

# CEO Turnover: Cross-Country Effects

**Natasha Burns**  
University of Texas at San Antonio  
[natasha.burns@utsa.edu](mailto:natasha.burns@utsa.edu)  
210-458-6838

**Kristina Minnick**  
Bentley University  
[kminnick@bentley.edu](mailto:kminnick@bentley.edu)  
781-891-2941

**Laura Starks**  
University of Texas at Austin  
[lstarks@mail.utexas.edu](mailto:lstarks@mail.utexas.edu)  
512-471-5899

## Abstract

Corporate boards and their managements worldwide face different environments, including variations in cultural, legal, and regulatory attributes. Examining these variations' effects on boards' CEO contracting and monitoring processes, consistent with Williamson's (2000) emphasis on institutional influences, we find that CEO turnover varies systematically with major influences. Specifically, CEO turnover is affected by a country's investor protection, labor rigidity, as well as external and internal governance mechanisms.

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## CEO Turnover: Cross-Country Effects

Chief Executive Officers (CEOs) are considered critically important to the functioning of a corporation, providing the key leadership role for the company's operations. Just as important is the corporate board that determines whether to keep or dismiss the CEO, relying on their learning about the CEO's ability, how that ability matches with the firm's current needs, and the labor market for replacement CEOs. In fact, the board's CEO recruitment, retention and termination decisions are among the most important decisions that they make. Previous research has shown that the board's learning process and subsequent actions depend on a number of factors, such as the supply of replacement CEOs (Parrino, 1997), the independence of the board and its committees (Weisbach, 1988; Guo and Masulis, 2014), whether the CEO is part of the founding family (Morck, Shleifer, and Vishny, 1989; Parrino, 1997), board interlocks, well-connected directors, and directors' reputational concerns (Fich and White, 2003; Coles, Wang, and Zhu, 2015; Masulis and Mobbs), the fraction of shares owned by management or outside blockholders (Denis, Denis and Sarin, 1997), product market competition (Dasgupta, Li and Wang, 2015) as well as both hard and soft information about the CEO's performance and ability (Cornelli, Kominek, and Ljungqvist, 2013). What is particularly important to the board's contracting and monitoring process is the environment in which the boards and their management operate. That is, a country's cultural values along with its legal and regulatory conditions are fundamental to a corporation's operations, the perceptions about its performance, and the board's contracting with their CEO.<sup>1</sup>

Williamson (2000) points to the importance of institutions in economic activity and argues that there exist four levels of institutional influences on economic activity with each level influencing the next. At the base level lie the social norms and cultural influences, which he

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<sup>1</sup> See, for example, Stulz and Williamson (2003), Doidge, Karolyi and Stulz (2007), Griffin, Guedhami, Kwok, Li, and Shao, (2015) and Burns, Minnick and Starks (2017).

terms embeddedness: informal institutions, customs, traditions, norms, and religion. The next level involves the legal system, which defines and enforces the formal rules of contracts involving transactions that are part of economic activity. This level is followed by aligning governance structures with transactions to mitigate conflict and realize mutual gains. Finally, resource allocation and employment (prices and quantities; incentive alignment) form the highest level.

In this paper we focus on Williamson's (2000) three most basic levels to better understand how these influences can affect the board's CEO contracting and monitoring process. Using a cross-country sample, we examine how aspects of a country's environment related to the institutional influences affect the board's CEO contracting and monitoring process, most specifically, we examine the board's decision on whether to retain or terminate the CEO. Typically, models of CEO turnover (and the many related empirical tests) either explicitly or implicitly assume that the primary inputs into the board's learning and decision process with regard to CEO monitoring derive from the firm's reported performance, either accounting or market-based performance.<sup>2</sup> "Hard" information as defined by Cornelli, Kominek and Ljungqvist (2013). Much of this analysis has depended on U.S. data, thus, we first need to set a benchmark on whether CEO turnover in other countries is also strongly associated with firm performance as is the case in the United States. We find, similar to studies based on U.S. data, that when all countries in the sample are included in the analysis, CEO turnover is significantly negatively associated with firm performance. However, we do not find that to be the universal case when examining countries on an individual basis, suggesting that institutional differences across countries may be important in the board's CEO monitoring process.

The cultural values along with the legal and regulatory regimes in which a company operates provide structure, restrictions and influences on how board decisions are made. Culture,

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<sup>2</sup> See, for example, Hirshleifer and Thakor (1994), Hermalin and Weisbach (1998), Adams, Hermalin and Weisbach (2010), Coughlan and Schmidt (1985), Weisbach (1988) and Parrino (1997).

or social embeddedness, changes slowly, and imposes informal and potentially pervasive influence on the long-run character of economics (North, 1991), which can be important to economic productivity. Our analysis provides novel findings using proxies for cultural values (from the World Values Survey), proxies for the countries' legal regimes (investor protection) (from Spamann (2010)) and proxies for regulatory regimes (labor market rigidity) from the World Bank. We test for the effects of these institutional influences on the board's CEO turnover decisions, while controlling for firm specific characteristics such as CEO tenure, age and firm governance characteristics. Because director's access to and ability to understand information may affect their ability to react to the culture and legal regime, we also include a measure of director industry experience. The empirical results show that CEO turnover systematically varies across countries consistent with the argument that a board's CEO retention and termination decisions are influenced by the home country's cultural values, legal and regulatory regimes.

Hofstede (1980, 2001) argues that dimensions of national culture influence how individuals think about their work life, resulting in national differences in society's acceptance of certain aspects of the corporation. Building on his work, social scientists that conduct the World Values Survey have attempted to measure systematic differences across countries in attitudes toward social and political life. Using measures from these respective surveys, we find that CEO turnover is systematically associated with a country's cultural values, which suggests that these cultural differences are important. Specifically, we find that in cultures in which people believe hard work (as opposed to network connections) and competition are important to success, boards are more likely to replace CEOs.

Additionally, we measure a country's legal regime through the anti-director rights index (ADRI) of Spamann (2010) and find that countries with stronger shareholder rights have a higher rate of CEO turnover and a stronger sensitivity of CEO turnover to firm performance. These findings suggest that in countries with higher investor protection, boards are generally more likely to replace CEOs, particularly for poor performance.

A further issue in embeddedness involves a society's view on employee protection. Some countries may believe that employees should be given more opportunity to perform or be retrained, and to support this, be protected from dismissal, a view that becomes reflected in the country's legal and regulatory system. CEOs could also receive this protection through an explicit contract (e.g., Gillan, Hartzell and Parrino, 2009) or through labor market restrictions (e.g., Edmans, Li and Zhang, 2014) that permeate the social norms, even if there are not explicit rules on company executives. This system of beliefs in protecting employees may also be reflected in a lower sensitivity of CEO turnover to performance. Using measures of the countries' labor protection legislation from the World Bank, we find that CEO turnover occurs more often in countries with flexible labor markets. We also find weaker evidence that turnover is more sensitive to performance in these markets.

Governance at the firm level should reflect the institutional differences. As such, we consider the firm's CEO tournament structure, board independence, CEO duality, and director industry experience as part of the internal characteristics of firm governance and consider institutional ownership as a form of external governance. Research shows the important role of director industry experience on firm performance in the US (Knyazeva, Knyazeva, and Raheja, 2009; Dass, Kini, Nanda, Onal, and Wang, 2014; Kang, Kim, and Lu, 2017). Boards on which directors have more industry related experience may have access to information and be able to better process that information, thereby facilitating monitoring and termination decisions. Institutions can exert external governance by "voting with their feet" (Parrino, Sias, and Starks, 2003) or by engagement (McCahery, Sautner and Starks, 2016), and their ability to use this exit or voice approach effectively depends on the institutional environment. For example, Cohn and Rajan (2013) model that internal governance (board and manager) and external governance (activist investor) are substitutes when the institutional environment is weak and are complements when it is strong.

Our results show that turnover is positively related to the percent of directors with related industry experience (DRI), regardless of culture and legal institutions. If a firm is performing poorly and institutional ownership is high, then turnover is more likely in countries with weaker shareholder protections. In contrast, when a firm is performing poorly and DRI is high, then turnover is more likely, irrespective of shareholder protections. That is, DRIs seem to be as effective in countries in both high and low shareholder protections, while institutional ownership is more effective in countries with poorer shareholder protection. These results suggest that external governance (institutions) are more effective in weak environments.

Williamson (2000) states that research in institutional economics has primarily focused on levels two and three of his model of institutional influences on economic activity, with level one being relatively under researched. Our paper contributes to the literature by first showing that board monitoring of CEOs varies across countries in systematic ways that are associated with the countries' cultural, legal and regulatory structures. Cornelli, Kominek and Ljungqvist (2013) have shown that board monitoring improves when countries enact governance reforms. We also contribute to the growing literature on how societal and cultural norms are associated with economic outcomes. Our empirical analysis supports the hypothesis that cultural values are an influence on a board's contracting with its CEO, which is consistent with previous work on the effects of culture on economic outcomes (e.g., Guiso, Sapienza, and Zingales, 2009; Frijns, Gilbert, Lehnert, and Tourani-rad, 2011; Ahern, Daminelli, and Fracassi, 2015; and Burns, Minnick, and Starks, 2017).<sup>3</sup> In the next section, we describe our data and empirical design regarding CEO turnover. In Section 3 we present basic results of the empirical estimation for turnover for each country. In Section 4, we present our primary empirical results and we conclude in Section V.

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<sup>3</sup> Other papers that provide analyses of the influence of culture on financial outcomes include Stulz and Williamson (2003), Guiso, Sapienza, and Zingales (2008), Bogaard and Pirinsky (2011), Kumar, Page and Spalt (2011) and Karolyi (2015).

## 2. Data and Empirical Design

The goal of this study is to increase our understanding of how institutional influences can affect boards' CEO contracting and monitoring process. Our analyses require data from multiple databases. We identify CEO turnover, tournament structure and firm characteristics using Capital IQ; we gather share performance from Datastream. We employ BoardEx in order to obtain board characteristics and establish the presence of directors with expertise in related industries.

### *2.a. Sample Construction*

We define CEO turnover events as those in which the CEO identity changes by the start of the fiscal year. In order to remove any confounding influences, we remove any turnover events associated with an acquisition. Because of differences across countries, most particularly, cultural differences, it is difficult to identify whether a turnover event is voluntary or forced.<sup>4</sup> For example, in countries with a culture in which “saving face” is more important, it is less likely that involuntary turnover will be explicitly announced. Even in the U.S., this identification can be difficult. Fee, Hadlock, Huang, and Pierce (2018) examines models of CEO turnover in the U.S. and concludes that CEO turnover events are rarely voluntary, that attempting to separate voluntary and forced turnovers can lead to incorrect conclusions, and that combining the two types of events does not materially affect the empirical results for measuring sensitivity of CEO turnover to performance. Moreover, a displaced CEO's movement to another position in the firm may not be considered entirely voluntary. We therefore take the conservative approach of verifying our results when turnover associated with death or illness are removed, and for CEOs who take another CEO position.<sup>5</sup>

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<sup>4</sup> Urban (2018) studies CEO turnover in an international sample of the largest 70 firms in a country. Urban identifies forced turnovers as those in which the CEO is explicitly fired, forced out, or departed due to policy differences, based on media searches.

<sup>5</sup> We identify deaths using the BoardEx announcement data. We identify whether the CEO position was terminal using BoardEx to track the next corporate role, if any of the departing CEO.

We combine CEO turnovers and firm characteristics from Capital IQ (CIQ) with data from BoardEx using ISIN numbers.<sup>6</sup> The firm characteristics include firm size (measured as the log of assets and also as the market capitalization), net income, EBITDA/Assets, and leverage (measured as total debt to assets). To be included in our sample, a country must have at least 100 firm-year observations.

In Panel A of Table 1 we provide details on the sample over the 2004 to 2016 sample period. The U.S. has the largest number of observations at 22,893, followed by Canada (2,972), the U.K. (2,010), France (1,738), and Australia (1,433). In Panel B of Table 1 we report the number and average percentages of turnover events by country and in total. Over the sample period the aggregate average turnover percentage is 12% with a range from 7% to 19%. Spain, France, and the Netherlands have the lowest turnover rates (7% to 9%), and Israel, Poland, and Finland have the highest turnover rates (17% to 19%). The U.S. turnover rate in our sample of 10% is comparable to turnover rates reported in the literature, such as the 11% rate in Fee et al (2015).

## *2.b Empirical Design*

We focus on two observable outcomes of the board's contracting and monitoring process that are significantly researched using U.S data: general CEO turnover in a country and the sensitivity of that turnover to the firm's performance, where we evaluate performance using both stock market return and accounting data. Stock market return performance is measured as the annual return over the previous fiscal year, using the equity monthly return index (which includes dividends) from Datastream. Accounting performance is measured as the change in EBITDA/Assets over the fiscal year.

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<sup>6</sup> For those firms in BoardEx that do not have an ISIN number, we use the SAS *compge* string matching function on company names followed by a manual verification of matches.



Relative performance theory predicts that a firm's performance has two components: the idiosyncratic component, which is directly associated with CEO performance, and industry performance, which is exogenous to the CEO performance. (See Jenter and Kanaan, 2015.) We use their two-stage procedure to estimate the sensitivity of turnover to firm performance and estimate idiosyncratic firm performance as the residual,  $\varepsilon$ , from a sample-wide regression of firm returns on industry benchmark returns. The predicted value from this regression is the industry performance, which we term as market-induced performance. In the second stage, we include idiosyncratic firm performance and market-induced performance in a logit model to estimate the sensitivity of CEO turnover to firm performance. Industry performance is measured as the equally-weighted market or accounting performance with the sector classification of firms under FTSE International classification (41 main sectors). The return industry benchmark is the one-year return on the country-industry equally weighted portfolio (with the firm's return excluded from the calculation). The accounting performance industry benchmark is similarly measured.

$$i) r_{i,t-1} = B_0 + B_1 * r_{\text{peer group}} + \varepsilon_i.$$

$$ii) \text{Probability (CEO turnover}_{i,t}) = \gamma + \gamma_1 \cdot (\beta_0 + \beta_1 * r_{\text{peer group}, t-1}) + \gamma_2 \varepsilon + \zeta \\ = \gamma_0 + \gamma_1 * r_{i,t-1} + \gamma_2 * \varepsilon_{i,t-1} + \zeta.$$

The coefficients from this regression should pick up how the board of directors treat CEO turnover. If they are more likely to let CEOs go for poor firm performance that they directly control, then the coefficient,  $\gamma_2$ , on *idiosyncratic firm performance* should be negative and significant. Similarly, if they do not hold CEOs accountable for factors out of their control, i.e. industry related factors, then the coefficient,  $\gamma_1$ , on *market induced performance* should be zero or insignificant.<sup>7</sup>

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<sup>7</sup> Fee et. al. (2015) conclude that measuring firm performance relative to industry is a reasonable model for turnover, and that variations in industry definitions, or deviating from a multivariate logit model by using a Cox Hazard model or Probit model have limited impact on inferences regarding turnover sensitivity to performance.

To estimate the regression, we control for a number of other variables, employing annual data and measuring the independent variables at time t-1. These variables include CEO tenure, CEO age compared to the average country retirement age, and firm size. We use CEO age minus the average country retirement age in order to account for potential voluntary departures and to address the fact that retirement age varies by country. We obtain average retirement age from OECD and European Union Labour Force surveys.<sup>8</sup> We control for firm size using the log of assets.

We also include proxies for the firm's internal governance that could reflect a firm's adaptation to its institutional environment. Directors with experience in industries similar to (or the same as) the industry of the firm on which they serve would have access and expertise to interpret information useful in assessing CEO performance within the firm's existing environment. For example, understanding the industry may reduce the extent to which the board relies on the stock price for assessment of CEO performance. Faleye, Hoitash, and Hoitash (2017) find evidence to support lower turnover sensitivity to performance in the U.S. when directors have previous experience in the same industry as the firm on which they sit. Borrowing from Manso (2011), they argue that their finding is due to industry expertise reducing internal information asymmetry. The information exchange facilitated by directors with experience in related industries may be more important in industries with stronger connections. Further, director knowledge from experience in related industries can proxy for connections. This experience may be more important in countries in which connections matter more in general. Access to and expertise in interpreting industry related information may also enable directors to evaluate the CEO and moderate the effects of cultural characteristics.

We identify board membership by directors from related industries (DRIs) using the method in Dass, Kini, Nanda, Onal, and Wang (2014). We briefly describe the measure here and refer the reader to Dass et al. for a more detailed description. For our sample firms, we identify

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<sup>8</sup> Given the predominance of males as CEOs, we use the male retirement age.

the other firms for which each member of the board is also either a director or officer and whether that firm is in the same or a related industry. We identify related industries using the U.S. Bureau of Economic Analysis's Make-Use tables of products produced and used by industries. Using the BEA linkages tracked in the U.S. for other countries has the advantage that it is more of an exogenous measure for other countries, thus reducing potential endogeneity.<sup>9</sup> Similar to Dass, et al. we identify industries that directors are affiliated with from other roles that are considered significant (the dependency on the industry is 1%, 5% or 10% greater).

As in Dass, et al. (2014),

“For each director we add one if the director is an officer in a related industry and 0.5 if he/she serves as an outside director in the related industry. We then aggregate these values across all the directorships held by each director. If this sum for a director is greater than one, then we truncate its value at one. Based on these values for all directors, we construct two broad types of measures for the firm's board – either a dummy variable or a proportional measure. The dummy variable equals one to indicate the presence of at least one DRI on the firm's board. To compute the proportional measure, we aggregate individual values across all directors of the firm and divide this by the firm's board size.”

We measure the percent of directors from related industries as the number of DRIs divided by board size (*DRI\_ratio%*) as well as an indicator that is equal to one if the firm has any DRIs on the board (*I\_DRI%*). While all tests are based on each of these VRCs, for brevity we present our results with VRC at the 10 percent level, obtaining similar results at each cutoff.

We include measures of tournament and institutional ownership as firm specific governance variables that affect CEO turnover. Each measure is from CIQ. Burns, Minnick, and Starks (2017) find that in countries with a greater acceptance of power differentials and

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<sup>9</sup> Ideally, we would access the equivalent of a BEA industry table for each country. However, it is unlikely that the manufacturing process and industry linkages differs significantly across countries. In our increasingly globalized economy, and especially in less developed and middle-income economies, the role of transnational corporations (TNCs) is considered to be crucial for economic development (Meyer, 2004; Jindra et al., 2009). Focusing on the auto industry, Pavlinek and Zizalova (2014) find significant spillover from foreign owned (foreign) to domestic-owned (domestic) firms, particularly regarding technology and supply chain. This suggests that in our global economy, extrapolating OECD's US based Make-Use tables can proxy for the same industry dependency in other countries.

individualism, and in which competition is seen as promoting better outcomes, there exist steeper CEO tournament structures. Firm governance will be affected by country institutions and culture although it will still have variance that is reflective of the firm's internal culture. On the one hand, it may be that in cultures where power and individualism is more acceptable, CEOs are held more accountable for their firm's performance and consequently, CEO turnover is higher. Alternatively, a higher power differential may result in lower CEO turnover rates in which case the tournament reflects CEO entrenchment. Turnover rates may also be lower when tournament is steeper if the pay differential reflects more skill on the part of the CEO. Tournament structure is measured as CEO compensation divided by mean of the other top three most highly paid executives, and as the difference between the CEO and mean of the other top executives' compensation. Institutional ownership is measured as the percent ownership of shares outstanding by institutions. We also include industry and year fixed effects to account for systematic industry or year effects.

### *2.C. Descriptive Statistics*

Table 2 presents sample characteristics (lagged one year) for the years in which a CEO turnover occurs and separately the years without CEO turnovers. Firms with CEO turnover during the year have lower mean and median idiosyncratic performance, whether measured by market or accounting performance, than do firms having no CEO turnovers in the year. The difference is both statistically and economically significant. Similarly firm-years with CEO turnovers have poorer industry market performance over the previous year than do those with no turnovers. On the other hand, CEO turnover, on average across countries, does not appear to depend on industry accounting performance as it is not significantly different in firms that have a CEO turnover in a year versus other firms. These univariate results suggest that firm specific performance plays a more significant role in CEO turnover across countries than does industry performance.

Table 2 also includes other firm specific and CEO characteristics that have been shown to be related to CEO turnover. The univariate statistics for the measures of CEO tenure indicate that at the year of turnover, the average CEO has been in the position for about six years and the average CEO in years without turnover has been in place about 3.5 years. These results suggest that CEO tenures are relatively short. In terms of age, on average, CEOs who leave a firm are 54 with approximately 30 percent of the turnovers involving CEOs over the age of 60.

Table 2 shows that DRIs are more prevalent on boards experiencing a CEO turnover. DRI membership on the board is 19 percent of board size in turnover years (vs 15 in non-turnover years). Boards are also more independent. Tournament structure is greater in years without turnover consistent with the either greater CEO skill or entrenchment. Tournament is 2.88 times versus 1.96 times other top executive pay in years that do not experience turnover. Institutional ownership and the change in institutional ownership are each higher in years without turnover consistent with institutions increasing ownership when satisfied with the firm or CEO's performance.

### **3. CEO Turnover across Countries**

We test whether the sensitivity of turnover to firm performance differs across countries by estimating equation (2) within each country. Table 3 Panel A shows the averages by country of the variables used in the country level CEO turnover estimations. We report the medians of CEO age, CEO tenure, total assets, and idiosyncratic firm performance in the year prior to turnover. In Panels B and C of Table 3 we present the results of the logit regressions modeling CEO turnover by country, where we use market returns in Panel B and accounting data in Panel C. Generally for most countries, departing CEOs are older. Exceptions include China, India, Italy, New Zealand, and Norway. Departing CEOs typically have longer tenures than non-departing CEOs with a few exceptions which include Japan, France and Poland. In addition, we report the median idiosyncratic returns. Across all countries, for both stock and accounting returns, firms with departing CEOs have poorer idiosyncratic returns.

As pointed out earlier, previous empirical studies have found that idiosyncratic firm performance is one of the most significant and important determinants of CEO turnover in the U.S.<sup>10</sup> We find this result to hold for a number of countries, but it does not hold for all countries. Panels B and C of Table 3 show that 23 (22) of the 29 countries in our sample exhibit the expected significant negative relationship between CEO turnover and firm stock return (accounting) performance.

Table 3, Panels B and C, also show that for many of the countries in which CEO turnover is sensitive to idiosyncratic firm performance, do not show a similar sensitivity to industry performance. These results across countries are comparable to that of previous research using U.S. data such as Fee et al. (2015). Notably, however, CEO turnover is significantly related to industry return performance in five countries (Austria, Germany, Italy, South Africa, and Sweden) of which two (Austria and Sweden) have a positive relationship between turnover and industry return performance. A possible explanation for this result is that if a firm is underperforming in a well-performing industry, the CEO of the underperforming firm may be more likely to leave because of a lower tolerance in that country for poor performance when the overall industry is successful. When using accounting measures of industry performance, Panel C shows that 13 countries have a significantly negative relation between industry performance and CEO turnover. It is likely that there exists less variation in accounting performance than shareholder returns within an industry.

The concept of age in the workplace is a fundamental social and cultural norm (CITE), which corresponds with Williamson's (2004) base level of institutional influences. Thus, we expect to find differences across countries in the relationship of CEO turnover to age. In countries in which older individuals are more highly respected, the strong positive relationship between turnover and age found in the U.S. (e.g., Weisbach, 1988) would not be expected to

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<sup>10</sup> Additionally, Kaplan and Minton (1993) show that current performance plays an important role in turnover in the relationship-oriented systems of Germany and Japan. Kaplan and Minton maintain that this occurs because current prices incorporate long-term information.

hold. Table 3 Panel B shows that CEO turnover is significantly related to *age-retire* for many countries, but not all. This measure is more positive the older the CEO, implying that older CEOs are more likely to retire or be dismissed. However, in a few countries in which age is more respected, age is negatively related to turnover, notably Hong Kong, Japan, and Malaysia. (Canada and Poland also have negative coefficients, but these estimated coefficients become insignificant when using accounting performance measures.)

It has been argued that since boards tend to learn about CEO ability early in a CEO's career, negative shocks tend to be attributed to the CEO, resulting in a higher rate of turnover in the early years. Subsequently, as the board learns more about the CEO's ability and the appropriateness of the firm match, the sensitivity to shocks decreases (Jenter and Llewellyn, 2014). Our results support this hypothesis for some but not all countries in our sample. We find that the tenure of the CEO reduces the likelihood of turnover for North American countries, as well as Germany, Hong Kong, Israel, New Zealand, and Sweden.

#### **4. Country Cultural Values, Legal and Regulatory Standards, and Governance**

In this section we examine hypotheses regarding whether Williamson's (2004) institutional differences are reflected in CEO turnover differences across countries, recognizing that firm-specific governance attributes can modify these effects. Thus, we test models of CEO turnover that include country cultural values, legal and regulatory standards and firm governance characteristics.

##### *4.1 Measures of culture*

We obtain measures of country cultural values from the World Values Survey ([www.worldvaluessurvey.org](http://www.worldvaluessurvey.org)), which consists of a global network of social scientists who conduct personal interviews of almost 400,000 respondents from about 100 countries using a common questionnaire. These interviews have been run in four-year waves since 1981 and we employ Wave 5 (2005-2009) and Wave 6 (2010-2014), the timing of which is roughly coincident

with our CEO turnover data.<sup>11</sup> The country cultural values we expect to be most related to judging CEO performance would be attitudes towards hard work and competition. Based on a scale of 1 to 10, the WVS measures hard work as an indication of the extent to which the survey participants consider that hard work delivers success as opposed to success being a matter of luck and connections. A country's attitude toward competition, measured by asking people to consider on a scale of 1 to 10, whether competition "stimulates people to work hard and develop new ideas" versus "Competition bringing out the worst in people." Both the hard work and competition attitudes suggest that stakeholders would value more responsibility for the CEO and thus, greater sensitivity of turnover to firm performance.

#### *4.2 Legal and regulatory standards*

To measure a country's legal standards toward shareholders, we employ the revised Anti-directors Rights Index (ADRI) from Spamann (2010), which is a revision of the original measure introduced by La Porta, Lopez, Shleifer and Vishny (1998). We use the ADRI to proxy for country-level governance systems that may provide more shareholder protections and therefore be more oriented towards maximizing shareholder value and thus, CEO turnover should be more sensitive to market performance.

The final country institutional feature we consider is labor market flexibility or rigidity, a regulatory standard that can affect a board's contracting with its CEO, either because of an explicit requirement or because of a societal norm. Regulations on employment protection can make it harder for a firm to fire workers, which will add to the cost of adjusting labor and reduce labor mobility, but increase employee protection.<sup>12</sup> For example, research shows that in countries in which employment protection is stricter, firms spend more on training employees (Pierre and

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<sup>11</sup> See Ahern, et al. (2015) for a discussion of the construct validity of the World Values Survey.

<sup>12</sup> See Addison and Teixeira, 2003, and OECD, 2004 for reviews.



Scarpato, 2005). Although these regulations typically are written to protect workers rather than CEOs, if they arise due to a societal norm, we would expect them to also affect CEO turnover.

We derive annual measures of labor market protection using the World Bank Group's Doing Business data on labor market regulation, which categorizes restrictions on dismissing long-term workers.<sup>13</sup>

Specifically, we consider three regulations coded by the World Bank that would increase the cost to a firm for dismissing an employee: 1) *Does the employer need the approval of a third party in order to dismiss one redundant worker?* 2) *Must the employer obtain prior approval from a third party before a collective dismissal?* 3) *Severance pay for redundancy dismissal after 20 years of continuous employment is required.*<sup>14</sup>

We create indicators equal to one if the regulation makes it more difficult to dismiss a worker. Then, we create an index *costly to dismiss* equal to the sum of these indicators so that this variable is increasing in the cost of dismissal.

We show the breakout of these cultural variables by country in Appendix A. To facilitate ease of interpretation we construct culture measures *Competition*, *Hardwork*, and *easy to dismiss*, so that they are increasing in their value (i.e. *new\_measure* equal to maximum of the original measure minus *original\_measure*). As a result, we expect turnover to be increasing in *ADRI*, *Competition*, *Hardwork*, and *Easy to Dismiss* (intuitively renamed).

### 4.3 Empirical results

Table 4 presents the estimation of the turnover-performance sensitivity model of equation (1) in which we now include measures of country culture, legal and regulatory standards. Panel

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<sup>13</sup> See <http://www.doingbusiness.org/> for details.

<sup>14</sup> The data method changes in 2010 and collects severance payments based on dismissal after 10 years rather than 20 years.

A shows the estimation using return performance and Panel B using accounting performance. Regressions (1) through (4) include country characteristics of *ADRI*, *Hardwork*, *Competition*, and *Easy to dismiss*. Each of these is expected to be positively associated with turnover.

Across the estimations, CEO turnover is more likely after poor firm-specific performance, echoing the majority of results for individual countries discussed earlier. In most estimations market (industry) performance is not significantly related to turnover. Market induced performance is only significant when *easy to dismiss* is included as a country characteristic. We find a significant and positive relationship between ADRI and turnover, suggesting that in countries with higher investor protection, corporate boards are more willing to replace the CEO. The results suggest that there could be less managerial entrenchment in countries with higher shareholder protections. As hypothesized, a significant and positive relationship exists between CEO turnover and both *Hardwork* and *Competition*. That is, in cultures in which people view hard work and competition as important/useful to achieving success boards are more likely to replace underperforming CEOs. We also find that CEO turnover is more likely in countries in which it is easier to dismiss employees, leading to lower labor market rigidity. This is consistent with the conjecture that such regulations capture dominant country values/culture that may affect CEO turnover.

In addition to the performance measures, culture, and legal institutions, we include governance related variables of tournament, institutional ownership, and board characteristics, including DRI (Directors in Related Industries). Tournament controls for firm culture related to power structure since CEOs who are paid more relative to other executives are likely more powerful and may therefore be harder to dismiss. It can also proxy for incentives for competition, relative power, and CEO skill relative to other top executives. Prior research shows that institutional ownership is associated with monitoring (Burns, Kedia and Lipson, 2010) as are board characteristics like duality and independence. More recently, researchers have explored how director industry expertise affects board performance (Dass, Kini, Nanda, Onal, and Wang, 2014) and information sharing (Burns, Minnick, Raman, 2017). Therefore, we expect higher

institutional ownership and more DRIs to be associated with more monitoring. Higher institutional ownership and more DRIs may therefore result in a higher likelihood of turnover when performance is poor. We seek to understand whether and how culture and firm-specific governance modifies the relation between turnover and performance.

Regressions (5) through (8) adds in the firm-specific governance measures of tournament, DRI, and institutional ownership, and also controls for board independence and CEO duality. Regressions (9) through (13) repeat regressions (5) to (8) but uses change in institutional ownership instead of the level of institutional ownership. The coefficient on DRI is positive and significant and suggests that boards with more DRIs are more likely to dismiss the CEO. Given that DRIs will have the skill to interpret and better transparency about the CEO's ability, they may be able to better assess CEO performance.

Institutional ownership and change in institutional ownership are each negatively associated with turnover. The relationship between increasing institutional ownership and lesser probability of CEO turnover suggests that when institutional owners are satisfied with firm performance (and the CEO), they are more likely to hold the firms' shares. These results are consistent with the empirical evidence that institutional owners vote with their feet, i.e., sell their stake, prior to CEO turnover (e.g., Parrino, Sias and Starks, 2003), suggesting in those cases they are dissatisfied with the CEOs' performance.

The coefficient on tournament is negative and significant, consistent with the idea that a steeper tournament may reflect a CEO who is either more powerful or more skilled. Other governance controls of board characteristics—CEO duality and independence—have the expected signs.

The addition of the firm-specific governance variables is associated with a change in significance of both Hardwork and Competition. This may reflect that firms in countries with better investor protection have more variation in firm specific governance, and that variation has a stronger effect. We examine these relationships further in the following sections.

In Panel B, we employ accounting measures of performance rather than market measures. The mean reversion characteristic of accounting numbers and the fact that they can be more easily manipulated would seem to make accounting information to be less relevant in turnover decisions. On the other hand, Fee, et al point out that (forward looking) stock prices may incorporate the likelihood of CEO turnover and as a result stock prices will not be as strongly associated with CEO turnover. The results remain similar in significance for firm-specific performance. In contrast to results for market returns, market induced (industry) operating performance is negatively and significantly associated with turnover. This implies that a decline in peer operating performance increases the likelihood of CEO turnover.

We next examine CEO turnover across regimes of high or low cultural variables, legal and regulatory regimes because the effects of the firm-specific governance characteristics from institutional ownership or director industry experience are likely to vary across different cultures and legal institutions. To determine whether the turnover-performance relationship appears to be affected by the governance variables we add an interaction term between each of the governance variables and performance. We separate on culture because culture changes more slowly than firm-level governance. We create the median cutoffs of culture by country-year, so that the median does not depend on the number of firm-years in each country. For each measure, countries scoring at the median are grouped with the high value group.

. In Table 5 we report the results of these analyses using firm return performance in Panel A and firm operating performance in Panel B. Within both high and low cultural, legal and regulatory regimes we find CEO turnover to be sensitive to firm-specific performance as the coefficients are negative and significant in all specifications. For countries which have lower values of ADRI, Competition, or Hardwork, the coefficients are larger in magnitude. One explanation may be that in cultures that consider hard work and competition as principal components of success, firm market performance may not be the only metric that the board considers in a turnover decision. However, in cultures that believe that connections and luck dictate success, performance is the only clear cut measure to determine CEO suitability. Market-

induced performance shows a significantly greater association with turnover in countries in which competition is perceived as ‘bringing out the worst in people’ and in which ‘success is more a matter of luck and connections’. This could reflect that more commonality exists in governance and governance decisions on CEO turnover in these markets. Institutional ownership and DRI maintain the signs and significance discussed in Table 4. Institutional ownership is associated with lower turnover while DRI is associated with more turnover. When we use the change in institutional ownership (not reported) the significance remains, showing that increases in institutional ownership are associated with lower turnover.

We next turn our attention to the relationship between DRI, institutional ownership and turnover. Both institutional ownership and the interaction of institutional ownership with firm-specific performance is negative and significant for countries in which Competition and Hardwork are seen less as a means to success (and connections more important), and in which there are lower shareholder protections. However, it is difficult to interpret the economic significance of interactions with logit estimations. Therefore, we compute predicted probability of turnover for hypothetical cases. As we are interested in institutional ownership, we set the value equal to one standard deviation below the mean and one standard deviation above the mean and hold all other variables at their mean values to determine the change in the probability of turnover. We find that in low investor protection countries, moving from Mean-1SD to Mean +SD decreases the probability of turnover by 18%, versus only 6% for high ADRI countries. Similarly, increasing institutional ownership decreases the probability of turnover by 23% (20%) versus 5% (9%) in low versus high competition (hardwork) countries, which is a 18% (11%) higher reduction in the likelihood. This implies that institutional ownership reinforces the negative relation between performance and turnover in countries with these characteristics. Institutional ownership may be a substitute for broad shareholder protections consistent with Cohn and Rajan (2003).

Focusing on DRIs, we find that generally DRIs increase the probability of turnover. However, the coefficient on the interaction between DRI and firm-specific performance is generally negative and significant, in both high and low ADRI, Competition, Hardwork countries. The interaction between DRIs and idiosyncratic firm performance shows that DRIs reinforce the negative relation between performance and turnover. This interaction is larger in magnitude for countries with lower shareholder rights, lower values of Competition, and Hardwork. Focusing on the predicted probabilities, we look at the change in the predicted probabilities for firms with no DRI versus firms with DRIs. The presence of DRIs may enhance a firm's sensitivity to firm performance in certain cultures. We find that the addition of a DRI results in a 10% lower probability turnover for companies in countries with weak legal protection versus higher investor protection. We find similar decreases for countries with low competition and hardwork beliefs. In these cultures, there may more value in the transparency that DRIs bring to evaluating the CEO. It is insignificant in countries in which it is harder to dismiss employees and, in these countries, the interaction between DRI and market-induced performance is not significant and is consistent with directors with related industry experience having expertise that allows them to filter broader industry signals.

Since DRIs are a form of internal governance while institutional ownership is a form of external governance, these results suggest that institutional ownership can play a more important role in governance in countries where success is considered to more likely result from connections (i.e., the interaction between institutional ownership and idiosyncratic performance is not significant in countries with larger values of shareholder rights, competition and hardwork, while the interaction with DRI is significant in these countries).

Panel B of Table 5 reports these same regressions but with accounting measures of performance. The results largely reflect those reported in Panel A.

Because the cultural, legal and regulatory variables are highly correlated, in order to better understand their aggregate institutional influence, we conduct a principal components factor analysis of these variables (using varimax rotation) and include these factors in the regression

models, which allows us to consider whether the common elements are associated with CEO turnover. Panel A of Table 6 shows the results from the factor analysis for the two important factors. Factor 1 (F1) loads primarily on *Competition* and *Hardwork*, while Factor 2 (F2) loads primarily on *ADRI* and *Easy to Dismiss*.

Panel B of Table 6 reports the results from regressions of CEO turnover on the two factors in regressions (1) and (2) and including the firm-specific governance measures in regressions (3) and (4)), where we use return performance in regressions (1) and (3) and operating performance measures in (2) and (4). The results for regressions (1) and (2) show that CEO turnover is significantly positively related to both of the institutional influence factors and negatively related to the interaction of each of the factors with firm-specific performance. However, once we include the firm-specific governance variables in regressions (3) and (4), Factor 1, which loads primarily on *Competition* and *Hardwork* becomes insignificant, both as a single variable and the interaction with idiosyncratic firm performance. This result is consistent with results reported earlier in which the addition of firm specific governance removes the statistical significance on *Competition* and *Hardwork*. Factor 2, which loads primarily on the legal and regulatory regimes represented by *ADRI* and *Easy to Dismiss*, remains significant in the presence of the firm-specific governance variables, both on its own and in interaction with firm-specific performance.

Finally, to better understand the role of the institutional influences on boards' CEO contracting and monitoring decisions, we examine stock market reactions around the announcement of the CEO turnover. We measure announcement effects as the cumulative abnormal return over the 3-day window (Day -1 to Day +1) around the announcement of the CEO's departure. In calculating the abnormal return we use the home country's market return index from Datastream and the announcement dates from BoardEx. Because we could not identify an exact announcement date for all of the turnovers in our sample, we lose a significant number of observations and have 1,010 observations for this part of our analysis. In Panel A of Table 7 we report the country breakout of the abnormal return sample as well as the average

abnormal returns around the announcement for that country. The US is the largest part of this sample with 556 announcements, followed by Canada, Germany, France and the UK. Overall, we find an insignificant 0.157% average reaction to CEO departures across countries. Examining the results on a per country basis, we find seven countries experience significantly positive announcement effects (Germany, Hong Kong, Canada, Singapore, Malaysia, Norway and the Netherlands), while five countries experience significantly negative announcement effects (Australia, Belgium, France, Israel, and Italy). However, for a number of these countries the average significant results should be viewed with caution as they are based on a small number of observations.

In Panel B, we report a multivariate analysis in which we control for firm and the institutional influence characteristics. In regressions (1) – (4) we control for total returns and in regressions (5) – (8) we control for accounting performance. Interestingly, we find that the market reacts negatively to CEO turnover if the idiosyncratic component of stock returns are high, but there is no significant market reaction for accounting returns. In situations in which the CEO may be entrenched (represented by a high CEO Pay Ratio), the market reacts positively to the CEO's leaving. Conversely, the market has a negative reaction if the CEO is also the Chair of the board. This latter result may potentially be due to the disruption the turnover may cause not only to the company's management, but also due to changes in the board. If a firm has higher institutional ownership, there is a more severe announcement effect. This may be because the turnover was a surprise to the market. If institutional ownership declines, investors may foretell upcoming changes to management. Conversely, higher DRI representation is related to a better market reaction suggesting perhaps that investors believe that DRIs have insight into operations and talent and so may put additional trust into those turnover decisions.

Focusing on the results for the institutional influences, we find that in cultures that value competition, hardwork and where it is easier to dismiss employees, the market has a positive reaction to the announcement of a CEO turnover. In competitive cultures, investors may reward



firms that replace unproductive CEOs. Similarly, in cultures that value hardwork, investors may agree with replacing CEOs that are underperforming the market. These results support our previous findings from the logit estimations.

#### **IV. Conclusions**

The manner in which corporate boards contract with and monitor their CEOs should depend in part on the environment in which such relationships exist given the influence of countries' cultural, legal, and regulatory structures on economic outcomes. We examine this hypothesis through an analysis of cross-country differences in CEO turnover and its sensitivity to firm performance. We find that both the level of CEO turnover and the sensitivity of that turnover to firm performance vary across countries and that this variation can be partially explained by institutional influences (which include the desirability of hard work and competition) as well as the investor protection and the labor rigidity of a country.

Overall, our analysis supports the hypothesis that board contracting and monitoring of CEOs is influenced by national norms and rules. In countries that value hard work and competition and that have greater investor protection, CEO turnover is higher than in other countries. However, when power distance is valued and labor markets are more rigid, CEO turnover is less and the dependence of CEO turnover on firm performance is also lower.

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**Table 1 Sample number of observations by year and country**

This table reports the breakout of our sample by country. We only include countries with greater than 100 observations over the 2004-2016 sample period. Panel A shows the yearly distribution. Panel B reports the number and percent of CEO turnover events broken out by country.

**Panel A: Country distribution by year**

| country        | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | Total  |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Australia      | 96    | 103   | 106   | 108   | 113   | 114   | 114   | 115   | 116   | 111   | 111   | 113   | 113   | 1,433  |
| Austria        | 4     | 6     | 6     | 8     | 8     | 10    | 10    | 13    | 17    | 21    | 21    | 21    | 20    | 165    |
| Belgium        | 5     | 15    | 18    | 18    | 16    | 16    | 23    | 23    | 23    | 28    | 28    | 26    | 26    | 265    |
| Canada         | 207   | 211   | 215   | 219   | 222   | 222   | 222   | 228   | 237   | 248   | 250   | 248   | 243   | 2,972  |
| China          | 25    | 31    | 30    | 29    | 32    | 31    | 32    | 32    | 33    | 34    | 31    | 32    | 31    | 403    |
| Finland        | 13    | 17    | 17    | 17    | 17    | 15    | 15    | 16    | 16    | 16    | 16    | 16    | 13    | 204    |
| France         | 82    | 109   | 132   | 133   | 146   | 141   | 146   | 142   | 133   | 145   | 144   | 144   | 141   | 1,738  |
| Germany        | 39    | 59    | 80    | 80    | 81    | 86    | 87    | 88    | 86    | 93    | 96    | 95    | 96    | 1,066  |
| Hong Kong      | 74    | 106   | 106   | 107   | 105   | 108   | 108   | 108   | 93    | 118   | 118   | 117   | 118   | 1,386  |
| India          | 89    | 111   | 121   | 121   | 119   | 120   | 122   | 122   | 78    | 127   | 128   | 129   | 132   | 1,519  |
| Ireland        | 17    | 19    | 19    | 19    | 19    | 19    | 18    | 19    | 24    | 24    | 24    | 23    | 24    | 268    |
| Israel         | 9     | 8     | 9     | 10    | 11    | 12    | 12    | 14    | 13    | 23    | 36    | 37    | 38    | 232    |
| Italy          | 22    | 28    | 34    | 35    | 37    | 36    | 38    | 37    | 39    | 42    | 43    | 42    | 11    | 444    |
| Japan          | 0     | 0     | 1     | 0     | 0     | 1     | 16    | 32    | 34    | 35    | 39    | 41    | 40    | 239    |
| Malaysia       | 21    | 17    | 13    | 14    | 12    | 13    | 12    | 18    | 16    | 19    | 19    | 17    | 18    | 209    |
| Netherlands    | 37    | 38    | 38    | 38    | 38    | 39    | 39    | 40    | 41    | 42    | 42    | 44    | 44    | 520    |
| New Zealand    | 14    | 13    | 14    | 14    | 14    | 14    | 14    | 14    | 13    | 13    | 14    | 13    | 13    | 177    |
| Norway         | 27    | 25    | 31    | 31    | 31    | 30    | 30    | 29    | 28    | 30    | 30    | 29    | 28    | 379    |
| Poland         | 8     | 9     | 10    | 11    | 11    | 11    | 11    | 11    | 11    | 11    | 11    | 11    | 11    | 137    |
| Singapore      | 13    | 13    | 8     | 8     | 8     | 8     | 10    | 10    | 12    | 16    | 19    | 21    | 20    | 166    |
| South Africa   | 56    | 63    | 62    | 62    | 63    | 64    | 67    | 66    | 65    | 71    | 71    | 72    | 70    | 852    |
| Spain          | 4     | 7     | 12    | 11    | 13    | 12    | 14    | 21    | 25    | 23    | 29    | 29    | 17    | 217    |
| Sweden         | 41    | 39    | 47    | 49    | 46    | 48    | 47    | 47    | 49    | 44    | 47    | 47    | 48    | 599    |
| Switzerland    | 12    | 13    | 25    | 71    | 77    | 79    | 79    | 79    | 84    | 86    | 86    | 86    | 86    | 863    |
| Thailand       | 1     | 6     | 7     | 7     | 7     | 8     | 8     | 8     | 12    | 12    | 11    | 12    | 11    | 110    |
| United Kingdom | 146   | 145   | 145   | 149   | 148   | 151   | 150   | 152   | 147   | 169   | 170   | 170   | 168   | 2,010  |
| United States  | 1,698 | 1,721 | 1,748 | 1,745 | 1,685 | 1,736 | 1,751 | 1,750 | 1,756 | 1,822 | 1,834 | 1,831 | 1,816 | 22,893 |
| Total          | 2,760 | 2,932 | 3,054 | 3,114 | 3,079 | 3,144 | 3,195 | 3,234 | 3,201 | 3,423 | 3,468 | 3,466 | 3,396 | 41,466 |

**Panel B: Turnover by country**

| Country        | Total observations | % CEO turnover |
|----------------|--------------------|----------------|
| Australia      | 1,433              | 0.15           |
| Austria        | 165                | 0.08           |
| Belgium        | 265                | 0.14           |
| Canada         | 2,972              | 0.12           |
| China          | 403                | 0.13           |
| Finland        | 204                | 0.16           |
| France         | 1,738              | 0.09           |
| Germany        | 1,066              | 0.10           |
| Hong Kong      | 1,386              | 0.10           |
| India          | 1,519              | 0.12           |
| Ireland        | 268                | 0.11           |
| Israel         | 232                | 0.19           |
| Italy          | 444                | 0.13           |
| Japan          | 239                | 0.10           |
| Malaysia       | 209                | 0.15           |
| Netherlands    | 520                | 0.09           |
| New Zealand    | 177                | 0.08           |
| Norway         | 379                | 0.14           |
| Poland         | 137                | 0.17           |
| Singapore      | 166                | 0.10           |
| South Africa   | 852                | 0.15           |
| Spain          | 217                | 0.07           |
| Sweden         | 599                | 0.14           |
| Switzerland    | 863                | 0.13           |
| Thailand       | 110                | 0.15           |
| United Kingdom | 2,010              | 0.14           |
| United States  | 22,893             | 0.10           |
| Total          | 41,466             | 0.11           |

**Table 2 Univariate statistics CEO turnover**

This table reports univariate statistics for companies that do not experience a CEO turnover in a given year versus those that do experience a turnover event. We show the means and medians for the firm characteristics: Each row shows the mean and number of observations for firms with a CEO turnover and those without any turnover. The final column of each row provides the results of t-tests of the differences between the non and CEO turnover firms mean and median values. \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% levels, respectively.

|                                    | No Turnover |           | Turnover  |           | Sig. Diff. |        |
|------------------------------------|-------------|-----------|-----------|-----------|------------|--------|
|                                    | Mean        | Median    | Mean      | Median    | Mean       | Median |
| Assets                             | 15,329      | 1,127     | 32,184    | 1,547     | ***        | ***    |
| Market Capitalization              | 5,958       | 932       | 7,920     | 1,164     | *          | *      |
| Net Income                         | 378.85      | 46.1      | 522.21    | 55.5      | *          | *      |
| Debt Ratio                         | 0.21        | 0.18      | 0.22      | 0.18      |            |        |
| Idiosyncratic stock return         | 0.07        | 0.08      | -0.11     | -0.07     | ***        | ***    |
| Market-induced stock return        | 0.02        | 0.01      | 0.01      | 0.02      | **         | **     |
| Idiosyncratic EBITDA/Assets return | 0.03        | 0.03      | -0.02     | -0.03     | ***        | ***    |
| Market-induced EBITDA/Assets       | 0.04        | 0.05      | 0.03      | 0.04      |            |        |
| CEO Tenure                         | 3.49        | 4         | 6.59      | 6         | *          | *      |
| CEO Age                            | 55.92       | 54        | 54        | 56        | *          | *      |
| CEO Age Over 60                    | 0.32        | 0         | 0.23      | 0         | **         | **     |
| Country retirement age             | 65.09       | 65.04     | 65.23     | 65.12     |            |        |
| Director - Related Industry (DRI)  | 0.15        | 0         | 0.19      | 0         | ***        | ***    |
| CEO Pay Gap                        | 5,142,019   | 1,521,000 | 3,953,812 | 1,232,000 | **         | **     |
| CEO Pay Ratio                      | 2.88        | 1.68      | 1.96      | 1.41      | **         | **     |
| Institutional Ownership            | 44.34       | 37.65     | 44.62     | 38.97     | *          | *      |
| Institutional Ownership Change     | 0.02        | 0         | 0         | 0         | *          | *      |
| Board Size                         | 18.48       | 19        | 20.63     | 24        | **         | ***    |
| % Independent Directors            | 0.64        | 0.63      | 0.75      | 0.72      | ***        | **     |
| Dual CEO/Chair                     | 0.4         | 0         | 0.31      | 0         | ***        | ***    |
| Obs                                | 36,892      |           | 4,574     |           |            |        |



**Table 3: CEO turnover by country**

This table reports country-level estimations of CEO turnover. Panel A shows the univariate statistics. Panels B and C show the logit estimation of an indicator variable that is equal to one if CEO turnover occurred in time  $t=0$  and zero otherwise with total return in Panel B and EBITDA/Assets in Panel C. Returns are decomposed into residual and predicted components. The independent variables are lagged one year. P-values are in parenthesis. \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% levels, respectively. We control for robust standard errors clustered by firm as well as industry and year fixed effects.

**Panel A: Univariates by country**

| Country       | No Turnover |              |        |             |            | CEO Turnover |              |        |             |            |
|---------------|-------------|--------------|--------|-------------|------------|--------------|--------------|--------|-------------|------------|
|               | Age         | Total Assets | Tenure | Idio return | Idio Acctg | Age          | Total Assets | Tenure | Idio return | Idio Acctg |
| Australia     | 55          | 700.60       | 6      | 0.03        | 0.04       | 57           | 718.50       | 8      | (0.25)      | (0.02)     |
| Austria       | 54          | 3,040.50     | 4      | 0.02        | 0.03       | 55           | 4,314.65     | 3      | (0.06)      | (0.01)     |
| Belgium       | 55          | 2,643.50     | 5      | 0.08        | 0.04       | 56           | 1,735.95     | 3      | (0.07)      | 0.00       |
| Canada        | 55          | 773.60       | 5      | 0.05        | 0.04       | 57           | 694.30       | 8      | (0.21)      | (0.01)     |
| China         | 50          | 3,067.30     | 6      | 0.01        | 0.03       | 49           | 4,734.75     | 6      | (0.18)      | (0.01)     |
| Finland       | 50          | 2,401.50     | 6      | 0.08        | 0.03       | 53           | 2,411.10     | 6      | (0.12)      | (0.01)     |
| France        | 56          | 944.00       | 6      | 0.10        | 0.03       | 58           | 3,128.10     | 3      | (0.04)      | (0.00)     |
| Germany       | 54          | 958.70       | 6      | 0.08        | 0.04       | 56           | 2,129.65     | 8      | (0.11)      | (0.02)     |
| Hong Kong     | 52          | 1,302.95     | 6      | 0.03        | (0.00)     | 55           | 1,895.00     | 6      | (0.12)      | (0.03)     |
| India         | 57          | 918.40       | 6      | 0.15        | 0.05       | 55           | 2,320.15     | 6      | (0.11)      | (0.02)     |
| Ireland       | 53          | 1,825.80     | 5      | 0.10        | 0.03       | 54           | 14,275.10    | 7      | (0.04)      | (0.00)     |
| Israel        | 53          | 419.60       | 6      | 0.03        | (0.00)     | 55           | 383.20       | 6      | (0.09)      | (0.03)     |
| Italy         | 57          | 6,775.15     | 5      | 0.07        | 0.02       | 56           | 11,002.00    | 8      | (0.45)      | (0.02)     |
| Japan         | 62          | 24,235.40    | 15     | 0.03        | 0.04       | 64           | 12,942.40    | 4      | (0.13)      | 0.03       |
| Malaysia      | 50          | 3,626.50     | 6      | 0.04        | 0.02       | 54           | 4,301.55     | 8      | (0.06)      | (0.01)     |
| Netherlands   | 52          | 2,206.00     | 6      | 0.11        | 0.06       | 54           | 2,676.25     | 7      | (0.01)      | (0.01)     |
| New Zealand   | 59          | 752.40       | 6      | 0.15        | 0.07       | 56           | 2,625.85     | 7      | 0.00        | 0.01       |
| Norway        | 55          | 1,551.30     | 6      | 0.02        | 0.03       | 54           | 1,862.30     | 6      | (0.34)      | (0.01)     |
| Poland        | 52          | 9,932.45     | 6      | (0.00)      | (0.01)     | 60           | 8,008.90     | 3      | (0.25)      | 0.01       |
| Singapore     | 54          | 2,706.40     | 5      | 0.07        | 0.02       | 54           | 3,336.80     | 7      | 0.02        | 0.01       |
| South Africa  | 52          | 1,204.40     | 4      | 0.06        | 0.05       | 53           | 2,135.00     | 7      | (0.14)      | (0.01)     |
| Spain         | 51          | 3,671.40     | 6      | 0.01        | 0.02       | 60           | 10,465.50    | 5      | (0.48)      | (0.01)     |
| Sweden        | 49          | 2,404.10     | 6      | 0.11        | 0.02       | 52           | 1,181.10     | 7      | (0.08)      | (0.01)     |
| Switzerland   | 53          | 1,952.65     | 6      | 0.06        | 0.03       | 54           | 4,249.70     | 6      | (0.09)      | (0.02)     |
| Thailand      | 57          | 6,276.10     | 6      | 0.01        | 0.02       | 58           | 5,230.10     | 6      | (0.22)      | 0.01       |
| UK            | 52          | 1,726.45     | 5      | (0.00)      | 0.06       | 53           | 2,260.85     | 7      | (0.19)      | (0.01)     |
| United States | 54          | 992.20       | 5      | 0.10        | 0.03       | 56           | 1,140.50     | 7      | (0.09)      | (0.02)     |

**Panel B: Logit using return performance**

| Country        | Log(Assets) |        | Tenure    |        | Age -Retire |        | Idiosyncratic stock return |        | Market-induced stock return |        | Constant  | Obs.   | PR2    |       |
|----------------|-------------|--------|-----------|--------|-------------|--------|----------------------------|--------|-----------------------------|--------|-----------|--------|--------|-------|
| Australia      | 0.057***    | (0.00) | -0.092*** | (0.00) | 0.001       | (0.86) | -0.011**                   | (0.04) | -2.813                      | (0.31) | -1.898*** | (0.00) | 1,433  | 0.283 |
| Austria        | 0.343***    | (0.00) | -0.101    | (0.16) | 0.122**     | (0.03) | -0.292**                   | (0.01) | 2.653*                      | (0.06) | -15.105** | (0.04) | 165    | 0.189 |
| Belgium        | 0.061*      | (0.09) | 0.009     | (0.73) | 0.053       | (0.11) | -0.876                     | (0.46) | 2.839                       | (0.71) | -2.541    | (0.11) | 265    | 0.153 |
| Canada         | 0.031***    | (0.00) | -0.027*** | (0.00) | -0.026***   | (0.00) | -0.158*                    | (0.07) | -8.141                      | (0.63) | -2.938*** | (0.00) | 2,972  | 0.134 |
| China          | 0.068       | (0.90) | -0.119**  | (0.04) | 0.014       | (0.63) | -0.114***                  | (0.00) | 4.713                       | (0.17) | -2.274    | (0.27) | 403    | 0.268 |
| Finland        | -0.035**    | (0.01) | 0.048     | (0.50) | 0.119**     | (0.01) | -1.540**                   | (0.01) | -4.703                      | (0.60) | 0.192     | (0.96) | 204    | 0.104 |
| France         | 0.206***    | (0.00) | -0.009    | (0.32) | 0.048***    | (0.00) | -0.203***                  | (0.00) | -9.440                      | (0.55) | -4.385*** | (0.00) | 1,738  | 0.247 |
| Germany        | 0.196***    | (0.00) | -0.032*   | (0.07) | 0.063***    | (0.00) | -0.280**                   | (0.03) | 8.503*                      | (0.08) | -6.805*** | (0.00) | 1,066  | 0.270 |
| Hong Kong      | 0.050       | (0.44) | -0.009    | (0.55) | -0.042***   | (0.00) | -0.080*                    | (0.05) | -2.808                      | (0.87) | -5.381*** | (0.00) | 1,386  | 0.259 |
| India          | 0.273***    | (0.00) | -0.029**  | (0.04) | 0.025**     | (0.04) | -0.139*                    | (0.06) | 3.419                       | (0.87) | -5.666*** | (0.00) | 1,519  | 0.274 |
| Ireland        | 0.415***    | (0.00) | -0.006    | (0.79) | 0.088**     | (0.02) | -0.298**                   | (0.03) | -1.274                      | (0.82) | -6.562*** | (0.00) | 268    | 0.243 |
| Israel         | 0.035***    | (0.00) | -0.077**  | (0.02) | 0.043       | (0.15) | -0.120                     | (0.25) | 2.808                       | (0.73) | -1.140    | (0.38) | 232    | 0.310 |
| Italy          | 0.123**     | (0.06) | -0.018    | (0.26) | 0.006       | (0.77) | -0.309**                   | (0.01) | -9.315*                     | (0.09) | 3.007     | (0.26) | 444    | 0.277 |
| Japan          | 0.003**     | (0.01) | -0.020    | (0.19) | -0.080**    | (0.03) | -0.013                     | (0.26) | -5.333                      | (0.56) | 1.562     | (0.75) | 239    | 0.286 |
| Malaysia       | 0.025***    | (0.00) | 0.033     | (0.28) | -0.109***   | (0.00) | -3.349***                  | (0.01) | 1.501                       | (0.17) | -4.502*** | (0.00) | 209    | 0.176 |
| Netherlands    | 0.139*      | (0.06) | -0.051**  | (0.04) | -0.055*     | (0.07) | -0.112***                  | (0.01) | -2.224                      | (0.65) | -3.439*** | (0.00) | 520    | 0.247 |
| New Zealand    | 0.533**     | (0.04) | -0.033    | (0.57) | 0.047       | (0.29) | -5.976***                  | (0.01) | -0.322                      | (0.99) | -5.628*** | (0.00) | 177    | 0.239 |
| Norway         | 0.061       | (0.62) | -0.030    | (0.21) | 0.019       | (0.44) | -0.173                     | (0.39) | -4.043                      | (0.15) | 1.187     | (0.45) | 379    | 0.257 |
| Poland         | -0.019      | (0.19) | -0.167    | (0.16) | -0.085**    | (0.03) | -0.327                     | (0.79) | -1.490                      | (0.83) | 0.892     | (0.80) | 137    | 0.203 |
| Singapore      | 0.154       | (0.33) | -0.140**  | (0.02) | 0.034       | (0.60) | -1.882                     | (0.83) | 9.181                       | (0.45) | -4.917    | (0.33) | 166    | 0.296 |
| South Africa   | 0.228***    | (0.00) | 0.005     | (0.67) | 0.040**     | (0.03) | -0.298***                  | (0.00) | -8.013**                    | (0.02) | -3.391*** | (0.00) | 852    | 0.107 |
| Spain          | 0.143***    | (0.00) | 0.009     | (0.77) | 0.182***    | (0.00) | -0.631*                    | (0.06) | 1.202                       | (0.16) | -11.933** | (0.03) | 217    | 0.208 |
| Sweden         | 0.056       | (0.74) | -0.032*   | (0.06) | 0.056***    | (0.00) | -0.390*                    | (0.06) | 4.213**                     | (0.02) | -4.870*** | (0.00) | 599    | 0.228 |
| Switzerland    | 0.151***    | (0.00) | -0.025*   | (0.09) | 0.051***    | (0.00) | -0.743***                  | (0.00) | -1.428                      | (0.75) | -4.118*** | (0.00) | 863    | 0.285 |
| Thailand       | 0.019       | (0.12) | -0.064    | (0.19) | 0.054       | (0.37) | -1.923*                    | (0.10) | -2.901                      | (0.77) | -1.253    | (0.74) | 110    | 0.183 |
| United Kingdom | 0.142***    | (0.00) | -0.041*** | (0.00) | 0.031**     | (0.01) | -0.119***                  | (0.00) | -1.080                      | (0.57) | -3.385*** | (0.00) | 2,010  | 0.125 |
| United States  | 0.048***    | (0.00) | -0.047*** | (0.00) | 0.029***    | (0.00) | -0.137***                  | (0.00) | -4.635                      | (0.62) | -2.646*** | (0.00) | 22,893 | 0.277 |

**Panel C: Logit using operating performance**

| Country        | Log(Assets) |        | Tenure    |        | Age -Retire |        | Idiosyncratic<br>EBITDA/Assets<br>return |        | Market-induced<br>EBITDA/Assets |        | Constant  |        | Obs.   | PR2   |
|----------------|-------------|--------|-----------|--------|-------------|--------|--|--------|---------------------------------|--------|-----------|--------|--------|-------|
|                |             |        |           |        |             |        |  |        |                                 |        |           |        |        |       |
| Australia      | 0.084**     | (0.02) | -0.096*** | (0.00) | 0.001       | (0.81) | -1.268***                                | (0.00) | -0.584*                         | (0.05) | -2.106*** | (0.00) | 1,433  | 0.290 |
| Austria        | 0.235**     | (0.03) | -0.063    | (0.32) | 0.070       | (0.16) | -5.116**                                 | (0.05) | -1.265                          | (0.48) | -5.302    | (0.11) | 165    | 0.205 |
| Belgium        | 0.068*      | (0.05) | 0.007     | (0.79) | 0.047       | (0.16) | 2.073                                    | (0.45) | -2.096                          | (0.82) | -2.133    | (0.16) | 265    | 0.114 |
| Canada         | 0.222***    | (0.00) | -0.027*** | (0.00) | 0.027***    | (0.00) | -0.034***                                | (0.00) | 0.160                           | (0.83) | -3.028*** | (0.00) | 2,972  | 0.133 |
| China          | 0.041       | (0.64) | -0.115**  | (0.05) | 0.008       | (0.80) | -1.124***                                | (0.00) | -1.708                          | (0.29) | 0.435     | (0.78) | 403    | 0.267 |
| Finland        | -0.039      | (0.79) | 0.019     | (0.80) | 0.137***    | (0.00) | -2.262*                                  | (0.06) | -3.823                          | (0.21) | -0.896    | (0.59) | 204    | 0.269 |
| France         | 0.211***    | (0.00) | -0.008    | (0.37) | 0.045***    | (0.00) | -1.027***                                | (0.03) | -1.007**                        | (0.03) | -4.556*** | (0.00) | 1,738  | 0.253 |
| Germany        | 0.192***    | (0.00) | -0.033*   | (0.06) | 0.055***    | (0.00) | -0.463**                                 | (0.02) | -0.146**                        | (0.02) | -2.675*** | (0.00) | 1,066  | 0.256 |
| Hong Kong      | 0.043       | (0.36) | -0.007    | (0.64) | 0.043***    | (0.00) | -0.546**                                 | (0.01) | -2.479**                        | (0.01) | -5.044*** | (0.00) | 1,386  | 0.260 |
| India          | 0.265***    | (0.00) | -0.030**  | (0.04) | 0.021*      | (0.08) | -0.508**                                 | (0.02) | -0.980**                        | (0.02) | -5.339*** | (0.00) | 1,519  | 0.254 |
| Ireland        | 0.399***    | (0.00) | 0.001     | (0.95) | 0.083**     | (0.02) | -5.649**                                 | (0.01) | -1.675***                       | (0.01) | -7.989*** | (0.00) | 268    | 0.248 |
| Israel         | 0.257***    | (0.00) | -0.065*   | (0.05) | 0.055*      | (0.07) | -5.428**                                 | (0.02) | 3.438                           | (0.67) | -1.657    | (0.16) | 232    | 0.309 |
| Italy          | 0.113       | (0.14) | -0.023    | (0.15) | 0.009       | (0.67) | -7.499**                                 | (0.04) | -0.600                          | (0.28) | -1.695    | (0.22) | 444    | 0.288 |
| Japan          | 0.345**     | (0.02) | -0.021    | (0.15) | 0.075**     | (0.04) | -3.678                                   | (0.38) | 3.867                           | (0.92) | -0.097    | (0.97) | 239    | 0.277 |
| Malaysia       | 0.350***    | (0.00) | 0.044     | (0.17) | 0.087***    | (0.01) | -1.232                                   | (0.58) | -1.782                          | (0.30) | -6.435*** | (0.00) | 209    | 0.132 |
| Netherlands    | 0.190**     | (0.03) | -0.045*   | (0.06) | 0.054*      | (0.07) | -8.019**                                 | (0.01) | 1.606                           | (0.27) | -4.178*** | (0.00) | 520    | 0.149 |
| New Zealand    | 0.308**     | (0.04) | -0.030    | (0.64) | 0.043       | (0.32) | 1.061                                    | (0.31) | -4.473                          | (0.76) | -5.443**  | (0.01) | 177    | 0.125 |
| Norway         | 0.032       | (0.67) | -0.024    | (0.30) | 0.003       | (0.90) | -0.165                                   | (0.92) | -6.753                          | (0.53) | -0.561    | (0.52) | 379    | 0.261 |
| Poland         | -0.024      | (0.88) | -0.196    | (0.12) | 0.079**     | (0.05) | 1.016                                    | (0.12) | -1.884                          | (0.51) | 0.818     | (0.74) | 137    | 0.183 |
| Singapore      | 0.166       | (0.25) | -0.130**  | (0.02) | 0.026       | (0.66) | 3.682                                    | (0.57) | -7.964                          | (0.67) | -1.107    | (0.51) | 166    | 0.297 |
| South Africa   | 0.216***    | (0.00) | 0.004     | (0.74) | 0.035**     | (0.04) | -1.091**                                 | (0.01) | -3.104***                       | (0.01) | -3.798*** | (0.00) | 852    | 0.114 |
| Spain          | 0.418***    | (0.00) | 0.005     | (0.87) | 0.184***    | (0.00) | -1.354**                                 | (0.03) | -9.739**                        | (0.02) | -7.516**  | (0.02) | 217    | 0.241 |
| Sweden         | 0.035       | (0.57) | -0.034**  | (0.05) | 0.057***    | (0.00) | -0.141*                                  | (0.09) | -0.382*                         | (0.09) | -4.587*** | (0.00) | 599    | 0.236 |
| Switzerland    | 0.162***    | (0.00) | -0.023    | (0.12) | 0.053***    | (0.00) | -1.326*                                  | (0.10) | -1.725*                         | (0.10) | -5.056*** | (0.00) | 863    | 0.294 |
| Thailand       | 0.274       | (0.26) | -0.059    | (0.23) | 0.049       | (0.40) | -4.374*                                  | (0.07) | -1.326*                         | (0.07) | -4.580*   | (0.11) | 110    | 0.148 |
| United Kingdom | 0.134***    | (0.00) | -0.041*** | (0.00) | 0.029**     | (0.02) | -0.812**                                 | (0.00) | -1.493***                       | (0.00) | -3.335*** | (0.00) | 2,010  | 0.139 |
| United States  | 0.045***    | (0.00) | -0.047*** | (0.00) | 0.029***    | (0.00) | -0.112***                                | (0.00) | -0.761***                       | (0.00) | -2.697*** | (0.00) | 22,893 | 0.280 |

**Table 4 CEO turnover and institutional influences**

This table reports the results of logit estimations in which the dependent variable is CEO turnover. Panel A uses return performance and Panel B uses operating performance. The institutional influence variables are ADRI, Competition, Hardwork, and Hard To Dismiss. For each variable, the coefficient is reported on the first line with the p-value in parentheses underneath. Panels A and B report regressions with each of the cultural variables separately. We control for robust standard errors clustered by firm as well as industry and year fixed effects. \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% levels, respectively.

**Panel A: Logit using return performance**

|                       | (1)                 | (2)                 | (3)                 | (4)                 | (5)                 | (6)                 | (7)                 | (8)                 | (9)                 | (10)                | (11)                | (12)                |
|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Log(Assets)           | 0.084***<br>(0.00)  | 0.081***<br>(0.00)  | 0.081***<br>(0.00)  | 0.082***<br>(0.00)  | 0.065***<br>(0.00)  | 0.059***<br>(0.00)  | 0.060***<br>(0.00)  | 0.068***<br>(0.00)  | 0.066***<br>(0.00)  | 0.063***<br>(0.00)  | 0.064***<br>(0.00)  | 0.069***<br>(0.00)  |
| Tenure                | -0.040***<br>(0.00) | -0.040***<br>(0.00) | -0.040***<br>(0.00) | -0.038***<br>(0.00) | -0.036***<br>(0.00) | -0.036***<br>(0.00) | -0.036***<br>(0.00) | -0.034***<br>(0.00) | -0.037***<br>(0.00) | -0.036***<br>(0.00) | -0.036***<br>(0.00) | -0.034***<br>(0.00) |
| Age -Retire           | 0.026***<br>(0.00)  | 0.026***<br>(0.00)  | 0.026***<br>(0.00)  | 0.025***<br>(0.00)  | 0.025***<br>(0.00)  | 0.024***<br>(0.00)  | 0.024***<br>(0.00)  | 0.023***<br>(0.00)  | 0.025***<br>(0.00)  | 0.024***<br>(0.00)  | 0.024***<br>(0.00)  | 0.023***<br>(0.00)  |
| Idiosyncratic return  | -0.162***<br>(0.00) | -0.159***<br>(0.00) | -0.158***<br>(0.00) | -0.158***<br>(0.00) | -0.134***<br>(0.00) | -0.132***<br>(0.00) | -0.133***<br>(0.00) | -0.127***<br>(0.00) | -0.133***<br>(0.00) | -0.130***<br>(0.00) | -0.131***<br>(0.00) | -0.127***<br>(0.00) |
| Market-induced return | -0.420<br>(0.74)    | -0.726<br>(0.68)    | -0.753<br>(0.67)    | 13.724***<br>(0.00) | -0.781<br>(0.52)    | -1.573<br>(0.37)    | -1.482<br>(0.40)    | 12.364***<br>(0.00) | -0.963<br>(0.39)    | -1.627<br>(0.35)    | -1.543<br>(0.38)    | 12.256***<br>(0.00) |
| ADRI                  | 0.085**<br>(0.01)   |                     |                     |                     | 0.093**<br>(0.02)   |                     |                     |                     | 0.083**<br>(0.01)   |                     |                     |                     |
| Competition           |                     | 0.069*<br>(0.10)    |                     |                     |                     | 0.017<br>(0.68)     |                     |                     |                     | 0.065<br>(0.12)     |                     |                     |
| Hardwork              |                     |                     | 0.087**<br>(0.01)   |                     |                     |                     | 0.020<br>(0.54)     |                     |                     |                     | 0.039<br>(0.17)     |                     |
| Easy to dismiss       |                     |                     |                     | 0.096***<br>(0.00)  |                     |                     |                     | 0.128***<br>(0.00)  |                     |                     |                     | 0.117***<br>(0.00)  |
| CEO Pay Ratio         |                     |                     |                     |                     | -0.003***<br>(0.01) | -0.003***<br>(0.01) | -0.003***<br>(0.01) | -0.002*<br>(0.05)   | -0.003***<br>(0.01) | -0.003***<br>(0.01) | -0.003***<br>(0.01) | -0.002*<br>(0.06)   |
| Board Indep           |                     |                     |                     |                     | 1.292***<br>(0.00)  | 1.200***<br>(0.00)  | 1.246***<br>(0.00)  | 1.046***<br>(0.00)  | 1.291***<br>(0.00)  | 1.203***<br>(0.00)  | 1.251***<br>(0.00)  | 1.052***<br>(0.00)  |
| Dual CEO/Chair        |                     |                     |                     |                     | -0.214***<br>(0.00) | -0.187***<br>(0.00) | -0.193***<br>(0.00) | -0.206***<br>(0.00) | -0.213***<br>(0.00) | -0.188***<br>(0.00) | -0.195***<br>(0.00) | -0.208***<br>(0.00) |
| Inst Own              |                     |                     |                     |                     | -0.001***<br>(0.00) | -0.001***<br>(0.00) | -0.001***<br>(0.00) | -0.001**<br>(0.02)  |                     |                     |                     |                     |
| Chg Inst Own          |                     |                     |                     |                     |                     |                     |                     |                     | -0.001***<br>(0.00) | -0.001***<br>(0.00) | -0.001***<br>(0.00) | -0.001***<br>(0.00) |
| DRI                   |                     |                     |                     |                     | 0.371***<br>(0.00)  | 0.373***<br>(0.00)  | 0.370***<br>(0.00)  | 0.348***<br>(0.00)  | 0.370***<br>(0.00)  | 0.375***<br>(0.00)  | 0.372***<br>(0.00)  | 0.344***<br>(0.00)  |
| Constant              | -2.879***<br>(0.00) | -3.047***<br>(0.00) | -3.062***<br>(0.00) | -2.696***<br>(0.00) | -2.258***<br>(0.00) | -2.313***<br>(0.00) | -2.216***<br>(0.00) | -2.307***<br>(0.00) | -2.358***<br>(0.00) | -2.377***<br>(0.00) | -2.272***<br>(0.00) | -2.363***<br>(0.00) |
| Observations          | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              |
| PR2                   | 0.198               | 0.192               | 0.192               | 0.162               | 0.199               | 0.196               | 0.196               | 0.171               | 0.199               | 0.194               | 0.194               | 0.168               |

**Panel B: Logit using operating performance**

|                    | (1)                 | (2)                 | (3)                 | (4)                 | (5)                 | (6)                 | (7)                 | (8)                 | (9)                 | (10)                | (11)                | (12)                |
|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Log(Assets)        | 0.088***<br>(0.00)  | 0.086***<br>(0.00)  | 0.086***<br>(0.00)  | 0.088***<br>(0.00)  | 0.068***<br>(0.00)  | 0.063***<br>(0.00)  | 0.064***<br>(0.00)  | 0.069***<br>(0.00)  | 0.070***<br>(0.00)  | 0.067***<br>(0.00)  | 0.068***<br>(0.00)  | 0.070***<br>(0.00)  |
| Tenure             | -0.040***<br>(0.00) | -0.039***<br>(0.00) | -0.039***<br>(0.00) | -0.035***<br>(0.00) | -0.036***<br>(0.00) | -0.035***<br>(0.00) | -0.035***<br>(0.00) | -0.031***<br>(0.00) | -0.036***<br>(0.00) | -0.035***<br>(0.00) | -0.035***<br>(0.00) | -0.031***<br>(0.00) |
| Age -Retire        | 0.026***<br>(0.00)  | 0.026***<br>(0.00)  | 0.026***<br>(0.00)  | 0.023***<br>(0.00)  | 0.025***<br>(0.00)  | 0.024***<br>(0.00)  | 0.024***<br>(0.00)  | 0.021***<br>(0.00)  | 0.025***<br>(0.00)  | 0.025***<br>(0.00)  | 0.024***<br>(0.00)  | 0.022***<br>(0.00)  |
| Idio EBITDA/Assets | -0.405***<br>(0.00) | -0.406***<br>(0.00) | -0.406***<br>(0.00) | -0.235**<br>(0.02)  | -0.322***<br>(0.00) | -0.345***<br>(0.00) | -0.343***<br>(0.00) | -0.198**<br>(0.05)  | -0.321***<br>(0.00) | -0.333***<br>(0.00) | -0.331***<br>(0.00) | -0.194*<br>(0.05)   |
| Mkt EBITDA/Assets  | -0.809**<br>(0.02)  | -0.868**<br>(0.02)  | -0.876**<br>(0.02)  | -0.446<br>(0.11)    | -0.707**<br>(0.02)  | -0.814**<br>(0.03)  | -0.794**<br>(0.03)  | -0.265<br>(0.35)    | -0.697**<br>(0.02)  | -0.800**<br>(0.03)  | -0.779**<br>(0.04)  | -0.254<br>(0.37)    |
| ADRI               | 0.081**<br>(0.02)   |                     |                     |                     | 0.089**<br>(0.03)   |                     |                     |                     | 0.080**<br>(0.02)   |                     |                     |                     |
| Competition        |                     | 0.020**<br>(0.01)   |                     |                     |                     | 0.064<br>(0.13)     |                     |                     |                     | 0.061<br>(0.14)     |                     |                     |
| Hardwork           |                     |                     | 0.082**<br>(0.02)   |                     |                     |                     | 0.026<br>(0.43)     |                     |                     |                     | 0.035<br>(0.22)     |                     |
| Easy to dismiss    |                     |                     |                     | 0.054**<br>(0.02)   |                     |                     |                     | 0.088***<br>(0.00)  |                     |                     |                     | 0.080***<br>(0.00)  |
| CEO Pay Ratio      |                     |                     |                     |                     | -0.003***<br>(0.01) | -0.003***<br>(0.01) | -0.003***<br>(0.01) | -0.002*<br>(0.09)   | -0.003***<br>(0.01) | -0.003***<br>(0.01) | -0.003***<br>(0.01) | -0.002*<br>(0.10)   |
| Board Indep        |                     |                     |                     |                     | 1.297***<br>(0.00)  | 1.208***<br>(0.00)  | 1.252***<br>(0.00)  | 1.033***<br>(0.00)  | 1.296***<br>(0.00)  | 1.211***<br>(0.00)  | 1.256***<br>(0.00)  | 1.040***<br>(0.00)  |
| Dual CEO/Chair     |                     |                     |                     |                     | -0.214***<br>(0.00) | -0.188***<br>(0.00) | -0.194***<br>(0.00) | -0.243***<br>(0.00) | -0.214***<br>(0.00) | -0.189***<br>(0.00) | -0.196***<br>(0.00) | -0.245***<br>(0.00) |
| Inst Own           |                     |                     |                     |                     | -0.001***<br>(0.00) | -0.001***<br>(0.00) | -0.001***<br>(0.00) | -0.001*<br>(0.05)   |                     |                     |                     |                     |
| Chg Inst Own       |                     |                     |                     |                     |                     |                     |                     |                     | -0.001***<br>(0.00) | -0.001***<br>(0.00) | -0.001***<br>(0.00) | -0.001***<br>(0.00) |
| DRI                |                     |                     |                     |                     | 0.369***<br>(0.00)  | 0.370***<br>(0.00)  | 0.368***<br>(0.00)  | 0.395***<br>(0.00)  | 0.368***<br>(0.00)  | 0.372***<br>(0.00)  | 0.370***<br>(0.00)  | 0.393***<br>(0.00)  |
| Constant           | -2.876***<br>(0.00) | -3.044***<br>(0.00) | -3.068***<br>(0.00) | -2.476***<br>(0.00) | -2.257***<br>(0.00) | -2.317***<br>(0.00) | -2.224***<br>(0.00) | -2.121***<br>(0.00) | -2.350***<br>(0.00) | -2.373***<br>(0.00) | -2.273***<br>(0.00) | -2.174***<br>(0.00) |
| Obs.               | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              | 41,466              |
| PR2                | 0.199               | 0.193               | 0.193               | 0.136               | 0.100               | 0.197               | 0.197               | 0.148               | 0.100               | 0.195               | 0.195               | 0.146               |

**Table 5: CEO turnover and institutional influences segmented at median**

This table reports the results of logit estimations in which the dependent variable is CEO turnover. Panel A uses Total Returns to measure performance and Panel B uses EBITDA/Assets to measure performance. The institutional influence variables include ADRI, Competition, Hardwork, and Hard to Dismiss and are segmented into high and low regimes by medians. For each variable, the coefficient is reported on the first line with the p-value in parentheses underneath. We control for robust standard errors clustered by firm as well as industry and year fixed effects. \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% levels, respectively.

**Panel A: Logit using return performance**

|                                | (1)                 | (2)                 | (3)                 | (4)                 | (5)                 | (6)                 | (7)                 | (8)                 |
|--------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                                | ADRI                |                     | Competition         |                     | Hardwork            |                     | Easy to dismiss     |                     |
|                                | Low                 | High                | Low                 | High                | Low                 | High                | Low                 | High                |
| Log(Assets)                    | 0.076***<br>(0.00)  | 0.061***<br>(0.00)  | 0.061***<br>(0.00)  | 0.063***<br>(0.00)  | 0.048***<br>(0.00)  | 0.078***<br>(0.00)  | 0.065***<br>(0.00)  | 0.068***<br>(0.00)  |
| Tenure                         | -0.042***<br>(0.00) | -0.027***<br>(0.00) | -0.042***<br>(0.00) | -0.026***<br>(0.00) | -0.039***<br>(0.00) | -0.029***<br>(0.00) | -0.042***<br>(0.00) | -0.023***<br>(0.00) |
| Age -Retire                    | 0.028***<br>(0.00)  | 0.023***<br>(0.00)  | 0.025***<br>(0.00)  | 0.024***<br>(0.00)  | 0.022***<br>(0.00)  | 0.027***<br>(0.00)  | 0.025***<br>(0.00)  | 0.027***<br>(0.00)  |
| Idiosyncratic return           | -0.303***<br>(0.00) | -0.083***<br>(0.00) | -0.322***<br>(0.00) | -0.072***<br>(0.00) | -0.313***<br>(0.00) | -0.045***<br>(0.00) | -0.147***<br>(0.00) | -0.195***<br>(0.00) |
| Market-induced return          | 1.541<br>(0.90)     | 3.354<br>(0.37)     | -15.569*<br>(0.08)  | 4.639<br>(0.22)     | -14.653*<br>(0.06)  | 4.797<br>(0.23)     | 5.449<br>(0.44)     | 3.888<br>(0.34)     |
| CEO Pay Ratio                  | -0.011***<br>(0.00) | -0.002*<br>(0.05)   | -0.001***<br>(0.02) | -0.011***<br>(0.00) | -0.001**<br>(0.03)  | -0.015***<br>(0.00) | -0.023***<br>(0.00) | -0.001**<br>(0.02)  |
| Board Indep                    | 1.882***<br>(0.00)  | 0.769***<br>(0.00)  | 1.998***<br>(0.00)  | 0.557***<br>(0.00)  | 1.952***<br>(0.00)  | 0.455**<br>(0.01)   | 1.526***<br>(0.00)  | 0.865***<br>(0.00)  |
| Dual CEO/Chair                 | -0.275***<br>(0.00) | -0.081<br>(0.16)    | -0.186***<br>(0.00) | -0.155**<br>(0.01)  | -0.205***<br>(0.00) | -0.139**<br>(0.05)  | -0.255***<br>(0.00) | -0.035<br>(0.58)    |
| Inst Own                       | -0.002**<br>(0.03)  | -0.003**<br>(0.01)  | -0.001**<br>(0.04)  | -0.003**<br>(0.02)  | -0.001**<br>(0.05)  | -0.002**<br>(0.04)  | -0.002**<br>(0.05)  | -0.003**<br>(0.01)  |
| Inst Own*Idiosyncratic return  | -0.005***<br>(0.00) | -0.001<br>(0.13)    | -0.004***<br>(0.00) | -0.001<br>(0.21)    | -0.004***<br>(0.00) | -0.001<br>(0.09)    | -0.003**<br>(0.02)  | -0.001***<br>(0.00) |
| Inst Own*Market-induced return | -0.011<br>(0.81)    | -0.072*<br>(0.07)   | -0.034<br>(0.43)    | -0.055<br>(0.17)    | -0.027<br>(0.52)    | -0.061<br>(0.13)    | -0.011<br>(0.79)    | -0.078*<br>(0.05)   |
| DRI                            | 0.231**<br>(0.01)   | 0.504***<br>(0.00)  | 0.265***<br>(0.00)  | 0.543***<br>(0.00)  | 0.324***<br>(0.00)  | 0.526***<br>(0.00)  | 0.324***<br>(0.00)  | 0.447***<br>(0.00)  |
| DRI*Idiosyncratic return       | -0.078***<br>(0.00) | -0.057**<br>(0.05)  | -0.017*<br>(0.09)   | -0.001**<br>(0.03)  | -0.017*<br>(0.05)   | -0.011**<br>(0.04)  | -0.141<br>(0.80)    | -0.104**<br>(0.02)  |
| DRI*Market-induced return      | -0.706<br>(0.85)    | -1.130<br>(0.73)    | -0.534<br>(0.88)    | -2.864<br>(0.38)    | -1.436<br>(0.66)    | -2.119<br>(0.54)    | -0.902<br>(0.78)    | -0.525<br>(0.88)    |
| Constant                       | -1.911***<br>(0.00) | -3.432***<br>(0.00) | -1.818***<br>(0.00) | -3.529***<br>(0.00) | -1.834***<br>(0.00) | -3.430***<br>(0.00) | -2.116***<br>(0.00) | -3.488***<br>(0.00) |
| Observations                   | 38,243              | 3,223               | 8,351               | 3,315               | 8,847               | 32,619              | 13,639              | 27,827              |
| Pseudo R-squared               | 0.107               | 0.101               | 0.189               | 0.120               | 0.187               | 0.125               | 0.198               | 0.109               |

**Panel B: Logit using operating performance**

|   | (1)                 | (2)                 | (3)                 | (4)                 | (5)                 | (6)                 | (7)                 | (8)                 |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   | ADRI                |                     | Competition         |                     | Hardwork            |                     | Easy to dismiss     |                     |
|   | Low                 | High                | Low                 | High                | Low                 | High                | Low                 | High                |
| Log(Assets)                                 | 0.076***<br>(0.00)  | 0.067***<br>(0.00)  | 0.064***<br>(0.00)  | 0.068***<br>(0.00)  | 0.052***<br>(0.00)  | 0.083***<br>(0.00)  | 0.067***<br>(0.00)  | 0.076***<br>(0.00)  |
| Tenure                                      | -0.042***<br>(0.00) | -0.027***<br>(0.00) | -0.042***<br>(0.00) | -0.026***<br>(0.00) | -0.039***<br>(0.00) | -0.029***<br>(0.00) | -0.042***<br>(0.00) | -0.023***<br>(0.00) |
| Age -Retire                                 | 0.029***<br>(0.00)  | 0.024***<br>(0.00)  | 0.024***<br>(0.00)  | 0.024***<br>(0.00)  | 0.022***<br>(0.00)  | 0.027***<br>(0.00)  | 0.025***<br>(0.00)  | 0.027***<br>(0.00)  |
| Idiosyncratic EBITDA/Assets return          | -0.638***<br>(0.00) | -0.432<br>(0.16)    | -0.754***<br>(0.00) | -0.425<br>(0.17)    | -0.733***<br>(0.00) | -0.559*<br>(0.08)   | -0.661***<br>(0.00) | -0.605*<br>(0.06)   |
| Market-induced EBITDA/Assets                | -0.430<br>(0.64)    | -2.339**<br>(0.03)  | -1.447*<br>(0.08)   | -1.877*<br>(0.09)   | -1.643**<br>(0.04)  | -1.641<br>(0.14)    | -0.161<br>(0.86)    | -3.742***<br>(0.00) |
| CEO Pay Ratio                               | -0.011***<br>(0.00) | -0.002*<br>(0.10)   | -0.001<br>(0.31)    | -0.011***<br>(0.00) | -0.001<br>(0.29)    | -0.015***<br>(0.00) | -0.023***<br>(0.00) | -0.001<br>(0.42)    |
| Board Indep                                 | 1.896***<br>(0.00)  | 0.772***<br>(0.00)  | 2.001***<br>(0.00)  | 0.567***<br>(0.00)  | 1.954***<br>(0.00)  | 0.462**<br>(0.01)   | 1.528***<br>(0.00)  | 0.876***<br>(0.00)  |
| Dual CEO/Chair                              | -0.279***<br>(0.00) | -0.082<br>(0.16)    | -0.187***<br>(0.00) | -0.157**<br>(0.01)  | -0.207***<br>(0.00) | -0.140**<br>(0.05)  | -0.260***<br>(0.00) | -0.036<br>(0.57)    |
|   |                     | -0.004***           |                     |                     |                     |                     |                     |                     |
| Inst Own                                    | -0.003***<br>(0.00) |                     | -0.002***<br>(0.00) | 0.001<br>(0.71)     | -0.002**<br>(0.03)  | -0.001<br>(0.98)    | -0.003***<br>(0.00) | -0.001<br>(0.91)    |
| Inst Own*Idiosyncratic EBITDA/Assets return | -0.014***<br>(0.00) | -0.006<br>(0.53)    | -0.015***<br>(0.00) | -0.002<br>(0.80)    | -0.014***<br>(0.00) | -0.005<br>(0.60)    | -0.006<br>(0.50)    | -0.014***<br>(0.00) |
| Inst Own*Market-induced EBITDA/Assets       | 0.009<br>(0.38)     | 0.027<br>(0.20)     | 0.015<br>(0.13)     | 0.016<br>(0.46)     | 0.016*<br>(0.10)    | 0.011<br>(0.61)     | 0.010<br>(0.32)     | 0.040*<br>(0.08)    |
|   |                     | 0.455***            |                     |                     |                     |                     |                     |                     |
| DRI   | 0.195***<br>(0.00)  |                     | 0.222***<br>(0.00)  | 0.457***<br>(0.00)  | 0.257***<br>(0.00)  | 0.453***<br>(0.00)  | 0.286***<br>(0.00)  | 0.384***<br>(0.00)  |
| DRI*Idiosyncratic EBITDA/Assets return      | -0.009***<br>(0.00) | -0.126**<br>(0.02)  | -0.019*<br>(0.09)   | -0.291**<br>(0.03)  | -0.009*<br>(0.05)   | -0.271**<br>(0.04)  | 0.031<br>(0.80)     | -0.465**<br>(0.02)  |
| DRI*Market-induced EBITDA/Assets            | 0.738<br>(0.32)     | 0.905<br>(0.41)     | 0.881<br>(0.22)     | 0.899<br>(0.42)     | 0.926<br>(0.19)     | 0.997<br>(0.38)     | 0.444<br>(0.55)     | 1.663<br>(0.16)     |
| Constant                                    | -1.851***<br>(0.00) | -3.272***<br>(0.00) | -1.884***<br>(0.00) | -3.374***<br>(0.00) | -1.892***<br>(0.00) | -3.288***<br>(0.00) | -2.033***<br>(0.00) | -3.285***<br>(0.00) |
| Observations                                | 38,243              | 3,223               | 8,351               | 33,115              | 8,847               | 32,619              | 13,639              | 27,827              |
| Pseudo R-squared                            | 0.127               | 0.134               | 0.129               | 0.133               | 0.130               | 0.130               | 0.130               | 0.133               |

**Table 6: CEO Turnover and Culture**

This table provides the results of factor analysis on the institutional influences which are then included in the regression models used in Table 5. Panel A reports the loadings from a Varimax Factor Analysis. Panel B shows the results of multivariate regression analysis. Regressions (1) and (2) present results of factors and performance on turnover, while regressions (3) and (4) include firm-specific governance measures. We use return performance measures in regressions (1) and (3) and accounting performance measures in (2) and (4). We control for robust standard errors clustered by firm as well as industry and year fixed effects. \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% levels, respectively.

**Panel A: Varimax Factor Analysis**

| Variable        | Factor 1 | Factor 2 |
|-----------------|----------|----------|
| ADRI            | 0.4216   | 0.8428   |
| Competition     | 0.908    | 0.1896   |
| Hardwork        | 0.9206   | 0.0419   |
| Easy To Dismiss | 0.0517   | 0.9569   |



**Panel B: CEO turnover and factors**

|                                    | (1)                 | (2)                 | (3)                 | (4)                 |
|------------------------------------|---------------------|---------------------|---------------------|---------------------|
| Log(Assets)                        | 0.083***<br>(0.00)  | 0.087***<br>(0.00)  | 0.066***<br>(0.00)  | 0.069***<br>(0.00)  |
| Tenure                             | -0.041***<br>(0.00) | -0.040***<br>(0.00) | -0.037***<br>(0.00) | -0.037***<br>(0.00) |
| Age -Retire                        | 0.027***<br>(0.00)  | 0.027***<br>(0.00)  | 0.025***<br>(0.00)  | 0.025***<br>(0.00)  |
| Idiosyncratic stock return         | -0.168***<br>(0.00) |                     | -0.140***<br>(0.00) |                     |
| Market-induced stock return        | -0.058<br>(0.98)    |                     | -0.606<br>(0.77)    |                     |
| Idiosyncratic EBITDA/Assets return |                     | -0.419***<br>(0.00) |                     | -0.347***<br>(0.00) |
| Market-induced EBITDA/Assets       |                     | -0.687<br>(0.12)    |                     | -0.658*<br>(0.09)   |
| CEO Pay Ratio                      |                     |                     | -0.003**<br>(0.02)  | -0.004***<br>(0.00) |
| Board Indep                        |                     |                     | 1.313***<br>(0.00)  | 1.320***<br>(0.00)  |
| Dual CEO/Chair                     |                     |                     | -0.211***<br>(0.00) | -0.213***<br>(0.00) |
| Inst Own                           |                     |                     | -0.001**<br>(0.02)  | -0.001***<br>(0.00) |
| DRI                                |                     |                     | 0.370***<br>(0.00)  | 0.366***<br>(0.00)  |
| F1                                 | 0.045**<br>(0.01)   | 0.088**<br>(0.02)   | 0.033<br>(0.29)     | 0.045<br>(0.32)     |
| F2                                 | 0.083***<br>(0.01)  | 0.069***<br>(0.00)  | 0.114***<br>(0.00)  | 0.055*<br>(0.07)    |
| Idio Return*F1                     | -0.037**<br>(0.05)  | -0.057**<br>(0.02)  | 0.037<br>(0.35)     | 0.014<br>(0.90)     |
| Market *F1                         | -0.855<br>(0.46)    | 1.181<br>(0.12)     | -0.223<br>(0.85)    | 0.763<br>(0.31)     |
| Market*F2                          | 0.029<br>(0.43)     | 0.108<br>(0.31)     | 0.021<br>(0.58)     | -0.125<br>(0.24)    |
| Idio*F2                            | -0.104**<br>(0.91)  | -0.171**<br>(0.23)  | -0.103**<br>(0.03)  | -0.157*<br>(0.05)   |
| Constant                           | -2.990***<br>(0.00) | -2.985***<br>(0.00) | -2.523***<br>(0.00) | -2.514***<br>(0.00) |
| Observations                       | 41,466              | 41,466              | 41,466              | 41,466              |
| Pseudo R-squared                   | 0.199               | 0.199               | 0.105               | 0.105               |

**Table 7 Abnormal returns around the announcement of the CEO departure**

This table reports the cumulative 3-day abnormal returns around the announcement of the CEO's departure. Panel A shows the univariate breakout of the abnormal returns. Panel B shows the multivariate regression analysis using abnormal returns as the dependent variable and including controls for firm and institutional influence characteristics. We control for robust standard errors clustered by firm as well as industry and year fixed effects. \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% levels, respectively.

**Panel A: Country Average Abnormal Returns.**

| Country        | Abnormal return | Sig. Level | Number of Observations |
|----------------|-----------------|------------|------------------------|
| Australia      | -1.181%         | *          | 27                     |
| Austria        | -0.969%         |            | 11                     |
| Belgium        | -1.815%         | ***        | 13                     |
| Canada         | 2.502%          | ***        | 72                     |
| China          | -0.395%         |            | 6                      |
| France         | -1.496%         | **         | 56                     |
| Germany        | 1.999%          | ***        | 65                     |
| Hong Kong      | 1.381%          | ***        | 14                     |
| India          | -0.288%         |            | 14                     |
| Ireland        | 0.192%          |            | 9                      |
| Israel         | -1.632%         | **         | 6                      |
| Italy          | -4.997%         | ***        | 8                      |
| Japan          | 1.109%          |            | 4                      |
| Malaysia       | 1.888%          | **         | 6                      |
| Netherlands    | 1.656%          | ***        | 16                     |
| Norway         | 1.582%          | **         | 3                      |
| Singapore      | 1.829%          | **         | 4                      |
| South Africa   | -0.950%         |            | 36                     |
| Spain          | -0.948%         |            | 9                      |
| Sweden         | 0.344%          |            | 5                      |
| Switzerland    | 0.298%          |            | 13                     |
| Thailand       | -0.146%         |            | 6                      |
| United Kingdom | 0.567%          |            | 51                     |
| United States  | -0.045%         |            | 556                    |
| Total          | 0.157%          |            | 1,010                  |

**Panel B: Multivariate analysis of abnormal returns.**

|                                    | (1)                | (2)                | (3)                | (4)                | (5)                 | (6)                 | (7)                | (8)                 |
|------------------------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|--------------------|---------------------|
| Log(Assets)                        | -0.001<br>(0.73)   | -0.001<br>(0.67)   | -0.001<br>(0.29)   | -0.002**<br>(0.05) | -0.001<br>(0.61)    | -0.001<br>(0.42)    | -0.001<br>(0.16)   | -0.002**<br>(0.04)  |
| Tenure                             | 0.001<br>(0.22)    | 0.001<br>(0.18)    | 0.001<br>(0.17)    | 0.001<br>(0.38)    | 0.001<br>(0.30)     | 0.001<br>(0.25)     | 0.001<br>(0.24)    | 0.001<br>(0.64)     |
| Age -Retire                        | -0.001<br>(0.30)   | -0.001<br>(0.25)   | -0.001<br>(0.16)   | -0.001<br>(0.23)   | -0.001<br>(0.32)    | -0.001<br>(0.29)    | -0.001<br>(0.19)   | -0.001<br>(0.14)    |
| Idiosyncratic stock return         | -0.012**<br>(0.02) | -0.012**<br>(0.02) | -0.012**<br>(0.02) | -0.012**<br>(0.02) |                     |                     |                    |                     |
| Market-induced stock return        | -0.003<br>(0.97)   | -0.005<br>(0.97)   | -0.006<br>(0.97)   | -0.196**<br>(0.05) |                     |                     |                    |                     |
| Idiosyncratic EBITDA/Assets return |                    |                    |                    |                    | -0.016<br>(0.15)    | -0.015<br>(0.24)    | -0.016<br>(0.21)   | -0.025**<br>(0.04)  |
| Market-induced EBITDA/Assets       |                    |                    |                    |                    | 0.024<br>(0.79)     | 0.027<br>(0.51)     | 0.023<br>(0.57)    | -0.044<br>(0.17)    |
| CEO Pay Ratio                      | 0.017<br>(0.44)    | 0.020*<br>(0.06)   | 0.017*<br>(0.11)   | 0.018*<br>(0.07)   | 0.019<br>(0.40)     | 0.021**<br>(0.04)   | 0.019*<br>(0.07)   | 0.018*<br>(0.07)    |
| Board Indep                        | 0.012<br>(0.36)    | 0.009<br>(0.47)    | 0.013<br>(0.33)    | 0.001<br>(1.00)    | 0.010<br>(0.51)     | 0.008<br>(0.54)     | 0.012<br>(0.39)    | 0.002<br>(0.84)     |
| Dual CEO/Chair                     | -0.008**<br>(0.05) | -0.009**<br>(0.02) | -0.008*<br>(0.05)  | -0.005*<br>(0.06)  | -0.008**<br>(0.04)  | -0.009**<br>(0.02)  | -0.008**<br>(0.04) | -0.005**<br>(0.01)  |
| Inst Own                           | -0.001**<br>(0.02) | -0.001**<br>(0.02) | -0.001*<br>(0.07)  | -0.001**<br>(0.05) | -0.001***<br>(0.00) | -0.001***<br>(0.01) | -0.001**<br>(0.03) | -0.001***<br>(0.01) |
| DRI                                | 0.009**<br>(0.02)  | 0.009**<br>(0.04)  | 0.009**<br>(0.04)  | 0.008*<br>(0.05)   | 0.010**<br>(0.03)   | 0.010**<br>(0.03)   | 0.010**<br>(0.03)  | 0.008**<br>(0.05)   |
| ADRI                               | 0.001<br>(0.91)    |                    |                    |                    | 0.003***<br>(0.01)  |                     |                    |                     |
| Competition                        |                    | 0.007**<br>(0.01)  |                    |                    |                     | 0.007**<br>(0.02)   |                    |                     |
| Hardwork                           |                    |                    | 0.003**<br>(0.02)  |                    |                     |                     | 0.003*<br>(0.05)   |                     |
| Easy to Dismiss                    |                    |                    |                    | 0.002*<br>(0.05)   |                     |                     |                    | 0.002*<br>(0.05)    |
| Constant                           | -0.001<br>(0.96)   | 0.024<br>(0.32)    | -0.012<br>(0.65)   | 0.011<br>(0.21)    | 0.001<br>(0.96)     | 0.026<br>(0.29)     | -0.009<br>(0.73)   | 0.011<br>(0.22)     |
| Observations                       | 1,010              | 1,010              | 1,010              | 1,010              | 1,010               | 1,010               | 1,010              | 1,010               |
| Adjusted R-squared                 | 0.135              | 0.137              | 0.135              | 0.034              | 0.132               | 0.134               | 0.132              | 0.029               |