CEOs and Firm Policy: A Behavioural Perspective

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Abstract

This thesis takes a behavioural perspective in investigating three topics at the intersection of Corporate Governance, CEO behaviour and Firm policy. The first essay investigates CEO option exercise behaviour and examines the validity of option-based measures of overconfidence. The option-based measures of overconfidence are based on CEO's holding of vested options and follow the logic that CEOs who repeatedly keep their vested options and tie their wealth to firm idiosyncratic risk must be overconfident in their ability to create value for the firm. This research introduces $RationalOptimisim$ as an alternative explanation for why CEOs hold their exercisable options; CEOs keep their options in firms with sound financial condition and exercise their options in firm with no prospect. This research finds that the pattern in the data is consistent with both explanations and questions the validity of option-based measures of overconfidence. The second essay argues that culture can shape corporate control and introduces a new explanation for hostile takeover resistance. Honor culture is characterised by reputation maintenance and defence. It shows that firms in honor places are more resistant to hostile takeovers and are more likely to win the corporate control contests. The third essay investigates CEO political ideology as a determinant of CEO attitude towards firm stakeholders. It examines the effect of CEO political ideology on corporate dividend policy. It finds that firms led by liberal CEOs are more likely to be non-dividend paying firms and have consistently lower dividend payouts; the results are stronger when these CEOs are more powerful and when the strength of shareholder rights is weak. This research also reveals that conservative CEOs have a specific managerial style and pay more dividends at the cost of the employees.

AUTHOR'S DECLARATION

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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Dedication

To my beloved parents, my wonderful wife Zohreh, my sweet daughter Ronika, and my inspiring brothers and sisters for their endless love, support and encouragement.

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Chapter 1

Introduction

Introduction[1]

This thesis takes a behavioural perspective in investigating three topics at the intersection of Corporate Governance, CEO behaviour and Firm policy. The behavioural perspective relaxes the a priori rationality assumption in decision making and studies the agents as they behave in the real context. The behavioural perspective is emerging to be one of the key lenses for studying how the decisions are made at the top level of corporations. Because of the separation of ownership and control in modern corporations, one of the primary areas of corporate governance research is the study of how to monitor CEOs, how to align their interest with that of shareholders and how to reduce the agency cost. Central to the monitoring role of corporate boards is the understanding of how CEOs behave. Apart from this, CEO behaviour is closely linked to firm policy. Unlike what is predicted by the neoclassical view of the firm that top managers are homogeneous, findings from recent empirical research lend supports to the view that CEOs have different managerial styles and behave differently and these differences influence various firm policies.

The overall aim of this work is to investigate CEO behaviour and its implications for corporate governance and firm policy. The purpose is to contribute to the thriving behavioural finance literature and advance our knowledge of the field. The thesis tries to achieve its objective by offering three important empirical studies that explore how CEOs deviate from making rational decisions. While the focus of the first essay is on a managerial bias, the second and the third studies present instances where cultural values and political ideologies are important determinants of CEO decisions. The research objectives are as follows:

- Objective 1: To explore and interpret CEO option exercise behaviour using the theoretical concepts of overconfidence and rational optimism.
- Objective 2: To investigate the cultural underpinning of hostile takeover events and to introduce a new explanation for hostile takeover resistance.
- Objective 3: To emphasize the impact of CEO attitude toward the shareholders and employees on firm policy by investigating the influence of CEO political ideology on firm dividend policy.

The first essay in this thesis investigates CEO option exercise behaviour. Overexposure of CEOs wealth to firms idiosyncratic risk is taken as a sign of CEO overconfidence. The essay investi-

[1]In chapters 2, 3 and 4, I have used the first person plural (we, our) rather than the first person singular (I, my), as these chapters are associated with two working papers and one under review paper, co-authored with my PhD supervisors and one other collaborator. I am the lead author of all three papers. The first essay (chapter 2) is co-authored with my supervisors Professor Peter Kawalek and Dr Reza Salehnejad. The second essay (chapter 3) is co-authored with my first supervisor Professor Peter Kawalek. The third essay (chapter 4) is co-authored with Professor Marc Goergen.

gates overconfidence and rational optimism as two competing explanations for why CEOs hold well in-the-money options. The paper provides evidence that the CEO's decision to hold or exercise vested options is considerably driven by firm and market conditions and the results are consistent with both explanations. The view emerging from the analysis suggests that exercise decision is endogenous to firm characteristics and it is not quite valid to take failure to exercise as a sign of CEO overconfidence.

The second essay in this thesis provides a new explanation for why a target firm might resist a hostile bid. It utilises both the contemporary and early patterns in settlement of Scots-Irish in the United States to study the effect of honour culture on the defensive behaviour of target firms in corporate control contests. Honour culture is characterised by reputation maintenance and defence. The paper examines if firms located in places with an honour culture are more resistant to hostile takeovers when becoming a target. It finds that these firms show more resistance to hostile takeovers when becoming a target, and are more likely to win the contests. Beyond the existing explanations for takeover resistance, this study sheds light on how cultural dynamics can shape the takeover outcome and corporate control.

The third essay in this thesis goes beyond understanding how managers tend to serve themselves by looking at how CEO's attitude towards the firm stakeholders shapes corporate policy. It argues that CEOs have different attitudes towards the firms stakeholders and this affects the firms strategic decisions. To illustrate this, it examines the effect of CEO political ideology on firm dividend policy. The paper hypothesizes that liberal CEOs, as compared to their conservative counterparts, pay less attention to the shareholders and this should be reflected in dividend policy. The results suggest that firms led by liberal CEOs are more likely to be the non-dividend paying firms and consistently have lower dividend payouts. The results are stronger when these CEOs are more powerful and when the strength of shareholder rights is weak. To establish the causal effect of CEO political ideology on the dividend payout, the paper investigates the changes in the dividend payout around CEO appointments. It finds that the conservative CEOs increase the dividend level considerably in the first few years after their appointment. It also reveals that the conservative CEOs have a managerial style as they finance their dividend payout using the proceeds they raise using the divestment of inefficient resources of the firm and downsizing (which comes at the cost of employees).

The findings in all three chapters have wider implications for corporate boards. Specifically, the first essay finds no support for the view that corporate boards needs more disciplinary mechanisms to deal with CEO overconfidence as suggested by Malmendier and Tate (2005). The paper argues that CEO overconfidence might or might not have an influence on corporate decisions; we are still in need of a satisfactory measure of overconfidence to understand how and to what extent overconfidence shape corporate policies.

The second essay goes against the view that market for corporate control can efficiently deal with inefficient corporate boards and discipline underperforming firms. The paper highlights

how culture can cause inefficiency in the market for corporate control. When internal mechanisms for disciplining the management fail, the theory of market for corporate control predicts that external observers (who consistently monitor the performance of the firms in the market) act to take control of the firm and respectively a hostile takeover is seen as a way of disciplining underperforming firms. This research goes beyond the managerial entrenchment hypothesis to relate the takeover resistance to culture. Even if a firm located in an honour place does not perform up to the expectations of its shareholders, an acquiring firm might find it difficult to take control of the firm by making a hostile bid for the company. It shows that culture in this specific context can restrain the power of the external mechanisms in mitigating the agency problem.

The implication of the findings of the third essay is that CEO political ideology can serve as a determinant of CEO's managerial style. Conservative CEOs tend to allocate more of firm's income to paying dividends; an increase in the dividend level by a conservative CEO is sensitive to corporate divestment and downsizing which suggest that the conservative CEOs pay more dividend at the cost of employees. Corporate boards can look at CEO political ideology as a sign of CEO managerial style when hiring a new CEO to implement a specific policy.

1.1 Background

In this section, we explores why CEOs and their decisions are important and where our study sits in the context of the behavioural school in finance.

The neoclassical theory of the firm and the CEO effect:

The neoclassical theory of the firm considers firm as a production function and analyses the firm behaviour in relation to context of firms industry. Under the neoclassical theory of the firm, the heterogeneity among firm members does not play a role. Both the theory (Hambrick and Mason, 1984) and evidence (Bertrand and Schoar, 2003) however talks to the importance of CEOs and top management teams for firm policy and strategy. Important firm policies are partly determined by executives' managerial styles and these managerial styles are themselves influenced by executives' observable characteristics, values, ideologies and cognitive biases. Evidence for the significance of observable characteristics of executives is numerous. Comparably, less evidence exists on how the managerial values, ideologies and biases can shape corporate policy. Perhaps, one of the best ways to investigate the managerial effect is to put it in the context of behavioural perspective. The behavioural perspective partly investigates how managerial decisions are far from rational and it does so by examining the managerial cognitive biases. The first essay in this thesis builds on this strand of research but the second and third essays extend the behavioural paradigm by accommodating the role of CEO culturally driven values and politically oriented ideologies in CEO decisions and consequently on the firm policy.

The behavioural perspective

The behavioural school in the finance literature deviates from the full rationality assumption held in the traditional finance. Barberis and Thaler (2003) translates rationality in two ways. First, the agent's update of their beliefs based on Bayes Law and second, given the agents beliefs, their action is normatively acceptable in the sense that it is consistent with Savages notion of Subjective Expected Utility. A great portion of the work conducted in behavioural finance centres around irrationality of the investors and how it connects to the notion of Efficient Market Hypothesis (EMH). The EMH advocates for the idea that the security prices reflect its true fundamental value. This research stream embodies numerous works on the limits to arbitrage and cognitive biases of investors such as overconfidence, optimism, conservatism and representativeness (See Barberis and Thaler (2003) for a review).

More relevant to the context of this thesis is another branch of behavioural finance which puts the managerial irrationality under scrutiny. This strand of research investigates the managerial cognitive biases in relation to various firm policies. Roll (1986) introduces the hubris hypothesis to represent instances where despite the overall minimal gains for the bidders and targets in takeovers, managers overestimate the value gains and indulge in such activities. Heaton (2002) presents a model where the capital market is efficient but the managers are overconfidence; the model relates managerial overconfidence to firm capital structure and corporate investment. Malmendier and Tate (2005, 2008) use the same model and provide evidence for the effect of managerial overconfidence on corporate investment and mergers and acquisitions.

One of the key contributions of Malmendier and Tate (2005) is the introduction of new option-based proxies (what they refer to as Holder67 and LongHolder) for CEO overconfidence. These measures are widely accepted and have found their place in the literature. Later studies have used various versions of these proxies to argue for the effect of CEO overconfidence on various firm policies, most notably investment (Malmendier and Tate, 2005; Campbell et al., 2011), financial policy (Malmendier et al., 2011; Huang-Meier et al., 2015; Aktas et al., 2015), innovation (Hirshleifer et al., 2012; Galasso and Simcoe, 2011), merger and acquisition (Malmendier and Tate, 2008), dividend payout (Deshmukh et al., 2013) and accounting practices (Schrand and Zechman, 2012; Ahmed and Duellman, 2013). A Key contribution of the first essay in this thesis to the behavioural finance literature is the investigation of the validity of option-based measures of overconfidence. But, Perhaps the most important contribution to the behavioural finance literature is the introduction of the “rational optimism" hypothesis; the idea that it is fully rational for a CEO to keep their options in a firm with sound financial history operating in a strong market condition.

The part of behavioural finance that studies managerial irrationality and its consequences is still very young and is limited to the investigation of managerial cognitive biases. Equally important but scarcely studied is how managerial values and ideologies force managers to deviate from making rational decisions. The second essay in this thesis introduces the importance

of CEO cultural values and specifically looks at the importance of cultural values for hostile takeovers. In a rational world, upon receiving a good offer from a bidding firm, the target firms in corporate control contest should accept the bid. In majority of cases, the takeover attempts take a longer time than expected to complete and a considerable number of these deals fail. This thesis argues that cultural values put a constraint on the efficient operation of a market for corporate control. This explanation is different from the previous explanations that relate takeover resistance to managerial entrenchment (Berle and Means, 1932; Jensen and Meckling, 1976) and managerial bargaining endeavour (Angwin et al., 2004; Bates and Becher, 2017). In a similar vein, the third essay emphasises the role CEO political ideology. In a pro-shareholder economy such as the United States, one expects that the CEOs commit to the legal and the societal expectations and take the side of the shareholders (as compared to other firm stakeholders) when it comes to important firm decisions. This essay shows that CEOs with liberal political ideologies makes decisions that divert from maximizing shareholder interest and pay fewer dividends when they are able to. This is different from the decisions of conservative CEOs who pay more dividends at the cost of employees. The value-driven and ideologically shaped decisions of CEOs are not an insignificant input to the firm production function; they shape important firm policies.

1.2 Research metholology

All three essays in this thesis are empirical. Each essay brings a methodological innovation in answering the proposed research questions. The novelty of empirical design in the first essay is the exploitation of CEO transition from one firm to the other. This unique setting makes it possible to investigate if the option-based measures of overconfidence identify a CEO as overconfidence in both firms and hence capture a habitual tendency of the CEO. In addition, the essay utilises Machine Learning techniques to capture the complex interaction between different variables.

The second essay operationalises culture of honor using a novel proxy, the population density of Scots-Irish in each state and city in the United States. The proxy is constructed using data from US census data. No previous research has used this data in relation to the data on hostile takeover deals. To be able to respond to endogeneity concerns, the paper uses fixed effects model.

The novelty of empirical design in the third essay is related to the examination of the replacement of an incumbent CEO with a new CEO with an opposing political ideology. For example, the study looks at instances where a liberal CEO is replaced by a conservative one. This setting helps to relate the observed patterns (higher dividend payments in the firms led by conservative CEOs) to the CEOs but not the firm. Another methodological innovation in the third essay is the development of a new measure of political ideology using political donation data acquired from the US Federal Election Commission. The essay provides a thorough examination of the

donation patterns and presents a more valid measure of political ideology as compared to the previous research.

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CHAPTER 2

DOES CEO'S HOLDING OF VESTED OPTIONS MEASURE OVERCONFIDENCE?

Does CEO's Holding of Vested Options Measure Overconfidence?

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Abstract

The option-exercise measures of overconfidence are the most widely used proxies for overconfidence in the corporate finance literature. Overexposure of CEO's wealth to firm's idiosyncratic risk has been taken as a sign of CEO overconfidence. Different accounts of the measure have been used to study most importantly the effect of managerial overconfidence on corporate investment, financial policy, innovation, merger and acquisition. The hypothesis is that overconfident CEOs behave quite differently than non-overconfident CEOs. We trace CEOs across firms, investigating their option exercise decisions. We question the validity of option-based measures of overconfidence. Utilising both traditional econometrics methods and Machine Learning techniques, we provide evidence that CEO's decision to hold or exercise vested options is considerably driven by firm and market conditions. We reject the view that repeated holding of well in-the-money options adequately capture overconfidence.

Keywords: Managerial Biases, CEO Overconfidence, CEO Option Exercise Behaviour

2.1 Introduction

Overconfident CEOs invest more when they have access to internal funds and forgo value increasing investment projects when they need to seek external financing (Malmendier and Tate, 2005). Compared to their peers, they undertake more value-destroying mergers (Malmendier and Tate, 2008), use less external financing (Malmendier et al., 2011), hold more cash (Aktas et al., 2015; Huang-Meier et al., 2015), pay less dividend (Deshmukh et al., 2013) and are better at exploiting innovative growth opportunities (Hirshleifer et al., 2012). The empirical adequacy of these results — among many others — hinges on the validity of the option-based measures of overconfidence. The influential role of the measure merits a critical scrutiny. This paper investigates the justification behind the measure, examining whether it ably instantiate overconfident CEOs. If CEOs persistent holding of in-the-money options measures a habitual tendency such as overconfidence, the CEO should always demonstrate similar behaviour regardless of firm and market conditions. We follow the option exercise behaviour of executives when they switch firms. Does CEOs persistent failure to exercise vested options reflect overconfidence? Even allowing for different interpretations of overconfidence, the pattern in the data does not support the view that repeated holding of vested option can adequately measure overconfidence.

Overconfidence refers to the behavioural feature whereby the CEO overestimates his or her own abilities and the value s/he can create out of projects s/he undertakes. Overconfident CEOs think the market undervalues their firm's assets and consequently perceive external financing as too costly. CEO's decisions on firm policies such as investment and mergers are shaped by a trade-off between misperceived gains from investment (or merger) and the costs of external financing (Malmendier and Tate, 2015). [1]

CEO option-exercise measure of overconfidence is the most widely used proxy in the literature (Malmendier and Tate, 2015). It is first introduced by Malmendier and Tate (2005). They see the overexposure of CEO's wealth to firm's idiosyncratic risk as a sign of CEO overconfidence. A large portion of CEOs' compensation is tied to option contracts and a risk averse and an under-diversified CEO should exercise the option in their contract whenever the options become exercisable and hence reduce the risk. Repeated holding of vested options, delaying option exercise or buying more shares of the same firm (despite already being exposed to the risk via option contracts), as they argue, can send signals that the CEO is overconfident. The use of option-based measure of overconfidence has become a common practice in the literature that studies the effect of CEO overconfidence on firm policies ever since.

Despite its widespread use, less attention is paid to the validity of the option-based measure of overconfidence. Previous research touches on the issue only partially and indirectly. In a first attempt to support the validity of the measure, Malmendier and Tate (2008) introduce another measure of overconfidence based on CEOs' press portrayals and argue that this measure

[1] Unlike its conception, there is no consensus on the implications of CEO overconfidence. Does CEO overconfidence benefit firms? There is no straightforward answer. For a discussion of this see, Malmendier and Tate (2015)

correlates with the option-based proxy. More recently, Otto (2014) utilises a new measure of overconfidence based on a firms voluntary earnings forecasts. He finds a correlation between his measure and option-based measures of overconfidence. Yet, finding relationships between different measures of overconfident does not necessarily confirm the validity of the measure. Hill et al. (2014) compare seven measures of overconfidence and find that the existing measures do not measure the same construct. In this study, we provide a direct examination of option-based measure of overconfidence.

Persistence is at the heart of the option-based measure of overconfidence. Malmendier and Tate (2005) distinguish overconfidence as an explanation for CEO option exercise behaviour from private information in that overconfidence is persistent and the measure of overconfidence captures a permanent trait or a habitual tendency of CEOs. The basic idea is that overconfidence drives the CEOs decision whether to exercise or hold vested options. If a CEO fails to persistently exercise options, it is a sign that overconfidence drives the decision. The logical implication of this strong account is that an overconfident CEO behaves similarly across firms, and the behaviour does not correlate with the firms characteristics. It is the character that drives the decision, not the information about the firm or the market. The pattern in the data casts doubts on this strong account. We argue that the Malmendier and Tates measures of overconfidence fail to capture a permanent trait. We subsample and track CEOs and executives in our dataset who have worked in two different firms. We show that the Holder67 measure of overconfidence identifies a considerably large portion of those CEOs and executives as overconfident in one firm and non-overconfident in the other.[2] This goes against what portrays the strong view of overconfidence to say that the measure captures a permanent trait.

We trace executives across firms, investigating their option exercise decisions. Our data reveal a systematic pattern that as firm characteristics change, the decision of a single executive on whether to exercise the option or not changes systematically too. While this pattern is difficult to be explained with a strong notion of overconfidence, the pattern is consistent with a softer interpretation of overconfidence. This weaker account admits that the CEO while overconfident, still considers the information s/he receives from the firm and market seriously. This view gives credit to both character and information. This can explain the systematic pattern. The weak account allows a "residual" role for overconfidence in driving the decision. The residual impact, though, is confounded with the influence of information in driving the decision. A tendency to hold in-the-money options does not solely capture overconfidence. It may simply be that the firm has persistently performed well. Option-based measures can, to say the least, overestimate overconfidence. We need to treat with caution the call that overconfidence demands an incentive system above and beyond responses to principal-agent problems. We devise tests to isolate the residual influence of overconfidence. The impact of overconfidence may indeed be minor.

We exploit a rich panel of executives data over the period of 1996-2014. The purpose of this

[2]Holder 67 is a measure of overconfidence introduced by Malmendier and Tate (2005). The measure identifies a CEO as overconfidence if they repeatedly fail to exercise options that are 67% in the money.

research is to study executives overconfidence in general. Hence, our data includes all the top five executives of S&P 1500 companies for the period. To allow for the comparability of our result with previous studies, we also consider a subset in our data that includes CEOs. Does the option-based measure ably identify overconfident CEOs? We identify a single executive's overconfidence status in two firms using the option-based measure. It is expected that the measure will identify an overconfident CEO as overconfident in both firms. Furthermore, we use fixed effect panel regression to control for managerial fixed effect to see how much of the variation in the size of the option's moneyness can be attributed to firm characteristics and market conditions. Utilising count panel data estimator and 'unbiased conditional panel regression trees', we plan a test of the argument that executives frequently keep well in-the-money options when the firm condition is sound.

Our study contributes to a well-developed line of empirical work in behavioural finance that points to the importance of managerial biases for firm policies. Viewing investors as rational agents, this literature takes behavioural biases of the managers seriously. Managers may be overconfident and overestimate their own abilities (Heaton, 2002; Malmendier and Tate, 2005, 2008). They may prefer to pursue a quiet life, forgoing risky but promising investment projects (Bertrand and Mullainathan, 2003), they may pursue empire-building (Baumol, 1959), engage in actions that boost stock prices in the short run with detrimental effects in the long run (short-termism) (Narayanan, 1985; Stein, 1988; Bebchuk and Stole, 1993) or may simply follow the decisions of their peers (herding) (Scharfstein and Stein, 1990). Our research sheds light on the effect of overconfidence on firm policies.

In a more specific sense, our research contributes to two lines of research. To begin with, our research complements prior empirical research on measuring managerial overconfidence and the effect of overconfidence on firm policies. Even though, a handful of works on managerial overconfidence have used other approaches to measure overconfidence (Malmendier and Tate, 2008; Otto, 2014; Hribar and Yang, 2015; Ben-David et al., 2007, 2013), the use of option-based measure of overconfidence is ubiquitous in the literature. Previous research used various versions of the option-based overconfidence measure to study the effect of this managerial bias on various firm policies, most notably investment (Malmendier and Tate, 2005; Campbell et al., 2011), financial policy (Malmendier et al., 2011; Huang-Meier et al., 2015; Aktas et al., 2015), innovation (Hirshleifer et al., 2012; Galasso and Simcoe, 2011), merger and acquisition (Malmendier and Tate, 2008), dividend payout (Deshmukh et al., 2013) and accounting practices (Schrand and Zechman, 2012; Ahmed and Duellman, 2013). Secondly, this research helps in understanding why executives hold their exercisable options. It introduces *Rational Optimism* as an explanation for CEO's repeated holding of vested options.

The rest of the paper is organized as follows. Section 2 summarises the data and the measures. Section 3 introduces the framework for testing the validity of overconfidence measure and predictions of overconfidence hypothesis. Section 4 describes the empirical results. Section

5 presents the discussion and conclusion and set the direction for future research.

2.2 Data and Measures

We draw on three databases to put our sample together. The sample comes mainly from Standard & Poors' ExecuComp database. [3] We consider S&P 1500 companies' Executives over the period 1996-2014. The S&P 1500 index includes all the stocks in S&P 500, S&P 600 and S&P 400 and covers 90% of the market capitalization of U.S. stocks. This data is matched with the firm financial information obtained from Compustat database. As the aim is to study managerial overconfidence in general, our main sample contains a panel of all executives in ExecuComp database. To be close to the previous research on CEO overconfidence, we construct a subset of the main sample considering only CEOs. In total, the sample is an unbalanced panel with 137209 executive-year observations and a sub-sample of 22525 CEO-year observations. The main regressions are run using these samples. To check the validity of overconfidence measure, we track CEO option-exercise behaviour when they switch firms. It requires that we select executives with available data on both firms. An executive or a CEO should have at least 3 years of data in each firm to be included in these subsamples. This further reduces the executive and CEO samples to 6828 and 348 data points respectively. Finally, we collect data on actual earning (earning per share) and Analyst earning forecast from Thomson Reuters I/B/E/S database. For earning forecasts, we consider the average forecast across all the analysts' forecast made 9 months prior to the release of that years fundamentals.

Malmendier and Tate (2005) propose two option-based measures of overconfidence, Holder67 and LongHolder. A risk averse and undiversified CEO should exercise in-the-money options. Holder67 identify executives as overconfident if they repeatedly fail to exercise in-the-money options. LongHolder find executives to be overconfident if they hold in-the-money options until the last year of expiration. [4] Holder67 is the main measure of overconfidence in this study. We select a subset of executives that worked in two firms and had at least 3 years of data for each firm. Because ExecuComp do not provide detailed option grants data for the full sample period, we chose ExecuComp's data items OPT_UNEX_EXER_EST_VAL and pccr_f to construct average exercise price and options in-the-money percent. [5] The use of Longholder measure however seems to be almost impractical. For example, ExecuComp offers detailed executive option grants data starting from 2006. We filter executives who work in two firms during 2006-2014 . This gives us a subset of 1060 executives. Among them, we are able to identify 12 executives that kept options (which were 40% in-the-money the year before expiration) until the last year of expiration. Overall, options usually expire in a ten-year period and tracking executives over

[3] ExecuComp provides compensation data including yearly salary and holdings of stock and option for the five highest paid executives in the list of S&P 1500 companies.

[4] Full details of Holder67 and LongHolder can be found in Malmendier and Tate (2005).

[5] We follow the model to estimate the average exercise price of the aggregated option put forward by Core and Guay (2002) and used by Campbell et al. (2011) and Hirshleifer et al. (2012)

two firms demands that the executives work and stay in two firms for a long period of time and the data for that executive would be available.

Along with the measure of overconfidence, we construct and utilise a number of firm related measures. We measure cash flow as income before extraordinary items (Compustat item 18) plus depreciation (item 14). Investment is capital expenditures (item 128). Firm investment opportunities is proxied by Tobins Q and measured as market value to book value of asset. Firm Size is the natural logarithm of firm's total asset (item 6). Firm age is measured considering firms birth as the year firm first listed on a stock exchange. [6] Following Baker et al. (2003), leverage is defined as total debt (Item 9 + item 34) divided by total debt plus total stockholder equity (item 144). Dividend payout is the sum of preferred and common dividend (Item 19 + item 21). Cash holding is considered as Cash and Short-Term Investments (item 1). Sales growth is defined as the percentage change in sales calculated as sale (item 2) divided by beginning of the year value of sale minus one. Finally, we construct a measure of stock return by subtracting end of the year stock price from beginning of the year stock price and normalise it by beginning of the year stock price.

2.3 Empirical Methodology

We trace the option-exercise behaviour of individual executives and CEOs across firms. This allows assessing whether the overconfidence status of an executive remains the same across firms and thus the option-based measure of overconfidence captures a habitual tendency. Beyond this, it is also possible to compare the differences in key firm features for firms where the executive is identified as overconfident and non-overconfident. Further, fixed effect estimator is used to test if the variation in option exercise decision can be attributed to firm characteristics and market condition while dealing with managerial fixed effect. The specification of the fixed-effects models is as follows. We use the in-the-money measure (moneyness percent of the option) as the left hand side variable regressing it on firm age and beginning of the year value of firm investment, cash flow, q, cash holding, leverage, dividend and size. In-the-money is a direct function of the stock price. We include stock return to control for the variation in stock prices. We also include the average value of the proportion of option in compensation to account for popularity of stock option in each year. The base model is as follows:

$$\text{Moneyness}_t = \alpha + \frac{\text{StockReturn}_{t-1}}{\text{Asset}_{t-2}} + \frac{\text{Investment}_{t-1}}{\text{Asset}_{t-2}} + \frac{\text{CashFlow}_{t-1}}{\text{Asset}_{t-2}} + \text{Q}_{t-1} + \text{SaleGrowth}_{t-1} + \frac{\text{CashHolding}_{t-1}}{\text{Asset}_{t-2}} +$$

$$\text{FirmSize}_{t-1} + \text{FirmAge}_{t-1} + \text{Earning}_{t-1} + \text{EarningForecast}_{t-1} + \text{OptionPercent}_t + \epsilon$$

[6] Following the literature, we take the listing year as the year firms have non-missing stock price in Center for Research in Security Prices (CRSP) dataset.

To check if changes in market conditions influence executives' option exercise behaviour, we divide our sample into three segments around the financial crisis; before the crisis 2002-2007, the crisis period 2008-2009 and after crisis 2010-2014. We run the same model on these three samples.

To plan the test of the hypothesis that sound firm condition drives the number of times a CEO decide to keep well in-the-money option, we first run a count data model using the following specification. We define a dummy variable (named VAR1) with the value 1 if the amount of moneyness of the options exceeded the 67% threshold for each year in sample period and 0 otherwise.[7] We then create another variable (named VAR2) for each executive with the value equal to the number of times the executive fail to exercise options which are 67% in-the-money (sum of VAR1 values for each executive). To define a sound firm condition, we specify a number of new variables. For sales growth, Q, cash flow, earning forecast, earning and investment, we generate new dummy variables with value 1 if the value of the variable in that year is above industry average.[8] We regress VAR2 on these dummy variables, firm size, firm age, firm cash holding, stock return and percentage of option in compensation using poisson count panel data model.

Sound firm condition might be difficult to identify. The above dummy variables might not adequately proxy "sound firm condition". The interaction between these variables can also play a role. Thus, it makes sense to explore what interactions reveals about firm condition and the number of times a CEO hold options which were above 67% threshold. As the traditional panel regressions are not very good at revealing complex interactions between variables, we borrow from the emerging Machine Learning literature and utilise panel regression trees to visualise the possible channels through which different firm-level measures predict the number of times a CEO holds vested options. Regression trees provide an intuitive and easy to understand approach for making sense of data. We use similar specifications to our fixed effect model to run the regression trees.

2.4 Analysis

CEOs option exercise behaviour and overconfidence

Out of 35 CEOs who served in two different firms and had three years of available data in each firm, the measure identifies 57% as overconfident in one firm and non-overconfident in the other. The pattern is similar for the executives. 258 out of 635 executives are identified as overconfident in one firm and non-overconfident in the other. The change in behaviour suggests that the

[7] The 67% is based on the threshold in the Hall-Murphy framework. For a detailed definition of the measure see Malmendier and Tate (2005)

[8] We use Standard Industrial Classification (SIC) code provided in Compustat dataset to define the industries.

decision not to exercise does not fully reflect overconfidence. Hence, the decision whether to exercise, as any other executive's decision, calls for an explanation. To understand possible drivers of option exercise decisions, we compare the characteristics of the firms where the individual executives have served. Table 2.1 reports the mean differences between firm characteristics for executives who are identified as overconfident in the first firm and non-overconfidence in the second firm they worked for. Table 2.2 presents the mean differences in firm characteristics for firms in which executives are identified as non-overconfident in first firm and overconfident in the second. Table 2.3 provides a general comparison of differences in firm characteristics for firms with overconfident and non-overconfident executives with no time order restriction.

In all these cases, the tests reject the mean equality in cash flow, q and leverage between firms with CEOs identified as overconfident and non-overconfident. Executives tend to hold exercisable options in firms with higher growth opportunities and exercise in firms with low growth opportunities. Considering Table 2.3, executives keep their options in firms where q, cash flow, cash holding and investment are high and leverage is low. They exercise options in firms where q, cash flow, cash holding and investment are low and leverage is high. The pattern that the executives sell options when the firm's prospect is weak but keep options when the firm has great potentials casts doubt on the claim that Holder67 captures an exogenous permanent trait. Executives tend to keep their options when the firm performs strongly and exercise when the firm performs poorly. The results talks to the importance of information for executive's decision. Data does not support the strong account of overconfidence which suggests it is only the character that drive option exercise decision.

Firm heterogeneity and executives option exercise behaviour

Does firm heterogeneity account for the variation in executives option-exercise behaviour? Table 2.4 reports the result of our fixed effect models. All the fixed effect models are run at the individual level and therefore accounts for managerial fixed effect. The models difference out overconfidence if is considered as a fixed permanent trait of an executive. The purpose here is to examine the importance of information on executive's decision to keep vested options. The regression results for the CEOs and executives are presented in Model (1) and Model (2) respectively. Factors that relate to firm performance are both most economically and statistically significant. Investment opportunities (q), investment, cash flow and sales growth predict the in-the-money percent. Past firm characteristics explain a considerable amount of variation in the level of in-the-money measure. With minor differences, the overall picture is reasonably similar among CEOs and Executives.

We run through tests for three sample periods: before crisis 2002-2007, during the crisis 2008-2009 and after crisis 2010-2014. Model (3), Model (4) and Model (5) present the results for these three subsamples respectively. A considerable portion of variability in option exercise behaviour is explained by firm heterogeneity. Assuming overconfidence refers to a habitual ten-

Table 2.1: Mean differences of firm variables for executives identified as overconfident in the first firm and non-overconfidence in the second

	Overconfident	Nonoverconfident	T-Test
Investment	0.061	0.042	0.000
Q	2.681	1.853	0.000
Firm Size	7.471	7.889	0.000
Firm Age	26.353	20.779	0.000
Cash Flow	0.117	0.090	0.000
Leverage	0.748	0.829	0.000
Cash Holding	0.166	0.173	0.454
Dividend	0.008	0.013	0.000
Observations	671	541	

This table reports mean differences of firm-level variables for executives who were identified as overconfident in the first firm and non-overconfidence in the second firm. Investment is lagged value of capital expenditure. Q is beginning of the year value of Tobin's Q measured as market to book value of firm assets. Firm Size is the natural logarithm of firm's total asset taken at the beginning of the year. Firm age is the year firm first listed on a stock exchange. Cash flow is the lagged value of income before extraordinary items plus depreciation. Leverage is total debt divided by total debt plus total stockholder equity. Cash holding is the lagged value of Cash and Short-Term Investments. Dividend payout is the sum of preferred and common dividend.

dency, the overconfidence view predicts that the patterns of coefficient estimates should remain invariant across the three sub-periods. Yet, the coefficient estimates for most firm characteristics either lose significance or change during the financial crisis. Lagged cash flow is no longer statistically significant. Nor is lagged holdings. The economic significance of q has decreased to 0.357 and the coefficient estimate of earning forecast has turned negative. The variable sales growth has become significant. Our alternative hypothesis that suggest market conditions may drive decisions whether to exercise stock options overall better explains the pattern of coefficient estimates during the crisis. Considering the pre-crisis period, the coefficient of analyst's forecast of earning is positive and significant. During good market condition, executives listen to analysts. The coefficient of the beginning of the year earning is also negative and significant which suggests if the earning per share in the previous year was good, the executives exercise their option in that year and hence, the level of in-the-money options tends to decrease in the subsequent year.

Table 2.5 reports the results of poisson count panel models. The firm performance measures appear as statistically significant, suggesting that firm features matter for the frequency of holding well in-the-money options.

Figure 2.1 and 2.2 present results of panel regression trees for executives and CEOs respec-

Table 2.2: Mean differences of firm variables for executives identified as non-overconfident in the first firm and overconfidence in the second

	Nonoverconfident	Overconfident	T-Test
Investment	0.057	0.055	0.391
Q	1.773	2.150	0.000
Firm Size	7.556	7.685	0.098
Firm Age	29.228	22.347	0.000
Cash Flow	0.084	0.115	0.000
Leverage	0.793	0.823	0.049
Cash Holding	0.117	0.165	0.000
Dividend	0.011	0.011	0.384
Observations	561	917	

This table presents mean differences of firm-level variables for executives who were identified as non-overconfident in the first firm and overconfidence in the second firm. Investment is lagged value of capital expenditure. Q is beginning of the year value of Tobin's Q measured as market to book value of firm assets. Firm Size is the natural logarithm of firm's total assets taken at the beginning of the year. Firm age is the year firm first listed on a stock exchange. Cash flow is the lagged value of income before extraordinary items plus depreciation. Leverage is total debt divided by total debt plus total stockholder equity. Cash holding is the lagged value of Cash and Short-Term Investments. Dividend payout is the sum of preferred and common dividend.

tively. The frequency of keeping the vested options (the frequency at which a CEO fails to exercise the exercisable options) serves as the dependent variable. In both graphs, a firm's growth potential, captured by Tobins q, appears at the root of the panel regression tree, suggesting that a firm's investment opportunities are the most important predictor of the frequency at which an executive or a CEO keeps options. In figure 2.1, the branch 1-17-18-22-23 has the highest estimated frequency (7.703). Firms in this category have q above 1.898, are younger than 37, have very high (7.53) earning per share and investment lower than 0.038. These firms have very good growth potential, are young with good earning prospect. Two branches signify the lowest estimated frequency. Branch 1-2-3-4-6 with estimated frequency of 1.319 and branch 1-17-25-29-30. The first one represents grown firms with low growth potentials and the second branch constitutes mature firms that struggle to utilise their investment opportunities.

In the case of CEOs (figure 2.2), the branch 1-17-18-20-22 predicts the highest number of time executives kept options which were above the threshold (6.343). It is when q is above 1.655, age is below 46 and actual earning is above 5.59. These are firms with high growth potential and good earning per share. The lowest frequency for holding options appears in the branch 1-2-3-4-5. These are firms with q below 1.121 and investment below 0.076 and firm size below 7.348. These firms remained small with little growth potentials. Similar amount of estimated

Table 2.3: Mean differences of firm variables for executives identified as overconfident in one firm and non-overconfidence in the other

	Nonoverconfident	Overconfident	T-Test
Investment	0.049	0.057	0.000
Q	1.810	2.360	0.000
Firm Size	7.719	7.594	0.042
Firm Age	24.210	23.563	0.524
Cash Flow	0.087	0.116	0.000
Leverage	0.810	0.791	0.083
Cash Holding	0.145	0.166	0.001
Dividend	0.012	0.009	0.000
Observations	1,102	1,588	

This table reports mean differences of firm-level variables for for executives identified as overconfident in one firm and non-overconfidence in the other (no time order). Investment is lagged value of capital expenditure. Q is beginning of the year value of Tobin's Q measured as market to book value of firm assets. Firm Size is the natural logarithm of firm's total assets taken at the beginning of the year. Firm age is the year firm first listed on a stock exchange. Cash flow is the lagged value of income before extraordinary items plus depreciation. leverage is total debt divided by total debt plus total stockholder equity. Cash holding is the lagged value of Cash and Short-Term Investments. Dividend payout is the sum of preferred and common dividend.

frequency (2.068) can also be observed in branch 1-17-23-24-25 where the mature firms fail to utilise their investment opportunities, and earning per share remains low. Firms in this branch have q above 1.655, are older that 46 and have investment below 0.052 and their earning per share remains below 2.8. The results for this branch suggest that CEOs in these firms on average hold options which are above 67% in-the-money only twice.

The consistent pattern in both figures tells a story. Investment opportunity, investment, firm age, firm size and earning per share play significant role in predicting the number of times a CEO hold well in-the-money option. Interaction between these variables plays a vital role. The importance of these variables very much depends on one another. Take firm age for instance; it influences the decision of both executives and CEOs to frequently keep the options mostly for firm with high investment opportunities. Or consider investment; in the case of mature firms with high investment opportunities both executives and CEO sell their options if they find that the firm does not have the ability to utilise the opportunities (investment level is low.). On the other hand, low investment in younger firms with great investment opportunity means a different thing to executives. They see this as an opportunity rather than a threat.

The results from the regression trees establish two empirical regularities. Firstly, The lowest frequency of maintaining exercisable options occur in firms with little prospects. Two types of

Table 2.4: Fixed-effect regression models to explain the level of moneyness of stock options hold by executives and CEOs

	(1)	(2)	(3)	(4)	(5)
Stock Return (beginning of the year)	0.0974	0.0286*	0.0342	0.0845	0.0177
	(1.89)	(2.10)	(0.58)	(1.40)	(0.84)
Investment (beginning of the year)	0.637	0.861**	1.234*	-0.472	0.144
	(1.02)	(2.65)	(2.23)	(-1.16)	(0.32)
Cash Flow (beginning of the year)	0.203	0.328**	0.393*	0.0273	0.0270
	(1.16)	(2.74)	(2.02)	(0.32)	(0.21)
Q (beginning of the year)	0.592***	0.537***	0.516***	0.357***	0.645***
	(16.12)	(20.50)	(14.93)	(5.47)	(18.56)
Sales Growth (beginning of the year)	0.402*	0.131	0.136	0.229	0.00437
	(2.22)	(1.42)	(1.14)	(0.94)	(0.04)
Cash Holding (beginning of the year)	-0.165	0.126	0.306	0.417	0.249
	(-0.90)	(0.87)	(1.72)	(1.41)	(1.83)
Firm Size (beginning of the year)	0.331***	0.295***	0.429***	0.487**	0.704***
	(5.08)	(6.58)	(4.16)	(2.94)	(10.14)
Firm Age	-0.0605***	-0.0546***	-0.0626	0.0145	0.00461
	(-4.69)	(-5.82)	(-1.70)	(0.46)	(0.58)
Earning (beginning of the year)	0.00890	-0.0106	-0.0615*	-0.00785	-0.000454
	(0.70)	(-1.45)	(-2.15)	(-1.25)	(-0.07)
Earning Forecast	0.0203	0.0173	0.0429**	-0.0172	0.0104
	(1.28)	(1.88)	(3.00)	(-1.39)	(1.37)
Options Percent	-1.225	-1.018	-1.510	-0.832	1.126
	(-1.07)	(-1.09)	(-1.46)	(-0.41)	(1.52)
R^2	0.265	0.238	0.158	0.158	0.308
Adj. R^2	0.263	0.237	0.157	0.157	0.308
Observations	9958	49613	18266	7970	16654

This table reports the coefficients of the fixed-effect regression models. Model 1 presents the coefficients for the CEO subsample. Column 2 reports the estimates for executives (complete dataset). Model 3 to 5 are the models for subsamples of three periods 2002-2007, 2008-2009 and 2010-2014 respectively. The dependent variable is in-the-money percent measured as stock price over option's exercise price. Stock return is the difference between stock price and beginning of the year stock price normalised by beginning of the year stock price. Earning is the firm earning. Investment is lagged value of capital expenditure. Cash flow is the lagged value of income before extraordinary items plus depreciation. Q is beginning of the year value of Tobin's Q measured as market to book value of asset. Sales growth is percentage change in sales in each year calculated at beginning of the year. Firm Size is the natural logarithm of firm's total asset taken at the beginning of the year. Cash holding is the lagged value of Cash and Short-Term Investments. Earning forecast is analyst's forecast of firm earning. Firm age is the year firm first listed on a stock exchange. Option percent is the percentage of stock options in executives total compensation package each year calculated at the industry level. The reported standard errors are clustered at the firm level.

Table 2.5: Fixed-effect Poisson Models explaining number of times executives held options which were above 66% in-the-Money

	Poisson	Poission (zero truncated)
Stock Return	0.000	-0.000
	(0.000)	(0.000)
Firm Size	-0.012*	-0.014**
	(0.007)	(0.007)
Cash Holding (beginning of the year(BoY))	0.002	-0.002
	(0.015)	(0.014)
Firm Age	-0.002	-0.004
	(0.003)	(0.002)
Above Industry Sales Growth (BoY)	0.001	0.000
	(0.001)	(0.001)
Above Industry Q (BoY)	0.013***	0.011***
	(0.003)	(0.002)
Above Industry Cash Flow (BoY)	0.009***	0.005**
	(0.002)	(0.002)
Above Industry Earning Forecast (BoY)	-0.002	-0.001
	(0.002)	(0.002)
Above Industry Earning (BoY)	-0.002	-0.002
	(0.002)	(0.002)
Above Industry Investment (BoY)	-0.001	-0.001
	(0.003)	(0.002)
Option Percent	0.083	0.071
	(0.056)	(0.055)
Dummy Year	Yes	Yes
Num. of Observations	62047	57241

This table reports the coefficients of two fixed-effect poisson models. Reported standard errors are robust. The sources of excessive zeros are identifiable. Model 2 is similar to model 1 except that it uses the subsample that does not contain observations with 0 value for unexercised exercisable options. The dependent variable is number of times executives held options which were above 66% in-the-Money. Stock return is the difference between stock price and beginning of the year stock price normalised by beginning of the year stock price. Firm Size is the natural logarithm of firm's total assets taken at the beginning of the year. Cash holding is the lagged value of Cash and Short-Term Investments. Firm age is the year firm first listed on a stock exchange. Sales growth, q, cash flow, analyst earning forecast, earning and investment are all calculated by subtracting the value from corresponding industry average and are considered at the beginning of the year. Investment is lagged value of capital expenditure. Cash flow is the lagged value of income before extraordinary items plus depreciation. Q is beginning of the year value of Tobin's Q measured as market to book value of firm assets. Sales growth is percentage change in sales in each year calculated at beginning of the year. Earning forecast is analyst's forecast of firm earning. Option percent is the percentage of stock options in executives total compensation package each year calculated at the industry level. The variables marked as "Above Industry" are dummy variables with the value 1 if the value of the variable is above the industry median and zero otherwise. The reported standard errors are robust to serial correlation, heteroskedastisity and overdispersion.

these firms are identified. Firms which have grown old or remained small and have low investment opportunities and low investment; and mature firms with high investment opportunities but with no ability in exploiting those opportunities (low investment). Secondly, CEOs and executives frequently hold their vested options in firm with great prospects. These are firms which are relatively young, have great growth potentials (high q) and have very high earnings per share.

Further tests

A possible objection to our findings relates to the procedure we have followed to define the subsamples. To construct our subsamples, we primarily include executive with three years of available data in each firm. To ensure the robustness of the results, we further create the same subsamples including executives with four, five, six and seven years of data in each firm. The results remain the same in all these samples. A considerable fraction of CEOs are identified as overconfident in one firm and non-overconfident in the other.[9]

Another objection may be that when executives switch firms, they do not have exercisable options is the first few years. This might drive the results. We create a new sample for executives who worked in two firms, considering the years where the value of unexercised exercisable options is not zero.[10] 80 out of 180 executives and 7 out of 15 CEOs classified as overconfident in one firm and non-overconfident in the other. Our primary results survive.

Further, it might be argued that our test on the effect of market condition on executive's option exercise behaviour is driven by the changes in stock prices. After all, the dependent variable is a direct function of stock price. In our original regressions, we control for the variation in stock prices by including a measure of stock return. Malmendier and Tate (2015) argue that popularity of options might affect CEO's decision to sell or keep the options. We controlled for the popularity of the options in all of our models, and it was not significant.

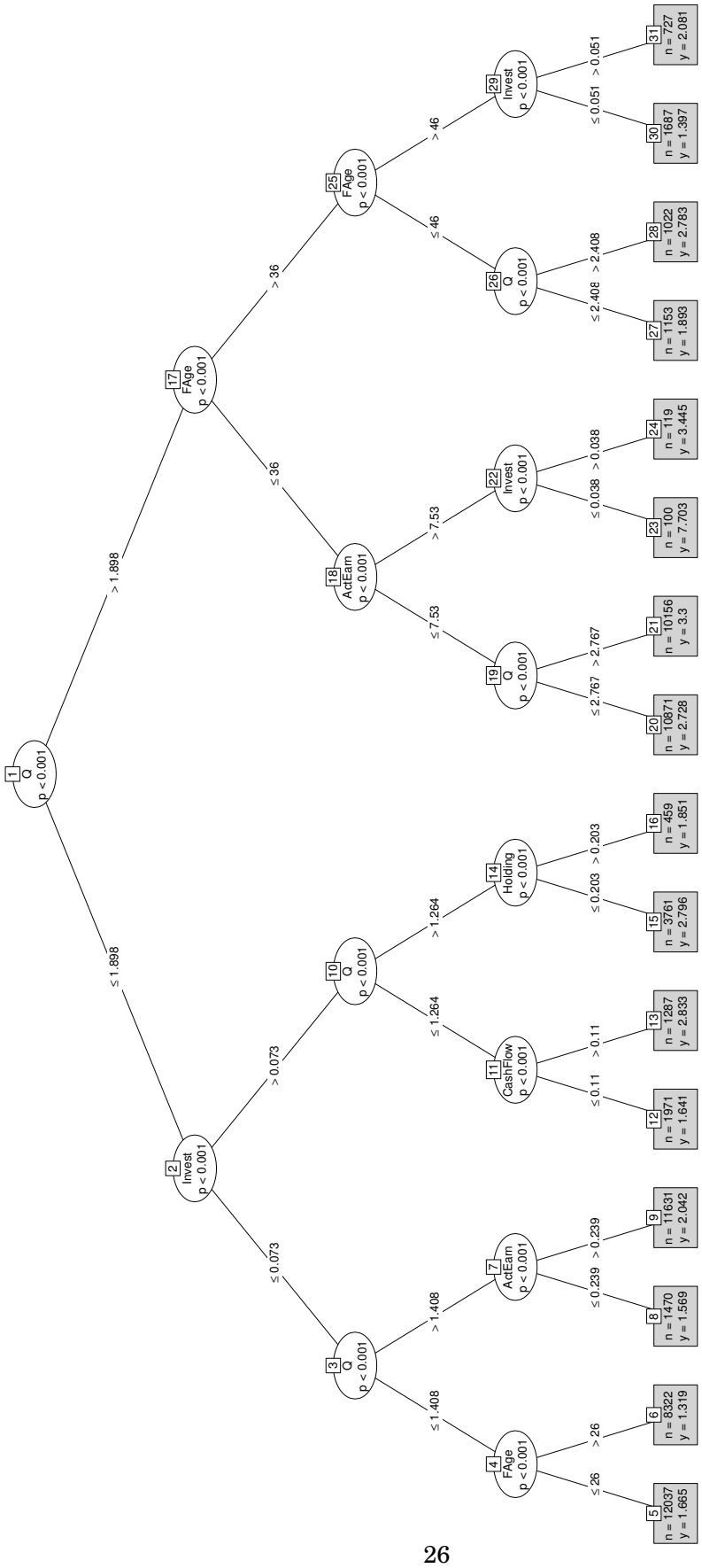
2.5 Discussion and Concluding Remarks

Our analysis reveals two stylized facts: CEOs behave differently when they switch firms. In some firms, they fail to exercise their exercisable options. In others, they exercise. Second, the decision to exercise or hold vested options is highly correlated with firm characteristics. The managers frequently keep well in-the-money vested options in high prospect firms and exercise them in low prospect firms. Option-based measure of overconfidence fails to adequately capture

[9] specifically, 140 out 325 (43%) are classified as overconfident in one firm and non-overconfident in the other if we select executives with four years of data in each firm. If we consider executives with five, six and seven years of data in each firm, we will have 42%, 38% and 41% of executives with different overconfidence status in each firm respectively.

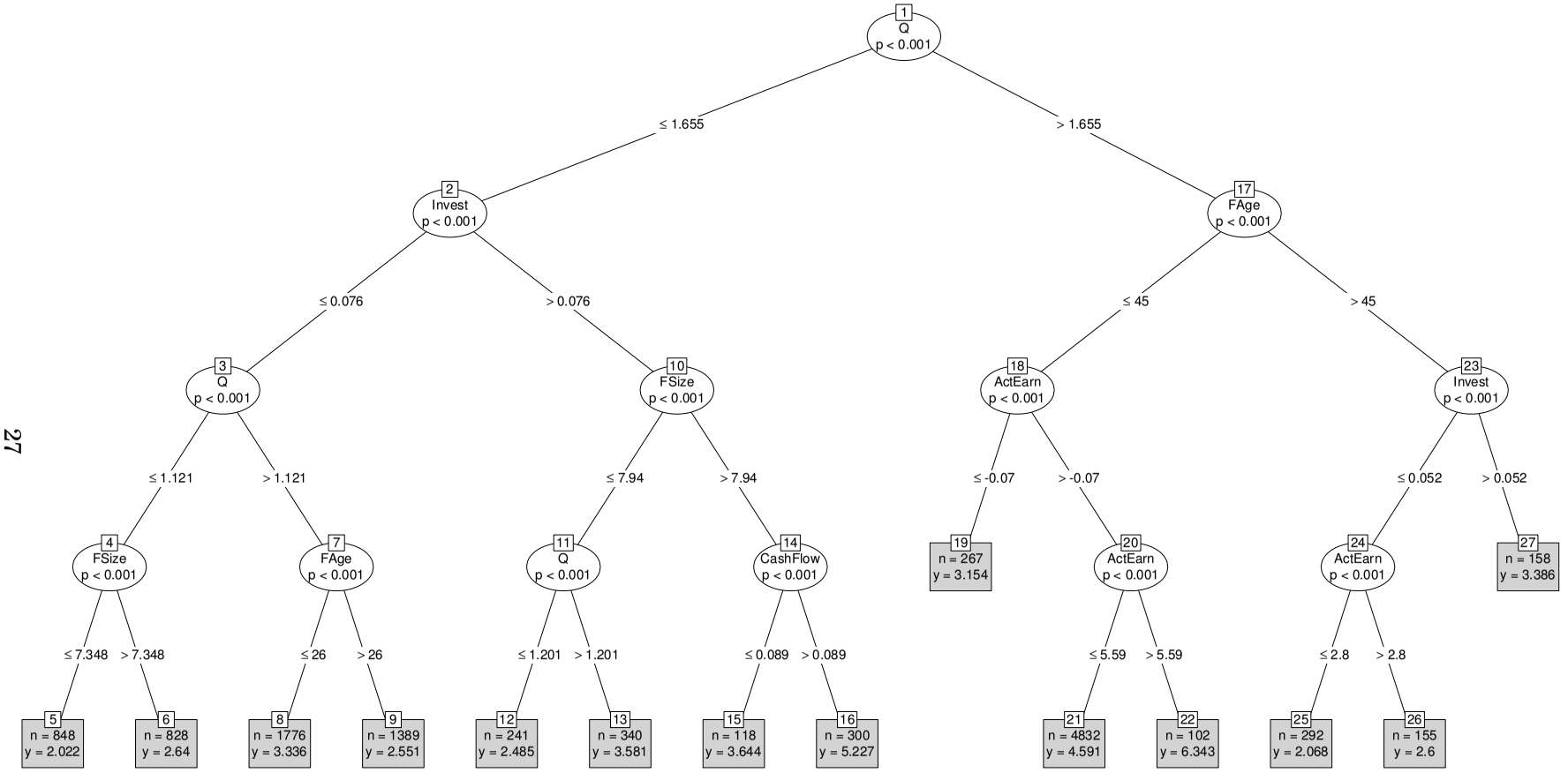
[10] We only consider the positive values of the variable OPT_UNEX_EXER_EST_VAL which measure the value of unexercised exercisable options. Considering the years where the value is larger that zero makes sure that the executives had some exercisable options in that year.

Figure 2.1: Conditional Panel Regression Tree for Executives



This figure presents the result of the conditional panel regression tree for executives. The dependent variable is the number of times an Executive hold options which were 67% in-the-money. The average value of the dependent variable is represented by "y" and reported in the lower ends of the tree for each segment. Q is beginning of the year value of Tobin's Q measured as market-to-book value of firm assets. Invest represents investment and is calculated as lagged value of capital expenditure. Cash flow is the lagged value of income before extraordinary items plus depreciation. Fsize is Firm Size measured as the natural logarithm of firm's total asset taken at the beginning of the year. Holding is Cash holding and measured as the lagged value of Cash and Short-Term Investments. FAge is Firm age and measured as the year firm first listed on a stock exchange. ActEarn is firm actual earning.

Figure 2.2: Conditional Panel Regression Tree for CEOs



This figure presents the result of the conditional panel regression tree for CEOs. The dependent variable is the number of times an executive hold options which are 67% in-the-money. The average value of the dependent variable is represented by "y" and reported in the lower ends of the tree for each segment. Q is beginning of the year value of Tobin's Q measured as market-to-book value of firm assets. Invest represents investment and is calculated as lagged value of capital expenditure. Cash flow is the lagged value of income before extraordinary items plus depreciation. Fsize is Firm Size measured as natural logarithm of firms total asset taken at the beginning of the year. Holding is Cash holding and measured as the lagged value of Cash and Short-Term Investments. FAge is Firm age and measured as the year firm first listed on a stock exchange. ActEarn is firm actual earning.

overconfidence. The strong account of overconfidence where the option-exercise decision is solely driven by CEO character (here overconfidence as a permanent trait) is not supported by the data as the measure identifies a single executive/CEO as overconfident in one firm and non-overconfident in the other. The weaker notion of overconfidence that allows for variation in CEO option exercise might explain both switching in executive's behaviour when they change firms and the associated pattern between firm characteristics and CEO switching behaviour. But these patterns are equally consistent with rational optimism hypothesis which gives high credit to the importance of past firm condition and the climate in the market. At best, the option-based measure overestimates overconfidence. Consequently, one should treat with caution the empirical results in the literature on the impact of overconfidence, including the celebrated investment-cash flow sensitivity. We are still in need of a satisfactory measure of overconfidence to understand how and to what extent CEO/executive overconfidence shapes corporate policies.

This research has implications for the design of incentive systems for executives. Firstly, we need to treat with caution the call that overconfidence demands an incentive system above and beyond responses to principal-agent problems. More research using other proxies for overconfidence might shed light on this matter. Secondly, The novelty of the machine learning techniques we used in this research allowed revealing complex patterns in executives' option-exercise behaviour which can be important for the design of the incentive system. Specifically, CEOs and executive frequently keep the options in relatively young firms with great investment opportunities. In the case of mature firms, the executive/CEO might exercise the options even if the firm has high investment opportunities. The decision to a large extent rests on the ability of the firm to harness those investment opportunities. Executives in general and CEOs in particular frequently exercise vested options in firms (specially young firms) with not enough investment opportunities and growth potentials.

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CHAPTER 3

Cultural Foundations of Corporate Control: An Empirical Enquiry

Cultural Foundations of Corporate Control: An Empirical Enquiry

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Abstract

This paper argues for the importance of culture for corporate governance practices. We utilise both the contemporary and early patterns in settlement of Scots-Irish in the United States to study the effect of honour culture on the defensive behaviour of target firms in corporate control contests. Honour culture is characterised by reputation maintenance and defence. We compare the behaviour of target firms in places with varying degree of honour culture. We empirically examine if firms located in places with an honour culture are more resistant to hostile takeovers when becoming a target. We find that these firms show more resistance to hostile takeovers when becoming a target, and are more likely to win the contests. Beyond the existing explanations for target firm resistance, this study sheds light on how cultural dynamics can shape takeover resistance and corporate control.

Keywords: Culture of Honour, Corporate Governance, Corporate Control, Hostile Takeovers, Takeover Resistance

"There's especially a lot of emotion in it when you're the one under attack,...It's as if you've just found out that someone's made a more attractive offer to your wife."

An executive perception of hostile takeover (Brill, 1976, p.54)

3.1 Introduction

In the Jensen and Meckling tradition, corporations are a form of "legal fiction" that are best understood in contractual terms. Individuals are considered homogeneous and their behaviour in organisations solely depends on the terms and nature of contracts. Corporate governance involves the act of monitoring which in itself includes "efforts on the part of the principal to control the behavior of the agent through budget restrictions, compensation policies, operating rules etc." (p.308). Contracts are used as a lever to discipline managers and to align their interest with that of principals. Hostile takeovers are external disciplinary mechanisms that come to play on the failure of internal governance systems. A target firm's resistance to a hostile bid is regarded as a part of the managerial entrenchment project.[1] We explore a new perspective on why firms resist when becoming target of a hostile takeover. Beyond the reasons provided by this extant tradition, this research relates the target's resistant behaviour to the broader cultural context surrounding the firm.

Our research evaluates the cultural underpinnings of hostile takeover contests. Our analysis is built upon the view that hostile takeovers are events that threaten organisational identity and are "arenas in which concerns about esteem, honour, and dignity are being played out." (Schneider and Dunbar, 1992). This perspective is evident in the terminology employed in hostile takeovers and in the normative framing used by the media and the participants to describe these events. Unlike other studies that refer to these narratives as inaccurate media coverage of the event (Jensen, 1991), deliberate products of the participants (especially those of target firm management) or a way to facilitate the institutionalisation of these events in the society (Hirsch, 1986), we translate these narratives as a true reflection of cultural norms, values and beliefs of the people in the era and the place where these events take place. We argue that these cultural values and beliefs present themselves in the way participants interpret and act upon these events.

We provide an empirical examination of this by exploiting the cultural variation in the United States. We focus on the well-studied culture of honour in the United States. Some parts of the United States (especially states in the South and the West regions) are known for being a stronghold for this culture of honour. The culture is characterised most importantly by concerns for reputation maintenance, social standing and defence (Pitt-Rivers, 1966; Wyatt-Brown,

[1] For examples, see Jensen and Meckling (1976), Jensen and Ruback (1983), Fama and Jensen (1983) and (Jensen, 1988). For some examples of earlier contributions see Coase (1937), Berle and Means (1932), Williamson (1963) and Manne (1965).

1982; Fischer, 1991; Nisbett and Cohen, 1996). Reputational concerns for men in this culture are directly associated with building and sustaining an image of personal strength and toughness. Men in possession of such qualities maintain a social status by remaining intolerant to provocations directed at the self, property, or family (Cohen and Nisbett, 1994; Barnes et al., 2014).

The historical root of the emergence of this culture in the United States is affiliated with the early settlement of herders from a fringe of Britain in 18th century (McWhiney, 1989; Fischer, 1991). People who became the early inhabitants of the South (and then moved West at later points in time) were mostly Protestant Scots-Irish with animal herding background.[2] They were different from northern settlers who were German, English and Dutch peasant farmers. Unlike crops, herds were more prone to theft and subsequently herders needed to demonstrate their willingness to engage in violent retribution against predatory behaviour and hence seek and maintain status for it. In such an environment, man's reputation for toughness was vital to his economic survival (Nisbett and Cohen, 1996). The core characteristic of the honour culture is reported as still present in the South of the United States two centuries later[3].

Our discussion is built on how the honour endorsers' perceptions of external threat together with their sense of group identity shape their defensive behaviour in a broader social context. Our research rests on four stylised facts about the culture of honour: First, men in possession of honour values are more likely to see a provocation as a threat to their masculine reputation and are more likely to react to it (Cohen and Nisbett, 1994; Cohen et al., 1996); second, men in a honour culture overestimate the aggressiveness of their male peers (Vandello et al., 2008); third, the conflation of self and broader social identity is more inflated among honour endorsers (Barnes et al., 2012, 2014); and fourth, institutions located in honour places can promote and behave in accordance with the norms of the honour culture (Cohen and Nisbett, 1997). We study the defensive behaviour of the target companies in hostile takeovers using these honour-related principles.

Previous studies define hostility in terms of the motivating forces behind the takeover (synergistic versus disciplinary) or categorise a deal as hostile if the management of the target firm resists. In the context of this study, hostility is related to the approach the bidding firm takes to pursue the deal. This includes unsolicited bids and the deals where the acquiring firm approaches the shareholders of the target firm after a failed negotiation with its management. In both cases, the acquiring firm ignores the board of the target firm by making an offer directly to the target firm's shareholders or launching a proxy fight to replace the board members.

[2]The estimations suggest that more than 200,000 Scots-Irish migrated to the US between 1717 and 1775 (Fischer, 1991).

[3]The following two justifications have been provided for the perpetuation of honour culture: 1 - The culture has reached a stage of functional autonomy and can operate in the absence of a herding economy (Cohen et al., 1996) 2- The prevelance of the honour culture can be explained by "pluralistic ignorance" where no one questions the belief that no response to affront harms the reputation for toughness, even if it is wrong. See a discussion of this in Vandello et al. (2008).

We hypothesise that target firms in honour and non-honour states respond to a hostile takeover differently. We postulate that the board members and the management of a target firm in honour states are either themselves maintain honour believes or submit to the honour code supported in the community. They are more likely to perceive the launch of a hostile takeover as an insult and a threat to their reputation and to go to any extent to defend the takeover. We conjecture that both the failure rate and duration for completing a hostile takeover to be higher in hostile takeover with the target being a firm located in a place with honour culture.

Similar to Grosjean (2014), we utilise the variation in the population of Scots-Irish to measure the presence of honour culture in each state and city in the United States.[4] We test our hypothesis using data on hostile takeover bids of public target firms in the United States. Our data covers all the completed and withdrawn hostile bids over the time span of 1984-2016.

Our analysis starts with tests evaluating the association between the duration of hostile takeover cases and our measure of honour culture at the state level. To check the robustness of our result, we perform the same analysis replacing the state-level Scots-Irish population density with city-level Scots-Irish population density. Furthermore, to account for the fixed-unobserved heterogeneity among states, we perform fixed effect analysis. Finally, we replace the existing population density of Scots-Irish descendants with the population density of Scots-Irish in each county in 1790. This will help to mitigate the possible confounding effect of historical events such as Slavery, Civil War or Great Depression and, geographical endowments on the observed patterns.[5] In all cases, our results confirm our prediction that target firms in honour places are more resistant in the corporate control contests. In addition to this, we run through additional test to see if the probability of completion rate of hostile takeovers is affected by the presence of an honour culture. Again, our speculation is validated in the data; the likelihood of failure is positively associated with the presence of honour culture. Overall, our analysis lend support to the view that target firms resistant behaviour is affected by the honour culture maintained in the area where the firm is located. More generally, the results highlights the importance of culture for corporate control and corporate governance practices.

Our research relates to two main strands of research. In a broad sense, it contributes to the comparative corporate corporate literature by providing empirical evidence on the importance of culture for corporate governance practices. At least two streams of comparative research have emphasised the role of culture in this context. First, the footprint of culture can be traced more abstractly in studies investigating the origins of legal traditions and their effect on the existing

[4]There are two other measures commonly used to proxy for honour culture in the social psychology literature. One is a regional dummy representing the South and the North United States. The other is Gastil's Southernness Index which orders states on a scale of 0 to 35 based on the prevalence of Southern culture(Gastil, 1971). These measures are useful but using them in this setting can cause an identification problem. For instance, the North and the South are not only different in terms of culture, but also on many other factors.

[5]Historical shocks can affect economic behaviour and firm policy. See for example, Malmendier et al. (2011), Giuliano and Spilimbergo (2014) and Bernile et al. (2016). For a recent review of the topic see Klüppel et al. (2016). In addition, geographical factors are shown to be a driving force in shaping the development of institutions and financial systems. See for example, Acemoglu et al. (2001), Easterly and Levine (2003) and Beck et al. (2003).

corporate governance practices (Porta et al., 1998). As Merryman and Pérez-Perdomo (2007) explains: “the legal tradition relates the legal system to the culture of which it is a partial expression". Second, some studies have portrayed a more direct account of culture by using religion and language as a proxy for culture or applying the Hofstede cultural dimensions (Hofstede, 1984) and Schwartz's value framework (Schwartz, 1994). Various dimensions of these proxies have been investigated in conjunction with investor protection, shareholder and creditor rights, shareholding structure and the size and quality of financial systems (Licht, 2000; Coffee, 2001; Chui et al., 2002; De Jong, 2002; Stulz and Williamson, 2003; Kwok and Tadesse, 2006; Aggarwal and Goodell, 2009).[6]

We build on this strand of research by utilising a subculture within the United States. Our study is distinct from previous research both in terms of our approach to study culture and the aspect of corporate governance we investigate. Our research exploits a subculture within a single nation and avoid taking a generic view of culture to be able to overcome some of the identification constraints faced by the past research. Moreover, it sheds light on takeover defence as one of the least highlighted aspects of corporate governance practices in the existing cross-cultural studies. More specifically, this research complements previous empirical works on the determinants of takeover resistance. We extend this line of research by crossing the borders of agency theory and by adding one more dimension to our understanding of why firms resist takeover bids.

The rest of the paper is organized as follows. Section 2 introduces the theoretical framework and outlines our hypotheses. Section 3 summarises the data and the measures. Section 3 explains the empirical models, reports the results and details our identification strategy. Section 5 presents the discussion and conclusion and set the direction for future research.

3.2 Theoretical Framework and Hypothesis Development

Culture of Honour

One's honour originates from the self estimation of one's own value and the level of one's worth recognised and acknowledged by society. Accordingly, honour can be defined in the way in which “people extort from others the validation of the image which they cherish of themselves"(Pitt-Rivers, 1966, pp.21-22). Honour, therefore, is closely tied to social identity, reputation and social status. As (Pitt-Rivers, 1966, p.22) further argues: “The claimant to honour must get himself accepted at his own evaluation, must be granted reputation, or else the claim becomes mere vanity". Upon acquiring recognition by society, the concerns for irreparable damage to reputation becomes central for a man of honour(Nisbett and Cohen, 1996; Pitt-Rivers, 1966).[7] He defends

[6]For a review of studies of culture in comparative corporate governance research see chapter 9 in Beugelsdijk and Maseland (2010).

[7]In an honour culture, both men and women should try to defend the social reputation of their family. Maintaining the status of a family in the case of feminine honour entails sexual purity and loyality (Gilmore, 1987; King, 2008; Cihangir, 2013). Nisbett and Cohen (1996) argue that women play a role in the honour culture by passing the ideas

reputation by responding to any insult or threat directed at him, his loved ones and his property and by refusing to submit to humiliation(Nisbett and Cohen, 1996).[8]

What are the boundaries of the honour culture and where does the concern for reputation maintenance apply? Evidence confirms that honour endorsers fuse their individual identities with that of a broader social community (e.g. nation) Barnes et al. (2012, 2014). To threaten, exploit or offend the collective is similar to threaten, exploit or offend the individual (Brown, 2016). There are enough theoretical grounds in support of this observation. In general, insights from social identity theory (Tajfel and Turner, 1979) suggest that people's affiliation with a social group such as an organisation or a country provide an important source of identity. Moreover, one of the core tenets of self-affirmation theory (Steele, 1988; Aronson et al., 1999) advocates for an individual's defensive response to collective threats as a motive to preserve self-integrity and value of the self both at the individual and collective levels (Sherman and Cohen, 2006). Further, in their theory of identity fusion, Swann et al. (2012) argue that with strong intergroup union among highly fused members the boundaries of personal and social self are so permeable that aspects of personal and social self can readily flow into one another. They portray a form of identity fusion (extended fusion) where people project relational ties onto relatively large collectives composed of many individuals with whom they may have no personal relationships. They refer to culture as one of the core drivers of identity fusion. In relation to culture of honour, they argue that the importance of relational ties between group members leads to response to challenges directed at the honour code of in-group members with extreme retribution. Overall, we conjecture that people with honour beliefs tend to get matters important to the broader community they belong to more personal and respond to it. In our case, board members and executives among other stakeholders of target firms located in an honour state are more likely to take hostile bids for a company personal. A humiliation to the firm is a humiliation to the firm's members.[9]

Previous research suggests that firms tend to hire more from the local pool of CEOs and directors. Examining a sample of large U.S. Corporations, Yonker (2016) discovers that the frequency with which firms hire CEOs from their own state is five times more than is expected under a model where geography plays no role in the hiring process. Alam et al. (2014) find similar patterns for inside directors: the median inside director distance to the firm in their sample was only 22.9 kilometres. These findings are relevant if hostility perceived to be directed towards the managers. Put differently, the managers of the firm (who make the decision to resist

of honour to their children through active participation in the socialisation process.

[8]In addition to this definition of honour, Pitt-Rivers (1966) closely links honor to virtues such as loyalty and honesty. What social scientists refer to as culture of honour is associated with the definition presented here which concerns matters of reputation and status (Barnes et al., 2012)

[9]Previous research suggests that firms tend to hire more from the local pool of CEOs and directors. Examining a sample of large U.S. Corporations, Yonker (2016) discovers that the frequency with which firms hire CEOs from their own state is five times more than is expected under a model where geography plays no role in the hiring process. Alam et al. (2014) find similar patterns for inside directors: at the 50th percentile, the median inside director distance to the firm is only 22.9 kilometers.

or accept the offer) are normally hired locally and therefore are expected to maintain the culture of the place.

Along with the matter of personal identity (which links the behaviour of individuals to that of institutions), the collective, organisational and societal support for honour can also contribute to the defensive behaviour of target firms. A firm can inherit the collective norms of the place. [10] This importance is shown by Cohen and Nisbett (1997) in two field experiments. They illustrate the institutional support for honour-related violence in the South and West of the U.S.. They compare organisations in the North, South and West that were the part of a single company. Employers in the South and West treated a job applicant who committed a crime of violence in defence of his honour less as an undesirable criminal and more as a decent citizen who deserves an opportunity. In the second study, they compared how newspapers in the three regions cover facts about an honour-related stabbing and found that, unlike newspapers in the North, newspapers in the South and West created stories that were more sympathetic toward the perpetrator and described his action as more justifiable.

People who maintain honour beliefs are shown to have heightened sensitivity in perceiving external threats. Two stylised facts in the literature support this view. Men in possession of honour values are more likely to see a provocation as a threat to their masculine reputation and are more likely to react to it (Cohen and Nisbett, 1994; Cohen et al., 1996); second, men in an honour culture overestimate the aggressiveness of their male peers (Vandello et al., 2008). These findings can be closely linked to the perception of the degree of hostility of a takeover. In honour places, when a firm becomes a target of a hostile takeover, we surmise that its board members and executives (among other firm stakeholders) view this as an insult; the insult is more likely to be perceived as a threat to their reputation; and the unsolicited bid carries a higher level of hostility for target firms located in honour places. As a result of this and the coercive pressure from the community the firm operates in, it is more likely that they react to these events.

Put together, there is a rationale for the proposition that target firms located in honour places are more likely to resist a hostile takeover. We define higher resistance in terms of the duration of the hostile bids. We interpret higher resistance as longer time for the acquiring firm to complete a hostile bid and shorter duration for the target firm to force the acquiring firm to withdraw the bid. Higher resistance can subsequently affect the outcome of these events. We link higher resistance to lower probability of successful completion of a hostile bid. Accordingly, we formalise our hypothesis as follows:

Hypothesis 1: *It takes a longer time to complete a hostile takeover of a target firm located*

[10] Tnis can be associated with coercive isomorphism which as Powell and DiMaggio (1983) suggest can stem from the “cultural expectations in the society within which organizations function"; or it can result from the pluralistic ignorance where no one questions or go against the general norm even if it is wrong (Miller and Prentice, 1994). Pluralistic ignorance can also be seen in corporate boards Westphal and Bednar (2005). For a broader discussion of socially influenced board practices see Westphal and Zajac (2013).

in a place that is a stronghold of a culture of honour

Hypothesis 2: *It takes a shorter amount of time to withdraw a hostile takeover of a target firm located in a place that is a stronghold of a culture of honour*

Hypothesis 3: *As a result of greater resistance, target firms located in places that maintain honour code are more likely to win the takeover battles*

3.3 Data and Measures

We draw from a number of databases to put our sample together. Our sample of mergers and acquisitions deals comes from the Thomson One Banker database and consists of all completed and withdrawn hostile takeovers of public target firms located the United States. The sample covers the period between 1984 and 2016. In total, the sample comprises 771 hostile takeover deals. We limit the hostile takeovers in our sample to deals for which more than half of the shares of the target are sought by the acquiring firm. This will guarantee that the acquiring firm's intention is to take control of the target firm.

We obtain state, county and city-level data on the population of Scots-Irish in the United States from US Census (Minnesota Population Center, 2016). The census data starts in 1790 and is available for every ten years thereafter. Specifically, we use the county level data from the 1790 Census where the data on the countries of origins of settlers is available. [11] Adding to this, we use the more recently reported state and city level population of Scots-Irish in the 2000 census.[12]

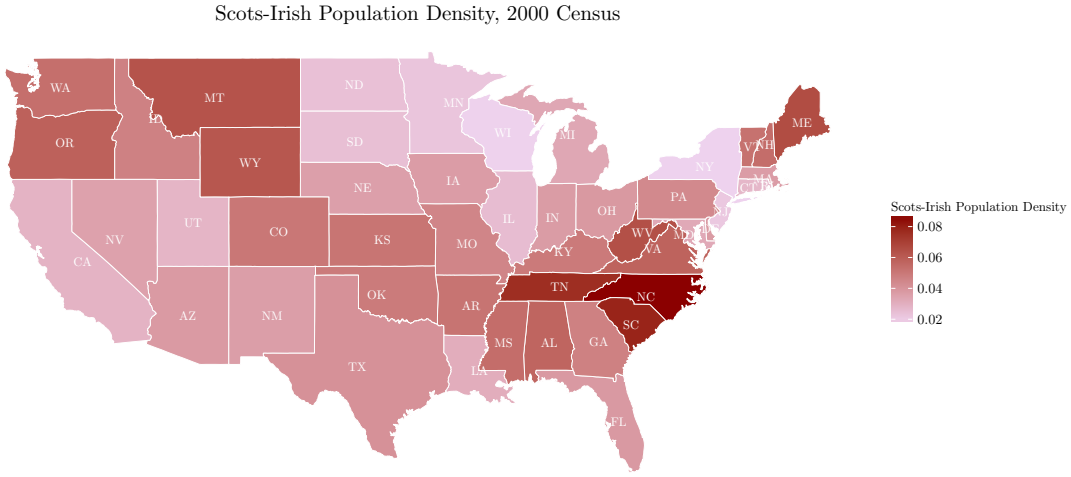
The main variable of interest is the duration of hostile takeovers. We calculate this using the announcement date of the deals (Date Announced) and the deals end date ("Date Effective" for completed deals and "Date Withdrawn" for withdrawn deals). The duration measure is created by calculating the number of days between the end date and the announcement date.[13] Because our analysis involves a general comparison of the duration of hostile takeovers between states,

[11] We classify people with reported Scottish and Irish background as Scots-Irish. We use county level rather than state level data because the 1790 Census data is limited to only reporting population demographics for 13 states. It is not possible to use the later dates data as the next census data that reports ethnic origins is the 1870 census and because mass immigration from Ireland, especially after the 1840s Potato Famine, consisted primarily of Irish Catholics (who had a different cultural and economic background) it is difficult to discern Protestant Ulster Scots in the 1870 data (Grosjean, 2014).

[12] We use the state-level data for our main analysis and use city-level data for robustness and for enabling us to run our fixed effect model. We limit our analysis to the 2000 census data as the 2010 census does not report the Scots-Irish ethnic background. This is unlikely that the contemprory geographical mobility of U.S. population will be an issue here as limited variation in the population of Scots-Irish is expected over time. Grosjean (2014) finds that the presence of Americans of Scots-Irish ancestry in 2000 is strongly associated with Scots-Irish settlements in 1790.

[13] For 37 out of 771 firms, the completion or withdrawn dates were earlier than the announcement dates resulting in negative duration. To have a meaningful sample, we exclude these deals from the data.

Figure 3.1: Scots-Irish population density in different states



we remove outliers in this variable.[14] Thomson One Banker reports the state and the city where the target firm is headquartered. [15] We use this information to match the census data with the hostile takeover deals.

The Scots-Irish population density in each state is calculated considering the number of individuals who reported their first, second or one of their ancestries (if reporting more than one ancestry) as Scots-Irish as a proportion of total number of people who reported ancestry in that state. The variation in population density of people with Scots-Irish ancestry as reported in the US 2000 Census is depicted in Map 1. North and South Carolina, Tennessee, Maine and West Virginia are among the states with the highest population density of people with reported Scots-Irish ancestry whereas states such as New York, Wisconsin, New Jersey and Minnesota have the lowest population density of people with Scots-Irish ancestry.

In the models we run in the next section, we control for a number of variables. Firms in different states and cities might differ in terms of their industry, size and profitability. We control for firm-level characteristics such as target and acquirer industry, target size (measured as the natural logarithm of firm total asset), target sales growth in the last five years.

The two main explanations for bid resistance by takeover targets are the managerial entrenchment hypothesis and the bargaining hypothesis. Under the managerial entrenchment hypothesis, the management of target firms resist the bid in order to protect its employment and to continue enjoying from the private benefits of control. Takeover provisions are closely linked to managerial entrenchment. This is because It is more difficult to take control of a firm

[14]The mean duration in our sample is 156 days and the sample consists of several takeover cases with duration as large as 7 standard deviations from the mean. We winsorise the data at 1% and 99% percentile to make sure our results are not driven by outliers.

[15]Headquarters locations are generally stable and does not change frequently. They are normally selected in the early life of a firm, many years prior to going public (Knyazeva et al., 2013).

with provisions in place and as a result, the management is expected to be more entrenched. We control for two types of provisions In addition to this, there might be deal specific reasons influencing the duration of takeovers. Targets might resist to increase their bargaining power and to enhance the offer price. We control for the number of bidders in each deal and the offer price (as a ratio of firm stock price one week prior to the announcement of the deal).

3.4 Empirical Models and Analysis

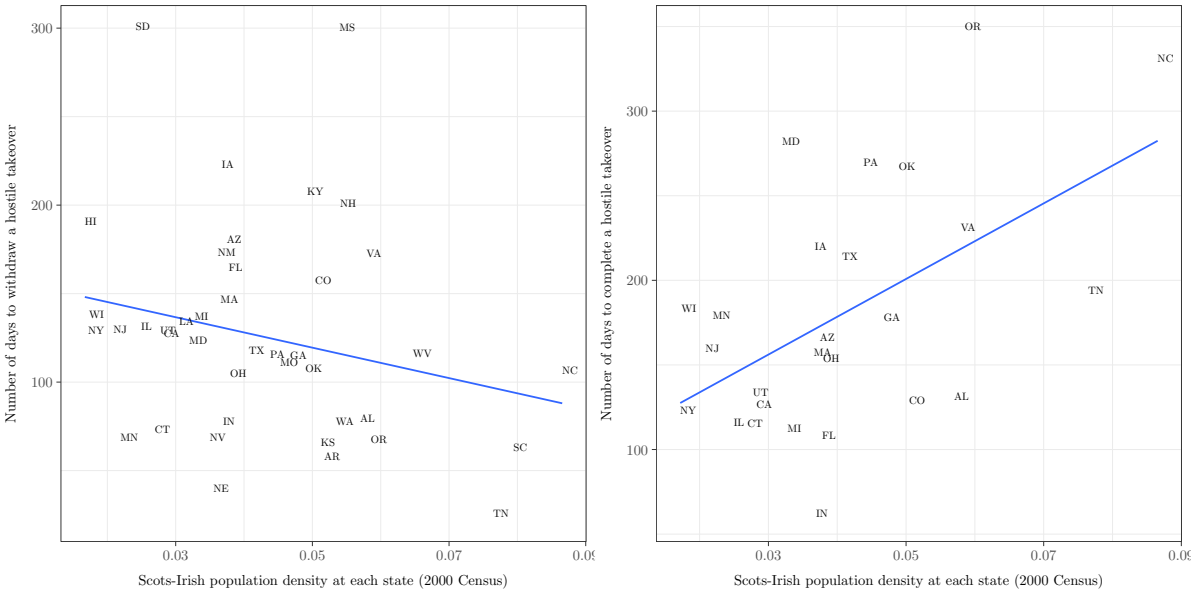
The duration of hostile takeovers

As discussed earlier, we expect the duration pattern to be different for completed and failed takeovers when taking the honour culture into account. Target firms in places with a higher presence of an honour culture are expected to be quicker in forcing the acquiring firm to withdraw the bid; if the acquirer persists and is able to complete the deal then it is expected that the duration would be longer. Figure 1 presents the association between the duration and the degree of presence of honour culture among states for completed and withdrawn bids. The direction of the best fit line is consistent with our speculations. We begin with regression analysis to check if the observed patterns hold if we control for other factors. We use model (1) to estimate the effect of the honour culture on the duration of hostile takeover. $Duration$ is the duration of the hostile takeover, SI is the Scots-Irish population density, $Status$ is a dummy variable taking the value of 1 if the deal is withdrawn and 0 if completed. X is a vector of firm-level and deal-specific controls introduced in the previous section.

$$(1)\ Duration_i = \alpha + \beta_1 SI_i + \beta_2 Status_i + \beta_3 (SI_i * Status_i) + X_i\gamma + \epsilon_i$$

The first column in Table 3.1 reports the coefficients estimated using Model (1) considering the state-level population density of people with reported Scots-Irish ancestry in the 2000 census. For completed deals, one percentage point increase in the population of Scots-Irish in the state is associated with a 13.8 days increase in the duration of hostile takeovers. This relation is inverse and statistically significant for failed takeovers; a one percentage increase in the population of Scots-Irish is associated with nearly a one day decrease in the duration of failed hostile takeovers. To check for the consistency of the results, we use the same specification once again, this time using city-level instead of state-level population density of people with reported Scots-Irish ancestry in the 2000 census. The results are reported in the second column of Table 3.1. The results are consistent and even stronger. On average, a one-percentage increase in the population of Scots-Irish in cities is associated with nearly a 20-days increase in the duration of completed takeovers. As expected, this pattern is negative for withdrawn takeovers; a one-percentage increase in the population of Scots-Irish in the city where the target firm is located is associated with nearly a 3-day decrease in the duration of failed takeovers.

Figure 3.2: The duration of hostile takeovers and the Scots-Irish population density



This graph illustrate the association between the duration of hostile takeovers and the Scots-Irish population density at each state for withdrawn (on the left) and completed (on the right) deals. This includes states with atleast two reported deals.

One concern is that Scots-Irish might have self-selected themselves into states with specific characteristics. For instance, different regulatory, institutional, geographical or other unseen factors among states might have driven the established pattern. To mitigate the possible influence of fixed unobserved heterogeneity among states, we run a two-way fixed effects model with specifications presented in Model (2). $Duration$ is the duration of the hostile takeover, SI is the city-level population density of people with reported Scots-Irish Ancestry in 2000 census. $Status$ is a dummy variable with value of 1 if the deal is withdrawn and 0 if completed. X is a vector of controls used in Model (1).

$$(2)\quad Duration_{it} = \alpha_i + \beta_1 SI_{c,i} + \beta_2 Status_{it} + \beta_3 (SI_{c,i} * Status_{it}) + X_{it}\gamma + u_{it}$$

The third column in Table 3.1 presents the coefficient estimates of the fixed effect model. Established pattern in the last models survive and is even stronger for completed deals. Even though the duration of withdrawn takeovers is still longer for places with stronger honour culture, the magnitude of the effect of honour culture on resistance is substantially stronger for successful deals. This estimate is more than 4 times higher than the same estimate in the second column. The model documents an increase of 86 days in the duration of successful takeovers as a result of one percent increase in the population of Scots-Irish in cities were target firms are located.[16]

[16]Even though this model helps to eliminate the fixed unobserved heterogeneity among states, it has one specific limitation. To be able to run this model, we needed to sacrifice half of cases in the sample used in the previous model.

Table 3.1: Regression models estimates for the duration of hostile takeovers

	(1)	(2)	(3)	(4)
(Intercept)	80.212	48.505		71.277
	(59.259)	(76.378)		(52.650)
Status (Withdrawn)	−88.962***	−15.613	105.138	19.775
	(13.202)	(30.172)	(67.798)	(25.057)
Scots-Irish (state)	13.791*			
	(6.351)			
Scots-Irish (state) * Status	−14.465*			
	(6.792)			
Scots-Irish (city)		19.734***	85.816***	
		(5.094)	(15.863)	
Scots-Irish (city) * Status		−22.987**	−36.292**	
		(7.236)	(11.977)	
Scots-Irish 1790 (County)				3.683*
				(1.427)
Scots-Irish 1790 (County) * Status				−9.707***
				(1.027)
Number of Bidders	14.232	12.823	26.114	−3.942
	(10.139)	(11.372)	(21.113)	(10.432)
Offer Price as a Proportion of Stock Price	−0.461*	−0.318	0.326	−0.403
	(0.217)	(0.260)	(0.423)	(0.335)
Firm Size	1.229	3.427	24.141*	
	(8.560)	(9.215)	(10.491)	
Sales Growth (last five years	−0.185	−0.249	−0.623	
	(0.382)	(0.397)	(0.420)	
Year	Yes	Yes	Yes	Yes
Target Industry	Yes	Yes	Yes	Yes
Acquirer Industry	Yes	Yes	Yes	Yes
R^2	0.453	0.437	0.480	0.550
Adj. R^2	0.280	0.214	0.111	0.210
Num. obs.	221	181	91	108
RMSE	99.794	103.799		95.297

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

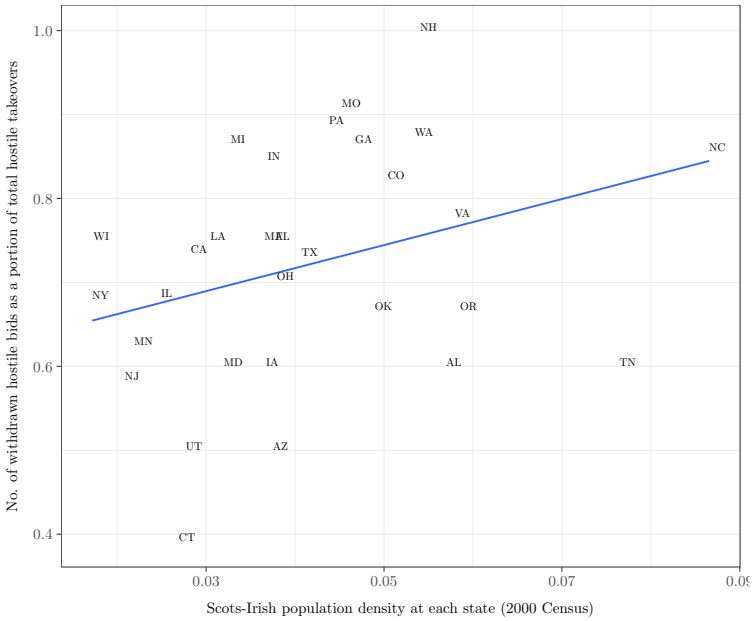
The dependent variable in all models is the duration of hostile takeovers measured as the number of days between the deal announced date and the end date. The first two columns are reported coefficients for two OLS regressions with the population of Scots-Irish taken at state-level and city-level as reported in the 2000 U.S. census consecutively. The third column reports the estimates of a state-level two-way fixed effect model. Last column presents the estimates of an OLS regression model with Scots-Irish population density is taken at the county-level as reported in 1790 U.S. census. Standard Errors are reported in parentheses. Standard Errors are reported in parentheses. All reported Standard Errors of OLS models are clustered at the state-level. The Standard Errors in the fixed effect model are robust to heteroskedasticity and autocorrelation.

Lastly, we test the robustness of our analysis using one additional test. It might be the case that the defensive behaviour of firms, which in our case is attributed to culture, is the result of past historical events (such as slavery, civil war or Great Depression) or geographical factors. These events and factors might have influenced the behaviour of Scots-Irish descendents in a different way. Greater resistance might be the results of these events rather than culture. We argue that this is not the case. We replace the contemporary variation in the population of Scots-Irish with the population density representing the early settlement of Scots-Irish in each county as reported in 1790 census. In fact, no relationship should be expected between the early settlement patterns of Scots-Irish more than 200 years ago with contemporary takeover resistance if the established pattern is entirely the result of these socio-economic and political events or geographical endowments. We use model 1 to estimate the effect of culture (as measured by early settlement pattern of Scots-Irish) on firm resistance behaviour. The last column in Table 3.1 reports the coefficients of our regression. The results follow a similar pattern. A one-percentage increase in the population of Scots-Irish in each county in 1790 is associated with nearly a 4-day increase (6-day decrease) in the duration of successful (failed) takeovers. The Coefficients are weaker if compared with the previous results which can suggest that culture does matter but other socio-economic and political events or geographical endowments may have also played a role in explaining the resistance behaviour of the firms located in those places.

The empirical regularities documented by the models lend support to our expectations and validate our first two hypotheses: It takes longer (shorter) amount of time to complete (withdraw) a hostile bid of a target firm located in a place that is a stronghold of a culture of honour.

The failure rate of hostile takeovers

Figure 3.3: Withdrawn hostile bids and Scots-Irish population density



This plot illustrates the association between the the number of withdrawn hostile bids as a fraction of total hostile bids and Scots-Irish population density as reported in 2000 U.S. census. This includes states with more than two reported deals.

Are target firms in places associated with culture of honour more successful in the battle of hostile takeovers as compared to target firms in other places? To begin answering this question, we first compare the number of failed hostile takeovers as a proportion of all hostile takeovers in places with different characteristics of an honour culture. Figure 3.3 portrays the association between the number of failed hostile attempts as a proportion of total number of hostile bids and the variation in the population density of people with Scots-Irish Ancestry for each state. Interestingly, there is a clear positive relationship between the two. Increases in the number of failed takeovers are associated with increases in the population density of Scots-Irish descendants. But will this relationship hold if we control for firm and deal specific characteristics? To be able to formally test this, we run the following Probit models $Prob(failure\ vs\ success) = f(Scots - Irish\ Population\ Density)$ estimating the likelihood that a hostile deal fails given the variation in the contemporary population density of Scots-Irish descendants in each state and city. We use the same controls as in our regression models.

Columns 1 and 2 in table 3.2 report the marginal effects of the Probits with Scots-Irish population density taken at state and city-level respectively. Both models yield similar patterns and coefficients. One percent increase in the population of Scots-Irish descendants in each state or city is associated with nearly three percent increase in the likelihood of failure. These results

Table 3.2: Probit models estimating the probability of withdrawal in hostile takeovers

	(1)	(2)
(Intercept)	2.426*	2.883**
	(0.988)	(1.100)
Scots-Irish (state)	0.028*	
	(0.014)	
Scots-Irish (city)		0.028*
		(0.013)
Number of Bidders	0.066*	0.073*
	(0.034)	(0.033)
Offer Price as a Portion of Stock Price	−0.002***	−0.002***
	(0.001)	(0.001)
Firm Size	−0.073**	−0.093**
	(0.025)	(0.03)
Sales Growth (last five years)	−0.001	−0.002
	(0.001)	(0.001)
Year	Yes	Yes
Target Industry	Yes	Yes
Acquirer Industry	Yes	Yes
AIC	294.563	248.681
BIC	475.851	412.919
Log Likelihood	-94.281	-73.341
Deviance	188.563	146.681
Num. obs.	226	185

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

The dependent variable in both models is a dummy variable with value of 1 representing withdrawn deals and 0 representing completed deals. Both columns report the marginal effects of two Probit models with the population of Scots-Irish taken at state-level and city-level as reported in the 2000 U.S. census consecutively. Standard Errors are reported in parentheses.

confirm our third hypothesis: target firms located in places that maintain an honour code are more likely to win the takeover battles.

3.5 Discussion and Concluding Remarks

Culture is considered as an important element of corporate governance. Blair (1996) defines corporate governance as a “whole set of legal, cultural, and institutional arrangements that determine what publicly traded corporations can do, who controls them, how that control is exercised, and how the risks and returns from the activities they undertake are allocated." Nonetheless, the part of corporate governance literature that studies culture has largely remained unexplored. This research provides empirical evidence on the importance of culture for corporate control. It offers a firm-level analysis of takeover resistant behaviour. It tests the effect of honour culture on the target firm’s resistant behaviour in corporate control contests. We argue that target firms in places associated with an honour code are more resistant to hostile takeovers and are more

likely to win the battle of corporate control. These results were supported using both contemporary and early patterns in settlement of Scots-Irish in the United States.

Unlike previous research that investigates takeover resistance through the lens of regulatory provisions and economic incentives, this study sheds light on how cultural dynamics can shape takeover resistance. It delivers a new perspective through which corporate control and corporate governance practices can be understood. These findings have important implications for research and policy. Specifically, it highlights culture as a factor that can cause inefficiencies in the market for corporate control. Even if a firm located in an honour place does not perform upto the expectations of its shareholders, acquiring firms might find it difficult to take control of the firm by making a hostile bid for the company. Culture in this context can restrain the power of the external mechanisms in mitigating the agency problem. The behaviour of agents in firms located in these places might not adequately respond to existing contracting practices and the external disciplinary forces. Our research sets the stage for further exploration of a framework that can best describe the implication of these culturally-driven behaviour for the design of a more transparent corporate governance system.

The role of culture in corporate control is the key focus but in addition, the selection of honour culture itself merits attention. Further research in this area can be informative and fruitful. For example, we introduced two possible channels through which the effect of honour culture on target's resistant behaviour can be explained; 1) Resisting targets might have had larger number of executives and board members with honour beliefs. 2) Target resistant behaviour might have been a response to the cultural values of the place where the firm operates. Investigation of these two channels can be a good starting point for further research in this area. In addition, this research paves the way for further research on how this culturally-driven resistance behaviour might affect shareholders. Does this resistance behaviour increase shareholder wealth? Such a question could be a point of enquiry in the future research.

The extent of our research is not limited to the United States. The prevalence of culture of honour has been documented throughout the world (Johnson and Lipsett-Rivera, 1998; Peristany, 1965; Brown, 2016). Examining the established patterns using data from other regions of the world will also help to understand the interaction between cultural dynamics and corporate governance practices.

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CHAPTER 4

CEO Political Ideology, Shareholder Primacy and Dividend Policy

CEO Political Ideology, Shareholder Primacy and Dividend Policy

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Abstract

This paper argues that CEOs have different attitudes towards the firm's stakeholders and this may affect the firm's strategic decisions. To illustrate this, we examine the effect of CEO political ideology on firm dividend policy. We hypothesize that liberal CEOs, as compared to their conservative counterparts, pay less attention to shareholders and this should be reflected in dividend policy. To test our hypothesis, we use a measure of CEO ideology based on political donations. We study the CEOs of S&P 500 firms between 1997-2014 and find that firms led by liberal CEOs are more likely to be non-dividend paying firms and have consistently lower dividend payouts. The results are stronger when these CEOs are more powerful and when the strength of shareholder rights is weak. We also find that conservative CEOs pay more dividends at the cost of the employees. To establish the causal effect of CEO political ideology on the dividend payout, we study the changes in the dividend payout around CEO appointments.

Keywords: CEO Political Ideology, Dividend Policy, Stakeholder Theory, Corporate Governance

4.1 Introduction

In 1919, when Henry Ford, the founder of Ford Motor Company, refused to distribute a proportion of his company's enormous profit in the form of a dividend, John and Horace Dodge two minority investors in the firm brought a lawsuit against him. Taking the Dodge brothers' side, the Michigan Supreme Court went against Ford's provocative claim that the money could be used for making cheaper cars for the customers and for paying better wages to the employees. The court put that the primary objective of a business corporation should be around making a profit for its stockholders. From a managerial perspective, this classic case raises three important stylized facts. First, business executives may have a different perception and attitude toward the firm stakeholders. Second, their attitude may directly impact firm policies. Third, executive perceptions and behavior may go against societal norms and regulations. These stylized facts can be explained by using an array of existing theories. In contrast, on the empirical side, our knowledge is limited to a few studies. More specifically, we do not have sufficient evidence on what might shape the perceptions of executives towards a specific group of stakeholder and how these perceptions may lead to various corporate outcomes. This paper examines the role of CEOs' political ideology, aiming to shed light on the effect of CEO conservatism versus CEO liberalism on the firm's dividend payout.

Our research is inspired by the views that a firm is a nexus of contracts between different parties (Coase, 1937). The CEO makes strategic decisions at the center of the nexus Mitroff (1983); Hill and Jones (1992) and his role demands him to be more like "a juggler of constituencies than a pilot at the helm of a great corporate ship." (Agle et al., 1999, p. 520). Any strategic decision made by the CEO is likely influenced, at least to a certain degree, by stakeholder expectations and the priority s/he gives to the competing stakeholder claims (Ansoff, 1984). Central to the CEO's decision is "the principle of who or what really counts" (Freeman, 1994, p. 4). Who catches his attention while making an important decision depends not only on the relative power of various stakeholder groups and the legitimacy and urgency of their claims, but it also depends on the CEO's *perception* of the relative importance of the various stakeholder groups (Mitchell et al., 1997).

In this context, understanding the CEO's perceptions towards various stakeholder groups and why the CEO prefers a group of stakeholders over the others is critical to shed light on the CEO's strategic decisions. Why should a CEO prioritize shareholder interests over the interests of other stakeholders? The prevailing shareholder-stakeholder debate in the corporate governance literature has tried to explain differences in these preferences typically focusing on the country level rather than the firm level. With regard to employees and shareholders, evidence suggests that there is substantial cross-country variation in the objective of the firm. For example, in Japan employee interests take precedence over shareholder interests. In turn, the Codetermination law in Germany ensures that both employees and shareholders have board representation and, hence, a voice in the way the firm is managed. In the USA and the UK, the

shareholder-centric view prevails. These country-level differences may explain CEO preferences given that CEOs are expected to conform to the societal norms and regulations of their country and take corporate actions that are in line with these. For example, CEOs in the USA should be more likely to cater to shareholder concerns and choose policies that maximize shareholder value while paying less attention to employees.

However, there may still be within-country variation in CEO preferences. To date, there is only a limited body of literature that attempts to explain such within-country differences in preferences by focusing on the specific personal attributes of corporate decision makers. Using survey questionnaire, Sturdivant and Ginter (1977) find that the best (worst) socially performing firms, as identified by the media, are led by executives who maintain broad (narrow) or liberal (conservative) attitudes with respect to business and social issues and are expected to promote (demote) corporate responsiveness concerning ecological matters, employee welfare, consumerism, and the like. Sturdivant (1979) observes fundamental differences between the values of executives and a group of stakeholders (namely activists). He finds that executives of the best socially performing firms have higher liberal scores and are more sensitive to stakeholder concerns.[1] Sonnenfeld (1981) investigates the perceptions of executives of different stakeholders. He examines the quality and quantity of interactions between the functional departments and the key stakeholders in firms operating in the forestry industry. He finds that executives responsible for a particular stakeholder group are more critical and less tolerant of that group. On the contrary, executives with relatively little interaction time with a given stakeholder group are more sympathetic to the concerns of that stakeholder group. For example, human resource managers are more open to financial stakeholder concern than are finance executives. Adams et al. (2011) study the personal values of board members and CEOs in Sweden. They find that these values have predictive power of how much emphasis the CEO puts on shareholders relative to stakeholders. Specifically, they find that the directors and CEOs that endorse higher achievement, power, and self-direction values and lower universalism values tend to focus on shareholders.[2]

More recent studies go beyond the sole investigation of the origins of CEO perceptions and provide evidence that link CEO personal values, CEO perceptions toward different stakeholders and CEO decisions. Chin et al. (2013) find that liberal CEOs make greater advances on corporate social responsibility and thus give greater attention to broader stakeholders when making decisions. Briscoe et al. (2014) investigate the formation of lesbian, gay, bisexual, and transgen-

[1]Sturdivant (1979) uses the same instrument as Sturdivant and Ginter (1977). He positions the response groups with respect to each other a priori on a dimension of a “broad" (liberal) to “narrow" (conservative) view of business and social issues. A high liberal score means that the respondent has a broad view of business and promotes corporate responsiveness to social issues.

[2]They utilize the personal value measures developed by Schwartz (1992). Achievement is related to personal success through demonstrating competence according to social standards; power refers to social status and prestige; self-direction refers to independent thought and action-choosing; and universalism is understanding, appreciation, tolerance and protection of the welfare of all people and for nature. For a complete list of values and their definitions, see Adams et al. (2011).

der employee groups in major corporations and provide evidence that the political liberalism of a CEO influences the likelihood of activism within the corporation.

Building on these contributions, we study the political ideology of the CEO and how this affects dividend policy and more generally the CEO's attitude toward shareholders. Shareholders provide the firm with the necessary capital and in turn expect a return on their investment. The dividend is a mechanism through which the CEO may return money to the shareholders. The relative importance of shareholder rights and worker rights has always been subject to debate between individuals of a left political leaning and those of a right political leaning. More precisely, CEOs with conservative views are expected to put more emphasis on capital and consequently one expect a right-wing CEO to pay more attention to shareholders. We expect that this attention will reflect itself in the firm's dividend policy. If the conjecture is valid, conservative CEOs are expected to pay more dividends.

The corporate governance literature is not unfamiliar with the idea that right-wing politics favors shareholders over workers (at least at the country level). Specifically, while studying the origins of ownership concentration, Roe (2003) puts the concept of ownership concentration into the political spectrum while focusing on how individual countries resolve the inherent conflict between workers and investors. He argues that, unlike right-wing countries, social democracies prefer workers over investors and this preference reflects itself in their policies and regulations. Roe argues that the political orientation of the government is the main determinant of the degree of attention given to investors versus workers. We follow the same logic at firm level rather than country level in studying the dividend policy of conservative and liberal CEOs.

We exploit a dataset that comprises CEOs of S&P 500 firms and covers the period of 1997 to 2014. We use the political donations of each individual CEO to the Republican and Democratic parties to measure the CEO's level of conservatism and liberalism. The use of political donation data for capturing the political ideology of the CEO has recently become popular among management and finance scholars (Elnahas and Kim, 2017; Hutton et al., 2014; Briscoe et al., 2014). We employ a slightly different variant of the most commonly used measures of political ideology in the literature. We find that firms with liberal CEOs are more likely to be non-dividend paying firms and consistently have lower dividend payouts. We also find that these patterns are more pronounced when liberal CEOs are more powerful and when the protection of shareholder rights (as measured by the number of takeover provisions in place) is weak. Contrary to expectations, we do not observe a difference in the likelihood of dividend cuts, omissions, initiations and re-initiations between liberal and conservative CEOs.

This paper contributes to at least three strands of existing research. First, our paper contributes to the strand of the strategic management literature that studies the relationship between management and stakeholders by providing evidence that CEOs vary in their attitudes towards stakeholders (Hill and Jones, 1992; Mitchell et al., 1997). Second, our research complements previous findings that point to the importance of CEO personal attributes for firm policies

(Hambrick and Mason, 1984; Bertrand and Schoar, 2003). More specifically, this paper adds to the growing literature that investigates the effect of the political ideology of the CEO on various firm actions (Elnahas and Kim, 2017; Hutton et al., 2014; Briscoe et al., 2014; Chin et al., 2013; Unsal et al., 2016; Francis et al., 2016). Finally, this research contributes to the literature that studies how CEOs might affect dividend policy (Deshmukh et al., 2013; Caliskan and Doukas, 2015).

The rest of the paper is organized as follows. Section 2 highlights related work. Section 3 comments on the sample and the measures. Section 4 elaborates on the empirical predictions, presents the empirical specifications and the results of the analysis. Section 5 contains the discussion and ends with concluding remarks.

4.2 Related Work

CEO Effect and Firm Policy

The effects that managers may have on firm behavior and performance has long been debated by organizational theorists (Chandler, 1966; Hannan and Freeman, 1977; Hambrick and Mason, 1984; Hambrick and Finkelstein, 1987; Bertrand and Schoar, 2003; Mackey, 2008; Quigley and Hambrick, 2015). An increasing amount of empirical research has explored the magnitude and nature of these effects. The earliest discussions involve two antagonistic views: one arguing for the importance of managerial effects on corporate performance (Child, 1972; Hambrick and Mason, 1984) and the other one arguing for the negligibility of managerial effects, and the importance of structure and environmental factors (Hannan and Freeman, 1977; DiMaggio and Powell, 1983). Not surprisingly, the empirical voyage in this area begins with research aiming to quantify the fraction of the variance in firm performance that is explained by executives (e.g., Lieberson and O'Connor (1972)). [3] In reaction to this apparent polarity, the focus of research moved away from the question of whether and to what extent managers matter to the question of when and under what circumstances managers matter (Finkelstein and Hambrick, 1990; Hambrick and Abrahamson, 1995; Crossland and Hambrick, 2007; Adams et al., 2005; Crossland and Hambrick, 2011). For example, the effect of managers on firm performance has been shown to be moderated by factors such as managerial discretion and the managerial labor market (Hambrick, 2007).

This literature has changed ever since to explore two additional promising and related directions. The first direction emerged from the realization that managers cannot be regarded as perfect substitutes for one another (Bertrand and Schoar, 2003). Contrary to the main assumption of the neoclassical theory of the firm, managers have idiosyncratic styles and have distinct character-

[3] Discussions and empirical inquiries around this as yet unsettled debate are still developing in the literature. For examples see Hambrick and Quigley (2014); Fitza (2014); Quigley and Graffin (2017) and Quigley and Hambrick (2015).

istics. These differences are predicted to translate into heterogeneous strategic actions. Second, the focus shifted partly from the direct emphasis on firm performance to specific firm policies such as corporate risk taking (Cain and McKeon, 2016; Cronqvist et al., 2012), corporate investment (Malmendier and Tate, 2005; Benmelech and Frydman, 2015), and firm financial policy (Malmendier et al., 2011; Graham et al., 2013).

Even though the research on the effects of the CEO on firm policies has passed the infancy stage, we still only have a limited amount of empirical evidence on how CEO attitudes towards different stakeholders shape the firms policies. This study investigates how CEO political ideology shapes CEO attitudes towards shareholders by focusing on the firm's dividend policy.

Political Ideology of CEOs and Firm Policies

There has been a surge in the number of studies focusing on the political ideology of CEOs and other board members. Evidence supports the view that conservative and liberal CEOs behave differently and have different management styles. Republican CEOs are more likely to follow conservative corporate policies. For example, they raise lower levels of corporate debt, invest less in research and development (R&D) and undertake less risky investments (Hutton et al., 2014). Republican CEOs also engage in fewer mergers and acquisitions (M&As), and, when they do, they are more likely to acquire public firms within the same industry and use cash as the method of payment Elnahas and Kim (2017). Unsal et al. (2016) find that the effects of lobbying on firm performance vary across firms with different managerial political orientations and excess lobbying (larger amount spent on lobbying) fails to create value for firms with conservative managers. Francis et al. (2016) associate Republican CEOs with more corporate tax sheltering even when their wealth is not tied with that of the shareholders and when corporate governance is weak. At the board level, Kim et al. (2013) find evidence that the monitoring effect of outside directors is more likely to be improved when the political views of the outside directors are distinct from those of the management. Further, ideologically diverse boards are associated with better firm performance and lower agency costs. Gupta et al. (2017) use CEO political ideology as an explanation for evenhandedness in resource allocation, defined as the degree to which every unit in an organization receives the same capital allocation. They observe that liberal CEOs favor evenhandedness, while conservative CEOs support the view that resources should flow to their most effective users, and hence tolerate greater disparity.

4.3 Sample Selection and Methodology

Sample selection

We collect CEO data from ExecuComp and match it with firm financial data obtained from Compustat. The sample includes all the executives who served as the CEO of an S&P 500 firm for at least three consecutive years between 1997 and 2014. The sample consists of 7,306 CEO-year

observations. We use this sample to construct the dependent variable and the control variables. For each CEO in the sample, we obtain political donation data from the Federal Election Commission (FEC). The FEC is an independent regulatory agency and has jurisdiction over the financing of political campaigns in the United States. It has been publicly disclosing detailed information about all the direct and indirect (via the Political Action Committee (PAC)) financial contributions to the federal elections by individuals since 1979. We consider all the direct contributions over $200 made by our list of CEOs to the Republican and Democratic parties between 1979 and 2016. We scrape the data directly from the FEC web page using its OpenAPI platform. We manually check the harvested data and distinguish the CEOs from other donors with similar names using information about occupation, employer and address. There are cases where CEOs made several donations to each party every year. Hence, for each year we aggregate the donations to obtain the total amount of contributions to each party made by each CEO. In total, we have 8422 observations of such aggregated donations.

Measuring the political ideology of the CEOs

In “The Polarization of American Politics", Poole and Rosenthal (1984) report a rise in the polarization of politics beginning with the 1970s when the Republicans and the Democrats became more divided along ideological lines with the Democrats holding consistently liberal positions and the Republicans promoting exclusively conservative ones. Later studies confirmed this polarization, suggesting its continuation and strengthening over time (McCarty, 2006; Poole and Rosenthal, 2007). Evidence also suggests that both voters and political activists (including those who contribute money to the candidates or parties) are also more separated across party lines and that their partisanship is increasingly aligned with their ideological preferences (Hetherington, 2001; Levendusky, 2009; Layman et al., 2010; Layman and Carsey, 2002). This suggests that political donations are a valid proxy for measuring the political ideology of the donor.

Considering CEO political contributions as a measure of CEO political ideology is constrained by two challenges, one being more general and the other one being specific to the CEO cohort. Given that political ideology can be captured by studying the patterns in donations, there is the question about the stability of ideology itself. One’s ideology is likely determined by one’s income, age, education as well as other demographics, which are subject to change over time. The second challenge is that the nature of the CEO’s profession likely makes the CEO different from the general public. CEOs pursue strategic objectives for their firms and, as a result, any donation made by the CEO may be regarded as strategic or opportunistic giving rather than being a reflection of his or her political ideology. We shall address these concerns in this section when discussing our measure of CEO political ideology.

Consistency of Donation Patterns over Time

Even though basic demographic traits may be important determinants of political preferences, we are less concerned about the fixed characteristics such as gender, ethnicity and education when it comes to the study of CEOs. This is because the majority of CEOs in our sample are highly educated white males. Hence, we draw our attention to characteristics such as CEO age and income, which are subject to change. The ExecuComp dataset provides information about CEO age and total compensation. By linking the ExecuComp data with the donation data, we are able to determine the age of the CEO at the time of the donation each year within and beyond the period of his tenure. This is however not possible for the compensation to explore its relationship to donation for any period out of the CEO tenure.[4]

Figure 4.1 presents two scatter plots illustrating the relationship between the fraction of total donations given to the Republicans on the one side and CEO age or CEO total compensation on the other side. The scatter plot on the left documents a positive and significant association between CEO age and donations to the Republicans (correlation coefficient of 0.10), suggesting that older CEOs are more likely to donate to the Republicans (being more conservative). The plot on the right side, however, shows no significant association between donations to the Republicans and CEO compensation. This may be due to the fact that CEOs are wealthy individuals and that a greater number of them maintain a right-leaning view.[5] Consistent with this view, the average value of conservatism (as measured by the percentage of dollars donated to the Republicans) is 64 percent.

The correlation between age and donations suggests that older CEOs tend to be more conservative. Next, we check whether the CEOs shift their donation behavior over time or whether they donate consistently to a single party over time? We cluster the CEOs based on the sequence of their donations. To begin with, we create a sequence for each CEO. Each sequence has a length equal to the number of years the CEO donated. Because a CEO may not donate every year, sequences have different lengths. Each element in the sequence can take one of these values: 1) $Republican$: if the CEO donates only to the Republican party in the year under consideration, 2) $Democrat$: if the CEO donates only to the Democratic party in the year, and 3) $BothParties$: if the CEO donates to both the Republican and Democratic parties in the year.

Next, we cluster the CEOs based on the dissimilarity of their donation patterns over time. We use 'Optimal Matching', a sequence alignment algorithm to measure the dissimilarity between the donation patterns.[6] Figure 4.2 presents the four identified clusters of CEOs. The first cluster

[4]For example, suppose the ExecuComp dataset has the record of a CEO between the years 2010 and 2015 and the CEO is 55 years old in 2010 and receives a compensation of one million in that year. And using donation data we realise that the same CEO has made two donations, one in 1990 and one in 2010. We know that the CEO was 35 years old in 1990 but we do not know his income in that year.

[5]This is not the case for CEO age. As mentioned earlier, it was possible to identify the age of the CEOs when they were as yet not a CEO and made a donation. This might explain why we see a significant relationship between age and conservatism but not income and conservatism.

[6] We let the substitution cost in matching the sequences to be determined by the transition rate. The inser-

Figure 4.1: Political Donation and CEO age and income

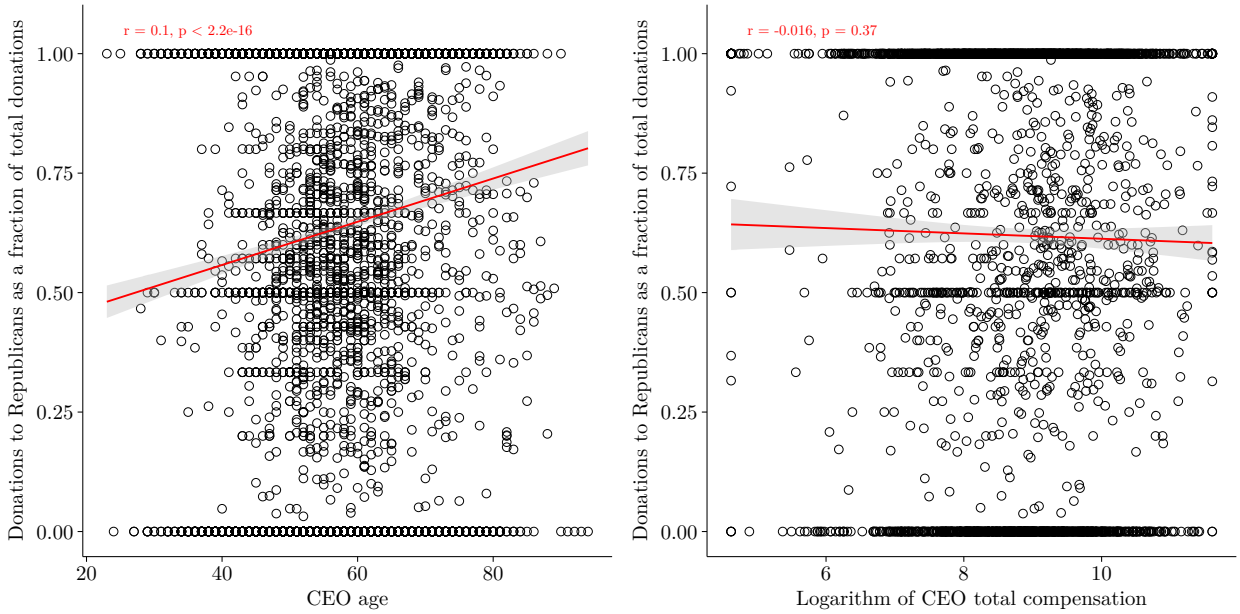
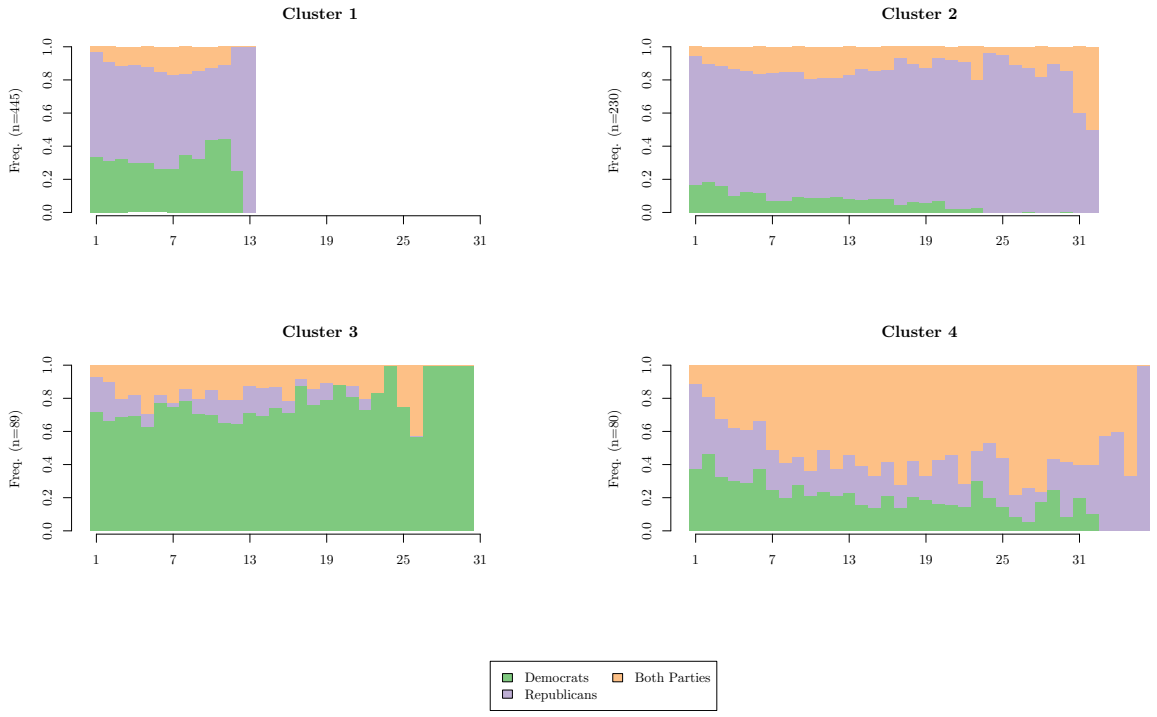


Figure 4.2: Sequence clustering for CEO donations



identifies CEOs who had shorter sequences (donated over a shorter period of time) and donated to the Republicans, the Democrats, or both. There is no evidence to suggest that the ratio of the CEOs who belong to one of those three groups changes sharply over time. The next three clusters represent CEOs who consistently donate to the Republicans, CEOs who consistently donate to the Democrats and CEOs who donate to either both or to one of the parties. The clear picture that emerges from the cluster analysis is that there are not a lot of transitions and the donation pattern seems to remain consistent over time. Even though age and conservatism seems to have an association, the cluster analysis suggests that individual CEOs normally do not change their donation behavior (and hence their political view) over time.

Donations: Ideology versus Opportunism

Contributing to political parties seems to be common practice among the leaders of big corporations in the United States. Nine out of ten CEOs in our sample made at least one donation to a political party during the period of study. The mean donation of CEOs of S&P 500 firms is $31,000. The mean donation of the CEOs in each two-year election cycle is nearly four millions to the Republican party and the Democratic party. The question arises whether the donations of corporate leaders are the result of their pursuing the objectives of the firm they lead or a reflection of their own ideology. Evidence suggests that, unlike corporate Political Action Committee (PAC), CEOs are more partisan in their donations, willing to give to non-incumbents, less likely to target powerful legislators and, as a result, it is highly likely that their donations reflect their ideology (Bonica, 2016).

In Figure 4.3, we present the frequency distribution of fraction of total donations given to the Republicans. Similar to Bonica (2016), we find that the distribution has fat tails, with a higher percentage of donations being made to the Republicans. This suggests that CEOs are partisan as each year they make donations only to one of the two parties. However, there still remains a considerable number of bipartisan CEOs occupying the middle of the frequency distribution and who make donations to both parties each year. This is similar to the results obtained from clustering. Tracking over time the donations of CEOs who donate to both parties, we observe that the percentage of CEOs who donate to both parties peaks at around presidential elections and it exceeds the percentage of CEOs who remain loyal to the Democrats. This pattern emerges clearly from Figure 4.4. The results suggest that, despite CEOs being consistent in their donation behaviour, there still remains a chance for a CEO to act opportunistically. We therefore differentiate between the following four different types of CEOs: 1) $ZeroDonations$: CEOs who during their tenure make no donations to any political party; 2) $NonPartisans$: CEOs who during their tenure made donations to both parties; 3) $Conservatives$: CEOs who remain loyal to the Republicans by contributing only to the Republican party; and 4) $Liberals$: CEOs who remain loyal to the Democrats by contributing only to the Democratic party.

tion/deletion (indel) cost is set to 1.

Figure 4.3: The fraction of total dollars donated to the Republicans.

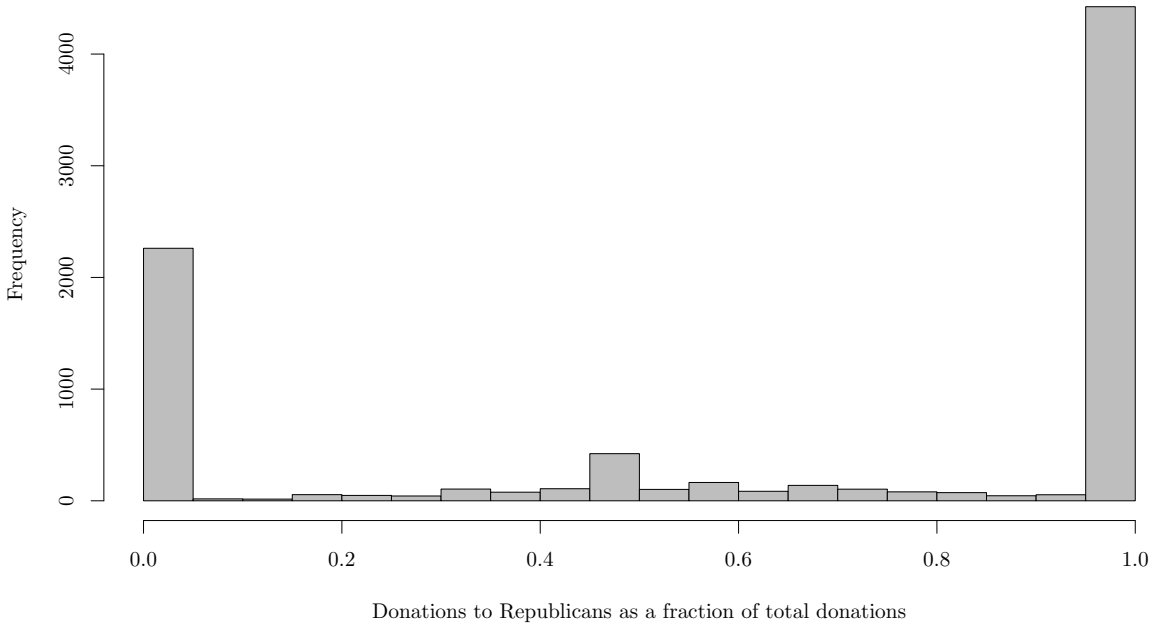
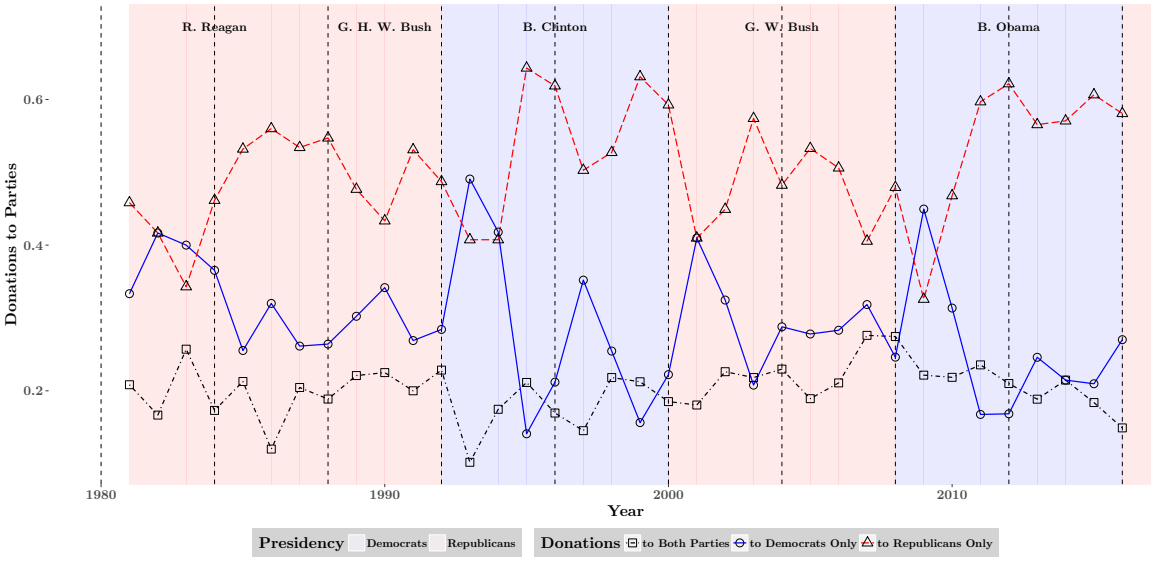


Figure 4.4: The fraction of CEOs made yearly donations only to the Republicans, only to the Democrats, or to both parties.



Dependent and Control Variables

We estimate the following baseline model:

$$(1)\quad Dividend_{it} = \alpha + \beta_1 PoliticalIdeology_i + X_{it-1}\gamma + Industry_i + Year_t + \epsilon_i$$

The dependent variable in this study is the dividend payout measured as common dividends over net income. To check the robustness of our results, we also consider common dividends over total assets, common dividends over sales, the dividend yield and the dividend per share. The definition of these variable and the control variables are given in the table in the Appendix.

We use a number of firm-related controls commonly used in studies examining dividend payouts (see e.g. Chen et al., 2017). These include the following. Firm size is measured by the natural logarithm of total assets. Tobins q is the market value of assets to the book value of assets. The market value of assets is the book value of assets plus the market value of common equity less the sum of the book value of common equity and deferred taxes. Leverage is the sum of short- and long-term debt. Cash holdings equals cash and marketable securities divided by beginning of the year total assets minus cash and marketable securities. Return on assets (ROA) is the ratio of earnings before interest, tax, depreciation, and amortization (EBIDTA) to total assets. Asset tangibility is net property, plant and equipment over total assets. R&D spending is research and development expenses. We consider firms with missing R&D values as non-R&D firms and set the value for this variable to zero. In order to mitigate the potential effects of outliers, we winsorize the dependent variable and the control variables at the 1st and 99th percentiles.

We also control for a number of board-level and CEO-level variables. They comprise board size, the fraction of independent directors on the board, an indicator variable for CEO duality, CEO tenure and the percentage of shares outstanding owned by the CEO. The standard errors in all regression models are clustered at the level of the industry. Moreover, time and the industry fixed effects are included in all the models. Table 4.1 provides summary statistics and Table 4.2 presents the correlation matrix.

4.4 Empirical Analysis

CEO Political Ideology and Dividend Payout

The main hypothesis of this paper is that liberal CEOs put less emphasis on shareholders and therefore firms led by such CEOs pay less dividends. We start by conducting a univariate analysis whether there is a relationship between CEO political ideology and the dividend payout. Panel A of Table 4.3 reports the average dividend payout (as measured by common dividends divided by net income) as well as the fraction of non-dividend paying firms, those with dividend

Table 4.1: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Median	Max
Dividend/TA	6,747	0.018	0.021	0.000	0.011	0.106
Dividend/SALES	6,197	0.030	0.042	0.000	0.017	0.244
Dividend/NI	5,437	0.309	0.434	−0.963	0.240	2.622
Dividend yield	7,279	0.017	0.018	0.000	0.013	0.086
Dividend per share	7,293	0.727	0.784	0.000	0.510	3.693
Tobin's q	5,441	2.160	1.488	0.830	1.659	9.228
R&D	6,780	0.023	0.049	0.000	0.000	0.326
Cash holding	5,730	0.138	0.172	0.001	0.072	0.858
ROA	5,637	0.171	0.099	−0.035	0.159	0.522
Firm size	6,776	9.259	1.525	4.407	9.171	14.674
Leverage	6,216	0.274	0.204	0.000	0.247	1.061
Asset tangibility	6,075	0.306	0.272	0.000	0.216	1.115
E-index	4,820	2.759	1.430	0	3	6
CEO share ownership	3,441	2.516	5.534	0.001	0.290	29.236
Tenure	6,780	4.699	3.243	1	4	17
CEO duality	5,834	0.637	0.481	0	1	1
Board independence	5,834	0.744	0.155	0.250	0.778	0.929
Board size	5,834	10.652	2.538	5	11	18

cuts, omissions, initiations and re-initiations for each year and for each of the four categories of CEOs (ie. conservative, liberal, nonpartisan and zero-donation CEOs). Panel B presents the means for each of the aforementioned dividend measures for conservative and liberal CEOs. The last column in Panel B reports the p-value of a z-test that compares the differences in proportions between the two types of CEOs. The mean dividend payout for firms with conservative CEOs is significantly higher that the mean dividend payout for firms with liberal CEOs. We also find that the proportion of firms with a conservative CEO that do not pay a dividend is significantly lower than the equivalent proportion for firms with a liberal CEO. These findings confirm our prediction.

$Dividend$ is dividend payout (dividend over net income) for firm i at time t. $PoliticalIdeology$ measures the political preference of the CEO of firm i. X is a vector of firm-level, board-level and CEO-level controls as described in the previous section. $Industry$ and $Year$ are industry and year fixed effects. The first three columns in Table 4 report the results of our regression analysis. In all these three models, we exclude firms led by non-partisan CEOs and CEOs who make no donations as we are interested in comparing the dividend policy of the firms led by conservative and liberal CEOs. Hence, $PoliticalIdeology$ is represented by a dummy variable that is set to one if the CEO is liberal, and zero if the CEO is conservative. In the first column, we do not

Table 4.2: Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1.Dividend/TA	1																	
2.Dividend/Sales	0.73	1																
3.Dividend/NI	0.45	0.55	1															
4.Dividend yield	0.56	0.70	0.66	1														
5.Dividend per share	0.59	0.59	0.47	0.73	1													
6.Tobin's q	0.17	-0.07	-0.19	-0.31	-0.21	1												
7.R&D	0.02	-0.020	-0.12	-0.18	-0.18	0.35	1											
8.Cash Holding	0.030	0	-0.14	-0.20	-0.21	0.47	0.50	1										
9.ROA	0.25	-0.07	-0.23	-0.24	-0.12	0.67	0.21	0.35	1									
10.Firm size	0.05	0.25	0.21	0.39	0.41	-0.48	-0.17	-0.22	-0.44	1								
11.Leverage	0.02	0.12	0.18	0.20	0.12	-0.28	-0.18	-0.20	-0.10	0.10	1							
12.Asset tangibility	-0.01	0.07	0.14	0.17	0.16	-0.20	-0.30	-0.25	0.09	0.04	0.26	1						
13.E_index	-0.02	0.01	0.06	0.09	0.08	-0.22	-0.05	-0.13	-0.11	0.01	0.09	0.03	1					
14.CEO ownership	-0.11	-0.11	-0.11	-0.18	-0.17	0.16	0.01	0.10	0.12	-0.16	-0.06	-0.02	-0.19	1				
15.Tenure	0.05	0.01	0	-0.03	-0.02	-0.01	0	0.05	0.01	0.04	-0.05	0	0.08	0.16	1			
16.CEO duality	0.01	-0.01	0.06	0.04	0.13	-0.08	-0.12	-0.13	-0.07	0.08	0.06	0.06	0.01	0.02	0.20	1		
17.Board independence	0.08	0.12	0.15	0.23	0.25	-0.22	0.09	-0.06	-0.19	0.32	0.09	0.01	0.27	-0.30	0.06	0.15	1	
18.Board size	0.09	0.17	0.21	0.36	0.39	-0.36	-0.21	-0.26	-0.32	0.57	0.10	-0.01	0.09	-0.12	-0.03	0.05	0.14	1

The table reports the correlation between the different variables. Appendix A contains the definition of all the variables.

Table 4.3: Summary Statistics for the Dividend Measures

Panel A

	clusters	variable	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Overall Period
1	Conservatives	Dividend/NI		0.016	0.015	0.015	0.017	0.015	0.016	0.016	0.018	0.020	0.020	0.021	0.021	0.024	0.022	0.023	0.023	0.030	0.019
2		Non-payers	0.257	0.229	0.253	0.257	0.257	0.291	0.279	0.265	0.239	0.206	0.231	0.216	0.237	0.225	0.219	0.190	0.153	0.054	0.232
3		Dividend cut	0.444	0.444	0.500	0.562	0.571	0.493	0.562	0.629	0.676	0.760	0.609	0.680	0.568	0.592	0.654	0.763	0.639	0.882	0.609
4		Omission	0.018	0	0	0.027	0.013	0.014	0	0	0	0	0	0	0.013	0.026	0	0	0.014	0	0.007
5		Initiation	0.053	0.050	0	0.040	0	0	0.032	0.036	0.083	0.048	0.045	0.048	0	0.125	0	0.043	0	0	0.035
6		Re-initiation	0	0	0	0	0	0	0.032	0.036	0	0.048	0	0	0	0	0	0.130	0	0.333	0.018
7	Liberals	Dividend/NI		0.018	0.018	0.014	0.014	0.014	0.013	0.015	0.011	0.010	0.011	0.010	0.009	0.011	0.013	0.018	0.019	0.028	0.014
8		Non-payers	0.333	0.346	0.344	0.381	0.381	0.375	0.439	0.409	0.435	0.469	0.444	0.480	0.431	0.412	0.346	0.234	0.233	0.154	0.383
9		Dividend cut	0.357	0.412	0.286	0.692	0.480	0.440	0.636	0.583	0.600	0.542	0.500	0.692	0.464	0.571	0.594	0.781	0.844	0.818	0.582
10		Omission	0	0	0	0.037	0	0	0.043	0.040	0	0.040	0.034	0	0	0.034	0	0	0	0	0.013
11		initiation	0	0	0	0	0.062	0	0.056	0.111	0	0	0	0	0.043	0.091	0	0.133	0.091	0	0.034
12		Re-initiation	0	0	0	0	0	0	0	0	0.048	0.045	0.080	0	0	0	0.100	0.133	0	0	0.027
13	NonPartisan	Dividend/NI		0.019	0.018	0.017	0.014	0.014	0.013	0.015	0.017	0.019	0.019	0.018	0.017	0.019	0.020	0.021	0.021	0.023	0.018
14		Non-payers	0.207	0.201	0.211	0.220	0.232	0.230	0.198	0.189	0.173	0.178	0.184	0.189	0.193	0.193	0.146	0.141	0.112	0.091	0.185
15		Dividend cut	0.490	0.464	0.331	0.444	0.406	0.469	0.497	0.586	0.651	0.657	0.598	0.646	0.454	0.575	0.655	0.728	0.650	0.786	0.563
16		Omission	0	0.009	0.016	0.007	0.014	0.020	0.013	0	0	0.006	0.011	0.022	0.011	0.012	0	0	0	0	0.008
17		Initiation	0	0	0	0	0.026	0.047	0.087	0.091	0.028	0.026	0	0.045	0.024	0.050	0.100	0.038	0.077	0	0.040
18		Re-initiation	0	0.037	0.061	0	0	0	0.087	0.023	0	0.026	0.026	0.070	0.024	0.050	0.150	0	0.192	0	0.043
19	ZeroDonation	Dividend/NI		0.015	0.016	0.013	0.010	0.010	0.011	0.014	0.016	0.016	0.023	0.021	0.020	0.021	0.021	0.023	0.026	0.034	0.019
20		Non-payers	0.246	0.226	0.324	0.343	0.368	0.365	0.413	0.355	0.329	0.360	0.316	0.336	0.330	0.310	0.279	0.264	0.197	0.100	0.304
21		Dividend Cut	0.349	0.447	0.500	0.511	0.429	0.533	0.558	0.614	0.660	0.566	0.651	0.704	0.529	0.613	0.707	0.725	0.739	0.778	0.610
22		Omission	0	0	0.038	0	0.023	0	0.023	0	0	0	0	0.014	0.014	0	0	0.011	0	0	0.007
23		Initiation	0	0.067	0	0	0	0.069	0.032	0.094	0.034	0.061	0.029	0	0.081	0.026	0.083	0.059	0.167	0	0.050
24		Re-initiate	0	0	0	0	0	0	0	0.062	0.034	0	0.088	0	0	0.053	0.056	0.059	0.033	0	0.026

Panel B

	Conservatives	Liberals	Difference in Proportions
Dividend/NI	0.019	0.014	0.006***
Non-payers	0.232	0.383	-0.151***
Divident cut	0.609	0.582	0.027
Omission	0.007	0.013	-0.006
Initiation	0.035	0.034	0.001
Re-initiation	0.018	0.027	-0.010

Panel A reports the means and proportions for the various measures of dividend each year for conservative, liberal, non-partisan CEOs and CEOs with no donation. Dividend/NI is the mean value of dividend over net income. Non-payers is the number of non-dividend paying firms divided by the total number of firms. Dividend cut is the number of dividend paying firms that reduce their dividend divided by the total number of dividend paying firms. Omission is the number of dividend paying firms that stop paying a dividend divided by the total number of dividend paying firms. Initiation is the number of non-dividend paying firms that have started paying a dividend for the first time since their appearance in the CRSP database divided by the total number of non-dividend paying firms. Reinitiation is the number of firms that start paying a dividend after omitting their dividend divided by the total number of zero dividend paying firms. Panel B compares the means (for Dividend/NI) and proportions (for the rest of the dividend measures) between the conservative and liberal CEOs. The asterisks in the third column denote the significance level of the Z-test (t-test for Dividend/NI).

include any controls, except for the year and industry fixed effect. In the second column, we add the firm-level controls and, finally, in the third column we include all the controls. Consistent with our prediction, the coefficient on $Liberalism$ is negative and significant in all the three columns, suggesting that firms led by liberal CEOs tend to have lower dividend payouts.

In addition, we compare the dividend payout of liberal CEOs with that of conservative and non-partisan CEOs by subsample analysis. [7] The results are presented in columns (4), (5) and (6) in Table 4.4. Our measure of political ideology is now a categorical variable representing three categories of CEOs, namely $Liberal$, $Conservative$ and $NonPartisan$. The last category is considered to be the base case. The results are similar to those for the first three models: compared to firms with conservative and non-partisan CEOs, corporations with liberal CEOs have lower dividend payouts.

In addition to the dividend payout, we explain the likelihood of a firm paying a dividend across liberal and conservative CEOs. We argue that CEO political ideology determines the likelihood of a firm being a dividend paying firm: a liberal CEO should be less likely to pay a dividend. We estimate logit models explaining the likelihood of the firm being a dividend payer (see columns (7), (8) and (9)). Again, CEO political ideology is the key variable of interest. Except for the dependent variable, the specifications are similar to the baseline model. The dependent variable takes the value one if the firm is a dividend-paying firm, and zero otherwise. The last three columns in the Table 4.4 report the results for the logit model. The results lend support to our conjecture that being a liberal CEO increases the likelihood of the firm not being a dividend payer.

We devise additional tests to examine the robustness of the results. Specifically, we replace the dividend payout measure (common dividends over net income) with dividends over total assets, dividends over total sales, the dividend yield and dividends per share in the baseline model. In all cases, the results remain: the dividend paid to the shareholders is negatively associated with the level of CEO liberalism. The results are reported in Table 4.5.

Dividend Payout Around CEO Appointments

Consistent with our hypothesis, we find that firms led by liberal CEOs pay less dividends and liberal CEOs are more likely to head non-dividend paying firms. However, it may be the case that liberal CEOs self-select themselves into firms that pay less or no dividends or into firms whose dividend payout ratio is low or zero. Hence, we investigate changes in dividend payouts around the appointment of a new CEO. Specifically, we consider firm-years one year before and one, two or three years after the appointment. We only consider appointments of CEOs that involve liberal and conservative incumbent and new CEOs. $Treated$, the explanatory variable of interest, takes the value of -1 for conservative-to-liberal CEO transitions, 0 for conservative-to-conservative as well as liberal-to-liberal transitions, and 1 for liberal-to-conservative transitions.

[7] The analysis yields similar results if we also include CEOs with no political donations.

Table 4.4: CEO Political Ideology, Dividend Payout and Likelihood of Being a Dividend Payer

Dependent variables	**Dividend/NI**						**Dividend payer**		
Models	**OLS**						**Logit**		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Intercept	0.553***	−0.126	0.036	0.410***	−0.124	0.047	0.271**	0.562***	0.188
	(0.084)	(0.218)	(0.337)	(0.029)	(0.222)	(0.216)	(1.093)	(3.101)	(4.890)
Liberalism	−0.061**	−0.050**	−0.081**	−0.099***	−0.088**	−0.089***	−0.112***	−0.068*	−0.037**
	(0.019)	(0.016)	(0.027)	(0.023)	(0.031)	(0.018)	(0.163)	(0.454)	(0.416)
Conservatism				−0.022	−0.029	−0.010			
				(0.028)	(0.028)	(0.029)			
ROA_{t-1}		−0.264	−0.358		−0.078	−0.245		0.250	0.187
		(0.192)	(0.205)		(0.065)	(0.178)		(3.825)	(4.537)
Firm $size_{t-1}$		0.065***	0.051***		0.047***	0.012*		0.055***	0.033**
		(0.016)	(0.013)		(0.010)	(0.005)		(0.314)	(0.373)
Tobin's q_{t-1}		0.019**	0.014		0.007	−0.003		0.005	−0.001
		(0.007)	(0.015)		(0.006)	(0.014)		(0.286)	(0.341)
Cash $holding_{t-1}$		−0.242***	−0.205***		−0.239***	−0.225***		−0.254***	−0.149***
		(0.052)	(0.055)		(0.049)	(0.045)		(1.399)	(1.453)
$Leverage_{t-1}$		0.033	0.021		0.094	0.110		−0.087	−0.051
		(0.062)	(0.102)		(0.098)	(0.136)		(0.921)	(0.990)
$R\&D_{t-1}$		−0.221	−0.212		−0.321	−0.198		−0.421*	−0.040
		(0.135)	(0.223)		(0.281)	(0.350)		(3.782)	(2.312)
Asset $tangibility_{t-1}$		0.029	−0.098		0.130	0.077		−0.075	−0.068
		(0.147)	(0.166)		(0.195)	(0.153)		(1.347)	(1.561)
CEO $tenure_{t-1}$			0.004			0.005**			0.000
			(0.007)			(0.002)			(0.033)
CEO $duality_{t-1}$			−0.006			−0.003			0.047***
			(0.020)			(0.020)			(0.395)
Board $independence_{t-1}$			0.037			0.257*			0.051
			(0.067)			(0.101)			(2.209)
Board $size_{t-1}$			0.024***			0.020***			0.004
			(0.007)			(0.004)			(0.139)
E-Index			−0.004			−0.024**			0.009**
			(0.004)			(0.008)			(0.113)
R^2	0.183	0.243	0.299	0.208	0.236	0.292			
Adj. R^2	0.153	0.206	0.249	0.193	0.218	0.267			
Num. obs.	1815	1494	1051	4213	3433	2382	2410	1667	1155
F statistic	5.949	6.531	6.052	14.467	13.129	11.865			
RMSE	0.349	0.335	0.324	0.390	0.391	0.382			
AIC							2150.012	1227.695	777.361
BIC							2549.342	1617.847	1141.095
Log Likelihood							−1006.006	−541.847	−316.681
Deviance							2012.012	1083.695	633.361

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

The rationale behind the coding of this variable is to distinguish between CEO appointments that change the political ideology of the CEO and those that do not. The dependent variable is the change in dividends per share. In line with Lintner (1956), dividend depends on past values of firm's income, the changes in firm's income and how much dividend they used to pay (dividend is sticky). We control for net income (normalized by the lagged value of total assets) one year before the appointment, the changes in net income and, the level of dividend per share one and two years prior to the appointment.

Table 4.6 reports the results.

In line with our expectations, the results suggest that conservative CEOs significantly increase the dividends per share in the years following their appointment. Both the size and the significance level of the $Treated$ coefficient increase over time which can be sign that conservative CEOs increase the dividend even more as they find their place in the company. Overall,

Table 4.5: Robustness of the Results.

Dependent Variables	**Dividend/TA**			**Dividend/Sales**			**Dividend Yield**			**Dividend Per Share**		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	0.028***	−0.011	−0.023	0.047***	−0.017	−0.025	0.016***	−0.007	−0.014*	0.832***	−0.726**	−1.385***
	(0.001)	(0.008)	(0.012)	(0.004)	(0.015)	(0.022)	(0.004)	(0.004)	(0.006)	(0.062)	(0.262)	(0.274)
Liberalism	−0.007***	−0.006**	−0.005***	−0.014***	−0.011***	−0.010***	−0.006***	−0.005*	−0.003**	−0.253***	−0.199***	−0.139***
	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.003)	(0.001)	(0.002)	(0.001)	(0.071)	(0.055)	(0.036)
Conservatism	0.001	−0.000	0.001	−0.002	−0.002	−0.000	−0.001	−0.001	−0.001	−0.072	−0.061	−0.020
	(0.001)	(0.001)	(0.001)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.072)	(0.061)	(0.054)
ROA_{t-1}		0.067***	0.075***		0.041*	0.043		0.014***	0.014*		1.100***	1.298**
		(0.015)	(0.015)		(0.017)	(0.023)		(0.003)	(0.007)		(0.284)	(0.421)
Firm $size_{t-1}$		0.003***	0.003***		0.006***	0.005***		0.003***	0.002***		0.177***	0.140***
		(0.001)	(0.001)		(0.001)	(0.001)		(0.000)	(0.000)		(0.016)	(0.022)
Tobin's q_{t-1}		0.002***	0.002		0.002***	0.001		−0.002***	−0.002***		−0.035**	−0.035***
		(0.000)	(0.001)		(0.001)	(0.001)		(0.000)	(0.000)		(0.012)	(0.009)
Cash $holding_{t-1}$		−0.024***	−0.027***		−0.019***	−0.021***		−0.011***	−0.012***		−0.689***	−0.666***
		(0.006)	(0.005)		(0.003)	(0.001)		(0.002)	(0.002)		(0.068)	(0.050)
$Leverage_{t-1}$		−0.009***	−0.011***		−0.008	−0.007		−0.001	−0.000		−0.312***	−0.346**
		(0.002)	(0.003)		(0.004)	(0.008)		(0.002)	(0.004)		(0.055)	(0.110)
$R\&D_{t-1}$		−0.021*	0.004		−0.010	0.042**		−0.009	−0.006		−1.262	−1.342
		(0.009)	(0.009)		(0.011)	(0.015)		(0.011)	(0.011)		(0.802)	(0.735)
Asset $tangibility_{t-1}$		−0.008	−0.007		0.011	0.018		−0.000	−0.001		0.040	0.013
		(0.007)	(0.006)		(0.018)	(0.019)		(0.006)	(0.006)		(0.302)	(0.269)
CEO $tenure_{t-1}$			0.000*			0.000			0.000			0.003
			(0.000)			(0.000)			(0.000)			(0.012)
CEO $duality_{t-1}$			−0.000			−0.000			0.000			0.128**
			(0.002)			(0.002)			(0.001)			(0.041)
Board $independence_{t-1}$			0.009			0.000			0.013**			0.396
			(0.006)			(0.009)			(0.005)			(0.266)
Board $size_{t-1}$			0.001*			0.001*			0.001***			0.053***
			(0.000)			(0.001)			(0.000)			(0.016)
E-Index			−0.001			−0.002*			−0.001*			−0.002
			(0.001)			(0.001)			(0.000)			(0.018)
R^2	0.320	0.426	0.511	0.443	0.396	0.499	0.400	0.466	0.517	0.365	0.449	0.501
Adj. R^2	0.311	0.414	0.496	0.434	0.383	0.483	0.391	0.455	0.501	0.356	0.438	0.485
Num. obs.	5281	3823	2630	4813	3823	2630	5704	3831	2633	5716	3832	2633
F statistic	32.710	35.203	33.339	50.231	31.084	31.762	49.274	41.459	34.086	42.576	38.718	32.014
RMSE	0.017	0.016	0.015	0.031	0.029	0.027	0.014	0.013	0.013	0.641	0.579	0.557

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

The results lend support to our argument that the political preferences of a CEO matter for the dividend policy and the pattern we observe in the regressions are not completely due to the CEO-firm matching.

The managerial style of conservative CEOs

Conservative CEOs tend to pay more dividends as compared to their liberal counterparts. However, does the greater emphasis on paying more dividends by conservative CEOs translate into a greater propensity to shed the workforce? To test this, we use the same specifications we used to study changes in dividends around new CEO appointments. We investigate whether the dividend payout for the new conservative CEO is moderated by employee downsizing and divestment. We speculate that conservative CEOs finance their dividend payout using the proceeds they raise using the divestment of inefficient resources of the firm. Columns (4), (5) and (6) and columns (7), (8) and (9) in Table 4.6 report the results of OLS regressions comparing the changes in dividend per share one year prior to new CEO appointment with one, two and three years after the appointments, respectively. Except for the interaction terms, the model specification is identical to the one we used to examine the new CEO appointment (columns (1) to (3)). Employee downsizing is captured by the reduction in the number of employees (the number of employees one year before the appointment minus the number of employees one, two or three

Table 4.6: Changes in dividend around CEO appointment and the managerial style of conservative CEOs

Dependent Variable: Change in Dividends Per Share									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Intercept	−0.030	−0.130	0.020	−0.044	−0.145	0.011	−0.053	−0.150	0.003
	(0.075)	(0.123)	(0.097)	(0.074)	(0.125)	(0.098)	(0.091)	(0.141)	(0.145)
Treated	0.164*	0.213**	0.239**	0.211**	0.269***	0.284**	0.299*	0.343***	0.390*
	(0.063)	(0.062)	(0.085)	(0.064)	(0.060)	(0.095)	(0.110)	(0.081)	(0.145)
Net Income$_{a-1}$	1.191	3.009*	1.500*	1.330*	3.173**	1.610*	1.558**	3.111**	1.555*
	(0.607)	(1.141)	(0.721)	(0.611)	(1.158)	(0.706)	(0.536)	(1.105)	(0.598)
Change in net income	0.824	2.952*	1.739**	0.899	3.050*	1.800**	0.946	2.902*	1.693***
	(0.552)	(1.320)	(0.519)	(0.556)	(1.340)	(0.512)	(0.534)	(1.269)	(0.413)
Dividend per share$_{a-1}$	1.063	1.111	1.307*	1.294*	1.262	1.319*	1.194*	1.202	1.342**
	(0.571)	(0.706)	(0.492)	(0.584)	(0.732)	(0.548)	(0.481)	(0.659)	(0.460)
Dividend per share$_{a-2}$	−1.212*	−1.334	−1.340**	−1.449*	−1.488*	−1.351*	−1.339*	−1.415*	−1.361**
	(0.596)	(0.701)	(0.489)	(0.609)	(0.725)	(0.543)	(0.503)	(0.645)	(0.442)
Downsizing (employee)				−0.001	−0.000	−0.000			
				(0.000)	(0.000)	(0.000)			
Treated * Downsizing				0.009***	0.007***	0.004*			
				(0.002)	(0.001)	(0.002)			
Divestment (asset)							0.137	0.043	0.039
							(0.268)	(0.230)	(0.236)
Treated * Divestment							0.557*	0.363*	0.372
							(0.265)	(0.166)	(0.245)
R^2	0.390	0.348	0.300	0.437	0.369	0.324	0.436	0.359	0.330
Adj. R^2	0.305	0.262	0.197	0.322	0.246	0.176	0.319	0.235	0.184
Num. obs.	42	44	40	42	44	40	42	44	40
F statistic	4.596	4.055	2.911	3.776	3.003	2.189	3.749	2.886	2.257
RMSE	0.260	0.426	0.333	0.257	0.431	0.337	0.257	0.434	0.336

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 4.7: *

Columns (1), (2) and (3) present the result of OLS regressions comparing the changes in dividend per share one year prior to new CEO appointment with one, two and three years after the appointments, respectively. $Treated$ gets the value of -1 when a conservative CEO is replaced by a liberal one, 0 when a conservative (liberal) CEO is replaced by a conservative (liberal) one and, 1 if a liberal CEO is replaced by a conservative one. Net income is normalised by total assets and then the change in net income is calculated. a denotes the year of the appointment. Columns (4) to (6) and columns (7) to (9) are similar to columns (1) to (3) but contain interaction terms between $Treated$ and $Downsizing$. Change in net income is calculated as net income after the appointment minus net income one year before the appointment. Downsizing is the number of employees one year before the appointment minus the number of employees after the appointment. Divestment is the logarithm of total assets one year before the appointment minus the logarithm of total assets after the appointment. Robust standard errors are reported in parentheses.

years after the appointment). Divestment is represented by the reduction in the firm's total assets (the logarithm of total assets one year before the appointments minus the logarithm of total assets one, two or three years after the appointment).

The interaction terms between the replacement of a CEO with a more conservative one and both downsizing (Treated * Downsizing) and divestment (Treated * Divestment) are positive and significant one and two years (also three years in the case of downsizing) after the appointment. These results are supportive of the view that the increased level of dividend payout (as measured by dividends per share) in the case of transitions to a more conservative CEO is more sensitive to downsizing and divestment. The decision of a more conservative CEO to increase the level of dividend payout comes at the expense of the employees.

The Effects of Shareholder Rights and CEO Power

The next set of predictions is around the role of firm-level shareholder rights and the effect of CEO power on the relationship between CEO political ideology and the dividend payout. It can be expected that the effect of CEO liberalism on the dividend payout is more pronounced if shareholder rights are weak or if the liberal CEO has excessive power. To put this to the test, we construct sub-samples of firms with high and low shareholder rights and of firms with high and low CEO power. Shareholder rights can be gaged using takeover provisions in the firm's articles of association (Gompers et al., 2003). The assumption is that these provisions weaken the bargaining power of the shareholders and enhance the power of the CEO. We use the E-Index which contains the six most important hostile takeover provisions (Bebchuk et al., 2009). In the same vein, this measure is used to capture CEO entrenchment and is therefore relevant in this context. A higher value for the E-Index means that there are more provisions in place and therefore signifies lower shareholder rights. The high E-Index (low shareholder rights) sub-sample comprises firms with their E-Index value being higher than the median value for the E-Index for all the firms in the sample. The low E-Index (high shareholder rights) sub-sample comprises firms with their E-Index being lower than the sample median value.

We use CEO tenure, duality and share ownership to capture CEO power. CEOs with high tenure, CEOs who also act as the chairman of the board of directors and CEOs who have a higher equity stake in the firm are expected to have more power. The high CEO tenure (high CEO power) sub-sample contains CEO-years where the CEO tenure is above the median tenure for all the CEOs in the main sample. The rest of the CEO-years fall into the low CEO tenure sub-sample. The same procedures follow in constructing the high and low sub-samples for CEO share ownership. CEO share ownership is the percentage of shares outstanding held by the CEO. In the case of CEO duality, High CEO power is associated with the sub-sample that contains CEOs who act as the chairman.

Table 4.8 reports the coefficients for OLS regressions performed on these sub-samples. Consistent with our prediction, liberal CEOs pay even less dividends when shareholder rights are

Table 4.8: The Effects of Shareholder Rights and CEO Power on the Relationship Between CEO Political Ideology and Dividend Payout

	E-Index		CEO Share		CEO Duality		CEO Tenure	
	High	Low	High	low	Yes	No	High	Low
Intercept	0.150	−0.128	0.129	0.008	0.051	−0.095	−0.236	0.087
	(0.224)	(0.344)	(0.511)	(0.210)	(0.196)	(0.384)	(0.268)	(0.216)
Conservatism	−0.022	−0.003	−0.084	−0.001	−0.008	−0.043	−0.023	0.001
	(0.042)	(0.029)	(0.074)	(0.047)	(0.025)	(0.067)	(0.029)	(0.042)
Liberalism	−0.122***	−0.028	−0.223**	−0.073	−0.096***	−0.130	−0.102***	−0.057
	(0.026)	(0.044)	(0.072)	(0.053)	(0.028)	(0.074)	(0.024)	(0.038)
ROA_{t-1}	−0.386*	−0.151	−0.504	−0.505	−0.619	0.115	−0.164	−0.368
	(0.189)	(0.185)	(0.321)	(0.582)	(0.335)	(0.146)	(0.211)	(0.277)
Firm $size_{t-1}$	0.010	0.019	0.023	0.007	−0.003	0.029**	0.022	0.009
	(0.009)	(0.015)	(0.014)	(0.012)	(0.008)	(0.010)	(0.014)	(0.010)
Tobin's q_{t-1}	0.005	−0.015	−0.008	0.032	−0.002	−0.006	0.008	−0.010
	(0.016)	(0.012)	(0.017)	(0.035)	(0.019)	(0.011)	(0.020)	(0.014)
Cash $holding_{t-1}$	−0.252***	−0.150*	0.085	−0.370***	−0.181***	−0.297***	−0.270***	−0.132
	(0.071)	(0.073)	(0.150)	(0.072)	(0.045)	(0.032)	(0.029)	(0.076)
$Leverage_{t-1}$	0.177	−0.015	0.036	0.088	0.156	0.101	0.148	−0.013
	(0.222)	(0.115)	(0.185)	(0.142)	(0.104)	(0.198)	(0.207)	(0.088)
$R\&D_{t-1}$	−0.580	0.256	−0.156	−0.039	−0.254	0.071	−0.261	−0.174
	(0.439)	(0.259)	(0.703)	(0.268)	(0.221)	(0.763)	(0.385)	(0.395)
Asset $tangibility_{t-1}$	0.015	0.195	0.078	0.339	−0.015	0.274	0.145	−0.054
	(0.135)	(0.181)	(0.148)	(0.320)	(0.154)	(0.306)	(0.195)	(0.196)
CEO $tenure_{t-1}$	0.005	0.003	0.006	0.007**	0.005*	0.005		
	(0.003)	(0.004)	(0.006)	(0.003)	(0.002)	(0.004)		
CEO $duality_{t-1}$	−0.026	0.031	0.057***	−0.066			−0.001	0.026
	(0.038)	(0.022)	(0.015)	(0.062)			(0.036)	(0.028)
Board $independence_{t-1}$	0.333***	0.175	0.154	0.461	0.257**	0.363*	0.301*	0.179
	(0.079)	(0.136)	(0.096)	(0.328)	(0.089)	(0.184)	(0.132)	(0.111)
Board $size_{t-1}$	0.019***	0.017***	0.024	0.017	0.033***	−0.002	0.018**	0.026***
	(0.005)	(0.005)	(0.025)	(0.011)	(0.006)	(0.015)	(0.006)	(0.005)
E-Index			−0.004	−0.059**	−0.030	−0.017	−0.023*	−0.016
			(0.016)	(0.020)	(0.015)	(0.015)	(0.009)	(0.013)
R^2	0.281	0.390	0.389	0.364	0.288	0.390	0.340	0.291
Adj. R^2	0.240	0.338	0.298	0.301	0.251	0.328	0.306	0.216
Num. obs.	1453	929	536	833	1565	817	1586	796
F statistic	6.878	7.482	4.293	5.777	7.621	6.309	9.972	3.882
RMSE	0.412	0.328	0.367	0.392	0.393	0.351	0.370	0.400

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

weak (high E-Index) and when the CEO is powerful (has high stake at the firm, has been with the firm for a long time or when act as the chairman).

Dividend Cuts, Omissions, Initiations and Re-initiations

The main results so far suggest that liberal CEOs are more likely to be non-dividend payers and, if they pay dividends, they tend to pay smaller dividends. Next, we examine if CEO political ideology determines the likelihood of dividend related decisions, i.e. dividend cuts, omissions, initiations and re-initiations. It can be speculated that liberal CEOs are more likely to cut or omit dividends and are less likely to initiate or re-initiate dividends. However, Panel B in Table 4.3 documents no differences for the likelihood of dividend cuts, omissions, initiations and re-initiations between liberal and conservative CEOs. We investigate the existence of any potential

difference by running additional Logit models which we do not report here. The results are similar to the results from Table 3: liberal and conservative CEOs tend to be similar with respect to these dividend decisions.

The findings about omitting and cutting dividend are consistent with Lintner (1956) stylized fact about the stickiness of dividends. It seems that the negative market reaction to dividend cuts and omissions is such that, regardless of their political views, CEOs are extremely reluctant to reduce the level of dividends their firm pays to the shareholders.

With respect to dividend initiations and re-initiations, conservative CEOs prefer stock repurchases over dividend initiations as the former tend to be more flexible (Grullon and Michaely, 2002). Firms might only initiate their dividend if they believe it can be maintained in the long run(Brav et al., 2005). Therefore, it is valid to compare the stock repurchase decisions of firms led by liberal and conservative CEOs. Do conservative CEOs make more repurchases than liberal CEOs? This remains a question for future research.

4.5 Discussion and Concluding Remarks

This research provides evidence that the political preferences of a CEO affect dividend policy. In all the tests, we find strong support for our conjecture that liberal CEOs pay less dividends to their shareholders. The cornerstone of our analysis is built upon the view that CEOs may have different attitudes towards the firms stakeholders and these differences are likely to shape the firm's policies. In our case, liberal CEOs are likely to pay less attention to the shareholders as compared to other stakeholders and they reveal their preferences when making decisions about the dividend policy.

This study has two important implications for investors. First, this research reveals that CEOs may treat the firm's stakeholders differently and may prioritize the interests of shareholders over employees and vice-versa. This may result in the CEO framing strategies and making policy decisions that may or may not result in increasing shareholder wealth. At least in the case of conservative CEOs, one might expect that their decisions are more likely to favor shareholders and increase their wealth in the short run if not the long run. Second, CEO values (i.e. political ideology for this study) may be a determinant of CEO and firm performance as well as managerial style. While the observable characteristics of a CEO such as education and work experience are normally used to infer the ability and the managerial style of CEOs, this research sheds light onto how the values of a CEO affect corporate policy. Hence, potential investors in a firm may use the CEO's political ideology as a determinant of the CEO's managerial style.

Much has been discovered about the agency problem between the top decision makers in firms and investors as well as its consequences for various corporate policies. This paper provides empirical evidence on how the CEO's political ideology determines whether s/he prioritizes investors over employees, or the converse. One area of further research is the study of the

dynamics between the CEOs self interest, his attention to the firms stakeholders and the consequences for corporate policy. Specific to the context of this study, further research may also explore differences in the use of stock repurchases between conservative and liberal CEOs. In general, this study finds no difference between conservative and liberal CEOs with respect to decisions to cut, omit, initiate or re-initiate the dividend; we relate these findings to the rigidity and the stickiness of dividends.

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4.A Appendix A: The Definition of Variables

Dividend Measures

- **Dividend/TA**: Dividend over beginning of the year total assets (Compustat: dvc / lag of at).
- **Dividend/NI**: Dividend over beginning of the year net income (Compustat: dvc / lag of ni).
- **Dividend/Sales**: Dividend over beginning of the year total sales (Compustat: dvc / lag of $sale$).
- **Dividend yield**: Dividend per share over the fiscal year-end share price (Compustat: $dvpsp\_f$ / $prcc\_f$).
- **Dividend per share**: Dividend per share (Compustat: $dvpsp\_f$).
- **Percentage of non-dividend payers**: The number of non-dividend paying firms divided by total number of firms (Compustat: (number of $dvpsp\_f$ = 0) / total number of firm).
- **Percentage dividend cuts**: The number of dividend paying firms that reduce the amount of divided by total number of dividend paying firms (Compustat: if $dvpsp\_f_t$ & $dvpsp\_f_{t-1}$ not equal 0 then percentage dividend cut is, the number of cases where $dvpsp\_f_t$ <$dvpsp\_f_{t-1}$ / total number of dividend paying firms at time t).
- **Percentage omission**: The number of dividend paying firms that stop paying dividend divided by total number of dividend paying firms (Compustat: the number of cases where $dvpsp\_f_t$ = 0 but $dvpsp\_f_{t-1}$ not equal 0 / total number of dividend paying firms at time t
- **Percentage initiation**: The number of non-dividend paying firms that start paying dividend for the first time since their appearance in the CRSP database divided by total number of non-dividend paying firms (Compustat: if $dvpsp\_f_t$ >0 for the first time).
- **Percentage re-initiation**: The number of firms that start paying dividend after an omission divided by total number of zero dividend paying firms (Compustat if $dvpsp\_f_t$ >0 but not for the first time).

Political Donation Groups

- **Conservatives**: CEOs whose contribution during his tenure was to the Republican party only (data from Federal Election Commission (FEC)).

- **Liberals**: CEOs whose contribution during his tenure was to the Democratic party only (data from FEC).

- **Non-partisan**: CEOs whose contribution during his tenure was to both Democratic and Republican parties (data from FEC).

- **Zero donation**: CEOs who did not have any political donations during his tenure (data from FEC).

Control Variables

- **Firm Size**: Logarithm of total assets (Compustat: log(at)).

- **Tobin's q**: Market value of assets divided by the book value of assets (Compustat: ((at + $mequity$) - (ceq + $txdb$)) / at).

- **ROA**: Return on Asset measured as earnings before interest, taxes, depreciation, and amortization (EBIDTA) divided by beginning of the year total assets (Compustat: $ebitda$ / lag of at).

- **Asset tangibility**: Net property, plant and equipment divided by beginning of the year total assets. (Compustat: $ppent$ / lag of at).

- **Cash holdings**: The sum of cash and marketable securities divided by beginning of the year total assets minus cash and marketable securities (Compustat: (che + msa) / (lag of at - (che + msa))).

- **Leverage**: The sum of short-term and long-term debts over the beginning of the year total assets (Compustat: ($dltt$ + dlc) / lag of at).

- **R&D**: Research and Development expenditure divided by beginning of the year total assets (Compustat: xrd/ lag of at).

- **CEO ownership**: Percentage of shares outstanding held by the CEO (Compustat: $shrown\_excl\_opts\_pct$).

- **Board size**: The total number of directors on the board (data from RiskMetrics).

- **Board independence**: Percentage of independent directors on the board (RiskMetrics: Independent directors / total number of directors).

- **CEO duality**: A dummy variable taking value of one if the CEO is chairman and zero otherwise (data from ExecuComp).

- **CEO tenure**: The number of years the CEO has been with the firm as CEO (data from Compustat).

- **E-index**: A measure of board entrenchment develop by Bebchuk et al. (2009) based on six anti-takeover provisions. The index takes a value between 0 to 6 counting the number of anti-takeover provisions in place. Higher value suggests a more entrenched board or lower shareholder rights.

CHAPTER 5

CONCLUSION

Conclusion

The study of CEO behaviour and its implications for corporate governance and firm policy has been an important topic in the fields of management and finance. This thesis provides three studies in this broad area of research. First, it looks at CEO option exercise behaviour and gives a reason to why CEOs hold their vested options and tie their wealth to firm idiosyncratic risk. Specifically, it looks at two competing hypothesis for why CEO hold vested options and argues that the widely used option-based measure of overconfidence cannot adequately capture CEO overconfidence. From the perspective of the theory of market for corporate control, resistance of target firms in corporate control contests is linked to CEO entrenchment. The second essay in this thesis provides a new explanation for why target firms resist hostile takeovers. It shows that firms in honor environments tend to show more resistance in corporate control contests and are more likely to be the winner of these contests. The third essay investigates CEO political ideology as a determinant of firm dividend payout policy. It finds that liberal CEOs tend to pay less dividend and are more likely to lead non-dividend paying firms.

The findings of these studies shed light on how executives in general and CEOs in particular make decisions in the corporate context. Understanding how CEOs make decision is vital for two important reasons. First, CEOs as the commanders of firms can decide the direction of the firm or they can be hired to implement specific policies at specific points in time where a firm needs to pursue a specific strategy. Put differently, CEO decision can determine corporate policies and affect the firm strategy. Second, the market react to the decisions of a CEO and the shareholders and their representatives on the board have a desire to predict the CEO behaviour, understand the implications of CEO decision and have control over what CEOs do. The findings of this thesis are very important in this respect. For example, the first essay suggests that we need to treat with caution the call by Malmendier and Tate (2005) that overconfidence demands an incentive system above and beyond responses to principal-agent problems. The second essay casts doubt on the efficiency of the market for corporate control in disciplining the managers, and chapter three reveals one of the managerial styles of conservative CEOs.

Research limitations

Given the limitations in data collection and the nature of the data and analysis, the current study has failed to address several important issues. First, the first essay in this thesis was only able to examine the validity of the Holder67 measure of overconfidence. It was not possible to test the validity of the LongHolder measure of overconfidence using the available data. The examination of this proxy requires the data to be far more extensive. This test requires observing CEOs that has at least 20 years of tenure, 10 years in each firm. Such data is not available and hence given the empirical setting used in this study, the examination of this is not possible.

Another limitation is related to the second study in this thesis. We were not able to find reliable CEO and board-level data to present a micro-level analysis of the effect of culture of honor on takeover resistance. It was not possible to construct a meaningful CEO and board-level dataset. Most takeovers in our sample are from the 1980s (47%) and 1990s (38%) and the existing databases that provide CEO and board-level data do not cover much of this period. We obtained CEO and board data from the Execucomp database but after merging this data with hostile takeover deals, we ended up having only around 50 deals with non-missing values. Given the size of the sample, it was not possible to run the regressions. We tried other strategies but none of them worked. Particularly, we obtained the name of the CEOs from other datasets and tried to collect data about CEO birthplace but could only find this information for a small number of CEOs (around 40). We also tried to derive the CEOs ancestry from their names. Onomap is the most reliable software for this purpose. It uses both the first name and the last name to provide details about country of origin. The problem is that it is not possible to identify Scots-Irish population. The software provides a general output that only contain “British" and “Scottish" and but not “Irish".

Further Research

The finding from the first essay suggests that the CEO option exercise behaviour can be a reflection of a habitual tendency of a CEO as well as firm and market condition. The identification of the part of CEO option exercise that only capture CEO overconfidence might be possible using other empirical strategies. This can be a topic for future research. In addition, this research highlights the inadequacy of option based measures of overconfidence. This is a call for research that can identify a more direct measure for overconfidence.

Our finding that culture of honour can determine a firm strategic decision in both interesting and important. The existence of culture of honour is documented in different parts of the world. Further research can examine the validity of the observed pattern in other parts of the world or study culture of honour in relationship to other firm policies.

Finally, further research can use the measure of CEO political ideology presented here to investigate the effect of CEO political ideology in relationship to other firm policies. Several studies have already explored the effect of CEO political ideology on firm policies yet, there exist many unanswered questions in this area which demand the attention of future research.