

# Workforce Diversity and Religiosity

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**Abstract** Workforce diversity has received increasing amounts of attention from academics and practitioners alike. In this article, we examine the empirical association between a firm's workforce diversity (hereafter, diversity) and the degree of religiosity of the firm's management by investigating their unidirectional and endogenous effects. Employing a large and extensive U.S. sample of firms from the years 1991–2010, we find a positive association between a measure of the firm's commitment to diversity and the religiosity of the firm's management after controlling for various firm characteristics. In addition, after controlling for endogeneity with the dynamic panel generalized method of moment, we still find a positive association between the firm's diversity and management's religiosity. We interpret these results as supportive of the religious motivation explanation that views the firm as a human community and considers religion as a factor that influences managers to more positively embrace diversity. Our results, however, provide no support for the resource-constraint hypothesis that views the firm as a nexus of contracts and sees managers as aiming to maximize shareholder returns under resource constraints that force them to invest only in projects that have a positive net

present value (NPV) and reject diversity initiatives since these do not have a positive NPV.

**Keywords** Workforce diversity · Religiosity · Religious motivation hypothesis · Resource-constraint explanation

## Introduction

Management interest in diversity initiatives—initiatives that support the fuller integration into the firm of women, persons with disabilities, racial and ethnic minorities, and other minorities<sup>1</sup>—has grown significantly over the last several decades. About 95 % of Fortune 1000 companies, for example, have implemented diversity management and diversity training programs (Chavez and Weisinger 2008) and it has been estimated that companies spend over eight billion dollars a year on such programs (Hansen 2003). Corporate spending on diversity has generally been justified on the basis of what has been called the “business case” for diversity which holds that diversity has significant business advantages such as increased productivity or increased creativity and innovation (Finkelstein and Hambrick 1996). Yet more than four decades of research has failed to provide conclusive evidence that diversity generally delivers the advantages attributed to it (Noon 2007), nor has it produced conclusive evidence that diversity training or diversity management programs are effective (Kalev et al. 2006; Christian et al. 2006). Why, then, have company managements continued to invest in diversity programs?

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<sup>1</sup> This kind of diversity is generally called “demographic” diversity, a term we define below.

A substantial body of recent research in finance has shown that religion influences managerial decision-making (Hilary and Hui 2009; Dyreng et al. 2010; El Ghoul et al. 2012; McGuire et al. 2012a, b; Omer et al. 2013). This nexus between religiosity and managerial decision-making raises the possibility that corporate decisions in support of diversity may be related to or influenced by the religious commitments of a firm's management. Because the extant research has found that corporate decision-making is influenced by religion, we believe that if we examine the association between religiosity and diversity, we may gain valuable insights regarding the possible influences underlying corporate decisions to invest in diversity initiatives. Moreover, because the literature on corporate social responsibility (CSR) takes diversity initiatives as part of a company's CSR policies (Velasquez 2012), understanding the role religion plays in a company's commitment to diversity initiatives will also shed light on its role in the company's CSR stance.

While religiosity and diversity are both widely researched constructs and numerous studies have examined the influence of each on the workplace (at both the group and organization levels), the same cannot be said about research on the association between the religiosity of a firm's managers and their workforce diversity policies. Gibson (2005), for example, found a rising trend in the extent to which religious Americans want to have their religion become an integral part of all areas of their lives, including their work lives. Kutcher et al. (2010) found that religiosity can affect employee attitudes and behaviors including their organizational commitment, job satisfaction, job stress, and burnout. Dezso and Ross (2012) studied female representation in top management teams and found that such gender diversity improves firm performance but only when the firm's strategy is focused on innovation. O'Reilly et al. (1989) showed that age diversity on teams reduced team cohesion and so reduced team performance. Larkey (1996) found that racial diversity reduced communication among a team's members and Tsui et al. (1992) found that it reduced the commitment of majority members. While religiosity and diversity have each been studied intensively, we have found no studies that examine the relation between religiosity and corporate decisions related to diversity; to the best of our knowledge we are the first to examine this relationship.

In this paper, we examine the association between corporate decisions supporting firm-level workforce diversity and the religiosity of the top managers that administer the firm. To analyze this association, we investigate the religiosity of the population of the geographical region in which the firm's headquarters is located and within which its top management also resides, and inquire whether there

exists an association between this measure of religiosity<sup>2</sup> and the firm's diversity decisions, specifically regarding the inclusion of women, minorities, and the disabled, in the firm's ranks.

To perform these tasks, we develop two relevant, but competing explanations regarding the influence of religiosity on diversity. The first hypothesis we label the religious morality hypothesis. This hypothesis is based in part on the moral teachings that the dominant American religions have proposed concerning diversity, and on the link between religious morality and behavior (Geyer and Baumeister 2005; Vitell et al. 2009). The major U.S. religious denominations (which are predominantly Protestant and Catholic) have converged on the view that Christians have a moral obligation to embrace diversity (Ellingsen 1993). Since the research on religious moral beliefs shows that such beliefs influence the behavior of church members, we formulate the hypothesis that the degree of religiosity of a firm's managers will be positively related to their support of diversity initiatives.

A second and competing explanation of the relation between religion and diversity is one we call the resource-constraint hypothesis. This second hypothesis, which is based on agency theory (Jensen and Meckling 1976), suggests that the manager's sole aim should be to maximize shareholder value. That is, the manager has a fiduciary obligation to choose only those projects that have a positive net present value (NPV) and so maximize shareholder value (Friedman 1970). In addition, because the manager has a short-term outlook, the manager will reject any projects that do not have a positive NPV over the short term (Bolton et al. 2006). Since diversity programs generally do not have a positive NPV over the short term, the manager will not choose to invest in diversity programs. Thus, the resource-constraint hypothesis will predict a non-positive association between a firm's diversity policy and the religiosity of its managers.

The remainder of the paper is organized as follows. "Literature review and hypotheses development" section briefly describes the literature review and hypothesis development. We then discuss the sample and measurement of diversity and religiosity as well as our research design in "Data, measurement, and research design" section. "Discussion" section presents the empirical results. The final sections summarize the limitation of this study followed by our conclusions.

<sup>2</sup> We define religiosity, following McDaniel and Burnett (1990), as a belief in God accompanied by a commitment to follow principles believed to be set by God. Also following McDaniel and Burnett we measure religiosity in behavioral terms as frequency of church attendance.

## Literature Review and Hypotheses Development

### Diversity

Interest in workplace diversity has grown significantly not only among practitioners, as we noted above, but also among academic researchers. In his study of the growth of interest in diversity among academics, Oswick (2011) reports that the number of research articles on diversity indexed by the Social Science Citation Index grew from about 50 articles in 1990 to almost 500 by 2008.

Studies of diversity in the workplace fall into two broad categories: “social” or “demographic” diversity and “functional” or “task-related” diversity (Christian et al. 2006; Simons and Rowland 2011). Although definitions of diversity are themselves diverse, here we can adopt the definition of Harrison and Klein (2007, p. 1200) who provide a general definition of diversity as “the distribution of differences among the members of a unit with respect to a common attribute, X, such as tenure, ethnicity, conscientiousness, task attitude, or pay.” Studies of social or demographic diversity look at diversity with respect to attributes that are not directly related to the performance of a task and that are relatively enduring (and, some would add, that are observable) such as race, gender, ethnicity, age, disability, and so on; studies of functional diversity look at diversity with respect to attributes that are related to the performance of a task such as knowledge, experience, skills, conscientiousness, education, and so on. Here we focus solely on demographic diversity and therefore set aside the copious research literature on functional or task-related diversity.

In practice, demographic diversity is considered to be a kind of inclusivity that can go beyond the groups that are legally protected in equal opportunity statutes. Firms may choose from a spectrum of responses to implement their commitment to diversity (Cole and Salimath 2012). At the low end of the diversity spectrum, a firm may simply comply with its minimal legal obligations as required by civil rights legislation and rely on affirmative action and equal employment opportunity initiatives to ensure it embraces a suitable representation of genders, religions, ages, and racial and ethnic minorities within its ranks. As the firm’s goal shifts, however, from compliance to awareness and acceptance of the potential value of a diverse workforce, the firm may engage in diversity training programs and attempt to exploit the variety of perspectives and knowledge that diversity is said to provide (Valentine and Page 2006). Eventually, firms that move to the high-end of the spectrum of commitment to diversity go beyond compliance or acceptance and begin to voluntarily incorporate diversity as a key component in the firm’s strategy and mission formulation (Cole and Salimath 2012).

For the purpose of this study, we will count an organization as having a commitment to diversity so long as it undertakes initiatives that are at least at the low end of this diversity spectrum.

The histories of IBM and Coca-Cola Company are illustrative of companies at various positions on this spectrum of commitment to diversity. IBM, for example, is a company positioned around the middle level of the diversity spectrum. IBM has had a long-standing commitment to equal opportunity and in 1953 it produced its first Equal Opportunity Policy calling for equal opportunity in hiring “Regardless of race, color, or creed” (IBM 2013). Today all of its employee practices including hiring, promotion, compensation, and the design and administration of its benefit plans are conducted without regard to race, color, religion, gender, gender identity or expression, sexual orientation, national origin, genetic profile, disability, or age (2010 IBM corporate responsibility report). This thorough commitment to equal opportunity enabled IBM to comply with all applicable civil rights laws and would have positioned it as an exemplary company at the basic or low end of the diversity spectrum. But in 1995 IBM established eight “Executive Task Forces”—Asian, Black, Hispanic, Lesbian/Gay/Bisexual/Transgender, Men, native American, People with Disabilities, and Women—and charged each with answering the question, “What is required for your group to feel welcomed and valued at IBM?” Based on the work of these task forces, IBM developed numerous “Diversity Network Groups” charged with mentoring and coaching employees and adopted as one of its basic “Principles,” the imperative that “Each of us must take responsibility to explore, understand and reflect differences in culture, customs, time of day, holidays, language, business requirements, the personal needs of stakeholders, and the impact of our decisions on business dealings” (IBM 2013, p. 5). These initiatives moved the company to the “next generation of diversity ... beyond hiring practices and protection for our employee constituents” to a new level of commitment to diversity, one aimed at creating “an innovative, integrated whole through inclusion,” and one where the company sees “the diversity of cultures, people, thoughts and ideas as an imperative to successfully delivering innovative, superior technologies to the marketplace” (IBM 2013, p. 3). The company had now positioned itself at a higher, middle level of the diversity spectrum, the level at which a company moves beyond compliance, recognizes the potential value of diversity, and tries to use diversity to encourage innovation and an understanding of its marketplace.

Coca-Cola Company took a different path on its diversity journey. During the 1990s, the company publicly asserted that it was committed to diversity and fairness in all aspects of its business. But contrary to the company’s

public statements, a lawsuit filed against the company by its black employees in 1999 provided statistics indicating that the median salary for black employees was one-third less than that of white employees and that company policies kept blacks clustered at the bottom of the company and unable to advance to senior management levels. Earlier, the company's few black executives had reported being "humiliated, ignored, overlooked, or unacknowledged" while other minority workers described an environment so hostile that they fell victim to a variety of stress-related illnesses (Winter 2000). If these accusations are true, then Coca-Cola Company had perhaps not attained even a low-end position on the diversity spectrum. In November 2000, however, the Coca-Cola Company settled what had become the largest racial-discrimination lawsuit in history. In the wake of the \$192.5 million settlement, the federal court appointed a seven-member task force to oversee the company's diversity efforts. Coca-Cola's then CEO Neville Isdell (2008) later explained how, with the task force's guidance, Coca-Cola worked to establish a new culture that embraced diversity with measurable programs and initiatives designed to recruit, mentor, and retain minorities and women. Coca-Cola experienced double-digit leaps in the percentage of women and minorities holding management and executive positions. Moreover, Isdell asserted, Coca-Cola began to leverage the insights of its diverse workforce to reap business benefits. The company not only launched the kind of diversity education and training programs that are characteristic of companies in the middle levels of the diversity spectrum, it went on to make diversity part of its global mission and its self-identity. Diversity, the company states "is an integral part of who we are, how we operate and how we see the future" (Coca-Cola Journey<sup>TM</sup>). Diversity became one of the company's core values and a strategic means of developing the "ability to understand, embrace and operate in a multicultural world" (Coca-Cola Journey<sup>TM</sup>). In 2004, Luke Visconti, a co-founder of Diversity Inc., which rates companies on their diversity efforts, stated "...because of this settlement decree, Coca-Cola was forced to put in place management practices that have put the company in the top 10 for diversity" (Shin 2004). The company had thus been forced to jump from the low end of the diversity spectrum, to the high end where companies make diversity part of their strategy and mission and see diversity as key to their success.

In fact, much of the research on demographic diversity has focused on the "business case" in support of diversity, which suggests that diversity generally improves performance, both at the group and the organizational level. The "business case" for diversity is generally cited as the basic reason why firms invest (and should invest) in initiatives designed to increase the demographic diversity of the firm (Cox 2001; Hansen 2003; Hubbard 2004; Page 2007;

Herring 2009). Studies of demographic diversity at the organizational level, however, have not consistently supported the business case for diversity. Some studies, to be sure, have concluded that demographic diversity is positively associated with improved performance at the organizational level, but others have found a negative association, and others yet have found no association at all. Herring (2009), for example, found that workplace diversity is positively associated with larger revenues, larger market share, and higher profits, while Armstrong et al. (2010) found diversity was associated with increased labor productivity, increased workforce innovation, and decreased employee turnover. Carter et al. (2003) concluded that increases in the proportion of women or racial minorities on a firm's board of directors are associated with higher firm value. But Roberson and Park (2007) found that "firm performance declines with increases in the representation of racial minorities in leadership up to a point, beyond which further increases in diversity are associated with increases in performance" (p. 548). Richard (2000) found no general association between racial diversity and firm performance, although at those firms that adopted a growth strategy racial diversity improved employee productivity, return on equity, and market performance while at those firms that adopted a no-growth strategy racial diversity was associated with lower employee productivity, lower return on equity, and lower market performance. Richard et al. (2003) likewise found that racial diversity had no general effect on a firm's financial performance (as measured by return on equity), but at those firms that adopted an innovation strategy racial diversity was associated with higher financial performance while at those firms that did not pursue an innovation strategy racial diversity was associated with lower financial performance. And Sacco and Schmitt (2005) found that an organization's racial diversity was negatively associated with its profitability and positively associated with higher turnover rates. Reviewing the conflicting findings in the literature, Kochan et al. (2003) concluded that there is little evidence that demographic diversity at the organizational level will generally or consistently result in higher productivity or better financial performance.

Studies of the relationship between demographic diversity and performance at the group level have also been inconclusive. Some have hypothesized that demographic diversity will produce cognitive diversity, which in turn will improve performance on cognitive tasks that involve creativity, decision-making, and problem solving (McLeod et al. 1996; Richard 2000; Page 2007); others have hypothesized, however, that demographic diversity will produce conflict and impede communication and that such effects will in turn reduce group performance (Chatman 1991). While Murnighan and Conlon (1991) found that demographic diversity

lowered performance on cognitive tasks, Bantel and Jackson (1989) found that it improved performance, and Watson et al. (1993) found that it initially lowered and then subsequently improved performance. Some studies have shown that demographically diverse groups outperform homogeneous groups (Cox et al. 1991), while the results of other studies indicate that demographic diversity has a negative effect on group processes (Konrad et al. 1992; Tsui et al. 1992). O'Reilly et al. (1989), Jackson et al. (1991) and Wiersema and Bird (1993) found that age diversity increased turnover, while Tsui et al. (1992) showed that as gender diversity increased, white male turnover also increased. Pelled et al. (1999) found that racial diversity increased emotional conflict on teams, while age diversity did not. Jehn et al. (1999) showed that age and gender diversity increases relationship conflict in a group yet, paradoxically, it improves the morale of the group. In their respective reviews of the research on diversity and performance, Williams and O'Reilly (1998), Webber and Donahue (2001) and Jackson et al. (2003) concluded that findings on diversity at the group level were mixed and showed no consistent effects on group performance.

Almost four decades of research, then, have failed to provide conclusive evidence to confirm the claim that demographic diversity generally improves performance, a claim that is widely proposed as the reason why businesses should and do invest in diversity initiatives. But if diversity cannot be linked to any general improvement in performance, why have businesses continued to invest in diversity? In the next section, we turn to consider the possibility that business investments in diversity are explainable, at least in part, by religion, a non-economic factor that to this point has been overlooked by the research on workplace diversity.

### Religiosity

Since Max Weber's work on the *Protestant Ethic* (2009 [1904]) numerous studies have examined the question whether religion influences human behavior (Iannaccone 1998; Stulz and Williamson 2003; Kumar et al. 2011). Leege and Kellstedt (1993), Jelen (1998), and Fastnow et al. (1999) have shown that religion has a strong influence on political behaviors such as voting. Jeynes (2003) and Barkan (2006) found that religion affects people's attitudes toward extramarital childbirth as well as decisions to engage in or abstain from premarital intercourse. Grasmick et al. (1991), Patee et al. (1994), and Stack and Kposowa (2006) found that religiosity is inversely associated with the likelihood that adult individuals will engage in tax fraud. Agnew (1998) and Baier and Wright (2001) demonstrated that religiosity is also inversely associated with the likelihood that a person will engage in deviant

behaviors. Cochran and Akers (1989) found that religion is likewise inversely related to juvenile delinquency. Although some early studies questioned this inverse association (Hirschi and Stark 1969), more recent research has reconfirmed it (Albrecht et al. 1977; Sloane and Potvin 1986; Donahue and Benson 1995; Chadwick et al. 2010).

Several studies have suggested that the presence of religion also influences corporate decision-making (Nash 1994; Hilary and Hui 2009; Dyreng et al. 2010; El Ghouli et al. 2012; McGuire et al. 2012a, b; Omer et al. 2013). Nash (1994), for example, states that in her interviews of "evangelical CEOs," those executives that evidenced a commitment to religion indicated that their religious commitment "guided" their decisions.

A number of researchers have argued that religion influences behavior through the moral values that it imparts to the religious person and the subsequent expression of those values in the person's behavior. Huffman (1988) suggests, for example, that religiosity is a stronger determinant of the individual's values than any other predictor. Similarly, Walker and Pitts (1998) suggest that a very religious person will be one that embodies the traits of a moral person, while Hunt and Vitell (1986, 1993) argue that those who are more religious can be expected to be more ethical in terms of their beliefs. McCabe and Trevino (1993) suggested that the fear of God's punishment, in particular, will motivate the seriously religious individual to adhere to "virtue and morality" and Shariff and Norenzayan (2007) found evidence that confirmed their suggestion. In addition, Weaver and Agle (2002) suggest that since religiosity is known to have an influence both on human attitudes and behavior, that influence may be exerted by the religious self-identity that is formed by the internalization of the beliefs and role expectations offered by religion. Geyer and Baumeister (2005) assert that religious beliefs can supply those who hold such beliefs with the "motivations, hope, and comfort that can allow them to maintain virtuous behavior," even when doing so may be difficult. Rohrbaugh and Jessor (1975) claim that religiosity directly and positively influences self-control, which in turn can facilitate moral behavior. In a similar vein, Welch et al. (2006) claim that those individuals higher in religiosity tend to exhibit a higher level of self-control and are less likely to engage in unethical behavior. Geyer and Baumeister (2005) point out that "Religion has strong ties to morality in that religions prescribe morality... Further, many religious persons believe that religion is the source of morality." Consistent with these arguments, Kennedy and Lawton (1998) found a negative relationship between religiosity and a willingness to behave *unethically*.

If it is true that religion influences managerial decisions and that this influence is exerted through the moral beliefs that religion imparts to its adherents, then religious views

about the moral obligations managers have should influence the decisions they make. In particular, the nexus between religiosity and decision-making leads us to ask whether religious views about a person's moral obligations influence managers' decisions regarding workplace diversity. To examine that topic we must look at what religion teaches about the moral obligations people have with respect to the issue of diversity.

### Religiosity and Diversity

According to Gallup polls conducted during 2011, the majority, 82.5 %, of all Americans say they are members of a religion, 78 % identify themselves as Christians, and 4.5 % say they belong to a non-Christian religion, such as Judaism (1.6 %), Islam (0.5 %) or other non-Christian religion (2.4 %) (Newport 2011). These figures imply that a surprising 95 % of those Americans who belong to a religion self-identify as Christians. An earlier survey, the 2008 *American Religious Identification Survey* (ARIS), on which the Bureau of the Census relies for its own estimates of U.S. religious demographics, found that of those American adults who self-identify as Christian, 33 % are Catholic, and the other 67 % are members of Protestant<sup>3</sup> denominations including Baptist (20.8 %), Methodist (6.5 %), Lutheran (5 %), Presbyterian (2.8 %), Mormon (1.8 %), Episcopal (1.4 %), Church of Christ (1.2 %), Evangelical (1.2 %), Jehovah's Witness (1.2 %), Assemblies of God (0.6 %), Seventh Day Adventist (0.6 %), United Church of Christ (0.4 %), and "Unspecified" Christian (9.5 %) or "Unspecified" Pentecostal (3.2 %) denominations (Kosmin and Keysar 2009). These figures are substantially the same as those found by the annual *General Social Survey* (Smith et al. 2012) and the *Portraits of American Life Study* (Emerson and Sikkink 2006). Thus, although the great majority of religious Americans identify as being Christian, the Christian denominations themselves are fairly diverse.

But while the Christian denominations differ in important ways, they share a common set of moral beliefs about diversity that are significant for our study (ILO 2012, pp. 45–46). Two beliefs shared by all the Christian denominations are, first, that all people share an equal human dignity that all must respect and, second, that when people come together they form communities in which

each has mutual obligations toward the others (Zinbarg 2001; Melé 2003, 2009, 2012a, b; Wilburn 2005). Melé (2012b), for example, points out that within the Christian view, particularly as expressed within Catholic social teaching, a business is a community of persons in which each possess a human dignity that all must respect. This view implies, he argues, that workers have the right to equal opportunity and that managers have a moral obligation to show equal respect to all members of the community and to avoid unjust discrimination.

The view that Mele articulates is clearly present in the "social encyclicals" (pastoral letters on social issues addressed to the entire Church) that Catholic popes began to promulgate in the nineteenth century<sup>4</sup> and have continued promulgating to the present time (Thompson 2010; Finn 2012). The 1991 Encyclical, *The Hundredth Anniversary*, written by Pope John Paul II, for example, affirms that "God imprinted his own image and likeness on man, conferring upon him an incomparable dignity," that "deserves respect" and that is the basis of "rights that no one may violate," particularly "by going against the minority"; moreover "a business... is a 'society of persons' in which people participate in different ways and with specific responsibilities" toward each other (John Paul II 1991, sections 11, 13, 22, 43, and 44). In a statement delivered in 1984 to the United Nations, John Paul II drew out the implications of this view: Because of "man's creation by God 'in his own image'" he wrote, "every form of discrimination based on race... is absolutely unacceptable." (John Paul II 1984). Earlier, the Second Vatican Council (a Church Council is a global meeting of bishops who together constitute the Church's highest teaching authority) had similarly stated that since all people "are created in God's image... there is here a basic equality between all men" and so "discrimination in basic personal rights on the grounds of sex, race, color, social conditions, language or religion, must be curbed and eradicated as incompatible with God's design" (Vatican Council II 1965, section 29). These themes were reiterated in *Brothers and Sisters to Us*, a 1979 pastoral letter of the American bishops addressed to U.S. Catholics that condemned "every form of discrimination... whether because of race, ethnicity, religion, gender, economic status, or national or cultural origin" and affirmed "the value of fostering greater diversity of racial and minority" groups within the Church as well as in "the private sector." Catholic social

<sup>3</sup> The exact origin of the term *Protestant* is unsure, and may come either from French *protestant* or German *Protestant* (Online etymology dictionary 2012). However, it is certain that both languages derived their word from the Latin: *protestantem*, meaning "one who publicly declares/protests", which refers to the letter of protestation by Lutheran princes against the decision of the Diet of Speyer in 1529, which reaffirmed the edict of the Diet of Worms in 1521, banning Martin Luther's 95 theses of protest against some beliefs and practices of the early 16th century Catholic Church..

<sup>4</sup> Popes were writing encyclicals long before the nineteenth century, of course, but the first encyclical to explicitly address social issues was the 1891 encyclical *The Condition of Labor*. Other sources of Catholic Social Teachings besides the encyclicals include the teachings of Church Councils such as the Second Vatican Council, the addresses of the popes, and official publications and summaries such as the *Compendium of the Social Doctrine of the Church*.

teaching, then, sees the pursuit of diversity as a moral responsibility of all Christians.

The teachings of the Protestant denominations concerning diversity are not only similar to each other, but are also quite similar to those found in Catholic social teaching (ILO 2012; Peccoud 2004). As Zinbarg (2001, p. 122) points out, the Protestant denominations likewise tend to see “the workplace as a close-knit community” and affirm that since every person was “created in the image of God” each has an equal “dignity” that all must respect. The various Protestant denominations, however, do not recognize any institution that, like the papacy, has the authority to issue statements on social issues that denominational members should accept. Nevertheless, the various Protestant churches have issued statements on moral and social issues that they recommend to their members, and a representative picture of their teachings on diversity can be drawn from these statements (Ellingsen 1993).

For example, the Evangelical Lutheran Church in America (formed in 1988 by the unification of the American Lutheran Church, the Association of Evangelical Lutheran churches, and the Lutheran Church in America) during its 1993 Churchwide Assembly adopted a “Social Statement” declaring that the Church had “committed” itself “to welcome cultural diversity” and took “delight” in the fact that people “have such diversity.” The statement went on to declare that “racism... is sin, a violation of God’s intention for humanity” and that “racial, ethnic, or cultural barriers deny the truth that all people are God’s creatures and, therefore, persons of dignity” (Evangelical Lutheran Church in America 1993). The United Methodist Church’s top legislative body, the General Conference—the only entity that can speak for the United Methodist Church—adopted in 1980, and readopted in 2000 and 2008, a resolution that asserted “all women and men are made in God’s image and all persons are equally valuable in the sight of God”; moreover, the resolution adds, the Church must aim at becoming an “inclusive” community, i.e., one that embraces “racial and cultural diversity.” The United Church of Christ (formed in 1957 from the unification of the Evangelical and Reformed Church and the Congregational Christian Churches) from the time of its second General Synod in 1959, has advocated “the end of racial segregation and discrimination in our communities—in church life, in housing, in employment, in education, in public accommodations and services” (Freeman 2001); at its nineteenth General Synod in 1993 the United Church of Christ committed itself to become a “multiracial and multicultural church” that celebrates “its racial and ethnic diversity.” The Presbyterian Church (U.S.A.), which was established in 1983 through the merger of the Presbyterian Church in the United States and the United Presbyterian Church in the United States of America, expressed its

fundamental teachings in the *Confession of 1967* which declares that “God has created the peoples of the earth to be one universal family” and He “overcomes the barriers between sisters and brothers and breaks down every form of discrimination based on racial or ethnic differences” (Presbyterian Church (USA) 1967, 9.44). Elaborating on these themes in its 1999 policy statement “Facing Racism: In Search of the Beloved Community,” the Presbyterian Church (USA) pledged “to embrace racial and cultural diversity” and celebrate “diversity and inclusiveness as God’s purpose for the human family” (Presbyterian Church (USA) 1999). The Southern Baptist Convention, the largest Protestant denomination in the United States, in 1995, adopted a “Resolution on Racial Reconciliation” confessing that many “Southern Baptist forbears... participated in, supported, or acquiesced in the particularly inhumane nature of American slavery” and “in later years Southern Baptists failed, in many cases, to support, and in some cases opposed, legitimate initiatives to secure the civil rights of African Americans”, acknowledging that “every human life is sacred, and is of equal and immeasurable worth, made in God’s image, regardless of race or ethnicity” the Baptist Convention asked forgiveness and resolved to work to “eradicate racism in all its forms” (Southern Baptist Convention 1995).

These and many other similar declarations show that in spite of their differences, the teachings of the Protestant denominations converge on an almost identical set of ideas regarding diversity (Ellingsen 1993; Zinbarg 2001; Peccoud 2004; ILO 2012). First, they uniformly hold that since all people were created in the image of God, all men, and women of any race or color are equal. Second, they affirm that discriminating on the basis of race, ethnicity, or gender is wrong and that Christians should support a diversity that embraces women and all ethnic and racial minorities. And third, they indicate that all must work to change the organizations and social structures that continue to embody discrimination. Thus, a remarkable homogeneity exists among the Christian churches of the U.S. with respect to their teachings on diversity.

However, one aspect of diversity on which the U.S. Christian denominations have not agreed is the extent to which diversity initiatives should be extended to include homosexual men and women. While some denominations such as the United Church of Christ have issued certain statements supporting equal rights for gay and lesbian persons, others such as the Roman Catholic Church, the Southern Baptist Convention, the Lutheran church-Missouri Synod, and the United Methodist Church condemn all same-sex sexual activity as sinful, and others, such as the Anglican church and the United Church of Christ still remain split on the matter. While the Christian denominations in the U.S. have all embraced a diversity that is

inclusive of differences of gender, race, and ethnicity, they have disagreed on whether diversity initiatives should include gays and lesbians.

The idea that the Christian denominations in the U.S. have embraced a commitment to diversity seems, however, to be contradicted by several studies that have found a positive link between religiosity and racial prejudice, particularly among white Christians. Batson et al. (1993), for example, examined 47 different studies published between 1940 and 1990 and found that 37 of them showed a positive relation between religiosity and prejudice. However, this apparent link between being religious and being racially prejudiced has been found to be moderated by whether a person's religious commitment is "extrinsic" or "intrinsic"—two constructs originally developed by Gordon W. Allport (Hunt and King 1971). Allport and Ross (1967) characterized a person's religiosity as "extrinsic" when the person "uses his religion" as a means toward other ends such as social gains, and they characterized a person's religiosity as "intrinsic" when the person is "motivated" to embrace religion for itself. Starting with the study of Allport and Ross (1967), Batson et al. (1993) examined 32 studies of the relation between religiosity and prejudice that took the extrinsic and intrinsic constructs into account, and reported that all but two of them found that those whose religiosity was extrinsic were relatively highly prejudiced, while those whose religiosity was intrinsic were relatively low in prejudice. Twenty-three of the studies they examined measured intrinsic versus extrinsic by whether a person was involved in religious activities, such as church attendance, to a high or low degree, suggesting that the greater a person's participation in religious activities such as church attendance, the less likely it is that the person will be racially prejudiced. Finally, Batson et al. (1993) reviewed six additional studies that looked at whether an intrinsically religious person's lack of prejudice against a specific group was related to whether that person's religion proscribed prejudice against that group, and they concluded that these studies showed that "to the degree that people value their religion intrinsically they are more likely to report being tolerant of those their religious community tells them they should tolerate" (1993, p. 323).

The research on religiosity and prejudice, then, suggests that intrinsic religiosity as exhibited by a higher level of participation in religious activities such as church attendance, is associated with a lack of prejudice. And, in particular, it is associated with a lack of prejudice against those specific groups that religion teaches one should not be prejudiced against. The research on religiosity and prejudice, then, is consistent with the claim that the teachings of the Christian denominations proscribing prejudice and discrimination against women or racial and ethnic minorities, are likely to influence the behavior of the members of those

denominations depending on their level of participation in church activities such as church attendance.<sup>5</sup>

It may be helpful to briefly summarize the discussion thus far. We have seen that the research on religiosity has shown that religiosity influences the attitudes and behaviors of its adherents. In particular, religious moral beliefs influence the attitudes and behaviors of those who adhere to those religious beliefs. We then saw that the dominant U.S. religions uniformly teach that people have a moral obligation to support diversity. This suggests that the religiosity of individuals—including the top managers of business firms—should lead them to support diversity, and the greater their religiosity, the greater their support of diversity. How are we to measure the religiosity of the top managers of a firm? Previous studies have measured the religiosity of managers by using (as a proxy) the religiosity of the area in which they reside (Hilary and Hui 2009; Dyreng et al. 2010; Grullon et al. 2010; El Ghouli et al. 2012). As we explain more fully below, we will use this method of estimating the religiosity of a firm's top managers. If we assume that the top managers of a firm reside in the area in which the firm's headquarters is located, our discussion leads us to suggest that if a firm is headquartered in an area of higher religiosity, its top managers will exhibit a higher level of religiosity and so greater support for diversity; if the firm is headquartered in an area of lower religiosity, its top managers will exhibit lower levels of religiosity and so lower support for diversity.

There is a second set of considerations that also suggests that the religiosity of an area should lead the top managers of a firm to support diversity initiatives. In addition to the psychological studies that have examined the influence that a person's own religious beliefs have on his or her behavior, a series of sociological studies on "moral communities" have found that the religiosity of a surrounding community "is a potent generator of conformity" for members of that community (Welch et al. 1991, p. 159; see also Cochran and Akers 1989; Sloane and Potvin 1986; Stark 1996). These studies imply that communities with a high level of religiosity promote conformity to their religious morality and their morality thereby exerts a significant influence on the behavior of members of that community (Stark et al. 1980,

<sup>5</sup> Another issue that may seem to clash with the idea that the Christian denominations in the U.S. are supportive of diversity is the fact that most U.S. congregations today are racially segregated. However, although congregations remain segregated, during the last two decades they have made substantial efforts to integrate themselves, particularly through the "reconciliation" movements the churches launched during the 1990s. The reasons why they remain segregated in spite of the efforts both white and black congregations have made to integrate their memberships are not completely clear. However, we note here that our claim is that the Christian denominations have supported diversity in business organizations, even if they have failed to make their own organizations more diverse.

1982; Pescosolido 1990; Regnerus 2003). These studies have tended to operationalize the construct of a “community” in terms of a geographical region, and several have measured a region’s religiosity in terms of the proportion of religious adherents residing in that region (for example, Stack and Kposowa 2006). Some of these studies have shown that the religiosity of the population of a city, for example, influences the attitudes or behaviors of the residents of that city (Stark et al. 1980, 1982; Ellison et al. 1997); some have shown that the religiosity of the population of a county influences the attitudes or behaviors of that county’s residents (Pescosolido 1990; Regnerus 2003); and some have shown that the religiosity of the population of a nation influences the attitudes or behaviors of its citizens (Stack and Kposowa 2006). A person’s religious context is significant, then, because his or her behaviors and attitudes will be influenced by the religiosity of the people of the region within which he or she resides (Greeley et al. 1981; Wald et al. 1988; Leege and Welch 1989; Ellison et al. 1997). As we have already seen, the dominant U.S. religions teach that people have a moral responsibility to support diversity. Consequently, if we assume, again, that the top managers of a firm reside in the area (e.g., the county) in which the firm is headquartered, then the research on moral communities suggests that the greater the religiosity of the population of that area, the greater the pressures on managers to support the diversity that U.S. religions uniformly prescribe.

Accordingly, we hypothesize that since the dominant religions in the United States uniformly embrace the view that all people have a moral responsibility to support diversity, and since religious morality influences the behaviors of people, both directly and through the community’s pressures to conform, the managers of firms headquartered in areas with higher religiosity will tend to evidence higher levels of commitment to diversity initiatives. We call this the “religious motivation hypothesis”:

**Hypothesis 1** Under the religious motivation hypothesis, the top managers of firms headquartered in areas with higher religiosity tend to support more diversity initiatives.

There is a competing and mutually exclusive explanation of the relation between religion and workplace diversity, namely the resource-constraint hypothesis, which is based on agency theory. Coase (1937), Ross (1973), and Jensen and Meckling (1976) developed agency theory which views the firm as a nexus of contracts and the manager as an agent contractually delegated by shareholders-principals to operate the firm in the best interests of shareholders by maximizing firm value and stock price. Most traditional economists and finance scholars have adopted the view of the firm as a nexus of contracts and the manager as an agent of shareholders dedicated to

maximizing shareholder wealth. Indeed, the agency theory view of the firm was originally developed for financial purposes. The work of Jensen and Meckling (1976), for example, was aimed at analyzing the major types of conflicts of interest between shareholders and management.

Managers and shareholders may differ, of course, in their evaluation of risk. In addition, managers may have a shorter time horizon (short-termism) (Cheng and Warfield 2005; Bolton et al. 2006) than shareholders and in their pursuit of promotion may aim at early returns and fast rewards even at the cost of shareholders’ long-term interests. Furthermore, although the objective of the firm is to maximize shareholders’ wealth under the standard shareholder wealth maximization (SWM) model, managers may use corporate resources to provide themselves with various management perquisites, i.e., superfluous executive jets, luxurious offices, first-class air travel, etc. Few scholars, however, believe that CEO perquisites represent an efficient way to monitor or influence executives. Recent studies show that the relation between management perks and short-run abnormal return is negative (Rajan and Wulf 2006; Yermack 2006; Grinstein et al. 2011). Grinstein et al. (2011), in particular, find that perks are positively related to CEO power and free cash flow, while negatively associated with a firm’s growth opportunities.

Obviously, there is a separation between ownership and control, and there is no reason to believe that if left on their own managers will necessarily act in the best interest of the shareholders. Consequently, shareholders will monitor managerial decisions to make sure that management makes every decision in a way that maximizes firm value and will put in place incentives that align managerial interests with those of shareholders. As managers are supposed to act for the best interests of shareholders, and they have a short-termism, they choose only positive NPV projects that maximize firm value and stock price over the short term, and often could not give enough attention to moral or religious concerns even if they wanted to. Because the firms’ financial resources are limited and any returns from implementing diversity programs usually have a longer time horizon, managers will not engage in diversity programs (Kacperczyk 2009).

Furthermore, even when a diversity program has quick returns, it will find itself competing with many other substitute projects that have similarly quick returns. Even religiously motivated projects could become competing substitutes for a diversity program in a highly religious community that might be willing to provide the firm with greater rewards for investing in a religious project. To the extent that several positive NPV projects, one or more religious projects, and perhaps several other CSR projects are all substitutes for a diversity program, they will be competing against each other for limited resources and it is

likely that the diversity program will only rarely win the contest. Thus, the resource-constraint hypothesis based on agency theory will predict the following;

**Hypothesis 2** Under the resource-constraint hypothesis, the top managers of firms headquartered in areas with higher religiosity, do not tend to engage in more diversity initiatives.

Hypothesis 2 is also in line with the view of some researchers, such as Kohlberg (1981), who claim that religiosity and morality are not related. Moreover, hypothesis 2 is also related to the view of CSR that was classically expressed by Milton Friedman (1970). Friedman advanced the view that the manager has a moral obligation to “maximize profits” for shareholders and advocated the adoption of incentives that would ensure that managers pursue this objective.

But which of our mutually exclusive hypotheses is correct? Because it is an empirical question whether hypothesis 1 or hypothesis 2 has greater validity, we turn next to examine the impact that religiosity has on corporate decisions regarding workforce diversity by using empirical data. We do this in the following sections.

## Data, Measurement, and Research Design

### Data and Measurements of Workforce Diversity

In order to test our hypotheses, we need to know the extent to which the managers of firms engage in diversity initiatives. To the best of our knowledge, there is no database that provides that kind of information about specific managers. However, the Kinder, Lydenberg, and Domini Stats (KLD) database provides information about the firm-level diversity initiatives of several thousand companies. We assume that these corporate initiatives are the outcomes of decisions made by the firm’s top management, and so interpret the KLD data on a firm’s diversity initiatives as data about the diversity decisions made by each company’s top managers. In this study, therefore, we use the data on diversity for a sample of firms in the KLD database taken from the period 1991 to 2010 to measure the extent to which the managers of those firms engage in diversity initiatives.

KLD’s database is intended for the use of investors who want to know the CSR record of the companies in which they invest. KLD rates each of the companies in its database in seven major “corporate social responsibility” categories including community relations, corporate governance, diversity initiatives, employee relations, environment, human rights, and products. In each of these CSR categories each company is given positive evaluations

for each of several possible “strengths” it possess in that category, and a negative evaluation for each of several possible “concerns” that the company’s activities raise within that category. Altogether (i.e., counting all seven social responsibility categories), the KLD rating criteria provide approximately 80 “strengths” and “concerns” ratings for each company in their database. Prior to 2001, KLD covered approximately 650 firms listed on the S&P 500 or Domini 400 Social Indexes and issued its reports in August of each year. However, starting in 2001 and 2002, the KLD ratings were assigned to approximately 1,100 (3,100) firms listed on the S&P 500, the Domini 400 Social Indexes, and the Russell 1,000 (Russell 2,000) Indexes and their reports were issued as of December 31st of each year.<sup>6</sup>

As with the other items in the KLD database, the diversity items are each evaluated by being assigned a binary (0 and 1) value for each strength and each concern. Since the number of measures varies across the years, we use an index to aggregate the individual activities. In Appendix, we show how KLD gives diversity ratings in eight specific criteria for strengths and three for concerns. The KLD diversity ratings are based on the firm’s inclusion of women and minorities in top management, directorships, and promotions, its adoption of policies regarding gay and lesbian employees and disabled employees, and other diversity strengths, as well as on certain diversity concerns, such as having been forced to pay substantial fines or civil penalties as a result of affirmative action controversies, having no women on its board of directors or in its top management, and being involved in any other significant diversity controversies. In this study, however, we set aside and do not use the KLD diversity rating concerning *Gay and Lesbian Policies*. We set this item aside because, as we noted earlier, the Christian denominations in the United States do not have a unified teaching on gay and lesbian issues.

We constructed a diversity index (DIV\_IDX) following the CSR index-making procedure of Jo and Harjoto (2011, 2012). For each category, we let  $D^{ijt}$  denote an indicator variable of diversity for firm  $i$  with strength  $j$  for year  $t$ ,  $D^{ikt}$  denotes an indicator variable of diversity for firm  $i$  with concern  $k$  for year  $t$ , and  $D^{it}$  and  $D^{kt}$  each denote the maximum number of KLD diversity strengths and concerns, respectively, in year  $t$  for any firm. The index  $D^{it}$  of each diversity category for firm-year observation  $i_t$  is

<sup>6</sup> Because KLD increased its sample size substantially by including the Russell 1000 in 2001 and the Russell 2000 in 2003, the results for the diversity measures in 2001 and 2003 may not be stable due to the large increase in the number of firms in the sample. As a robustness check, we have also excluded 2001 and 2003 from the sample. Overall, our untabulated results are robust to the exclusion of 2001 and 2003.

$$D^{it} = \frac{\sum_j D^{ijt} - \sum_k D^{ikt} + D^{kt}}{D^{it} + D^{kt}}$$

In short, our diversity index score (DIV\_IDX) is the ratio of the difference between the KLD diversity strengths minus the KLD diversity concern items plus the maximum number of KLD strengths (numerator) divided by the sum of the maximum number of KLD strengths and concerns (denominator). The reason why we add the maximum number of KLD strengths in the numerator is to avoid ending with a possible negative diversity scores. In addition, we use the net scores of diversity (DIV\_NET) calculated as the net scores of diversity strengths minus the diversity concern items, as an additional and independent diversity measure to later examine the robustness of our analysis.

### Measurement of Religiosity

Testing our hypotheses also requires that we know the religiosity of the areas in which the headquarters of the firms in the KLD database are located. To the best of our knowledge, there is no database that provides such information about the headquarters of the firms in the KLD database. However, the American Religion Data Archive (ARDA) provides data about the religiosity of the populations of each of the counties in the United States (as measured by the number of people who participate in church activities), and the COMPUSTAT database provides the location of each firm in the KLD database (as well as other financial variables for each firm). By putting these two databases together, we can determine the religiosity of the county in which each firm's headquarters is located. Moreover, assuming that the top management of a firm resides in the same county in which its headquarters is located, this will also tell us the religiosity of the area in which each firm's top managers reside.

We therefore construct our religiosity variable by using the ARDA dataset, as has been done by Hilary and Hui (2009), Dyreng et al. (2010), Grullon et al. (2010), and El Ghoul et al. (2012). The ARDA provides the "U.S. church membership data file at county level," from which we get the information on the number of members and adherents for each religious group. In this paper, as a measure of the degree of religiosity (REL) of the residents of each county, we use the percentage of adherents, which we derive by dividing the number of all adherents in a county by the total population of the county. The ARDA provides the adherent data on a 10-year basis (1971, 1980, 1990, and 2000). Since the KLD and other data are on an annual basis, following Hilary and Hui (2009), Dyreng et al. (2010), Grullon et al. (2010), and El Ghoul et al. (2012), we linearly interpolate and extrapolate the religiosity variable

to obtain values in the missing years from 1991 to 2010 and use these to match with our diversity index and with any other independent variables we use.<sup>7</sup>

### Construction of the Final Sample

Our final sample is constructed by merging the diversity index we constructed from the KLD data, the location, and financial variables from COMPUSTAT and CRSP, and the religiosity index we constructed from the ARDA data. We first match the KLD-based diversity dataset and the location and financial variables from COMPUSTAT and CRSP, since they all contain firm-level variables. Then, this constructed sample is combined with the religiosity index. Since the latter are provided on a county-level basis, we match the datasets by using the counties where the firms' headquarters are located. However, since the COMPUSTAT dataset for the most part does not provide the names of the counties where the firms' headquarters are located, we utilize their ZIP codes instead. But while the ZIP codes of the firms are provided in the COMPUSTAT database, the ARDA only provide county codes, i.e., FIPS. We therefore match the FIPS codes with the ZIP codes, which enables us to obtain our final sample set.

After matching across all these databases and accounting for lags and changes in diversity (DIVERSITY), religiosity (REL), and our other control variables, the size of the combined sample measures approximately 26,555 firm-year observations from 1991 to 2010. Actual samples used in the regression analyses differ slightly from the combined sample since the availability of the data for the variables varies across different regression models.

### Research Design

Since we seek to investigate the relation between firm-level diversity initiatives (DIVERSITY) and area religiosity (REL), we first regress the diversity indices, constructed from the KLD data, on the level of religiosity (REL), as measured by the percentage of adherents, along with our other control variables. Our choice of control variables generally include the variables used in the CSR study of Jo and Harjoto (2011, 2012) because diversity is one of the important sub-categories of CSR. According to prior literature on CSR, a firm's CSR choices may be linked to factors such as its financial performance, investment growth opportunities, risk, size, R&D, and advertising.

<sup>7</sup> To check the existence of potential interpolation bias, we conduct our regressions using only the years for which we have direct survey data on religiosity (1990 and 2000) in our unreported results. Though the sample size is much smaller, the significant association between diversity and religiosity measure suggests that our linear interpolation does not create systematic noise in our main results.

Accordingly we assume that these factors could affect a firm's decisions about diversity issues as well. Thus, we include various financial characteristics of the firms including the firm's size, as measured by the log of its total asset value (LOGTA) or the total market value of its equity (LOGMVE), and the firm's investment growth opportunities as measured by Tobin's Q. We also control for the firm's total debt ratio (DEBTR), advertising expense ratio (ADVR), R&D expenditure ratio (RNDR), capital expenditure ratio (CAPEXA), one-year sales growth rate (SALEG), operating income (ROA), and the Fama–French (1997) 48 industry dummy variables. Based on suggestions in the finance and accounting literature, we also control for firm risk, as measured by the volatility (standard deviation) of its monthly stock returns (DEVRET). To handle the time-invariant, firm-fixed effects in the relation between our diversity and religiosity measures, we run fixed effects regressions.

$$DIVERSITY_{i,t} = \alpha_0 + \alpha_1 REL_{i,t} + \sum_{j=2}^n \alpha_j CONTROL\ VARIABLES_{i,t} + u_i + \varepsilon_{i,t}$$

As we suggested earlier, our measure of religiosity could influence our measure of diversity. The diversity scores in the KLD database, however, tend to be autocorrelated. In addition, the religiosity variable is endogenously determined. Thus, in order to address the endogeneity and autocorrelation issues, we adopt a well-developed dynamic panel generalized method of moment (GMM) estimator following Wintoki et al. (2012), and use the method for the determinants of diversity, and then compare the results to those obtained from the fixed-effects regressions.

$$DIVERSITY_{i,t} = \alpha_0 + \alpha_1 REL_{i,t} + \sum_{j=2}^n \alpha_j CONTROL\ VARIABLES_{i,t} + \kappa_1 DIVERSITY_{it-1} + \kappa_2 DIVERSITY_{it-2} + \eta_i + \varepsilon_{i,t}$$

We repeat the same regression procedures by replacing the diversity index scores (DIV\_IDX) with diversity net scores (DIV\_NET) as well. Table 1 lists the definitions and construction of all the variables that we use in this study.

## Empirical Results

### Descriptive Statistics

In Table 2, we present the summary statistics of the main and control variables. In Panel A, we present the descriptive

**Table 1** Variable descriptions and data source

| Variables                     | Definitions                                                                                                                                                                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DIV_IDX                       | The combined diversity score index of strengths and concerns of each diversity items (source: KLD)                                                                                                                                               |
| DIV_NET                       | The net score of diversity strengths minus diversity concern items (source: KLD)                                                                                                                                                                 |
| REL                           | The degree of local religiosity measured by the percentage of adherents (= total adherents/total population) per county, linearly interpolated and extrapolated, based on the 1990 and 2000 data (source: American Religion Data Archive (ARDA)) |
| <i>Firm control variables</i> |                                                                                                                                                                                                                                                  |
| LOGTA                         | Log of total asset (source: Compustat)                                                                                                                                                                                                           |
| LOGMVE                        | Log of market value of equity (source: Compustat)                                                                                                                                                                                                |
| MBVE                          | Growth opportunities measured by market value of equity divided by book value of equity (source: Compustat)                                                                                                                                      |
| CAPEXA                        | Capital expenditure expense divided by total sales (source: Compustat)                                                                                                                                                                           |
| SALEG                         | Sales growth rate from t-1 to t (in %) (source: Compustat)                                                                                                                                                                                       |
| DEVRET                        | Standard deviation of monthly stock returns for the past year prior to current year (source: Center for Research in Stock Prices (CRSP))                                                                                                         |
| DEBTR                         | Long-term debt divided by total asset (source: Compustat)                                                                                                                                                                                        |
| ADVR                          | Advertising expense divided by total sales (source: Compustat)                                                                                                                                                                                   |
| RNDR                          | R&D expense divided by total sales (source: Compustat)                                                                                                                                                                                           |
| FF48 INDUSTRY                 | Fama and French (1997) 48 industry classification (source: Compustat)                                                                                                                                                                            |

This table presents definitions of the variables used in the empirical tests

statistics of religiosity and demographic variables. The average number of REL is 51.81 % indicating that the average number of the percentage of adherents (= total adherents/total population) per county is approximately 51 %. In addition, we present descriptive statistics regarding the workforce diversity scores (DIV\_IDX and DIV\_NET) and firm characteristics. The mean of DIV\_IDX is 0.3045 and the mean of DIV\_NET is 0.0232. The average volatility of monthly stock returns (DEVRET) during a year is 0.1002. The averages of the firms' financial characteristics reported in Table 2 are comparable with samples in previous studies, such as Ioannou and Serafeim (2010), Baron et al. (2011), Dhaliwal et al. (2011), and Jo and Harjoto (2011, 2012).

In Panel B, we present the mean values of the religiosity (REL) and workforce diversity scores (DIV\_IDX and DIV\_NET) on a state by state basis. The REL value is highest in District of Columbia, 0.758, and lowest in Oregon, 0.328. The high REL value in Utah is presumably

**Table 2** Descriptive statistics

Panel A. Workforce diversity scores (diversity index and net score) and firm characteristics

| Variable | Observation | Mean   | Std Dev | Min     | Median | Max     |
|----------|-------------|--------|---------|---------|--------|---------|
| DIV_IDX  | 27,600      | 0.3045 | 0.1120  | 0.0000  | 0.3000 | 1.0000  |
| DIV_NET  | 27,600      | 0.0232 | 1.1174  | −3.0000 | 0.0000 | 6.0000  |
| REL      | 27,600      | 0.5181 | 0.1314  | 0.0000  | 0.5181 | 1.0000  |
| LOGTA    | 27,600      | 7.4533 | 1.7343  | 3.8980  | 7.3672 | 12.0647 |
| LOGMVE   | 27,500      | 7.2940 | 1.5563  | 4.0556  | 7.1577 | 11.4776 |
| MBVE     | 27,500      | 3.1969 | 3.1997  | 0.4451  | 2.2110 | 21.4117 |
| CAPEXA   | 26,700      | 0.0468 | 0.0531  | 0.0000  | 0.0315 | 0.2988  |
| ADVR     | 27,600      | 0.0106 | 0.0283  | 0.0000  | 0.0000 | 0.1775  |
| RNDR     | 27,600      | 0.0307 | 0.0639  | 0.0000  | 0.0000 | 0.3702  |
| DEBTR    | 27,500      | 0.1772 | 0.1717  | 0.0000  | 0.1378 | 0.6868  |
| SALEG    | 27,400      | 0.1281 | 0.2965  | −0.5154 | 0.0797 | 1.6919  |
| DEVRET   | 26,900      | 0.1002 | 0.0526  | 0.0326  | 0.0861 | 0.2919  |

Panel B. Workforce diversity (diversity index and net score) and religiosity: State-by-state comparison

|    | DIV_IDX | DIV_NET | REL   |
|----|---------|---------|-------|
| AK | 0.276   | −0.250  | 0.398 |
| AL | 0.282   | −0.196  | 0.506 |
| AR | 0.283   | −0.194  | 0.569 |
| AZ | 0.306   | 0.035   | 0.386 |
| CA | 0.311   | 0.084   | 0.465 |
| CO | 0.283   | −0.189  | 0.453 |
| CT | 0.343   | 0.405   | 0.637 |
| DC | 0.352   | 0.512   | 0.758 |
| DE | 0.362   | 0.607   | 0.433 |
| FL | 0.291   | −0.117  | 0.430 |
| GA | 0.293   | −0.095  | 0.505 |
| HI | 0.360   | 0.563   | 0.357 |
| IA | 0.323   | 0.204   | 0.521 |
| ID | 0.287   | −0.143  | 0.421 |
| IL | 0.328   | 0.256   | 0.561 |
| IN | 0.298   | −0.047  | 0.450 |
| KS | 0.271   | −0.315  | 0.467 |
| KY | 0.307   | 0.049   | 0.494 |
| LA | 0.280   | −0.224  | 0.529 |
| MA | 0.293   | −0.090  | 0.706 |
| MD | 0.307   | 0.042   | 0.469 |
| ME | 0.349   | 0.463   | 0.386 |
| MI | 0.326   | 0.238   | 0.420 |
| MN | 0.330   | 0.279   | 0.592 |
| MO | 0.284   | −0.182  | 0.496 |
| MS | 0.273   | −0.289  | 0.492 |
| MT | 0.248   | −0.529  | 0.400 |
| NC | 0.300   | −0.023  | 0.409 |
| ND | 0.307   | 0.045   | 0.651 |
| NE | 0.311   | 0.088   | 0.514 |
| NH | 0.313   | 0.107   | 0.591 |
| NJ | 0.317   | 0.147   | 0.578 |

**Table 2** continued

| Panel B. Workforce diversity (diversity index and net score) and religiosity: State-by-state comparison |         |         |       |
|---------------------------------------------------------------------------------------------------------|---------|---------|-------|
|                                                                                                         | DIV_IDX | DIV_NET | REL   |
| NM                                                                                                      | 0.318   | 0.174   | 0.542 |
| NV                                                                                                      | 0.290   | −0.127  | 0.355 |
| NY                                                                                                      | 0.322   | 0.200   | 0.657 |
| OH                                                                                                      | 0.304   | 0.017   | 0.451 |
| OK                                                                                                      | 0.263   | −0.385  | 0.576 |
| OR                                                                                                      | 0.321   | 0.186   | 0.328 |
| PA                                                                                                      | 0.295   | −0.066  | 0.596 |
| RI                                                                                                      | 0.319   | 0.174   | 0.595 |
| SC                                                                                                      | 0.263   | −0.383  | 0.480 |
| SD                                                                                                      | 0.275   | −0.265  | 0.603 |
| TN                                                                                                      | 0.285   | −0.175  | 0.460 |
| TX                                                                                                      | 0.275   | −0.273  | 0.498 |
| UT                                                                                                      | 0.284   | −0.182  | 0.705 |
| VA                                                                                                      | 0.290   | −0.122  | 0.370 |
| VT                                                                                                      | 0.349   | 0.471   | 0.407 |
| WA                                                                                                      | 0.318   | 0.161   | 0.351 |
| WI                                                                                                      | 0.308   | 0.051   | 0.530 |
| WV                                                                                                      | 0.286   | −0.178  | 0.429 |
| WY                                                                                                      | 0.174   | −1.333  | 0.369 |
| Total                                                                                                   | 0.305   | 0.023   | 0.520 |

Panel A display descriptive statistics from 1991 to 2010, with varying firm-year observations. Sample size varies due to data availability. Mean, median, minimum, and maximum are reported. The definitions of variables are provided in Table 1. We measure the degree of religiosity by the percentage of adherents (= total adherents/total population) per county (REL). In Panel B, we compare each state's mean values of diversity index (DIV\_IDX), diversity net score (DIV\_NET) and religiosity (REL)

due to its large Mormon population. In the untabulated results, we got by examining and comparing 529 counties, we find that the highest REL value is that of Bristol County in Virginia, 0.8912, and the lowest is that of Hancock county in Maine, 0.1645. The DIV\_IDX is highest in Delaware, 0.362 and lowest in Wyoming, 0.174. Our unreported results suggest that the highest DIV\_IDX is found in Yellowstone county in Montana, 0.7500, and the lowest score is for Davidson county in North Carolina, 0.1673. The DIV\_NET is highest in Delaware, 0.607 and lowest in Wyoming, −1.333. Moreover, we find the highest average DIV\_NET in Buffalo county in New York, 1.0000 and in a few other counties while the lowest DIV\_NET score of −1.346 is that of Winona county in Minnesota. These descriptive statistic numbers suggest that there are quite wide variations in the religiosity and diversity scores across counties as well as states.

Table 3 presents the Spearman correlation matrix for the variables discussed in the previous section after we removed one percent outliers. Consistent with the expected positive association between the measure of a firm's diversity initiatives and the measure of the religiosity (REL) of the county in which the firm's headquarters is

located, DIV\_IDX is positively related to REL. As anticipated, DIV\_NET is highly correlated to DIV\_IDX with a correlation coefficient of 0.997. The Spearman correlation coefficient between DIV\_IDX and REL measures 0.045, which is statistically significant, at least, at 5 %. We consider the correlation between religiosity and diversity, at about 4.5 %, to be small, but non-trivial. The Spearman correlation coefficient between REL and DEVRET is justifiable as well, scoring −0.1829 and also significant. Most of the variables are found to be significantly correlated with DIV\_IDX and DIV\_NET, at least, at the 5 % level.

While most of the variables are found to be significantly correlated with DIV\_IDX and DIV\_NET in bivariate associations, we turn our attention on multivariate relations in the next section.

### Multivariate Regression Results

Because we use cross-sectional and time-series combined panel data, we need to employ fixed effects regressions to account for fixed effects within each firm in the sample and to impose time independent effects for each variable that could be correlated with the regressors. We start our

**Table 3** Bivariate correlations

| No. | Variables | 1        | 2        | 3        | 4        | 5        | 6       | 7        | 8        | 9        | 10       | 11      | 12 |
|-----|-----------|----------|----------|----------|----------|----------|---------|----------|----------|----------|----------|---------|----|
| 1   | DIV_IDX   | 1        |          |          |          |          |         |          |          |          |          |         |    |
| 2   | DIV_NET   | 0.9973*  | 1        |          |          |          |         |          |          |          |          |         |    |
| 3   | REL       | 0.0449*  | 0.0484*  | 1        |          |          |         |          |          |          |          |         |    |
| 4   | LOGTA     | 0.3576*  | 0.3540*  | 0.0435*  | 1        |          |         |          |          |          |          |         |    |
| 5   | LOGMVE    | 0.3820*  | 0.3787*  | 0.0612*  | 0.8023*  | 1        |         |          |          |          |          |         |    |
| 6   | MBVE      | 0.0725*  | 0.0736*  | 0.0122*  | -0.1272* | 0.2136*  | 1       |          |          |          |          |         |    |
| 7   | CAPEXA    | -0.0187* | -0.0149* | -0.01    | -0.0544* | 0.0687*  | 0.0624* | 1        |          |          |          |         |    |
| 8   | ADVR      | 0.1255*  | 0.1254*  | 0.0166*  | -0.0852* | 0.0221*  | 0.1511* | 0.0750*  | 1        |          |          |         |    |
| 9   | RNDR      | -0.0374* | -0.0368* | -0.0262* | -0.3467* | -0.1256* | 0.2648* | -0.0856* | -0.0343* | 1        |          |         |    |
| 10  | DEBTR     | 0.0051   | 0.0055   | -0.0111  | 0.2367*  | 0.0869*  | 0.0505* | 0.0759*  | -0.0622* | -0.2221* | 1        |         |    |
| 11  | SALEG     | -0.0653* | -0.0653* | 0.0044   | -0.0990* | 0.0178*  | 0.1502* | 0.0815*  | -0.0343* | 0.0970*  | -0.0166* | 1       |    |
| 12  | DEVRET    | -0.1829* | -0.1972* | -0.0743* | -0.3662* | -0.3434* | 0.0516* | -0.0356* | 0.0183*  | 0.2788*  | -0.0879* | -0.0102 | 1  |

This table reports Spearman correlation coefficients among variables of main interest from 1991 to 2010. See Table 1 for variable definitions

\* Indicates the 5 % level of significance or less

analysis with a fixed effects method based upon the assumption that the unobservable individual effects known to be correlated with regressors are non-random.

Table 4 presents the results from the baseline fixed effect regression of the level of DIV\_IDX and DIV\_NET on the level of REL with controls. We find that the impact of REL on DIV\_IDX and DIV\_NET is positive and statistically significant at the one (five) percent level with t-statistics ranging from 1.99 to 3.01. The positive association between REL and the diversity measures remains intact when we control for firm size either by the log of total assets or by the market value of its equity, and both when we include and exclude firm growth opportunities as measured by the lag of market-to-book value of equity (LAG(MBVE)). This significantly positive association between diversity and religiosity is generally consistent with the religious motivation hypothesis (our Hypothesis 1), but not with the resource-constraint hypothesis (our Hypothesis 2). We also find that bigger firms and firms with high debt invest more in diversity policies, while firms with high capital expenditures (CAPEXA) tended not to invest in diversity practices.

Next, we ask whether firms in highly religious communities are more interested in the positive dimensions of diversity issues, such as the inclusion of women and minorities in top management and directorships, policies for disabled employees, and other strengths (DIVERSITY\_STRENGTH), or are instead interested in resolving their controversy concerns, such as having no women on the board or paying high penalties due to controversies related to diversity (DIVERSITY\_CONCERN) (see Appendix for more detail). Table 5 reports the results from the fixed-effects regressions for diversity strengths in Panel A and diversity concerns in Panel B. As in our baseline fixed effect regressions, we find a significant and positive relation between DIVERSITY\_STRENGTH and REL. Both the coefficients on DIVERSITY\_STRENGTH and corresponding t-statistics shown in Panel A are similar to the baseline fixed effects regressions. Again, the fixed effects regressions results are also consistent with the religious motivation explanation. The coefficients on DIVERSITY\_CONCERNS shown in Panel B, however, are all non-significant. Thus, the impact of religiosity on DIVERSITY\_STRENGTH and DIVERSITY\_CONCERN is not symmetric; that is, the positive association between diversity and REL is mostly due to diversity strengths. This suggests that managers of firms headquartered in areas with higher religiosity are more interested in improving those company practices that add to workforce diversity than in rectifying those company practices that may have harmed diversity.

Previous studies on CSR (Ioannou and Serafeim 2010; Jo and Harjoto 2011, 2012) suggest that a firm's CSR

**Table 4** Fixed effect regressions

| Variables                | (1)<br>DIV_IDX         | (2)<br>DIV_IDX         | (3)<br>DIV_IDX        | (4)<br>DIV_IDX         | (5)<br>DIV_NET         | (6)<br>DIV_NET         |
|--------------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|
| REL                      | 0.0397***<br>(2.773)   | 0.0329**<br>(2.097)    | 0.0312**<br>(1.987)   | 0.0328**<br>(2.092)    | 0.4166***<br>(3.009)   | 0.3503**<br>(2.314)    |
| <i>Control variables</i> |                        |                        |                       |                        |                        |                        |
| LAG(LOGTA)               | 0.0066***<br>(4.781)   |                        | 0.0066***<br>(4.686)  |                        | 0.0671***<br>(5.067)   |                        |
| LAG(LOGMVE)              |                        | 0.0048***<br>(4.722)   |                       | 0.0049***<br>(4.840)   |                        | 0.0480***<br>(4.874)   |
| LAG(MBVE)                |                        |                        | −0.0001<br>(−1.539)   | −0.0001**<br>(−2.120)  |                        |                        |
| LAG(CAPEXA)              | −0.0448***<br>(−2.663) | −0.0513***<br>(−2.975) | −0.0427**<br>(−2.482) | −0.0513***<br>(−2.980) | −0.4498***<br>(−2.770) | −0.5145***<br>(−3.091) |
| LAG(ADVR)                | −0.0639<br>(−1.571)    | −0.0759*<br>(−1.812)   | −0.0749*<br>(−1.787)  | −0.0752*<br>(−1.794)   | −0.5566<br>(−1.417)    | −0.6802*<br>(−1.681)   |
| LAG(RNDR)                | −0.0062<br>(−0.282)    | −0.0234<br>(−1.051)    | −0.0097<br>(−0.428)   | −0.0204<br>(−0.916)    | −0.0096<br>(−0.045)    | −0.1906<br>(−0.887)    |
| LAG(DEBTR)               | 0.0118**<br>(2.131)    | 0.0220***<br>(3.798)   | 0.0150***<br>(2.597)  | 0.0231***<br>(3.986)   | 0.1021*<br>(1.911)     | 0.2026***<br>(3.628)   |
| LAG(SALEG)               | 0.0017<br>(1.076)      | 0.0006<br>(0.390)      | 0.0016<br>(1.008)     | 0.0008<br>(0.468)      | 0.0107<br>(0.689)      | 0.0000<br>(0.000)      |
| DEVRET                   | −0.0252*<br>(−1.681)   | −0.0153<br>(−0.990)    | −0.0237<br>(−1.563)   | −0.0150<br>(−0.969)    | −0.2022<br>(−1.397)    | −0.1075<br>(−0.721)    |
| Constant                 | 0.2515***<br>(20.011)  | 0.2645***<br>(23.000)  | 0.2536***<br>(19.214) | 0.2634***<br>(22.897)  | −0.5104***<br>(−4.203) | −0.3677***<br>(−3.312) |
| YEAR DUMMY               | YES                    | YES                    | YES                   | YES                    | YES                    | YES                    |
| Observations             | 25,506                 | 24,825                 | 24,821                | 24,820                 | 25,506                 | 24,825                 |
| Number of firms          | 4,162                  | 4,132                  | 4,131                 | 4,131                  | 4,162                  | 4,132                  |
| R <sup>2</sup>           | 0.105                  | 0.102                  | 0.102                 | 0.102                  | 0.160                  | 0.159                  |

This table displays the baseline fixed effect regressions for the sample over the period of 1991–2010. The dependent variables are DIV\_IDX in models (1) through (4) and DIV\_NET in models (5) and (6), respectively. We measure the degree of religiosity by the percentage of adherents (= total adherents/total population) per county (REL). Robust *t*-statistics are presented in parentheses. See Table 1 for variable definitions. \*\*\*, \*\*, and \* indicate statistical significance at the 1, 5, and 10 % level, respectively

engagement is endogenous. The same issue affects diversity and religiosity. To properly address this issue, we attempt to conduct an endogeneity correction of diversity scores by using the dynamic panel GMM regression following Wintoki et al. (2012).<sup>8</sup> The dynamic panel GMM model enables us to estimate the diversity/religiosity relation while including both past diversity ratings and fixed-effects to account for the dynamic aspects of the diversity/REL relation and time-invariant unobservable heterogeneity. Table 6 presents the regression results of dynamic

<sup>8</sup> The dynamic panel GMM model, in particular, enables us to estimate the diversity-religiosity relation by dealing with (i) past diversity scores due to autocorrelation problem of diversity ratings, (ii) fixed-effects to account for the dynamic aspects of the diversity-religiosity relation, and (iii) time-invariant unobservable heterogeneity, respectively.

GMM. The results show that when we include fixed-effects in a dynamic model and estimate via the system GMM, the coefficient on REL in the diversity (both DIV\_IDX and DIV\_NET) regressions are still positive and significant, at the one percent level (*t*-values range from 2.62 to 3.10). Because statistical significance remains close to those of the fixed effect regressions, it seems that managers of firms headquartered in areas with higher religiosity, i.e., more religious communities, tend to engage in more diversity initiatives. Overall, our dynamic GMM results support the religious motivation hypothesis as opposed to the resource-constraint hypothesis.

Reverse causality may also be a concern. It is unlikely but perhaps not impossible that highly religious managers of firms with high levels of workforce diversity practices may demand more religiosity from their employees.

**Table 5** Fixed effect regressions based on diversity strengths and diversity concerns

## Panel A: The effect of religiosity (REL) on diversity strengths

| Variables                | (1)<br>DIVERSITY_STRENGTH | (2)<br>DIVERSITY_STRENGTH | (3)<br>DIVERSITY_STRENGTH | (4)<br>DIVERSITY_STRENGTH |
|--------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| REL                      | 0.3012***<br>(2.933)      | 0.2243**<br>(2.007)       | 0.2165*<br>(1.935)        | 0.2239**<br>(2.003)       |
| <i>Control variables</i> |                           |                           |                           |                           |
| LAG(LOGTA)               | 0.0450***<br>(4.576)      |                           | 0.0456***<br>(4.510)      |                           |
| LAG(LOGMVE)              |                           | 0.0436***<br>(6.153)      |                           | 0.0442***<br>(6.229)      |
| LAG(MBVE)                |                           |                           | −0.0002<br>(−0.799)       | −0.0003<br>(−1.457)       |
| LAG(CAPEXA)              | −0.2337*<br>(−1.941)      | −0.2719**<br>(−2.214)     | −0.1994<br>(−1.627)       | −0.2723**<br>(−2.217)     |
| LAG(ADVR)                | −0.3409<br>(−1.170)       | −0.4601<br>(−1.540)       | −0.4745<br>(−1.588)       | −0.4563<br>(−1.528)       |
| LAG(RNDR)                | 0.1324<br>(0.840)         | 0.0417<br>(0.263)         | 0.0960<br>(0.593)         | 0.0563<br>(0.354)         |
| LAG(DEBTR)               | 0.0546<br>(1.377)         | 0.1196***<br>(2.902)      | 0.0584<br>(1.421)         | 0.1258***<br>(3.041)      |
| LAG(SALEG)               | 0.0021<br>(0.183)         | −0.0072<br>(−0.617)       | 0.0023<br>(0.199)         | −0.0065<br>(−0.560)       |
| DEVRET                   | 0.0815<br>(0.759)         | 0.1927*<br>(1.748)        | 0.0901<br>(0.835)         | 0.1939*<br>(1.759)        |
| Constant                 | −0.7597***<br>(−8.380)    | 0.0607<br>(0.747)         | 0.0672<br>(0.714)         | 0.0557<br>(0.686)         |
| YEAR DUMMY               | YES                       | YES                       | YES                       | YES                       |
| Observations             | 25,506                    | 24,825                    | 24,821                    | 24,820                    |
| Number of firms          | 4,162                     | 4,132                     | 4,131                     | 4,131                     |
| R <sup>2</sup>           | 0.122                     | 0.106                     | 0.106                     | 0.107                     |

## Panel B: The effect of religiosity (REL) on diversity concerns

| Variables                | (5)<br>DIVERSITY_CONCERN | (6)<br>DIVERSITY_CONCERN | (7)<br>DIVERSITY_CONCERN | (8)<br>DIVERSITY_CONCERN |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| REL                      | 0.1153<br>(1.403)        | 0.1248<br>(1.377)        | 0.1157<br>(1.275)        | 0.1245<br>(1.374)        |
| <i>Control variables</i> |                          |                          |                          |                          |
| LAG(LOGTA)               | 0.0222***<br>(2.818)     |                          | 0.0229***<br>(2.794)     |                          |
| LAG(LOGMVE)              |                          | 0.0081<br>(1.410)        |                          | 0.0087<br>(1.515)        |
| LAG(MBVE)                |                          |                          | −0.0003<br>(−1.515)      | −0.0003*<br>(−1.781)     |
| LAG(CAPEXA)              | −0.2161**<br>(−2.242)    | −0.2475**<br>(−2.485)    | −0.2286**<br>(−2.300)    | −0.2479**<br>(−2.488)    |
| LAG(ADVR)                | −0.2158<br>(−0.925)      | −0.2104<br>(−0.869)      | −0.1927<br>(−0.796)      | −0.2069<br>(−0.854)      |
| LAG(RNDR)                | −0.1420<br>(−1.126)      | −0.2171*<br>(−1.688)     | −0.1430<br>(−1.089)      | −0.2026<br>(−1.572)      |
| LAG(DEBTR)               | 0.0475                   | 0.0881***                | 0.0730**                 | 0.0933***                |

**Table 5** continued

Panel B: The effect of religiosity (REL) on diversity concerns

| Variables       | (5)<br>DIVERSITY_CONCERN     | (6)<br>DIVERSITY_CONCERN     | (7)<br>DIVERSITY_CONCERN     | (8)<br>DIVERSITY_CONCERN     |
|-----------------|------------------------------|------------------------------|------------------------------|------------------------------|
| LAG(SALEG)      | (1.499)<br>0.0086<br>(0.933) | (2.635)<br>0.0060<br>(0.637) | (2.191)<br>0.0074<br>(0.789) | (2.781)<br>0.0066<br>(0.699) |
| DEVRET          | −0.2837***<br>(−3.301)       | −0.2780***<br>(−3.110)       | −0.2781***<br>(−3.178)       | −0.2760***<br>(−3.086)       |
| Constant        | −0.5475***<br>(−7.594)       | −0.4579***<br>(−6.955)       | −0.5591***<br>(−7.328)       | −0.4627***<br>(−7.023)       |
| YEAR DUMMY      | YES                          | YES                          | YES                          | YES                          |
| Observations    | 25,506                       | 24,825                       | 24,821                       | 24,820                       |
| Number of firms | 4,162                        | 4,132                        | 4,131                        | 4,131                        |
| R <sup>2</sup>  | 0.265                        | 0.264                        | 0.264                        | 0.264                        |

This table displays the baseline fixed effect regressions for the sample over the period of 1991–2010. The dependent variables are DIVERSITY\_STRENGTH in Panel A and DIVERSITY\_CONCERN in Panel B, respectively. We measure the degree of religiosity by the percentage of adherents (= total adherents/total population) per county (REL). Panels A and B present the effect of religiosity on DIVERSITY strengths and concerns, respectively. Robust *t*-statistics are presented in parentheses. See Table 1 for variable definitions. \*\*\*, \*\*, and \* indicate statistical significance at the 1, 5, and 10 % level, respectively

However, while it is intuitively understandable that religiosity could lead a company to increase its diversity activities, it is not conceivable that diversity policies could generate higher levels of religiosity, and therefore, this behavioral intuition mitigates the reverse causality concern.

## Discussion

### Limitations

Using a large and extensive U.S. sample of firms during the 1991–2010 period, we find that managers of firms headquartered in areas with higher levels of religiosity engage in more diversity activities, supporting the religious motivation hypothesis, but not the resource-constraint explanation based on agency theory. Our study, however, has a number of limitations. First, while KLD is one of the oldest and most respected independent CSR ratings in the world, and is widely used by accounting, business ethics, economics, finance, management, marketing, religious studies, and strategy scholars, the KLD data has a number of shortcomings. First, it does not reveal how it weights each screening category in determining a firm's overall diversity rating, other than indicating the assignment of a binary (0 and 1) code. Also, the KLD data does not indicate in which, if any, of the firms it covers, the diversity levels may be a result of legally mandated affirmative action programs (this may not be a significant issue, however, since some scholars, e.g., Stainback and Tomaskovic-Devey (2012) have shown that

since the 1980s, and in spite of some landmark judicial rulings, government has not required much in the way of affirmative action). Moreover, in certain instances the KLD data on which ratings are based are incomplete, particularly with respect to the non-U.S. operations of the firms in its database. A final caveat in our use of the KLD data is its unbalanced panel structure and certain construct validity issues (Chatterji et al. 2009). Sharfman (1996), nevertheless, encourages researchers studying CSR to have confidence in the KLD measures and feel secure in the idea that the data do tap into the core of CSR.

Second, while this study uses various econometric methods to deal with the endogeneity issue, the religiosity data obtained from the American Religion Data Archive (ARDA) is not available on an annual basis. Thus, we employ the linear interpolation method following Hilary and Hui (2009), Dyreng et al. (2010), Grullon et al. (2010), and El Ghouli et al. (2012) to obtain values in the missing years. Although the use of such a method to conduct various regressions is inevitable, we acknowledge that it could introduce some potential interpolation bias.<sup>9</sup>

Third, one of the two rationales that we provide for our hypothesis 1, assumes that the level of religiosity (REL) of the population of an area (a county) can serve as a proxy or indicator of the level of religiosity of the firm's top managers, who constitute a subset of that population. We are

<sup>9</sup> As suggested earlier, based on direct survey data on religiosity (1990 and 2000), we find the significant and positive relation between diversity and religiosity measure, indicating that our linear interpolation process does not create systematic bias in our main results..

**Table 6** Dynamic generalized method of moment (GMM) results

| Variables                                            | (1)<br>DIV_IDX        | (2)<br>DIV_IDX        | (3)<br>DIV_IDX        | (4)<br>DIV_IDX        | (5)<br>DIV_NET        | (6)<br>DIV_NET        |
|------------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| REL                                                  | 0.0619***<br>(3.104)  | 0.0591***<br>(2.894)  | 0.0593***<br>(3.075)  | 0.0552***<br>(2.774)  | 0.5216***<br>(2.829)  | 0.4880***<br>(2.620)  |
| <i>Control variables</i>                             |                       |                       |                       |                       |                       |                       |
| LOGTA                                                | 0.0136***<br>(5.130)  |                       | 0.0141***<br>(5.559)  |                       | 0.1461***<br>(6.087)  |                       |
| LOGMVE                                               |                       | 0.0109***<br>(3.933)  |                       | 0.0133***<br>(5.042)  |                       | 0.1233***<br>(4.551)  |
| MBVE                                                 |                       |                       | −0.0022**<br>(−2.003) | −0.003***<br>(−2.581) | −0.0193*<br>(−1.824)  | −0.028***<br>(−2.638) |
| CAPEXA                                               | −0.1096<br>(−1.532)   | −0.1372*<br>(−1.911)  | −0.0988<br>(−1.350)   | −0.1109<br>(−1.538)   | −0.8474<br>(−1.224)   | −0.9704<br>(−1.381)   |
| ADVR                                                 | −0.1270<br>(−0.529)   | −0.1229<br>(−0.509)   | −0.1176<br>(−0.494)   | −0.1586<br>(−0.656)   | −0.7345<br>(−0.327)   | −1.1407<br>(−0.505)   |
| RNDR                                                 | −0.0941<br>(−0.626)   | −0.1974<br>(−1.266)   | 0.0068<br>(0.050)     | −0.0528<br>(−0.399)   | 0.6254<br>(0.511)     | −0.5183<br>(−0.414)   |
| DEBTR                                                | 0.0263<br>(1.462)     | 0.0652***<br>(3.447)  | 0.0355*<br>(1.912)    | 0.0752***<br>(3.905)  | 0.2998*<br>(1.705)    | 0.5695***<br>(3.155)  |
| SALEG                                                | −0.0096<br>(−1.073)   | −0.031***<br>(−3.221) | −0.0074<br>(−0.811)   | −0.0197*<br>(−1.893)  | −0.0648<br>(−0.751)   | −0.1627*<br>(−1.784)  |
| DEVRET                                               | 0.0399<br>(0.659)     | 0.0073<br>(0.110)     | 0.0410<br>(0.724)     | 0.0406<br>(0.649)     | 0.5939<br>(1.161)     | 0.4318<br>(0.765)     |
| DIVERSITY(T-1)                                       | 0.7823***<br>(26.244) | 0.8049***<br>(25.934) | 0.7856***<br>(26.520) | 0.8028***<br>(26.219) | 0.7798***<br>(27.330) | 0.7938***<br>(27.639) |
| CONSTANT                                             | −0.092***<br>(−3.165) | −0.054**<br>(−2.053)  | −0.091***<br>(−3.379) | −0.067***<br>(−2.660) | −1.586***<br>(−5.910) | −1.155***<br>(−4.332) |
| YEAR DUMMY                                           | YES                   | YES                   | YES                   | YES                   | YES                   | YES                   |
| FF48INDUSTRY DUMMY                                   | YES                   | YES                   | YES                   | YES                   | YES                   | YES                   |
| Observations                                         | 16,003                | 15,998                | 15,998                | 15,998                | 15,998                | 15,998                |
| Number of firms                                      | 2,486                 | 2,486                 | 2,486                 | 2,486                 | 2,486                 | 2,486                 |
| AR(1) test ( <i>p</i> value)                         | 0.0000                | 0.0000                | 0.0000                | 0.0000                | 0.0000                | 0.0000                |
| AR(2) test ( <i>p</i> -value)                        | 0.5841                | 0.5971                | 0.6551                | 0.6237                | 0.6252                | 0.5817                |
| Hansen test over-identification ( <i>p</i> -value)   | 0.0000                | 0.0000                | 0.0000                | 0.0000                | 0.0000                | 0.0000                |
| Diff-in-Hansen test of exogeneity ( <i>p</i> -value) | 0.0000                | 0.0000                | 0.0000                | 0.0000                | 0.0000                | 0.0000                |

This table displays dynamic GMM regressions during the period of 1991–2010. The dependent variables are DIV\_IDX in models (1) through (4) and DIV\_NET in models (5) and (6), respectively. We measure the degree of religiosity by the percentage of adherents (= total adherents/total population) per county (REL). The AR(1) and AR(2) tests are tests for first-order and second-order serial correlation in the first-differenced residuals, under the null of no serial correlation. The Hansen test of over-identifying restrictions is a test with the joint null hypothesis that instrumental variables are valid, i.e. uncorrelated with error terms. We use lagged two- to five-periods as instruments for endogenous variables. All the regressors except industry dummies and year dummies are assumed to be endogenous. The difference-in-Hansen test of exogeneity is a test with the null hypothesis that the subsets of instruments that we use in the levels equations are exogenous. Robust *t*-statistics are presented in parentheses. See Table 1 for variable definitions. \*\*\*, \*\*, and \* indicate statistical significance at the 1, 5, and 10 % level, respectively

therefore using an indirect proxy to estimate the religiosity of the firm's top management group. We believe that our use of this proxy is reasonable and, as we indicated earlier, prior studies have used this proxy. However, our study would be strengthened if we had a direct way to determine the religious characteristics of the top managements of the firms in the KLD database. For example, knowing the

specific religious commitment of the CEO of a firm would provide a more direct measure of the degree of religiosity of a firm's top decision makers, and so a more direct way to test the influence of religion on that firm's diversity initiatives. Again, if we knew the specific religious affiliations and commitments of the members of the top management teams of companies in the KLD database, we could also

use this information to get a more direct test of the influence of religion on diversity. Unfortunately, such data is not easily available to us.

Fourth, we cannot provide empirical results or evidence regarding the tolerance of other none-religious diversities in the workplace due to the lack of such data and due to the religious and cultural homogeneity in the regions of our sample.

Fifth and related to the above, our study is limited to the United States and its religious denominations. Scholars have pointed out the unique role that religion plays in American life, a role that is different from the roles it plays in other nations. (Micklethwait and Wooldridge 2009). Consequently, without further study, we cannot claim that our conclusions necessarily apply to the managements of other religions and nations. Moreover, our study focused mostly on the Christian denominations. It will be fruitful if some future studies can show whether the members of other religions believe and act in a similar way.

Sixth, we note that the KLD database contains two kinds of data regarding a firm's diversity initiatives. Some of the ten KLD items on diversity that we use in this study provide information only about what the firm's policies are with respect to some diversity area, while other items provide information about what the firm has actually done to incorporate women and minorities into its ranks. Of the 10 items we use, for example, 3 to 4 (depending on what one counts as "policy information") are "policy" items, and the other 6 to 7 report on the actual demographics of the firm or its actual interactions with relevant external parties. Our study would be stronger if the KLD database provided more items about what each firm has actually done to advance diversity, and fewer items that inform us only about the diversity policies that firms have adopted.

Finally, we note that two forms of diversity that are usually mentioned in discussions of diversity are not discussed in this study. We do not discuss the extent to which firms have moved toward an inclusion of greater religious diversity, nor whether firms have moved toward a greater GLBT diversity. We omit these for two reasons. First, the teachings of U.S. religions on diversity say little or nothing about moving toward greater religious diversity; the churches do not see religious diversity as a value. Nor, as mentioned above, do U.S. religious teachings agree on the value of moving toward greater gay and lesbian diversity. Because these two forms of diversity are not consistently supported by the teachings of the dominant U.S. religious denominations, we decided to omit them from our study. Moreover, a second reason for omitting discussion of religious diversity is that the KLD database says nothing about religious diversity.

Overall, despite these limitations, we consider our main empirical findings of a positive association between the

degree of religiosity and diversity engagement as an important first step to understand the potential religiosity-diversity nexus proposed by the view that the firm is a human community and the belief of many religious people that religion is the source of morality. Both diversity and religiosity are very much moving targets, however. They are now quite different from what they were 5 or 10 years ago, and they will continue to evolve.

We believe that it will be fruitful if future studies can gather adequate data about the specific religious affiliations of the top management teams of companies, and conduct empirical studies examining the relation between their religious affiliations and their firm's diversity engagement. While their main focus is neither the specific religious affiliation of top management, nor the religiosity-diversity relation, we consider recent efforts of the Kutcher et al.'s (2010) survey-based research (collecting employee's response regarding the religiosity-job stress relation) could provide a viable method to pursue these issues. In addition, investigating the relation between the CEO's specific religious affiliation and other CSR initiatives, such as the environmental performance of the firm, should also be interesting. The influence of religion on women in the boardroom may also be a subject of fruitful research. While women represent about half of the U.S. population and half of its workforce (U.S. Department of Labor, 2012), women still fill just 14 % of board seats (Butler 2013).

## Significance

Our study makes important contributions in a number of domains. First, and of greatest significance, our study shows that religion influences a firm's position on workforce diversity. Specifically, our study suggests that at least one of the factors underlying managerial decisions related to diversity is their religiosity, a factor that has only rarely been examined in the prior literature.

Secondly, because employees are key stakeholders of a company, the company's diversity policies toward employees are generally seen in the literature on CSR as part of the company's CSR stance (Mitchell et al. 1997; Gibson 2000; Kaler 2002; Crane and Matten 2004). Our study shows, therefore, that religion is an influence on a firm's CSR stance, at least to the extent that religion is one of the factors that play a role in managerial decisions to invest in diversity initiatives.

Third, our study provides additional evidence for the claim that the teachings of religious denominations affect the behaviors of their members or, at least, of those who live in a community of religious adherents (Welch et al. 1991; Ellison et al. 1997; Regnerus 2003). Our study therefore makes a contribution to the psychological and sociological literature that examines whether and how

religiosity influences behavior. Earlier studies have shown that religion has an influence on the moral decisions of adolescents (Brownfield and Sorenson 1991; Donahue and Benson 1995; Baier and Wright 2001; Bearman and Bruckner 2001); it affects the political actions of adults (Manza and Brooks 1997; Regnerus et al. 1999; Greeley and Hout 2006; Hirschl et al. 2009); it influences everyday adult decisions (Schieman 2011); it is positively associated with college student honesty (Perrin 2000); and it is correlated with adult intentions to obey the law (Grasmick et al. 1991) as well as with adult intentions to refrain from premarital sex (Barkan 2006). To this list, we can add that religion also has an influence on management decisions to invest in workplace diversity.

Fourth, as several scholars have suggested (Geyer and Baumeister 2005; Welch et al. 2006; Melé 2012a, b), our study shows that religious beliefs influence American business life. In particular, we have shown that religious beliefs influence corporate decisions related to workforce diversity policies and religious actions. We note that our study showed that religion exerts this influence regardless of how large the firm is, or what its growth opportunities may be.

Fifth, our study provides at least part of the explanation of why companies have continued to invest in diversity programs in spite of the fact that research on diversity has failed to show that diversity programs will generally provide economic benefits to the firm that adopts them. The descriptive statistics in our study indicated that there is some variance in the extent to which companies invest in diversity. Our findings suggest, therefore, that although some managers choose not to invest in diversity, one of the factors that lead other managers to continue investing in diversity is related to religion; specifically, managers invest in diversity, at least in part, because their religion teaches that the pursuit of diversity is morally right.

Sixth, our study also shows that managers do not single-mindedly seek to maximize shareholder value. That is, the fiduciary obligation to “maximize profits” for shareholders that Friedman (1970) and others attribute to managers is not the only obligation to which managers pay attention. Managers balance their responsibilities to shareholders with the moral responsibilities that religion says they owe to others. In particular, they balance their responsibilities to shareholders with the moral responsibility to reduce workplace discrimination and to make the workplace a more diverse and inclusive community.

## Conclusion

In this paper, we examined the empirical association between the degree of religiosity of the area in which a firm’s headquarters is located and in which its top

managers live, and our workforce diversity index, in order to determine the relative validity of the two competing explanations of the relation between religiosity and diversity, namely, the religious motivation hypothesis and the resource-constraint hypothesis. Based on a large and extensive sample of U.S. data on firms’ diversity engagement and their managements’ degree of religiosity, we find a positive association between the degree of religiosity and workforce diversity engagement, implying that religiosity encourages the inclusion of minorities, women, and the disabled in the firm and throughout its ranks.

The empirical results of our study, which is based on a sample of U.S. firms operating in the period 1991–2010, suggest a positive association between diversity engagement and religiosity after controlling for various firm characteristics. In addition, when we employ dynamic panel generalized methods of moment (GMM) to control for endogeneity issues, we still find a positive association between diversity and religiosity. This positive association remains robust under various econometric methods including fixed-effect regressions and dynamic GMM regressions.

We believe that this robust positive association between religiosity and workplace diversity, supports the premise that managers of firms in religious communities are more committed to workplace diversity, and it also supports the religious morality hypothesis, but not the resource-constraint hypothesis. Our robust findings of a positive relation between religiosity and diversity are also indirectly supportive of the proposition by Geyer and Baumeister (2005) and Melé (2012a, b) that religion is indeed a source of the moral motivations of managers. We also note that this positive religiosity-diversity relation is found in the U.S. where the majority of the population with a religious identity is Christian.

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## Appendix: Diversity Categories

### Diversity Strengths (DIVERSITY\_STRENGTH)

*CEO.* The company’s chief executive officer is a woman or a member of a minority group.

*Promotion.* The company has made notable progress in the promotion of women and minorities, particularly to line positions with profit-and-loss responsibilities in the corporation.

*Board of Directors.* Women, minorities, and/or the disabled hold four seats or more (with no double counting) on the board of directors, or one-third or more of the board seats if the board numbers less than 12.

**Work/Life Benefits.** The company has outstanding employee benefits or other programs addressing work/life concerns, e.g., childcare, elder care, or flextime. In 2005, KLD renamed this strength from Family Benefits Strength.

**Women & Minority Contracting.** The company does at least 5 % of its subcontracting, or otherwise has a demonstrably strong record on purchasing or contracting, with women and/or minority-owned businesses.

**Employment of the Disabled.** The company has implemented innovative hiring programs; other innovative human resource programs for the disabled, or otherwise has a superior reputation as an employer of the disabled.

**Other Strength.** The company has made a notable commitment to diversity that is not covered by other KLD ratings.

#### Diversity Concerns (DIVERSITY\_CONCERN)

**Controversies.** The company has either paid substantial fines or civil penalties as a result of affirmative action controversies, or has otherwise been involved in major controversies related to affirmative action issues.

**Non-Representation.** The company has no women on its board of directors or among its senior line managers.

**Other Concern.** The company is involved in diversity controversies not covered by other KLD ratings.

**Source:** KLD Research & Analytics, Inc. The KLD original diversity strength scores also include the *Gay & Lesbian Policies*: The company has implemented notably progressive policies toward its gay and lesbian employees. In particular, it provides benefits to the domestic partners of its employees. In 1995, KLD added the *Gay & Lesbian Policies Strength*, which was originally titled the *Progressive Gay/Lesbian Policies strength*. The problem with this item, however, is that a good number of the Christian denominations do not support policies that benefit gays and lesbians. In fact, several of the Christian denominations have officially taken the position that such policies should be rejected. Consequently, we remove the item of *Gay & Lesbian Policies* from our measurement of DIVERSITY scores because of continuing controversy.

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