

Do religion and politics impact corporate governance diversity policy?

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Abstract

Purpose – In this paper, the authors examine how religious and political factors affect a firm's corporate governance diversity policies.

Design/methodology/approach – The authors develop five basic empirical models. Model 1 examines how religious beliefs and political affiliation determine whether a firm will establish diversity incentive in its senior executives' performance assessment. Model 2 investigates how the diversity goal, religious beliefs and political affiliation separately affect the level of actual diversity achieved. Model 3 examines how the diversity goal and environmental factors interact to affect the level of actual diversity achieved. Model 4 and Model 5 examine whether the diversity incentive in senior executives' compensation plan and the environmental factors (religious belief and political affiliation) help to reduce the compensation differentials between male and female executives.

Findings – The authors find that firms located in more liberal counties with more Mainline Protestants and less Republican voters in the United States are more likely to include workforce diversity as a criterion in evaluating their senior executives. The authors also provide evidence that firms with diversity goals have more female directors, more female senior executives and more minority directors. However, they find no evidence that the compensation differentials between male and female executives are smaller in these firms. Finally, they find that external environment affects the effectiveness of the implementation of the diversity goals.

Originality/value – In line with this branch of research, the authors expand the literature on the link between corporate culture and corporate decision-making by investigating the non-financial performance measures. Besides the corporate decision-making in investment, financial reporting and social responsibilities as documented in prior studies, the authors argue that the religious beliefs and political affiliations could also affect the development and implementation of corporate non-financial performance goals in executive incentive contracts.

Keywords Religion, Political factor, Diversity policy, Gender diversity, Ethnicity diversity, Executive compensation

Paper type Research paper

1. Introduction

In this paper, we examine whether religious and political factors influence corporate governance policies of the US public companies as they relate to workforce diversity in the senior executive ranks and the board of directors. There is a growing body of literature that examines the impact of religion (Hassan and Christopher, 2005; Hilary and Hui, 2009; McQuire *et al.*, 2012; Stulz and Williamson, 2003) and politics (Giuli and Kostovetsky, 2014; Hong and Kostovetsky, 2012; Kaustia and Torstila, 2011) on many corporate policies and



actions. We are motivated to investigate the impact of these two external environmental factors on diversity in senior executive ranks and board of directors for two primary reasons.

First, lack of gender and ethnic diversity in the senior executive ranks and board of directors in public companies remain, globally, a “subject of intense public and regulatory focus” (Broome and Krawiec, 2008, p. 431). With regard to representation of women on the boards of the US public companies, the recently released Government Accountability Office (GAO) report concluded that women on US public company boards are so much underrepresented that “even if equal proportions of women and men joined boards each year beginning in 2015 . . . it could take more than four decades for women’s representation on boards to be on par with that of men’s” (GAO, 2015, Abstract). Similarly, a 2013 census of Fortune 500 companies reported that globally ethnic minorities continue to lag behind significantly in their share of board seats with 13.3% in 2012, up slightly from 12.8% in 2010 (Alliance for Board Diversity, 2012). Reacting to the 2015 GAO study, Representative Carolyn Maloney (D-NY-12), in a letter (2015) written to the then Securities and Exchange Commission (SEC) Chair White, urged the Commission to amend its Final Rule 33–9089 on Proxy Disclosure Enhancements [1] requiring disclosure of “each board member’s gender, race, and ethnicity.” The Canadian Securities Regulators from 11 jurisdictions now require on a “comply or explain” basis the non-venture issuers to disclose annually information on female directors such as their number and percentage, company policy on inducting female directors and targets for female directors (Canadian Securities Regulators, 2015). Similarly, the European Commission’s (European Commission, 2014) directive seeks to promote gender-diverse boards by setting a quota of at least 40% representation for each gender among the non-executive directors by 2020 within the European Union. Likewise, on August 6, 2021, the US SEC voted to approve new listing rules for the Nasdaq stock market to advance board diversity through a “comply or disclose” framework [2]. In the same vain, Goldman Sachs has also issued its own set of requirements to take only those companies public, after July 1, 2021, which at least have two diverse directors, including one woman on the board.

Second, “culture as a possible determinant of economic phenomena” (Guiso *et al.*, 2006, p. 23) is gathering more academic attention because better techniques and more data sources are now available to researchers to study the impact of “systematic differences in people’s preferences and beliefs” on economic phenomena including individual and group decision-making (Guiso *et al.*, 2006, p. 23). For example, Giannetti and Yafeh (2012) find that cultural distance between banks and borrowers could reduce loan amount granted, increase interest rate and cause more requirement for third-party guarantees. Similarly, Li *et al.* (2013) find that national culture does influence corporate risk-taking through its effect on managerial decision-making.

With regard to the impact of corporate culture on decision-making, “it seems intuitive that firms operating in different social environments would exhibit different behaviors” (Hilary and Hui, 2009, p. 455). This comes naturally because in real life it is not the firms that set policies and make corporate decisions but the individuals in the senior ranks of these firms who make the corporate decisions. Therefore, what these individuals do outside of their work is likely to affect the ways they set policies and make decisions in doing their work. This is consistent with social identity theory (Hogg and Abrams, 1988; Tajfel, 1978), which argues that one person’s identity is mainly determined by social factors such as nationality, sex, ethnicity, religion and occupation. For example, individuals practicing religions that prohibit gambling would be less likely to do so in order to meet the expectations of their social groups (Halek and Eisenhauer, 2001). In addition, personnel psychology theory suggests that people prefer to work in organizations they believe will help them maximize their values, in environments that share the similar personality profile and with coworkers who bear the same characteristics (Vroom, 1966; Tom, 1971). Consequently, organizations could attract particular types of individuals who influence organization behavior in a certain way (Schneider, 1987; Schneider *et al.*, 1995).

Since there is no universally accepted definition of culture, let alone corporate culture, [Giannetti and Yafeh \(2012, p. 367\)](#) note, “culture usually includes some notion of shared values, beliefs, codes and norms.” Thus, for the purposes of our study, we focus on religious beliefs and political affiliations of the communities where the firm is headquartered.

Religion could affect economic thoughts of decision makers inside a firm and hence the corporate behavior. The literature has documented the impact of religion on organization risk-taking behavior ([Hilary and Hui, 2009](#)), financial reporting irregularities ([McQuire *et al.*, 2012](#)) and creditor rights protection ([Stulz and Williamson, 2003](#)). Political sentiments are also believed to be a major factor in influencing the external environment and corporate culture. For instance, left-wing voters and politicians are less likely to invest in stock markets ([Kaustia and Torstila, 2011](#)). Mutual fund managers leaning toward Democrats are less likely to hold, in their portfolios, shares issued by firms with lower social responsibility images, such as tobacco, guns, defense firms and firms with bad employee relations or diversity rankings ([Hong and Kostovetsky, 2012](#)). Firms have higher corporate social responsibility ratings when they have Democratic founders, CEOs, directors and when they are headquartered in Democratic-leaning states ([Giuli and Kostovetsky, 2014](#)).

In line with this branch of research, we expand the literature on the link between corporate culture and corporate decision-making by investigating the non-financial performance measures from the managerial accounting perspective. Besides the corporate decision-making in investment, financial reporting and social responsibilities as documented in prior studies, we argue that the religious beliefs and political affiliations could also affect the development and implementation of corporate non-financial performance goals in executive incentive contracts.

Therefore, we examine how external social environment affects corporations as they set up and implement non-financial performance goals in their executives' incentive contracts in the S&P 1500 companies, when it comes to workforce diversity. In particular, we focus on the religious beliefs and the political affiliation held by residents in the county where the firm is headquartered. We also control for the average family income in the neighborhood, the firm's financial conditions (return on assets, firm size and market to book ratio) and corporate governance (board size and percentage of independent directors). We find that firms located in more liberal counties, represented by counties with more Mainline Protestants and less Republican voters, in the United States are more likely to include workforce diversity as a criterion in evaluating how their senior executives govern. We also provide evidence that firms with diversity goals have more female directors, more female senior executives and more minority directors. However, we find no evidence that the compensation differentials between male and female executives are smaller in these firms. Finally, we find that external environment affects the effectiveness of the implementation of the diversity goals.

Our paper contributes to the literature in following ways. First, our findings contribute to the literature on corporate culture by studying the effect of corporate social environmental factors on corporate policymaking, especially on non-financial goal setting and performance evaluation. Although the influence of corporate culture has been widely discussed in media and social studies, little empirical work has been conducted in economics and finance literature until recently (e.g. [Giuli and Kostovetsky, 2014](#); [Hassan and Christopher, 2005](#); [Hilary and Hui, 2009](#); [McQuire *et al.*, 2012](#)). In particular, hardly any empirical work has been done in the managerial accounting area understanding and documenting the effect of corporate social environmental factors on corporate policy-making, especially on non-financial goal setting and performance evaluation. Our paper fills this gap in the literature.

Second, our findings contribute to understanding from where corporate management get their ideas and why their decision-making differs so greatly in setting workforce diversity policy. While the literature documenting the role of corporate culture and values in corporate investment and social responsibility performance is growing ([Giuli and Kostovetsky, 2014](#); [Hilary and Hui, 2009](#)), its role in shaping diversity policy through executive incentive and

goal setting has been significantly underexplored. Corporate diversity is potentially an important indicator under learning and growth perspective because it encourages the recruitment of talented employees essential to a company. Focusing on workforce diversity policy would help one understand not only the corporate performance in the area of social responsibilities but also firms' potential growth on a long-term basis.

Third, religious beliefs and political preferences have been previously investigated at the individual and country levels. For instance, political preference could affect mutual fund managers' portfolio selections (Hong and Kostovetsky, 2012) and individual investors' risk aversion attitude in stock markets (Kaustia and Torstila, 2011). Religious beliefs could help explain how countries differ in international investment flows (Siegel *et al.*, 2011) and investor protection practices (Stulz and Williamson, 2003). However, few studies – except for recent work of Hilary and Hui (2009) on risk aversion and Giuli and Kostovetsky (2014) on corporate social responsibility performance – have been conducted to examine their roles in corporate policy setting. Our study on corporate diversity policy setting and evaluation contributes to the literature by extending the link of religion and politics and its behavioral consequences at the corporate level.

The rest of the paper is organized in four sections. Section 2 reviews the prior literature and develops hypotheses. Section 3 describes the research design and data sources. Section 4 presents and discusses the empirical results. Section 5 concludes the paper.

2. Literature review and hypotheses development

2.1 Individual characteristics and organizational behavior

Although it is natural that firms operating in different social environments would tend to behave differently, the role of corporate culture in economics literature has been underexplored mainly because it is a difficult concept to operationalize (Hilary and Hui, 2009). The individual characteristics could affect group behavior, and organizations are not immune from this influence. The theoretical background on such a link could be traced back to social identity theory. For example, Vroom (1966) shows that people choose to work in firms that they believe will be the most instrumental in helping them obtain their valued outcomes. Tom (1971) shows that individuals prefer work environments with people who have similar personality profile. Holland (1985) argues that the compatibility between one's personality and the environment determines his/her career satisfaction. Specifically, congruent individuals will be reinforced, satisfied and stay in the organization. Incongruent individuals will tend to either modify the environment or leave the organization. *Social identity theory* (Tajfel, 1978; Hogg and Abrams, 1988) suggests that the value in sharing an identity and having a sense of being in a particular group has substantial influence on people's behaviors. This line of research suggests that the culture of an organization should be homogenous and aligned with the local environment of the firm (Hilary and Hui, 2009).

Collectively, prior studies based on social identity theory imply that corporate policy-making and implementation shall be congruent with corporate cultures, managerial style and employee values. To the degree that religious and political tendency of individuals cluster in a geographical area, firms headquartered in the same geographical area may hire a bigger population of people with similar religious and political preferences at different levels of hierarchy in the firm. Consequently, religious and political tendency of employees, managers and members of board of directors, who tend to share the same attitude toward the workforce diversity policy-making and implementation, should be reflected in firms' corporate culture and decision-making. This would yield a greater aggregate attitude for firms that are located in more religious and politically homogenous areas than firms located in less religious and politically heterogeneous areas.

2.2 Religious beliefs and corporate workforce diversity policy

Economists and sociologists have long documented the effects of religious beliefs on a wide range of social and economic phenomena on a macro level (Guiso *et al.*, 2003; La Porta *et al.*, 1999; Stulz and Williamson, 2003). Countries with different dominant religions vary in their economic development and creditor protection. For instance, using international survey data, Barro and McCleary (2003) find that macroeconomic development has a positive relation with the extent of religious beliefs but a negative correlation with Church attendance. Stulz and Williamson (2003) find that a country's religious belief domination predicts the cross-sectional variation in creditor right protection better than the country's language, income per capita, origin of legal system and openness to international trade.

More recent studies also document the influence of religion on corporate decision-making, including financial reporting. For instance, Hilary and Hui (2009) show that the link between individual religiosity and risk aversion documented in the literature could be extended to firm level. Using the US Church attendance data from 1971 to 2000, they find that firms located in county with higher levels of religiosity show lower risk exposure, as reflected in the variance in equity price and return on assets, investment rate and growth rate. McQuire *et al.* (2012) examine the impact of religion on financial reporting reliability. They propose that firms in religious areas are less likely to engage in financial reporting irregularities because higher levels of religiosity could reduce the likelihood of unethical business practices. Using US data, they find that firms headquartered in areas with strong religious social norms generally experience lower incidences of financial reporting irregularities.

Similarly, religious beliefs may affect a firm's corporate policies particularly relating to corporate social responsibility as the stance on social activism may differ from one religion to another. For instance, Mainline Protestant denomination has typically emphasized on accommodating stance toward modernity, a proactive view on issues of social and economic justice and pluralism in their tolerance of varied individual beliefs (Steensland *et al.*, 2000). On the other hand, Evangelical Protestant denomination has typically sought more separation from the broader culture, emphasized missionary activity and individual conversion and taught strict adherence to particular religious doctrines (Steensland *et al.*, 2000). In addition, it has been argued that the Mainline Protestant denominations have taken pro-choice stance, while Evangelical, Catholic and Mormon groups have made very public their pro-life stance (Fastnow *et al.*, 1999). Mainline Protestants and Catholics are more likely than the Evangelical Protestants to support same-sex marriage (Whitehead, 2010), and Mainline Protestants are more likely to encourage women to play the more prominent role (O'Conner, 2010).

According to Cui *et al.* (2015), the influence of religious belief on corporate workforce diversity could be explained by two alternative hypotheses. First, religious morality hypothesis suggests a positive relationship between managements' religion and corporate workforce diversity initiatives. Based on the moral teachings, the major American religions have proposed on embracing diversity (Ellingsen, 1993) and the link between religious morality and behavior (Geyer and Baumeister, 2005; Vitell *et al.*, 2009). Second, resource-constraint hypothesis suggests a non-positive relationship between managements' religion and corporate diversity initiatives based on the agency theory that manager's major goal is to maximize the wealth of shareholders (Jensen and Meckling, 1976) instead of investing in diversity and corporate social image. Although culture is deemed as one of the important factors influencing corporate accounting and disclosure practices in the literature (e.g. Secord and Su, 1994), it remains an empirical question whether religious beliefs influence corporate policy-making relating to the workforce diversity as one of non-financial measures and performance evaluation criteria in executive incentive plans and whether religious morality hypothesis could be dominant in the process.

Our study focuses on three religions that have the largest followers in the United States: Catholics, Evangelical Protestants and Mainline Protestants. We hypothesize that

corporations located in counties with more Mainline Protestants will be more likely to set up diversity as a performance goal in evaluating their senior executives because of their liberal stance and their vocal support toward equality as documented in prior studies (Whitehead, 2010; O'Conner, 2010). Based on the above discussion, we view Mainline Protestants as a liberal religious group and Evangelical Protestant and Catholics as conservative religious groups. In our hypotheses, we assume that liberal thinking associated with Mainline Protestants prevalent in the headquarter area will impact the value system of the senior management and the employees in the firm. In turn, this will create pressure for firms to adopt more liberal corporate policies and practices. We expect that the liberal firms are more likely to set up diversity goals in evaluating their executives. They tend to hire more female and minority directors, female CEOs, female CFOs and other female senior executives. On the other hand, we expect that firms located in counties with conservative religions (i.e. Evangelical Protestant and Catholics) will have the opposite effects. These discussions lead to the following hypotheses:

- H1a. Firms headquartered in areas with a higher percentage of *Mainline Protestants* are more likely to include diversity criteria as a performance goal in their senior executives' compensation contracts.
- H1b. Firms headquartered in areas with a higher percentage of *Mainline Protestants* are more likely to have a higher percentage of gender and ethnic diversity in their senior executive and board ranks.

2.3 Political affiliation and corporate workforce diversity policy

There is an extensive literature documenting that one's political ideology affects personal values (Layman, 1997; Rosenberg, 1956) and that the liberal-conservative spectrum has been most instrumental in understanding individuals' values (Poole and Rosenthal, 1984; Schwartz, 1996). Schwartz (1996) argues that people who are liberal in political ideology are likely to be sensitive to civil rights and social issues such as diversity, human rights and the environment. Conservatives, by contrast, value individualism, property rights and free markets (Detomasi, 2008; Murtha and Lenway, 1994; Roe, 2003) and place more emphasis on order, stability and respect for ability and business needs (Erikson *et al.*, 1988; McClosky and Zaller, 1984). Not surprisingly, the literature documents that investment managers leaning toward Democrats are more likely to increase portfolio holdings of corporations with better social responsibility performance (Hong and Kostovetsky, 2012). Additionally, individual investors with left-wing political preference, characterized as being in favor of redistribution, labor market protection and antipathy for capital markets, are less likely to invest in stock markets (Kaustia and Torstila, 2011).

The link between political ideology and personal values could also extend to group behavior. For instance, Chin *et al.* (2013) argue that the liberalism/conservatism has been associated with the two major political parties in the United States: the Democratic Party (more liberal) and the Republican Party (more conservative). Hetherington (2009) find that partisan polarization has increased among US Congress members, with congressional Republicans becoming increasingly conservative and Democrats more liberal. Jost (2006) notes that public opinion polls reflect these sharp ideological distinctions derived from the personal values affiliated with one's political affiliation.

The recent literature documents how the main political affiliation in the headquarter area affects a firm's corporate policies. For example, Chin *et al.* (2013) find that firms located in areas with more Republican supporters, or with Republican CEOs, tend to spend less on social responsibilities. Similarly, Giuli and Kostovetsky (2014) find that firms score higher on CSR when they have Democratic rather than Republican founders, CEOs and directors, and when they are headquartered in Democratic rather than Republican-leaning states.

The underlying mechanism between firms' political orientation and workforce diversity policy could be explained via political preference hypothesis. According to [Giuli and Kostovetsky \(2014\)](#), political affiliation can serve as a direct measure of preferences for corporate social responsibility. The Democratic Party platform prioritizes issues related to corporate social responsibilities, such as environmental protection, anti-discrimination laws and affirmative action, employee protection and serving for the underrepresented. As workforce diversity naturally falls within the party agenda of Democrats, we would expect such a policy is more likely to be incorporated into executives' incentive scheme for firms headquartered in the areas with a higher percentage of Democratic Party supporters, as these firms are more likely to hire employees and managers with similar political ideology. In addition, these firms will be more likely to have diversity in their workforce. In contrast, firms headquartered in areas with a higher percentage of Republican Party supporters will be less likely to have diversity criteria in the performance goals of their senior executives, and will be less likely to have a higher level of diversity. Consequently, we propose the following hypotheses:

- H2a.* Firms headquartered in areas with a higher percentage of *Republicans* are less likely to include diversity criteria as a performance goal in their senior executives' compensation contracts.
- H2b.* Firms headquartered in areas with a higher percentage of *Republicans* are less likely to have a higher level of gender and ethnic diversity in their senior executives and board ranks.

2.4 Religious beliefs, political affiliation, workforce diversity initiatives and their effectiveness

If a firm's environmental factors are not in line with a firm's liberal leaning performance goals, there will be more obstacles in achieving the desired outcomes. For instance, shareholder proposals or other firm-wide initiatives supporting gay and lesbian rights may be more readily adopted by the firms headquartered in liberal-leaning areas than in the conservative-leaning areas. Even though a firm can establish a related performance goal and build it into an executive's incentive compensation in the face of a conservative-leaning social environment, sabotage may occur and the effectiveness of implementation may be hampered. Therefore, we examine whether environmental factors interact with the performance goals in affecting the effectiveness of implementation.

As in the hypotheses relating to religious beliefs, we expect that corporations located in areas with more Mainline Protestants will be more likely to set diversity as a performance goal in evaluating their senior executives because of their liberal stance and their vocal support of equality as documented in prior studies ([O'Conner, 2010](#); [Whitehead, 2010](#)). From political perspective, we expect that political affiliation can serve as a direct measure of preferences for corporate social responsibility ([Giuli and Kostovetsky, 2014](#)). As workforce diversity naturally is a part of the Democratic Party agenda, we would expect that such a policy is more likely to be incorporated into executives' incentive compensation scheme for firms headquartered in areas with a higher percentage of Democratic Party supporters, as these firms are more likely to hire employees and managers with similar political ideology. In contrast, firms headquartered in areas with a higher percentage of Republicans would exhibit an opposite pattern. In a supportive environment (i.e. an area with higher percentage of Mainline Protestants and Democratic Party supporters), these effects would be enhanced as the effectiveness of the performance and goal-setting in bringing in actual changes to workforce diversity could be higher. Based on this reasoning, we expect a supportive environment for diversity reflected in religious and political beliefs to affect the effectiveness of implementing the workforce diversity goal. Hence, the following hypothesis:

- H3. The effectiveness of performance goals and incentive compensation system in bringing actual changes on the diversity dimension is higher for firms headquartered in areas with a supportive environment for diversity.

2.5 Religious beliefs, political sentiments, workforce diversity and compensation gap

We further investigate whether religious beliefs, political affiliation and workforce diversity have any influence on the compensation gap between male and female senior executives. The literature has documented that there exists a gender gap in top executive compensation. For instance, [Bertrand and Hallock \(2001\)](#) investigate executive compensation data including salary, bonus, other annual pay and value of granted options for S&P 1500 in the period 1992–1997 (women represented 2.5% of the total observations). They find that, on average, women earned 45% less than men. Focusing on the compensation for 47 female CEOs who held office during 2000 and comparing their pay to a matched sample of firms headed by male CEOs, [Mohan and Ruggiero \(2003\)](#) document the compensation differences of male and female CEOs. They find that women are underpaid when options are included in the compensation measure. Using a measure that compared the potential salary of women to the potential salary of men, they show that the potential compensation of female CEOs was lower than their male counterparts. In other words, male executives tended to be the higher paid executives after controlling for experience and company sales.

The underlying reasons could be the limited number of female executives, age, tenure and firm size. For instance, in [Bertrand and Hallock \(2001\)](#), women represented 2.5% of the total observations on S&P 1500 in the period 1992–1997. They find that 75% of the difference is explained by the fact that women managed smaller companies and that there were fewer women CEOs and chairs of board of directors. Furthermore, the wage gap is reduced to 5% after allowing for age and lower seniority, as women were younger and had fewer years of seniority than the men. When using only CEO/chair data (this time women represented 1% of total observations), the average pay ratio of women CEO to men CEO is positive (1.75) and marginally significant. The result may suggest that a woman could be a better manager than her male counterpart after surmounting their career hurdles ([Oakleyo, 2000](#)).

However, in the context of gender diversity, most studies focus on the compensation gap between men and women executives, firm performance and corporate disclosure (e.g. [Campbell and Minguez-Vera, 2008](#); [DeBoskey et al., 2018](#)), while few studies examine the impact of women participation in the process of board's compensation monitoring ([Adams and Ferreira, 2009](#)). One exception is [Lucas-Perez et al. \(2015\)](#), who examine the relationship between gender diversity and compensation of top managers in the Spanish context. They show that gender diversity positively affects the effectiveness of boards – in terms of composition, structure, size and functioning – via the design of executive compensation linked to firm performance. Their evidence suggests that legislative actions aimed at increasing the presence of women on boards of directors in Spain are justified not only for ethical reasons but also for economic reasons.

Based on the same line of argument, one would expect the workforce diversity goals to help improve the efficiency and effectiveness of executive incentive compensation system. The theories behind this could derive from several areas. First, according to agency theory, firms need to provide incentives for managers to ensure the alignment of their interests with those of shareholders to reduce the information risk and enhance corporate governance. As the most important governance mechanism for protecting shareholder's interest, the board could provide effective monitoring only when it provides independent and high-quality advice ([Fama, 1980](#)). Consequently, a more diverse environment may lead to increased board independence, and hence improve monitoring of management ([Carter et al., 2003](#)). Second, from the social psychology theory perspective, in contrast to traditional boards formed mostly by men, the presence of women can bring the heterogeneity necessary to the board

because women have other positive aspects, which can improve their effectiveness and influence in decision-making. Thus, decisions made by heterogeneous groups may have higher quality than decisions made by homogeneous groups (Forbes and Milliken, 1999). Third, resource dependence theory suggests that women are more likely to have higher level of education and experience than men, bringing more diverse options to decision-making (Daily and Dalton, 2003; Hillman *et al.*, 2002). Women have more orientation to society and stakeholders and better potential to resolve strategic and control issues (Burges and Tharenou, 2002; Hillman *et al.*, 2002). The diversity of the group may favor network ties, both internal and external (Beckman and Haunschild, 2002; Robinson and Dechant, 1997), attracting greater support and better relations with stakeholders and encouraging decisions that benefit more parties (Bear *et al.*, 2010).

Therefore, the presence of women on boards of directors may provide greater knowledge, experience and enhanced relationships, as well as greater willingness to work together and collaborate. We would expect diversity from other perspectives could also have similar effects. Therefore, one would expect the workforce diversity goals to help improve the efficiency and effectiveness of executive incentive compensation system. Collectively, while there is abundant evidence that the total compensation for the same position is lower for female than for male senior executives, we expect that such difference to be moderated in a firm with diversity goal in its incentive compensation system. Thus, we propose the following hypotheses:

- H4a.* The compensation differential between male and female senior executives is lower for firms that include *diversity criteria* as a performance goal in their senior executives' incentive compensation contracts.
- H4b.* The compensation differential between male and female senior executives is lower for firms headquartered in areas with a higher percentage of *Mainline Protestants*.
- H4c.* The compensation differential between male and female senior executives is higher for firms headquartered in areas with a higher percentage of *Republicans*.

3. Data and research methods

3.1 Empirical model

In this paper, we examine (1) how religious belief and political affiliation may determine whether a firm will establish diversity incentive in its senior executives' performance assessment, (2) how the diversity goal and these environmental factors jointly affect the actual level of diversity achieved and (3) whether the diversity incentive helps to reduce the compensation differentials between male and female senior executives. We define workforce diversity broadly to include the employment of women as the CEO, CFO and in other senior executive positions, and the appointment of women and ethnic minority individuals to the board of directors [3].

To test various hypotheses relating to these questions, we develop five basic empirical models. Model 1 examines how religious beliefs and political affiliation may determine whether a firm will establish diversity incentive in its senior executives' performance assessment. Model 2 is employed to investigate how the diversity goal, religious beliefs and political affiliation separately affect the level of actual diversity achieved. Model 3 is used to examine how the diversity goal and environmental factors interact to affect the level of actual diversity achieved. Model 4 and Model 5 are used to examine whether the diversity incentive in senior executives' compensation plan and the environmental factors (religious belief and political affiliation) help to reduce the compensation differentials between male and female executives, respectively.

Model 1: To test H1a and H2a

$$\text{INCEN} = a + b_1\text{MAINL} + b_2\text{EVAN} + b_3\text{CATH} + b_4\text{REPUB} + b_5\text{AFINC} + b_6\text{BSIZE} \\ + b_7\text{INDDIR} + b_8\text{ROA} + b_9\text{FSIZE} + b_{10}\text{MB} + b_{11}\text{FIXED EFFECTS} + e$$

Model 2: To test H1b and H2b

$$\text{PERF} = a + b_1\text{INCEN} + b_2\text{MAINL} + b_3\text{EVAN} + b_4\text{CATH} + b_5\text{REPUB} + b_6\text{AFINC} \\ + b_7\text{BSIZE} + b_8\text{INDDIR} + b_9\text{ROA} + b_{10}\text{FSIZE} + b_{11}\text{MB} + b_{12}\text{FIXED EFFECTS} \\ + e$$

Model 3: To test H3

$$\text{PERF} = a + b_1\text{iPSM_Qi} + b_2\text{MAINL} + b_3\text{EVAN} + b_4\text{CATH} + b_5\text{REPUB} + b_6\text{AFINC} \\ + b_7\text{BSIZE} + b_8\text{INDDIR} + b_9\text{ROA} + b_{10}\text{FSIZE} + b_{11}\text{MB} + b_{12}\text{FIXED EFFECTS} \\ + e$$

Model 4: To test H4a

$$\text{TCOMP} = a + b_1\text{WOMEN} + b_2\text{INCEN} * \text{WOMEN} + b_3\text{MAINL} + b_4\text{EVAN} + b_5\text{CATH} \\ + b_6\text{REPUB} + b_7\text{AFINC} + b_8\text{BSIZE} + b_9\text{INDDIR} + b_{10}\text{ROA} + b_{11}\text{FSIZE} \\ + b_{12}\text{MB} + b_{13}\text{FIXED EFFECTS} + e$$

Model 5: To test H4a, H4b and H4c

$$\text{TCOMP} = a + b_1\text{WOMEN} + b_2\text{INCEN} * \text{WOMEN} + b_3\text{MAINL} * \text{WOMEN} \\ + b_4\text{EVAN} * \text{WOMEN} + b_5\text{CATH} * \text{WOMEN} + b_6\text{REPUB} * \text{WOMEN} + b_7\text{AFINC} \\ + b_8\text{BSIZE} + b_9\text{INDDIR} + b_{10}\text{ROA} + b_{11}\text{FSIZE} + b_{12}\text{MB} \\ + b_{13}\text{FIXED EFFECTS} + e$$

where:

PERF = Firm diversity-related performance. We use following six different diversity-related performance measures: a dummy variable for the existence of female CEO (WCEO), coded as 1 if there is a female CEO and 0 otherwise; a dummy variable for the existence of female CFO (WCFO), coded as 1 if there is a female CFO and 0 otherwise; percentage of women executives (WEXE) who are not CEO or CFO in the top 10 salary and bonus rank; percentage of female directors (PWDIR); percentage of ethnic minority directors (PMDIR); and diversity ratings (DIV_CSR) provided by the ISS (formerly Risk Metrics) database;

INCEN = A dummy variable for the existence of diversity-related goal in senior executives' incentive compensation system, coded as 1 if the diversity goal exists and 0 otherwise;

TCOMP = Total compensation (log10 transformed) paid to CEO, CFO and other senior executives, male or female;

MAINL/EVAN/CATH = Average number of Mainline Protestant/Evangelical Protestant/Catholic adherents per 1,000 residents in the county of the company headquarters in 2000 and 2010;

REPUBLIC = Average percentage of voters voting Republican in the 2000, 2004, 2008 presidential elections in the county where the firm is headquartered;

AFINC = Log10 transformation of average family income of the county where the firm is headquartered;

BSIZE = Board size (the number of directors on the board) in a particular year;

INDDIR = Annual percentage of independent directors (as a percentage of total directors);

ROA = Return on assets defined as net income divided by total assets;

FSIZE = Firm size which is the log 10 transformation of total assets of the firm [4];

MB = market-to-book ratio defined as market value of equity divided by the book value of equity;

WOMEN = A binary dummy variable, coded as 1 if the executive is female, otherwise 0;

PSM_{Qi} = the quartile rank of the firm's environment (both religion and political affiliation) based on propensity score matching (PSM) [5]; and

FIXED EFFECTS = Industry fixed effects and year fixed effects. Industry fixed effects is based on the first digit of the SIC codes. The year fixed effects are from 2000 to 2012.

In the regression models, MAINL, EVAN and CATH are used to examine the effect of the religion, and REPUBLIC is used to examine the effect of the political affiliation of the headquartered regions. AFINC is used to control for the family income differential of the county, common to many studies involving different municipalities (McQuire *et al.*, 2012). BSIZE and INDDIR are used to control the board structure of the firm, and ROA, FSIZE and MB are used to control for the firm's financial condition. Lastly, we capture industry effects in the fixed effects variables.

Based on our hypotheses, we expect MAINL to have a significantly positive coefficient, while EVAN, CATH and REPUBLIC will have significantly negative coefficients in Models 1 and 2. To test whether the diversity goal and environmental factors interact to affect the level of actual diversity achieved, we derive the PSM score of the supportive environment. Firms scoring in the highest PSM quartile (Quartile 4) are regarded to have the best environmental support, while those scoring the lowest PSM (Quartile 1) are viewed as having the poorest support. The term measures the effectiveness of the incentive scheme in different supportive environment. We incorporate the terms into Model 3 and hypothesize that firms with more supportive environment (i.e. Quartile 3 or 4) will have significantly positive effect on performance. To test hypotheses related to compensation differentials, the dependent variable in Models 4 and 5 is log 10 of total compensation paid to all executives (male or female). The wage differential is captured by binary dummy variable WOMEN, which is expected to have a negative coefficient. The effect of the diversity incentive is captured by the interaction variable WOMEN*INCEN, which is expected to have a positive coefficient if the diversity goals help to reduce the adverse compensation gap faced by women executives. The moderating effect of the religion and political sentiment is captured by the interaction terms between WOMEN and religion and political factors – MAINL, EVAN, CATH and REPUBLIC in Model 5, which are expected to have a positive coefficient for MAINL and a negative one for REPUBLIC if the diversity goals help to reduce the adverse compensation gap faced by women executives.

3.2 Data collection

We collect the county-level religion data from the US Religion Census of Religious Congregations and Membership Study, 2000 and 2010, the two surveys which encompass our period of study [6]. We average the percentage of the religious adherents in these two surveys. To measure political affiliation, we use the US presidential election surveys of 2000, 2004 and 2008 (county level). We average the percentage of votes supporting the Republican Party in these years. We collect the average family income data based on county-level US censuses [7]. We collect corporate financial data from COMPUSTAT, data relating to woman CEO, CFO and other senior executives and their compensations from ExecuComp, stock return from CRSP, governance information from Corporate Library and minority data from the Institutional Shareholder Services (ISS, formerly Risk Metrics) [8]. We match the religious and political variables and the family income data with the address zip code reported in Compustat [9]. We use the Wharton Research Data Service (WRDS) SEC Analytic Suite (WRDS SEC) to search for SEC filings (e.g. proxy statements and annual reports) on a firm's performance goals and evaluation criteria using keywords including "workforce diversity," "employee diversity," "board diversity," "diversity criteria" and repeat the search with "fairness" and "equality" replacing "diversity." We then read the related paragraphs of the disclosure in Proxy Statement (DEF 14A) and 10K to determine whether the firm has used the performance goal in its senior executives' incentive compensation system. Our data are composed of 20,446 firm-year observations spanning a period from 2000 to 2012. However, the firm-year observations in our regression tables start from 2003 as we obtain data from the Corporate Library and the ISS (formerly Risk Metrics) databases starting from 2002 due to subscription window. Table 1 summarizes our data collection effort. Note that the biggest discrepancy is between CRSP and Compustat on one side and Corporate Library and ISS (formerly Risk Metrics) on the other. This is because Corporate Library covers only S&P 1500 firms, while the coverage for CRSP and Compustat is much larger.

4. Findings and discussions

Table 2 presents descriptive statistics on our sample observations. Only 1.27% of firms have diversity as one of their performance goals in the executive compensation incentive plan (INCEN) for the executives. At the outset, it is clear that much remains to be done relating to diversity in senior executive and board ranks in US public companies. This observation is

	Number of observations
Number of firm-year observations on which CRSP data are available in 2003–2012	45,815
Less: Firm-year observations with no corresponding data from compustat	–274
Firm-year observations with complete stock price and financial variables	45,541
Less: Data for firms not covered by corporate library (governance data)	–25,095
Firm-year observations with stock, financial and governance data	20,446
Less: Firm-year observations where non-financial performance measures (e.g. diversity) are not available from ISS (formerly risk metrics) database	–1,376
Observations with complete data for stock, financial governance and non-financial performance analysis	19,070
Note: Analysis of compensation data depends also on the availability of the executive compensation from exec comp	
Data for analysis involving CEO compensation data	14,585
Data for analysis involving CFO compensation data	13,920
Data for analysis involving compensation of other executives (more than one executive in a firm)	48,452

Table 1.
Sample selection process

Variable	N	Mean	Median	Std dev	Minimum	Maximum
INCEN	20,446	0.0127	0.0000	0.1121	0.0000	1.0000
DIV_CSR	19,070	-0.1100	0.0000	0.2888	-1.0000	0.8750
PWDIR	20,446	0.1013	0.1000	0.0984	0.0000	0.6667
PMDIR	20,446	0.0311	0.0000	0.0740	0.0000	1.0000
WCEO	20,446	0.0212	0.0000	0.1441	0.0000	1.0000
WCFO	20,446	0.0571	0.0000	0.2321	0.0000	1.0000
WEXE	20,446	0.0433	0.0000	0.0938	0.0000	0.8333
MAINL	20,446	0.0803	0.0710	0.0502	0.0135	0.6830
EVAN	20,446	0.1206	0.0931	0.0942	0.0057	0.5454
CATH	20,446	0.2469	0.2308	0.1304	0.0000	0.5938
RE PUB	20,446	0.4205	0.4360	0.1349	0.0000	0.8180
AFINC	20,446	4.7271	4.7133	0.1026	4.3984	4.9882
ROA	20,446	0.0629	0.0717	0.1394	-1.2384	0.3756
FSIZE	20,446	3.1787	3.1393	0.7405	0.6951	6.3728
MB	20,446	2.7424	1.9801	3.5588	-8.4714	28.2327
BSIZE	20,446	8.9661	9.0000	2.4680	3.0000	34.0000
INDDIR	20,446	0.6933	0.7143	0.1654	0.0000	1.0000

Note(s): This table provides statistical descriptions on the major variables used in the primary tests. INCEN = a dummy variable indicating the existence of diversity goal in the executive incentive system, which is coded as 1 if a firm has the goal and 0 otherwise; DIV_CSR = diversity ratings provided by the ISS (formerly Risk Metrics) to measure a firm's diversity effort; PWDIR = percentage of woman directors on board; PMDIR = percentage of minority directors on board; WCEO = a dummy for woman CEO, coded as 1 if a firm has a woman CEO and 0 otherwise; WCFO = a dummy variable for woman CFO, coded as 1 if a firm has a woman CFO and 0 otherwise; WEXE = percentage of woman executives (other than CEO or CFO) among the top 10 highest compensation (based on salary and bonus) executives of the firm; MAINL = Mainline Protestant adherents percentage in a county where a firm is headquartered; EVAN = Evangelical Protestant adherents percentage in a county where a firm is headquartered; CATH = Catholics adherent percentage in a county where a firm is headquartered. REPUB = Percentage of voters voted for Republicans in a county where a firm is headquartered; AFINC = log10 transformation of average family income; BSIZE = board size; INDDIR = percentage of independent directors on board; ROA = return on assets; FSIZE = log10 transformation of total assets; MB = firm's market to book ratio

Table 2.
Descriptive statistics

further reinforced by the fact that average rating of the firms in our sample is -0.11 on the diversity dimension of the ISS (formerly Risk Metrics) corporate social responsibility index. Additionally, only 10.13% of all directors are female, and 3.11% are ethnic minorities. In the executive suite, only 2.12% of the CEOs are females but the percentage of women CFOs (WCFO = 5.71%) and women in their top-10 senior executive positions (excluding CEO and CFO) ranked based on salary and bonus (WEXE = 4.33%) is somewhat higher. Overall, in Corporate America, during our sample period, the senior executive suite is dominated by male executives. The largest religion group in our sample is Catholics (about 247 per thousand of residents), followed by Evangelical Protestants (about 121 per thousand) and then by Mainline Protestants (about 80 per thousand). On an average, during our sample period, 42.05% (range from 0% to 82% in a particular county) of the voters voted for a Republican presidential candidate. The average family income for all counties represented in our sample is US\$53,703 a year (4.73 in log10 form). While the average return on assets (ROA) for our sample firms is 6.29%, the average firm size, in terms of total assets is US\$1.51 billion (3.18 in log10 form), ranging from a low of \$4.96 million to \$2,359 billion. This wide range suggests that our sample includes firms of all sizes that are listed on US stock exchanges. To measure the environmental impacts, we need both large and small firms in our sample from different localities. The average market-to-book ratio (MB) is 2.74. The average board size is 8.97 and the average percentage of independent directors is 69.3%.

Table 3 presents the Pearson correlations. The diversity performance goal and incentive compensation variable (INCEN) correlate positively with PMDIR ($r = 0.07$), PWDIR ($r = 0.09$) and the diversity CSR rating ($r = 0.08$). Firms with higher diversity rating are associated with more female directors ($r = 0.49$), more ethnic minority directors ($r = 0.24$), more women CEO ($r = 0.13$), more women CFO ($r = 0.14$) and other women executives ($r = 0.20$). Firms with more women directors are associated with more minority directors on their board ($r = 0.19$) and women CEO ($r = 0.22$). As expected, larger firms usually have larger boards ($r = 0.59$), more women directors ($r = 0.28$) and more ethnic minority directors ($r = 0.31$). Firms with larger boards are also associated with better diversity CSR ratings ($r = 0.31$), more women directors ($r = 0.26$) and more minority directors ($r = 0.21$). Firms with more independent directors are associated with more ethnic minority directors ($r = 0.20$) and more women directors ($r = 0.16$).

4.1 Religious beliefs, political affiliation and corporate workforce diversity policy

Table 4 presents results relating to factors contributing to the company's establishment of the diversity goal in the incentive compensation system of their senior executives. We use logit regression due to the binary nature of the dependent variable INCEN. As predicted in hypothesis H1a, firms located in areas with more Mainline Protestants ($\chi^2 = 9.89$) [10] are more likely to establish the diversity performance goals in their senior executives' incentive compensation plans. However, we do not find any support for H2a ($\chi^2 = 1.79$ not significant) which predicted that areas with more Republican votes are less likely to include diversity criteria as a performance goal in their senior executives incentive compensation contracts. Additionally, Table 4 results show that firms larger in size ($\chi^2 = 76.34$) and firms with a larger board ($\chi^2 = 17.07$) are more likely to include diversity goals in their executives' incentive compensation contracts.

Table 5 presents the results relating to factors contributing to attracting more women and minority directors to a firm's board. Columns 1 and 2 present the results for women directors. As predicted in our hypothesis H1b, firms headquartered in areas with more Mainline Protestants (t -value = 8.54) tend to have more women directors. This result is further reinforced by the fact that the coefficient of EVAN (t -value = -13.58) and coefficient of CATH (t -value = -3.68) are both negative and significant. As predicted in hypothesis H2b, firms headquartered in Republican areas have fewer female directors (t -value = -3.71). Diversity goal (INCEN) is significantly and positively contributing to existence of more women directors (t -value = 7.91). Looking at other dimensions, women directors are also more prevalent in firms with a higher number of independent directors (t -value = 22.35), larger board size (t -value = 16.46), larger asset base (t -value = 19.53), higher MB ratio (t -value = 4.20) and better profitability (ROA, t -value = 4.14).

Similarly, columns 3 and 4 in Table 5 present the results on minority directors. These results are similar to what we find with regard to women directors. Contrary to what we predict in hypothesis H1b, firms headquartered in areas with more Mainline Protestants tend to have fewer ethnic minority directors (coefficient of -0.0339 with t -value = -3.31). However, contrary to what we find with regard to women directors, firms headquartered in areas with more Evangelical Protestants have more (t -value = 3.49) minority directors. This result is in line with the notion that corporations with headquarters situated in areas with more minority population tend to invite minorities into their boardrooms, as many Evangelical Protestants are African Americans.

Likewise, as predicted in hypothesis H2b, firms headquartered in Republican areas have fewer ethnic directors (t -value = -10.37) even though the diversity goal (INCEN) is significantly and positively contributing to existence of more minority directors (t -value = 5.61). It may very well indicate that in this instance the religious beliefs of the community in which the firm is headquartered tend to exert greater influence than the political affiliation of the people.

	INCN	DIV_CSR	PWDIR	PMDIR	WCEO	WCFO	WEXE	MAINL	EVAN	CATH	REPUB	AFINC	ROA	FSIZE	BSIZE	INDDIR
INCN	1															
DIV_CSR	0.08***	1														
PWDIR	0.09***	0.49***	1													
PMDIR	0.24***	0.19***	0.19***	1												
WCEO	0.01	0.13***	0.22***	0.06***	1											
WCFO	0.02**	0.14***	0.07***	0.06***	0.04	1										
WEXE	0.04***	0.20***	0.20***	0.10***	0.11***	0.22***	1									
MAINL	0.04***	0.01	0.07***	-0.01	0.01	-0.01	-0.01	1								
EVAN	0.03***	-0.09***	-0.11***	-0.03***	-0.04***	-0.02**	-0.04***	0.33***	1							
CATH	-0.04***	0.04***	0.04***	0.01	0.03***	-0.01	0.02**	-0.30***	-0.67***	1						
REPUB	0.00	-0.12***	-0.11***	-0.09***	-0.04***	-0.05***	-0.07***	0.56***	0.56***	-0.34***	1					
AFINC	-0.02***	0.00	-0.01	0.02**	0.01	-0.01	0.02	-0.20***	-0.43***	0.34***	-0.08***	1				
ROA	0.02***	0.08***	0.06***	0.09***	0.02***	0.07***	0.09***	0.09***	0.07***	-0.06***	0.06***	-0.06***	1			
FSIZE	0.09***	0.36***	0.28***	0.31***	0.01	0.03***	0.07***	0.09***	0.05***	-0.04***	-0.03***	-0.13***	0.16***	1		
BSIZE	0.08***	0.31***	0.26***	0.21***	0.00	0.01	0.05***	0.14***	0.05***	-0.04***	-0.02**	-0.16***	0.03***	0.59***	1	
INDDIR	0.01	0.12***	0.16***	0.20***	0.03***	0.03***	0.09***	0.04***	-0.02**	0.00	-0.02**	0.02**	0.02***	0.13***	0.08***	1

Note(s): This table presents Pearson correlation coefficients of major variables. INCN = a dummy variable indicating the existence of diversity goal in the executive incentive system, which is coded as 1 if a firm has the goal and 0 otherwise; DIV_CSR = diversity ratings provided by the ISS (formerly Risk Metrics) to measure a firm's diversity effort; PWDIR = percentage of woman directors on board; PMDIR = percentage of minority directors on board; WCEO = a dummy for woman CEO, coded as 1 if a firm has a woman CEO and 0 otherwise; WCFO = a dummy variable for Woman CFO, coded as 1 if a firm has a woman CFO and 0 otherwise; WEXE = percentage of woman executives (other than CEO or CFO) among the top 10 highest compensation (based on salary and bonus) executives of the firm; MAINL = Mainline Protestant adherents percentage in a county where a firm is headquartered; EVAN = Evangelical Protestant adherents percentage in a county where a firm is headquartered; CATH = Catholic adherents percentage in a county where a firm is headquartered; REPUB = percentage of voters voted for Republicans in a county where a firm is headquartered; AFINC = log10 transformation of average family income; BSIZE = board size; INDDIR = percentage of independent directors on board; ROA = return on assets; FSIZE = log 10 transformation of total assets; MB = firm's market to book ratio. ***, ** and * indicate significance at the 1, 5 and 10% levels, respectively

Table 3. Pearson correlation matrix

ARA
30,1

16

Dependent variable INCEN Parameter	Estimate	Wald chi-square
Intercept	-10.6926	8.33***
MAINL	0.3626	9.89***
EVAN	-0.1409	1.63
CATH	-3.3258	17.88***
REPUB	-0.7674	1.79
AFINC	0.1862	0.06
ROA	0.9058	1.45
FSIZE	0.9158	76.34***
MB	-0.0013	0.01
BSIZE	0.1233	17.07***
INDDIR	-0.2683	0.39
<i>Responses</i>		
Pseudo R-sq		0.1452
Percent concordant		79.2
Percent discordant		17.4
Percent tied		3.4
N		20,446

Note(s): This table presents the logistic regression results of religious and political factors and existence of corporate diversity policy. Dependent variable is INCEN, which is a dummy variable indicating the existence of diversity goal in the executive incentive system, which is coded as 1 if a firm has the goal and 0 otherwise; MAINL = Mainline Protestant adherents percentage in a county where a firm is headquartered; EVAN = Evangelical Protestant adherents percentage in a county where a firm is headquartered; CATH = Catholic adherents percentage in a county where a firm is headquartered; REPUB = percentage of voters voted for Republicans in a county where a firm is headquartered; AFINC = log10 transformation of average family income; BSIZE = board size; INDDIR = percentage of independent directors on board; ROA = return on assets; FSIZE = log 10 transformation of total assets; MB = firm's market to book ratio. ***, ** and * indicate significance at the 1, 5 and 10% levels, respectively

Table 4.
Logistic regression results of religious and political factors and existence of corporate diversity policy

Table 6 presents the results on the determinants of women CEOs, women CFOs and other senior female executives for our sample firms. As predicted in H1b, columns 1 and 2 show that female CEOs tend to appear more frequently in firms headquartered in areas with more Mainline Protestants ($\chi^2 = 12.76$ significant at $p = 0.01$). Likewise, as predicted in H2b, firms headquartered in areas with Republican voters tend to have fewer female CEOs ($\chi^2 = 6.80$ significant at $p = 0.01$). With regard to the other determinants, we find more female CEOs in firms that are less profitable ($\chi^2 = 3.99$ significant at $p = 0.05$) and in firms with more independent directors ($\chi^2 = 19.21$ significant at $p=0.01$).

Columns 3 and 4 present the results of the determinants of female CFOs. Contrary to what we predict in hypothesis H1b, we do not find any significant direct results suggesting that companies located in counties with higher percentage of Mainline Protestants employ higher number of female CFOs. However, we do find indirect evidence in support of this hypothesis because companies headquartered in counties with higher population of Evangelical Protestants (coefficient = -1.4799, $\chi^2 = 6.60$, significant at p -value = 0.05) and Catholics (coefficient = 1.1881, $\chi^2 = 13.17$, significant at p -value = 0.01) tend to have fewer female CFOs. However, as predicted in H2b, we find that firms headquartered in areas with Republican voters tend to have fewer female CFOs (coefficient = -1.2714, $\chi^2 = 20.98$, significant at p -value = 0.01). With regard to the other determinants, we find more female CFOs in firms with higher profitability (coefficient = 3.2508, $\chi^2 = 92.27$, significant at p -value = 0.01) and lower MB ratio coefficient = -0.0292, $\chi^2 = 9.11$, significant at p -value = 0.01).

	PWDIR		PMDIR	
	Estimate	t-value	Estimate	t-value
Intercept	-0.0951	-2.79***	-0.3348	-12.96***
INCEN	0.0443	7.91***	0.0238	5.61***
MAINL	0.1153	8.54***	-0.0339	-3.31***
EVAN	-0.1487	-13.58***	0.0290	3.49***
CATH	-0.0240	-3.68***	-0.0032	-0.64
REPUB	-0.0214	-3.71***	-0.0453	-10.37***
AFINC	0.0050	0.70	0.0435	8.07***
ROA	0.0195	4.14***	0.0129	3.60***
FSIZE	0.0219	19.53***	0.0287	33.82***
MB	0.0007	4.20***	0.0010	7.17***
BSIZE	0.0053	16.46***	0.0018	7.13***
INDDIR	0.0907	22.35***	0.0570	18.69***
N		20,446		20,446
F-value		172.45		161.33
Adj. R-sq		0.1846		0.1694
Industry fixed effect		Included		Included
Year fixed effect		Included		Included

Note(s): This table presents regression results on the effects of religious and political factors on the percentage of women and minority directors on board. Dependent variables are PWDIR and PMDIR: PWDIR = percentage of woman directors on board; PMDIR = percentage of minority directors on board; INCEN = a dummy variable indicating the existence of diversity goal in the executive incentive system, which is coded as 1 if a firm has the goal and 0 otherwise; MAINL = Mainline Protestant adherents percentage in a county where a firm is headquartered; EVAN = Evangelical Protestant adherents percentage in a county where a firm is headquartered; CATH = Catholic adherents percentage in a county where a firm is headquartered; REPUB = percentage of voters voted for Republicans in a county where a firm is headquartered; AFINC = Log10 transformation of average family income; BSIZE = board size; INDDIR = percentage of independent directors on board; ROA = return on assets; FSIZE = log 10 transformation of total assets; MB = firm's market to book ratio. ***, ** and * indicate significance at the 1, 5 and 10% levels, respectively

Table 5. Regression results on religious and political factors and percentage of women and minority directors on board

Columns 5 and 6 present the results of the determinants of other senior female executives in the firm's top-10 salary and bonus pool (excluding the CEO and the CFO). We do not find any evidence in support of H1b, which predicts a higher percentage of female executives for companies located in counties with more Mainline Protestants. However, we do find that companies headquartered in areas with more Evangelicals tend to employ a lower percentage of female executives (coefficient = -0.025, t-value = -1.87, significant at p-value = 0.10). However, like the effect on women CEO and women CFO, we find that firms headquartered in areas with Republican voters tend to have fewer other female senior executives (t-value = -8.75). Interestingly, we find that INCEN (presence of a diversity goal in senior executives' incentive compensation contract) does matter in helping attract more females to other senior executive ranks for firms in our sample.

4.2 Religious beliefs, political affiliation, workforce diversity goals and their achievement

Table 7 presents the results relating to H3, which investigates whether the performance goal and the external environment (religion and politics) interact to affect the implementation of diversity goals. To examine this, we use the PSM method (Dehejia and Wahba, 2002) to divide our sample firms into four quartiles, where quartile 1 contains firms that have the lowest probability of having diversity in their performance goals and quartile 4 contains firms that have the highest probability of having diversity in their performance goals. Model 1 is used as the logistic prediction model to generate a propensity score for each firm given its external environment, financial resources and governance support. Thus, in accordance with our hypothesis, firms

	WCEO		WCFO		WEXE	
	Estimate	Wald chi-square	Estimate	Wald chi-square	Estimate	t-Value
Intercept	-5.4207	4.08*	-0.5228	0.10	-0.1059	-2.57***
INCEN	0.3464	1.07	0.2625	1.40	0.0188	2.79***
MAINL	3.3480	12.76***	-0.7941	1.38	-0.0124	-0.76
EVAN	-1.5935	2.46	-1.4799	6.60**	-0.0254	-1.87*
CATH	1.0596	4.24**	-1.1881	13.17***	-0.0118	-1.50
REPUB	-1.2019	6.80***	-1.2714	20.98***	-0.0608	-8.75***
AFINC	-0.0192	0.00	-0.6662	3.68*	0.0254	2.96***
ROA	0.8861	3.99**	3.2508	92.27***	0.0709	12.46***
FSIZE	0.1288	2.19	0.2214	16.73***	0.0056	4.12***
MB	-0.0013	0.00	-0.0292	9.11***	-0.0002	-0.71
BSIZE	-0.0325	1.46	-0.0065	0.16	0.0003	0.80
INDDIR	1.5050	19.21***	0.8546	17.16***	0.0692	14.14***
<i>Responses</i>						
Pseudo/Adj. R-squares		0.0642		0.0496		0.055
Percent concordant		68.4		64.7		
Percent discordant		27.9		33.7		
Percent tied		3.6		1.9		
N		20,446		20,446		20,446
Likelihood/F-value		245.46***		362.96***		45.07***
Industry fixed effect		Included		Included		Included
Year fixed effect		Included		Included		Included
Model used	Logit		Logit			OLS

Note(s): This table presents the regression results on religious and political factors and woman CEO, woman CFO and percentage of non-CEO/CFO woman executives in the company. Dependent variables are WCEO, WCFO and WEXE. WCEO = a dummy for woman CEO, coded as 1 if a firm has a woman CEO and 0 otherwise; WCFO = a dummy variable for woman CFO, coded as 1 if a firm has a woman CFO and 0 otherwise; WEXE = percentage of woman executives (other than CEO or CFO) among the top 10 highest compensation (based on salary and bonus) executives of the firm; INCEN = a dummy variable indicating the existence of diversity goal in the executive incentive system, which is coded as 1 if a firm has the goal and 0 otherwise; MAINL = Mainline Protestant adherents percentage in a county where a firm is headquartered; EVAN = Evangelical Protestant adherents percentage in a county where a firm is headquartered; CATH = Catholic adherents percentage in a county where a firm is headquartered. REPUB = percentage of voters voted for Republicans in a county where a firm is headquartered; AFINC = Log10 transformation of average family income; BSIZE = board size; INDDIR = percentage of independent directors on board; ROA = return on assets; FSIZE = log 10 transformation of total assets; MB = firm's market to book ratio. ***, ** and * indicate significance at the 1, 5 and 10% levels, respectively

Table 6. Regression results on religious and political factors and woman CEO, woman CFO and percentage of non-CEO/CFO woman executives in the company

having a higher PSM score are characterized with facing less resistance in implementing their diversity goals. In Table 7, this is captured via the variable INCEN*PSM4Q. Consistent with H3, we find that, across the board, firms with the best supportive external environment have positive and significant coefficients (PWDIR $t = 5.47$ and PMDIR $t = 6.28$). We interpret these results as suggesting that firms headquartered in areas with a supportive environment reflected in higher proportion of Mainline Protestants and less Republicans tend to be more effective in appointing higher percentage of female and minority directors.

4.3 Religious beliefs, political affiliation, workforce diversity and gender compensation gap
Table 8 presents the results relating to H4a that predicts the compensation differential between a firm's senior executives based on their gender will be lower for firms with

	PWDIR Women directors		PMDIR Minority directors		DIV_CSR Diversity CSR score	
	Estimate	<i>t</i> -value	Estimate	<i>t</i> -value	Estimate	<i>t</i> -value
Intercept	-0.0969	-2.84***	-0.3093	-12.00***	-0.8634	-9.36***
INCEN * PSM1Q	0.0720	2.92***	-0.0014	-0.07	0.1089	1.68*
INCEN * PSM2Q	0.0241	1.05	-0.0184	-1.06	0.0173	0.29
INCEN * PSM3Q	0.0882	6.03***	0.0175	1.58	0.1426	3.57***
INCEN * PSM4Q	0.0355	5.47***	0.0308	6.28***	0.0853	5.02***
MAINL	0.1157	8.56***	-0.0341	-3.34***	-0.0258	-0.71
EVAN	-0.1480	-13.51***	0.0281	3.40***	-0.2372	-7.96***
CATH	-0.0238	-3.65***	-0.0031	-0.63	-0.0597	-3.38***
RE PUB	-0.0219	-3.80***	-0.0446	-10.26***	-0.1271	-8.16***
AFINC	0.0053	0.74	0.0439	8.18***	0.0547	2.85***
ROA	0.0197	4.17***	0.0125	3.49***	0.0592	4.34***
FSIZE	0.0220	19.61***	0.0288	34.11***	0.1107	35.9***
MB	0.0007	4.00***	0.0010	7.09***	0.0030	6.09***
BSIZE	0.0053	16.52***	0.0016	6.65***	0.0168	19.17***
INDDIR	0.0907	22.36***	0.0515	16.79***	0.1973	17.80***
<i>N</i>		20,446		20,446		19,070
<i>F</i> -value		192.6***		147.33***		346.21***
Adj. <i>R</i> -sq		0.1879		0.1768		0.352
Industry fixed effect		Included		Included		Included
Year fixed effect		Included		Included		Included

Note(s): This table presents the regression results on religious and political factors and woman director, minority director and firm diversity performance with the interaction of diversity goals and environmental factors. In this table we include a variable on the quartile ranking of the firm's environment (both religion and political affiliation) based on propensity score matching (PSM) approach and propensity scores obtained from Model (1). PSM1Q, PSM2Q, PSM3Q and PSM4Q are indicator variables, coded as 1 if the propensity score of a firm falls into the first quartile, second quartile, third quartile and fourth quartile, respectively, and 0 otherwise. INCEN = a dummy variable indicating the existence of diversity goal in the executive incentive system, which is coded as 1 if a firm has the goal and 0 otherwise; DIV_CSR = diversity ratings provided by the ISS (formerly Risk Metrics) to measure a firm's diversity effort; PWDIR = percentage of woman directors on board; PMDIR = percentage of minority directors on board; MAINL = Mainline Protestant adherents percentage in a county where a firm is headquartered; EVAN = Evangelical Protestant adherents percentage in a county where a firm is headquartered; CATH = Catholic adherents percentage in a county where a firm is headquartered; REPUB = percentage of voters voted for Republicans in a county where a firm is headquartered; AFINC = log10 transformation of average family income; BSIZE = board size; INDDIR = percentage of independent directors on board; ROA = return on assets; FSIZE = log 10 transformation of total assets; MB = firm's market to book ratio. ***, ** and * indicate significance at the 1, 5 and 10% levels, respectively

Table 7. Regression results on religious and political factors and woman director, minority director and firm diversity performance: Interaction of diversity goals and environmental factors

workforce diversity goals in their senior executives' incentive compensation plan. The dependent variables are total compensation (log10 transformed) paid to the CEO, CFO and top 10 salary and bonus ranked executives other than CEO or CFO. Consistent with H4a, we expect that WOMEN, the gender variable, to carry a negative coefficient because of the well-documented compensation differentials between male and female. If the diversity performance goal has any effect on lowering this compensation gap, we should find that the interaction term, WOMEN*INCEN, to be positive. As expected, we find that the variable, WOMEN, carries negative sign across the board, but it is significant only for the differential in the CFO compensation (see columns 3 and 4, $t = -2.86$) and for the differential in the compensation of male senior executives (see columns 5 and 6, $t = -9.20$). For the CEO compensation differential, although the sign is in the predicted direction but we do not find it significant. The interaction term INCEN*WOMEN has a positive sign but is statistically

	CEO compensation		CFO compensation		Other exec compensation	
	Estimate	t-value	Estimate	t-value	Estimate	t-value
Intercept	0.3837	2.11**	-0.0437	-0.33	0.0094	0.12
WOMEN	-0.0226	-1.15	-0.0249	-2.86***	-0.0464	-9.20***
INCEN*WOMEN	0.1256	0.99	0.0734	1.21	-0.0617	-1.91*
MAINL	-0.1011	-1.42	-0.2843	-5.52***	-0.3812	-12.62***
EVAN	-0.0179	-0.30	0.0715	1.68*	0.0467	1.86*
CATH	0.0188	0.53	-0.0476	-1.88*	-0.0611	-4.05***
RE PUB	-0.1158	-3.66***	-0.0218	-9.59***	-0.2397	-17.82***
AFINC	0.2987	7.85***	0.3796	13.83***	0.3570	22.08***
ROA	0.5361	15.47***	0.4174	16.70***	0.4192	28.56***
FSIZE	0.3968	65.37***	0.3594	81.64***	0.3702	143.94***
MB	0.0102	9.40***	0.0095	12.22***	0.0113	24.75***
BSIZE	-0.0038	-2.12**	-0.0050	-3.82***	-0.0010	-1.34
INDDIR	0.2659	11.73***	0.0726	4.41***	0.0068	0.70
N		14,585		13,920		48,454
F-value		297.11***		431.97***		1,395.18***
Adj. R-sq		0.3625		0.4644		0.4462
Industry fixed effect		Included		Included		Included
Year fixed effect		Included		Included		Included

Note(s): This table presents regression results on religious and political factors and executive compensations. In this table the dependent variables are CEO compensation, CFO compensation and average compensation paid to other senior executives. These compensation measures (TCOMP) are calculated as total compensation (log10 base transformed) paid to CEO, CFO and other senior executives; WOMEN = A binary dummy variable, coded as 1 if the executive is female, otherwise 0; INCEN = a dummy variable indicating the existence of diversity goal in the executive incentive system, which is coded as 1 if a firm has the goal and 0 otherwise; MAINL = Mainline Protestant adherents percentage in a county where a firm is headquartered; EVAN = Evangelical Protestant adherents percentage in a county where a firm is headquartered; CATH = Catholic adherents percentage in a county where a firm is headquartered; REPUB = percentage of voters voted for Republicans in a county where a firm is headquartered; AFINC = log10 transformation of average family income; BSIZE = board size; INDDIR = percentage of independent directors on board; ROA = return on assets; FSIZE = log 10 transformation of total assets; MB = firm's market to book ratio. ***, ** and * indicate significance at the 1, 5 and 10% levels, respectively

Table 8. Regression results on religious and political factors and executive compensations: Diversity and compensation gap

insignificant for the CEO and the CFO compensation differential. However, contrary to H4a, we find that the compensation differential for other senior executives is higher and significant ($t = -1.91$) for firms that include diversity criteria as a performance goal in their senior executives' incentive compensation contracts. Overall, our results lead us to conclude that the diversity performance goal in senior executives' incentive compensation plan does not appear to be effective in narrowing the compensation gap between female and male executives.

Table 9 presents the results relating to H4b and H4c that predict the direction of the compensation differential between male and female executives for firms with different religion and political preferences. Similar to Table 8, the dependent variables are total compensation (log10 transformed) paid to the CEO, CFO and top 10 salary and bonus ranked executives other than CEO or CFO. We expect that WOMEN, the gender variable, to carry a negative coefficient because of the well-documented compensation differentials between male and female. If the religion and political tendencies have any effect on the compensation gap, we expect the interaction term, WOMEN*MAINL, to have a positive coefficient and a negative coefficient for WOMEN*RE PUB. The results presented in Table 9 show that the variable, WOMEN, carries a positive sign in all columns, but contrary to our expectation the gender-related differential is positive and statistically significant for the CFO after controlling for the effects of religion and political affiliations on compensation gap.

	CEO compensation		CFO compensation		Other exec compensation	
	Estimate	<i>t</i> -value	Estimate	<i>t</i> -value	Estimate	<i>t</i> -value
Intercept	0.2323	1.43	-0.0565	-0.48	-0.1002	-1.43
WOMEN	0.1207	1.18	0.1617	3.93***	0.0353	1.51
INCEN*WOMEN	0.1993	1.52	0.0648	1.06	-0.0532	-1.62
MAINL*WOMEN	-1.2976	-3.42***	-0.0809	-0.63	-0.3855	-3.62***
EVAN*WOMEN	-0.2144	-0.58	0.0047	0.03	0.1601	1.92*
CATH*WOMEN	-0.1210	-0.58	-0.1529	-1.58	0.0221	0.43
REPU*WOMEN	0.0590	0.31	-0.3483	-4.08***	-0.1740	-4.03***
AFINC	0.3178	9.40***	0.3574	14.52***	0.3499	24.05***
ROA	0.5247	15.17***	0.3962	15.81***	0.3966	26.91***
FSIZE	0.3998	66.06***	0.3629	82.20***	0.3715	145.53***
MB	0.0102	9.46***	0.0099	12.61***	0.0117	25.51***
BSIZE	-0.0042	-2.38**	-0.0059	-4.52***	-0.0022	-2.86***
INDDIR	0.2640	11.64***	0.0726	4.40***	0.0063	0.65
<i>N</i>		14,585		13,920		48,454
<i>F</i> -value		296.03***		423.26***		1,355.18***
Adj. <i>R</i> -sq		0.3616		0.4593		0.4390
Industry fixed effect		Included		Included		Included
Year fixed effect		Included		Included		Included

Note(s): This table presents the regression results on the effect of religious and political factors on executive compensations considering the interactive effects between the diversity policy, gender diversity and executive compensations. In this table the dependent variables are CEO compensation, CFO compensation and average compensation paid to other senior executives. These compensation measures (TCOMP) are calculated as total compensation (log10 base transformed) paid to CEO, CFO and other senior executives; WOMEN = A binary dummy variable, coded as 1 if the executive is female, otherwise 0; INCEN = a dummy variable indicating the existence of diversity goal in the executive incentive system, which is coded as 1 if a firm has the goal and 0 otherwise; MAINL = Mainline Protestant adherents percentage in a county where a firm is headquartered; EVAN = Evangelical Protestant adherents percentage in a county where a firm is headquartered; CATH = Catholic adherents percentage in a county where a firm is headquartered; REPUB = percentage of voters voted for Republicans in a county where a firm is headquartered; AFINC = \ln transformation of average family income; BSIZE = board size; INDDIR = percentage of independent directors on board; ROA = return on assets; FSIZE = log 10 transformation of total assets; MB = firm's market to book ratio. ***, ** and * indicate significance at the 1, 5 and 10% levels, respectively

Table 9. Regression results on religious and political factors and executive compensations: diversity and compensation gap with interaction effects

Contrary to H4b, results presented in Table 9 indicate that the compensation differential between male and female CEOs ($t = -3.42$) and other senior executives ($t = -3.62$) is wider, not narrower, for firms headquartered in areas with higher percentage of Mainline Protestants (MAINL*WOMEN). However, the results presented in Table 9 support H4c because the interaction term REPUB*WOMEN is significant for the CFO compensation ($t = -4.08$) and other senior executives' compensation ($t = -4.03$).

4.4 Endogeneity issue

We also investigate a potential endogeneity issue regarding whether the religious and political make-up of the population cause firms to behave in certain way or whether the behavior of firms attract people of certain faiths. To address this issue, we replicate our OLS results using a two-stage least squares (2SLS) approach. Using a 2SLS approach helps mitigate the effect of any potential measurement errors in the level of religious faith and political affiliation, although it is not immediately obvious why this measurement error would be correlated with dependent variables such as the inclusion of diversity incentive in executive compensation plan. In addition, an instrumental variable approach removes the estimation bias caused by an omitted correlated variable if the instruments are uncorrelated

with this omitted variable and are sufficiently correlated with the endogenous elements of the variable of interest (e.g. [Hillary and Hui, 2009](#)). As our primary data start from 2003, the lagged religion and politics values in this two-stage regression are based on the 2000 survey.

[Table 10](#) presents the 2SLS results to alleviate the endogeneity concerns. Panel A reports the first stage regression results which we obtain by regressing the lagged data from the religion and politics survey (LMAINL, LEVAN, LCATH, LREPUB) and additional variables including MINORIT defined as minority population in the county which is computed as 1 (percentage of white population), COLLEGE (percentage of population with college degree) and POP_DEN (population density of a county). The effects of minority population density, community education level and overall population density on religious and political preference of a population are well documented in the literature (e.g. [Bartels, 2006](#); [Craig and Richeson, 2014](#); [Gimpel et al., 2006](#); [Taylor et al., 1996](#); [Warf and Winsberg, 2008](#)). However, no study has examined or found the influence of these factors on diversity of management team and/or executive compensation of a firm. Therefore, we believe these variables are valid instrumental variables as they meet both relevance condition and exclusion restriction. We present the second-stage regression results in Panel B, for Models 2, 3 and 4. Our major findings, as discussed above, remain unchanged. INCEN is significant in all of the models, and the magnitude of the coefficients remains unchanged. The interaction term between INCEN and WOMEN generally has a positive sign but is negative and significant only in the compensation model for other executives. In addition, MAINL is positive and significant only in women directorship model, while REPUB is negative and significant in all of the models. All the results are reported with industry and year-fixed effects in the full sample.

5. Summary and conclusions

In this paper, we examine whether a firm's external environment (i.e., religion and politics) in its headquartered location will have any effect on corporate governance diversity policy. We find that firms headquartered in more liberal counties (represented by counties with more Mainline Protestants and less Republican voters) are more willing to adopt diversity goals in their executives' incentive compensation systems. We also find evidence suggesting that once established, these incentive goals have helped companies better attain diversity by attracting more female directors, female executives and minority directors to their senior executive and board ranks. However, we do not find evidence supporting that the compensation differentials between male and female executives are narrowing for firms with diversity goals. Our results provide evidence supporting the notion that non-financial goals in management accounting are affected by the external environment where the firm is located and the ultimate success of the implementation is dependent on the interaction between performance goals and firm external environment.

Our study is not free of limitations. First, the religiosity and political data obtained from the American Religion Data Archive (ARDA) is not available on an annual basis. Thus, we estimate the religiosity and political preference data based on average of available observations, which could create less variation in our data. However, this could only bias against finding the results we documented here.

Second, to test our hypotheses, we use the level of religiosity and political preference of the population of an area (a county) as a proxy or indicator of external environment, and test the influence of these factors on corporate workforce diversity under the assumption that the environmental factors would influence the level of religiosity and political affiliation of the firm's top executives. Prior studies have used this proxy (e.g. [Cui et al., 2015](#)) as an indirect proxy to estimate the religiosity and political preference of the firm's top management group.

Panel A: First-stage regression analysis

	MAINL	EVAN	First stage	CATH	REPUB
Intercept	-0.0834 -14.57***	-0.0202 -20.91***		0.0046 2.52	0.0482 28.51***
LMAINL	0.9147 1022.06***	0.0320 21.17***		-0.0312 -10.89**	-0.0356 -13.50***
LEVAN	0.0010 1.12	0.9657 755.18***		-0.0360 -14.71	0.0973 43.51***
LCATH	-0.0063 -13.64**	-0.0046 -5.85***		0.9459 635.89***	0.0744 54.29***
LREPUB	0.0030 5.56***	0.0397 43.31***		0.6117 35.15***	0.9164 571.49***
MINORIT	0.0136 27.67***	0.0236 28.58***		0.0332 21.20***	-0.0664 -45.97***
COLLEGE	0.0103 20.35***	-0.0210 -24.49***		-0.0178 -10.96***	-0.0383 -25.63***
POP_DEN	-0.0002 -1.70*	0.0062 31.79***		-0.0080 -21.65***	-0.0046 -13.47***
N	20,420	20,420		20,420	20,420
Adj. R-sq	0.9846***	0.9875***		0.9765***	0.9814***
Industry fixed effect	Included	Included		Included	Included
Year fixed effect	Included	Included		Included	Included

Panel B: Second-stage regression analysis

	PWDIR	PMDIR	WEXE	CEO comp	CFO comp	Other exec comp	Diversity rating (DIV_CSR)
Intercept	-0.0888 -2.60***	-0.3105 -12.03***	-0.0830 -2.01**	0.3932 2.16***	-0.0350 -0.27	0.0320 0.41	-0.8407 -9.11***
WOMEN				-0.0228 -1.16	-0.0242 -2.78***	-0.0460 -9.12***	
INCEN	0.0446 7.97***	0.0242 5.73***	0.0188 2.79***	0.1235	0.0728	-0.0620	0.0906 6.14***
INCEN*WOMEN				0.97	1.20	-1.92*	
MAINL	0.1203 8.81***	-0.0338 -3.28***	-0.0075 -0.45	-0.0896 -1.25	-0.2718 -5.26***	-0.3622 -11.90***	-0.0299 -0.82

(continued)

Table 10. Two-stage least squares regression analysis of effects of religious and political factors on woman director, minority director, other woman executives and executive compensations

Panel B. Second-stage regression analysis

	PWDIR	PMDIR	WEXE	CEO comp	CFO comp	Other exec. comp	Diversity rating (DIV_CSR)
EVAN	-0.1507	0.0325	-0.0396	-0.0035	0.0977	0.0615	-0.2524
	-13.34***	3.81***	-2.91***	-0.06	2.22**	2.38**	-8.21***
CATH	-0.0247	0.0002	-0.0153	0.0325	-0.0289	-0.0433	-0.0708
	-3.69***	0.03	-1.90*	0.89	-1.10	-2.78***	-3.90***
REPUB	-0.0194	-0.0450	-0.0567	-0.1298	-0.2324	-0.2500	-0.1201
	-3.30***	-10.15***	-7.99***	-4.01***	-9.99***	-18.17***	-7.55***
AFINC	0.0035	0.0438	0.0206	0.2966	0.3767	0.3514	0.0503
	0.49	8.16***	2.41**	7.81***	13.76***	21.76***	2.62***
ROA	0.0189	0.0121	0.0707	0.5362	0.4171	0.4177	0.0579
	4.00***	3.39***	12.41***	15.48***	16.69***	28.46***	4.24***
FSIZE	0.0219	0.0290	0.0057	0.3966	0.3595	0.3704	0.1108
	19.56***	34.24***	4.21***	65.33***	81.67***	143.98***	35.95***
MB	0.0007	0.0010	-0.0002	0.0102	0.0095	0.0114	0.0030
	4.02***	7.09***	-0.72	9.36***	12.24***	24.80***	6.10***
BSIZE	0.0053	0.0016	0.0003	-0.0039	-0.0051	-0.0012	0.0168
	16.36***	6.69***	0.73	-2.18**	-3.96***	-1.53	19.20***
INDDIR	0.0905	0.0517	0.0691	0.2675	0.0744	0.0086	0.1963
	22.29***	16.85***	14.12***	11.79***	4.52***	0.89	17.70***
N	20,420	20,420	20,420	14,569	13,090	48,400	19,044
F-value	172.01***	162.81***	45.07***	296.8***	431.6***	1,392.6***	383.6***
Sys. Resq	0.1844	0.1763	0.0551	0.3624	0.4644	0.4460	0.3517
Industry fixed effect	Included	Included	Included	Included	Included	Included	Included
Year fixed effect	Included	Included	Included	Included	Included	Included	Included

Note(s): This table presents the two-stage least squares results to alleviate the endogeneity concerns. Panel A reports the first-stage regression results which we obtain by regressing the lagged data from the religion and politics survey (LMAINL, LEVAN, LCATH, LREPUB) and additional variables including MINORIT (defined as minority population in the county which is computed as 1 (the percentage of white population), COLLEGE (percentage of population with college degree) and POP_DEN (population density of a county). The effects of minority population density, community education level and overall population density on religious and political preference of a population are well documented in the literature (e.g. Taylor *et al.*, 1996; Craig and Richeson, 2014; Warf and Winsberg, 2008; Bartels, 2006; Gimpel *et al.*, 2006). However, no study has examined or found the influence of these factors on diversity of management team and/or executive compensation of a firm. Therefore, we believe these variables are valid instrumental variables as they meet both relevance condition and exclusion restriction. Panel B presents the second-stage least squares analysis of the effect of religious and political factors on firm's diversity performance and executive compensations: LMAINL, LEVAN, LCATH, LREPUB are lagged values of MAINL, EVAN, CATH, REPUB, INGEN = a dummy variable indicating the existence of diversity goal in the executive incentive system, which is coded as 1 if a firm has the goal and 0 otherwise; DIV_CSR = diversity ratings provided by the ISS (formerly Risk Metrics) to measure a firm's diversity effort; PWDIR = percentage of woman directors on board; WOMEN = a dummy variable for female executives coded as 1 if the executive is female and 0 otherwise; PMDIR = percentage of minority directors on board; WCEO = a dummy for woman CEO, coded as 1 if a firm has a woman CEO and 0 otherwise; WCEO = a dummy variable for woman CFO, coded as 1 if a firm has a woman CFO and 0 otherwise; WEXE = percentage of woman executives (other than CEO or CFO) among the top 10 highest compensation (based on salary and bonus) executives of the firm; MAINL = Mainline Protestant adherents percentage in a county where a firm is headquartered; EVAN = Evangelical Protestant adherents percentage in a county where a firm is headquartered; CATH = Catholic adherents percentage in a county where a firm is headquartered; REPUB = percentage of voters voted for Republicans in a county where a firm is headquartered; AFINC = log10 transformation of average family income; BSIZE = board size; INDDIR = percentage of independent directors on board; ROA = return on assets; FSIZE = log 10 transformation of total assets; MB = firm's market to book ratio; CEO Comp = log 10 transformation of CEO compensation based on salary and bonus; CFO Comp = log 10 transformation of CFO compensation based on salary and bonus; Other Exec Comp = log 10 transformation of other executive compensation. ***, **, and * indicate significance at the 1, 5 and 10% levels, respectively

Future study could find a direct way to determine the religious and political characteristics of the top managements of the firms. As indicated by Cui *et al.* (2015), knowing the specific religious and political affiliation of the CEO of a firm would provide a more direct measure of the degree of religiosity and political preference of a firm's top decision makers, and a more direct way to test the influence of religion and political affiliation on that firm's diversity initiatives.

Third, our study focuses on religion and political preference of populations surrounding the headquarters of firms. Future studies could examine the tolerance of other religions and political preference and its impacts on corporate diversity policies.

Fourth, the labor market segmentation hypothesis (Bansak *et al.*, 2012) indicates that demand for female workers is directly linked to demand in female-dominated industries and occupations. Based on this hypothesis, demand for female CEO/CFO/directors should be directly related to demand in industries with a relatively high percentage of female employees. Future studies could investigate how the overall percentage of women employed in the industry affect firm performance. In addition, Frye and Pham (2018) find that boards of female CEOs are structured for more monitoring, a broader director network and younger directors. As an interesting direction, future study could also investigate how these factors would affect firm performance [11].

Finally, this study uses the data spanning a period from 2003 to 2012. As more regulations have been released recently regarding the representation of women on the boards of the US public companies, it would be interesting to investigate the topic by extending the sample period to recent years. However, as the major religion and political data are not updated in recent years, we could not obtain more recent data to test our hypotheses. Future study could investigate the economic consequences of the recent changes in regulations regarding representation of women on the boards of the US public companies.

Notes

1. The SEC Final Rule 33-9089, issued in 2009, currently requires US public companies to disclose "whether, and if so how, the nominating committee (or the board) considers diversity in identifying nominees for director" (p. 115). Under these rules, the companies can define diversity "in ways that they consider appropriate" (p. 39). Thus, it is quite conceivable that some may focus on racial, ethnic or gender diversity, while others may implement it "to include differences in viewpoint, professional experience, education, and skill and other individual qualities and attributes that contribute to board heterogeneity while others may focus on diversity concepts such as race, gender and national origin (p. 39)." Available at <https://www.sec.gov/rules/final/2009/33-9089.pdf>.
2. United States Securities and Exchange Commission, August 6, 2021, Final Rule available at <https://www.sec.gov/rules/sro/nasdaq/2021/34-92590.pdf>.
3. We do not find reliable dataset on minority executives. The ISS (formerly Risk Metrics) database provides information on minority directors but not on minority employees. Foley and Kerr (2013) identified ethnic innovators by using name analysis. While such methods can be used to identify immigrants from China, Korea, Japan, India, Philippines and Middle East, it is much less reliable in identifying African Americans who have been residing in the US for many generations and use predominant Anglo-Saxon names.
4. We used log 10 base transformation instead of natural log. As an independent check, the average firm size measured by the natural logarithm of total assets is comparable to those reported in earlier studies (e.g. Cui *et al.*, 2015).
5. We obtained propensity scores from the regression results of diversity incentive model (Model 1).
6. For county-level religious data, see http://www.thearda.com/Archive/Files/Codebooks/RCMSCY10_CB.asp.
7. For county-level average family income data, see <http://www.census.gov/support/USACdataDownloads.html#INC> (file = IPE01).

8. Institutional Shareholder Services (ISS, formerly Risk Metrics) database provides data on board members of S&P1500 companies and shareholder proposal starting from 1996.
9. We use data item ADDZIP in COMPUSTAT and US Department of Labor documents, which link zip code with individual counties (http://www.dol.gov/owcp/regs/feeschedule/fee/fee11/fs11_gpci_by_msa-ZIP.pdf).
10. Note that we are choosing to denote chi-square by writing it out as χ^2 instead of the typical Greek sign because in MS Word, as we save the file the Greek sign changes to square.
11. The authors would like to thank the anonymous reviewer for these suggestions.

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Variables	Definitions
INCEN	A dummy variable on the existence of diversity goal in the executive incentive system, coded as 1 if a firm has diversity goal in the executive incentive system and 0 otherwise. We hand-collect the data based on the related paragraphs of the disclosure in proxy statement (DEF 14A) and 10K to determine whether the firm has used the performance goal in its senior executives' incentive compensation system
PERF	Firm's diversity performance. We use six different diversity-related performance measures as follows: a dummy variable for the existence of female CEO (WCEO), coded as 1 if there is a female CEO and 0 otherwise; a dummy variable for the existence of female CFO (WCFO), coded as 1 if there exists a female CFO and 0 otherwise; percentage of women executives (WEXE) who are not CEO or CFO in the top 10 salary and bonus rank; percentage of female directors (PWDIR); percentage of ethnic minority directors (PMDIR); and diversity ratings provided by the ISS (formerly risk metrics)
DIV_CSR	Diversity ratings provided by the ISS (formerly risk metrics) to measure a firm's diversity effort
PWDIR	Percentage of woman directors on board
PWDIR	Percentage of minority directors on board
WCEO	A dummy variable on woman CEO, coded as 1 if a firm has a woman CEO and 0 otherwise
WCFO	A dummy variable on woman CFO, coded as 1 if a firm has a woman CFO and 0 otherwise
WEXE	Percentage of woman executives (other than CEO or CFO) among the top 10 highest compensation (based on salary and bonus) executives of the firm
MAINL	Percentage of Mainline Protestant adherents in a county where a firm is headquartered; we collect the county-level religion data from the US religion census of religious congregations and membership study, 2000 and 2010, the two surveys which encompass our period of study. We average the percentage of the religious adherents in these two surveys
EVAN	Percentage of Evangelical Protestant adherents in a county where a firm is headquartered
CATH	Percentage of Catholic adherents in a county where a firm is headquartered
REPUB	Percentage of voters voted for republicans in a county where a firm is headquartered; to measure political affiliation, we use the US presidential election surveys of 2000, 2004 and 2008 (county level). We average the percentage of votes supporting the Republican Party in these years
AFINC	Log 10 base of average family income in a county where a firm is headquartered
BSIZE	Variable on board size, measured by the number of members on board
INDDIR	A measure of board independence, calculated as the percentage of independent directors
ROA	Return on assets
FSIZE	Firm size measured by the log 10 base of total assets
MB	Firm's market to book ratio
TCOMP	Executive compensations. We use three alternative measures – CFO compensation, CFO compensation and other executive compensation – calculated as total compensation (log10 base transformed) paid to CEO, CFO and other senior executives
WOMEN	A binary dummy variable on gender, coded as 1 if the executive is female and 0 otherwise
PSM_Qi	A variable on the quartile rank of the firm's environment (both religion and political affiliation) based on propensity score matching (PSM)

Table A1.
Definition of variables

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