Executive Accountability around the World:

The Sources of Cross-national Variation in Firm Performance-CEO Dismissal Sensitivity

Craig Crossland
University of Texas at Austin
McCombs School of Business
1 University Station, CBA 4.208
Austin, TX 78712
(512) 232-8082
craig.crossland@mccombs.utexas.edu

Guoli Chen
INSEAD
1 Ayer Rajah Avenue
Singapore 13876
+65 6799 5354
guoli.chen@insead.edu

May 8, 2012

We thank Ethan Burris, Don Hambrick, Andy Henderson, Gerry McNamara, Tim Pollock, Tim Quigley, James Stewart, Wenpin Tsai, and Margarethe Wiersema for their helpful comments on earlier drafts of this paper. This research was funded in part by a Smeal Dissertation Research Grant from the Pennsylvania State University and a 3M Nontenured Faculty Grant at the University of Texas at Austin.

Executive Accountability around the World:

The Sources of Cross-national Variation in Firm Performance-CEO Dismissal Sensitivity

ABSTRACT

In this study, we investigate why CEOs seem to be held more accountable for poor firm performance in some countries than others. We begin by revisiting four fundamental assumptions underlying most theoretical arguments linking performance and dismissal: (1) CEOs are personally responsible for firm performance outcomes; (2) boards/owners have the power to dismiss CEOs; (3) firm performance measures are meaningful, and (4) suitable alternative candidates for the CEO role are available. We argue that CEO accountability will vary in line with the extent to which these assumptions are more or less valid from one country to the next. We provide robust evidence – across both market-based and accounting-based measures – that CEOs are more likely to be dismissed following poor firm performance in countries where managerial discretion is high, where firm performance measures are more meaningful, and where the CEO labor market is more developed. However, we do not find support for our prediction that CEO accountability varies in line with cross-national differences in CEO power asymmetry.

Few events in the business world provoke as much interest as the dismissal of a CEO from a large public firm. Witness the widespread coverage of Carly Fiorina's ouster from HP in 2005 (Elgin, 2005). Or, more recently, the business press's fascination with the firings and forced resignations at high-profile firms such as GM, Sears, AIG, Merrill Lynch, and Yahoo (Farrell, 2007; Lauria, 2011). Finally, consider the acres of newsprint devoted to the fate of BP's Tony Hayward following the Deepwater Horizon oil spill (Lemer, 2010).

CEO dismissal is a window to the heart of executive accountability. If an organization experiences extreme positive or negative performance, observers tend to attribute the source of that performance to organizational leadership (cf., Meindl et al., 1985). When a firm succeeds, therefore, its CEO is often showered with praise and financial rewards (Wade et al., 2006). However, when a firm fails, much of the blame is laid at the door of the incumbent CEO (Zemba et al., 2006). And, therefore, he or she is more likely to be held accountable via dismissal (cf. Lerner and Tetlock, 1999). Whether we look at wins in professional baseball (Gamson and Scotch, 1964), business school rankings (Fee et al., 2005), firm growth metrics (Boeker, 1992), profitability (Wagner et al., 1984), market performance (Denis et al., 1997), or even simply expectations of performance (Puffer and Weintrop, 1991), research in this domain consistently shows that an organization's most senior executive is more likely to leave office following weak organizational performance.

However, the overwhelming majority of work on this subject has examined only U.S. organizations and U.S. contexts. Those few studies that have investigated this topic using cross-national samples show decidedly mixed findings. For example, a recent comprehensive multi-

country analysis reported non-significant performance-turnover relationships for market-based and accounting-based measures (Lel and Miller, 2008). And, single-country studies employing non-U.S. samples report both significant (e.g., Lau et al., 2009) and non-significant (e.g., Anderson and Campbell, 2004) results. We see suggestive anecdotal (Augstums, 2008; Jolly, 2009) and empirical (Karlsson et al., 2008) evidence that CEOs may vary substantially from one country to the next in their likelihood of being dismissed following poor firm performance. Our study is therefore driven by the following research question: *Why are CEOs held more accountable for poor firm performance in some countries than others?*

To answer this question, we revisit a series of implicit and explicit assumptions underpinning the theorized link between (poor) performance and CEO dismissal. Specifically, studies in this domain tend to assume that: (1) CEOs are personally responsible for firm performance outcomes, (2) boards/owners have the power to dismiss CEOs, (3) firm performance measures are meaningful, and (4) suitable alternative candidates for the CEO role are available. Drawing on prior cross-national research, we show that the reasonableness of these assumptions in fact varies substantially from one country to the next. In turn, we show how relaxing these assumptions helps us to better understand cross-national differences in performance-dismissal sensitivity.

We begin with the simple yet powerful idea that CEOs from some countries are held more responsible for poor performance because they in fact *are* more responsible. Recent work in the domain of managerial discretion suggests just this possibility: CEOs matter more in some countries than others (Crossland and Hambrick, 2007, 2011). Managerial discretion, or latitude of action (Hambrick and Finkelstein, 1987), is the extent to which senior executives are able to

impart their own idiosyncratic stamps on their firms. In high-discretion environments, CEOs have much greater opportunity to influence firm performance for good and for ill. If CEOs do matter more in some countries than others, we predict that they are therefore more likely to be held accountable for poor firm performance in those countries.

Second, we explore the impact of international differences in power asymmetry between the CEO and boards/shareholders. A number of U.S.-based studies of CEO dismissal have shown that dismissal tends to be less sensitive to performance when the CEO is relatively entrenched, such as when he or she is a family CEO in a family-owned firm (Allen and Panian, 1982). In addition to varying within countries, though, firm ownership and governance patterns also differ systematically across countries (Aguilera and Jackson, 2003; Gedajlovic and Shapiro, 1998). We therefore argue that CEOs will be held more accountable for poor performance in those countries where CEOs tend to have relatively low power vis-à-vis boards and shareholders.

Next, we address the idea that financial firm performance measures may themselves be more or less meaningful from country to country. Prior work (Leuz et al., 2003; Morck et al., 2000) suggests that identical measures of firm performance (both accounting-based and market-based) may be significantly more valid in some societies than others. Thus, we hypothesize that the extent to which poor performance becomes a catalyst for CEO dismissal will vary commensurately with these differences in firm performance meaningfulness.

Finally, we predict that CEO accountability will differ across countries in line with the size of a country's pool of suitable replacement CEO candidates. In some countries – those with many

large public firms and a well-developed CEO labor market – we expect to see a larger pool of potential candidates from which to select a replacement. In countries where an appropriate replacement is more readily available, we argue that a board will be more likely to dismiss a CEO following poor firm performance.

This study provides several contributions to the strategic management and organization science literatures. We develop theory based on the role of CEO attributions (Fredrickson et al., 1988; Haleblian and Rajagopalan, 2006) to provide a comprehensive, nuanced answer to the question of why CEOs are held more accountable in some countries than others. In doing so, our study helps to explain why prior research into the performance antecedents of CEO succession has at times generated inconsistent findings from one country to the next. We test our hypotheses using multiple performance measures (including both operating and market performance measures) and a 14-country, 10-year, 699-firm sample, including hand-coded data establishing the date and cause of all CEO departures. Very few studies have compared the performance-dismissal relationship across multiple countries simultaneously. Finally, we include a broad panel of control variables across multiple levels of analysis, along with a series of robustness and sensitivity tests, which helps us to validate our findings.

THEORY AND HYPOTHESES

Firm Performance and CEO Dismissal

Investigations into the sources of CEO dismissal have occupied the management and organizational literatures for decades. Some of the earliest studies in this field explored the impact of characteristics such as firm size (Grusky, 1961), ownership structure (Christensen,

1953), and bureaucratization (Guest, 1962; see Kesner and Sebora (1994) for a review). One of the first studies to explicitly consider performance-related antecedents of dismissal examined professional baseball teams over a thirty-year period (Grusky, 1963). The results of this study showed a consistent negative relationship between team performance (operationalized by number of wins) and frequency of managerial dismissal. Moving to the corporate world, Coughlan and Schmidt (1985) reported a negative relationship between past stock price and present CEO dismissal in a 3-year sample of 250 large U.S. firms. Since then, a multitude of studies have found evidence supporting Coughlan and Schmidt's (1985) conclusions (e.g., Brickley, 2003; Martin and McConnell, 1991; Warner et al., 1988; Weisbach, 1988).

However, although the performance-dismissal relationship has been explored in a large number of U.S.-based studies (DeFond and Park, 1999), only a relatively small number of studies have examined this relationship using non-U.S. samples (e.g., Firth et al., 2006; Kaplan, 1994; Maury, 2006). And, to our knowledge, there exists no comprehensive, multi-country comparative study of CEO dismissal. To this point, three studies in the finance and accounting literatures have examined performance-turnover sensitivity using large cross-national samples, but none of these studies explicitly distinguished between dismissals and voluntary departures (DeFond and Hung, 2004; Gibson, 2003; Lel and Miller, 2008). Furthermore, each of these studies reported at least one sample-wide null relationship between performance and turnover. Thus, it is not at all clear to what extent the findings of U.S.-based research in this domain are generally applicable to other national contexts.

Performance-Dismissal Sensitivity across Countries

In fact, existing research suggests several reasons why we should we should be wary of indiscriminately generalizing the findings from U.S.-based studies to other national settings. Firms from different countries operate in highly distinct informal and formal institutional contexts, with the "rules of the game" (North, 1990) varying substantially from one country to another. Firms – even large, public, globally-active ones – are differentially constrained and enabled by the idiosyncratic national political, economic, and social milieus within which they operate (e.g., Aguilera and Jackson, 2003; Chan et al., 2008; Hall and Soskice, 2001; Jackson and Deeg, 2008; Makino et al., 2004; Mantzavinos, 2001; Peng, 2002). Accordingly, we see evidence of cross-national differences in a wide range of phenomena related to strategic decision-making and behavior, from the role of business groups (Khanna and Rivkin, 2001), to corporate HR policies (Budhwar and Sparrow, 2002), to the use of bond covenants (Qi et al., 2011) to CEOs' cognitive maps (Witt and Redding, 2009).

More concretely, though, how will these institutional differences affect performance-dismissal sensitivity? To address this question, we return to the fundamental implicit and explicit assumptions contained in most of the prior work in this field. Research in this stream draws primarily upon agency theory (Eisenhardt, 1989; Jensen and Meckling, 1976); thus, we focus on the core assumptions inherent in this perspective[1]. Most fundamentally, agency theory assumes that poor firm performance is an *ipso facto* case of poor CEO performance. CEOs are held accountable for poor performance because they are assumed to be personally responsible for the firm-level actions and inactions leading to performance outcomes (Fama, 1980). Second, this literature assumes, and provides empirical support for, the idea that poor performance is most

likely to lead to dismissal when the CEO has relatively low power vis-à-vis the board and shareholders (e.g., Huson et al., 2001). Third, a further implicit assumption is that the financial measures used to evaluate firm performance outcomes are meaningful and valid (e.g., Agrawal and Knoeber, 1996). Finally, arguments linking performance and dismissal assume that CEO replacements of at least equivalent quality and experience are readily available (e.g., Denis and Denis, 1997). We consider the implications of each of these assumptions in turn.

Managerial Discretion

How much, and under what circumstances, do CEOs matter to the actions and outcomes of their firms? Much of the work in the management literature addressing this question builds on the construct of managerial discretion, the extent to which a CEO possesses a wide range of potential actions that "lie within the zone of acceptance of powerful parties" (Hambrick and Finkelstein, 1987: 378). Sometimes, CEOs can have a great deal of influence on the strategic direction and performance of their firms (Mackey, 2008). Sometimes, though, executives are heavily constrained in terms of the actions that they can initiate, and, in turn, the performance outcomes of such actions. The capacity to make large capital investments, to acquire and divest businesses, to enter or leave product markets, to hire and fire, and to re-structure a firm internally, are all a function of the discretion available to a CEO (Hambrick and Abrahamson, 1995; Shen and Cho, 2005).

Most studies in this domain have examined industry-level and firm-level sources of discretion (e.g., Cho and Hambrick, 2006; Finkelstein and Boyd, 1998). In addition, recent work has extended the construct of discretion to the national level. Building on new institutional theory

(North, 1990), Crossland and Hambrick (2011) hypothesized that a country's informal institutions (e.g., cultural values) and formal institutions (e.g., legal rules) would be associated with the extent to which CEOs of public firms headquartered within that country possessed discretion. In their empirical analyses, these authors demonstrated significant links between existing measures of national institutions (Hofstede, 2001; Gelfand et al., 2006, La Porta et al., 1998, Estevez-Abe et al., 2001) and a national-level measure of discretion based on data from multiple expert panels. For example, countries with common-law legal traditions and high levels of individualism were also characterized by high levels of discretion. Crossland and Hambrick (2011) also showed that national-level discretion was a significant positive predictor of national-level CEO effects (the amount of variance in firm performance attributable to CEO-level factors), and that discretion mediated the relationship between national institutions and CEO effects. Thus, we argue that Crossland and Hambrick's (2011) study provides a validated, country-level measure of the extent to which CEOs are responsible for firm-level actions and outcomes.

If there are indeed differences in managerial discretion across countries, we posit that these differences will be associated with differences in firm performance attributions. When internal and external stakeholders evaluate performance, they make judgments based not only on performance levels and expectations, but also on causality (Fredrickson et al., 1998; Haleblian and Rajagopalan, 2006). Although baseline perceptions of firm performance may not differ significantly across high- and low-discretion environments, we argue that differences in discretion will be associated with substantial differences in causal attributions.

In low-discretion countries, where executives have, and are perceived to have, minimal discretion, firm stakeholders will tend to view the CEO role as that of a "titular figurehead" (Hambrick and Finkelstein, 1987: 390), without substantial influence over the actions and outcomes of the firm. Accordingly, in a low-discretion country, although firm performance may still be perceived negatively, that poor performance is less likely to be attributed directly to the CEO. Thus, owners, boards, and other stakeholders are less likely to view the CEO's efficacy negatively, and the CEO will therefore be less likely to be dismissed.

In contrast, in high-discretion countries, firm stakeholders will tend to view the CEO role as that of an "unconstrained manager" (Hambrick and Finkelstein, 1987: 391), with great scope to affect firm outcomes, both positively and negatively. Accordingly, in a high-discretion country, when firm performance is perceived negatively, that poor performance is much more likely to be attributed directly to the CEO. These attributions of poor performance will be accompanied by a negative perception of the CEO's efficacy. Therefore, a CEO is more likely to be held accountable and dismissed following poor firm performance in a high-discretion country. Specifically, the (negative) relationship between firm performance and CEO dismissal will be amplified in high-discretion countries, such that the relationship becomes more negative. In low-discretion countries, this relationship will be less negative or perhaps even non-significant.

> *Hypothesis 1. The relationship between recent firm performance and the probability of CEO dismissal will be significantly stronger (more negative) in countries where national-level managerial discretion is high.*

CEO Power Asymmetry

A second important assumption in the CEO dismissal literature is that boards have the power to dismiss poorly-performing CEOs. In other words, dismissal will be sensitive to performance only to the extent that boards have the power to dismiss CEOs. Thus, factors that enhance CEOs' power (cf., Finkelstein, 1992) in relation to the power of boards and shareholders should reduce the likelihood that CEOs can be held accountable. Evidence from U.S.-based studies supports this idea. For example, CEOs from firms with shares concentrated into blockholdings (Warner et al., 1998), or with more outside directors (Weisbach, 1988), are more likely to be dismissed following poor performance. In contrast, CEOs with larger shareholdings (McEachern, 1975) and family CEOs (Allen and Panian, 1982) are significantly less likely to be dismissed.

In our study, we extend this idea to the national level. We argue that there will be more CEO accountability in countries where governance and ownership characteristics tend to place shareholders and boards of directors in positions of relative strength vis-à-vis CEOs. Specifically, we consider in detail two representative characteristics that will affect a CEO's relative power and that have been shown to vary substantially across countries: ownership dispersion (La Porta et al., 1998) and CEO-chair duality (Randoy and Nielsen, 2002; Roe, 1993).

Ownership dispersion. Ownership dispersion may be defined as the extent to which the shares of a firm are widely (vs. closely) held (Pedersen and Thomsen, 1997). Prior research shows that countries tend to display distinct patterns of public firm ownership

(La Porta et al., 1998). Some countries (e.g., United Kingdom), are characterized by a relatively large separation between ownership and control (Aguilera and Jackson, 2003). Shares of public firms tend to be widely held and most firms have few or no concentrated owners. In other countries (e.g., France), ownership and control are more tightly linked (Gedajlovic and Shapiro, 1998). Shares of public firms tend to be held by a smaller number of more concentrated owners, such as banks, families, other firms, and business groups.

Agency theory predicts that dispersed ownership will be associated with weaker internal control mechanisms (Jensen and Meckling, 1976), leading to outcomes such as lower overall CEO compensation (Core et al., 1999) and lower pay-performance sensitivity (Hambrick and Finkelstein, 1995). Ownership dispersion thus limits the ability of owners to prevent CEO self-dealing and wealth expropriation. CEOs in such situations are likely to be more entrenched and to possess greater power in relation to boards and shareholders. A related manifestation of this entrenchment will be a reduced ability of boards to fire such CEOs. Aggregated to the national level, we therefore argue that another reason why CEOs from some countries are held less accountable for poor firm performance is because the firms in those countries are characterized by higher levels of ownership dispersion.

> *H2a: The relationship between recent firm performance and the probability of CEO dismissal will be significantly weaker (less negative) in countries where firm ownership is more dispersed.*

CEO duality. CEO (or CEO-chair) duality refers to the situation where a CEO is simultaneously the head of the firm's board of directors (Boyd, 1995). The extent of duality also varies considerably from one country to the next. Some countries (e.g., U.S.) show a high incidence, with duality being the modal arrangement for large public firms (Iyengar and Zampelli, 2009). Some countries, however, proscribe the practice entirely, with CEOs either not permitted to chair the board (e.g., Sweden) or not permitted to sit on the board at all (e.g., Germany) (Roe, 1993). Other countries (e.g., Japan) fall somewhere in between, with a number of both dual and non-dual firms.

Similar to the situation described above for ownership dispersion, CEO duality is viewed in the agency literature as an indication of suboptimal corporate governance (e.g., Fahlenbrach, 2009), with duality generally associated with weaker internal monitoring and control mechanisms compared to the situation where the CEO and board-chair roles are held by separate individuals (Dalton et al., 1998). Dual CEOs are therefore likely to be more entrenched and harder to dismiss. Consistent with this idea, there is some evidence in U.S. samples of firms that duality weakens firm performance-CEO dismissal sensitivity (Goyal and Park, 2002). Extending this logic to the national-level, we argue that CEO accountability for poor firm performance will be lower in those countries characterized by high levels of CEO duality.

> *H2b: The relationship between recent firm performance and the probability of CEO dismissal will be significantly weaker (less negative) in countries where CEO duality is more prevalent.*

Firm Performance Meaningfulness

We now move to another important assumption underlying much of the work addressing performance-dismissal sensitivity – that standard measures of financial performance are equally informative across firms (and, in our case, across countries). However, we know from the accounting and finance literatures that well-established, widely-used operating and market measures actually differ considerably in their information content from country to country (e.g., Ball et al., 2003; Brown and Higgins, 2001; DeFond and Hung, 2004). We first consider market-based measures of performance.

Stock price informativeness. A firm's stock return – the change in its value over time – is a function of both new market information more generally and new firm-specific information (Morck et al., 2000). When a group of stocks move asynchronously, this suggests a relative preponderance of firm-specific vs. general market information. However, when a group of distinct stocks closely track each other over time, stock returns are relatively less a function of firm-specific information (Roll, 1988). In the latter case, therefore, stock returns, and a firm's stock price, are less informative indicators of the firm's individual underlying economic performance (Lel and Miller, 2008). Morck and colleagues (2000) examined this phenomenon cross-nationally, identifying large country-to-country variations in the percentage of stocks that moved synchronously (in the same direction) in an average week. This figure ranged from a low of 58% (United States) to a high of 83% (Poland). Higher values therefore equate to lower firm-specific stock price informativeness (Morck et al., 2000; Volpin, 2002).

In countries where stock prices and stock returns are highly informative – where these measures more accurately reflect changes in the underlying economic value of firms – boards will be more willing to take important, high-profile decisions based on these data. When trying to determine if a particular level of market-based performance is sufficiently poor to justify dismissing a CEO, the board will be especially anxious to ensure that such a performance indicator is a valid one. In countries where stock returns and stock prices are less informative – where these measures are more reflective of broader market forces than they are of the firm's specific value and capabilities – boards will be more reluctant to act upon the data. In making the decision whether or not to dismiss a sitting CEO, market performance measures should be relatively less influential in such situations. We therefore hypothesize that CEOs will be held more accountable for poor market performance in those countries where stock price informativeness is high.

> *H3a: The relationship between recent market-based firm performance and the probability of CEO dismissal will be significantly stronger (more negative) in countries where stock price informativeness is high.*

Earnings management. Accounting-based, or operating, measures of firm performance also appear to be relatively more or less informative across countries. Financial reporting standards, such as U.S. Generally Accepted Accounting Principles (GAAP), are systems of enforceable rules designed to facilitate market-wide resource allocation by requiring firms to provide regular, timely, and accurate reports of firm performance to corporate stakeholders (Healy and Wahlen, 1999). Because market participants are not only interested in maximally accurate information, but also information that is fully up-to-date, accounting standards typically allow managers and

firms a certain degree of judgment in reporting firm performance. However, one of the drawbacks of allowing managers to exercise judgment in financial reporting is the potential that this creates for provisions such as restructuring charges, premature revenue recognition, and write-offs (Dechow et al., 1995). These provisions, sometimes called "smoothing" or "cookie jar accounting," are examples of earnings management, which may be defined as the process whereby "managers use judgment in financial reporting and in structuring transactions to alter financial reports…about the underlying economic performance of the company" (Healy and Wahlen, 1999: 368).

The nature of earnings management, and the extent to which it occurs, therefore tends to vary in line with differences in the characteristics of the financial reporting standards that firms have to observe when reporting firm performance measures (Schipper, 1989). Accordingly, we see far greater variability in the extent of earnings management across countries than within countries (Beneish, 1997; Leuz et al., 2003). For example, in a study of 31 countries, Leuz and colleagues (2003) used multiple measures to determine the extent to which public firms within a country practice earnings management. In some countries (e.g., Australia, Canada), firms tend to engage in relatively little earnings management, while in others (e.g., Austria, Italy), such practices are widespread.

In countries where financial reporting standards are designed such that earnings management is less common and more difficult to accomplish, corporate stakeholders will be more likely to trust that a particular reported level of operating performance is reflective of the firm's underlying quality at that point in time. Accounting-based measures of firm performance will therefore be

more meaningful. In turn, subsequent decisions based on a particular level of firm performance will be easier to make. However, in those countries where standards and practices are such that earnings management is more likely, stakeholders will be more wary of the legitimacy of any given report of firm performance. Thus, decisions based on firm performance reports (in our case, whether or not to dismiss the CEO) will be significantly less clear-cut. We therefore argue that CEOs will be held less accountable for poor operating performance in those countries where earnings management is more likely.

> *H3b: The relationship between recent accounting-based firm performance and the probability of CEO dismissal will be significantly weaker (less negative) in countries where earnings management is more prevalent.*

CEO Labor Market Development

We now consider one final important assumption underpinning most of the literature addressing performance-dismissal sensitivity – that a suitable replacement CEO will be readily available. Although we often see CEOs being dismissed without a named permanent successor in place (e.g., Lauria, 2011), it is reasonable to assume that boards in these situations expect there to be a functioning executive labor market consisting of a pool of suitable candidates (cf., Khurana, 2002; Spear and Wang, 2005). Only in the most extreme cases of incompetence or malfeasance would a board be likely to dismiss an incumbent CEO if they did not believe that a suitable replacement could be found for an extended period of time.

When any given labor market tightens (i.e., when the number of available positions goes up relative to the number of suitable candidates), we see a series of predictable responses. Wages

for incumbents and new employees rise, firms face skill shortages, involuntary turnover goes down, and the potential for voluntary turnover increases (Abraham, 1988; Houseman et al., 2003). In highly selective labor markets – such as the market for senior executives – where employers are necessarily restricted to considering a small number of experienced, highly-skilled candidates, those employers will be especially cognizant of the challenges inherent in finding equivalently-qualified applicants to replace departing employees (DiNardo et al., 1996; Juhn et al., 1993).

Furthermore, existing literature suggests that, unlike the internationalized labor markets of, say, professional sportspeople or entertainers, the labor market for CEOs is overwhelmingly a national one (Greve, 2009). Rarely does an executive of a firm headquartered in one country take up a subsequent CEO position at a firm based in a different country. Accordingly, the likelihood that a firm will be able to find a suitable replacement candidate following CEO dismissal is heavily dependent upon the characteristics of the CEO labor market in that country, and specifically the number, variety, and size of public firms in that country.

In countries with fewer, smaller public firms, boards will tend to be more cautious when reacting to poor firm performance. Even if the board is convinced that the incumbent CEO is personally responsible for the poor performance, the CEO is relatively unentrenched, and the relevant performance metric is seen to be meaningful, a decision to dismiss the CEO will be tempered by the knowledge that the pool of suitable replacements is shallow and that it may take many months to hire an appropriate candidate. Combined with the inherent upheaval that accompanies even voluntary, relay CEO successions (Shen and Cannella, 2003), this uncertainty will reduce

the likelihood that a CEO will be dismissed for a given level of poor performance. In contrast, boards operating in countries with many large public firms will be much more confident that a suitable replacement will be available. Even if the board is unable to initiate any type of recruitment search prior to the departure of the incumbent CEO, they will be much less concerned that a search will be prolonged or unsuccessful. We therefore hypothesize that CEOs will be held more accountable for poor performance in those countries where the CEO labor market is well-developed.

H4: The relationship between recent firm performance and the probability of CEO dismissal will be significantly stronger (more negative) in countries where the CEO labor market is more developed.

METHODS

Sample

Our sample consisted of large, public firms from 14 different countries: Australia, Austria, Canada, France, Germany, Italy, Japan, The Netherlands, Singapore, Spain, Sweden, Switzerland, United Kingdom, and United States. These countries are all high-income (developed) OECD societies and have been included in a wide range of studies of cross-national business phenomena (e.g., La Porta et al., 1998). We used a sample of firms from the 2006 Forbes Global 2000, an annual listing of the 2000 largest public firms in the world. We began by including all firms headquartered in the fourteen countries noted above. Three countries were represented by more than 100 firms: United States (693 firms), Japan (320 firms), and United Kingdom (122 firms). As it was not feasible to gather data on every firm from each of these countries, we took a random sample of 100 firms per country. For the remaining 11 countries,

we included every available firm from each country. This resulted in a final sample of 699 firms. Our sample frame consisted of the ten financial years from 1996 to 2005 inclusive, for a total of 6554 firm-years. Thus, our unit of analysis is the firm-year. Not all firms have 10 full years of data because a small number of firms came into existence and/or first went public after 1996. Each firm was assigned to one of 27 industry sectors, as per its designation in the Forbes Global 2000 database (Table 1). For more details on the firms comprising this sample, see Crossland and Hambrick (2011)[2].

Table 1 about here

Dependent Variable: CEO Dismissal

We began by determining the month in which each firm's financial year ended. Then, for each of the 699 firms, we collected data on every CEO departure that occurred during the ten-year period beginning the month of the firm's 1996 financial year-end. To reduce the chance of including interim CEOs in the sample, we excluded those individuals who were explicitly labeled as being interim or temporary CEOs, or who remained in office for fewer than six months. A total of 834 CEOs left office during the sample frame. For these CEOs, we recorded the month and year of departure. A departure was attributed to a particular financial year if it occurred within the 12 month period following the end of that financial year (but also see "Supplementary Analyses" below for several alternative operationalizations). CEO departure data were hand-collected from annual reports, regulatory filings, press releases, company websites, and news media.

We then coded each of the 834 successions as a dismissal or a voluntary departure. Accurately distinguishing between voluntary and involuntary turnover is challenging and somewhat imprecise (Warner et al., 1988). Because it can be in both the CEO's and the firm's interest to portray a dismissal as a voluntary turnover, press releases describing CEO successions can sometimes be ambiguous concerning the causes of turnover. Therefore, drawing on prior research (e.g., Dahya et al., 2002; Lau et al. 2007), we used a multi-stage process to make the distinction between dismissals and voluntary turnovers.

For each of the 834 successions, we coded company-generated press releases and relevant contemporaneous articles in the financial and general media that addressed the succession. We initially looked for strong evidence suggesting either dismissal or voluntary turnover. We coded a succession as a dismissal if: a) a company press release described the CEO as having been dismissed or asked to resign, b) a press release or media report stated that the CEO had resigned by mutual agreement with the board (or used similar language), or c) the CEO left office effective immediately, followed by a period in which the firm employed an interim CEO. We coded turnover as voluntary if: a) the CEO remained on the firm's board after leaving office (usually as board chair), b) the CEO died while in office or there was strong evidence that the CEO left for health-related reasons, c) there was prior evidence of a planned or relay succession, d) the CEO left office in order to immediately take up a comparable position at another firm, or e) the CEO had reached the firm's retirement age. Using these criteria, we were able to code 243 departures as dismissals and 571 departures as voluntary successions.

For 20 CEO departures (2.4%), there was insufficient evidence to make a reliable judgment concerning the nature of dismissal. For these CEOs, we used an age-based screen. We coded a departure as a dismissal if it occurred when the CEO was more than a year younger than the country's statutory pensionable age (Social Security Administration, 2008)[3]. Our final sample contained 250 dismissals (30.0%) and 584 voluntary departures (70.0%).

To determine the reliability of our coding scheme, we used multiple coders. One of the study's authors coded all departures, and an independent coder (unaffiliated with the study) separately coded a random sample of 83 departures (10%). The intraclass correlation for this sub-sample (ICC (2,1) = 0.90) indicated that our coding scheme was reliable (Westphal and Clement, 2008).

Across our whole sample, the CEO succession rate has tended to increase over time (cf., Lel and Miller, 2008). The likelihood of voluntary CEO departure in a given firm-year rose from 7.5% in 1996-2000 to 10.2% in 2001-2005. Similarly, the likelihood of CEO dismissal in a given firm-year rose from 3.0% in 1996-2000 to 4.5% in 2001-2005. However, the number of dismissals as a percentage of total successions has remained largely unchanged over time, rising slightly from 28.8% in 1996-2000 to 30.8% in 2001-2005. Table 2 reports the number of firm-year observations for each country and the corresponding probabilities of dismissal and voluntary departure. As can be seen, the likelihood of a CEO departing office in any given firm year (either voluntarily or involuntarily) differs from country to country, as does the number of dismissals as a percentage of total successions.

Table 2 about here

Independent Variable: Recent Firm Performance

We used two different annual measures of firm performance. Our market-based measure was total shareholder returns in excess of the country average return (*excess returns*)[4]. The use of excess returns allows us to account for cross-national variations in general market performance in a particular year. Our accounting-based measure of performance was earnings before interest and taxes divided by total assets (*EBITTA*). EBITTA is preferable to net income divided by total assets as it is not influenced by a country's tax regime or a firm's capital structure (DeFond and Hung, 2004). Both of these measures have been used in the few prior studies that have examined performance-turnover sensitivity across countries (DeFond and Hung, 2004; Lel and Miller, 2008), as well as a wide range of other studies examining performance-dismissal sensitivity within specific countries (e.g., Huson et al., 2001; Kang and Shivdasani, 1995; Lau et al., 2009). All performance data were gathered from the Datastream Worldscope database. For consistency with other studies in this domain (DeFond and Hung, 2004; Lel and Miller, 2008), we used excess returns and unadjusted EBITTA at Year -1 to predict CEO dismissal at Year 0. We also considered several alternative performance measures, including variations in our lag structure (see "Supplementary Analyses" below).

Moderating Variables

***Managerial discretion*.** We used Crossland and Hambrick's (2011) measure of national-level managerial discretion. This measure was originally constructed based on data from an expert panel comprising managers of large international mutual funds. Using Morningstar's mutual fund database, Crossland and Hambrick (2011: 805) contacted all managers with at least five

years' experience managing an international fund (and 10 years' experience in mutual funds overall), who were currently managing funds with over US$100m in assets, investments in five or more countries, and more than one-third of funds invested in non-U.S. equities. After being given a short description of managerial discretion, all panelists were asked the following:

> Listed below are 15 countries. Please use the seven-point scale to indicate the extent to which – in your estimation – CEOs of public firms headquartered in each country possess managerial discretion. If you are unfamiliar with a country or unsure about its discretion characteristics, please select 'not sure.' (Since the conditions affecting discretion might vary over time, it may be useful to know that our period of interest is 1996-2005).

Of the 32 managers satisfying the inclusion criteria, eight respondents provided 97 individual discretion ratings. Mean country-level discretion scores ranged from 6.6 to 3.0[5]. The intraclass correlation coefficient (ICC (3,k)) for the panelists' ratings was 0.93, suggesting good reliability. In addition, these country-level ratings were highly correlated ($r = 0.87$, $p < .01$) with ratings from a similar survey of prominent international business academics (Crossland, 2009).

Ownership dispersion. For each firm in our sample, we operationalized this measure as 100 minus the percentage of shares held by the largest shareholder.

CEO duality. This measure was coded as a binary 1/0 variable, with a value of 1 for a firm when the CEO was also chair of the board at the end of the relevant financial year, and 0 otherwise.

Stock price informativeness. We used Morck et al.'s (2000:223) national-level measure of stock price informativeness, which was calculated as the percentage of stocks in a country that move in step, based on six months of data on all publicly-traded firms listed on each country's largest stock exchange. Morck et al.'s (2000) measure is constructed such that lower scores equate to

higher stock price informativeness. For ease of interpretation, we therefore used the reverse of each score (the negative value of the raw score).

Earnings management. We used Leuz et al.'s (2003: 514-515) national-level measure of earnings management, which was calculated based on four distinct proxy measures (e.g., the ratio of small profits to small losses) in a 10-year sample of over 8,000 firms.

CEO labor market development. CEO labor market development was operationalized as the total number of listed firms for each country-year. We assume that the greater the number of listed firms in a country, the deeper the talent pool for a firm to draw from in finding potential replacement CEO candidates. In a separate analysis, we instead used the total size of all listed firms (in logged US$ equivalents) as an alternative measure, generating similar results. Data for this variable were taken from World Bank's World Development Indicators database.

Moderating interactions. Hypotheses 1-4 predicted that the firm performance-CEO dismissal relationship would be strengthened (made more negative) or weakened (made less negative) depending on the value of the relevant moderating variable. To test these hypotheses, we created interaction terms by multiplying the respective firm performance measure (excess returns or EBITTA) by the relevant moderating variable. Therefore, H1, H3a, and H4 will receive support if the interaction terms are negative and significant, while H2a, H2b, and H3b will receive support if the interaction terms are positive and significant.

Control Variables

CEO controls. For each firm-year in the sample, we gathered data on *CEO age*, the age in years of the CEO at the end of the relevant financial year, and *CEO tenure*, the CEO's tenure in years at the end of the financial year. CEO age and tenure data were collected from annual reports, regulatory filings, press releases, company websites, and news media.

Firm controls. Evidence suggests that firm size influences the rate of CEO departure (Grusky, 1961; James and Soref, 1981). We operationalized *firm size* as the natural log of total assets (converted to U.S. dollars). We also controlled for the annual percentage of *closely-held shares*, the percentage of shares held by insiders, and *CEO founder*, which was operationalized as 1 in a particular firm-year if the sitting CEO had founded the firm, and 0 otherwise (Boeker, 1992; McEachern, 1975). Finally, we controlled for *firm internationalization*, which was operationalized as the ratio of foreign sales divided by total sales for a particular firm-year (Daniels and Bracker, 1989; Sullivan, 1994)[6].

National controls. DeFond and Hung (2004) found evidence that firm performance-CEO succession sensitivity was significantly related to a country's *law enforcement institutions*. Following these authors, enforcement was operationalized as the mean score (out of 10) of three variables: efficiency of the judicial system, rule of law, and corruption (reverse-scored) (see La Porta et al. (1998) for original data). In addition, because there is evidence that U.S. stock exchange listings specifically may have a significant impact on performance-dismissal sensitivity (Lel and Miller, 2008), we created a single control for *US stock listing*. This was operationalized as a 1/0 binary variable according to whether or not a firm possessed a U.S. listing or cross-

listing at any point during a particular financial year, (i.e., was a U.S.-headquartered firm or was a non-U.S. firm with an American Depository Receipt (ADR) listing).

Calendar year. We also included calendar year dummy variables in each of our models to control for year-specific sources of heterogeneity.

Analyses

A multilevel, mixed effects, logistic regression model was used to estimate the likelihood of CEO dismissal. Our final dataset was structured at three levels. Firm-level observations (level 1) were nested within industries, (level 2), which were nested within countries (level 3). Alternative methods of combining variables at different levels into single models are at risk of producing biased and inefficient parameter estimates because observations at the same level are not random (Moulton, 1990). To address this issue, we used a multilevel model with a binary response variable (via the "xtmelogit" command in Stata (Rabe-Hesketh and Skrondal, 2008)). Mixed effects models contain both fixed effects and random effects. The fixed effects are specified as regression parameters similar to standard regression coefficients. The random-effects portion of the model is specified according to the grouping structure of the data, and generates random-effect parameters. Specifically, in our study, we used the Stata code "xtmelogit… || country: industry" to fit a mixed-effects model with a random intercept and a random slope for the industry grouping structure[7]. For comparative purposes, in a supplementary analysis we also ran fixed-effects logit models, which have been widely used in prior studies of CEO dismissal relying on panel datasets (DeFond and Hung, 2004; Lel and Miller, 2008). See "Supplementary Analyses" for details.

Our Results Tables (see below) report unadjusted logistic regression coefficients. However, because logit models are intrinsically nonlinear, the direct relationship between an independent and a dependent variable cannot be determined solely by the model coefficient (Hoetker, 2007; Wiersema and Bowen, 2009). Therefore, for each model, we also calculated the marginal effect of each variable, which is the effect of a unit change in the IV on the change in probability of CEO dismissal. Marginal effects were calculated using the sample mean of all model variables. The marginal effects for interaction terms are equivalent to the mean "true interaction effect" (Ai and Norton, 2003). We report marginal effects in the text.

Belsley-Kuh-Welsch diagnostics (Belsley et al., 1980; via the "coldiag" module in Stata 12) indicated that our models were not significantly affected by multicollinearity, with all condition statistics being below 30. Because the highest pairwise correlations in our panel were between managerial discretion and the two firm performance meaningfulness variables (earnings management and stock price informativeness), as an added precaution we also ran additional analyses of H1 omitting earnings management and stock price informativeness, and analyses of H3a and H3b omitting managerial discretion. Results were unchanged.

RESULTS

Table 3 reports descriptive statistics and correlations for all variables used in this study, and Tables 4a and 4b report results for the tests of our Hypotheses. Table 4a reports analyses using excess returns, while Table 4b reports analyses using EBITTA. Models 1 and 1' of Tables 4a and 4b include all control variables and firm performance at Year -1. Models 2 to 6 add the

interaction terms between firm performance and the relevant moderating variables used to test Hypotheses 1 to 4. As reported in Note 2 in Table 4, the founder CEO variable was automatically dropped from all analyses as it perfectly predicted dismissal (i.e., none of the founder CEOs in our sample were dismissed).

Tables 3, 4a, and 4b about here

Before moving to our hypothesis tests, we first note the main effect of firm performance on CEO dismissal across our entire sample. Models 1 and 1' in Tables 4a and 4b show that excess returns (β = -1.00, marginal effect = -0.19; $p<0.001$) and EBITTA (β = -10.58, marginal effect = -0.26; $p<0.001$) were both negative and significant predictors of CEO dismissal. To explore this finding in more detail, we ran separate analyses for the individual countries in our sample. Figure 1 provides an illustration of performance-dismissal sensitivity for the six countries – Canada, France, Germany, Japan, U.K., and U.S. – that contribute more than 50 firms to our sample. The x-axis is firm performance; we define "good (poor) performance" as excess returns of one standard deviation above (below) the mean. The y-axis is a CEO's probability of being dismissed, divided by the probability of being dismissed following good performance. The U.S. sub-sample shows the steepest slope, or the greatest performance-dismissal sensitivity, followed by Canada, U.K. Germany, France and Japan. Figure 1 clearly indicates that CEO accountability does vary across countries. We now consider our six specific hypotheses, which attempt to provide an explanation for why this occurs.

Figure 1 about here

First, did the performance-dismissal relationship differ as a function of national-level managerial discretion, as argued in Hypothesis 1? Models 2 and 2' in Table 4 indicate that it did. The interaction between excess returns and managerial discretion was negative and significant (β = -0.65, marginal effect = -0.15; $p<0.001$), as was the EBITTA-discretion interaction (β = -2.51, marginal effect = -0.09; $p<0.01$). Thus, we found support for H1 for both firm performance measures.

Recall that Hypotheses 2a and 2b predicted that the effect of firm performance on CEO dismissal would be significantly weaker (less negative) in those countries where, respectively, ownership dispersion was high and CEO duality was prevalent. Models 3 and 3' report the firm performance-ownership dispersion interactions, while Models 4 and 4' report the firm performance-CEO duality interactions. None of these interaction terms were significant; thus, we did not find support for Hypotheses 2a or 2b.

Hypotheses 3a and 3b addressed firm performance meaningfulness. Excess returns is a stock-based performance measure and so its validity is more likely to be influenced by stock price informativeness. By contrast, EBITTA is an accounting-based performance measure and so its validity is more likely to be influenced by earnings management. Thus, in Model 5 in Table 4a we report the interaction of excess returns and stock price informativeness, whereas in Model 5' in Table 4b we report the interaction of EBITTA and earnings management. Consistent with H3a, Model 5 shows that the interaction between excess returns and stock price informativeness was negatively significant (β = -0.20, marginal effect = -0.09, $p<0.001$). Thus, H3a was

supported. Similarly, Model 5' shows that the interaction between EBITTA and earnings management was positive and significant ($\beta = 0.50$, marginal effect = 0.11; $p<0.05$), supporting Hypothesis 3b.

Finally, Hypothesis 4 predicted that the performance-dismissal relationship would be more negative in those countries where the CEO labor market is more developed (i.e., the interaction would be negative). Models 6 and 6' show that the interactions between firm performance and CEO labor market development were indeed negatively significant for both excess returns ($\beta = -0.57$, marginal effect= -0.06, $p<0.01$) and EBITTA ($\beta = -2.67$, marginal effect = -0.13, $p<0.05$). Thus, H4 was supported.

In addition to testing each hypothesis individually, we also ran combined models with all predictors included. The results of the combined Models were generally consistent with our other results. When using excess returns, we found that the performance-managerial discretion interaction was negative and significant ($\beta = -0.64$, marginal effect = -0.09, $p<0.05$), the performance-stock price informativeness interaction was negative and significant ($\beta = -0.16$, marginal effect = -0.06, $p<0.05$), and the performance-CEO labor market interaction was negative and marginally significant ($\beta = -0.34$, marginal effect = -0.04, $p<0.1$). When using EBITTA, we found that the performance-managerial discretion interaction was again negative and significant ($\beta = -1.86$, marginal effect = -0.07, $p<0.05$) and the performance-earnings management interaction was positive and significant ($\beta = 0.46$, marginal effect = 0.09, $p<0.05$). However, the performance-CEO labor market interaction became non-significant.

Supplementary Analyses

In order to determine the robustness of our results, we conducted several additional analyses. We first re-ran all analyses using an alternative market performance measure (market-to-book ratio) and an alternative operating performance measure (return on invested capital). Our results were robust to both of these substitutions. Second, our results were also unchanged when we substituted firm performance in Year -1 for firm performance *change* in Year -1 (i.e., performance in Year -1 minus performance in Year -2). Third, instead of using performance in Year -1 to predict CEO dismissal in Year 0, we re-ran our analyses using the average performance in Year -2 and Year -1 to predict dismissal in Year 0. Results for the moderating effects of managerial discretion (H1), ownership dispersion (H2a), stock price informativeness (H3a), earnings management (H3b), and CEO labor market development (H4) were robust to this change. However, we found that the interaction between performance and CEO duality (H2b) became negatively significant, which was contrary to our arguments in H2b. We consider a possible explanation for this finding in the Discussion below.

Next, we re-ran all analyses using fixed effects logistic regression (using the Stata "xtlogit, fe" command). In fixed-effects models, firms which do not show any variance in the dependent variable over the observation period are automatically dropped, as are time-invariant independent variables (e.g., law enforcement institutions). Thus our total firm-year observations dropped from 6654 to 1956. Our fixed-effects analyses showed similar results. For instance, in our models using excess returns, the interaction coefficients for managerial discretion ($\beta = -0.48$, $p < 0.01$), stock price informativeness ($\beta = -0.13$, $p < 0.01$), earnings management ($\beta = 0.05$, $p <$

0.01), and CEO labor market development ($\beta = -0.39$, $p < 0.05$) showed similar predictive power to those in our multi-level models. Again, we did not find significant support for H2a or H2b.

Finally, although the focus of this study is CEO dismissal, for comparative purposes we completed a supplementary analysis of the performance-voluntary departure relationship. Our results showed that firm performance was not a significant predictor of CEO voluntary departure for either excess returns or EBITTA. This finding reinforces the importance of separately coding for dismissal and voluntary departure in studies of CEO turnover (Pitcher et al., 2000).

In summary, our results provided strong support for Hypotheses 1, 3a, 3b, and 4. We did not find support for H2a or H2b.

DISCUSSION

This study investigated the impact of national context on the extent to which CEOs are held accountable for poor firm performance through dismissal. We hypothesized and found robust support for the idea that performance-dismissal sensitivity would be greater in countries where managerial discretion was high, where firm performance measures were informative, and where there was a well-developed CEO labor market. Our results were consistent for both accounting-based and market-based measures of performance.

However, we did not find support for our prediction that CEO accountability for poor performance would be lower in countries where ownership and governance structures result in CEOs having relatively greater power vis-à-vis boards and shareholders. In

fact, in one of our robustness tests, we instead found an opposite effect, with the interaction of firm performance and CEO duality having a negatively significant impact on CEO dismissal (signaling *increased* accountability). One possible explanation for this result can be found by considering in more detail the distinct mechanisms underlying Hypotheses 1 and 2a/2b.

Prior work on the topic of managerial discretion (Finkelstein and Peteraf, 2007; Hambrick and Finkelstein, 1987; Li and Tang, 2010) has identified a range of different antecedents, which can be categorized into two broad types. Some sources of discretion – such as demand volatility (Finkelstein and Boyd, 1998) or an individualistic national culture (Crossland and Hambrick, 2011) – might best be termed "non-power-enhancing" sources. These phenomena will increase the number and type of strategic actions available to executives, but should have little or no direct effect on CEO-board or CEO-shareholder power dynamics (Finkelstein, 1992).

In contrast, other sources of discretion – such as ownership dispersion or CEO duality (Li and Tang, 2010) – are "power-enhancing," in that they are also likely to increase a CEO's influence in comparison to other firm stakeholders. Because these governance and ownership arrangements tend to increase a CEO's power, one prediction (similar to our H2a and H2b) is that this should limit the ability of a board to hold a CEO accountable. However, at the same time, these factors are also associated with greater levels of discretion, and, therefore, greater stakeholder expectations that a CEO is personally responsible for firm performance outcomes (our H1). Our results suggest

that, at the national level at least, the incremental impact of duality and a dispersed ownership structure in terms of promoting entrenchment appear to be counter-balanced by the increased responsibility for firm performance that comes with such a high-discretion context. Perhaps the distinct power-enhancing and discretion-enhancing mechanisms associated with these ownership and governance arrangements counteract each other when it comes to CEOs being held accountable, leading to (in general) a non-significant impact on performance-dismissal sensitivity.

Implications and Future Research

The results of our study have several implications for future work in the area of executive succession. First, our results offer insights into an interesting, but rarely-examined aspect of executive succession. Although the firm-level antecedents and consequences of executive dismissal have been widely studied, we know almost nothing about the consequences for executives themselves of having been fired (Cannella et al., 1995). Clearly, being ousted from a large, visible organization is a stigmatizing event (Wiesenfeld et al., 2008). Thus, one might assume that a dismissed executive would be at a substantial disadvantage if attempting to re-ascend to a comparable position in another organization. But, we in fact see considerable variability in the extent to which dismissed executives are subsequently able to achieve similar positions in the future (e.g., Kollewe, 2007; Ovide, 2011). If, as we find in our study, executives are held accountable more for poor firm performance in certain contexts, dismissal is likely to be a more stigmatizing event in those contexts. Accordingly, the number and type of future opportunities available to a dismissed CEO may differ systematically depending on the characteristics of the environment in which he or she was fired.

Second, our results also shed light on the two main streams of theory used to explain performance-dismissal sensitivity. Arguments rooted in agency theory (e.g., Huson et al., 2001) suggest that executives will be disciplined for poor performance via reductions in compensation and dismissal. In high-discretion environments, CEOs have a greater impact on firm actions and performance. They should therefore have a higher rate of dismissal following poor performance than CEOs in low-discretion environments, who are less responsible for firm outcomes. This explanation is largely reflected in our results. However, arguments rooted in symbolism and scapegoating theory (e.g., Boeker, 1992) suggest that, irrespective of their control over firm outcomes, CEOs will be held accountable for poor firm performance. Therefore, poor performance should predict dismissal, but the probability of dismissal should not differ substantially across high-discretion and low-discretion contexts. This explanation does not appear to be supported by our results.

One interesting possible explanation is that the actual process of scapegoating may differ across countries. Indeed, some research suggests that the fundamental attribution error – the tendency to over-attribute outcomes in general to individuals and under-attribute outcomes to external factors (Tetlock, 1985) – may not be so fundamental after all. Evidence indicates that there is significant cross-national variance in the degree to which the fundamental attribution error operates (Harvey et al., 1981; Krull et al., 1999). Individual-agency cultures (e.g., U.S.) are more likely to attribute negative organizational events to an individual, while collective-agency cultures (e.g., Japan) are more likely to attribute negative organizational events to a group or

collective (Zemba et al., 2006). Therefore, perhaps individual scapegoating is less prevalent in societies where there is a stronger belief in the causal role of external (non-individual) factors.

Limitations

Two important limitations of our study should be noted. First, this study, similar to almost all the prior literature discussed in this paper, focused on firm financial performance (implicitly, shareholder performance goals) and did not examine any non-financial stakeholder performance goals, such as employment levels, employee satisfaction, or corporate social responsibility. It is therefore possible that part of the reason we see cross-national variability in the performance-dismissal relationship is that some national environments, manifested in the decisions of public firm boards of directors, privilege shareholder-oriented performance more than others. We address this possibility by explicitly measuring the extent to which financial performance measures are more or less meaningful across countries, and by using a sample of very large public firms, which are subject to at least a reasonable degree of market pressure in all societies. Nevertheless, this alternative explanation might be fruitfully explored further in future studies.

Second, due to the multi-year, cross-national nature of our sample, as well as the large number of firm-years considered, it was not possible to gather comprehensive and comparable data on CEO human capital or social capital variables (e.g., Hitt et al., 2001; Pennings et al., 1998). Although we were able to collect data on, and thus control for, CEO age and tenure, we were not able to gather data on potentially important variables such as industry experience, education, and board of director ties, each of which may have implications for the phenomena discussed in this study.

An interesting extension of our work would be to explore the differential impact of such human capital and social capital factors.

CONCLUSION

Researchers have long been interested in the antecedents and consequences of executive succession. Our study extends prior research in this domain by providing a nuanced explanation for why CEOs seem to be held accountable for firm performance outcomes much more in some countries than others. In doing so, we offer a deeper understanding of both the substantive and the symbolic sources of performance-related CEO dismissal.

ENDNOTES

1. Several alternative theoretical perspectives have also been discussed in this literature, including ritual scapegoating (e.g., Boeker, 1992; Pfeffer, 1981), organizational adaptation (Virany et al., 1992), social psychological processes (Zajac and Westphal, 1996), and power circulation (Ocasio, 1994). Although we do not address these perspectives in detail in our study, each alternative perspective also predicts a negative performance-dismissal relationship, and some of them (e.g., ritual scapegoating, power circulation) also address the assumption that boards and shareholders are able to hold poorly-performing CEOs accountable.

2. We note that Crossland and Hambrick's (2011) sample, upon which our sample is based, actually included 15 countries: the 14 countries in our sample and South Korea. We attempted to include South Korean firms in our analyses, but were unable to do so as we could not gather sufficient data to allow us to reliably distinguish between dismissals and voluntary departures.

3. The statutory pensionable age for each country in our investigation period was 65, except for France (60) and Singapore (55).

4. Total shareholder returns was calculated as share price at the end of the year, plus dividends, minus share price at the beginning of the year (adjusted for any share splits), all divided by share price at the beginning of the year.

5. Specific country-level discretion scores were as follows: Australia (5.7), Austria (3.8), Canada (5.9), France (4.0), Germany (4.1), Italy (3.2), Japan (3.00), Netherlands (5.2), Singapore (4.8), Spain (4.6), Sweden (5.1), Switzerland (5.0), U.K. (6.0), and U.S. (6.6).

6. Approximately 25.3% of our sample (1685 of 6654 firm-year observations) did not report foreign sales. We replaced these missing values with zero in our empirical analyses. Our results

were consistent when we restricted our analyses to the sub-sample of firms that reported foreign sales (N = 4969).

7. Because hierarchical multi-level analyses allow us to directly model industry-level variance, we do not include binary control variables for industry in our models.

REFERENCES

Abraham, K.G. (1988) 'Flexible staffing arrangements and employers' short-term adjustment strategies', in R.A. Hart (ed) *Employment, Unemployment and Labor Utilization*, pp288-311. Boston: Unwin Hyman.

Agrawal, A. and Knoeber, C.R. (1996) 'Firm performance and mechanisms to control agency problems between managers and shareholders', *Journal of Financial and Quantitative Analysis* 31: 377-397.

Aguilera, R.V. and Jackson, G. (2003) 'The cross-national diversity of corporate governance: Dimensions and determinants', *Academy of Management Review* 28: 447-465.

Ai, C. and Norton, E.D. (2003) 'Interaction terms in logit and probit models', *Economics Letters* 80: 123-129.

Allen, M.P. and Panian, S.K. (1982) 'Power, performance, and succession in the large corporation', *Administrative Science Quarterly* 27: 538-547.

Anderson, C.W. and Campbell, T.L. (2004) 'Corporate governance of Japanese banks', *Journal of Corporate Finance* 10: 327-354.

Augstums, I.M. (2008) 'Wachovia board forces out CEO Ken Thompson', *USA Today*, June 2.

Ball, R., Robin, A. and Wu, J.S. (2003) 'Incentives versus standards: Properties of accounting income in four East Asian countries', *Journal of Accounting and Economics* 36: 235-270.

Belsley, D.A., Kuh, E. and Welsch, R.E. (1980) *Regression Diagnostics: Identifying Influential Data and Sources of Collinearity*. New York: John Wiley.

Beneish, M.D. (1997) 'Detecting GAAP violation: Implications for assessing earnings management among firms with extreme financial performance', *Journal of Accounting and Public Policy* 16: 271-309.

Boeker, W. (1992) 'Power and managerial dismissal: Scapegoating at the top', *Administrative Science Quarterly* 37: 400-421.

Boyd, B.K. (1995) 'CEO duality and firm performance: A contingency model', *Strategic Management Journal* 16: 301-312.

Brickley, J.A. (2003) 'Empirical research on CEO turnover and firm-performance: A discussion', *Journal of Accounting and Economics* 36: 227-233.

Brickley, J.A. and Van Horn, R.L. (2002) 'Managerial incentives in nonprofit organizations: Evidence from hospitals', *Journal of Law and Economics* 45: 227-249.

Brown, L.D. and Higgins, H. (2001) 'Managing earnings surprises in the US versus 12 other countries', *Journal of Accounting and Public Policy* 20: 373-398.

Brown, M.C. (1982) 'Administrative succession and organizational performance: The succession effect', *Administrative Science Quarterly* 27: 1-16.

Budhwar, P.S. and Sparrow, P.R. (2002) 'An integrative framework for understanding cross-national human resource management practices', *Human Resource Management Review* 12: 377-403.

Cannella, A.A., Fraser, D.R. and Lee, D.S. (1995) 'Firm failure and managerial labor markets evidence from Texas banking', *Journal of Financial Economics* 38: 185-210.

Chan, C.M., Isobe, T. and Makino, S. (2008) 'Which country matters? Institutional development and foreign affiliate performance', *Strategic Management Journal* 29: 1179-1205.

Cho, T.S. and Hambrick, D.C. (2006) 'Attention as the mediator between top management team characteristics and strategic change: The case of airline deregulation', *Organization Science* 17: 453-469.

Christensen, C.R. (1953) *Management Succession in Small and Growing Enterprises*. Boston, MA: Harvard Business School Press.

Core, J.E., Holthausen, R.W. and Larcker, D.F. (1999) 'Corporate governance, chief executive officer compensation, and firm performance', *Journal of Financial Economics* 51: 371-406.

Coughlan, A.T. and Schmidt, R.M. (1985) 'Executive compensation, management turnover, and firm performance: An empirical investigation', *Journal of Accounting and Economics* 7: 43-66.

Crossland, C. (2009) 'Why do CEOs matter more in some countries than others? Managerial discretion at the national level', *Academy of Management Annual Meeting Proceedings*. Chicago, IL.

Crossland, C. and Hambrick, D.C. (2007) 'How national systems differ in their constraints on corporate executives: A study of CEO effects in three countries', *Strategic Management Journal* 28: 767-789.

Crossland, C. and Hambrick, D.C. (2011). 'Differences in managerial discretion across countries: How nation-level institutions affect the degree to which CEOs matter', *Strategic Management Journal* 32: 797-819.

Dahya, J., McConnell, J.J. and Travlos, N.G. (2002) 'The Cadbury Committee, corporate performance, and top management turnover', *Journal of Finance* 57: 461-483.

Dalton, D.R., Daily, C.M., Ellstrand, A.E. and Johnson, J.L. (1998) Meta-analytic reviews of board composition, leadership structure, and financial performance', *Strategic Management Journal* 19: 269-290.

Daniels, J.D. and Bracker, J. (1989) 'Profit performance: Do foreign operations make a difference?', *Management International Review* 29: 46-56.

Dechow, P.M., Sloan, R.G. and Sweeney, A.P. (1995) 'Detecting earnings management', *Accounting Review* 70: 193-225.

DeFond, M.L. and Hung, M. (2004) 'Investor protection and corporate governance: Evidence from worldwide CEO turnover', *Journal of Accounting Research* 42: 269-312.

DeFond, M.L. and Park, C.W. (1999) 'The effect of competition on CEO turnover', *Journal of Accounting and Economics* 27: 35-56.

Denis, D.J. and Denis, D.K. (1997) 'Performance changes following top management dismissals', *Journal of Finance* 50: 1029-1057.

Denis, D.J., Denis, D.K. and Sarin, A. (1997) 'Agency problems, equity ownership, and corporate diversification', *Journal of Finance* 52: 135-160.

DiNardo, J., Fortin, N. and Lemieux, T. (1996) 'Labor market institutions and the distribution of wages, 1973-1992: A semiparametric approach', *Econometrica* 64: 1001-1044.

Eisenhardt, K.M. (1989) 'Agency theory: An assessment', *Academy of Management Review* 14: 57-74.

Estevez-Abe, M., Iversen, T. and Soskice, D. (2001) 'Social protection and the formation of skills: A reinterpretation of the welfare state', in P.A. Hall and D. Soskice (eds) *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage,* pp145-183. New York: Oxford University Press.

Fahlenbrach, R. (2009) 'Shareholder rights, boards, and CEO compensation', *Review of Finance* 13: 81-113.

Fama, E.F. (1980) 'Agency problems and the theory of the firm', *Journal of Political Economy* 88: 288-307.

Farrell, G. (2007) 'Under fire, Merrill Lynch CEO O'Neal retires', *USA Today*, October 30.

Fee, C.E., Hadlock, C.J. and Pierce, J.R. (2005) 'Business school rankings and business school deans: A study of nonprofit governance', *Financial Management* 34: 143-166.

Finkelstein, S. (1992) 'Power in top management teams: Dimensions, measurement, and validation', *Academy of Management Journal* 35: 505-538.

Finkelstein, S. and Boyd, B.K. (1998) 'How much does the CEO matter? The role of managerial discretion in the setting of CEO compensation', *Academy of Management Journal* 41: 179-199.

Finkelstein, S. and Peteraf, M.A. (2007) 'Managerial activities: A missing link in managerial discretion theory', *Strategic Organization* 5: 237-248.

Firth, M., Fung, P.M.Y. and Rui, O.M. (2006) 'Firm performance, governance structure, and top management turnover in a transitional economy', *Journal of Management Studies* 43: 1289-1330.

Fredrickson, J.W., Hambrick, D.C. and Baumrin, S. (1988) 'A model of CEO dismissal', *Academy of Management Review* 13: 255-270.

Gamson, W.A. and Scotch, N.A. (1964) 'Scapegoating in baseball', *American Journal of Sociology* 70: 69-72.

Gedajlovic, E.R. and Shapiro, D.M. (1998) 'Management and ownership effects: Evidence from five countries', *Strategic Management Journal* 19: 533-553.

Gelfand, M.J., Nishii, L.H. and Raver, J.L. (2006) 'On the nature and importance of cultural tightness-looseness', *Journal of Applied Psychology* 91: 1225-1244.

Gibson, M.S. (2003) 'Is corporate governance ineffective in emerging markets?', *Journal of Financial and Quantitative Analysis* 38: 231-250.

Goyal, V.K. and Park, C.W. (2002) 'Board leadership structure and CEO turnover', *Journal of Corporate Finance* 8: 49-66.

Greve, P.M. (2009) 'International mobility in executive labor markets', Ph.D. Dissertation, University of St. Gallen.

Grusky, O. (1961) 'Corporate size, bureaucratization, and managerial succession', *American Journal of Sociology* 67: 261-269.

Grusky, O. (1963) 'Managerial succession and organizational effectiveness', *American Journal of Sociology* 69: 21-31.

Guest, R.H. (1962) 'Managerial succession in complex organizations', *American Journal of Sociology* 68: 47-56.

Haleblian, J. and Rajagopalan, N. (2006) 'A cognitive model of CEO dismissal: Understanding the influence of board perceptions, attributions, and efficacy beliefs', *Journal of Management Studies* 43: 1009-1026.

Hall, P.A. and Soskice, D. (eds) (2001) *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. New York: Oxford University Press.

Hambrick, D.C. and Abrahamson, E. (1995) 'Assessing managerial discretion across industries: A multimethod approach', *Academy of Management Journal* 38: 1427-1441.

Hambrick, D.C. and Finkelstein, S. (1987) 'Managerial discretion: A bridge between polar views of organizational outcomes', in B. Staw and L.L. Cummings (eds) *Research in Organizational Behavior (vol. 9),* pp 369-406. Greenwich, CT: JAI Press.

Hambrick, D.C. and Finkelstein, S. (1995) 'The effects of ownership structure on conditions at the top: The case of CEO pay raises', *Strategic Management Journal* 16: 175-193.

Harvey, J.H., Town, J.P. and Yarkin, K.L. (1981) 'How fundamental is the fundamental attribution error?', *Journal of Personality and Social Psychology* 40: 346-349.

Healy, P.M. and Wahlen, J.M. (1999) 'A review of the earnings management literature and its implications for standard setting', *Accounting Horizons* 13: 365-383.

Hitt, M.A., Bierman, L., Shimizu, K. and Kochhar, R. (2001) 'Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective', *Academy of Management Journal* 44: 13-28.

Hoetker, G. (2007) 'The use of logit and probit models in strategic management research: Critical issues', *Strategic Management Journal* 28: 331-343.

Hofstede, G. (2001) *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations across Nations (2nd ed)*. Thousand Oaks, CA: Sage.

Houseman, S.N., Kalleberg, A.L. and Erickcek, G.A. (2003) 'The role of temporary agency employment in tight labor markets', *Industrial and Labor Relations Review* 57: 105-127.

Huson, M.H., Parrino, R. and Starks, L.T. (2001) 'Internal monitoring mechanisms and CEO turnover: A long-term perspective', *Journal of Finance* 56: 2265-2297.

Iyengar, R.J. and Zampelli, E.M. (2009) 'Self-selection, endogeneity, and the relationship between CEO duality and firm performance', *Strategic Management Journal* 30: 1092-1112.

Jackson, G. and Deeg, R. (2008) 'Comparing capitalisms: Understanding institutional diversity and its implications for international business', *Journal of International Business* 39: 540-561.

James, D.R. and Soref, M. (1981) 'Profit constraints on managerial autonomy: Managerial theory and the unmaking of the corporation president', *American Sociological Review* 46: 1-18.

Jensen, M.C. and Meckling, W.H. (1976) 'Theory of the firm: Managerial behavior, agency costs, and ownership structure', *Journal of Financial Economics* 3: 305-360.

Jolly, D. (2009) 'Sony expects to report $3 billion annual loss', *New York Times*, January 23.

Juhn, C., Murphy, K.M. and Pierce, B. (1993) 'Wage inequality and the rise in returns to skill', *Journal of Political Economy* 101: 410-442.

Kang, J.-K. and Shivdasani, A. (1995), 'Firm performance, corporate governance, and top executive turnover in Japan', *Journal of Financial Economics* 38: 29-58.

Kaplan, S.N. (1994) 'Top executive rewards and firm performance: A comparison of Japan and the United States', *Journal of Political Economy* 102: 510-546.

Karlsson, P.-O., Neilson, G.L. and Webster, J.C. (2008) 'CEO succession 2007: The performance paradox' *strategy+business*, June 10.

Kesner, I.F. and Sebora, T.C. (1994) 'Executive succession: Past, present, and future', *Journal of Management* 20: 327-372.

Khanna, T. and Rivkin, J.W. (2001) 'Estimating the performance effects of business groups in emerging markets', *Strategic Management Journal* 22: 45-74.

Khurana, R. (2002) *Searching for a Corporate Savior: The Irrational Quest for Charismatic CEOs*. Princeton, N.J.: Princeton University Press.

Kollewe, J. (2007) 'Bob Nardelli gets top Chrysler job', *The Guardian*, August 6.

Krull, D., Loy, M., Lin, J., Wang, C.-F., Chen, S. and Zhao, X. (1999) 'The fundamental fundamental attribution error: Correspondence bias in individualist and collectivist cultures', *Personality and Social Psychology Bulletin* 25: 1208-1219.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. (1998). 'Law and finance', *Journal of Political Economy* 106: 1113-1155.

Lau, J., Sinnadurai, P. and Wright, S. (2009) 'Corporate governance and chief executive officer dismissal following poor performance: Australian evidence', *Accounting and Finance* 49: 161-182.

Lauria, P. (2011) 'CEO of Yahoo: A jinxed post that no one wants to hold', *The Sunday Guardian,* Sep 11.

Lel, U. and Miller, D.P. (2008) 'International cross-listing, firm performance, and top management turnover: A test of the bonding hypothesis', *Journal of Finance* 63: 1897-1937.

Li, J. and Tang, Y. (2010) 'CEO hubris and firm risk taking in China: The moderating role of managerial discretion', *Academy of Management Journal* 53: 45-68.

Leuz, C., Nanda, D. and Wysocki, P.D. (2003) 'Earnings management and investor protection: An international company', *Journal of Financial Economics* 69: 505-527.

Lemer, J. (2010) 'Hayward moves into Obama line of fire', *Financial Times,* June 7.

Lerner, J.S. and Tetlock, P.E. (1999) 'Accounting for the effects of accountability', Psychological Bulletin 125: 255-275.

Mackey, A. (2008) 'The effect of CEOs on firm performance', *Strategic Management Journal* 29: 1357-1367.

Makino, S., Isobe, T. and Chan, C.M. (2004) 'Does country matter?', *Strategic Management Journal* 25: 1027-1043.

Mantzavinos, C. (2001) *Individuals, Institutions, and Markets*. New York: Cambridge University Press.

Martin, K.J. and McConnell, J.J. (1991) 'Corporate performance, corporate takeovers, and management turnover', *Journal of Finance* 46: 671-687.

Maury, B. (2006) 'Corporate performance, corporate governance, and top executive turnover in Finland', *European Financial Management* 12: 221-248.

McEachern, W.A. (1975) *Managerial Control and Performance*. Lexington, MA: D.C. Heath.

Meindl, J.R., Ehrlich, S.B. and Dukerich, J.M. (1985) 'The romance of leadership', *Administrative Science Quarterly* 30: 78-102.

Moulton, B.R. (1990) 'An illustration of a pitfall in estimating the effects of aggregate variables on micro units', *Review of Economics and Statistics* 72: 334-338.

Morck, R.K., Yeung, B. and Yu, W. (2000) 'The information content of stock markets: Why do emerging markets have synchronous stock price movements?', *Journal of Financial Economics* 58: 215-260.

North, D.C. (1990) *Institutions, Institutional Change and Economic Performance*. New York: Cambridge University Press.

Ocasio, W. (1994) 'Political dynamics and the circulation of power: CEO succession in U.S. industrial corporations, 1960-1990', *Administrative Science Quarterly* 39: 285-312.

Ovide, S. (2011) 'Carly Fiorina defends her Hewlett-Packard tenure', *Wall Street Journal*, August 22

Pedersen, T. and Thomsen, S. (1997) 'European patterns of corporate ownership: A twelve-country study', *Journal of International Business Studies* 28: 759-778.

Peng, M.W. (2002) 'Towards an institution-based view of business strategy', *Asia-Pacific Journal of Management* 19: 251-267.

Pennings, J.M., Lee, K. and van Witteloostuijn, A. (1998) 'Human capital, social capital, and firm dissolution', *Academy of Management Journal* 41: 425-440.

Pfeffer J. (1981) 'Management as symbolic action: The creation and maintenance of organizational paradigms', in L.L. Cummings and B.M. Staw (eds) *Research in Organizational Behavior (vol. 3)*, pp1-52. Greenwich, CT: JAI Press.

Puffer, S.M. and Weintrop, J.B. (1991) 'Corporate performance and CEO turnover: The role of performance expectations', *Administrative Science Quarterly* 36: 1-19.

Qi, Y., Roth, L. and Wald, J.K. (2011) 'How legal environments affect the use of bond covenants', *Journal of International Business Studies* 42: 235-262.

Rabe-Hesketh, S. and Skrondal, A. (2008) 'Generalized linear mixed effects models', in G. Fitzmaurice, M. Davidian, G. Verbeke and G. Molenberghs (eds) *Longitudinal Data Analysis: A Handbook of Modern Statistical Methods*, pp79-106. Boca Raton, FL: Chapman & Hall/CRC.

Randoy, T. and Nielsen, J. (2002) 'Company performance, corporate governance, and CEO compensation in Norway and Sweden', *Journal of Management and Governance* 6: 57-81.

Roe, M. (1993) 'Some differences in corporate structure in Germany, Japan, and the United States', *Yale Law Journal* 102: 1927-1993.

Roll, R. (1988) 'R^2', *Journal of Finance* 43: 541-566.

Schipper, K. (1989) 'Commentary on earnings management', *Accounting Horizons* 3: 91-102.

Shen, W. and Cannella, A.A. (2003) 'Will succession planning increase shareholder wealth? Evidence from investor reactions to relay CEO successions', *Strategic Management Journal* 24: 191-198.

Shen, W. and Cho, T.S. (2005) 'Exploring involuntary executive turnover through a managerial discretion framework', *Academy of Management Review* 30: 843-854.

Social Security Administration (2008) *Social Security Programs throughout the World: The Americas 2007, Europe 2008, Asia and the Pacific 2008*. Washington, DC: U.S. Social Security Administration.

Spear, S.E. and Wang, C. (2005) 'When to fire a CEO: Optimal termination in dynamic contracts', *Journal of Economic Theory* 120: 239-256.

Sullivan, D. (1994) 'Measuring the degree of internationalization of a firm', *Journal of International Business Studies* 25: 325-342.

Tetlock, P.E. (1985) 'Accountability: A social check on the fundamental attribution error', *Social Psychology Quarterly* 48: 227-236.

Virany, B., Tushman, M.L. and Romanelli, E. (1992) 'Executive succession and organization outcomes in turbulent environments: An organization learning approach', *Organization Science* 3: 72-91.

Volpin, P.F. (2002) 'Governance with poor investor protection: Evidence from top executive turnover in Italy', *Journal of Financial Economics* 64: 61-90.

Wade, J.B., Porac, J.F., Pollock, T.P. and Graffin, S.D. (2006) 'The burden of celebrity: The impact of CEO certification contests on CEO pay and performance', *Academy of Management Journal* 49: 643-660.

Wagner, W.G., Pfeffer, J. and O'Reilly, C.A. (1984) 'Organizational demography and turnover in top management groups', *Administrative Science Quarterly* 29: 74-92.

Warner, J.B., Watts, R.L. and Wruck, K.H. (1988) 'Stock prices and top management changes', *Journal of Financial Economics* 20: 461-492.

Weisbach, M.S. (1988) 'Outside directors and CEO turnover', *Journal of Financial Economics* 20: 432-460.

Westphal, J.D. and Clement, M.B. (2008) 'Sociopolitical dynamics in relations between top managers and security analysts: Favor rendering, reciprocity, and analyst stock recommendations', *Academy of Management Journal* 51: 873-897.

Wiersema, M.F. and Bowen, H.P. (2009) 'The use of limited dependent variable techniques in strategy research: Issues and methods', *Strategic Management Journal* 30: 679-692.

Wiesenfeld, B.M., Wurthmann, K.A. and Hambrick, D.C. (2008) 'The stigmatization and devaluation of elites associated with corporate failure: A process model', *Academy of Management Review* 33: 231-251.

Witt, M.A. and Redding, G. (2009) 'Culture, meaning, and institutions: Executive rationale in Germany and Japan', *Journal of International Business Studies* 40: 859-885.

Zajac, E.J. and Westphal, J.D. (1996) 'Who shall succeed? How CEO/board preferences and power affect the choice of new CEOs', *Academy of Management Journal* 39: 64-90.

Zemba, Y., Young, M.J. and Morris, M.W. (2006) 'Blaming leaders for organizational accidents: Proxy-logic in collective- versus individual-agency cultures', *Organizational Behavior and Human Decision Processes* 101: 36-51.

FIGURE 1: Firm Performance–CEO Dismissal Sensitivity across Six Countries

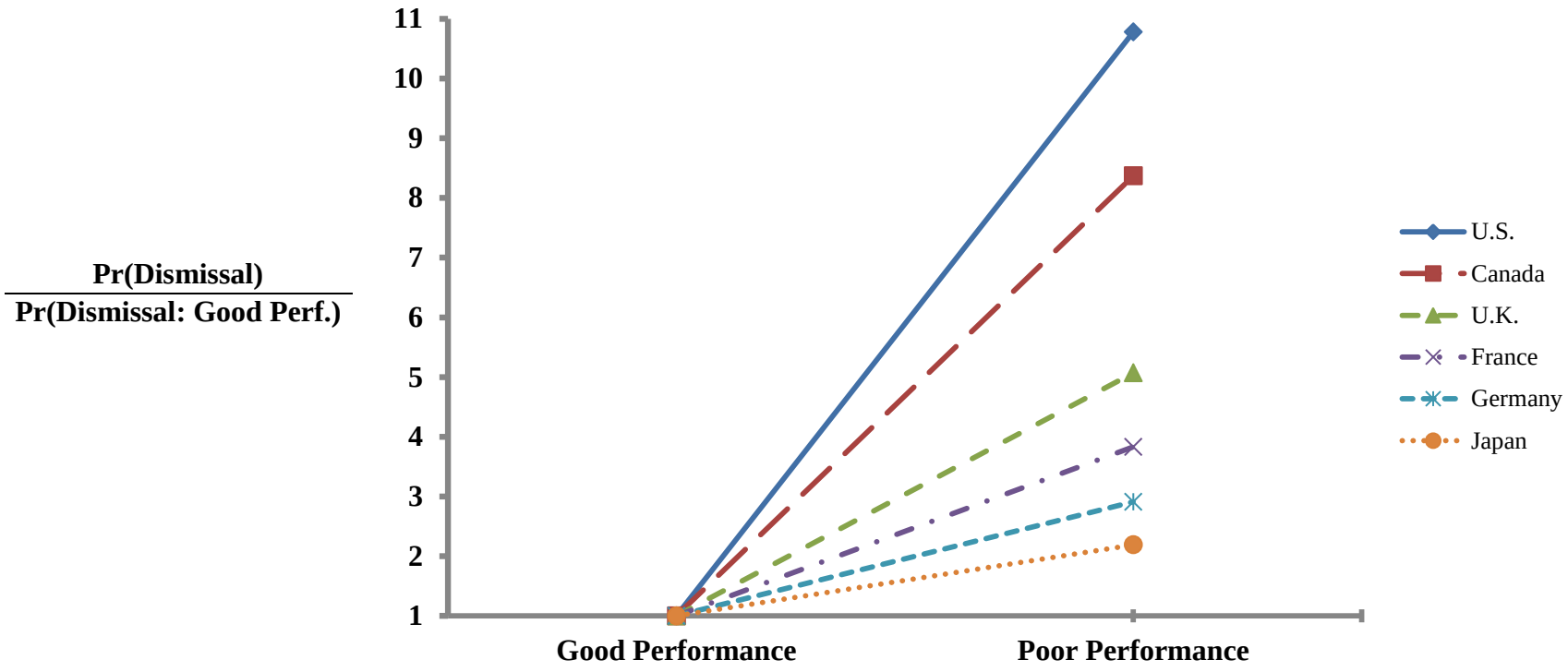

TABLE 1: Sample Firms by Country and Industry

Industry Sector	AUS	AUT	CAN	FRA	GER	ITA	JAP	NED	SIN	SPA	SWE	SWI	UK	US	Total
Aerospace & Defense	0	0	1	2	0	1	0	0	1	0	0	0	1	0	6
Banking	5	3	7	5	4	17	22	1	3	7	4	8	6	12	104
Business Services and Supplies	0	0	1	1	0	1	5	3	0	0	1	2	4	4	22
Capital Goods	0	0	0	3	4	1	8	0	1	1	6	2	1	3	30
Chemicals	1	0	3	2	3	0	5	2	0	0	0	3	2	4	25
Conglomerates	1	0	0	0	1	0	0	1	1	0	0	0	1	0	5
Construction	2	0	0	6	3	2	4	1	0	5	3	1	6	2	35
Consumer Durables	0	0	1	5	5	2	8	0	0	0	1	0	0	2	24
Diversified Financials	6	0	3	5	5	2	11	3	2	1	2	3	11	10	64
Drugs & Biotechnology	1	0	0	1	3	0	3	0	0	0	0	3	2	3	16
Food Markets	2	0	4	1	1	0	0	1	0	0	0	0	3	0	12
Food, Drink, & Tobacco	3	0	0	2	2	1	2	2	0	1	0	1	9	6	29
Health Care Equipment & Services	0	0	0	1	2	0	2	0	0	0	0	2	2	6	15
Hotels, Restaurants & Leisure	1	0	0	2	1	1	0	0	0	0	0	0	8	1	14
Household & Personal Products	0	0	0	3	4	1	3	0	0	1	0	3	1	3	19
Insurance	3	2	4	4	4	6	2	1	0	1	0	6	6	5	44
Materials	2	1	10	3	2	0	4	1	0	1	3	1	7	4	39
Media	1	0	3	3	1	1	4	2	1	0	0	0	6	2	24
Oil & Gas Operations	2	1	10	2	0	2	2	1	1	3	0	0	2	3	29
Retailing	0	0	3	1	1	0	1	0	0	0	1	0	8	5	20
Semiconductors	0	0	0	0	1	0	0	0	0	0	0	1	0	2	4
Software & Services	0	0	0	2	1	0	2	1	0	0	0	0	1	2	9
Technology Hardware & Equipment	0	0	2	3	0	0	1	0	0	0	1	0	0	1	8
Telecommunications Services	1	1	3	1	1	1	0	1	1	1	2	1	1	3	18
Trading Companies	0	0	0	1	0	0	2	1	0	0	0	0	1	0	5
Transportation	1	0	3	3	3	2	5	1	2	2	1	1	2	3	29
Utilities	1	2	2	4	4	4	4	0	0	5	0	1	9	14	50
Total	33	10	60	66	56	45	100	23	13	29	25	39	100	100	699

TABLE 2: Firm Characteristics and CEO Departures by Country

Country	Firms	Firm-years	Firm size (log) (mean)	Total Successions	Voluntary Departures	Dismissals	Prob. of succession per firm-year	Prob. of vol. departure per firm-year	Prob. of dismissal per firm-year	Dismissals/ Total successions
Australia	33	308	22.70	36	19	17	11.7%	6.2%	5.5%	47.2%
Austria	10	93	23.00	10	8	2	10.8%	8.6%	2.2%	20.0%
Canada	60	555	22.64	59	43	16	10.6%	7.7%	2.9%	27.1%
France	66	644	23.37	66	44	22	10.2%	6.8%	3.4%	33.3%
Germany	56	534	23.51	59	40	19	11.0%	7.5%	3.6%	32.2%
Italy	45	424	23.70	54	28	26	12.7%	6.6%	6.1%	48.1%
Japan	100	949	23.14	148	132	16	15.6%	13.9%	1.7%	10.8%
Netherlands	23	226	23.21	38	28	10	16.8%	12.4%	4.4%	26.3%
Singapore	13	127	22.86	17	11	6	13.4%	8.7%	4.7%	35.3%
Spain	29	278	23.11	29	16	13	10.4%	5.8%	4.7%	44.8%
Sweden	25	234	22.89	43	31	12	18.4%	13.2%	5.1%	27.9%
Switzerland	39	358	23.27	53	28	24	14.5%	7.8%	6.7%	46.2%
U.K.	100	901	22.85	126	83	43	14.0%	9.2%	4.8%	34.1%
U.S.	100	923	22.69	97	72	24	10.5%	7.8%	2.6%	24.7%
Total	699	6554	23.11	834	584	250	12.7%	8.9%	3.8%	30.0%

TABLE 3: Descriptive Statistics and Correlations

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. CEO age	56.47	7.65																
2. CEO tenure	6.58	6.17	0.31															
3. Firm size	23.11	1.53	0.08	-0.14														
4. Closely-held shares	27.29	21.41	0.08	0.05	-0.16													
5. CEO founder	0.05	0.22	0.04	0.36	-0.18	0.00												
6. Firm internationaliz.	29.43	33.06	-0.06	0.01	-0.04	0.02	-0.01											
7. Enforcement institutions	9.12	0.77	-0.09	-0.02	-0.10	-0.16	0.06	0.09										
8. US stock listing	0.42	0.25	-0.06	-0.05	0.23	-0.12	-0.04	0.28	0.02									
9. Excess returns	0.01	0.07	0.02	0.01	-0.02	0.04	0.01	-0.04	-0.04	-0.03								
10. EBITTA	0.06	0.04	-0.12	0.08	-0.45	-0.05	0.08	0.19	0.15	0.07	0.01							
11. Managerial discretion	4.81	1.26	-0.36	0.02	-0.13	-0.36	0.11	0.02	0.44	-0.03	-0.03	0.33						
12. Ownership dispersion	81.52	17.08	0.03	-0.04	0.07	-0.55	0.00	0.02	0.16	0.14	-0.03	0.03	0.18					
13. CEO duality	0.27	0.44	0.15	0.15	-0.02	-0.06	0.03	-0.09	0.00	-0.12	-0.01	-0.05	0.00	0.08				
14. Earnings management	13.39	7.96	0.28	-0.02	0.15	0.40	-0.12	0.02	-0.43	0.08	0.04	-0.28	-0.86	-0.30	-0.10			
15. Stock price inform.	-62.72	3.45	-0.23	0.11	-0.07	-0.18	0.18	0.06	0.35	-0.10	-0.05	0.20	0.62	0.07	0.18	-0.67		
16. CEO labor market	7.18	1.10	0.09	0.02	-0.10	-0.29	0.08	-0.24	0.16	-0.19	0.02	0.07	0.35	0.33	0.31	-0.56	0.36	
17. CEO dismissal	0.04	0.17	-0.08	-0.14	0.04	0.00	-0.04	0.04	-0.03	0.02	-0.03	-0.06	0.00	-0.01	-0.02	0.02	-0.02	-0.05

N=6654; All correlations of 0.04 or higher are significant at the 0.01 level. Year dummy variables omitted from Table.

TABLE 4a: Impact of Firm Performance (Excess Returns) on Probability of CEO Dismissal

	(1)	(2)	(3)	(4)	(5)	(6)
CEO age	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
CEO tenure	-0.93***	-0.94***	-0.93***	-0.93***	-0.93***	-0.94***
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Firm size	0.12*	0.12*	0.12*	0.12*	0.12*	0.12*
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Closely-held shares	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Firm internationalization	0.01**	0.01**	0.01**	0.01**	0.01**	0.01**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Enforcement institutions	-0.32**	-0.31**	-0.32**	-0.32**	-0.29**	-0.33**
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
US stock listing	-0.19	-0.17	-0.20	-0.19	-0.19	-0.19
	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)
Managerial discretion	0.40**	0.29*	0.41**	0.40**	0.39**	0.44**
	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)
Ownership dispersion	-0.00	0.00	0.00	-0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
CEO duality	0.13	0.15	0.14	0.13	0.11	0.13
	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)
Stock price informativeness	0.02	0.01	0.01	0.02	0.03	0.02
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Earnings management	0.03	0.03	0.03	0.03	0.03	0.04
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
CEO labor market	-0.18	-0.18	-0.18	-0.18	-0.17	-0.15
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)

TABLE 4a (cont.): Impact of Firm Performance (Excess Returns) on Probability of CEO Dismissal

	(1)	(2)	(3)	(4)	(5)	(6)
Excess returns	-1.00***	-1.19***	-1.34***	-0.98***	-13.98***	-2.76*
	(0.23)	(0.23)	(0.35)	(0.26)	(3.48)	(1.30)
Excess returns * Managerial discretion (H1: (-))		-0.65***				
		(0.18)				
Excess returns * Ownership dispersion (H2a: (+))			-0.02			
			(0.01)			
Excess returns * CEO duality (H2b: (+))				-0.09		
				(0.53)		
Excess returns * Stock price inform. (H3a: (-))					-0.20***	
					(0.05)	
Excess returns * CEO labor market (H4: (-))						-0.57**
						(0.20)
Constant	0.20	0.57	0.19	0.18	0.48	-0.08
	(2.97)	(2.97)	(2.97)	(2.97)	(2.98)	(2.99)
Log Likelihood	-655.93	-649.90	-655.11	-655.92	-649.70	-651.85
Wald Chi2	209.61***	216.39***	209.81***	209.59***	218.40***	210.59***
Random-effects parameters:						
Country:						
Sd(industry)	0.04	0.02	0.01	0.02	0.02	0.04
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Sd(constant)	0.31	0.46	0.31	0.30	0.38	0.35
	(0.11)	(0.12)	(0.11)	(0.11)	(0.12)	(0.11)
LR test vs. Logistic regression: Chi2(2)	5.87*	6.58*	5.26+	5.20+	5.92*	5.90*

Note 1: Coefficients for year dummy variables are not reported; robust standard errors in parentheses;
Note 2: Founder CEO independent variable perfectly predicted the CEO dismissal dependent variable in our models and was therefore dropped automatically;
*p < .05, **p < .01, ***p < .001

TABLE 4b: Impact of Firm Performance (EBITTA) on Probability of CEO Dismissal

	(1')	(2')	(3')	(4')	(5')	(6')
CEO age	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
CEO tenure	-0.94***	-0.94***	-0.94***	-0.94***	-0.95***	-0.94***
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Firm size	-0.01	-0.01	-0.01	0.00	-0.01	-0.01
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Closely-held shares	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Firm internationalization	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Enforcement institutions	-0.33**	-0.33**	-0.33**	-0.34**	-0.33**	-0.36***
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.11)
US stock listing	-0.11	-0.13	-0.11	-0.13	-0.14	-0.13
	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)
Managerial discretion	0.46***	0.57***	0.46***	0.49***	0.45**	0.49***
	(0.14)	(0.16)	(0.14)	(0.14)	(0.14)	(0.14)
Ownership dispersion	0.00	0.00	0.01	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
CEO duality	0.11	0.14	0.12	0.65*	0.15	0.14
	(0.21)	(0.21)	(0.21)	(0.32)	(0.21)	(0.21)
Stock price informativeness	0.02	0.02	0.02	0.03	0.02	0.03
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Earnings management	0.04	0.04	0.04	0.04	0.01	0.04
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)
CEO labor market	-0.18	-0.17	-0.18	-0.16	-0.18	-0.05
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.14)

TABLE 4b (cont.): Impact of Firm Performance (EBITTA) on Probability of CEO Dismissal

	(1')	(2')	(3')	(4')	(5')	(6')
EBITTA	-10.58***	-8.18*	-12.74***	-8.44**	-17.07***	-7.93*
	(2.42)	(4.01)	(3.48)	(2.60)	(4.33)	(3.03)
EBITTA * Managerial discretion (H1: (-))		-2.51**				
		(0.83)				
EBITTA * Ownership dispersion (H2a: (+))			-0.11			
			(0.13)			
EBITTA * CEO duality (H2b: (+))				-8.31		
				(6.04)		
EBITTA * Earnings management (H3b: (+))					0.50*	
					(0.22)	
EBITTA * CEO labor market (H4: (-))						-2.67*
						(1.26)
Constant	2.94	2.32	3.22	2.76	3.45	2.59
	(3.05)	(3.08)	(3.06)	(3.05)	(3.05)	(3.05)
Log Likelihood	-641.38	-638.16	-641.01	-639.69	-639.10	-640.35
Wald Chi2	196.75***	199.45***	196.92***	197.76***	199.22***	197.76***
Random-effects parameters:						
Country:						
Sd(industry)	0.01	0.03	0.01	0.01	0.01	0.04
	(0.04)	(0.05)	(0.04)	(0.05)	(0.04)	(0.04)
Sd(constant)	0.29	0.41	0.30	0.29	0.32	0.35
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
LR test vs. Logistic regression: Chi2(2)	4.92+	6.38*	5.02+	4.90+	5.90*	6.13*

Note 1: Coefficients for year dummy variables are not reported; robust standard errors in parentheses;
Note 2: Founder CEO independent variable perfectly predicted the CEO dismissal dependent variable in our models and was therefore dropped automatically;
*p < .05, **p < .01, ***p < .001