

WHO DIRECTS STRATEGIC CHANGE? DIRECTOR EXPERIENCE, THE SELECTION OF NEW CEOs, AND CHANGE IN CORPORATE STRATEGY

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We develop a theory of board-directed strategic change in which directors (1) conceive changes in corporate strategy that reflect the strategies of their own home companies, and (2) select new CEOs who have prior experience with similar strategies to facilitate implementation. The findings show that, while the experience of new CEOs appears to predict corporate strategic change, these effects disappear after accounting for board experience. Thus, our results suggest that executive effects on strategy can mask board effects. Copyright © 2001 John Wiley & Sons, Ltd.

INTRODUCTION

A basic premise in strategic management research is that top executives play a dominant role in formulating corporate strategy. According to Gioia and Chittipeddi (1991: 434), "the CEO is [typically] portrayed as someone who has primary responsibility for setting strategic directions and plans for the organization, as well as responsibility for guiding actions that will realize those plans." Moreover, a basic tenet of research on strategic change is that new top managers, and especially managers recruited from outside the organization, typically initiate change and determine the new strategic direction for their firm (Miles *et al.*, 1978; Grimm and Smith, 1991; Tushman and Romanelli, 1985). This study examines how the strategic changes that typically follow the selection of new CEOs may reflect the influence of boards rather than top executives. Our perspective suggests that, although a new CEO's strategic orientation may predict the direction of strategic

change, this relationship may actually result from the board's preferences regarding both the CEO's characteristics and the strategic direction for the firm. Thus, we consider the possibility that apparent executive effects on strategic change may actually indicate board effects.

A growing body of empirical research on top management and strategic change appears to confirm the common assumption that top executives determine new corporate strategies. Studies in the upper echelons literature have consistently demonstrated, for instance, that top management's experience predicts the likelihood and content of major strategic changes (for a review, see Finkelstein and Hambrick, 1996). In a recent study, Boeker (1997a) provided strong evidence that when firms recruit a new CEO from outside the organization, they tend to initiate strategic changes that lead the firm to resemble the CEO's prior employer (see also Child and Smith, 1987; Kraatz and Moore, 1998; Sambharya, 1996). Moreover, several studies suggest that the board appointments held by top executives in other firms appear to influence major strategic decisions in the executive's own firm. For example, Haunschild (1993) found a strong relationship between the acquisition tendencies of firms where top managers have a board

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appointment, and the subsequent acquisition strategy of their own firm. More recently, Geletkanycz and Hambrick (1997) presented results suggesting that top managers who held board appointments in different industries, which presumably follow different strategic practices, were more likely to initiate strategic change at their own firm.

A common interpretation of these studies and the larger upper echelons literature is that top managers influence firm conduct and performance by determining the overall strategic direction of the firm—as indicated by observed relationships between executives' prior management and board experience and subsequent strategic change at the focal firm. In comparison to top managers, boards are often assumed—implicitly or explicitly—to exercise relatively little independent influence over the firm's strategic direction. Research on interlocking directorates has typically assumed that outside board members exert relatively little influence over major decisions such as corporate diversification, so that only the experience acquired *by executives* through their board appointments is thought to significantly affect strategic decision making at the focal firm (cf. Davis, Diekmann, and Tinsley, 1994; Haunschild, 1993: 575; Mizruchi, 1996). Rather than directing strategic decisions, outside directors are thought to support managers by co-opting financial institutions, helping to avoid hostile takeovers, and perhaps providing information and expertise (e.g., financial expertise) that aids in the implementation of management's strategy, without determining the strategy itself (Haunschild, 1993, 1994; Palmer *et al.*, 1995).

The behavioral literature on boards has traditionally assumed that outside directors play a relatively passive role in the strategic decision-making process, with some authors suggesting that boards serve only to rubber stamp strategic initiatives conceived by management (cf. Mace, 1971; Herman, 1981). In reviewing this literature, Finkelstein and Hambrick (1996: 228) noted that behavioral perspectives on boards have been “virtually uniform” in their assumption that “boards of directors are not involved in strategy formation.” Financial-economic and agency perspectives on boards have suggested that directors can play a more significant role in protecting shareholder interests by engaging in “financial control” over top management, whereby directors monitor financial results and occasionally fire or otherwise “discipline”

executives for poor firm performance (Kosnik, 1987; Warner *et al.*, 1988; Weisbach, 1988); however, “strategic control” is generally reserved for executives (e.g., Baysinger and Hoskisson, 1990; Hoskisson, Johnson, and Moesel, 1994: 1213; Zajac, 1990). From this perspective, relatively active and independent boards might respond to poor performance by firing the CEO and selecting a new one, perhaps an outsider who can bring a fresh perspective on strategic opportunities, who would then determine the new strategic direction for the firm. In characterizing the agency perspective, Baysinger and Hoskisson (1990: 74) suggest that “top managers may be evaluated [by outsiders] in terms of the outcome of the adopted choice rather than in terms of strategic desirability.”

While the empirical literature has generally assumed that boards exert relatively little influence in formulating strategy, several authors have noted that large firms have been under considerable pressure from institutional investors and other external constituents to increase the board's role in strategy formation (Finkelstein and Hambrick, 1996; Westphal and Zajac, 1997; Useem *et al.*, 1996). Moreover, recent research has begun to suggest that boards can indeed have some influence over strategic decision making. Recent studies taking an agency perspective on boards have considered how boards may influence strategy to some degree when agency costs are relatively high and directors have relatively strong incentives to protect shareholders, e.g., resulting from poor strategic controls or high free cash flow (Bergh, 1995; Gibbs, 1993; Johnson, Hoskisson, and Hitt, 1993). Judge and Zeithaml (1992) found that boards are sometimes involved in the process of formulating strategic decisions, although their theoretical perspective suggested that outside directors should be less involved than insiders. Moreover, Goodstein and colleagues (Goodstein and Boeker, 1991; Goodstein, Gautam, and Boeker, 1994) suggested that CEOs are better able to initiate change following board turnover, especially when directors have relatively homogeneous backgrounds, suggesting that new directors may assist top managers in strategy formulation. Westphal (1999) showed how boards could influence strategic decision making through advice-giving interactions with CEOs, but he did not examine whether this influence involved primarily strategy formulation, or the implementation of existing strategies.

This raises important questions for research on top management: Is it possible that boards, in comparison with top managers, could actually exert primary influence in determining the firm's strategic direction, and how could such influence take place? Here, we develop a theory of board-directed strategic change in which board members, particularly under conditions of poor firm performance, (1) conceive strategic changes that effectively align the corporate strategy of the focal firm with the strategies of their own home companies, (2) use outside CEO succession to initiate the change process, and (3) select new CEOs who have prior experience with the new strategy. It is argued that, through this process, the board of directors shapes a firm's strategic direction by selecting a CEO who has experience at implementing the strategy that board members favor. Our perspective further suggests how results from prior studies in the top management literature that appear to demonstrate the influence of executives on strategic direction may actually indicate the effect of the board.

THEORY DEVELOPMENT

The strategic orientation of the board

Theory and research on strategic decision making have increasingly suggested that strategic choices are influenced by the personal background and prior experience of top managers. The upper echelons perspective begins with the premise that strategic decisions are made under conditions of information overload and ambiguity. Drawing from behavioral decision theory (Cyert and March, 1963; March and Simon, 1958), Hambrick and Mason (1984) argued that executives cope with the inherent complexity of strategic decision making by referring to their pre-existing beliefs about appropriate strategic behavior, and that these scripts and schemas are shaped by prior experience in similar roles (see also Boeker, 1997a; Geletkanycz and Hambrick, 1997). The problem of decision-making uncertainty is especially severe for outside directors, as they typically have less firm-specific knowledge to draw upon in analyzing strategic issues, and less time and attention to devote to the task, in comparison to executives (Lorsch and MacIver, 1989). Thus, they seem especially likely to rely upon their prior beliefs and experiences in doing strategic analyses.

In evaluating corporate strategy, perhaps the most directly relevant experience available to board members derives from their experience at their home companies (where they serve as an executive). The corporate strategy of a manager-director's home firm can be viewed as an important indicator of their attitudes and beliefs about strategy. To the extent that the director was involved either in the initial formulation of the strategy or in the decision to maintain the pre-existing strategy, it is likely to reflect their pre-existing beliefs about strategy. If the director was also involved in implementing the strategy, such involvement should further influence their strategic orientation. Much research in social psychology suggests that individuals tend to develop attitudes that justify their prior behavior (Festinger and Carlsmith, 1959; Bem, 1972; Fiske and Taylor, 1991; Staw, 1981). Thus, through implementing or maintaining a corporate strategy managers are likely to develop attitudes that validate the strategy. Research has also shown that individuals are especially likely to develop beliefs that justify their participation in an activity when their involvement is known to a wider audience (Finkelstein and Hambrick, 1990; Salancik and Pfeffer, 1977; Staw, 1981). Since various constituents and potential employers routinely make attributions about top managers based on the strategy of their firms (Fombrun, 1996), there should be a particularly strong tendency for such managers to develop attitudes that endorse the strategies they have helped to formulate and/or implement (Fox and Staw, 1979).

Corporate strategies also lead to the development of beliefs and ideologies at the *group and organization* levels of analysis that justify or validate the strategy and facilitate implementation. This, in turn, further reinforces positive attitudes held by individual managers about the strategy (Tushman and Romanelli, 1985). Managers become socialized into belief systems that endorse the corporate strategy through direct social influence from other members of the top management team and the larger organization, and also through the indirect influence of social context on how managers interpret feedback about the effectiveness of the strategy (Salancik and Pfeffer, 1977).

As a result of these socialization and commitment processes, evaluations of strategy by outside directors may be strongly influenced by the corporate strategy of their home firm. As discussed

above, an extension of the upper echelons perspective (Hambrick and Mason, 1984) would suggest that outside directors cope with the incomplete and ambiguous information and limited time available to them for evaluating strategy (in the focal firm) by referring—intentionally or unintentionally—to their pre-existing beliefs about corporate strategy. Thus, director assessments may be strongly influenced by the relative similarity or divergence between the focal company's strategy (where they serve as director) and that of their home companies: directors may be biased in favor of corporate strategies that resemble their home firm strategy, and biased against different strategies. This would suggest, for example, that executives who have been involved in formulating, implementing, or maintaining a corporate strategy characterized by high levels of diversification are likely to advocate diversification as a viable strategic alternative at other firms. Similarly, a director who has prior experience in managing a globalized firm (i.e., geographic diversification) should tend to favor higher levels of internationalization at other companies where he or she is an outside director. This perspective does not presume that directors are insensitive to firm capabilities or industry conditions in assessing strategy. Rather, it assumes that strategic problems and opportunities are open to interpretation. With respect to industry conditions, for instance, directors might interpret performance problems as suggesting that the firm is overly exposed to conditions in one or a few industries, and thus needs to diversify. Alternatively, directors may infer that the firm is spread too thin, and has not adequately concentrated its resources and attention on protecting its core market position. Thus, director beliefs about diversification are tied to beliefs about how to invest in capabilities and respond to industry conditions (Hamel and Prahalad, 1994; Jemison, 1987); given that these assessments are inherently subjective, director beliefs about needed strategic changes can be influenced by their prior experience.

The strategic orientation of the board and CEO succession

An initial step in the process of changing corporate strategy to one favored by outside directors may involve outside CEO succession. While boards may instigate succession by firing the CEO and/or pressuring the CEO into retirement, they may also

use the succession event to initiate change opportunistically, following voluntary CEO turnover. Boards assume greater power following the departure of a powerful top manager, and this provides an opportunity to initiate change. The larger literature on group decision making has also shown that groups consider the need for change in decision-making strategies primarily at the time of leader succession; during the periods between succession events inertia sets in and group members are more likely to accept existing strategies as given (McGrath and Gruenfeld, 1992). Thus, departure of the CEO may prompt boards to evaluate the current strategy and consider the need for change.

As discussed above, our theoretical perspective suggests that board members perceive a greater need for change in the current strategy if it diverges from their home firm strategies. Moreover, if a relatively large divergence exists at the time of CEO turnover, we would expect boards to initiate change by selecting an outsider as the new CEO. A central tenet of the top management literature is that outside succession facilitates strategic change (Dalton and Kesner, 1985; Tushman, Virany, and Romanelli, 1985; Wiersema, 1992). While the socialization and psychological commitment processes discussed above make incumbent managers and inside successors resistant to strategic change, new top managers from outside the organization lack these psychological and political attachments to the status quo, and they also import knowledge about how to implement strategic alternatives (Fredrickson, Hambrick, and Baumrin, 1988; Boeker, 1997a; Miller, 1993; Starbuck, Greve, and Hedberg, 1978). Thus, boards may select outsider CEOs as an initial step in the process of implementing strategic changes that make the focal firm more strategically similar to their home companies. From this perspective, board turnover affects the likelihood of outside succession by changing the home firm experience base that is represented on the board, which would tend to alter the board's preference for change.

Further, the tendency for outside succession to result from differences between the focal firm's strategy and directors' home company strategy may be especially strong where firm performance is relatively poor. According to behavioral decision theory, individuals are biased by their prior experiences in diagnosing organizational problems (Cyert and March, 1963; Levitt and March, 1988). To the extent that directors are biased in favor

of corporate strategies that resemble their home firm strategies, and biased against divergent strategies, they may tend to attribute more blame for performance problems to the firm's strategy (and top management) when it differs significantly from their home firm strategy. The notion of problemistic search suggests that "solutions are motivated to search for problems," such that individuals who have experience with a strategic alternative are motivated to advocate that strategy as a solution when performance problems arise (Cyert and March, 1963: 121). Prior research also suggests that poor firm performance effectively empowers the board and justifies their involvement in management selection (Zajac and Westphal, 1996), providing them with the opportunity to replace the CEO with an outsider as an initial step toward changing corporate strategy. Accordingly, poor firm performance may amplify the effect of strategic differences (i.e., between the focal firm and outside director home companies) on outside succession.

The above discussion suggests the following hypotheses:

Hypothesis 1: The greater the difference between the strategy of the focal firm and the strategy of manager-director home companies, the greater the likelihood of outside succession at the focal firm.

Hypothesis 1a: Relatively low firm performance will interact with the difference between the strategy of the focal firm and the strategy of manager-director home companies to increase the likelihood of outside succession at the focal firm.¹

The discussion thus far has considered how the aggregated strategy experience of directors may influence outside succession, without addressing how the experiences of individual directors are combined or weighted in determining the overall board effect on succession. We suggest two factors that may determine the relative influence of individual directors' experience on outside succession: tenure and performance at their home companies. A director is likely to believe more

strongly in the value of their home firm strategy when they have relatively long tenure in the firm. Extensive research in social psychology and organizational behavior suggests that tenure in an organization is associated with psychological commitment to the status quo, including commitment to the organization's current strategy. Over time, through participation in implementing a firm's strategy, a manager's internal sense of career accomplishment and external reputation become more strongly tied to the strategy, increasing their psychological commitment to it (Fox and Staw, 1979; Hambrick, Geletkanycz and Fredrickson, 1993; Staw, 1981). Moreover, long-tenured managers are more likely to have been fully socialized into belief systems that endorse a particular corporate strategy (Katz, 1982; Salancik and Pfeffer, 1977). Research in social psychology also suggests that individuals come to believe more strongly in a position, and are more likely to advocate it, to the extent that they have been repeatedly asked to justify that position in the past (Downing, Judd and Brauer, 1992). Thus, long-tenured top managers, who are likely to have been repeatedly called on to justify their strategy to internal and external constituents, come to believe more strongly in the strategy, and are more likely to advocate it to others (e.g., in board meetings at other firms). Accordingly, the relative influence of an individual director's home firm strategy on the board's preference for change may be weighted by home firm tenure: specifically, a director's home firm strategy should have a stronger influence on the likelihood of outside succession to the extent that they have relatively long tenure at their home firm. This leads to the following hypothesis:

Hypothesis 1b: Relatively high tenure of manager-directors at their home firms will interact with the difference between their home firm strategies and the focal firm strategy to increase the likelihood of outside succession at the focal firm.

In addition, while our theoretical argument suggests that outside succession is more likely to result from differences between the focal firm's strategy and directors' home company strategies when performance is poor, the effect of directors' home firm experience on the likelihood of succession may also depend on the apparent success of their

¹ The hypotheses refer to non-directional differences, or the absolute value of the difference between the focal firm's strategy and manager-director home company strategies.

home firm strategies. Theory and research on social learning processes would suggest that boards are more likely to consider adopting the strategies of other organizations when those strategies are associated with favorable outcomes (Bandura, 1983; Cyert and March, 1963; Nelson and Winter, 1982; Haunschild and Miner, 1997). Thus, the board may be most likely to initiate change when director home company strategies that differ from the focal firm's strategy are also associated with relatively high performance.² Specifically:

Hypothesis 1c: Relatively high performance at manager-director home firms will interact with the difference between the strategy of those firms and the focal firm strategy to increase the likelihood of outside succession at the focal firm.

The strategy experience of new CEOs

A second aspect of this board-directed strategic change process involves the strategy experience of an outside successor. In this section we suggest that a combination of strategic considerations and social psychological factors may lead directors to favor CEO candidates who have experience with corporate strategies that resemble their own home company strategies. First, if directors tend to initiate changes that align the focal firm's strategy with their home company's strategy, as argued above, they should seek new CEOs whose prior experience indicates that they are well-qualified to implement such change. CEO candidates may be viewed as better qualified to the degree that they have had experience in implementing the chosen strategy at another firm. Grinyer and Spender (1979) argued that strategic reorientation is facilitated by the appointment of new executives whose prior experience enables them to import successful "recipes" for implementing strategic change. More recently, Boeker (1997a) suggested that firms planning to

enter a new product market can benefit from the expertise and information provided by new executives from outside the organization, who have prior experience in that market.

The benefits of executives' prior experience can be understood from a socio-cognitive perspective. Through their personal experience top managers develop personal theories or "knowledge structures" about how to implement a particular strategy (Walsh, 1995). Research on managerial cognition has shown that with experience, individuals develop more complex knowledge structures, with fewer schema categories and more information units per category, and this leads to more efficient information processing and more accurate predictions (Stabell, 1978; Ford and Baucus, 1987). Nelson and Winter (1982: 76) suggested that first-hand experience yields "causal depth of knowledge" and "coherent knowledge" on how to exercise a set of routines. When the board conceives a new corporate strategy of diversification, for instance, CEOs who have prior experience with diversification are more likely to ascertain the changes in organization structure, information systems and rewards needed to successfully implement the new strategy (Kazanjian and Drazin, 1987). More generally, the movement of executives across firms is a primary mechanism for the transfer of strategic capabilities (Boeker, 1997a).

Board members may also choose new CEOs who have related, prior experience for less explicitly strategic reasons. In particular, social psychological research on hiring practices has consistently documented bias in evaluation decisions where job candidates and recruiters are similar to each other in their attitudes and/or experience (e.g., Graves and Powell, 1995; Latham, Wexley and Pursell, 1975). Thus, when CEO candidates have similar attitudes to directors regarding corporate strategy (i.e., as indicated by their prior experience), directors are likely to overrate their qualifications for the position. Similarity provides mutual reinforcement of director attitudes, enhancing interpersonal attraction and producing bias in the evaluation of CEO candidates (Byrne, Clore and Worchel, 1966). Zajac and Westphal (1996) explicitly argued that similarity-attraction biases demonstrated in the social psychological literature on hiring and performance evaluation would lead boards to favor new CEOs who had a similar demographic profile to incumbent directors. While those authors emphasized how social differences resulting from

² It might be suggested that the effect of home firm performance could depend on performance at the focal firm, such that the effect of director home firm strategy is strongest when home firm performance is high and focal firm performance is low. However, the gap between home firm performance and focal firm performance would not help explain the relative influence of each director's experience on the likelihood of outside succession (i.e., above and beyond the effect of home firm performance). Thus, it would not provide additional explanatory power in determining how individual director experience is weighted or combined in determining the board's overall preference for change.

dissimilarity on demographic attributes such as age and educational affiliation can generate out-group biases in CEO selection (Turner, 1987), the argument developed here suggests that directors may also prefer CEO candidates who have compatible strategy experience, and considers the specific content of directors' strategic preferences. Given evidence that in-group/out-group bias can result from similarity in virtually any salient attitude or characteristic, including demographic attributes that seem irrelevant to strategic decision making (Miller and Brewer, 1996; Westphal and Milton, 2000), similarity-attraction bias may be especially pronounced for the strategically-relevant attributes examined here.

In summary, explicit, strategic considerations may combine with implicit, social psychological factors to prompt directors to prefer CEO candidates who have experience with corporate strategies that resemble their own home company's strategy, which they favor for the focal firm. Moreover, the theoretical arguments leading to hypothesis 1a above would suggest that the tendency for director preferences to influence CEO characteristics is greatest when focal firm performance is relatively poor, as directors are more likely to become involved in the succession process and impose their strategic beliefs under such conditions. Although poor performance may suggest the need to hire CEOs who can make immediate cost reductions, directors are likely to be concerned that CEOs can make cost cuts that are consistent with their preferred strategy, given that decisions about operational issues are interdependent with strategic decisions (Hax, 1984). In addition, our prior theoretical arguments would suggest that the influence of an individual director's home company experience in determining the new CEO's background will increase to the extent that director home company tenure is relatively high, or home company performance is relatively high. This suggests the following hypotheses:

Hypothesis 2: The strategy of manager-director home firms will be positively associated with the strategy of the outside successor's prior firm.

Hypotheses 2a–c: The relationship between the strategy of manager-director home companies and the strategy of the outside successor's prior firm will become more positive as (a) focal firm performance decreases; (b) manager-director

home firm tenure increases; (c) manager-director home firm performance increases.

CEO experience on other boards

CEO candidates can also gain first-hand experience with corporate strategy from their board appointments at other companies. The literature on interlocking directorates has addressed how the involvement of top executives on other boards can provide an important source of information about strategic practices (cf. Mizruchi, 1996). For example, Useem (1982) provided evidence that executives use their board appointments to scan the environment for pertinent information. He quotes several executives who suggest that such appointments are "a tool for top management education" (Useem, 1982: 209–210). Similarly, Haunschild (1993: 568) suggests that "director ties are important sources of information on firm structures and practices" (see also Geletkanycz and Hambrick, 1997; Palmer *et al.*, 1995). Therefore, CEOs who serve as outside directors can learn about the efficacy of different approaches to strategic change and implementation by observing first-hand the consequences of management decisions at other firms. Moreover, learning derived from board ties is particularly valuable in that it reflects the recent experience of a manager's contemporaries, who face similar macro-economic threats and opportunities. Thus, directors of the focal board may also increase a firm's ability to implement the new corporate strategy by selecting a CEO who has board ties to firms that follow similar strategies, and such strategic considerations may again be complemented by similarity-attraction biases in the hiring process. This suggests additional hypotheses, patterned after Hypotheses 2 and 2c above:

Hypothesis 3: The strategy of manager-director home firms will be positively associated with the strategy of firms where the new CEO serves as outside director.

Hypotheses 3a–c: The relationship between the strategy of manager-director home companies and the strategy of firms where the new CEO serves as outside director will become more positive as (a) focal firm performance decreases; (b) manager-director home firm tenure increases; (c) manager-director home firm performance increases.

Board vs. manager effects on strategic change

The theoretical argument leading to the first three hypotheses suggests a new interpretation of evidence that top manager experience and information derived from prior management positions and current network ties can predict subsequent corporate strategy at the focal firm (e.g., Boeker, 1997a; Geletkanycz and Hambrick, 1997; Haunschild, 1993). To the extent that boards initiate outside succession in order to help implement new strategies which they have already conceived, and then (consciously or unconsciously) favor new CEOs who have experience with the chosen strategy, relationships observed in prior studies between CEO experience or network ties and strategic change may result, in part, from the influence of board member preferences (i.e., as indicated by their home company strategies). This suggests several additional hypotheses. The first two hypotheses offered below complete the theoretical framework developed in preceding sections: they predict that divergence between the strategies of manager-director home companies and the focal firm's strategy will ultimately lead to strategic change that narrows the gap (i.e., following outside succession), and that this relationship will be stronger if (a) firm performance is relatively poor (i.e., providing the impetus to seek strategic alternatives, as discussed above); (b) director home firm tenure is relatively high; or (c) director home firm performance is relatively high. Thus, for instance, if diversification at manager-director home companies is generally lower than diversification at the focal firm, we would expect decreases in diversification following outside succession.

The final two hypotheses capture the overall implications of our theoretical perspective for the relative influence of boards vs. managers on the formulation of strategic change. As discussed above, our theory suggests that boards conceive strategic changes according to their experience, and then select outsider CEOs who have also have prior experience with the chosen strategy. Thus, on the one hand, we would expect an association between the strategy experience of outsider CEOs and strategic change following outside succession, consistent with prior research. However, to the extent that this relationship actually results from the influence of board preferences on both CEO experience and the new corporate strategy, the association may be spurious. Our argument

leads to the prediction that the effects of CEO experience and ties to other boards which have been observed in prior research will become significantly less positive after accounting for the strategies of manager-director home companies. In other words, these hypotheses predict that apparent "executive effects" on changes in corporate strategy at least partially indicate "board effects."

Hypothesis 4: The strategy of manager-director home firms will be positively associated with focal firm's strategy following outside succession.³

Hypotheses 4a–c: The relationship between the strategy of manager-director home firms and the focal firm's strategy following outside succession will become more positive as (a) focal firm performance decreases; (b) manager-director home firm tenure increases; (c) manager-director home firm performance increases.

Hypothesis 5a: The relationship between the strategy of the new CEO's prior employer and the focal firm's strategy following outside succession will become significantly less positive after accounting for the strategy of manager-director home firms.

Hypothesis 5b: The relationship between the strategy of companies where the new CEO serves as outside director and the focal firm's strategy following outside succession will become significantly less positive after accounting for the strategy of manager-director home firms.

METHOD**Sample and data collection**

The population for this study includes large- and medium-sized U.S. industrial and service firms listed in the 1983 *Forbes* and *Fortune 500* indexes. We collected data for the years 1984 to 1996, inclusive. Firms were excluded if complete data on

³ As discussed further in the method section below, we control for the focal firm's strategy prior to succession in the analyses, so that the models can be viewed as assessing the extent to which the focal firm's strategy changes to become more or less aligned with the strategy of director home firms following outside succession (Johnston and DiNardo, 1997).

corporate strategy and performance were unavailable. Our final sample included 406 companies. We conducted Kolmogorov-Smirnov two-sample tests (Siegel and Castellan, 1988) to examine whether this sample differed significantly from the larger sample frame of *Fortune/Forbes* 500 firms. These tests showed no significant differences between the initial and final samples with respect to size, performance, or board composition.

Data on diversification, industry concentration, and performance were obtained from the COMPUSTAT *Business Segment Tapes* and PC-COMPUSTAT. Data on board composition and tenure came from Standard and Poor's *Register of Corporations, Directors, and Executives*, *The Dun and Bradstreet Reference Book of Corporate Management*, *Who's Who in Finance and Industry*, and proxy statements. We obtained CEO succession data from proxy statements and the on-line *Wall Street Journal Index*. Two hundred and one outside successions were observed during the period of study.

Measures

Independent and dependent variables

We examined two dimensions of corporate strategy in this study: *product market diversification*, and *geographic diversification*. These dimensions, while not exhaustive, represent key components of a firm's corporate strategy, and have been studied extensively in the strategy literature (Kim, 1989; Rumelt, 1974). Prior studies of top management and strategic change have often focused on product market diversification in measuring corporate strategy (e.g., Wiersema and Bantel, 1992; Boeker, 1997b). Moreover, some recent research has begun to examine how top management characteristics are related to geographic diversification (e.g., Sambharya, 1996). In order to increase the generalizability of our findings, we tested the hypotheses using both dimensions of diversification.

Product market diversification was operationalized using the entropy measure, which takes into account the number of segments in which a firm operates and weights each segment according to its contribution to total sales (cf. Palepu, 1985). As discussed further below, we also conducted separate models that distinguished between related and unrelated diversification. Although the entropy score is an imperfect measure of diversification

(e.g., an increase in the entropy score inflates the true increase in diversification), this measure "has been found to have good construct validity relative to other diversification measures" (Hoskisson *et al.*, 1994: 1222). We operationalized geographic diversification using the composite measure validated by Sullivan (1994; see also Sambharya, 1996; Sanders and Carpenter, 1998). This measure includes three components: (1) the ratio of foreign sales to total sales; (2) foreign assets divided by total assets; (3) the number of country subsidiaries (calculated as a percentage of the highest value in the sample). Following Sullivan (1994), the three variables are summed to form our composite measure. Prior research has shown high inter-item reliability for the component variables (Sanders and Carpenter, 1998); we found similarly high reliability in this sample ($\alpha = 0.88$).

We then created variables indicating focal firm diversification and the average diversification of director home companies. In models of outside succession, the non-directional difference between strategy at the focal firm and strategy at manager-director home companies was measured by subtracting diversification of the focal firm in the prior year from the average home company diversification of manager-directors on the board in the prior year, and squaring the difference (*difference between product market/geographic diversification at the focal firm and diversification of director home companies*) (Edwards and Parry, 1993; Tsui and O'Reilly, 1989). We conducted separate analyses to examine whether our use of squared difference scores satisfies the constraints listed by Edwards and Parry (1993). Specifically, we estimated models that included (i) the unsquared components of the difference scores (e.g., focal firm diversification and average diversification at manager-director home companies), (ii) the squared components of the difference scores, and (iii) the product of the components. This analysis showed that (i) the unsquared components of the difference scores were not significant, and (ii) the coefficients on the squared terms were not significantly different from one another. Thus, our use of squared difference scores in the succession models appears to be justified.

In our models of diversification, the dependent variable represents the level of diversification following succession, while the independent variables represent the average level of diversification

at director home companies just prior to succession (the specific lag structure is discussed below). We also created variables indicating the strategy of the new CEO's previous employer, measured in the year prior to the year of employment (*product market/geographic diversification of the new CEO's prior employer*). Similarly, we calculated the average diversification of other *Fortune/Forbes* companies where the new CEO served as outside director in the prior year (*product market/geographic diversification of the new CEO's board ties*).

We tested interaction effects with the product-term approach. For instance, to test the interaction effect between manager-director home firm strategy and organizational tenure at the home firm on strategy at the focal firm we multiplied each director's home firm diversification score by their tenure and summed the products across directors (Jaccard, Turrisi and Wan, 1990). Similarly, to test interactions between home firm strategy and performance, we multiplied each director's home firm diversification score by the value of the performance variable for their home company (see discussion of the performance variable below) and summed the products across directors. This approach weights the home firm strategy of individual directors by their home firm tenure and performance. To avoid multicollinearity problems from including multiple interaction terms, the independent variables were centered in creating the interaction terms (Jaccard *et al.*, 1990). As a further precaution, we checked the tolerance of independent variables in the interaction models (Sen and Srivastava, 1990). In no instance was the tolerance of an independent variable less than 0.01, suggesting that multicollinearity was not a problem in the analyses.

We measured *firm performance* with return on equity (as an accounting-based measure), and Jensen's alpha (as a market-based measure), averaged over the prior two years (the results were robust to different time periods, e.g., ROE in the prior year). These variables were combined into a single index using principal components analysis (the results presented below were substantively unchanged when market-to-book value was used as a market-based measure of performance). Principal components is a data reduction technique that identifies the unit-length linear combination of the variables with the greatest variance (Selvin, 1995). This technique is appropriate when one does not necessarily expect high inter-correlations among the variables, as in the case of performance

variables. In testing interaction effects, the performance index was inverted so that higher values signify lower performance (*low performance*).

The organizational tenure of manager-directors was simply measured as the number of years the director had been employed at their current home company (*director home firm tenure*). Finally, we created a binary variable indicating *outside succession*, coded as 1 in a given year if a new CEO from outside the organization was hired in that year, and as 0 otherwise.

Control variables

Several studies in the CEO succession literature have suggested that certain board characteristics may increase the board's power to replace the CEO. For instance, it has been argued that directors may feel some loyalty or social obligation to support CEOs who were responsible for appointing them (cf. Wade, O'Reilly and Chandratat, 1990), such that boards comprised largely of directors appointed by the CEO may be less likely to replace him or her (Boeker, 1992). Accordingly, we controlled for the *portion of the board appointed after the (previous) CEO* in models of outside CEO succession. Studies have also suggested that the board may be more willing to initiate changes in top management leadership when the board chairman position is held by an outside director rather than by the CEO (e.g., David, Kochhar and Levitas, 1998; Harrison, Torres and Kukalis, 1988; Mallette and Fowler, 1992). Thus, we included a dichotomous variable for *separation of the CEO and board chair positions*. Stock ownership may also enhance the power and the incentive of directors to act on their preferences (Kosnik, 1990); thus we controlled for *outside director ownership*, measured as the percentage of total common stock owned by outside directors (Hoskisson *et al.*, 1994). We also controlled for *board size* in all models. Given that our two-stage approach to analyzing strategic change effectively controls for indicators of CEO/board power in the first-stage equations that predict CEO succession (see further discussion below), we did not expect these indicators to independently predict strategic change in the second-stage equations; separate analyses confirmed that the hypothesized effects were unchanged when these variables were included in the equations predicting strategy.

Institutional investors may exert pressure on boards to influence strategic decision making and

to replace CEOs when performance is poor (David *et al.*, 1998; Useem *et al.*, 1996). Thus, we controlled for *institutional investor stock ownership*, measured as the number of shares held by pension funds, banks and trust companies, savings and loans, mutual fund managers, and labor union funds, divided by total common stock (Hill and Hansen, 1991). Given that inertial tendencies associated with firm size could extend to outside succession, as well as strategic change, we also controlled for firm size, measured as *log of sales* (Rajagopalan and Spreitzer, 1997). Instability in the industry environment may also raise the costs of managing multiple business lines, prompting lower levels of diversification. Thus, we controlled for *environmental instability* in models of strategy, measured as the absolute change in the concentration ratio of a firm's three largest business lines, weighted by sales, during the prior three-year period (cf. Wiersema and Bantel, 1992; Zajac and Westphal, 1996). Finally, we included industry dummy variables at the two-digit SIC code level in all models, and we controlled for year by including dummy variables for the N-1 years in the sample to ensure that results were not dependent upon unspecified, time-specific factors (to conserve space, coefficients for these variables are not reported).

Analysis

We used discrete-time event history analysis to estimate the likelihood of outside succession. To permit annual updating of the time-varying covariates, we divided the succession intervals into firm years (Amburgey, Kelly and Barnett, 1993). Given that firms are at risk of succession throughout the time period, we treated succession as a repeatable event (Boeker, 1992). We included three control variables suggested by Allison (1982) for repeated event models: the length of the prior interval between successions, measured in years; the length of time since the prior succession, also measured in years; and the number of successions that occurred previously. These variables were calculated from data on CEO succession for all firms in the sample since 1975. This approach predicts the likelihood of outside succession versus inside succession *or* no succession, which recognizes that boards may precipitate change either by initiating succession events, or by taking advantage of CEO departure to select an outsider.

We used the Heckman selection model to analyze corporate strategy and the experience of new CEOs. The Heckman model is essentially a two-stage procedure that corrects for sample selection bias in regression analysis (see Zajac and Westphal [1996] for a detailed discussion of this procedure). Given that the effects of board experience on new CEO experience and the effects of new CEO (vs. board) experience on strategy are limited to firms that have experienced succession, sample selection bias could threaten the generalizability of our results to the larger population of *Fortune/Forbes* 500 firms, e.g., if companies that experience outside succession are more likely to include board members in formulating strategic decisions, then OLS results may not generalize to the larger population. The Heckman model includes two equations: the first (selection) model estimates the likelihood of outside succession with the discrete-time event history model for the full sample, and the hazard rate from that model is then included in a second-stage regression model to predict CEO experience or strategy for companies that have experienced outside succession. Thus, parameter estimates from the event history model, which are based on information from all firm-years in the sample, are included in the second-stage models. Accordingly, the sample size for the Heckman model is appropriately reported as $N = 5,278$, although standard errors for the second-stage models reflect the smaller sample of companies that have experienced outside succession ($N = 201$).

The regression models estimate the level of diversification following succession while controlling for the prior value. This analytical approach estimates change in strategy (Johnston and DiNardo, 1997), and has been widely used in the empirical literatures on strategy, structure and performance (e.g., Geletkanycz and Hambrick, 1997; Haveman, 1992, 1993; Zajac and Westphal, 1994). The primary models estimate diversification in year $t + 2$ (D_{t+2}) while controlling for the prior value (D_{t-1}). The other independent and control variables are also measured in the prior year. This lag structure has been shown to be long enough to capture change in firms with more protracted decision-making processes, but also short enough to reflect the influence of managers and directors at time t (Wiersema and Bantel, 1992). We also ran separate analyses with a two-year lag (i.e., estimating D_{t+1} , while controlling for D_{t-1}) or a four-year lag, and the results were substantively unchanged.

Moreover, we used the Cochrane-Orcutt transformation to correct for autocorrelation. In separate analyses we used the Prais-Winsten method, and the results were very similar (Johnston and DiNardo, 1997). Although Johnston suggests that a correction for autocorrelation is usually sufficient in such models, we also conducted separate analyses using weighted least squares regression to ensure that the coefficients were not biased upward by heteroskedasticity (Haveman, 1993; Johnston and DiNardo, 1997: 362), and again, the hypothesized effects were unchanged.

RESULTS

Descriptive statistics and bivariate correlations are provided in Table 1. The results of models of outside CEO succession are shown in Table 2. Results for the main effects model (Model 1 in Table 2) strongly support Hypothesis 1. Specifically, boards were more likely to replace CEOs with an outsider to the extent that their home company strategies were relatively different from the focal firm's strategy, either in the level of product market diversification or geographic diversification. The results shown in Model 2 provide partial support for Hypothesis 1a. Specifically, there is a significant interaction between firm performance and the difference between product market diversification at the focal firm and diversification of director home companies: such differences were more likely to lead to outside succession where firm performance was relatively poor. The interaction is not significant for geographic diversification. The results also support Hypothesis 1b for both kinds of diversification. Specifically, the difference between diversification at the focal firm and diversification at director home companies had a more positive effect on outside succession to the extent that directors had relatively high tenure at their home firms. Moreover, Hypothesis 1c is supported for product market diversification: the difference between such diversification at the focal firm and diversification at director home companies also had a more positive effect on outside succession as home firm performance increased.

We did not necessarily expect similarity between directors' home company strategies and the focal firm's strategy to predict *inside* succession. Strategic similarity may reduce the likelihood of succession altogether, or perhaps delay succession (i.e.,

rather than prompting inside succession), because directors are more likely to accept the current strategy, and the current CEO already has experience in implementing the strategy. Nevertheless, we conducted a separate analysis that estimated the likelihood of inside succession (and outside succession) using a competing risk model. As we expected, the hypothesized effects of the independent variables on outside succession were substantively unchanged, while strategic similarity between directors' home company strategies and the focal firm's strategy did not increase the likelihood of inside succession (i.e., vs. no succession, "controlling" for the effects on outside succession).

The results of Heckman selection models of new CEO experience are provided in Table 3. As shown in the first and third columns of the table, Hypothesis 2 is supported. The strategy of director home companies is positively associated with the strategy of the new CEO's prior employer, for both the level of product market and geographic diversification. As shown in the second and fourth columns, the results are also consistent with the hypothesized interaction effects (Hypotheses 2a-c): the strategy of manager-director home companies has a more positive effect on the strategy of the outside successor's prior firm as (a) focal firm performance decreases; (b) manager-director home firm tenure increases; and (c) manager-director home firm performance increases. Results in columns five and seven support Hypothesis 3: the strategy of director home companies is significantly related to the strategy at firms where the new CEO serves as an outside director; and again the results hold for both dimensions of strategy. As shown in columns six and eight, the hypothesized interaction effects were supported in models predicting the product market diversification of firms where the CEO serves as an outside director, and partially supported in models predicting the geographic diversification of such firms. The interactive effect of director home firm tenure was significant, while the effects of home firm performance and focal firm performance were not significant.

The last set of analyses estimated the focal firm's new corporate strategy following outside succession. The results are shown in Table 4. Model 1 assesses whether new CEO experience is related to strategic change. These results show that, after controlling for diversification strategy prior to succession, the level of diversification at the new CEO's prior employer is positively associated with

Table 1. Descriptive statistics and Pearson correlation coefficient ($N = 5,278$)

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Diff. between product market divers. at the focal firm and product market divers. of director home cos.	0.02	0.29																				
2. Diff. between geographic divers. at the focal firm and geographic divers. of director home companies	0.01	0.08	0.17																			
3. Product market divers. of director home companies	0.71	0.25	-0.05	-0.02																		
4. Geographic divers. of director home companies	0.57	0.19	0.03	-0.05	0.24																	
5. Product mkt divers. of new CEO's prior employer	0.64	0.46	-0.03	0.03	0.38	0.10																
6. Geographic divers. of new CEO's prior employer	0.66	0.43	0.01	0.00	0.08	0.20	0.22															
7. Product mkt divers. of new CEO's board ties	0.67	0.31	-0.05	0.01	0.27	0.07	0.15	0.11														
8. Geographic divers. of new CEO's board ties	0.59	0.29	-0.01	0.07	0.05	0.29	0.08	0.05	0.16													

(continued overleaf)

Table 1. (Continued)

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
9. Outside director ownership	0.02	0.06	-0.05	-0.07	-0.03	0.02	-0.02	0.07	0.01	0.04												
10. Separation of the CEO and board chair positions	0.16	0.37	-0.02	-0.15	-0.07	0.11	-0.10	0.05	0.09	0.13	0.19											
11. Portion of the board appointed after the CEO	0.31	0.23	0.01	0.01	-0.13	-0.14	-0.03	-0.06	0.04	-0.17	0.24	-0.23										
12. Institutional investor stock ownership	0.34	0.22	-0.07	-0.05	-0.04	0.06	-0.01	-0.15	-0.02	-0.10	-0.10	0.09	0.04									
13. Focal firm performance	0.00	1.16	0.04	0.09	-0.03	0.07	-0.01	0.01	0.02	0.03	0.06	0.05	0.05	0.09								
14. Director home firm performance	0.06	0.57	0.01	-0.03	-0.04	0.01	-0.02	-0.02	0.00	0.01	0.02	0.04	-0.03	0.06	0.03							
15. Director home firm tenure	7.42	7.48	-0.03	-0.02	0.06	-0.08	0.00	0.02	-0.01	0.03	0.01	0.05	-0.07	0.01	0.04	-0.03						
16. Board size	13.39	3.10	0.01	0.00	0.04	0.07	0.01	-0.01	0.02	-0.03	0.07	-0.03	0.02	0.02	-0.01	0.00	0.05					
17. Environmental instability	0.03	0.04	-0.02	0.02	0.03	0.02	-0.07	0.06	0.00	-0.01	0.06	-0.04	-0.03	0.08	-0.04	-0.01	-0.02	0.01				
18. Log of sales	7.88	1.11	0.07	0.00	0.06	0.02	0.01	0.06	0.06	-0.02	0.12	0.10	0.17	0.13	-0.04	-0.01	-0.08	0.13	-0.11			
19. Outside succession	0.04	0.20	0.34	0.25	-0.09	0.12	-0.04	0.08	-0.03	0.01	0.16	0.08	-0.22	0.04	-0.24	0.13	0.09	0.07	0.04	0.09		
20. Product mkt divers. of the focal firm	0.61	0.45	-0.07	-0.02	0.42	0.16	0.30	0.10	0.23	0.08	-0.04	-0.11	-0.04	-0.07	0.08	0.02	0.04	0.01	0.18	0.27	-0.05	
21. Geographic divers. of the focal firm	0.65	0.49	-0.05	-0.11	0.11	0.31	0.18	0.26	0.15	0.29	0.07	0.08	-0.03	0.03	-0.12	0.03	0.01	0.02	0.24	0.25	-0.02	0.24

Table 2. Event history analysis of outside CEO succession

Independent variables	Model 1	Model 2
1. Difference between product market divers. at the focal firm and product market divers. of director home firms	0.890 (0.277)***	0.918 (0.281)***
2. Diff. between geographic divers. at the focal firm and geographic divers. of director home firms	2.135 (0.672)***	2.064 (0.683)***
3. Low focal firm performance \times the difference between the focal firm and dir. home firms on prod./mkt divers.		0.610 (0.229)**
4. Low focal firm performance \times the difference between the focal firm and dir. home firms on geographic divers.		0.900 (0.708)
5. High home firm performance \times the difference between the focal firm and dir. home firms on prod./mkt divers.		0.134 (0.061)*
6. High home firm performance \times the difference between the focal firm and dir. home firms on geographic divers.		0.210 (0.124)
7. High home firm tenure \times the difference between the focal firm and dir. home firms on prod./mkt divers.		0.035 (0.011)***
8. High home firm tenure \times the difference between the focal firm and dir. home firms on geographic divers.		0.013 (0.005)**
9. Outside director ownership	1.428 (1.554)	1.352 (1.564)
10. Separation of the CEO and board chair positions	0.364 (0.182)	0.353 (0.184)
11. Portion of the board appointed after the CEO	-0.823 (0.391)*	-0.822 (0.391)*
12. Institutional investor stock ownership	0.526 (0.411)	0.532 (0.415)
13. Focal firm performance	-0.165 (0.068)*	-0.175 (0.072)*
14. Director home firm performance	0.214 (0.147)	0.259 (0.163)
15. Director home firm tenure	0.014 (0.020)	0.014 (0.020)
16. Board size	0.015 (0.030)	0.015 (0.030)
17. Log of sales	0.034 (0.094)	0.035 (0.095)
Constant	0.394 (1.292)	0.946 (1.400)
χ^2	81.15***	119.44***
$\Delta\chi^2$		38.29***

$N = 5278$

* $p \leq 0.05$; ** $p \leq 0.001$; *** $p \leq 0.001$

Note: Standard errors are in parentheses. T-tests are one-tailed for hypothesized effects, two-tailed for control variables.

strategy at the focal firm following succession for both dimensions of diversification. Similarly, the strategy at firms where the CEO serves as an outside director is also positively associated with subsequent strategy at the focal firm, after controlling for strategy prior to succession. In effect, these results indicate that strategic changes following outside succession tended to make the focal firm more strategically similar to the new CEO's prior employer, and to firms where the CEO serves as director. These findings are consistent with prior research (e.g., Boeker, 1997a; Gelekanycz and Hambrick, 1997; Haunschild, 1993; Kraatz and Moore, 1998), and appear to suggest that new CEOs initiate strategic changes according to their experience.

Further analyses examined whether these results might actually reflect the influence of board members. Model 2 tests Hypothesis 4, which predicted that, after controlling for strategy prior to succession, the strategy of *director* home companies would influence the new strategy following outside succession. The results are consistent

with this hypothesis for both dimensions of corporate strategy. This suggests that directors initiate changes following outside succession that reduce the gap between their home firm strategies and the focal firm's strategy. Moreover, the results in Model 3 generally support the hypothesized interactions with focal firm performance (Hypothesis 4a), director home firm tenure (Hypothesis 4b), and home firm performance (Hypothesis 4c) (the effect of home firm performance is significant only for product market diversification).

Finally, the results provide strong support for Hypothesis 5. As shown in Model 2 of Table 4, the effects of CEO experience on strategy became non-significant after accounting for the effects of director experience. This pattern of results emerged for both kinds of CEO experience (i.e., prior experience as a top manager, and experience as an outside director), and it held for both dimensions of corporate strategy.

Although many prior studies have measured diversification strategy using the entropy measure or a related measure of overall diversification

Table 3. Heckman selection models of new CEO experience

Independent variables	Strategy of new CEO's prior employer		Strategy of new CEO's board ties	
	Product market diversification	Geographic diversification	Product market diversification	Geographic diversification
1. Strategy at director home firms	0.449 (0.146)**	0.355 (0.161)*	0.280 (0.094)**	0.274 (0.114)**
2. Low focal firm performance × Strategy at director home firms	0.242 (0.108)*	0.649 (0.289)*	0.172 (0.69)**	0.378 (0.221)
3. High home firm performance × Strategy at director home firms	0.096 (0.033)**	0.215 (0.118)*	0.073 (0.021)**	0.131 (0.090)
4. High home firm tenure × Strategy at director home firms	0.006 (0.003)*	0.019 (0.007)**	0.005 (0.002)**	0.016 (0.005)**
5. Institutional investor stock owner.	-0.037 (0.171)	0.421 (0.137)**	-0.123 (0.110)	0.208 (0.104)*
6. Focal firm performance	-0.074 (0.029)*	-0.033 (0.024)	-0.043 (0.019)*	-0.014 (0.018)
7. Director home firm performance	0.100 (0.064)	-0.010 (0.051)	0.071 (0.041)	-0.072 (0.043)
8. Director home firm tenure	0.002 (0.006)	0.008 (0.005)	0.006 (0.004)	0.009 (0.004)*
9. Log of sales	0.086 (0.038)*	0.028 (0.031)	0.058 (0.024)*	0.054 (0.023)*
10. Board size	-0.008 (0.012)	0.009 (0.010)	-0.013 (0.008)	0.004 (0.008)
Constant	-0.528 (0.509)	-0.286 (0.545)	0.658 (0.326)*	0.376 (0.416)
χ^2	93.38***	102.03***	90.26***	108.54***
$\Delta\chi^2$	20.07***	15.01**	31.33***	14.57**

N = 5278

* $p \leq 0.05$; ** $p \leq 0.001$; *** $p \leq 0.001$

Note: Standard errors are in parentheses. T-tests are one-tailed for hypothesized effects, two-tailed for control variables.

Table 4. Heckman selection models of corporate strategy

Independent variables	Product market diversification			Geographic diversification		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
1. Strategy at new CEO's prior employer	0.245 (0.071)***	0.091 (0.072)	0.077 (0.072)	0.317 (0.107)**	0.089 (0.106)	0.066 (0.106)
2. Strategy at new CEO's board ties	0.338 (0.115)**	0.182 (0.112)	0.171 (0.110)	0.352 (0.134)**	0.192 (0.134)	0.111 (0.134)
3. Strategy at director home firms		0.425 (0.133)***	0.440 (0.135)***		0.674 (0.194)***	0.750 (0.216)***
4. Low focal firm performance × Strategy at director home firms			0.236 (0.098)**			0.682 (0.366)*
5. High home firm performance × Strategy at director home firms			0.073 (0.030)**			0.050 (0.034)
6. High home firm tenure × Strategy at director home firms			0.007 (0.003)**			0.028 (0.009)***
7. Institutional investor stock ownership	-0.246 (0.151)	-0.241 (0.155)	-0.219 (0.156)	0.143 (0.185)	0.147 (0.184)	0.156 (0.185)
8. Focal firm performance	0.048 (0.026)	0.049 (0.026)	0.040 (0.028)	-0.039 (0.031)	-0.037 (0.031)	-0.055 (0.036)
9. Director home firm performance	0.034 (0.057)	0.040 (0.058)	0.047 (0.065)	0.061 (0.067)	0.063 (0.067)	0.082 (0.077)
10. Director home firm tenure	0.008 (0.005)	0.008 (0.005)	0.009 (0.006)	0.003 (0.006)	0.003 (0.006)	0.002 (0.007)
11. Log of sales	0.090 (0.035)**	0.092 (0.035)**	0.090 (0.036)*	0.115 (0.041)**	0.109 (0.041)**	0.106 (0.042)**
12. Board size	0.007 (0.011)	0.009 (0.011)	0.009 (0.011)	0.026 (0.013)*	0.026 (0.013)*	0.026 (0.013)*
13. Environmental Instability	2.293 (0.985)*	2.497 (0.989)*	2.415 (0.996)*	2.427(1.131)*	2.325(1.126)*	2.443(1.133)*
14. Prior strategy at focal firm	1.016 (0.069)***	1.047 (0.071)***	1.056 (0.072)***	1.139 (0.088)***	1.131 (0.087)***	1.142 (0.089)***
Constant	0.518 (0.471)	0.404 (0.484)	1.037 (0.659)	0.214 (0.560)	0.832 (0.758)	0.720 (0.762)
χ^2	278.64***	285.93***	313.15***	233.76***	245.02***	261.09***
$\Delta\chi^2$			27.22***			16.07**

N = 5278
 * $p \leq 0.05$; ** $p \leq 0.001$; *** $p \leq 0.001$
 Note: Standard errors are in parentheses. T-tests are one-tailed for hypothesized effects, two-tailed for control variables.



strategy (e.g., Boeker, 1997b; Gibbs, 1993; Wiersema and Bantel, 1992), the entropy measure does not distinguish between related and unrelated diversification, and there is a theoretical basis for measuring related and unrelated diversification as two separate strategies (e.g., Bergh, 1995; Fligstein and Brantley, 1992; Krishnan, *et al.*, 1997). Whereas the objective of related diversification is to achieve economies of scope by extending existing competencies to new but related products and/or markets, the objective of unrelated diversification can involve reducing product/market risk (e.g., by entering entirely separate markets with countercyclical demand). Thus, we conducted further analyses in which related and unrelated diversification are measured separately. The results generally supported the hypotheses (see Appendix for a representative portion of the results). These analyses demonstrate that our results are robust to different measures of diversification.

It might be supposed that directors would be most likely to advocate strategic change when their home company strategies are similar to one another, as well as different from the focal firm's strategy. In that case, directors might be more likely to reach consensus about the need for strategic change at the focal firm. Yet, research on group decision making would suggest that directors could still reach agreement about the need for strategic change despite having somewhat divergent strategy experience. Whereas demographic diversity has been shown to generate conflict in decision-making groups, diversity in work-related experience can trigger productive debate in which group members effectively negotiate a position that combines their respective preferences (Bettenhausen and Murnighan, 1985; Williams and O'Reilly, 1997). In order to examine whether the influence of board experience on strategy is affected by the diversity of that experience, we conducted separate analyses in which we controlled for the variation in director home firm strategies using the coefficient of variation. The hypothesized effects were substantively unchanged in all models. Moreover, the interactions between variation in director home company strategies and the independent variables were generally not significant.

It might be suggested that firms independently initiate strategic change in response to poor performance, and then change board composition to include directors who have experience with the chosen strategy (cf. Boeker and Goodstein,

1991). To test this possibility, we used pooled cross-sectional time series regression analysis to estimate the effect of prior firm performance on change in the average director home firm diversification strategy over a three-year period. Performance did not predict such change for either kind of diversification. It might also be suggested that retiring CEOs could influence the change by appointing directors who have experience with a new strategy that the CEO believes should be adopted after their retirement. Although it seems unlikely that CEOs would seek to influence strategy after their retirement through director selection, we conducted a separate analysis that excluded the experience of directors appointed within two years. The findings were unchanged, suggesting that the observed effects of director experience on strategic change do not reflect the preferences of prior CEOs.

DISCUSSION

Overall, the findings of this study appear to offer new insight into how boards of directors can influence corporate strategy. A basic tenet of research on top management and strategic change is that top executives determine the strategic direction of the firm. Studies in the upper echelons literature appear to support this view by demonstrating that executive experience predicts the direction of strategic change (Boeker, 1997a; Finkelstein and Hambrick, 1996; Geletkanycz and Hambrick, 1997). However, the findings of this study suggest how prior results that appear to show the influence of managers over strategy could mask the influence of boards. While our initial models showed that the strategy experience of new top executives at other companies predicts subsequent strategic change at the focal firm, these effects became non-significant after modeling the strategy experience of board members. Thus, what appear to be executive effects on corporate strategy may actually indicate board effects. Accordingly, it appears that upper echelons research should devote greater attention to how boards of directors may determine relationships between top management characteristics and organizational outcomes. For instance, prior evidence that demographic characteristics of top managers predict corporate strategy and performance may result from the influence of board preferences on both executive selection and strategic change.

The findings of this study also begin to address *how and when* boards influence strategic change. First, it appears that the CEO succession event provides an important opportunity for boards to initiate change. The departure of the CEO may leave a power vacuum that enables board members to assert their strategic preferences by selecting new CEOs from outside the organization who have experience with the strategy that board members favor. Our focus on outside vs. inside succession as a vehicle for board-directed strategic change is consistent with the view that inside successors are more likely than outsiders to maintain the existing strategy (Tushman *et al.*, 1985). Moreover, if directors who favor strategic change select new CEOs who have experience with their preferred strategy (i.e., in order to facilitate change), as our theoretical perspective and results would suggest, then they should favor outside successors, since insiders have experience with the current strategy.

In addition, the findings may suggest a new perspective regarding the strategic preferences of board members. While prior research has considered how the strategic orientation of top managers may be influenced by their prior experience and personal backgrounds (Hambrick and Mason, 1984), that perspective has not previously been extended to the board. To the extent that boards influence strategy at all, they are typically assumed to promote the economic interests of shareholders (e.g., Bergh, 1995; Fama and Jensen, 1983; Gibbs, 1993; Johnston *et al.*, 1993). The findings of this study appear to support a more nuanced, socio-cognitive perspective on the strategic orientation of board members. The results are consistent with the view that directors' strategic preferences are influenced by their beliefs and prior experiences with corporate strategy, as indicated by their home company diversification.⁴ In effect, it appears that

board members may use their personal experience as a reference point or benchmark in formulating and evaluating strategic alternatives at the focal firm (Cyert and March, 1963; March and Simon, 1958).

Moreover, our theory and findings also address how individual director experiences are weighted or combined in determining the board's overall preference for change. Specifically, the results are consistent with the view that director experience is weighted by home firm tenure and performance: an individual director's home firm strategy has a greater effect on the likelihood of outside succession, CEO selection, and strategic change to the extent that they have relatively long tenure at their home firms, and their home firm's performance is relatively high. While research in the upper echelons literature has typically not considered how the prior experiences of individual managers are weighted in determining organizational outcomes (e.g., Wiersema and Bantel, 1992; Finkelstein and Hambrick, 1990), the results of this study suggest that more powerful empirical models can be developed by addressing how individual beliefs are weighted or combined in determining group-level effects on change (for a top management team, board of directors, or other group-level change agent).

In general, the present study builds on recent research suggesting that boards can have some direct influence over the formulation of strategic decisions, especially when focal firm performance is poor (e.g., Goodstein and Boeker, 1991; Johnston *et al.*, 1993; Judge and Zeithaml, 1992), by demonstrating *how* such influence is exercised, and to what extent: specifically, boards initiate the change process by formulating strategies that are consistent with their home firm experience, and by selecting a new CEO who has prior experience with the chosen strategy in order to facilitate implementation. The findings show how, through this process, boards may actually exert more influence than executives in determining the

⁴ It might be suggested that director preferences would be affected by their experience on other boards (i.e., as an outside director), as well as their home firm experience. However, the theoretical mechanisms that cause directors to favor their home firm strategies are less likely to cause them to favor strategies of companies where they serve as director. Although directors monitor implementation and evaluate management effectiveness in implementing strategy, they seldom participate directly in implementation activities (Lorsch and MacIver, 1989), which reduces the potential effect of self-justification processes on attitude formation (Fiske and Taylor, 1991; Staw, 1981). Moreover, in comparison to the CEO, an outside director's personal reputation is tied much less closely to the firm's strategy, which should reduce the effect of "external forces for self-justification", as shown in the extensive literature on psychological commitment

(Fox and Staw, 1979: 453; Staw, 1981). Finally, as part-time employees who are removed from the day-to-day activities of the firm, outside directors are less influenced by the internal corporate culture than top managers. Thus, we did not necessarily expect director experience on other boards to systematically affect their beliefs about the focal firm's strategy. Moreover, we conducted separate analyses in which director experience on other boards was included in the models, and the hypothesized effects of director home company experience were consistently unchanged.

firm's strategic direction. The results are not consistent with the view that boards influence strategy only indirectly through the appointment of CEOs. If CEOs were the proximate cause of strategic change, then the effect of CEO experience would remain significant when board experience is included in the strategy models, and the effect of board experience would be insignificant. Instead, the results show that board experience is significant and CEO experience becomes insignificant in predicting strategy when both sources of experience are included in the models. Our results are consistent, however, with the perspective that new CEOs are primarily responsible for implementing strategies conceived by the board. With respect to implementation, directors may exert indirect or secondary influence by advising the CEO and/or monitoring CEO decision making (cf. Westphal, 1999). Moreover, our model focuses on explaining strategic change at the time of CEO succession. CEOs may exert more direct influence over strategy formulation as their tenure increases.

The results also have implications for research on executive selection. While some such work has sought to explain the demographic characteristics of top executives, prior studies have not directly examined the strategy experience of new CEOs (e.g., Rajagopalan and Datta, 1996; Michel and Hambrick, 1992; Zajac and Westphal, 1996). This study suggests that board members select new CEOs who have strategy experience that is consistent with their own experience, and with the strategy they favor for the firm. Thus, while several authors have suggested that boards may appoint outside CEOs to import new and unique strategic ideas and expertise, it appears instead that directors favor CEO candidates who are most likely to support the existing strategic perspective of the board.

It might be suggested that if directors appoint CEOs with similar strategic experience, perhaps CEOs would likewise favor the appointment of directors with similar strategic experience. As a result, CEOs and directors would become increasingly homogenous with respect to their strategy experience, so that (a) we would no longer have any variance on our exogenous variables (i.e., the difference between CEO and director experience), and consequently (b) our theory would no longer explain succession and change. However, we would not suggest that the only determinant of CEO experience is director experience; in fact,

our results suggest that the similarity—attraction effect occurs primarily when firm performance is relatively poor. Thus, extending our theoretical perspective and results to director selection, if performance improves subsequent to CEO succession, CEO experience should become a weaker predictor of director experience. In any event, our theory does not fully extend to director selection. We argue that directors favor new CEOs with compatible strategy experience in part because such CEOs will be better able to implement the board's preferred strategy. This argument is less applicable to director selection, precisely because CEOs, rather than directors, are primarily responsible for strategy implementation.

It might also be suggested that board independence from management would moderate the influence of directors' home firm experience on change. However, recent evidence suggests that board independence does not necessarily increase the board's overall power in determining strategy, as CEOs engage in interpersonal influence tactics that offset the effects of formal or informal board independence (Westphal, 1998). Moreover, in separate analyses we examined whether the effects of director experience on outside succession, CEO selection and strategic change were moderated by the ratio of outside to inside directors or the portion of the board appointed after the CEO, and the interactions were consistently insignificant for either variable.

The present study is consistent with recent research that has documented limitations in the board's ability to promote shareholder interests in decisions about executive compensation, CEO succession, and director selection (e.g., Westphal and Zajac, 1995; Zajac and Westphal, 1996; Daily *et al.*, 1998; Westphal, 1998). At the same time, while our theory and results suggest that directors' strategic preferences may be biased by their prior experiences, our results do not support the view that directors are largely indifferent to shareholder interests. Given evidence that boards initiate strategic change in response to poor firm performance, and that directors' strategic preferences are influenced by the relative economic success of their home firms' strategies (with respect to product market diversification), board-directed strategic change is perhaps best characterized as a flawed, yet boundedly rational pursuit of shareholder interests.

Limitations and future research

This study has several limitations that may suggest further possibilities for empirical research. First, our theoretical perspective does not explicitly model the effect of incentives on director preferences. One might suggest, for instance, that economic incentives for board members (e.g., stock options) would lead them to assess strategic issues more objectively (Roberts, 1998), reducing the effect of home firm experience on their preferences for change. However, although we would welcome further research on this issue, studies in the decision-making literature have consistently shown that incentives do not necessarily reduce the effects of cognitive biases on decision-making outcomes (Bazerman, 1998).

Although we have made an initial attempt in this study to examine how individual director experience is combined in determining the board's overall strategic preference, more research is needed on this question in the upper echelon and corporate governance literatures. Our analysis weights individual director experience by characteristics of the source (performance and director tenure at the home firm). Further research should examine the influence of focal firm characteristics or behavioral processes on the aggregation of individual preferences. Such research could apply findings from the literature on social decision schemes (Davis, 1973) to model the aggregation of individual preferences, and then consider the implications of different decision schemes for the quality of strategic decision making.

From a methodological standpoint, a limitation of our study and most prior studies in the governance literature is that we measure strategy with a limited set of archival variables. Our measures focus on overall diversification strategy to the exclusion of intermediate strategic decisions, such as acquisitions and divestitures, that ultimately drive changes in diversification. Future studies should develop larger empirical models that capture the mediating effects of specific acquisitions and divestitures. Moreover, our sample is confined to large- and medium-sized public companies in the manufacturing and service sectors. The results do not necessarily generalize to smaller companies, private firms, or organizations in other sectors, such as education (Kraatz and Moore, 1998). Future studies should examine the relative influence of director experience on strategy in other populations.

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Although the results generally supported our hypotheses for both geographic diversification and product market diversification, the moderating effects of firm performance are generally not significant for geographic diversity. Perhaps managers who have implemented geographic diversification strategies at their home firms tend to believe that such strategies will become more critical in the future, as global competition increases, so that any current performance problems will eventually be reversed. Such beliefs would also lead them to press for geographic diversification at the focal firm even when current performance is satisfactory there. Future survey research should examine how manager beliefs about geographic diversification strategies are affected (or not affected) by poor performance.

Finally, the findings of this study highlight the value of integrating research on top management and strategic choice with research on corporate governance. As boards of directors become more involved in corporate affairs, and institutional investors and other external constituents seek greater influence over strategic decision making, researchers must develop models of corporate strategy that distinguish the relative influence of top executives over strategy from the influence of boards and other stakeholders. More generally, as a wider set of actors seek influence over decision making outcomes, perspectives on strategic choice may need to reconsider dominant assumptions about *who* really determines the strategic direction of the firm.

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APPENDIX

Heckman selection models of related vs. unrelated diversification

Independent variables	Related diversification			Unrelated diversification		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
1. Strategy at new CEO's prior employer	0.137 (0.038)***	0.040 (0.039)	0.026 (0.039)	0.100 (0.033)***	0.031 (0.031)	0.022 (0.032)
2. Strategy at new CEO's board ties	0.161 (0.062)**	0.099 (0.063)	0.047 (0.061)	0.149 (0.052)**	0.070 (0.053)	0.051 (0.052)
3. Strategy at director home firms		0.221 (0.073)***	0.229 (0.076)***		0.210 (0.060)***	0.208 (0.062)***
4. Low focal firm performance × Strategy at director home firms			0.121 (0.053)*			0.121 (0.045)**
5. High home firm performance × Strategy at director home firms			0.037 (0.016)*			0.032 (0.014)*
6. High home firm tenure × Strategy at director home firms			0.004 (0.001)**			0.004 (0.001)***
7. Institutional investor stock ownership	−0.141 (0.082)	−0.141 (0.082)	−0.142 (0.084)	−0.082 (0.070)	−0.088 (0.068)	−0.087 (0.068)
8. Focal firm performance	0.020 (0.014)	0.020 (0.014)	0.025 (0.016)	0.024 (0.012)*	0.023 (0.012)	0.029 (0.014)*
9. Director home firm performance	0.012 (0.031)	0.014 (0.031)	0.021 (0.034)	0.001 (0.027)	−0.002 (0.026)	0.006 (0.030)
10. Director home firm tenure	0.005 (0.003)	0.006 (0.003)	0.006 (0.003)	0.004 (0.003)	0.003 (0.002)	0.004 (0.002)
11. Log of sales	0.047 (0.019)*	0.047 (0.019)*	0.044 (0.019)*	0.044 (0.016)**	0.047 (0.016)**	0.046 (0.016)**
12. Board size	0.002 (0.006)	0.002 (0.006)	0.003 (0.006)	0.001 (0.005)	0.001 (0.005)	0.001 (0.005)
13. Environmental instability	1.451 (0.538)**	1.472 (0.539)**	1.260 (0.547)*	1.384 (0.457)**	1.362(0.445)**	1.376(0.446)**
14. Prior strategy at focal firm	1.150 (0.076)***	1.170 (0.078)***	1.174 (0.079)***	0.908 (0.065)***	0.886 (0.063)***	0.917 (0.066)***
Constant	0.052 (0.260)	0.089 (0.258)	0.336 (0.360)	0.075 (0.222)	0.024 (0.215)	0.195 (0.302)
χ^2	266.85***	275.28***	297.26***	283.35***	296.92***	322.39***
$\Delta\chi^2$			21.98***			25.47***

$N = 5278$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

Note: Standard errors are in parentheses; T-tests are one-tailed for hypothesized effects, two-tailed for control variables.