalized Succession Processes, Decision-Making Biases, and Effectiveness

Formalized succession planning, as a form of procedural rationality, leads to better decisions, and thus, on average, better outcomes (Kahneman, 2011). Although this line of reasoning has not been applied to CEO succession, it has been demonstrated in alternative literatures. For instance, decision-makers are often suboptimal in their decision-making (Mellers, Schwartz, & Cooke, 1998), leading to erratic decision-making and poorer judgement quality (Mitchell, Shepherd, & Sharfman, 2011). In contrast, formalized decision-making is shown to lead to better outcomes, even when the decision-makers are well-trained professionals (Dawes, Faust, & Meehl 1989). These formalized decision-making processes are effective because they can provide three critical decision-making benefits. First, they can help overcome the "planning fallacy," a decision-making bias that occurs when people underestimate the time and effort required to make quality decisions (Kahneman, 1991). For CEO succession, this trap is particularly pernicious because identifying and preparing a CEO successor can take years. Failure to plan forces boards to either rush a decision or spend considerable time identifying and

readying a candidate while the firm is leaderless. As one former *Fortune* 100 CEO noted, "Succession planning isn't a once a year meeting; it is an ongoing process." And, as another senior executive shared, "We begin planning for the next CEO succession the first day our CEO takes office." Formalized succession planning also allows the board to create developmental opportunities that enhance candidate readiness and yield insights regarding capabilities, reducing the risk of adverse selection.

Second, procedural rationality can help overcome problems related to confirmation bias, such as when decision-makers choose an option and then fall into the trap of making a decision using supporting evidence while ignoring disconfirming evidence (e.g., Nickerson, 1998; Rabin & Schrag, 1999). For example, they might place more weight on evidence that confirms the initial choice of an heir apparent rather than carefully examining evidence regarding who can best lead the firm in the future. Confirmation bias can also be mitigated through employing systematic processes, whereby criteria are carefully developed, with multiple opportunities to evaluate candidates (Hitt & Tyler, 1991), which also should help avoid inappropriate preferences for charismatic or "celebrity" candidates (Wade, Porac, Pollock, & Graffin, 2006).

Third, procedural rationality enhances decision-making quality (Bourgeois, 1985; Bourgeois & Eisenhardt, 1988) by reducing the board's reliance on the CEO for information. Procedural rationality and, relatedly, decision-making comprehensiveness are both associated with decision effectiveness (Dean & Sharfman, 1996), and subsequent firm performance (Fredrickson, 1984; Fredrickson & Iaquinto, 1989). Comprehensiveness is a means by which decision-makers evaluate possible alternatives prior to making a decision, and procedural rationality focuses on comprehensiveness in the activities decision-makers engage in and the information collected to evaluate that decision. Hence, procedural rationality defines a set of formalized processes to follow for the evaluation of candidates across systematically devised criteria that should yield greater comprehensiveness.

Overcoming these three decision-making challenges has also been shown to positively influence organizational outcomes. For instance, companies adopting data-driven decision-making have 5–6% higher output and productivity than would otherwise be expected (Brynjolfsson, Hitt, & Kim, 2011). Additionally, it can also have a positive impact on sales, customer satisfaction, and improved strategic decision-making (Chen, Chiang, & Storey, 2012). We take these benefits of systematic decision-making in other areas of business to infer that there would also be similar benefits of doing this regarding CEO succession, and provide the best evidence that our data will allow by examining proximal outcomes to these decisions.

In high-velocity environments, it is conceivable that decision-making comprehensiveness could relate negatively to firm performance (Fredrickson & Iaquinto, 1989; Fredrickson & Mitchell, 1984), due to the time needed to collect information and make decisions.[1] In a CEO succession, this concern could suggest an argument against formalized succession processes, but that argument would advocate randomness as an alternative, which produces poorer selection decisions, even in highly volatile situations (Ployhart, 2006). Further, when processes are in place in advance of a succession event, it should not delay critical decisions, even in high-velocity situations. Formal processes may even counteract such problems by avoiding the planning fallacy and enabling a quicker transition, even in an unexpected situation. Finally, optimal CEO succession starts by naming a successor and providing a transition through on-the-job training. As such, velocity is less important than accuracy for effective succession planning.

Quantity and Quality of Succession Candidates

The majority of succession research focuses on how succession influences firm outcomes; however, such findings are relatively mixed (Dalton et al., 1998; Schepker, Kim, Patel, Thatcher, & Campion, 2017). Thus, Finkelstein et al. (2009: 226) called for studies of "the linkage between executive succession and more immediate organizational outcomes," and Giambatista, Rowe, and Riaz (2005) highlighted the need to consider sociopolitical relationships among directors, CEOs, and successor candidates. Accordingly, we examine the influence of procedural rationality by examining the effect that formalized succession processes have on four outcomes that reflect the quantity and quality of successor candidates considered by boards.[2]

[1] We thank a reviewer for pointing us in this direction.

[2] We expect these outcomes to lead to a more effective CEO succession; however, their direct effects may be difficult to disentangle from the myriad of factors that influence firm performance, suggesting that intermediate outcomes may be more relevant for examining formalized succession planning effectiveness.

Multiple successor candidates. Considering multiple candidates increases firm performance (Boudreau & Berger, 1985) by avoiding myopia in strategic choices (Dean & Sharfman, 1996) and allowing for direct comparisons of candidates over time. This benefit is critical because, as one executive shared, "most succession candidates never evolve to the succession role," and the alternative can arise such as described by Wright and Schepker (2015) regarding a board with only one CEO successor candidate that discounted an unsolicited negative recommendation letter about the candidate, who then failed. As this example shows, boards that lack systematic processes for evaluating candidates may fixate on a single candidate and this may be for reasons irrelevant for performance. By considering multiple candidates, the board can react quickly as it receives information, reducing the likelihood of adverse selection.

Establishing formalized succession processes allows for the systematic collection of information that encourages consideration of alternatives (Hough & White, 2003) by providing options if a candidate leaves or fails to develop as expected (Eisenhardt, 1989). Formalized succession processes should establish, therefore, activities that provide exposure to multiple candidates. In turn, this exposure informs board members about potential successors and limits the potential bias associated with information solely provided by the CEO. Alternatively, boards without formalized succession processes lack a systematic process to identify candidates or may fixate on a single candidate. Even when it is less efficient to identify multiple candidates, considering more than one allows for comparisons that increase decision-making effectiveness.

It is conceivable that considering multiple candidates could lead to more formalized processes. However, formal succession planning processes should be relatively stable and thus unlikely to quickly change dramatically, making it more likely that it is the processes leading to multiple candidates rather than the reverse. Without such processes, it is less likely that boards will have the information necessary to know whom should be considered.

Hypothesis 1a. Formalized CEO succession planning processes positively relates to the consideration of more than one CEO successor candidate.

Likelihood of internal successor. Internal successors are less likely to suffer from adverse selection problems (Zhang, 2008) and are associated with positive long-term firm performance (Schepker et al., 2017; Shen & Cannella, 2002a). According to a former *Fortune* 50 CEO we interviewed, "Companies that go outside [the organization for a successor] validate the fact that they do not have a robust succession planning process." Thus, the hiring of an internal successor is one way to judge succession planning effectiveness.

Procedural rationality should increase the likelihood that an internal candidate will be selected because formalized succession planning processes help identify candidates and provide opportunities to undertake challenging assignments that foster growth. For example, a nominating committee member of a *Fortune* 500 firm discussed a chief financial officer (CFO) who was considered a candidate; however, the board wanted to see the candidate in an operating environment to better evaluate his capabilities. In response, the board asked the then CEO to move the candidate from CFO to president of the company's largest division. This gave the board greater visibility into the candidate's operating style and business acumen, which increased their belief in his abilities, and ultimately increased the likelihood of selecting the next CEO from within the firm. Without conducting reviews of internal talent, the board would have been unlikely to believe the CFO could be an effective CEO. Such activities can also weed out potentially ineffective CEOs through internal horse races. In short, formalized processes can result in identifying internal executives who can be groomed to be effective candidates for the multifaceted position of CEO.

As the example also shows, formalized succession planning processes may lead boards to conduct systematic reviews of candidate talent gaps. If gaps exist, boards may become involved in hiring into positions that help groom candidates, such as hiring talent who can be potential successors early enough to allow the new hire to learn the culture. Thus, while formalized succession processes should increase awareness of external talent, our interviews suggest that such processes decrease the need to hire a CEO directly from outside. Instead, firms may hire from the outside but by bringing the external talent into the firm at levels below the CEO and observing the talent. For instance, following an internal talent review, Archer Daniels Midland hired Juan Luciano as chief operating officer in 2011. Three years later, Luciano was named president and assumed the role of CEO the following year. This process provides boards time to observe the candidate's capabilities, which reduces adverse selection concerns.

Alternatively, firms with fewer processes may not identify gaps soon enough to affect the outcome. In such cases, boards may not have viable internal options and are then left to hire externally. Further, external candidates may appear to have greater qualifications (e.g., prior CEO experience) than

internal candidates if the board has little familiarity with them. In turn, the board's lack of familiarity with external candidates, as well as the candidate's lack of familiarity with the firm, increases the risk of adverse selection (Zhang, 2008).

Hypothesis 1b. Formalized CEO succession planning processes positively relates to the likelihood of having an internal successor candidate.

Time to permanent successor. When McDonald's CEO Jim Cantalupo suffered a fatal heart attack overnight, the company named Charlie Bell CEO by 9:30 a.m. (Gibson & Gray, 2004). This quick reaction was an indication of a "board acting at its finest" (The Economist, 2004). Research supports this contention: interim CEOs are associated with both negative firm performance (Ballinger & Marcel, 2010) and investor reactions (Gangloff, Connelly, & Shook, 2016). Interim CEO selection is more likely if a CEO departs during the first three years of his or her tenure (Mooney, Semadeni, & Kesner, 2014), suggesting that boards often are slow to begin the succession process. Because formalized succession planning processes increase the likelihood of having an internal successor, they can reduce transition disruptions. Development activities help executives cultivate skills relevant to the CEO position (Dragoni, Oh, Vankatwyk, & Tesluk, 2011), and identification and evaluation activities help the board recognize which executives are ready to succeed. In the aforementioned example of the CFO moved to an operating position, by gaining operating experience, the candidate was able to illustrate his effectiveness in both business administration and operations, which increased the board's belief in his readiness to succeed. Without formalized succession processes, boards need more time to evaluate candidates, so an interim CEO becomes more likely, as does the threat of adverse selection following a rushed succession process. In short, formalized succession processes yield greater preparedness. Thus, they should reduce the time in naming a permanent CEO. While the mechanisms are similar to those for Hypothesis 1b, the outcomes are distinct; internal candidates are identified and given opportunities to illustrate different capabilities (Hypothesis 1b), which in turn enables them to assume the position in a quicker, less turbulent fashion (Hypothesis 1c).

Hypothesis 1c. Formalized CEO succession planning processes negatively relates to the expected time required to name a permanent CEO.

Use of external help. Third-party succession planning experts can increase decision efficacy by serving as an additional information source (Charan, 2005; Khuranna, 2002). Such experts can vet external candidates to compare to internal candidates (Faulconbridge, Beaverstock, Hall, & Hewitson, 2009; Hamori, 2010), which increases board options and helps avoid premature conclusions. Our interviews also indicate a growing desire for third parties to assess internal talent and offer alternate, potentially more objective views, with the recognition that "failure to capitalize on the experience of others who have seen this work/fail is arrogant and dangerous." External help may also identify external candidates who might better meet the firm's criteria. As one former *Fortune* 100 CEO we interviewed noted, "No matter how strong your internal person is, you must do an external search to ensure you have the best." Using outside help provides objective information that complements internal activities (Charan, 2005).

Formalized succession planning processes should increase the use of external help, for several reasons. First, processes should dictate considering alternatives, including external candidates. This will allow boards more information to reduce their risk of bias. Second, acclimation or wishful-thinking biases can cause decision-makers to become blind to issues, and thus myopia can be exacerbated by confirmation bias (Babad & Katz, 1991)—outside experts can bring these concerns to the fore. Third, when boards lack processes, individual directors may be overly confident in their belief that they possess the knowledge and skills necessary to effectively select CEO talent, but outside experts can provide counsel (Tversky & Kahneman, 1974). Fourth, external experts can help validate the board's desire to overcome potential information shortfalls by detailing internal candidates' strengths and weaknesses (Faulconbridge et al., 2009). Boards do not need to rely solely on external help, but such help instead becomes an added information source to triangulate opinions.

It is possible that boards that do not have processes may engage external help as a substitute for conducting their own process. However, this is less likely, for two reasons. First, processes are designed to gather information, suggesting that stable, formalized processes will lead to using external help, although this could be a recursive relationship whereby the board's processes lead to selecting outside experts, and the experts, in turn, suggest additional processes. Second, boards lacking processes are likely to be less engaged and focus more attention on activities other than succession planning (Golden & Zajac, 2001), making them less likely

to commit the energy necessary to engage and manage a third party.

Hypothesis 1d. Formalized CEO succession planning processes relates positively to the use of external help.

CEO Influence and Succession Planning Processes

Prior CEO succession research claims that CEOs drive the process (Vancil, 1987) and want to influence the succession outcome toward their preferred candidates (Zajac & Westphal, 1996), for two primary reasons. First, in some cases, CEOs seek to extend their legacies, whether by selecting a replacement who will continue policies or choosing a weak successor who makes them look comparatively strong (Finkelstein et al., 2009). Second, some CEOs honestly disagree with the board about the capabilities a successor should have or the strengths and weaknesses of candidates (Khuranna, 2002). Yet, like boards, a CEO can be blind to strengths and weaknesses. For example, in-group or similarity biases may lead CEOs to identify and support candidates who appear similar to themselves (Zajac & Westphal, 1996), especially those whom they have mentored. Such preferences, driven by subconscious biases, often are suboptimal in decision-making. In addition, many CEOs, are susceptible to overconfidence bias (Tversky & Kahneman, 1974). They believe they are best qualified to determine the company's future needs and assess the candidates' skills (Westphal & Clement, 2008). This confidence is forged from prior success leading the firm, but overconfidence can lead CEOs to ignore alternatives and changing signals.

We posit that the CEO's influence is manifest in the four succession planning outcomes previously discussed. Boivie et al. (2016) argued that structural barriers may inhibit the board's acquisition, processing, and sharing of information. We suggest that the CEO's influence can serve as a structural barrier to the board's information processing. While we argue that these four outcomes are positively related to decision-making effectiveness, the CEO's desire may be driven by negative (e.g., extend a legacy, promote a handpicked successor) or positive intentions (e.g., disagreements with the board over the firm's future strategy), particularly if the CEO believes the board is not well informed. Thus, influential CEOs may desire to alter the process in a potentially negative fashion even though they believe their intentions are beneficial.

First, influential CEOs can limit the board's evaluation of candidates, such as when the CEO alters the board's agenda to reduce exposure to candidates or discourages evaluation of alternative candidates by publicly endorsing a successor. A former *Fortune* 100 CEO we interviewed noted that he was responsible for picking the events, trips, and locations where board members could access candidates. By controlling access to candidates, the CEO can highlight the strengths of a preferred candidate and make that candidate salient to the board.

Hypothesis 2a. CEO influence in succession planning processes negatively relates to the consideration of more than one CEO successor candidate.

Second, given the negative consequences of external successors (Zhang, 2008), boards are likely to be wary of hiring externally. However, CEOs may influence the process and seek to extend their own tenure by limiting internal candidates and reducing the board's familiarity with talent, thus reducing the board's options for replacing the CEO (Shen & Cannella, 2002b). In the extreme, a CEO could oust all potential successors to protect his or her position (Khuranna, 2002). This may lead the board to feel that it is necessary to seek an external candidate or risk not having a candidate. Further, some might suggest that influential CEOs will decrease board options internally in order to enhance their own personal influence, in a vicious cycle, resulting in a lower likelihood the board can select an internal candidate.

Hypothesis 2b. CEO influence in succession planning processes negatively relates to the likelihood of having an internal successor candidate.

Third, boards are likely to be more reticent to replace a CEO without a ready replacement (Fredrickson, Hambrick, & Baumrin, 1988), suggesting that limited candidate readiness also likely lengthens the timeframe for naming a permanent successor. That is, influential CEOs may hinder succession planning, consciously or subconsciously, by extending the time before a candidate is ready. One board member recalled an outgoing CEO consistently dragging his feet with regard to grooming talent. As the problem worsened, the board was forced to circumvent this CEO to provide developmental opportunities for candidates, but not without considerable challenge. It is possible that, in some situations, CEOs could reduce this time to ensure their handpicked candidates are ready to ascend. However, having candidates ready makes it easier for boards to replace the CEO, so CEOs interested in protecting their position will, on average, be more likely to minimize competition, rather than accelerate its readiness. Further, as with the prior hypothesis, some might suggest influential CEOs will seek to limit the

readiness of candidates to enhance their own influence over the process, suggesting a vicious cycle.

Hypothesis 2c. CEO influence in succession planning processes positively relates to the expected time required to name a permanent CEO.

Finally, external help supplements internal evaluations by providing access to candidates the firm cannot identify on its own and external evaluation of internal executives (Charan, 2005; Hamori, 2010; Khuranna, 2002). Incumbent CEOs may discourage the use of outside help as it provides information about external possibilities or identifies weaknesses in the CEO's handpicked successor. Restricting the use of external advisors who report directly to the board also limits the board's ability to collect information independently of the CEO. External firms have their own agendas (e.g., financial incentives to place outsiders; Khuranna, 2002), but the supplementary information they provide potentially disrupts the CEO's agenda and weakens the CEO's control over the process. Therefore, we expect CEOs to discourage the use of such help.

At the same time, if a CEO could be assured that the external advisors would supplement the CEO's own evaluation, the CEO might seek such support. However, three problems arise with this argument. First, the use of external help may reduce CEO involvement, particularly by a board that is otherwise reliant on the CEO for information. Second, CEOs often desire to control information to influence selection of their successor (Zajac & Westphal, 1996). Using a search firm complicates the process and increases the chance that information will be generated that does not confirm the CEO's selection. Third, executive search firms typically are engaged by and report to boards (Khuranna, 2002), reducing the CEO's ability to filter such information.

Hypothesis 2d. CEO influence in succession planning processes relates negatively to the use of external help.

Moderating Effect of CEO Influence

Boards face difficulties in gathering and processing information, which makes decision-making difficult. An information deficit may be problematic if it leads to distrust between the board and the CEO (Sundaramurthy & Lewis, 2003). Prior research argues that powerful CEOs hinder board succession planning processes by acting opportunistically (Adams, Almeida, & Ferreira, 2005). Further, agency and power theories imply that CEOs use their influence to drive their preferred results (Zajac & Westphal, 1996), suggesting behavior that can create distrust. Thus, CEO influence should attenuate the beneficial effects of formalized succession processes.[3]

In creating formalized processes, the board defines a framework by which information is gathered. The CEO can facilitate or serve as a further barrier for such a process. While strong processes are critical to mitigate the influence of an opportunistic CEO, a dominant CEO can still alter the effectiveness of such processes by affecting the quality and quantity of information that the board receives; in essence, serving as a barrier to board information processing. That is, influential CEOs can use their influence to funnel information to the board to achieve their desired result, which limits the effectiveness of formalized succession planning processes.

As hypothesized, formalized succession processes will be associated with a greater quantity and quality of succession candidates, while CEO influence will be negatively related to quantity and quality of succession candidates. At low levels of formalized succession processes, we expect that quantity and quality of succession candidates will be poor regardless of CEO influence. However, at higher levels of processes, we expect higher and lower levels of CEO influence to illustrate differential effects. When CEO influence is low, CEOs have less of an effect on the ability of formalized succession planning processes to overcome information barriers and therefore should encourage a collaborative relationship. Alternatively, when CEO influence is high, the CEO can more effectively serve as an information barrier and manipulate formalized succession planning processes, attenuating processes' effectiveness. Even motivated boards cannot completely overcome such problems because the barriers limit the acquisition and sharing of critical knowledge (Boivie et al., 2016). In essence, we expect little difference in outcomes when formalized succession processes do not exist, regardless of CEO influence; however, as the board develops more formalized CEO succession processes, influential CEOs can limit the effectiveness

[3] While the outcomes of these formalized processes should be beneficial to firms, CEOs may have positive or negative motivation to disrupt such processes, such as concern over the board's processing of information in a way that yields different conclusions than those reached by the CEO.

of such processes, while less influential CEOs accentuate their effects.

Hypothesis 3. CEO influence moderates the relationship between formalized succession processes and succession planning outcomes, such that, when CEO influence is high, the relationship between formalized succession planning processes and all four key succession planning outcomes will be weaker.

METHODS

Sample and Data Collection

To test our hypotheses, we surveyed CHROs. Surveying CHROs constitutes a departure from prior research that indicates that human resource leaders have limited influence over the strategic direction of the organization. However, our in-depth interviews with corporate board members reveal that CHROs have become critical to the succession process, as they often serve as trusted sources of objective information that can supplement (or even offset) CEO opinions. Thus, we assert that such prior thinking is outdated. For instance, according to a former *Fortune* 500 CEO we interviewed, after the CEO, the two most important top management team members are the CFO and the CHRO, because modern firms compete substantially by leveraging their human capital (Chambers, Foulon, Handfield-Jones, Hankin, & Michaels, 1998). Another executive we interviewed noted that these positions are critical because, in addition to the CEO, the CFO and CHRO are the only organizational positions that have enterprise-wide perspectives and responsibilities. Proxy statements also affirm this view. For example, Avnet and Archer Daniels Midland directly state that their CHRO presents succession plans at least annually to the board. Hence, we consider CHROs the best source for information about CEO succession planning because they are often responsible for managing the succession process, identifying potential succession candidates, creating development plans, and advising the board about CEO succession and candidates. They rarely are potential CEO successors, so they also are less likely to have personal investment in the result. In this unique position, CHROs have a distinct view of succession planning and related activities that includes both CEO and board perspectives, derived from their access to both (Wright, Boudreau, Pace, Sartain, McKinnon, & Antoine, 2011), as well as an increasingly important role in strategic decision-making (Nadler & Chen, 2015).

To validate this approach, we verified the succession planning involvement of the sample of CHROs for this study, asking respondents about their time interacting with the board. On average, respondents spent 12% of their time interacting directly with the board. More than 75% of respondents also reported engaging the board about CEO succession at least twice per year, and with the CEO at least four times per year. In addition, 70% spoke with potential candidates about their succession possibilities at least twice per year. Thus, the CHROs in this study had an intimate understanding of their firm's succession planning activities.

Over three years, we collected data using multiple methods, as part of an ongoing series of research into succession planning. First, we videotaped in-depth, semi-structured interviews with nine CHROs of *Fortune* 500 companies to gain insights into succession planning. Second, we completed informational meetings with 40 CHROs (three from the initial nine in-depth interviews), as well as one retired CEO from a *Fortune* 50 firm who currently serves as the chair of the board for the firm he formerly led, one current CEO of a *Fortune 500* firm, and one board member of a *Fortune* 500 firm. Most of these executives also served as active directors on corporate boards. With these meetings, we sought to understand critical succession planning challenges. Based on our interviews and conversations, we developed grounded theory about how firms conduct succession planning, best practices, board and CEO engagement, and how the parties facilitate the process. Third, we conducted extensive interviews with 22 directors who collectively served on 135 boards of large, publicly traded firms and had experienced 97 CEO succession events. This group included eight former CEOs and one current CEO. These conversations together provided opportunities to identify research areas and confirm that our findings were realistic and relevant to professionals actively involved in the CEO succession process.

To begin the process, we formulated questions and conferred with 23 CHROs, 20 of whom worked in *Fortune* 500 firms and all of whom had substantial CEO succession planning experience. Next, we emailed the survey to CHROs of *Fortune* 500 companies and other members of the largest CHRO lobbying association. The surveys were administered between April and June for three years (2013–2015). We received responses from 156 of 459 CHROs in 2013 (34% response rate), 222 of 634 participants in 2014 (35% response rate), and 172 of 668 invitations in 2015 (26% response rate). The usable survey (i.e., U.S.-based public companies with complete answers) and financial data covered 355 firm-year

observations from 218 companies (92 firms in 2013, 153 in 2014, and 110 in 2015). Of these, 71% belonged to the *Fortune* 500. Further, 36 companies provided data in all three survey years, 65 provided data in two survey years, and 117 provided data in just one year. Of the CHROs surveyed, 95% reported directly to their firm's CEO.[4] To ensure that they focused on actual, in-place processes and to minimize post hoc sense making, we instructed respondents to provide information about the firm's succession planning activities as of the survey date, rather than referencing prior succession events. Thus, we captured different stages of succession planning unique to each firm and created a more holistic perspective of the planning process, rather than a retrospective view that could be biased by successor performance. To supplement survey data, we gathered financial and governance data from the year preceding each survey administration from Compustat, MSCI (formerly GMI Ratings), and firm proxy statements.

Dependent Variables

We examined four dependent variables for the quantity and quality of succession candidates. First, for consideration of *multiple successor candidates*, we asked respondents, "Approximately how many executives in the total executive population currently would be considered potential successors to the CEO?"[5] These responses were coded 0 if one or fewer candidates were being considered and 1 if there were at least two candidates under consideration. We anticipated a qualitative difference between firms that consider just one candidate and those that consider more than one. Second, to assess the *likelihood of internal successor*, we asked, "If your CEO were to step down or leave today, how confident are you that his/her permanent successor would immediately be an internal direct report (i.e., immediate promotion without an "interim" CEO)?" The scale for this item ranged from 0% to 100%, in 10-unit intervals. The item assesses the quality of succession planning by evaluating the expectation that the organization could name an internal successor. Third, to evaluate expected *time to permanent successor*, we asked, "If your CEO were to step down or leave today, how long do you think it would take to have a permanent successor in place?" The six response options ranged from "less than one week" to "six months or more"; smaller values indicate a shorter timeframe. Fourth, to assess the *use of external help*, we asked respondents, "Are you using external/third party help in CEO succession?" coded as 1 if companies indicated use external help and 0 otherwise.

Independent Variables

Formalized succession processes. To measure *formalized succession processes*, we focused on how the board gathered information during the process by examining the formalized activities conducted to analyze and evaluate successor candidates. Prior research does not offer items to measure succession planning activities. Therefore, in conjunction with a third-party consulting group that has more than 60 years of expertise working with firms on their succession planning, we identified items that represent critical succession planning activities, and analyzed the data for reliability. Specifically, participants completed objective assessments of whether the board engaged in 13 CEO succession planning related activities. We validated these activities through our discussions with our executive informants, who provided feedback that prompted us to ask specifically, "Does your board do each of the following with regard to CEO succession?" When viewed in isolation, some items might not appear necessary (e.g., "Develops clear role profile for CEO aligned to five years (or more) of enterprise business strategy analysis"), but, in the context of the succession question, we emphasize the links between, for example, understanding the necessary CEO role profile and evaluating executive talent to be prepared for an unexpected CEO departure and succession processes. These 13 items are presented in Appendix A.

To determine the appropriateness of these 13 items, we first conducted a parallel analysis (Horn, 1965; Lee & Donohue, 2012), as recommended by Zwick and Velicer (1986) to identify the number of factor components. The analysis suggested a single-factor solution. In an exploratory factor analysis of the 13 activities, we identified 10 items with factor loadings greater than .40 (see Appendix A). We

[4] We conducted additional analyses excluding responses from CHROs who did not report directly to the CEO. The results were substantively similar to those we report here and are available on request.

[5] In 2015, we asked two questions—"Approximately how many insiders are currently considered potential successors to your current CEO?" and "Approximately how many external candidates are you currently monitoring as potential successors to the CEO?"— which were combined to create a comparable measure to 2013 and 2014.

excluded the three items with factor loadings below .40, which appear less related to the 10 activities that constitute a procedurally rational process.[6]

The 10 items also align with three established succession planning domains: defining the desired CEO role profile based on current and future strategy, identifying candidates with the potential to fit that profile, and creating development experiences for successor candidates. For the final measure, we counted the number of formalized succession processes that the board uses in its succession planning. We cannot determine relative value among these processes; however, the use of more processes is consistent with our definition of procedural rationality, and should create a more efficient and effective search. This prediction mimics the assumption embedded in literature examining the effect of organizational policies and routines on organizational outcomes (e.g., Becker, 2004; Guthrie, 2001; Knott & McKelvey, 1999; Nelson & Winter, 1982; Trevor & Nyberg, 2008). The measure exhibited acceptable reliability (Cronbach's $\alpha = .74$).

CEO influence in succession planning. Finkelstein and colleagues (2009: 246) argued that "it is important to identify the distribution of power between boards and CEOs." To assess *CEO influence in succession planning*, we asked, "When it comes to the reality of choosing the CEO's successor, how much influence will the CEO have versus the board?" The response categories ranged from "100% board/0% CEO" to "0% board/100% CEO," in 10% increments. In line with our theory, we chose to measure CEO influence, rather than traditional measures of CEO power, because "power" refers to a person's ability to potentially alter other's opinions, whereas "influence" is the degree to which an individual can affect such changes in others (Raven, 1965). The responses ranged from 100% board influence to 90% CEO influence. We treated them as interval variables, with values ranging from 0 to 10, such that 0 represented 0% CEO/100% board control and 10 represented 100% CEO control/0% board control. The board had greater influence than the CEO in 48% of cases, less in 30% of cases, and an equal influence in 22% of cases.

Control Variables

We included control variables reflecting measures of *firm size* (log of firm assets), return on assets (*ROA*), and *debt-to-equity ratio* (winsorized at the 1% level to lessen the impact of extreme observations). Larger firms may have more candidates to choose from (Fredrickson et al., 1988), which may affect succession planning. Firms with strong prior performance also may have greater CEO influence. We included additional controls for corporate governance, including the total *number of directors*, *number of board meetings*, *CEO pay ratio* (ratio of CEO pay to the next highest-paid employee), *CEO ownership*, *CEO directorships* (number of boards on which the CEO serves), *CEO duality*, *post-CEO directors* (directors appointed after the outgoing CEO), *block ownership* (percent of ownership by those holding more than 5% of company stock), and *board independence* (proportion of independent directors). We included these variables to increase the likelihood that our measure of CEO influence captured additional information, beyond traditional board strength or CEO power measures (Aguilera & Jackson, 2010; Finkelstein, 1992; Ocasio, 1997).[7] We also included *CEO age* and *CEO tenure*, predicting that succession planning activities vary for firms with older CEOs or those early in their tenure.[8] To control for industry effects, we classified firms into six industry categories, based on standard industrial classifications (SIC) used by Schepker and Oh (2013): agricultural, fishing, mining, and construction ($SIC < 20$); manufacturing ($20 \leq SIC < 40$); transportation, communication, and utility ($40 \leq SIC < 50$); wholesale and retail ($50 \leq SIC < 60$); finance, insurance, and real estate ($60 \leq SIC < 70$); and services ($SIC \geq 70$).[9] Finally, we also accounted for the *year*.

Analytic Approach

We examined participants' responses across survey years to assess test–retest and interrater reliability. As expected, the correlations of independent and

[6] Results remained substantively unchanged using all 13 items or various combinations of the 10 items.

[7] We also analyzed results excluding the CEO power variables to test for the possibility of over-controlling; however, results were consistent, and are available upon request.

[8] We also analyzed results while controlling for whether there was an agreed upon timeline for CEO succession to occur (yes or no), and, if so, how long. Results were consistent and are available upon request.

[9] In additional analyses, we controlled for industry at the two-digit SIC level and obtained substantively similar results, but many of these industries included only a single firm, resulting in a substantial loss of data.

dependent variables between study years ranged from .35 to .55, with the exception of the correlation between the consideration of multiple successor candidates in 2013 and 2014, which was .07. However, the ICC1 for consideration of multiple candidates was .26, and other variables ranged from .41 to .52, suggesting that a meaningful portion of the variance in ratings over time can be explained by the firm, and our measures are consistent across years. The CHRO also changed between survey administrations in 11 cases, which provided an opportunity to explore the potential for common method bias: if ratings by different CHROs representing the same firm are consistent, common method bias is less likely to be a problem. Using paired *t*-tests to compare firm ratings from different CHROs, we found no significant differences for any dependent or independent variables—although, with this small subsample, we cannot completely rule out potential bias.

The ICCs over time for our dependent variables ($ICC1_{MultipleCandidates} = .26$, $ICC1_{LikelihoodInternal} = .48$, $ICC1_{TimeToPermanent} = .41$, $ICC1_{ExternalHelp} = .50$) were statistically significant, so we could use random coefficient modeling, which accounts for the non-independence that can arise in data collected over multiple time periods (Ployhart, Holtz, & Bliese, 2002). Therefore, we modeled interfirm correlations between periods, which otherwise would inflate the statistical significance of our effects. This also allowed us to include firms with usable data from only one time period. To analyze the *consideration of multiple successor candidates* and *use of external help* variables, we used logistic random coefficient modeling; that is, we accounted for the binary dependent variable. The analyses relied on the *nlme* and *lme4* packages in R.

RESULTS

Table 1 reports the descriptive statistics and bivariate correlations for study variables. For Hypotheses 1a–1d, regarding effects of formalized succession processes on the quantity and quality of successor candidates, we provide baseline models with the controls in Model 1 of each table (Tables 2–5). Formalized succession processes has a statistically significant, positive relationship with the consideration of multiple successor candidates (Model 2, Table 2: $b = .24$, $p < .01$), likelihood of internal successor (Model 2, Table 3: $b = .20$, $p < .05$), and use of external help (Model 2, Table 5: $b = .16$, $p < .05$), as well as a statistically significant, negative relationship with time to name a successor (Model 2, Table 4: $b = -.10$, $p < .05$). These findings support Hypothesis 1a–1d, which posited that formalized succession processes affect critical succession planning outcomes. These results appear to be meaningful, such that the differences between low (−1 *SD*) and high (+1 *SD*) levels of formalized succession planning processes (4.6 to 9.3 respectively) is associated with an increase of 12.0% in the probability of considering multiple successor candidates, the likelihood of an internal successor increases by 20.0%, time to a permanent successor decreases by 11.9%, and probability of using external help increases by 58.3%.

Despite our arguments that CEO influence affects succession planning outcomes, we fail to find support for Hypotheses 2a, 2b, or 2c concerning considering multiple successor candidates (Table 2, Model 3), the likelihood of internal successor (Table 3, Model 3), and the time to a permanent successor (Table 4, Model 3), respectively. However, we do find a statistically significant, negative relationship between CEO influence and the use of external help (Table 5, Model 3, $b = -.19$, $p < .05$), such that firms with influential CEOs are less likely to engage a third party in succession planning, supporting Hypothesis 2d.

Finally, we fail to find a statistically significant moderating relationship between board processes and CEO influence on the consideration of multiple successors (Table 2, Model 5), likelihood of an internal successor (Table 3, Model 5), time to a permanent successor (Table 4, Model 5), or use of external help (Table 5, Model 5). Thus, we cannot confirm Hypotheses 3a–3d. Rather, our results suggest that board processes occur independently of CEO influence.

Supplemental Analyses

To test the robustness of our findings, we conducted additional analyses. We were concerned that formalized succession planning processes could be affected by endogeneity issues. To address this possibility, we conducted a two-stage analytical procedure. First, following prior guidance (e.g., Murray, 2006; Semadeni, Withers, & Certo, 2014), we identified board engagement as an instrumental variable and ran a first-stage model, wherein board engagement in succession planning was identified as a strong instrument for formalized succession processes ($t = 9.15$, $p < .01$). *Board engagement* was measured using a single survey item asking respondents, "How would you describe your board of

TABLE 1
Descriptive Statistics and Correlations

	Variable	Mean	*SD*	1	2	3	4	5	6	7	8	9	10
1	Multiple Successor Candidates	0.85	0.36										
2	Likelihood of an Internal Successor	5.17	3.66	.20									
3	Time to Permanent Successor	3.65	1.85	−.17	−.81								
4	Use of External Help	0.41	0.49	.06	−.06	.05							
5	Formalized Succession Processes	6.92	2.35	.28	.12	−.14	.15						
6	Board Engagement	4.43	0.59	.18	.22	−.22	.10	.48					
7	Nominating Committee Involvement	4.71	1.80	.15	−.05	.04	.07	.17	.15				
8	CEO Influence	4.68	1.95	.03	.11	−.07	−.17	−.04	−.07	−.04			
9	Firm Size (Assets)	9.65	1.45	.22	.13	−.09	.03	.28	.13	.38	.03		
10	Block Ownership	0.22	0.17	−.15	−.11	.11	−.04	−.10	−.05	−.13	−.03	−.35	
11	Debt-to-Equity Ratio	1.33	2.70	−.01	−.05	.01	.04	.03	.00	−.06	−.03	−.06	.12
12	ROA	5.30	5.70	.17	.11	−.10	.01	.10	.19	.01	.00	−.08	−.18
13	Number of Directors	10.90	1.90	.19	.10	−.09	.02	.19	.08	.18	.07	.51	−.24
14	Number of Board Meetings	7.94	2.95	−.02	−.01	−.02	.03	.04	.03	.27	−.08	.25	−.02
15	CEO Pay Ratio	2.29	0.99	.12	.06	−.05	.04	.13	.05	.04	.01	.00	−.09
16	CEO Ownership	0.55	1.48	−.06	.09	−.04	−.06	−.17	−.05	−.19	.06	−.24	.00
17	CEO Directorships	1.65	0.73	.04	.06	−.04	.10	.00	−.05	−.04	.03	.08	−.04
18	CEO Tenure	5.94	5.86	.02	.27	−.24	−.07	−.07	.03	−.14	.11	−.08	−.10
19	CEO Duality	0.55	0.50	.13	.30	−.23	.01	.12	.10	−.02	.10	.21	−.12
20	Post CEO Directors	0.35	0.28	.07	.23	−.20	.00	−.02	.01	.00	.07	−.07	.01
21	Board Independence	0.77	0.17	.12	−.05	.05	−.01	.09	.19	.20	−.02	.19	−.12
22	CEO Age	56.60	5.76	.10	.26	−.18	.06	−.06	.03	−.04	.12	.07	−.10
23	Year	2014.05	0.75	.02	−.02	.01	.04	−.01	.13	.02	−.04	.00	.10

	Variable	11	12	13	14	15	16	17	18	19	20	21	22
12	ROA	−.11											
13	Number of Directors	−.07	.06										
14	Number of Board Meetings	.03	−.14	.06									
15	CEO–Pay Ratio	.07	.09	−.08	−.10								
16	CEO Ownership	−.03	.06	−.12	−.10	−.03							
17	CEO Directorships	.05	−.04	.08	−.02	.18	−.06						
18	CEO Tenure	−.07	.08	.00	−.11	.10	.58	.20					
19	CEO Duality	.02	.03	.19	−.08	.20	.13	.32	.43				
20	Post CEO Directors	.01	−.01	−.05	.00	.11	.31	.19	.68	.30			
21	Board Independence	−.08	.12	.05	.07	.12	−.10	.04	.00	.11	.05		
22	CEO Age	−.02	−.01	.03	−.05	.07	.29	.24	.45	.32	.32	−.02	
23	Year	−.01	.04	−.05	.01	.01	.05	−.03	.07	−.01	.05	.40	.12

Notes: $n = 355$. Correlations with absolute values greater than .10 are statistically significant at $p < .05$.

directors' involvement in succession?" Responses were measured using a five-point scale, encompassing "disruptive," "disengaged," "ambivalent," "engaged," and "highly engaged." Results of the first-stage model are presented in Appendix B. We then used the residuals of the first-stage model as a control to test our second-stage models. Results for all hypotheses (see Tables 6–9) were consistent with the prior reported results, except Hypothesis 1a, wherein including the endogeneity control results in no statistically significant relationship between formalized succession planning processes and consideration of multiple successors; however, the endogeneity control is also not statistically significant.

We ran additional tests for endogeneity using two instrument variables, board engagement (as discussed above) and the additional board processes that were not included in our board processes measure. We tested for instrument strength and exogeneity using two instrument variables. These resulted in support for strong instruments but mixed results for exogeneity, finding exogenous instruments when analyzing multiple successors and time to permanent successors. Even with exogenous instruments,

TABLE 2
Multiple Successor Candidates Logistic Regression Results

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	−75.76	−165.89	−85.35	−171.44	−222.25
	(496.77)	(514.47)	(498.30)	(515.07)	(514.51)
Firm Size (Assets)	0.43**	0.32†	0.43**	0.32†	0.31†
	(0.16)	(0.17)	(0.16)	(0.17)	(0.17)
Block Ownership	−0.69	−0.90	−0.71	−0.91	−0.99
	(1.02)	(1.04)	(1.02)	(1.04)	(1.04)
Debt-to-Equity Ratio	−0.01	−0.02	−0.01	−0.02	−0.02
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
ROA	0.07*	0.07*	0.07*	0.07*	0.07*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Number of Directors	0.17	0.13	0.17	0.12	0.15
	(0.11)	(0.11)	(0.11)	(0.11)	(0.12)
Number of Board Meetings	−0.03	−0.04	−0.03	−0.04	−0.04
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
CEO Pay Ratio	0.16	0.09	0.15	0.09	0.06
	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)
CEO Ownership	−0.07	−0.02	−0.07	−0.02	−0.02
	(0.13)	(0.14)	(0.13)	(0.15)	(0.15)
CEO Directorships	−0.24	−0.14	−0.24	−0.14	−0.15
	(0.24)	(0.25)	(0.24)	(0.25)	(0.25)
CEO Tenure	−0.07	−0.08	−0.07	−0.08	−0.08
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
CEO Duality	0.29	0.22	0.29	0.23	0.21
	(0.41)	(0.43)	(0.42)	(0.43)	(0.44)
Post CEO Directors	1.66†	1.72†	1.67†	1.72†	1.86*
	(0.86)	(0.92)	(0.86)	(0.92)	(0.92)
Board Independence	0.29	0.21	0.30	0.21	0.22
	(1.05)	(1.07)	(1.05)	(1.07)	(1.07)
Year	0.03	0.08	0.04	0.08	0.11
	(0.25)	(0.26)	(0.25)	(0.26)	(0.26)
CEO Age	0.07†	0.08*	0.06†	0.07*	0.07*
	(0.03)	(0.04)	(0.03)	(0.04)	(0.03)
Industry Controls	Included	Included	Included	Included	Included
Formalized Succession Processes		0.24**		0.24**	0.02
		(0.07)		(0.07)	(0.18)
CEO Influence			0.02	0.02	−0.25
			(0.09)	(0.09)	(0.23)
Formalized Succession Processes × CEO Influence					0.05
					(0.04)
Log likelihood	−126.49	−120.51	−126.46	−120.48	−119.61
Marginal R^2	0.31	0.36	0.31	0.36	0.38
Conditional R^2	0.34	0.38	0.34	0.38	0.40
AIC	296.98	287.02	298.91	288.97	289.22

Notes: $n = 355$, in 218 groups. Standard errors are in parentheses. Marginal R^2 represents variance explained by the fixed effects of the model; conditional R^2 represents variance from both fixed and random effects. AIC = Akaike information criterion.

† $p < .10$

* $p < .05$

** $p < .01$; two-tailed hypothesis tests.

we were not able to detect a statistically significant endogeneity effect, suggesting support for our original results.[10] Though limited instrument variables constrain our ability to definitively rule out potential endogenous effects, we were not able to detect problems stemming from endogeneity using the data available to us.

Since we did not find a statistically significant detrimental effect from endogeneity, using a two-stage

[10] These results, as well as additional endogeneity tests, are available from the authors.

TABLE 3
Likelihood of Internal Successor Regression Results

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	171.50	209.33	147.51	186.43	190.81
	(481.21)	(473.16)	(482.12)	(474.14)	(474.74)
Firm Size (Assets)	0.41*	0.33	0.41*	0.33	0.34
	(.20)	(.20)	(.20)	(.20)	(.20)
Block Ownership	0.11	0.27	0.05	0.21	0.20
	(1.26)	(1.26)	(1.27)	(1.26)	(1.26)
Debt-to-Equity Ratio	−0.04	−0.04	−0.04	−0.04	−0.04
	(.07)	(.07)	(.07)	(.07)	(.07)
ROA	0.04	0.04	0.04	0.04	0.04
	(.04)	(.04)	(.04)	(.04)	(.04)
Number of Directors	−0.06	−0.08	−0.06	−0.08	−0.09
	(.12)	(.12)	(.12)	(.12)	(.13)
Number of Board Meetings	0.07	0.07	0.07	0.08	0.08
	(.07)	(.07)	(.07)	(.07)	(.07)
CEO Pay Ratio	0.15	0.13	0.15	0.13	0.13
	(.19)	(.19)	(.19)	(.19)	(.19)
CEO Ownership	−0.19	−0.16	−0.20	−0.17	−0.16
	(.16)	(.16)	(.16)	(.16)	(.16)
CEO Directorships	−0.29	−0.24	−0.29	−0.24	−0.24
	(.28)	(.27)	(.28)	(.27)	(.28)
CEO Tenure	0.08	0.08	0.07	0.08	0.08
	(.06)	(.06)	(.06)	(.06)	(.06)
CEO Duality	1.45**	1.34**	1.47**	1.36**	1.39**
	(.49)	(.49)	(.49)	(.49)	(.50)
Post CEO Directors	1.23	1.03	1.24	1.05	1.04
	(.91)	(.90)	(.91)	(.90)	(.91)
Board Independence	−2.16	−2.14	−2.13	−2.12	−2.14
	(1.21)	(1.20)	(1.21)	(1.20)	(1.20)
Year	−0.09	−0.11	−0.08	−0.10	−0.10
	(.24)	(.24)	(.24)	(.24)	(.24)
CEO Age	0.10*	0.11*	0.10*	0.10*	0.10*
	(.04)	(.04)	(.04)	(.04)	(.04)
Industry Controls	Included	Included	Included	Included	Included
Formalized Succession Processes		0.20*		0.20*	0.29
		(.08)		(.08)	(.19)
CEO Influence			0.09	0.09	0.22
			(.10)	(.09)	(.27)
Formalized Succession Processes × CEO Influence					−0.02
					(.04)
Log likelihood	−919.64	−918.31	−920.64	−919.34	−921.55
Marginal R^2	.20	.21	.20	.21	.21
Conditional R^2	.54	.57	.54	.57	.57
AIC	1864.66	1860.73	1865.73	1861.84	1863.55

Notes: $n = 355$, in 218 groups. Standard errors are in parentheses. Marginal R^2 represents variance explained by the fixed effects of the model; conditional R^2 represents variance from both fixed and random effects.

$^{\dagger}p < .10$

$^{*}p < .05$

$^{**}p < .01$; two-tailed hypothesis tests.

regression approach has the potential to introduce bias into our results and should be avoided (Semadeni et al., 2014). Thus, because our findings are largely consistent across analytical techniques, endogeneity does not appear to statistically significantly bias our results.

Second, to account for the potential differences in analytical techniques, we also tested our models using GLS and longitudinal probit analyses using the *xtreg* and *xtprobit* commands in Stata. Examining the analytical models both with and without endogeneity controls yielded results nearly identical in direction

TABLE 4
Time to Permanent Successor Regression Results

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	15.47	3.16	26.28	13.63	13.67
	(256.75)	(253.86)	(257.25)	(254.38)	(254.78)
Firm Size (Assets)	−0.13	−0.09	−0.14	−0.09	−0.09
	(.10)	(.10)	(.10)	(.10)	(.10)
Block Ownership	0.49	0.44	0.52	0.46	0.46
	(.66)	(.66)	(.66)	(.66)	(.66)
Debt-to-Equity Ratio	−0.01	−0.01	−0.02	−0.02	−0.02
	(.04)	(.04)	(.04)	(.04)	(.04)
ROA	−0.01	−0.01	−0.01	−0.01	−0.01
	(.02)	(.02)	(.02)	(.02)	(.02)
Number of Directors	−0.00	0.00	0.00	0.01	0.01
	(.06)	(.06)	(.06)	(.06)	(.06)
Number of Board Meetings	−0.06	−0.06	−0.06	−0.06	−0.06
	(.04)	(.04)	(.04)	(.04)	(.04)
CEO Pay Ratio	−0.07	−0.05	−0.07	−0.06	−0.06
	(.10)	(.10)	(.10)	(.10)	(.10)
CEO Ownership	0.18*	0.17†	0.18*	0.17†	0.17†
	(.09)	(.09)	(.09)	(.09)	(.09)
CEO Directorships	0.15	0.12	0.15	0.12	0.12
	(.14)	(.14)	(.14)	(.14)	(.14)
CEO Tenure	−0.06*	−0.07*	−0.06*	−0.06*	−0.06*
	(.03)	(.03)	(.03)	(.03)	(.03)
CEO Duality	−0.48	−0.43	−0.49	−0.44	−0.44
	(.25)	(.26)	(.25)	(.26)	(.26)
Post CEO Directors	−0.36	−0.27	−0.36	−0.28	−0.28
	(.47)	(.47)	(.47)	(.47)	(.47)
Board Independence	1.13	1.14	1.12	1.13	1.13
	(.64)	(.64)	(.64)	(.64)	(.64)
Year	−0.00	0.00	−0.01	−0.00	−0.00
	(.13)	(.13)	(.13)	(.13)	(.13)
CEO Age	−0.04	−0.04	−0.03	−0.04	−0.04
	(.02)	(.02)	(.02)	(.02)	(.02)
Industry Controls	Included	Included	Included	Included	Included
Formalized Succession Processes		−0.10*		−0.10*	−0.10
		(.04)		(.04)	(.10)
CEO Influence			−0.04	−0.04	−0.04
			(.05)	(.05)	(.14)
Formalized Succession Processes × CEO Influence					−0.00
					(.02)
Log likelihood	−704.76	−704.41	−706.54	−706.21	−709.20
Marginal R^2	.15	.16	.15	.17	.17
Conditional R^2	.47	.49	.47	.49	.49
AIC	1407.37	1404.09	1408.76	1405.48	1407.48

Notes: $n = 355$, in 218 groups. Standard errors are in parentheses. Marginal R^2 represents variance explained by the fixed effects of the model; conditional R^2 represents variance from both fixed and random effects.

† $p < .10$

* $p < .05$

** $p < .01$; two-tailed hypothesis tests.

and magnitude to those reported in the paper. Further, we conducted a Durbin–Wu–Hausman test for all four dependent variables, which failed to find a systematic difference across coefficients in each case when endogeneity controls were included, further limiting the likelihood endogeneity biased our reported results.

DISCUSSION

An increased emphasis on corporate governance has led boards to increase their involvement in organizational decisions, calling into question existing corporate governance theory and research that suggests boards are unwilling to participate in strategic

TABLE 5
Use of External Help Logistic Regression Results

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	−749.70	−719.15	−707.05	−680.87	−678.65
	(449.39)	(445.85)	(445.17)	(446.03)	(446.56)
Firm Size (Assets)	−0.05	−0.12	−0.05	−0.12	−0.12
	(.18)	(.17)	(.17)	(.17)	(.17)
Block Ownership	−0.81	−0.74	−0.70	−0.62	−0.63
	(1.14)	(1.13)	(1.12)	(1.12)	(1.12)
Debt-to-Equity Ratio	0.05	0.05	0.04	0.04	0.04
	(.06)	(.06)	(.06)	(.06)	(.06)
ROA	0.02	0.01	0.02	0.02	0.02
	(.03)	(.03)	(.03)	(.03)	(.03)
Number of Directors	0.03	0.02	0.05	0.03	0.03
	(.11)	(.11)	(.11)	(.11)	(.11)
Number of Board Meetings	0.02	0.02	0.01	0.01	0.01
	(.06)	(.06)	(.06)	(.06)	(.06)
CEO Pay Ratio	0.11	0.07	0.11	0.07	0.07
	(.18)	(.18)	(.17)	(.17)	(.17)
CEO Ownership	0.03	0.06	0.05	0.07	0.07
	(.17)	(.16)	(.18)	(.17)	(.17)
CEO Directorships	0.22	0.27	0.24	0.29	0.29
	(.25)	(.25)	(.25)	(.25)	(.25)
CEO Tenure	−0.09	−0.08	−0.09	−0.09	−0.09
	(.05)	(.05)	(.05)	(.05)	(.05)
CEO Duality	0.41	0.30	0.40	0.30	0.31
	(.44)	(.43)	(.44)	(.43)	(.43)
Post CEO Directors	0.69	0.56	0.72	0.58	0.58
	(.85)	(.83)	(.83)	(0.82)	(.82)
Board Independence	−1.46	−1.45	−1.56	−1.57	−1.57
	(1.12)	(1.11)	(1.10)	(1.10)	(1.10)
Year	0.37	0.36	0.35	0.34	0.34
	(.22)	(.22)	(.22)	(.22)	(.22)
CEO Age	0.01	0.02	0.02	0.02	0.02
	(.04)	(.04)	(.04)	(.04)	(.04)
Industry Controls	Included	Included	Included	Included	Included
Formalized Succession Processes		0.16*		0.17*	0.19
		(.07)		(.07)	(.17)
CEO Influence			−0.19*	−0.20*	−0.17
			(.09)	(.09)	(.26)
Formalized Succession Processes × CEO influence					−0.00
					(.04)
Log likelihood	−218.08	−214.57	−214.51	−210.78	−210.77
Marginal R^2	.07	.09	.09	.12	.12
Conditional R^2	.54	.52	.53	.52	.52
AIC	480.17	475.13	475.01	469.56	471.55

Notes: $n = 355$, in 218 groups. Standard errors are in parentheses. Marginal R^2 represents variance explained by the fixed effects of the model; conditional R^2 represents variance from both fixed and random effects.

$^{\dagger}p < .10$

$^{*}p < .05$

$^{**}p < .01$; two-tailed hypothesis tests.

decision-making. However, there is still variation in board attention placed on activities such as succession planning. Further, research has long sought to understand how boards influence firm outcomes, and recent research has recognized board as information-processing groups (e.g., Khanna et al., 2014). Conceptualizing boards as information-processing groups exposes a paradox: boards are responsible for CEO selection, but informational barriers to acquiring, processing, and acting upon

TABLE 6
Multiple Successor Candidates Logistic Regression Results with Endogeneity Control

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	−75.76	−156.75	−85.35	−162.54	−215.02
	(496.77)	(517.37)	(498.30)	(517.98)	(517.10)
Firm Size (Assets)	0.43**	0.34†	0.43**	0.34†	0.32†
	(0.16)	(0.18)	(0.16)	(0.18)	(0.18)
Block Ownership	−0.69	−0.89	−0.71	−0.91	−0.99
	(1.02)	(1.04)	(1.02)	(1.05)	(1.04)
Debt–Equity Ratio	−0.01	−0.02	−0.01	−0.02	−0.01
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
ROA	0.07*	0.07*	0.07*	0.07*	0.07*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Number of Directors	0.17	0.13	0.17	0.13	0.15
	(0.11)	(0.11)	(0.11)	(0.11)	(0.12)
Number of Board Meetings	−0.03	−0.04	−0.03	−0.04	−0.04
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
CEO–Pay Ratio	0.16	0.10	0.15	0.10	0.08
	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)
CEO Ownership	−0.07	−0.03	−0.07	−0.03	−0.03
	(0.13)	(0.15)	(0.13)	(0.15)	(0.15)
CEO Directorships	−0.24	−0.16	−0.24	−0.16	−0.17
	(0.24)	(0.25)	(0.24)	(0.25)	(0.25)
CEO Tenure	−0.07	−0.08	−0.07	−0.08	−0.08
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
CEO Duality (Yes)	0.29	0.25	0.29	0.26	0.24
	(0.41)	(0.44)	(0.42)	(0.44)	(0.44)
Post CEO Directors	1.66†	1.71†	1.67†	1.71†	1.85*
	(0.86)	(0.92)	(0.86)	(0.92)	(0.92)
Board Independence	0.29	0.21	0.30	0.21	0.22
	(1.05)	(1.08)	(1.05)	(1.08)	(1.07)
Year	0.03	0.07	0.04	0.08	0.10
	(0.25)	(0.26)	(0.25)	(0.26)	(0.26)
CEO Age	0.07†	0.07*	0.06†	0.07*	0.07*
	(0.03)	(0.04)	(0.03)	(0.04)	(0.04)
Industry Controls	Included	Included	Included	Included	Included
Endogeneity Control		0.09		0.09	0.09
		(0.24)		(0.24)	(0.24)
Formalized Succession Processes		0.20		0.20	−0.02
		(0.14)		(0.14)	(0.21)
CEO Influence			0.02	0.02	−0.25
			(0.09)	(0.09)	(0.23)
Formalized Succession Processes × CEO Influence					0.05
					(0.04)
Log likelihood	−126.49	−120.44	−126.46	−120.41	−119.54
Marginal R^2	0.31	0.36	0.31	0.36	0.38
Conditional R^2	0.34	0.38	0.34	0.38	0.40
AIC	296.98	288.87	298.91	290.82	291.09

Notes: $n = 355$, in 218 groups. Standard errors are in parentheses. Marginal R^2 represents variance explained by the fixed effects of the model; conditional R^2 represents variance from both fixed and random effects.

† $p < .10$

* $p < .05$

** $p < .01$; two-tailed hypothesis tests.

data are considerable, which makes executing their responsibility challenging. Existing theory is insufficient to explain how organizations overcome such informational barriers, and some researchers have suggested that boards cannot overcome these challenges (Boivie et al., 2016). In contrast, by expanding on the decision-making theory of procedural rationality, we sought to illustrate how

TABLE 7
Likelihood of Internal Successor Regression Results with Endogeneity Control

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	171.50	216.62	147.51	193.47	197.63
	(481.21)	(470.70)	(482.12)	(471.68)	(472.30)
Firm Size (Assets)	0.41*	0.24	0.41*	0.24	0.24
	(0.20)	(0.21)	(0.20)	(0.21)	(0.21)
Block Ownership	0.11	0.37	0.05	0.31	0.30
	(1.26)	(1.26)	(1.27)	(1.26)	(1.26)
Debt–Equity Ratio	−0.04	−0.05	−0.04	−0.04	−0.04
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
ROA	0.04	0.03	0.04	0.03	0.03
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Number of Directors	−0.06	−0.09	−0.06	−0.10	−0.11
	(0.12)	(0.12)	(0.12)	(0.12)	(0.13)
Number of Board Meetings	0.07	0.07	0.07	0.08	0.08
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
CEO–Pay Ratio	0.15	0.08	0.15	0.08	0.08
	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)
CEO Ownership	−0.19	−0.13	−0.20	−0.13	−0.13
	(0.16)	(0.17)	(0.16)	(0.17)	(0.17)
CEO Directorships	−0.29	−0.18	−0.29	−0.18	−0.19
	(0.28)	(0.28)	(0.28)	(0.28)	(0.28)
CEO Tenure	0.08	0.08	0.07	0.08	0.08
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
CEO Duality (Yes)	1.45**	1.26*	1.47**	1.27*	1.30*
	(0.49)	(0.50)	(0.49)	(0.50)	(0.50)
Post CEO Directors	1.23	0.91	1.24	0.93	0.91
	(0.91)	(0.90)	(0.91)	(0.90)	(0.91)
Board Independence	−2.16	−2.10	−2.13	−2.07	−2.09
	(1.21)	(1.20)	(1.21)	(1.20)	(1.20)
Year	−0.09	−0.11	−0.08	−0.10	−0.10
	(0.24)	(0.23)	(0.24)	(0.23)	(0.23)
CEO Age	0.10*	0.11**	0.10*	0.11**	0.11**
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Industry Controls	Included	Included	Included	Included	Included
Endogeneity Control		−0.37		−0.37	−0.37
		(0.22)		(0.22)	(0.22)
Formalized Succession Processes		0.41**		0.41**	0.50*
		(0.15)		(0.15)	(0.23)
CEO Influence			0.09	0.09	0.21
			(0.10)	(0.09)	(0.27)
Formalized Succession Processes × CEO Influence					−0.02
					(0.04)
Log likelihood	−919.64	−917.52	−920.64	−918.54	−920.77
Marginal R^2	0.20	0.22	0.20	0.22	0.22
Conditional R^2	0.54	0.58	0.54	0.58	0.58
AIC	1864.66	1859.88	1865.73	1860.96	1862.69

Notes: $n = 355$; 218 groups. Standard errors in parentheses. Marginal R^2 represents variance explained by the fixed effects of the model; conditional R^2 represents variance from both fixed and random effects.

$^{\dagger}p < .10$

$^{*}p < .05$

$^{**}p < .01$; two-tailed hypothesis tests.

boards can overcome information challenges and decision-making biases to reduce the likelihood of adverse selection and increase decision-making effectiveness.

Theoretical Contributions and Implications

First, we integrated decision-making theory regarding procedural rationality with theory on boards

TABLE 8
Time to Name a Permanent Successor Regression Results with Endogeneity Control

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	15.47	1.84	26.28	12.48	12.58
	(256.75)	(253.88)	(257.25)	(254.40)	(254.80)
Firm Size (Assets)	−0.13	−0.06	−0.14	−0.06	−0.06
	(0.10)	(0.11)	(0.10)	(0.11)	(0.11)
Block Ownership	0.49	0.41	0.52	0.44	0.44
	(0.66)	(0.66)	(0.66)	(0.66)	(0.66)
Debt–Equity Ratio	−0.01	−0.01	−0.02	−0.01	−0.01
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
ROA	−0.01	−0.01	−0.01	−0.01	−0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Number of Directors	−0.00	0.01	0.00	0.01	0.01
	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)
Number of Board Meetings	−0.06	−0.06	−0.06	−0.06	−0.06
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
CEO–Pay Ratio	−0.07	−0.04	−0.07	−0.04	−0.04
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
CEO Ownership	0.18*	0.15	0.18*	0.15	0.15
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
CEO Directorships	0.15	0.11	0.15	0.11	0.11
	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)
CEO Tenure	−0.06*	−0.07*	−0.06*	−0.07*	−0.07*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
CEO Duality (Yes)	−0.48	−0.40	−0.49	−0.41	−0.40
	(0.25)	(0.26)	(0.25)	(0.26)	(0.26)
Post CEO Directors	−0.36	−0.24	−0.36	−0.24	−0.24
	(0.47)	(0.47)	(0.47)	(0.47)	(0.48)
Board Independence	1.13	1.12	1.12	1.11	1.11
	(0.64)	(0.64)	(0.64)	(0.64)	(0.64)
Year	−0.00	0.00	−0.01	−0.00	−0.00
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
CEO Age	−0.04	−0.04	−0.03	−0.04	−0.04
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Industry Controls	Included	Included	Included	Included	Included
Endogeneity Control		0.13		0.13	0.13
		(0.12)		(0.12)	(0.12)
Formalized Succession Processes		−0.17*		−0.17*	−0.17
		(0.08)		(0.08)	(0.12)
CEO Influence			−0.04	−0.04	−0.03
			(0.05)	(0.05)	(0.14)
Formalized Succession Processes × CEO Influence					−0.00
					(0.02)
Log likelihood	−704.76	−705.06	−706.54	−706.84	−709.84
Marginal R^2	0.15	0.17	0.15	0.17	0.17
Conditional R^2	0.47	0.49	0.47	0.49	0.49
AIC	1407.37	1404.90	1408.76	1406.27	1408.27

Notes: $n = 355$; 218 groups. Standard errors in parentheses. Marginal R^2 represents variance explained by the fixed effects of the model; conditional R^2 represents variance from both fixed and random effects.

$^{\dagger}p < .10$

$^{*}p < .05$

$^{**}p < .01$; two-tailed hypothesis tests.

as information-processing groups to understand how decision-making effectiveness can be enhanced given the informational challenges and barriers boards face. With this theoretical extension, we showed how formal succession planning processes combat the information challenges boards face leading boards to overcome common decision-making biases. As such, formalized succession processes by the board can

TABLE 9
Use of External Help Logistic Regression Results with Endogeneity Control

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	−749.71	−719.02	−707.05	−677.76	−675.56
	(449.39)	(447.82)	(445.17)	(446.52)	(447.06)
Firm Size (Assets)	−0.05	−0.15	−0.05	−0.15	−0.15
	(0.18)	(0.18)	(0.17)	(0.18)	(0.18)
Block Ownership	−0.81	−0.74	−0.70	−0.63	−0.63
	(1.14)	(1.14)	(1.12)	(1.12)	(1.13)
Debt–Equity Ratio	0.05	0.05	0.04	0.04	0.04
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
ROA	0.02	0.01	0.02	0.01	0.01
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Number of Directors	0.03	0.01	0.05	0.03	0.03
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Number of Board Meetings	0.02	0.02	0.01	0.01	0.01
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
CEO–Pay Ratio	0.11	0.05	0.11	0.06	0.06
	(0.18)	(0.18)	(0.17)	(0.18)	(0.18)
CEO Ownership	0.03	0.07	0.05	0.08	0.08
	(0.17)	(0.16)	(0.18)	(0.17)	(0.17)
CEO Directorships	0.22	0.28	0.24	0.30	0.29
	(0.25)	(0.25)	(0.25)	(0.25)	(0.25)
CEO Tenure	−0.09	−0.08	−0.09†	−0.09	−0.09
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
CEO Duality (Yes)	0.41	0.27	0.40	0.27	0.28
	(0.44)	(0.44)	(0.44)	(0.44)	(0.44)
Post CEO Directors	0.69	0.52	0.72	0.55	0.55
	(0.85)	(0.84)	(0.83)	(0.83)	(0.83)
Board Independence	−1.46	−1.45	−1.56	−1.57	−1.57
	(1.12)	(1.12)	(1.10)	(1.10)	(1.10)
Year	0.37	0.36	0.35	0.34	0.34
	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)
CEO Age	0.01	0.02	0.02	0.02	0.02
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Industry Controls	Included	Included	Included	Included	Included
Endogeneity Control		−0.13		−0.11	−0.11
		(0.21)		(0.21)	(0.21)
Formalized Succession Processes		0.23		0.23	0.25
		(0.14)		(0.14)	(0.21)
CEO Influence			−0.19*	−0.20*	−0.17
			(0.09)	(0.09)	(0.26)
Formalized Succession Processes × CEO Influence					−0.00
					(0.04)
Log likelihood	−218.08	−214.25	−214.51	−210.55	−210.55
Marginal R^2	0.07	0.09	0.09	0.12	0.12
Conditional R^2	0.54	0.53	0.53	0.52	0.52
AIC	480.17	476.49	475.01	471.11	473.10

Notes: $n = 355$; 218 groups. Standard errors in parentheses. Marginal R^2 represents variance explained by the fixed effects of the model; conditional R^2 represents variance from both fixed and random effects.

† $p < .10$

* $p < .05$

** $p < .01$; two-tailed hypothesis tests.

allow it to make better decisions by increasing the likelihood that firms consider multiple successor candidates, the likelihood of an internal successor and that such successors will be prepared to succeed quicker, and the firm's willingness to use external help. Without systematic, rigorous processes, individual board members or other outside forces (e.g., the CEO) may unduly influence the outcome, which may harm organizational

effectiveness. While others have theorized about the importance of information gathering by boards in improving decision-making (e.g., Boivie et al., 2016; Hambrick et al., 2015), we are among the first to illustrate how such formalized information-gathering processes improve decision-making effectiveness.

Second, we incorporated decision-making biases (e.g., similarity, overconfidence) with CEO succession literature and illustrate how and why CEOs can influence the succession planning process. Prior research often assumes that CEOs attempt to influence the process for negative reasons (e.g., to preserve their legacy). We instead explain that CEOs may influence the process in response to rational disagreements with the board and their belief that they are better able to make informed decisions. This resonates with the arguments in Zajac and Westphal (1996) about demographic similarities between new CEOs and powerful outgoing CEOs. Even if the CEO does not select the replacement, he or she can influence the board by altering its exposure to candidates (Zald, 1965), which can then influence board perceptions. Whether conscious or unconscious, this may be driven by the CEO's control of information the board sees. Thus, while our arguments that such actions by CEOs should have negative consequences, CEOs still may engage in such behaviors if they believe it is better for the organization.

Third, this study dives deeply into the processes of CEO succession planning. Although prior research describes decision content and results immediately surrounding a CEO succession event, virtually no studies have examined the secretive processes that firms use for CEO succession planning or the associated sociopolitical dynamics (Finkelstein et al., 2009; Giambatista et al., 2005). We used primary data from independent, objective C-suite executives who have worked closely with the board and the CEO to plan successions. Our surveys did not rely on reflective evaluations of a previous succession event, but, rather, addressed ongoing succession planning activities. Therefore, we examined how firms conduct succession planning at various points in a CEO's tenure, avoid retrospective sense making, and examine processes as they unfold. Our discussions with executives and boards indicated that boards take succession planning objectives seriously, starting the processes much earlier in a CEO's tenure than assumed in the literature.

Further, we answered calls from prior researchers to explore intermediate succession planning outcomes (e.g., Finkelstein et al., 2009; Giambatista et al., 2005). Using intermediate outcomes allowed us to more fully explore proximal consequences of decision-making processes, rather than exploring distal outcomes that are influenced by a myriad of factors. Our theory suggested, however, that these four outcomes should be closely related to effectiveness and, therefore, ultimately to firm performance. Further, recent evidence suggests that the performance benefits are stronger long term for firms that hire internal successors (Schepker et al., 2017). Thus, looking only at distal outcomes may fail to uncover decision-making efficacy, while using intermediate outcomes can better yield evidence on whether formalized processes result in positive outcomes. Additionally, prior research on CEO succession and decision-making effectiveness suggests our four outcomes of interest should be related to better decision quality and therefore ultimately to firm performance. For instance, internal successors perform significantly better than external hires (Schepker et al., 2017) and having ready candidates reduces the board's negative reliance on interim CEOs (e.g., Ballinger & Marcel, 2010).

Our empirical results suggest a consistent pattern: boards' use of formalized succession processes to gather and process information has a positive impact on succession planning outcomes. The influence of board effects on succession planning outcomes suggest that understanding sociopolitical dynamics within the boardroom and among board members and the CEO may be a fruitful avenue for future research to understand how individual board members evaluate succession candidates and incumbent CEOs. Further, these results suggest that researchers and practitioners should strive to understand what leads boards to focus time and attention on certain activities. Since succession planning is one of the most important activity boards perform, the variation across boards is curious. Examining when and why board members engage in succession planning may be useful.

The lack of statistically significant results with regard to CEO influence may also be an indication of contingent effects of CEO influence on succession planning effectiveness. Our theoretical arguments are largely predicated on past research using agency and power theory predictions of CEO behavior as opportunistic and self-serving, with a strong desire to achieve the CEO's own interests. To the degree that CEOs are stewards rather than agents, theory suggests greater CEO influence may enhance succession planning effectiveness. Further, CEOs may also utilize influence in much more positive ways than previously theorized.

Areas for Future Research

Our theory and implications yield several potential avenues for future research. First, building on the

notion of CEOs as stewards or use of influence, researchers could explore how executives may be motivated to ensure their successor continues the legacy of the firm, and even achieves greater prominence than the outgoing CEO. Thus, one potential, unexplored condition of our theory is whether the CEO serves as a steward or an agent. Future research should also further explore the positive effects of CEO influence. For instance, examining the behaviors that CEOs use to help boards overcome their informational barriers or how influential CEOs help create meaning in the board's processing and interpretation of information may be useful.

Second, our research indicates a variety of individuals who play substantive roles in the process beyond the traditional board/CEO relationship. For instance, CHROs were noted by board members as playing a role in advising the current CEO, CEO candidates, and the board throughout the process; however, board members also noted that the degree to which they depend on the CHRO is largely predicated by the CHRO's level of credibility. Additionally, little research to date has focused on the role of external consultants in the process. Future research should explore both the positive (e.g., evaluation of internal and identification of external candidates) and negative implications (e.g., self-serving) to understand when external help is valuable.

Less focused on in our paper is the role of board committees. Prior research (e.g., Zhang, 2008) has noted that the nominating committee plays a meaningful role in influencing CEO selection decisions. Understanding how and when boards create committees for succession planning and the role these committees play is important. In examining the role of the nominating committee in our data, we explored firm proxy statements to identify whether specific committees were given succession planning responsibility. Of our 355 firm-year observations, we found no committee identified in 68 cases. In 80 cases, the nominating committee was responsible, with 11 cases identifying a joint nominating and compensation committee. In 139 cases, the compensation committee (or its variation) was identified as responsible, while, 57 times, the full board was noted as having succession planning responsibility. Thus, there is considerable variation in the means by which boards assume responsibility for succession planning, which creates avenues for future researchers to understand the effects of such variations.

Finally, our research uncovers a variety of processes that occur throughout succession planning. These include defining roles and responsibilities, defining the firm's future strategy, outlining the capabilities needed in a future CEO, identifying CEO candidates who meet the role profile, developing candidates to be ready to assume the position, selecting the successor, and, ultimately, transitioning the role. Each of these processes includes its own potential pitfalls as firms attempt to navigate the process of identifying and selecting a successor, while the board seeks to overcome its informational challenges. Understanding how these processes influence decision-making effectiveness, as well as how board members overcome their own limitations to conduct these processes, is important to better understanding CEO succession.

Practical Implications

We note four main practical implications. First, directors, shareholders, and corporate governance activists should understand the importance of engaged boards that perform critical activities. Changing landscapes require directors who are willing to exert the board's authority in critical decisions. Our research suggests that involvement drives the development of formalized succession planning process that can provide rational, systematic, and rigorous means to evaluate successor candidates. In turn, the candidates are more prepared to assume the CEO position, and the board has more good options from which to select.

Second, both boards and CEOs are susceptible to decision-making biases. Instituting formalized processes increases the chances of overcoming both informational challenges and sociopolitical dynamics. For example, it forces board members to evaluate the firm's strategy and create a profile against which to evaluate candidates. Understanding the needs of the business and identifying successors who can solve future problems seems straightforward, yet, instead, boards frequently become enamored with celebrity CEOs (Khuranna, 2002).

Third, our results suggest that CEOs have little influence on the succession planning process. This is in contrast to prior research, which indicated CEOs strongly influenced such processes (e.g., Vancil, 1987; Zajac & Westphal, 1996). Boards and management should continue to work together. Boards' informational challenges exist because of their lack of involvement in the daily business and their continued reliance on management for information. Board activities require management involvement, as well as honest evaluations of candidates. Poor collaboration thus could undermine board efforts to overcome information problems. While they may have ultimate decision authority, the CEO's input is still critical in assisting the board's process.

Limitations

Our findings derive from data drawn only from large, U.S.-based organizations. Such processes may occur differently in smaller enterprises or in other countries. We also explore succession planning during ongoing succession activities, such that our theory and results relate only to planning for a friendly succession event. Different processes may apply to unfriendly succession events, when even powerful CEOs are unlikely to influence the situation and boards may seek more external help. Boards also likely use different processes depending on the CEO's time horizon. Organizations with new CEOs may engage in less active processes, though, as one of our executive informants suggested, "The day that a CEO is hired is the day to begin thinking about finding that person's successor." Even if processes start early, however, their intensity likely shifts as the succession date approaches. These differences in intensity also may be exacerbated if the board chooses to dismiss a CEO. Therefore, further research should investigate how the processes change for an unexpected CEO succession event or as a known succession approaches.

Another concern is that our methods do not allow us to evaluate the quality of the formalized processes. Higher-quality processes should yield more effective successions. The formalized succession planning activities that we capture cover a broad range of processes, designed to define the overall process, identify talent, and develop capabilities. Firms that undertake activities in all three areas thus might make better succession decisions. In this sense, our results may be understated because we do not consider higher-quality processes that enhance the effectiveness of conducting a greater number of activities. Decision-making research also indicates that comprehensiveness can result in slower decisions; however, our findings suggest that planning for an emergency can allow for quicker decisions in an emergency situation.

Gathering the independent and dependent variable measures from the same informants may result in biased results (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), though the objective nature of these variables in our study suggest that our results are less prone to common method bias (Chadwick, Way, Kerr, & Thacker, 2013). We also used different scales to measure the variables, which may limit the effect of common method bias (Podsakoff et al., 2003). The proximity of the CHRO to the succession process also makes these executives ideal sources for reporting the dependent variables. Following previous research (e.g., Jansen, Van Den Bosch, & Volberda, 2005; Li & Atuahene-Gima, 2001; Stam & Elfring, 2008), we used Harman's one-factor test of common method bias. The findings—namely, multiple factors fit the data better than a single factor and a single factor did not account for a majority of the variance—indicate that common method bias is not a substantive problem for our study (Podsakoff & Organ, 1986).

Another limitation is that asking respondents about their use of external help could have led to varying interpretations of the question, in terms of what constitutes external help. Yet, our survey respondents appeared aware that external help largely serves to increase search comprehensiveness. Our results also might capture reverse causation in this item: external consultants could guide board processes by providing a list of succession activities the board should complete. However, it is more theoretically likely that boards use external help as part of the process, not that boards without formal processes recognize their need for external help. Additionally, even if the causal process is reversed, the resulting correlations are informative.

Despite our best efforts to account for endogeneity, it remains a concern due to the continual reciprocal influence of actors involved in this process, including the relationship between CEO, board, CEO candidates, and CHRO. Given these influences, there is likely to always be some level of reciprocal causation for which we cannot account; however, we believe that our results provide strong support for the notion that systematic planning efforts undertaken by the board can have positive effects on organizational succession planning.

Finally, despite our arguments and evidence from interviews with executives regarding the involvement of CHROs in succession planning, not all CHROs are intimately involved. In some industries, smaller firms, and certain countries, they may still have a lesser role. For example, in German companies with works councils, human resources leaders tend to be less involved strategically. However, this variation does not bias our results because our respondents report spending substantial time on succession planning activities with the current CEO and boards.

Conclusion

Although CEO succession planning is one of the few areas where boards directly affect the firm, little

theory exists about how boards navigate this process to overcome informational challenges. Using decision-making theory, we explain differences that exist based on the use of formalized succession processes, why informational problems exist, and how boards gain access to information. Our study thereby enhances theory about succession planning and explicates the process by which boards conduct succession planning as a continuous activity, using a rare empirical test of such processes. Our results are also consistent with decision-making research that describes how individuals and groups can make better decisions.

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APPENDIX A

ITEMS IN THE FORMALIZED SUCCESSION PROCESSES MEASURE

To your knowledge, does your board do each of the following with regard to CEO succession?

Item	Factor Loading
Conducts ongoing assessment of readiness of internal candidates and depth of talent pipeline	.63
Develops clear role profile for CEO aligned to five years (or more) of enterprise business strategy analysis	.59
Reviews formal development plans for CEO candidates	.55
Designs exposure to board for CEO talent pipeline	.50
Has formal tools for talent assessment of CEO pipeline candidates	.49
Has a clearly defined ownership for CEO succession processes	.47
Has feedback processes on performance and development to candidates	.43
Develops clear role profiles for direct reports to the CEO aligned with five years (or more) of enterprise business strategy	.42
Conducts five years (or more) of business strategy and global industry sector analysis	.41
Considers restructuring organization to create building block roles and key experiences for potential successors	.40
Has scheduled conversations with CEO regarding time for succession	.28
Regularly explores the external market for potential CEO successors	.27
Includes discussion of CEO succession in board minutes	.13

Notes: Items with loadings greater or equal to .40 were included in the analysis. Additionally, to check the measure's robustness, we ran models using various combinations of the 10 items selected, and found the results to be consistent.

APPENDIX B

FIRST-STAGE FORMALIZED SUCCESSION PROCESSES RESULTS FOR ENDOGENEITY CONTROL

	Model 1	Model 2
Intercept	−154.02	69.62
	(319.72)	(288.94)
Firm Size (Assets)	0.42**	0.34**
	(.13)	(.12)
Block Ownership	−0.41	−0.44
	(.84)	(.75)
Debt-to-Equity Ratio	0.01	−0.01
	(.05)	(.04)
ROA	0.02	−0.01
	(.02)	(.02)
Number of Directors	0.07	0.07
	(.08)	(.07)
Number of Board Meetings	0.01	−0.00
	(.05)	(.04)
CEO Pay Ratio	0.19	0.15
	(.13)	(.11)
CEO Ownership	−0.15	−0.08
	(.11)	(.10)
CEO Directorships	−0.21	−0.06
	(.18)	(.17)
CEO Tenure	−0.03	−0.05
	(.04)	(.03)
CEO Duality	0.54	0.32
	(.33)	(.29)
Post CEO Directors	0.79	0.88
	(.60)	(.54)
Board Independence	−0.20	−0.61
	(.81)	(.73)
Year	0.08	−0.04
	(.16)	(.14)
CEO Age	−0.03	−0.03
	(.03)	(.02)
Industry Controls	Included	Included
Board Engagement		1.73**
		(.19)
Log likelihood	−783.82	−747.24
Marginal R^2	.14	.30
Conditional R^2	.51	.59
AIC	1575.98	1498.46

Notes: $n = 355$, in 218 groups. Standard errors are in parentheses. Marginal R^2 represents variance explained by the fixed effects of the model; conditional R^2 represents variance from both fixed and random effects.

* $p < .05$

** $p < .01$; two-tailed hypothesis.