

Community Religion, Employees, and the Social License to Operate

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Abstract The World Bank recently noted: “Social license to operate has traditionally referred to the conduct of firms with regard to the impact on local communities and the environment, but the definition has expanded in recent years to include issues related to worker and human rights” (World Bank 2013, <http://go.worldbank.org/FZ88VMOM90>). In this paper, we examine a factor that can influence the kind of work conditions that can facilitate or obstruct a firm’s attempts to achieve the social license to operate (SLO). Specifically, we examine the empirical association between a company’s employee practices and the religiosity of its local community by investigating their fixed and endogenous effects. Using a large and extensive U.S. sample, we find a positive association between the “employee friendly” practices of a firm and the religiosity of the local community after controlling for several firm characteristics. In addition, after mitigating endogeneity with the dynamic panel system generalized method of moment and after employing several other econometric tests, we still find a robust positive association between the religiosity of the local community and

employee-friendly practices. Since recent research has shown that the firm’s treatment of its stakeholders is a key to achieving an SLO, and since employees constitute a highly significant stakeholder group, we interpret our results as supporting the view that religion is an important influence on the kinds of employee practices that can increase the likelihood that a firm will acquire the SLO.

Keywords Corporate social responsibility · Employee friendliness · Religiosity · Religious morality hypothesis · Social license to operate

Introduction

Originating in the extractive industries¹ (oil, natural gas, and mining), the construct of a “social license to operate” has increasingly been perceived as a concept that applies to companies in a variety of other industries and it has consequently drawn an increasing amount of attention from both practitioners and academics (Downing 2001; Klein 2012; Black 2013). While there is no universally accepted definition of the term “social license to operate,” it is generally taken to refer to a community’s acceptance or approval of a specific company project or of the entire company’s ongoing operations in the community (O’Keefe

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¹ The term “social license to operate” was coined in 1997 by James Cooney, an executive with PlacerDome, a mining company, during a meeting with the World Bank. The World Bank subsequently adopted the term in its dealings with other mining companies and gave it wide currency (Boutillier et al. 2012).

2009; Wilburn and Wilburn 2011; Yates and Horvath 2013; Black 2014).²

The social license to operate (hereafter SLO) has been related to several other constructs including corporate social responsibility (CSR) (Wilburn and Wilburn 2011; Rowe and Bansal 2013; Bansal 2005), stakeholder engagement (Boutilier et al. 2012), and the concept of “free, prior, and informed consent” (FPIC) (Cooperacion 2004; Asmus 2009). Yates and Horvath (2013), for example, suggest that displaying a commitment to CSR is one way to achieve the SLO, while Wilburn and Wilburn (2011) point out that many companies position the SLO as part of their CSR strategy. Virtually, every study of the SLO asserts or assumes that stakeholder analysis and stakeholder engagement are key to acquiring the SLO (Wilburn and Wilburn 2011), and several have suggested that FPIC is quite similar to SLO, although FPIC differs from SLO insofar as it provides greater specificity than SLO and makes explicit the idea that community “acceptance” should be based on actual—not merely presumed—consent (Slack 2008; Voss and Greenspan 2012).

The early literature on the SLO suggested that a firm’s SLO was contingent on how the firm negotiated acceptance of the various impacts its operations might have on the local community and especially on the natural environment (Wilburn and Wilburn 2011). Later conceptual studies expanded this idea to include the firm’s impacts on other stakeholder groups including, in particular, employees. As the World Bank put it: “Social license to operate has traditionally referred to the conduct of firms with regard to the impact on local communities and the environment, but the definition has expanded in recent years to include issues related to worker and human rights” (World Bank 2013). The underlying idea is that companies that endow a community’s workers with jobs in which they are treated fairly and provided with employee-friendly initiatives are more likely to be accepted by the community and so more likely to be granted an SLO. The adoption of employee-friendly programs, of course, is not by itself sufficient to secure the SLO. As Black (2013, 2014) and others have argued, while providing good jobs may be necessary for the SLO, it is increasingly regarded as insufficient to earn the SLO because “more is expected of companies today.”

There is a remarkable lack of empirical research on the SLO, although there exists some research on related constructs such as the antecedents and consequences of stakeholder engagement (for example, Bowen et al. 2010)

and of CSR (see Aguinis and Glavas 2012). Nevertheless, at least one study has provided empirical support for the claim that fair and favorable treatment of stakeholders increases the likelihood that a company will be able to acquire the SLO (Moffat and Zhang 2014). In our paper, we do not provide additional support for this claim but instead propose to examine a related claim. In this paper, we will assume that fair and favorable treatment of stakeholders will increase the likelihood that a company will acquire the SLO, as Moffat and Zhang (2014) have shown, and we then ask the further question: What factors influence a company’s decisions to deal fairly and favorably with stakeholders, specifically with that group of stakeholders that the World Bank and others have singled out as particularly important for the SLO, namely employees? In particular, we examine a factor that is known to have a significant influence on the decisions company managements make, i.e., religion. By understanding the factors that influence a company’s decisions about one of its key stakeholder groups, i.e., its employees, we believe that we can gain some understanding of the external factors that can influence whether companies will achieve a social license to operate.

Previous research indicates that the presence of religion in a community does in fact influence local corporate decision making (e.g., Hilary and Hui 2009; Dyreng et al. 2010; Omer et al. 2010; Kumar et al. 2011; El Ghouli et al. 2012; McGuire et al. 2012a, b). This nexus between religion and corporate decision making suggests that corporate decisions regarding employees may likewise be influenced by the religiosity of the community surrounding the corporation’s top management. In particular, we believe that we may gain valuable insights into the possible influences underlying those corporate decisions that may help a company acquire the SLO, if we examine the association between religiosity and corporate decisions that impact how employees are treated. Moreover, since the literature on CSR sees employees as a key stakeholder to which management ought to be responsive (e.g., Crane and Matten 2004; Lynch-Fannon 2004; Faleye and Trahan 2010; Bae et al. 2011; Edmans 2011; Ertugrul 2012; Deng et al. 2013), learning how religion affects management decisions about employees will also have important implications for research on CSR, one of the constructs that previous literature has suggested is related to the SLO.

Religiosity³ is a widely researched construct, of course, and a number of studies have examined the influence of religiosity on employee attitudes and behaviors. There is,

² Social license exists outside formal regulatory processes, and there is ample evidence that a failure to gain and maintain this social license can lead to conflict, delays, or cost for the proponents of a project (Yates and Horvath 2013).

³ The meaning of “religiosity” is contested (Stark 2001; Zinnbauer et al. 1997). Here, we adopt the definition of McDaniel and Burnett (1990) and define religiosity as the degree to which an individual or group adheres to a belief in God, accompanied by a commitment to follow principles believed to be set by God.

however, little research on how religion may affect decisions that managers make *about* employees. Kutcher et al. (2010), for example, suggest that religiosity affects the job attitudes and behaviors of employees including their organizational commitment, job satisfaction, and job stress and burnout. Gibson (2005) and Micklethwait and Wooldridge (2009) show that workers increasingly want their religion integrated into all areas of their lives including the workplace. To the best of our knowledge, however, we are the first to empirically examine the influence of religiosity on corporate decisions about employees.

To examine this relationship, we develop a hypothesis that we label the religious morality hypothesis. The religious morality hypothesis is based in part on an examination of the moral obligations that the dominant U.S. religions teach that managers owe employees, and in part on the link between religious morality and behavior (Geyer and Baumeister 2005; Vitell et al. 2009). Melé (2012a, b), for instance, has suggested that the U.S. religious denominations (which are predominantly Protestant and Catholic) see employee-friendly practices as morally desirable. Since previous research has shown that a region's religious moral beliefs affect the behavior of believers and nonbelievers within that region (Stark et al. 1980, 1982; Pescosolido and Georgianna 1989; Pescosolido 1990; Omer et al. 2013; Regnerus 2003; Corcoran et al. 2012; Clark-Miller 2008), we are led to the hypothesis that the religiosity of the region in which a firm's headquarters is located will be positively related to the firm's investments in the employee-friendly practices that the U.S. religions promote.

The empirical results of our study, which is based on a sample of the U.S. firms operating in the period 1991–2010, suggest that this hypothesis is correct: there is a positive and robust association between corporate investments in employee-friendly practices and the local community's religiosity, an association that remains even after controlling for various firm and demographic characteristics. In addition, following Wintoki et al. (2012), when we employ Blundell and Bond's (1998) dynamic panel system generalized methods of moment (GMM) to mitigate endogeneity issues, our results confirm the positive association between employee-friendly practices and the religiosity of the local community surrounding the firm's headquarters. Overall, our results suggest that firms whose headquarters are located in areas with higher levels of religiosity invest in more employee-friendly activities, supporting the religious morality hypothesis. Our robust findings of a positive relation between local community religiosity and employee-friendly practices are supportive of the view that religion influences managerial decisions to invest in employee-friendly programs. Religion, therefore, can influence the firm's ability to obtain the SLO if, as we

are presuming, communities are more willing to grant a company the SLO when it provides employment that is fair and favorable toward employees.

The remainder of the paper is organized as follows: “Literature Review and Hypotheses Development” section describes the literature on which we base our hypothesis development. We then discuss the sample and measurement of employee-friendly corporate practices and religiosity as well as our research design in “Data, Measurement, and Research Design” section. “Empirical Results” section presents the empirical results. The final sections summarize the significance and the limitations of this study and state our overall conclusions.

Literature Review and Hypotheses Development

Religiosity

Following in the footsteps of Max Weber (2009 [1904]), numerous studies have asked whether religion has a significant impact on human behavior. Religion has been shown to have a strong influence on political attitudes and political behaviors such as voting (Leege and Kellstedt 1993; Jelen 1998; Fastnow et al. 1999). Religion affects attitudes toward premarital childbirth and decisions to engage in or abstain from premarital intercourse (Jeynes 2003). It is inversely associated with the likelihood that adult individuals will engage in tax fraud (Grasmick et al. 1991a, b; Patee et al. 1994; Stack and Kposowa 2006) and, more generally, will engage in deviant behaviors (Agnew 1998; Baier and Wright 2001). Religion has also been found to be inversely related to juvenile delinquency (Cochran and Akers 1989). Although some early studies contested this association (e.g., Hirschi and Stark 1969), more recent ones have tended to confirm it (Albrecht et al. 1977; Sloane and Potvin 1986; Donahue and Benson 1995; Chadwick et al. 2010).

Previous research also suggests that the presence of religion influences corporate decision making (Nash 1994; Hilary and Hui 2009; Dyreng et al. 2010; Omer et al. 2010; El Ghoul et al. 2012; McGuire et al. 2012a, b). Nash (1994) reported that in her interviews of “evangelical CEOs,” executives that demonstrated a strong commitment to religion stated that their decisions were guided by those religious commitments.

Some researchers have suggested that, at the individual level, religion exerts its influence on behavior through the moral values that it inculcates in individuals. Huffman (1988) argues, for example, that an individual's religiosity is a stronger determinant of the individual's values than any other predictor. Hunt and Vitell (1986, 1993) suggest that those who are more religious might be expected to be

more ethical. McCabe and Trevino (1993) maintain that the fear of God's punishment instilled by religion motivates seriously religious individuals to adhere to "virtue and morality." In this vein, Kennedy and Lawton (1998) found a *negative* relationship between an individual's religiosity and a willingness to behave *unethically*. In addition, Weaver and Agle (2002) suggest that an individual's religiosity is known to influence both the individual's attitudes and the individual's behaviors. They further argue that behavior is influenced by religious self-identity, which is formed by the internalization of the role expectations offered by religion. Walker and Pitts (1998) similarly argue that a very religious person will embody the traits of a moral person. Geyer and Baumeister (2005) assert that religion can supply individuals with the "motivations, hope and comfort that can allow them to maintain virtuous behavior" even when this may be difficult. Rohrbaugh and Jessor (1975) claim that religiosity directly and positively can influence an individual's self-control, which in turn can facilitate moral behavior. Echoing their claim, Welch et al. (2006) maintain that 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."

A related stream of research on the so-called "moral communities" hypothesis has focused on how the religiosity of a group influences the behaviors of the group's members. Welch et al. (1991, p. 159), for example, have argued that religion "is a potent generator of conformity" among the members of a community. Research on the moral communities hypothesis is generally traced back to Emile Durkheim's classic study of suicide (1897). In his study, Durkheim compared the rates of suicide in regions that were predominantly populated by Catholics, with the suicide rates in regions populated predominantly by Protestants. Finding that suicide rates in Catholic regions were lower than suicide rates in Protestant regions, Durkheim argued that the difference was due to the stronger social control that Catholic communities exerted on their members, compared to the weaker forms of control exerted by Protestant communities. As articulated in its modern formulation, the moral communities hypothesis claims that the religiosity of a community influences the attitudes and behaviors of its members, both adherents and non-adherents, because communities with higher levels of religiosity promote greater conformity to their moral values (Welch et al. 1991; Sloane and Potvin 1986; Cochran and Akers 1989). A significant number of empirical studies have tended to support the moral community hypothesis (Stark et al. 1980, 1982; Pescosolido and Georgianna 1989; Pescosolido 1990). Omer et al. (2013), for example, found that

the audit opinions issued by accountants working in highly religious metropolitan areas were more conservative and more honest than those of accountants in less religious areas; Regnerus (2003) found that counties with higher levels of religiosity were associated with lower theft and delinquency rates among adolescents living in those counties; Welch et al. (1991) showed that the level of religiosity of a Catholic parish influences the likelihood that people living within that parish will engage in deviant behaviors; and Corcoran et al. (2012) and Clark-Miller (2008) showed that the level of religiosity of a nation influences the extent to which that nation's inhabitants will see white-collar crime as acceptable. In summary, the level of religiosity of a geographically defined community—whether at the level of a parish, a city, a county, or an entire nation—is positively associated with the moral attitudes and behaviors of the inhabitants of that community (Greeley et al. 1981; Wald et al. 1988; Legee and Welch 1989).

If it is true that religion influences decision making, that it does so through the moral beliefs that it inculcates, and that its influence can extend throughout a community, then a community's religious views about the moral obligations managers have toward employees may influence the decisions local managements make about their employees. In particular, we are led to ask whether a community's religious views about the moral obligations managers owe employees influence managerial decisions to implement programs and policies that are fair and friendly toward employees, the type of stakeholder engagement initiatives that have been shown to be supportive of the SLO (Moffat and Zhang 2014). To begin to answer that question, we look next at the kinds of moral obligations that the U.S. religions say that managers owe their employees.

Religiosity and Employee Relations

Although the religious traditions of the U.S. are quite diverse, the great majority (76 %) identify themselves as Christian and the proportion of Americans who belong to non-Christian religions (3.9 %) is relatively small.⁴ Thus

⁴ The majority of the U.S. population—76 %—identifies itself as Christian according to the 2008 *American Religious Identification Survey* (ARIS) on which the Bureau of the Census relies for its own estimates of the U.S. religious demographics. (Kosmin and Keysar 2009). Of this religious majority, according to ARIS, 33 % are Catholic and the other 67 % are members of Protestant 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 (.6 %), Seventh Day Adventist (.6 %), United Church of Christ (.4 %), and "Unspecified" Christian (9.5 %) or "Unspecified" Pentecostal (3.2 %). In addition to those Americans who identified themselves to ARIS as members of a Christian

we will focus on the teachings of the three main Christian denominational groups: Catholics, mainline Protestants, and evangelical Protestants. As we will see, the views of the Christian denominations that make up this majority converge on several common themes regarding employees, evidencing a degree of similarity that is surprising in light of the diversity that characterizes the Protestant denominations in particular (ILO 2012). Melé (2003, 2009, 2012a, b) and Zinbarg (2001), for example, have pointed out that a theme common to the literature of the Christian denominations is the view that the firm should be seen as a “community” of persons who each possess a “human dignity” that all must respect. Mele argues that this view of the firm and its employees implies that managers have a moral responsibility to respect the human dignity of employees and to ensure that, as members of the community, they share in the benefits that the firm generates. This view of the organization as a community of persons with dignity extends the manager’s moral responsibilities beyond the requirements of the law to include allowing worker involvement in decision making, providing stable ongoing employment, respecting worker’s human rights, paying a living wage, and supporting the development of the worker through training and education (Melé 2012b).

The views of the Catholic Church adhere closely to those that Mele articulates. Catholic moral views on business are embodied in what is sometimes called “Catholic Social Teaching” (CST) which is based for the most part on a series of “social encyclicals” (moral teachings on social, economic, and political issues) that Catholic popes began to write in the late nineteenth century (Finn 2012; Thompson 2010).⁵ The first of the social encyclicals was the 1891 encyclical of Pope Leo XIII, *The Condition of Labor*, written in response to the unjust treatment of workers that the industrial revolution had produced, and the most recent was the 2009 encyclical, *Charity in Truth*, of

Pope Benedict XVI. Thompson (2010) points out that the “foundations” of the moral views expressed in the social encyclicals are the claims, first, that every person has an “inviolable dignity” that derives from being created “in the image of God,” (see, for example, Benedict XVI 2009) and, second, that humans are social and interdependent and so must live and work in communities in which each has responsibilities toward the others. A business, in particular, is a kind of community; that is, it is “a ‘society of persons’ in which people participate in different ways and with specific responsibilities” (John Paul II 1991). In this community, “management cannot concern itself only with the interests of the proprietors [shareholders], but must also assume responsibility for all the other stakeholders who contribute to the life of the business: the workers, the customers, the suppliers, ... [and] the [local] community” (John Paul II 1981). The 1981 encyclical of John Paul II, *On Human Work*, provides the fullest articulation of the CST’s view of the responsibilities of management toward workers. By working, it declares that people “share... in the activity of the Creator” (section 25). Because as a person the worker has a dignity that must be respected, *On Human Work* argues (sections 14–19) that the managers of a firm should provide workers with (1) a “just remuneration” that is “sufficient for the needs of a family,” (2) health care insurance, (3) periods of rest and vacation, (4) retirement benefits, (5) safe and healthy working conditions, (6) the right to unionize, and (7) a way to participate in the management of the business and a way to share in its ownership.

While the Protestant denominations are, as we noted above, quite diverse, their views on how employees ought to be treated tend to converge on a set of moral beliefs that are similar not only to each other, but to those of CST (ILO 2012; Peccoud 2004). Mainline Protestant teachings view “the workplace as a close-knit community” (Zinbarg 2001, p. 122), see workers as possessing a human dignity that derives from being “created in the image of God,” and advocate fairness and employee-friendly practices as a way of exhibiting respect for workers’ human dignity (ILO 2012). Unlike the Catholic Church, of course, the various mainline Protestant Churches do not recognize any institution that, like the Papacy, is able to issue a unified and authoritative body of statements on moral issues. Nevertheless, a representative picture of Protestant views can be drawn from statements that various groups of mainline Protestant Churches have issued and recommended to their members, a picture that is quite cohesive and consistent with CST. For example, in their 2004 paper *Business as Mission*, the Lausanne Committee for World Evangelization, a major international religious group composed of representatives of several mainline Protestant denominations, echoes CST in its declaration that “Created in God’s

Footnote 4 continued

denomination, 3.9 % stated that they were members of non-Christian religions (such as Jewish, 1.2 %, Muslim, .6 %, and Buddhist, .5 %) and 15 % state that they have no religion, while the remaining 5.2 % provided no response when asked about their religious affiliation. In his Gallup study, Newport (2011) reports numbers that are similar to those of ARIS. Newport (2011) reports that based on 327,244 interviews, 78 % of American adults identify with some form of Christian religion, including Protestant (52.5 %), Catholic (23.6 %), and Mormon (1.9 %). The remainder are adherents of Judaism (1.6 %), Islam (0.5 %), other non-Christian religions (2.4 %), atheist (15 %), and no response given (2.5 %).

⁵ Popes were writing encyclicals long before the nineteenth century, of course, but the first encyclical to address social/economic issues was the 1891 encyclical *The Condition of Labor*. Other sources of CST besides the encyclicals include the teachings of Church Councils such as *Vatican II*, the addresses of the Popes, and official summaries such as the *Compendium of the Social Doctrine of the Church*.

image, humanity is also capable of creating” and has “the responsibility to respect and care for each other and ... the creation we are stewards of” (Lausanne 2004). Business people that are committed to “apply Christ’s teaching to their business life and practice,” the paper states, will seek “the holistic welfare of employees” and “make work and working conditions as safe and pleasant as possible” while ensuring that “employees are treated with dignity and are given opportunities for personal and professional growth” (Ibid.)

Another important mainline Protestant document that addresses employee issues is *Economic Life, Sufficient, Sustainable Livelihood for All*, which was adopted by the Churchwide Assembly of the Evangelical Lutheran Church in America in 1999. This church statement, too, claims that all people possess a “human dignity” because they are “created in God’s image.” Consequently, the document asserts that employers must “treat employees with dignity” by providing “remuneration” that is “sufficient for them to live in dignity,” as well as “adequate pension and health benefits, safe and healthy work conditions,” “workplaces of participatory decision-making,” and “the right of employees to organize” in unions. (Ibid.) The influential *Oxford Declaration on Christian Faith and Economics*, which was written by representatives of several mainline Protestant denominations in 1990, similarly states that workers are “made in the image of God” and so have a “dignity” that implies they should not be treated “merely as costs,” but should be allowed to “participate... in... decision-making,” to have “ownership... of economic institutions,” to “develop their potential” through “educational programs,” and to have their “human rights” respected. The largest mainline Protestant group, the United Methodist Church (UMC), at its 2008 General Conference adopted a resolution entitled “Rights of Workers” that stated, “human beings, created in the image of God, have an innate dignity.” Consequently, “workers should be treated with respect and dignity” and “should earn wages that sustain themselves and their families, and employers have a particular responsibility to treat workers fairly and empower them to organize to improve conditions.” The resolution supported “safety in the workplace;... fair compensation; just supervision; and the right of collective action.”

On May 1930, in New Orleans, Louisiana, the Southern Baptist Church, whose moral views are fairly representative of the evangelical Protestant denominations, adopted a Resolution *Concerning Industrial Relations* that called for the recognition of “the right” of workers to “organize and engage in collective bargaining” and to receive a “living wage” and “good sanitary housing conditions.” Then in June 1978 in Atlanta, Georgia, the Southern Baptist Church adopted a “Resolution” entitled “Declaration of Human Rights” that asserted that people have rights because they

are created “in God’s own image” and added that people have a right to “work and equal pay for equal work.”

The Christian denominations which dominate the American religious population, then, uniformly advocate employee-friendly practices, and they call on managers to support such practices and to treat workers fairly and equitably. The U.S. Christian denominations affirm the “dignity” of the worker based on the idea that each is created “in the image of God.” We summarize the main views of Christian denominations toward employee-friendly practices in Table 1.

As Table 1 indicates, all the Christian denominations declare that respect for the dignity of workers implies that workers should be able to participate in management decision making, should be able to participate in ownership of the companies in which they work, should be able to organize into unions, and should receive fair compensation, steady employment, retirement benefits, access to a safe and healthy workplace, and that their human rights must be respected.

How might these religious views of the moral obligations managers owe to their employees affect the decisions of managers? We earlier briefly reviewed the literature that demonstrates that religiosity affects the behavior of individuals. In addition, a stream of research on “moral communities” has provided strong evidence that religion “is a potent generator of conformity” (Welch et al. 1991, p. 159; see also Cochran and Akers 1989; Sloane and Potvin 1986; Stark 1996). That is, the religiosity of a region has a strong influence on the moral behavior of those residing in that region because communities with a high level of religiosity promote conformity to their religious morality (Stark et al. 1980, 1982; Pescosolido 1990; Regnerus 2003). Religious context matters and local levels of religiosity will influence the behaviors of the community’s local residents. (Greeley et al. 1981; Legee and Welch 1989; Wald et al. 1988; Ellison et al. 1997).

Accordingly, since the dominant religions in the United States uniformly embrace the view that managers have a moral obligation to treat their employees in a manner that is fair and supportive of their welfare, and since local levels of religiosity have been shown to influence the behaviors of local residents, we hypothesize that firms whose top managements are headquartered in areas with higher levels of religiosity will tend to engage in higher levels of fair and employee-friendly dealings with employees. We call this the “religious morality hypothesis”:

Hypothesis 1 Under the religious morality hypothesis, firms headquartered in areas with higher religiosity tend to engage in more employee-friendly practices.

But is our hypotheses correct? Because that is an open empirical question, we turn next to examine the impact that

Table 1 Christian denomination and employee relations

Denomination of Christian	Different religious views regarding employees
Catholics	<p>Catholic moral views on business are called “Catholic Social Teaching” or “Catholic Social Tradition” (CST) (Finn 2012; Thompson 2010)</p> <p>A business, in particular, is <i>a kind of community</i>; In this community, “management cannot concern itself only with the interests of the proprietors [shareholders],... (Benedict XVI 1981)</p> <p>The managers of a firm should provide workers with (1) “just remuneration,” (2) health care insurance, (3) periods of rest and vacation, (4) retirement benefits, (5) safe and healthy working conditions, (6) the right to unionize, and (7) a way to participate in the management of the business and a way to share in its ownership (The 1981 encyclical of John Paul II)</p>
Mainline protestant	<p>“The workplace <i>as a close-knit community</i>” (Zinbarg 2001, p. 122)</p> <p>Business people that are committed to “apply Christ’s teaching to their business life and practice,” the paper states, will seek “the holistic welfare of employees” and “make work and working conditions as safe and pleasant as possible” while ensuring that “employees are treated with dignity and are given opportunities for personal and professional growth” (“Business as Mission” by Lausanne 2004)</p> <p>Employers must “treat employees with dignity” by providing “remuneration” that is “sufficient for them to live in dignity,” as well as “adequate pension and health benefits, safe and healthy work conditions,” “workplaces of participatory decision making,” and “the right of employees to organize” in unions (“Economic Life, Sufficient, Sustainable Livelihood for All,” Evangelical Lutheran Church 1999)</p> <p>“Workers should be treated with respect and dignity” and “should earn wages that sustain themselves and their families, and employers have a particular responsibility to treat workers fairly and empower them to organize to improve conditions.” The resolution supported “safety in the workplace;... fair compensation; just supervision; and the right of collective action.” (“Rights of Workers,” United Methodist Church, 2008)</p>
Evangelical protestant	<p>The Church adopted a Resolution that called for the recognition of “the right” of workers to “organize and engage in collective bargaining,” to receive a “living wage” and “good sanitary housing conditions.” (“Concerning Industrial Relations,” Southern Baptist Church 1930)</p> <p>The Church adopted a “Resolution” asserted that people have rights because they are created “in God’s own image” and added that people have a right to “work and equal pay for equal work” (“Declaration of Human Rights,” Southern Baptist Church 1978)</p>

religion may have on employee practices using empirical data. We do this in the following sections.

Data, Measurement, and Research Design

Data and Measurements of Employee-Friendly Practices

We begin by taking a sample of firms in the Kinder, Lydenberg, and Domini’s (KLD) Stats database (KLD) from 1991 to 2011. Initiated in 1989, the KLD database rates companies on their CSR performance in several categories, has been widely used in studies of firms’ CSR performance, and has been characterized as highly reliable (Sharfman 1996). During the 1991 to 2011 period, the KLD Stats database rated each of the companies in its database in seven major CSR categories including community relations, corporate governance, diversity, employee relations, environment, human rights, and products. In each of these CSR categories, each company is given a score (either a zero or one) for each of several possible “strengths” (positive CSR characteristics) it could possess in that

category, and a score for each of several possible “concerns” (negative CSR characteristics) that the company could have within that category. Altogether (i.e., counting all seven CSR categories), the KLD rating criteria provide approximately 80 “strengths” and “concerns” annual ratings for each company in their database. Prior to 2001, KLD included all the firms listed on the S&P 500 plus 150 additional firms selected for their superior CSR records. In 2001 and 2002, the KLD ratings were expanded to cover the “Russell 1000” (the 1000 largest US firms including the S&P 500) plus 100 additional firms with exemplary CSR records. In 2003, the KLD database was again expanded to cover the “Russell 3000” (the 3000 largest US firms) plus 100 additional firms selected for their outstanding CSR records. Because the inclusion of those firms that were specifically selected for their superior CSR performance threatens to bias our results, we removed those firms from our dataset and retained only the firms in the S&P 500, the Russell 1000, and the Russell 3000.

While the typical CSR studies focus on all or most of the categories covered by the KLD Stats database (by aggregating all of a company’s ratings in all categories), in this paper we solely focus on the employee relations category

of KLD's database of CSR ratings and use the ratings in this single category to construct what we call the employee relations index scores for each company. We construct two employee relations index scores (EMPREL I and EMPREL II that is the logistic transformation of EMPREL I) for each company. In Appendix, we show in detail how in its employee relations category KLD gives each company a rating on each of seven possible strengths and on each of five possible concerns. Specifically, KLD employee relations strength ratings are based on the following: the quality of its union relations, having a no-layoff policy, providing cash profit sharing, allowing employee involvement in decision making or stock ownership, providing retirement benefits, maintaining a healthy and safe workplace, and "other" strengths; KLD's concerns ratings in the employee relations category are based on the following: having notably poor union relations, willful violations of employee health and safety standards, significant reductions in its workforce in recent years, having an inadequate retirement benefits program, and other employee "controversy" concerns which generally consist of human rights violations pertaining to employees. These employee strengths and concerns, we note, coincide fairly well with the kinds of employee-friendly practices that are supported by the dominant U.S. religious denominations we discussed earlier.

The KLD ratings consist of a binary (0 or 1) value assigned to each strength and each concern factor. Since the number of measures varies across the years, the EMPREL I score we assign to each firm in a given year is normalized by subtracting the sum of the concerns values from the sum of the strengths values and dividing the result by the number of possible strengths and concerns KLD used that year in its employee relations category (this follows the CSR index-making procedure of Jo and Harjoto 2011 and, 2012, and Cui et al. 2014). For each firm i in year t , we let E^{ijt} denote an indicator variable of employee relations strength j for firm i in year t ; we let E^{ikt} denote an indicator variable of employee relations concern k for firm i in year t ; and let E^{jt} and E^{kt} denote the maximum number of employee relations strengths and concerns, respectively, in year t for any firm. The EMPREL I index score, E^{it} , for each firm i for firm-year observation t is then:

$$E^{it} = \frac{\sum_j E^{ijt} - \sum_k E^{ikt}}{E^{jt} + E^{kt}} \quad (1)$$

In other words, our main employee relations index score (EMPREL I) for each firm in a given year is the difference between the sum of its KLD employee relations strengths values minus the sum of its KLD employee relations concerns values (numerator), divided by the number of KLD employee relations strengths and concerns KLD used that year (denominator). In addition, we construct a second

index score we call the EMPREL II index score, which is constructed by calculating the logistic transformation of the EMPREL I score. We use the EMPREL II index score as an additional and independent measure to check the robustness of our analysis.

Measurement of Religiosity and Use of Control Variables

Our measure of religiosity is based on the dataset contained in the American Religion Data Archive (ARDA), which has been used for this purpose by, e.g., Hilary and Hui (2009), Dyreng et al. (2010), Grullon et al. (2010), and El Ghoul et al. (2012), as well as others. The ARDA provides the "U.S. church membership data file at the county level," which provides us with the number of adherents of each religious group in each county. In this paper, as a proxy for the level of religiosity of the population of a county, we use the percentage of religious adherents in that county, i.e., we divide the number of religious adherents in a county by that county's total population to yield what we call the religiosity (REL) score for that county [this procedure follows Hilary and Hui (2009), Dyreng et al. (2010), Omer et al. (2010), El Ghoul et al. (2012), and McGuire et al. (2012a, b)]. The ARDA provides the adherent data on a 10-year basis (1971, 1980, 1990, 2000, and 2010). Since our EMPREL scores and other data are compiled on an annual basis, we need to linearly interpolate and extrapolate the religiosity variable (REL) to obtain values in the missing years from 1991 to 2010 in order to be able to match the REL scores with our two EMPREL scores (EMPREL I and EMPREL II) and with other independent variables that we describe below. The resulting religiosity variable, REL, we believe, is an adequate proxy for what we referred to earlier as the level of religiosity of the area (the county) within which the management of a firm may reside.

The ARDA data also provide the number of people in each county that are Catholic, the number that are adherents of a mainline Protestant denomination, and the number that are adherents of an evangelical denomination. By dividing each of these three numbers by the total population of the county, we are able to determine for each county the percentage of the population that belongs to each group. We then use the percentage of Catholics in a county as a measure of its Catholic religiosity (CATHO), the percentage of mainline Protestants as a measure of its mainline Protestant religiosity (MAIN), and the percentage of evangelical Protestants as a measure of its evangelical Protestant religiosity (EVAN). This will allow us to disaggregate the overall religiosity of a county (REL) into its three main components (CATHO, MAIN, EVAN) and therefore examine the contribution that each of these three Christian groups makes to the impact, if any, that religiosity (REL)

has on a firm's employee relation scores.^{6,7} The measures for our three disaggregated religiosity variables (CATHO, MAIN, and EVAN) and our main religiosity variable (REL) are linearly interpolated and extrapolated, based on the 1990, 2000, and 2010 ARDA data, following Hilary and Hui (2009), Dyreng et al. (2010), Grullon et al. (2010), and El Ghoul et al. (2012).

We draw an additional set of control variables from the Compustat database which provides financial variables for each firm, as well as from the Center for Research in Stock prices (CRSP) datasets compiled by the University of Chicago. We use these variables as controls for various financial characteristics of the companies in our study (The rationale for using these and other financial variables as controls is discussed below in the section on research design.). Compustat provides measures of each company's total assets, market value, capital expenditures, sales growth rate, long-term debt, advertising expenditures, R&D expenditures, and industry, while CRSP provides information on company stock returns. These financial variables are also described in Table 2.

Construction of the Final Sample

Our final sample is constructed by merging the employee relations index (EMPREL) we constructed from the KLD data, the location and financial variables from COMPUSTAT, the standard deviations of monthly stock returns computed from the Center for Research in Stock Prices (CRSP) data, and the religiosity indices (REL, CATHO, MAIN, and EVAN) we constructed from the ARDA data. We first match the KLD-based employee relations 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 indices.⁸

⁶ Based on a comprehensive dataset from the CSR wire news service, Griffin and Sun (2013) find that firms disclose less in locations with strong religious beliefs (high adherence) but disclose more in locations with more non-evangelicals (high affiliation).

⁷ In our unreported tabulation of 503 counties, we found that Norfolk county, MA, has the highest percentage of Catholic adherents (55.2 %), and Winnebago county, IA, has the highest percentage of mainline Protestant adherents (67.7 %), while Jones county, MS, has the highest percentage of evangelical Protestant adherents (53.6 %). The tabulated results are available from the authors upon request.

⁸ Since the religiosity indices are provided on a county-level basis, we match the datasets using the counties where the firms' headquarters are located. However, since the COMPUSTAT dataset for the most part does not provide the counties where 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 provides 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 our employee relations (EMPREL I and EMPREL II), religiosity (REL, CATHO, MAIN, and EVAN), and other control variables, the size of the combined sample measures approximately 23,900 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 employee initiatives and area religiosity (REL), we first regress a firm's employee relation score (EMPREL), constructed from the KLD data, on the level of religiosity (REL) of the county in which the firm is located, along with our other control variables. Our choice of control variables generally include the variables used in other CSR studies because the KLD employee relations category is one of the important sub-categories of CSR and 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 (Clarkson et al. 2011; for additional references see Jo and Harjoto 2011, 2012). Accordingly, we assume that these factors could affect a firm's decisions about employee issues as well. Thus, we include various financial characteristics of each firm including the firm's size as measured by the log of its total asset value (LOGTA) and the total market value of its equity (LOGMVE), and the firm's investment growth opportunities as measured by the market-to-book value of equity (MBVE). We also control for the firm's total debt ratio (DEBTR), advertising expense ratio (ADVR), R&D expenditure ratio (RNDR), capital expenditure ratio (CAPEXA), and one-year sales growth rate (SALEG) variables. Moreover, based on suggestions in the finance and accounting literature, we control for firm risk, as measured by the volatility (standard deviation) of its monthly stock returns (DEVRET). We also control for various county-level demographic variables including age, poverty, sex, education, income, and race, following Iannaccone (1998). We further control for political affiliation (POLITICAL AFFILIATION) as Rubin (2008) and Di Giuli and Kostovetsky (2014) suggest, firm internationalization (as Attig et al. 2014 suggest) using the existence of foreign exchange earnings (FCA), and we control for board independence (PCTINDEP) following Jo and Harjoto (2011, 2012). In addition, we conduct pre- and post-Sarbanes-Oxley Act (SOX) analyses using a SOX-dummy that is equal to one for the post-SOX period and zero for the pre-SOX period, following El Ghoul et al. (2012). To examine the relation between our employee relations and religiosity

Table 2 Variable descriptions and data source

Variables	Definitions
<i>EMPREL I</i>	The combined index scores of strengths and concerns of each employee relations (source: KLD)
<i>EMPREL II</i>	The logistic transformation value of employee relation index scores
<i>REL</i>	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>MAIN</i>	Measured by the percentage of adherents of mainline protestant denominations (=total adherents of mainline protestant denominations/total population) per county, linearly interpolated and extrapolated, based on the 1990, 2000, and 2010 data [source: American Religion Data Archive (ARDA)]
<i>EVAN</i>	Measured by the percentage of adherents of evangelical protestant denominations (=total adherents of evangelical protestant denominations/total population) per county, linearly interpolated and extrapolated, based on the 1990, 2000, and 2010 data [source: American Religion Data Archive (ARDA)]
<i>CATHO</i>	Measured by the percentage of adherents of Catholicism (=total adherents of Catholicism/total population) per county, linearly interpolated and extrapolated, based on the 1990, 2000, and 2010 data (source: American Religion Data Archive (ARDA))
<i>EMPLOYEE_STRENGTH</i>	The number of all employee relations strength items (source: KLD)
<i>EMPLOYEE_CONCERN</i>	The negative value of the number of all employee relations concern items (source: KLD)
Firm control variables	
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 the current year (source: 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)
FCA	Foreign Exchange earnings (source: Compustat)
PCTINDEP	Measured as the number of independent outside directors divided by the number of total directors (source: Risk-Metrics database)
Demographic control variables	
AGE	Median age of residents per county, linearly interpolated (source: US Census Bureau)
SEX	Percentage of female residents per county, linearly interpolated (source: US Census Bureau)
EDUCATION	Percentage of residents with bachelor degree per county, linearly interpolated (source: US Census Bureau)
INCOME	Per capita income per county, linearly interpolated (source: US Census Bureau)
RACE	Percentage of black population per county, linearly interpolated (source: US Census Bureau)
Other controls	
POLITICAL AFFILIATION	Percentage of residents having voted for Republicans in the previous election per county, linearly interpolated (source: US Census Bureau)
R_U_DUMMY	Equal to one if the firm is located in an urban area, and zero otherwise.(source: US Census Bureau)
SOX_DUMMY	Equal to one for the period after the ratification of the Sarbanes–Oxley (2002), and zero otherwise

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

measures, we first run the following baseline fixed effect regressions in order to handle the time-invariant, firm-fixed effects in the relation between *EMPREL* and *REL*.

$$\begin{aligned}
 \text{EMPREL}_{i,t} = & \alpha_0 + \alpha_1 \text{REL}_{i,t} \\
 & + \sum_{j=2}^n \alpha_j \text{CONTROL VARIABLES}_{i,t-1} + u_i + \varepsilon_{i,t}
 \end{aligned}
 \tag{2}$$

The employee relation scores of each firm in the KLD database, however, tend to be autocorrelated. In addition, the religiosity variable is endogenously determined. In order to address these endogeneity and autocorrelation issues, we adopt a well-developed dynamic panel system generalized method of moment (GMM) estimator, following Blundell and Bond (1998) and Wintoki et al. (2012), and use the method for the determinants of employee relations, and then

compare the results to those obtained from the baseline fixed effect estimates

$$\begin{aligned} \text{EMPREL}_{i,t} = & \alpha_0 + \alpha_1 \text{REL}_{i,t} \\ & + \sum_{j=2}^n \alpha_j \text{CONTROL VARIABLES}_{i,t-1} \\ & + \kappa_1 \text{EMPREL}_{i,t-1} + \kappa_2 \text{EMPREL}_{i,t-2} + \eta_i + \varepsilon_{i,t} \end{aligned} \quad (3)$$

Table 2 lists definitions and constructions of all variables that are used in this study.

Empirical Results

Descriptive Statistics and Bivariate Correlation

In Table 3 Panel A, we present the summary statistics of our main and control variables. The mean of EMPREL I is 0.4438, while the mean of the logistic transformation

of EMPREL I (EMPREL II) is 0.4706. The minimum and maximum of the firms' EMPREL index scores range between 0.0000 and 0.9091 for EMPREL I and between 0.0180 and 0.9933 for EMPREL II indicating that there are wide variations of employee-friendly practices across our KLD sample firms. The average value of REL is 51.72 % indicating that the average number of the percentage of religious adherents (=total adherents/total population) per county is approximately 52 %. Descriptive statistics for control variables are also reported in Table 3. The average volatility of monthly stock returns (DEVRET) during the year measured by the standard deviation of monthly stock returns for the year prior to the current year is 0.0986. Sample firms have an average total debt ratio (DEBTR) of 18.09 and an average market-to-book value of equity (MBVE) of 3.24. The firms' average sales growth (SALEG) is 12.87 % and the average R&D ratio is about 3 %. The averages of firms' financial characteristics reported in Table 3 are comparable with samples in previous studies, such as Dhaliwal

Table 3 Descriptive statistics

Variable	Observation	Mean	Std Dev	Min	Median	Max
Panel A: Employee relations (<i>EMPREL</i>) scores and firm characteristics						
<i>EMPREL I</i>	24100	0.4438	0.0849	0.0000	0.4545	0.9091
<i>EMPREL II</i>	24100	0.4706	0.1716	0.0180	0.5000	0.9933
<i>REL</i>	24100	0.5172	0.1310	0.0000	0.5163	1.0000
<i>MAIN</i>	24100	0.0791	0.0509	0.0000	0.0682	0.7334
<i>EVAN</i>	24100	0.1271	0.1324	0.0000	0.0807	1.0000
<i>CATH</i>	24100	0.2771	0.1429	0.0000	0.2739	0.7380
<i>LOGTA</i>	24100	7.5206	1.6820	4.1250	7.4552	12.1502
<i>LOGMVE</i>	24100	7.4181	1.5130	4.6513	7.2678	11.5491
<i>MBVE</i>	24100	3.2419	3.1903	0.5115	2.2535	21.1533
<i>CAPEXA</i>	24100	0.0462	0.0523	0.0000	0.0311	0.2938
<i>ADVR</i>	24,100	0.0104	0.0271	0.0000	0.0000	0.1674
<i>RNDR</i>	24,100	0.0314	0.0634	0.0000	0.0000	0.3608
<i>DEBTR</i>	24,000	0.1809	0.1723	0.0000	0.1454	0.6835
<i>SALEG</i>	24,000	0.1287	0.2836	-0.4955	0.0833	1.5737
<i>DEVRET</i>	23,800	0.0986	0.0509	0.0325	0.0851	0.2794
<i>FCA</i>	24,100	-0.1714	5.6744	-30.0000	0.0000	40.0000
<i>PCTINDEP</i>	11,600	0.7069	0.1546	0.0000	0.7273	1.0000
Panel B: Demographic characteristics						
<i>AGE</i>	23,900	35.6644	2.8021	22.6600	35.5400	52.5000
<i>EDUCATION</i>	23,900	34.5481	10.3352	6.9700	32.7667	69.7556
<i>INCOME</i>	23,900	10.6808	0.3668	9.3503	10.6578	11.9125
<i>SEX</i>	23,900	0.5091	0.0166	0.3414	0.5100	0.9944
<i>RACE</i>	23,900	0.1384	0.1210	0.0007	0.1046	1.2075
<i>POLITICAL AFFILIATION</i>	23,900	39.9526	13.6291	0.0000	40.1500	86.0000

This table displays descriptive statistics from 1991 to 2011, 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 2. We measure the degree of religiosity by the percentage of adherents (=total adherents/total population) per county (*REL*)

Table 4 Bivariate correlations

No.	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
<i>Panel A: Correlation among employee relations, religion, and firm characteristics</i>																			
1	EMPREL I	1																	
2	EMPREL II	0.9385*	1.0000																
4	REL	0.0416*	0.0247*	1															
5	MAIN	0.0507*	0.0196*	0.1917*	1														
6	EVAN	-0.0675*	-0.0439*	-0.2398*	0.2385*	1													
7	CATHO	-0.0016	0.0036	0.6946*	-0.2810*	-0.6148*	1												
8	LOGTA	0.1740*	0.1395*	0.0429*	0.1113*	-0.0049	-0.0068	0.8081*	1										
9	LOGMVE	0.2331*	0.1805*	0.0611*	0.0834*	-0.0716*	0.0409*	-0.1242*	0.2173*	1									
10	MBVE	0.0792*	0.0531*	0.0199*	-0.0191*	-0.0872*	0.1500*	-0.1231*	0.0798*	0.0647*	1								
11	CAPEXA	0.0445*	0.0163*	-0.0137*	0.0744*	0.1500*	-0.0465*	0.008	-0.0572*	0.0510*	0.1613*	0.832*	1						
12	ADVR	-0.0025	-0.0142*	0.0185*	0.0086	-0.0465*	0.008	-0.0572*	0.0510*	0.1613*	0.2714*	-0.0797*	-0.0375*	1					
13	RNDR	0.0406*	0.0414*	-0.0182*	-0.1685*	-0.1706*	0.1277*	-0.3426*	-0.1198*	0.2714*	0.0449*	0.0717*	-0.0608*	-0.2293*	1				
14	DEBTR	-0.0300*	-0.0413*	-0.007	0.0515*	0.0636*	-0.0591*	0.2474*	0.0814*	0.0449*	0.1396*	0.0782*	-0.0381*	0.1010*	-0.0195*	1			
15	SALEG	0.0065	0.0118	0.002	-0.0494*	0.0170*	0.0170*	-0.1086*	-0.0069	0.1396*	0.0510*	-0.0283*	-0.0059	0.2808*	0.0012	0.0072	0.0180*	1	
16	DEVRET	-0.1050*	-0.0533*	-0.0672*	-0.1567*	0.0057	0.0310*	-0.3601*	-0.3286*	0.0510*	-0.0338*	-0.0157*	-0.0347*	0.007	0.0072	0.0180*	1		
17	FCA	-0.0051	0.0000	-0.0123	-0.0125	0.0035	-0.0022	0.0013	-0.0242*	-0.0338*	-0.0372*	-0.0485*	-0.0358*	0.0199*	-0.0735*	-0.0496*	-0.0083	1	
18	PCTINDEP	-0.1009*	-0.0290*	-0.0560*	-0.0197*	0.0087	0.0229*	0.1069*	0.0351*	-0.0372*	-0.0485*	-0.0358*	0.0199*	0.0411*	-0.0735*	-0.0496*	-0.0083	1	
No.	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<i>Panel B: Correlations among religion, demographic variables, and political affiliations at the county level</i>																			
1	REL	1																	
2	AGE	0.1364*	1																
4	EDUCATION	0.1971*	0.1388*	1															
5	INCOME	0.2249*	0.3288*	0.2601*	1														
6	SEX	0.2067*	0.2601*	0.2067*	0.2601*	1													
7	RACE	-0.0976*	-0.2378*	-0.0976*	-0.2378*	-0.1738*	1												
8	POLITICAL AFFILIATION	-0.1205*	-0.0107	-0.1205*	-0.0107	-0.4087*	-0.1738*	-0.4087*	1										

This table reports Spearman correlation coefficients among variables of main interest from 1991 to 2011. See Table 2 for variable definitions

* Indicates the 5 % level of significance or less

et al. (2011), Jo and Harjoto (2011, 2012), and Ioannou and Serafeim (2014).

Table 4 presents the Spearman correlation matrix for the variables discussed in the previous section. Consistent with the hypothesized positive association between the level of employee-friendly practices (EMPREL I and EMPREL II) and the degree of religiosity as measured by the proportion of religious adherents (REL), which is expressed in our hypothesis 1, EMPREL I and EMPREL II are positively related to REL. The Spearman correlation coefficient between EMPREL I (EMPREL II) and REL measures 0.0416 (0.0247). Although the coefficient magnitude is small, it is statistically significant to at least the five percent level. The correlation coefficient between REL and the firm risk measure of DEVRET is justifiable as well, scoring -0.0672 and significant. Most of the variables are significantly correlated with EMPREL I and EMPREL II, to at least the five percent level. Note, also, that there are *positive* and statistically significant correlations between our employee relation measures (EMPREL I and EMPREL II) and our measure of mainline Protestant religiosity (MAIN) that are 0.0507 and 0.0196, respectively, while the correlations between our employee relation measures and the measures of evangelical Protestant religiosity (EVAN) are larger and also significant, but *negative*, -0.0675 and -0.0439 . The correlations between our measure of Catholic religiosity (CATHO) and our employee relations scores, however, are insignificant. This suggests that the influence that Catholic religiosity and mainline Protestant religiosity have on a firm's employee decisions is different from the influence of evangelical Protestant religiosity.

Multivariate Regression Results

We first conduct multicollinearity diagnostics using a linear regression model and find that all the individual variable's variance inflation factor (VIF) values were below 6 (mean VIF was below 3 for all models), suggesting that multicollinearity does not significantly influence our results. We 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 is possibly correlated with the regressors.⁹

Table 5 presents results from the baseline fixed effects regression of the level of EMPREL I and EMPREL II on the level of REL with control variables. We find that the impact of REL on EMPREL I and EMPREL II is positive

and statistically significant at the one percent level with p values of 0.000. The positive association between REL and EMPREL I and EMPREL II remains intact when we control for firm size either by the lagged variable of the log of total assets (LAG(LOGTA)) or by the lagged value of the log of the market value of equity (LAG(LOGMVE)) and whether we include or exclude growth opportunities as measured by the lag of market-to-book value of equity (LAG(MBVE)).¹⁰ This significantly positive relation between EMPREL I (and EMPREL II) and REL, as we noted, is consistent with the religious morality hypothesis. In addition, we find a negative association between EMPREL I and EMPREL II and our risk measure, the standard deviation of monthly stock return (DEVRET), at the one percent level, which is consistent with earlier negative CSR and firm risk relations found by McGuire et al. (1988), Feldman et al. (1997), Orlitzky and Benjamin (2001), Husted (2005), Godfrey et al. (2009), Salama et al. (2011), Jo and Na (2012), and Oikonomou et al. (2012). Thus, this evidence adds to the validity of our empirical results.

We also find that firms with higher capital expenditures (CAPEXA) or bigger firm size as measured by the market value of equity (MVE) tend to engage in more employee-friendly practices. Thus, when firms are sufficiently large or have sufficient resources available, they are more likely to invest in employee-friendly practices. On the other hand, firms with a higher R&D ratio (RNDR) and a high debt ratio (DEBTR) tend to shun employee-friendly practices. These latter results are explainable on the assumption that high investments in R&D and high interest payments impose financial constraints on firms that make it difficult for them to invest in employee-friendly programs. In short, both R&D expenditures and long-term debt behave like competitors to employee-friendly projects. Thus, while our study supports the view that non-economic religious considerations influence a firm's investments in its employees, nevertheless our study also provides limited support for the view that the amount a firm invests in employee-friendly initiatives depends on the resources it has available. Recently created companies, however, are not in the same economic situation as old ones and they may be in a more difficult situation to implement employee-friendly policies. Thus, we repeat the above analyses with firm age variable as additional control variables. Our unreported results suggest that the main results of the positive association between REL and EMPREL remain intact. In addition, the

⁹ Due to the cross-sectional and time-series combined panel structure of our data, we conduct the Hausman (1978) test to select between a fixed effects and a random effects model. The test suggests the use of the fixed effects modeling.

¹⁰ In our untabulated results, we also employ the EMPREL net scores, i.e., EMPREL strength scores minus EMPREL concern scores, instead of EMPREL index, and find that the main results remain qualitatively the same. Furthermore, when we add the profitability measure of return on assets (ROA), our untabulated results remain qualitatively the same.

Table 5 Fixed effect regressions

Variables	(1) EMPREL I	(2) EMPREL I	(3) EMPREL I	(4) EMPREL I	(5) EMPREL II	(6) EMPREL II
<i>Panel A: The impact of the religiosity of a community (REL) on firm's employee relations</i>						
REL	0.0723*** [0.000]	0.0726*** [0.000]	0.0760*** [0.000]	0.0720*** [0.000]	0.1295*** [0.000]	0.1306*** [0.000]
<i>Control variables</i>						
LAG(LOGTA)	-0.0009 [0.502]		-0.0006 [0.649]		-0.0024 [0.386]	
LAG(LOGMVE)		0.0032*** [0.001]		0.0035*** [0.001]		0.0066*** [0.001]
LAG(MBVE)			0.0000 [0.856]	-0.0002 [0.278]		
LAG(CAPEXA)	0.0266* [0.089]	0.0224 [0.161]	0.0265* [0.093]	0.0231 [0.148]	0.0627* [0.065]	0.0552 [0.111]
LAG(ADVR)	-0.0780* [0.058]	-0.0880** [0.036]	-0.0900** [0.029]	-0.0859** [0.041]	-0.1758** [0.048]	-0.1973** [0.030]
LAG(RNDR)	-0.0578*** [0.004]	-0.0515** [0.012]	-0.0619*** [0.003]	-0.0475** [0.023]	-0.1343*** [0.002]	-0.1201*** [0.007]
LAG(DEBTR)	-0.0207*** [0.000]	-0.0174*** [0.001]	-0.0210*** [0.000]	-0.0163*** [0.003]	-0.0415*** [0.000]	-0.0348*** [0.003]
LAG(SALEG)	0.0022 [0.154]	0.0012 [0.433]	0.0021 [0.163]	0.0013 [0.392]	0.0051 [0.119]	0.0030 [0.366]
DEVRET	-0.1037*** [0.000]	-0.0942*** [0.000]	-0.1025*** [0.000]	-0.0928*** [0.000]	-0.2156*** [0.000]	-0.1944*** [0.000]
Constant	0.4261*** [0.000]	0.3967*** [0.000]	0.4229*** [0.000]	0.3947*** [0.000]	0.4492*** [0.000]	0.3830*** [0.000]
YEAR DUMMY	YES	YES	YES	YES	YES	YES
Observations	23,332	22,798	23,167	22,793	23,332	22,798
Number of firms	3869	3843	3851	3842	3869	3843
R ²	0.230	0.220	0.230	0.220	0.050	0.050
Variables	(1) EMPREL I	(2) EMPREL I	(3) EMPREL I	(4) EMPREL I	(5) EMPREL II	(6) EMPREL II
<i>Panel B: The impact of the religiosity of specific religious groups on firms' employee relations</i>						
MAIN	0.0889** [0.046]	0.0936* [0.052]	0.1008** [0.026]	0.0928* [0.054]	0.1395 [0.147]	0.1386 [0.184]
EVAN	-0.1089*** [0.000]	-0.1175*** [0.000]	-0.1148*** [0.000]	-0.1175*** [0.000]	-0.2317*** [0.000]	-0.2511*** [0.000]
CATHO	0.0805*** [0.001]	0.0750*** [0.002]	0.0861*** [0.000]	0.0743*** [0.003]	0.1289** [0.011]	0.1188** [0.027]
Control variables	The same as in Panel A					
YEAR DUMMY	YES	YES	YES	YES	YES	YES
Observations	23,332	22,798	23,167	22,793	23,332	22,798
Number of firms	3869	3843	3851	3842	3869	3843
R ²	0.231	0.222	0.231	0.222	0.052	0.052

This table displays the baseline fixed effect regressions for the sample over the period of 1991–2011. The dependent variables are *EMPREL I* in models (1) through (4) and *EMPREL II* in models (5) and (6). In Panel A, the main independent variable is Religiosity (REL). We measure the degree of religiosity by the percentage of adherents (=total adherents/total population) per county (REL). In Panel B, the independent variables are as follows. MAIN (EVAN) is measured by the percentage of adherents of Mainline (Evangelical) protestantism per county, and CATHO is measured by the percentage of adherents of Catholicism [source: American Religion Data Archive (ARDA)]. Robust *t* statistics are presented in parentheses. See Table 2 for variable definitions

***, **, and * indicate statistical significance at the 1, 5, and 10 % levels, respectively

Table 6 Fixed effect regressions of EMPREL on REL and other firm and demographic control variables

Variables	(1) EMPREL I	(2) EMPREL I	(3) EMPREL I	(4) EMPREL I	(5) EMPREL I	(6) EMPREL I
<i>Panel A: The impact of the religiosity of a community (REL) on local firms' employee relations</i>						
REL	0.0635*** [0.000]	0.0672*** [0.000]	0.0727*** [0.000]	0.1248*** [0.000]	0.0723*** [0.000]	0.0721*** [0.000]
<i>Control variables</i>						
LAG(LOGTA)	-0.0012 [0.370]	-0.0010 [0.420]	-0.0009 [0.501]	-0.0035 [0.120]	-0.0009 [0.502]	-0.0009 [0.500]
LAG(CAPEXA)	0.0243 [0.124]	0.0248 [0.115]	0.0258* [0.100]	0.0405 [0.128]	0.0266* [0.089]	0.0267* [0.089]
LAG(ADVR)	-0.0756* [0.067]	-0.0740* [0.073]	-0.0759* [0.065]	-0.0665 [0.357]	-0.0780* [0.058]	-0.0775* [0.060]
LAG(RNDR)	-0.0586*** [0.004]	-0.0587*** [0.004]	-0.0578*** [0.004]	-0.0567 [0.147]	-0.0578*** [0.004]	-0.0579*** [0.004]
LAG(DEBTR)	-0.0207*** [0.000]	-0.0202*** [0.000]	-0.0206*** [0.000]	-0.0250*** [0.003]	-0.0207*** [0.000]	-0.0206*** [0.000]
LAG(SALEG)	0.0021 [0.163]	0.0021 [0.158]	0.0021 [0.157]	0.0068** [0.020]	0.0022 [0.154]	0.0022 [0.154]
DEVRET	-0.1051*** [0.000]	-0.1040*** [0.000]	-0.1037*** [0.000]	-0.1495*** [0.000]	-0.1037*** [0.000]	-0.1037*** [0.000]
AGE	0.0007 [0.582]	0.0015 [0.234]				
EDUCATION	-0.0005 [0.471]	-0.0004 [0.560]				
INCOME	0.0151 [0.190]	0.0247** [0.035]				
SEX	0.1991*** [0.008]	0.1574** [0.036]				
RACE	-0.1201** [0.040]	-0.0967* [0.099]				
POLITICAL AFFILIATION		-0.0009*** [0.000]				
R_U_DUMMY			-0.0780*** [0.000]			
PCTINDEP				-0.0111 [0.122]		
SOX_DUMMY					0.0365*** [0.000]	
LAG_FCA						0.0001 [0.506]
Constant	0.1804 [0.150]	0.0987 [0.436]	0.5018*** [0.000]	0.4374*** [0.000]	0.3896*** [0.000]	0.4262*** [0.000]
YEAR DUMMY	YES	YES	YES	YES	YES	YES
Observations	23,162	23,162	23,332	11,532	23,332	23,332
Number of firms	3839	3839	3869	1927	3869	3869
R ²	0.231	0.231	0.230	0.274	0.230	0.230

Table 6 continued

Variables	(1) EMPREL I	(2) EMPREL I	(3) EMPREL I	(4) EMPREL I	(5) EMPREL I	(6) EMPREL I
<i>Panel B: The impact of the religiosity of specific groups in a community on local firms' employee relations</i>						
MAIN	0.0680 [0.141]	0.0779* [0.093]	0.0780* [0.079]	0.2421** [0.012]	0.0889** [0.046]	0.0887** [0.046]
EVAN	-0.1279*** [0.000]	-0.1171*** [0.000]	-0.1043*** [0.000]	-0.1951*** [0.000]	-0.1089*** [0.000]	-0.1088*** [0.000]
CATHO	0.0824*** [0.001]	0.0784*** [0.001]	0.0823*** [0.000]	0.1257*** [0.003]	0.0805*** [0.001]	0.0802*** [0.001]
Control variables	The same as in Panel A					
AGE	0.0002 [0.884]	0.0008 [0.519]				
EDUCATION	-0.0024*** [0.002]	-0.0021*** [0.005]				
INCOME	0.0227* [0.050]	0.0276** [0.019]				
SEX	0.1404* [0.062]	0.1238 [0.101]				
RACE	-0.0853 [0.150]	-0.0754 [0.204]				
POLITICAL AFFILIATION		-0.0005** [0.020]				
R_U_DUMMY			-0.0697*** [0.000]			
PCTINDEP				-0.0113 [0.116]		
SOX_DUMMY					0.0393*** [0.000]	
LAG_FCA						0.0001 [0.518]
Constant	0.2242* [0.076]	0.1684 [0.190]	0.5130*** [0.000]	0.4642*** [0.000]	0.4059*** [0.000]	0.4453*** [0.000]
YEAR DUMMY	YES	YES	YES	YES	YES	YES
Observations	23,162	23,162	23,332	11,532	23,332	23,332
Number of firms	3839	3839	3869	1927	3869	3869
R ²	0.232	0.232	0.231	0.277	0.231	0.231

This table displays the baseline fixed effect regressions including demographic variables as control variable for the sample over the period of 1991–2011. Robust *t* statistics are presented in parentheses. See Table 2 for variable definitions

***, **, and * indicate statistical significance at the 1, 5, and 10 % levels, respectively

inverse association between EMPREL and R&D or long-term debt also persists.¹¹

Similar to results reported by El Ghouli et al. (2012) and Cui et al. (2014), Table 5 Panel B presents the results from the baseline fixed effect regression of the level of our employee relation measures (EMPREL I and EMPREL II) on the level of our three subsidiary religiosity measures

(MAIN, EVAN, and CATHO) with controls. These regressions allow us to examine how a county's mainline Protestant, evangelical Protestant, and Catholic levels of religiosity each influence the employee-friendly practices of local firms. Interestingly, while the coefficients on the variables for both mainline Protestant religiosity (MAIN) and Catholic religiosity (CATHO) mostly indicate a positive and significant influence on both of our employee relations measures (EMPREL I and EMPREL II), the

¹¹ These results are available from authors upon request.

Table 7 Fixed effect regressions based on employee strengths and employee concerns

Variables	(1) EMP_STR	(2) EMP_STR	(3) EMP_CON	(4) EMP_CON		
<i>Panel A: The effect of religiosity (REL) on employee strengths (EMP_STR) and concerns (EMP_CON) with control variables</i>						
REL	0.3005*** [0.001]	0.2749*** [0.006]	-0.4768*** [0.000]	-0.5155*** [0.000]		
Control variables						
LAG(LOGTA)	0.0324*** [0.000]		0.0408*** [0.000]			
LAG(LOGMVE)		0.0520*** [0.000]		0.0184** [0.021]		
LAG(CAPEXA)	0.2253** [0.041]	0.1569 [0.160]	-0.0455 [0.725]	-0.0697 [0.598]		
LAG(ADVR)	-0.7777*** [0.007]	-0.8504*** [0.004]	0.1774 [0.601]	0.2237 [0.521]		
LAG(RNDR)	-0.3021** [0.034]	-0.3039** [0.034]	0.3318** [0.048]	0.2669 [0.116]		
LAG(DEBTR)	-0.1510*** [0.000]	-0.0810** [0.030]	0.0669 [0.114]	0.1035** [0.019]		
LAG(SALEG)	0.0118 [0.267]	-0.0004 [0.967]	-0.0124 [0.323]	-0.0147 [0.251]		
DEVRET	-0.0435 [0.658]	0.0615 [0.540]	1.0748*** [0.000]	1.0826*** [0.000]		
Constant	-0.1116 [0.183]	-0.2488*** [0.001]	0.2025** [0.040]	0.3750*** [0.000]		
YEAR DUMMY	YES	YES	YES	YES		
Observations	23,332	22,798	23,332	22,798		
Number of firms	3869	3843	3869	3843		
R ²	0.064	0.059	0.162	0.155		
Variables	(1) EMP_STR	(2) EMP_STR	(3) EMP_CON	(4) EMP_CON		
<i>Panel B: The effects of Catholic (CATHO) and of Mainline (MAIN) and Evangelical (EVAN) Protestant religiosity on employee strengths (EMP_STR) and concerns (EMP_CON)</i>						
MAIN	0.7640** [0.014]	0.6977** [0.039]	-0.1494 [0.684]	-0.2882 [0.471]		
EVAN	-0.7294*** [0.000]	-0.7731*** [0.000]	0.4339*** [0.001]	0.4794*** [0.001]		
CATHO	0.0994 [0.548]	0.0695 [0.688]	-0.7824*** [0.000]	-0.7679*** [0.000]		
Control variables	The same as in Panel A					
YEAR DUMMY	YES	YES	YES	YES		
Observations	23,332	22,798	23,332	22,798		
Number of firms	3869	3843	3869	3843		
R ²	0.066	0.061	0.162	0.155		
Variables	(1) EMP_STR_A	(2) ENV_STR_C	(3) EMP_STR_D	(4) EMP_STR_F	(5) EMP_STR_G	(4) EMP_STR_X
<i>Panel C: The effect of Catholic and Protestant religiosity on employee strengths (EMP_STR)</i>						
MAIN	-0.3188*** [0.000]	0.5840*** [0.000]	0.2436 [0.110]	0.2953** [0.047]	0.6644** [0.026]	0.2656** [0.019]
EVAN	-0.0448	-0.1580***	-0.3111***	0.0857	-0.1894***	-0.2257***

Table 7 continued

Variables	(1) EMP_STR_A	(2) ENV_STR_C	(3) EMP_STR_D	(4) EMP_STR_F	(5) EMP_STR_G	(4) EMP_STR_X
CATHO	[0.131] −0.2699*** [0.000]	[0.001] 0.0940 [0.169]	[0.000] 0.2385*** [0.004]	[0.137] −0.1226 [0.143]	[0.007] −0.0937 [0.366]	[0.000] 0.2528*** [0.000]
Control variables	The same as in Panel A					
Constant	0.1683*** [0.000]	−0.0861** [0.013]	−0.0479 [0.254]	−0.0649 [0.119]	1.0738*** [0.000]	−0.2289*** [0.000]
YEAR DUMMY	YES	YES	YES	YES	YES	YES
Observations	23,332	23,332	21,865	21,083	18,189	23,332
Number of firms	3869	3869	3760	3755	3686	3869
R ²	0.037	0.010	0.022	0.029	0.024	0.031

Variables	(1) EMP_CON_A	(2) ENV_CON_B	(3) EMP_CON_C	(4) EMP_CON_D	(5) EMP_CON_X
<i>Panel D: The effect of Catholic and Protestant religiosity on specific employee concerns (EMP_CON)</i>					
MAIN	0.2501*** [0.007]	−0.6873*** [0.000]	0.1711 [0.218]	−0.0304 [0.898]	0.3593** [0.010]
EVAN	−0.1337*** [0.000]	0.3078*** [0.000]	0.1359** [0.011]	0.2002** [0.028]	−0.0360 [0.481]
CATHO	0.0054 [0.913]	−0.3366*** [0.000]	−0.2141*** [0.006]	−0.5947*** [0.000]	0.1265* [0.088]
Control variables	The same as in Panel A				
Constant	−0.0526** [0.036]	−0.0365 [0.426]	−0.0826** [0.033]	2.4071*** [0.000]	0.0115 [0.759]
YEAR DUMMY	YES	YES	YES	YES	YES
Observations	23,332	23,332	21,083	21,083	23,330
Number of firms	3869	3869	3755	3755	3868
R ²	0.006	0.156	0.036	0.291	0.050

This table displays the fixed effect regressions for the sample over the period of 1991–2011. In Panel A, the dependent variables are EMP_STR in model (1) through to (2) and EMP_CON in model (3) through to (4). We measure the degree of religiosity by the percentage of adherents (=total adherents/total population) per county (REL). In Panel B, we repeat the same analysis as in Panel A, but with MAIN, EVAN, and CATHO instead of REL. MAIN (EVAN) is measured by the percentage of adherents of Mainline (Evangelical) Protestants per county, while CATHO is measured by the percentage of adherents of Catholics [source: American Religion Data Archive (ARDA)]. In Panel C, the dependent variable is each item of strengths, respectively. The independent variables are MAIN, EVAN, and CATHO instead of REL. In Panel D, the dependent variables are each items of concerns, respectively, and independent variables include MAIN, EVAN, and CATHO instead of REL. Robust *t* statistics are presented in parentheses. See Table 2 for definitions of each item

***, **, and * indicate statistical significance at the 1, 5, and 10 % levels, respectively

coefficients on evangelical Protestant religiosity (EVAN) are *negative* and statistically significant. These results suggest that the effects of Catholic religiosity, mainline Protestant religiosity, and evangelical Protestant religiosity on employee decisions differ from each other. Specifically, the results for Catholic religiosity (CATHO) are all positive and significant to less than the 5 percent significance level. The results for mainline Protestant religiosity (MAIN) are positive and significant when we use the EMPREL I measure, but positive and insignificant for the EMPREL II measure. In contrast, the results for the religiosity of the evangelical Protestant group (EVAN) are all

negative and significant (at the 1 % level) and the coefficients are relatively higher (their EMPREL I scores are between −0.1089 and −0.1175; and their EMPREL II scores are between −0.2317 and −0.2511). These results suggest that the evangelical Protestant religiosity of an area is associated with a smaller influence on the employee-friendly choices of firms headquartered in that area than the impacts of both mainline Protestant religiosity and Catholic religiosity on the employee-friendly choices of firms headquartered in the same area.

Because KLD increased its sample size substantially by including the Russell 1000 firms in 2001 and the Russell

2000 in 2003, the results for the EMPREL 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 therefore excluded 2001 and 2003 from the sample and ran our tests again. Overall, our untabulated results are robust to the exclusion of 2001 and 2003.

Table 6 Panel A presents the fixed effect regressions of our employee relation measure (EMPREL I) on our main religiosity measure (REL), together with the same controls as in Table 5, plus the addition of other control variables. These added variables include five county-level demographic variables (the average age, education level, income level, gender proportions, and race), political affiliations of a county's residents, a governance variable (the percentage of independent directors on a firm's board), a regulatory variable (a pre- and post-Sarbanes–Oxley Act dummy variable), and two firm variables (whether a firm is located in an urban or rural area and whether it is a multinational firm that has foreign exchange earnings or is a purely domestic firm). Due to substantial multicollinearity issues,¹² we regress our employee relations measures on our religiosity and control variables separately. Because the regressions on our two employee-friendly measures largely mirror each other, we here report the regressions on only one employee relations measure (EMPREL I). The results of regressing our employee relations measure (EMPREL I) on our main religiosity measure (REL) support the religious morality hypothesis because the coefficients on our religiosity measure are all positive and significant. The results also suggest that the presence of a higher percentage of female residents in a county is correlated with higher levels of employee-friendly initiatives in firms within that county, compared to the levels of employee-friendly initiatives associated with the presence of a similarly high percentage of male residents. In addition, firms headquartered in urban areas tend to engage in fewer employee-friendly activities. Furthermore, firms have engaged in more employee-friendly initiatives since the Sarbanes–Oxley Act was passed (2002) than they did previously.

¹² In our untabulated results, the correlations between demographic variables and other control variables of governance, political affiliations of a county's residents, a regulatory variable, and whether a firm is located in an urban or rural area and whether it is a multinational firm are very high. As a result, when we included both demographic variables and other control variables, the multicollinearity problems become serious (variance inflation factor is higher than 10), and our empirical results become unstable and insignificant. In econometrics, the variance inflation factor (VIF) quantifies the severity of multicollinearity in the regression analysis. It provides an index that measures how much the variance (the square of the estimate's standard deviation) of an estimated regression coefficient is increased because of collinearity. Because a VIF number larger than 10 indicates a serious multicollinearity problem (Greene 1993), we decide to include the demographic variables and other control variables separately in the subsequent analyses.

In Table 6 Panel B, we repeat the same analysis as in Panel A, but instead of using our main religiosity measure (REL), we use its three main components, i.e., the religiosity of mainline Protestants (MAIN), evangelical Protestants (EVAN), and Catholics (CATHO). As in Table 5 Panel B, the coefficients on the variables for both mainline Protestant religiosity (MAIN) and Catholic religiosity (CATHO) indicate a positive and significant influence on our employee-friendly measure (EMPREL I), while the coefficients on evangelical Protestant religiosity (EVAN) are significant and negative.

Next, we ask whether firms in highly religious communities are more interested in the positive dimensions of employee issues, such as strong union relations, a no-layoff policy, cash profit sharing, employee involvement in decision making or company stock ownership, retirement benefits, a strong health and safety record, and other strengths (EMP_STR), or, rather, are they more interested in resolving their negative or controversial employee concerns, such as notably poor union relations, willful violations of employee health and safety standards, significant reductions in the firm's workforce in recent years, an inadequate retirement benefits program, and other employee controversies (EMP_CON) (see Appendix for more detail).

Table 7 reports the results from the fixed effects regressions for EMP_STR and EMP_CON in Panel A; in Panel B, instead of using our main religiosity measure (REL), we use its three main components, i.e., the religiosity of mainline Protestants (MAIN), evangelical Protestants (EVAN), and Catholics (CATHO); Panels C and D report the results of regressions that look at employee strengths and employee concerns, respectively. Both of the coefficients on EMP_STR and EMP_CON, as well as the corresponding *p* values, shown in Panel A, are significantly positive for EMP_STR and significantly negative for EMP_CON, suggesting that a community's religiosity enhances employee strengths in local firms, while it decreases employee concerns, again confirming our hypothesis I. The coefficients on EMP_STR and EMP_CON shown in Panel B, however, suggest that the impact of religiosity on employee strengths and employee concerns is not symmetrical for each denomination. The positive association between EMP_STR and REL derives more from the influence of mainline Protestant religiosity (MAIN), while the negative association between EMP_CON and REL derives more from the influence of Catholic religiosity (CATHO). As before, the coefficients on evangelical Protestant religiosity (EVAN) are significantly negative for EMP_STR and positive for EMP_CON. In addition, our EMP_CON regressions are able to explain about 16 % of the variance in employee relations, while the EMP_STR models only explain about 6–7 % of the

Table 8 Dynamic system generalized method of moment (GMM) results

Variables	(1) EMPREL I	(2) EMPREL I	(3) EMPREL I	(4) EMPREL I
REL	0.1572** [0.027]	0.1494** [0.021]	0.1323** [0.049]	0.1252** [0.038]
Control variables				
LAG(LOGTA)	0.0047 [0.209]		0.0044 [0.190]	
LAG(LOGMVE)		0.0058 [0.144]		0.0061 [0.119]
LAG(MBVE)			0.0028 [0.604]	-0.0007 [0.769]
LAG(CAPEXA)	-0.6309* [0.069]	-1.0594*** [0.005]		-0.8839** [0.015]
LAG(ADVR)	-1.5791 [0.278]	-2.6899* [0.070]	-1.1403 [0.375]	-1.8585 [0.176]
LAG(RNDR)	0.1870 [0.737]	0.0428 [0.944]	0.1926 [0.772]	0.3904 [0.553]
LAG(DEBTR)	-0.3691** [0.018]	-0.3296** [0.043]	-0.3966** [0.017]	-0.2326 [0.113]
LAG(SALEG)	0.0380 [0.324]	0.0610 [0.172]	0.0398 [0.345]	0.0546 [0.240]
DEVRET	-0.0866 [0.598]	0.2900 [0.113]	-0.0152 [0.930]	0.2653 [0.158]
EMPREL I(T-1)	0.3809** [0.017]	0.5432*** [0.000]	0.5282*** [0.000]	0.5256*** [0.000]
EMPREL I(T-2)	0.1575 [0.280]	0.0884 [0.565]	0.0581 [0.651]	0.0923 [0.530]
CONSTANT	0.1109 [0.175]	0.0229 [0.779]	0.0946 [0.218]	0.0302 [0.689]
YEAR DUMMY	YES	YES	YES	YES
INDUSTRY DUMMY	YES	YES	YES	YES
Observations	15,931	15,927	15,924	15,924
Number of firms	2935	2935	2934	2934
AR(1) test (<i>p</i> value)	0.0283	0.0015	0.0012	0.0130
AR(2) test (<i>p</i> value)	0.164	0.401	0.455	0.368
Hansen test over-identification (<i>p</i> value)	0.657	0.444	0.669	0.510
Diff-in-Hansen test of exogeneity (<i>p</i> value)	0.425	0.428	0.532	0.411

This table displays dynamic GMM regressions during the period of 1991–2011. The dependent variable is employee relation scores (EMPREL I). 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, respectively, 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 three- and four-periods as instruments. 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 2 for variable definitions. ***, **, and * indicate statistical significance at the 1, 5, and 10 % levels, respectively

variance in employee relations. Taken together, these results suggest that managers of firms headquartered in areas with higher religiosity, especially Catholic

religiosity, are more interested in rectifying company practices that may harm employees than instituting initiatives that benefit employees, while managers surrounded

Table 9 Granger causality between employee relation and local community religiosity

Variables	(1) EMPREL I	(2) REL	(3) EMPREL I	(4) REL
EMPREL I _{t-1}	0.5569*** [0.000]	0.0000 [0.964]	0.5582*** [0.000]	0.0005 [0.291]
EMPREL I _{t-2}	-0.0697*** [0.000]	0.0006 [0.304]	-0.0705*** [0.000]	0.0007 [0.144]
REL _{t-1}	0.7596*** [0.000]	1.7977*** [0.000]	0.8294*** [0.000]	1.8064*** [0.000]
REL _{t-2}	-0.6829*** [0.000]	-0.8665*** [0.000]	-0.7423*** [0.000]	-0.8319*** [0.000]
LAG(LOGTA)	-0.0089*** [0.000]	0.0003*** [0.003]		
LAG(LOGMVE)			-0.0034*** [0.002]	0.0002*** [0.002]
LAG(CAPEXA)	0.1205*** [0.000]	-0.0006 [0.611]	0.1312*** [0.000]	-0.0012 [0.187]
LAG(ADVR)	-0.0852* [0.095]	-0.0003 [0.924]	-0.0661 [0.195]	0.0069*** [0.004]
LAG(RNDR)	-0.0457 [0.119]	0.0001 [0.941]	-0.0207 [0.476]	-0.0008 [0.527]
LAG(DEBTR)	-0.0152** [0.026]	-0.0007* [0.075]	-0.0225*** [0.001]	0.0000 [0.955]
LAG(SALEG)	0.0176*** [0.000]	-0.0002 [0.101]	0.0176*** [0.000]	-0.0001 [0.494]
DEVRET	-0.1070*** [0.000]	-0.0006 [0.573]	-0.1265*** [0.000]	-0.0035*** [0.000]
AGE		0.0010*** [0.000]		0.0023*** [0.000]
EDUCATION		-0.0005*** [0.000]		-0.0019*** [0.000]
INCOME		-0.0020** [0.015]		-0.0057*** [0.000]
SEX		-0.0046 [0.389]		0.0249*** [0.000]
RACE		0.0100** [0.015]		-0.0012 [0.731]
POLITICAL AFFILIATION		-0.0000 [0.119]		-0.0003*** [0.000]
Constant	0.2033*** [0.000]	0.0185** [0.034]	0.1514*** [0.000]	0.1075*** [0.000]
Observations	15,682	12,786	15,676	15,565
R ²	0.342	0.997	0.341	0.997

The figures are in bold type if Granger causality test is statistically significant at the 5 % level or lower ***, **, and * stand for statistical significance at the 1, 5, and 10 % levels, respectively

by higher levels of mainline Protestant religiosity are more interested in initiating practices that benefit employees.

We next attempt to dig deeper into these associations by asking which specific kinds of employee strengths (EMP_STR) and employee concerns (EMP_CON)

religiosity influences. Specifically, we ask whether the specific religiosity of mainline Protestants, of evangelical Protestants, and of Catholics are associated with any of the following employee strengths: providing beneficial union relations (EMP_STR_A), implementing a cash profit-

sharing program (EMP_STR_C), encouraging employee involvement (EMP_STR_D), using strong retirement benefits program (EMP_STR_F), maintaining strong health and safety program (EMP_STR_G), and “other” strengths (EMP_STR_X). Or, we ask, are these three categories of religiosity more closely associated with any of the following employee relations concerns: poor union relations (EMP_CON_A), substantial fine payment or major health and safety controversies (EMP_CON_B), significant workforce reductions (EMP_CON_C), substantially under-funded defined benefit pension plan, or inadequate retirement benefits (EMP_CON_D), and other employee relations concerns (EMP_CON_X) (see Appendix for more detail).

Table 7 Panel C presents the impact of the religiosity of each of the three denominational groups (MAIN, EVAN, and CATHO) on our employee relations strength variables. We find that mainline Protestant religiosity is positively associated with firms that provide a cash profit-sharing program (EMP_STR_C), employee involvement (EMP_STR_D), retirement benefits program (EMP_STR_F), health and safety program (EMP_STR_G), and what the KLD data call a firm’s “other” strengths related to the employee relations strengths (EMP_STR_X), but has a negative influence on the use of beneficial union relations (EMP_STR_A). Evangelical Protestant religiosity is negatively associated with firms that provide beneficial union relations (EMP_STR_A), cash profit-sharing program (EMP_STR_C), employee involvement (EMP_STR_D), health and safety program (EMP_STR_G) as well as with firms’ “other” employee relations strengths (EMP_STR_X). Catholic religiosity is positively associated with firms that provide strong employee involvement (EMP_STR_D) and firms’ “other” strengths related to the employee relations strengths (EMP_STR_X), but it has a negative influence on firms’ use of beneficial union relations (EMP_STR_A).

Table 7 Panel D presents the impact of the religiosity of the three groups (MAIN, EVAN, and CATHO) on the various KLD employee concerns (EMP_CON). We find that mainline Protestant religiosity is negatively associated with firms that pay substantial fines or have major health and safety controversies (EMP_CON_B), while it is positively associated with firms that keep poor union relations (EMP_CON_A) and have other employee relations concerns (EMP_CON_X). Evangelical Protestant religiosity is negatively associated with firms that have poor union relations (EMP_CON_A), while it is positively associated with firms that have to pay substantial fines or have major health and safety controversies (EMP_CON_B), workforce reductions (EMP_CON_C), and under-funded defined benefit pension plans or inadequate retirement benefits (EMP_CON_D). Catholic religiosity is negatively associated with firms that have to pay substantial fines or have

major health and safety controversies (EMP_CON_B), significant workforce reductions (EMP_CON_C), and under-funded defined benefit pension plans or inadequate retirement benefits (EMP_CON_D), while it is positively associated with firms that have other employee concerns (EMP_CON_X). Together, these results reinforce our earlier finding of certain heterogeneous impacts of religiosity on the employee initiatives of firms, i.e., mainline Protestant religiosity tends to be associated with firms that have higher levels of employee strengths, and Catholic religiosity tends to be associated with firms that reduce employee harms, while evangelical Protestant religiosity tends to be less associated with firms that have higher levels of employee benefits and firms that reduce employee harms.

Endogeneity Control and Reverse Causality Concerns

Previous studies on CSR (Jo and Harjoto 2011, 2012; Ioannou and Serafeim 2014) suggest that a firm’s CSR engagement is endogenous. The same issue affects our EMPREL scores. To address this issue properly, we attempt to conduct an endogeneity correction of EMPREL using the dynamic panel system generalized method of moment (GMM) following Blundell and Bond (1998) and Wintoki et al. (2012).¹³ The dynamic panel system GMM model enables us to estimate the relation between employee relations (EMPREL) and religiosity (REL) while including both past employee relations ratings and fixed effects to account for the dynamic aspects of the EMPREL–REL relation and time-invariant unobservable heterogeneity, respectively (Wintoki, et al. 2012). Table 8 presents the regression results of using the dynamic GMM. The results show that when we include fixed effects in a dynamic model and estimate via system GMM, controlling for endogeneity and potential autocorrelation problems in our EMPREL scores, the coefficient on REL in EMPREL regressions are still positive and significant, at least at the five percent level (p values range from 0.021 to 0.049), further lending support for our religious morality hypothesis. Although statistical significance gets relatively weaker than those of fixed effect regressions, it is still supportive of the hypothesis that managers of firms headquartered in areas with higher religiosity, i.e., in communities that are more religious, tend to engage in more employee-friendly

¹³ The dynamic panel GMM model, in particular, enables us to estimate the employee relation scores (EMPREL) and religiosity association by dealing with (i) past EMPREL activities due to autocorrelation problem of EMPREL scores; (ii) fixed effects to account for the dynamic aspects of the EMPREL–religiosity relation; and (iii) time-invariant unobservable heterogeneity, respectively.

Table 10 Fixed effect regressions of small vs. large firms

Variables	Small Firm (30 %)		Large Firm(30 %)	
	(1) EMPREL I	(2) EMPREL I	(3) EMPREL I	(4) EMPREL I
<i>REL</i>	0.0841*** [0.006]	0.0914*** [0.004]	0.0758*** [0.001]	0.0659*** [0.009]
Control variables				
LAG(LOGTA)	0.0051** [0.011]		-0.0083*** [0.004]	
LAG(MBVE)		0.0011 [0.374]		0.0058** [0.012]
LAG(CAPEXA)	-0.0214 [0.225]	-0.0199 [0.262]	0.1183*** [0.006]	0.1187*** [0.007]
LAG(ADVR)	0.0433 [0.405]	0.0300 [0.571]	-0.3795*** [0.000]	-0.3936*** [0.000]
LAG(RNDR)	-0.0540*** [0.004]	-0.0647*** [0.000]	0.0012 [0.987]	0.0235 [0.773]
LAG(DEBTR)	-0.0035 [0.574]	0.0025 [0.694]	-0.0523*** [0.000]	-0.0480*** [0.001]
LAG(SALEG)	-0.0003 [0.839]	-0.0007 [0.664]	0.0053 [0.165]	0.0038 [0.327]
DEVRET	-0.0534*** [0.002]	-0.0562*** [0.001]	-0.1364*** [0.000]	-0.1112*** [0.002]
Constant	0.3748*** [0.000]	0.3928*** [0.000]	0.5021*** [0.000]	0.3774*** [0.000]
YEAR DUMMY	YES	YES	YES	YES
Observations	7962	7835	7514	7300
Number of firms	2153	2126	1030	1021
R^2	0.115	0.103	0.270	0.260

This table displays the fixed effect results for small firms in column (1) and column (2), and the fixed effect results for large firms in column (3) and column (4) over the period of 1991–2011. The main dependent variable is employee relation index scores (*EMPREL I*). 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 2 for variable definitions

***, **, and * indicate statistical significance at the 1, 5, and 10 % level, respectively

practices. Overall, our dynamic GMM results mitigate endogeneity problems and support the religious morality hypothesis.

Reverse causality may also be a concern. We claim in our religious morality hypothesis that higher levels of religiosity within the population of a region leads firms headquartered in that region to make more employee-friendly decisions. But our regression results could be equally consistent with the claim that higher levels of employee-friendly decisions of firms in a region attract a population with higher levels of religiosity to that region. So do changes in a population's religiosity cause changes in firm's employee-friendly decisions, or do changes in firm's employee-friendly decisions cause changes in a population's religiosity? To resolve this issue of causality, it would help if we knew, for example, whether a firm's

commitment to employee-friendly programs changes when it leaves a county with low religiosity and enters a county with higher religiosity, or when it leaves a county with high religiosity and enters a county with lower religiosity. If we had that kind of data, and if we found an increase in the employee friendliness of a firm when it moved into a county with higher religiosity, and a decrease when it moved into a county with lower religiosity, then that would help support our claims about the direction of causality issue. Since we do not have that data, however, we instead use the “Granger causality” test as a second-best solution to deal with the problem of potential reverse causality. Table 9 presents the results of the regression models testing “Granger causality” between the level of the employee relations scores (*EMPREL I*) and the level of our measure of religiosity (*REL*), respectively. There is no statistically

Table 11 Fixed effect regressions of the religious level of counties around county as control variables

Variables	(1) EMPREL I	(2) EMPREL I	(3) EMPREL I	(4) EMPREL I	(5) EMPREL I	(6) EMPREL I
<i>Panel A: Based on the religious level of the nearest county (REL_I)</i>						
REL	0.0580*** [0.000]	0.0606*** [0.000]	0.0673*** [0.000]	0.1113*** [0.000]	0.0667*** [0.000]	0.0666*** [0.000]
REL_I	0.0242* [0.065]	0.0309** [0.019]	0.0242* [0.061]	0.0600** [0.010]	0.0245* [0.057]	0.0244* [0.058]
Control variables						
LAG(LOGTA)	-0.0011 [0.408]	-0.0009 [0.477]	-0.0008 [0.548]	-0.0033 [0.147]	-0.0008 [0.549]	-0.0008 [0.547]
LAG(CAPEXA)	0.0242 [0.125]	0.0248 [0.116]	0.0258 [0.100]	0.0398 [0.135]	0.0266* [0.090]	0.0266* [0.089]
LAG(ADVR)	-0.0766* [0.063]	-0.0753* [0.068]	-0.0769* [0.061]	-0.0720 [0.319]	-0.0791* [0.055]	-0.0785* [0.056]
LAG(RNDR)	-0.0584*** [0.004]	-0.0585*** [0.004]	-0.0576*** [0.005]	-0.0556 [0.155]	-0.0576*** [0.005]	-0.0577*** [0.004]
LAG(DEBTR)	-0.0205*** [0.000]	-0.0199*** [0.000]	-0.0203*** [0.000]	-0.0238*** [0.005]	-0.0203*** [0.000]	-0.0203*** [0.000]
LAG(SALEG)	0.0022 [0.156]	0.0022 [0.149]	0.0022 [0.151]	0.0068** [0.021]	0.0022 [0.148]	0.0022 [0.147]
DEVRET	-0.1041*** [0.000]	-0.1027*** [0.000]	-0.1027*** [0.000]	-0.1457*** [0.000]	-0.1027*** [0.000]	-0.1027*** [0.000]
AGE	0.0006 [0.638]	0.0015 [0.258]				
EDUCATION	-0.0003 [0.667]	-0.0001 [0.837]				
INCOME	0.0137 [0.233]	0.0237** [0.044]				
SEX	0.1998*** [0.007]	0.1556** [0.038]				
RACE	-0.1196** [0.041]	-0.0944 [0.107]				
POLITICAL AFFILIATION		-0.0009*** [0.000]				
R_U_DUMMY			-0.0778*** [0.000]			
PCTINDEP				-0.0095 [0.188]		
SOX_DUMMY					0.0371*** [0.000]	
LAG_FCA						0.0001 [0.520]
Constant	0.1811 [0.149]	0.0942 [0.458]	0.4918*** [0.000]	0.4115*** [0.000]	0.3790*** [0.000]	0.4163*** [0.000]
YEAR DUMMY						
Observations	23,162	23,162	23,332	11,532	23,332	23,332
Number of firms	3839	3839	3869	1927	3869	3869
R ²	0.231	0.231	0.231	0.275	0.230	0.230

Table 11 continued

Variables	(1) EMPREL I	(2) EMPREL I	(3) EMPREL I	(4) EMPREL I	(5) EMPREL I	(6) EMPREL I
<i>Panel B: Based on the religious level of the second nearest county (REL_II)</i>						
REL	0.0597*** [0.000]	0.0632*** [0.000]	0.0674*** [0.000]	0.1169*** [0.000]	0.0670*** [0.000]	0.0668*** [0.000]
REL_II	0.0355** [0.028]	0.0392** [0.015]	0.0409*** [0.009]	0.0615** [0.028]	0.0408*** [0.009]	0.0407*** [0.009]
Control variables same as Panel A						
AGE	0.0004 [0.782]	0.0012 [0.364]				
EDUCATION	-0.0003 [0.644]	-0.0002 [0.769]				
INCOME	0.0134 [0.243]	0.0232** [0.048]				
SEX	0.1874** [0.012]	0.1432* [0.057]				
RACE	-0.1193** [0.041]	-0.0950 [0.105]				
POLITICAL AFFILIATION		-0.0009*** [0.000]				
R_U_DUMMY			-0.0781*** [0.000]			
PCTINDEP				-0.0104 [0.146]		
SOX_DUMMY					0.0384*** [0.000]	
LAG_FCA						0.0001 [0.518]
Constant	0.1946 [0.121]	0.1118 [0.378]	0.4848*** [0.000]	0.4118*** [0.000]	0.3707*** [0.000]	0.4093*** [0.000]
YEAR DUMMY						
Observations	23,162	23,162	23,332	11,532	23,332	23,332
Number of firms	3839	3839	3869	1927	3869	3869
R ²	0.231	0.232	0.231	0.275	0.230	0.230

This table displays the fixed effect regressions of the religious level of counties around county as control variables for the sample over the period of 1991–2011. Robust *t* statistics are presented in parentheses. See Table 2 for variable definitions

***, **, and * indicate statistical significance at the 1, 5, and 10 % levels, respectively

significant relationship between the level of our religiosity measure (REL) and the level of employee relation scores (EMPREL I) when the level of religiosity (REL) is the dependent variable; that is, the *p* values are 0.964 in model (2) and 0.291 in model (4). However, there is a statistically significant and positive relation between the level of our religiosity measure (REL) and the level of employee relations scores (EMPREL I), with *p* values of 0.000 at time $t - 1$ in model (1) when the level of employee relation scores (EMPREL I) is the dependent variable. The positive relationship with the level of our religiosity measure and the level of employee relations scores that is

statistically significant at the 1 % level (*p* value = 0.000) in model (3) gives robustness to our results. Hence, the finding of a unidirectional and positive “Granger causal” relation between the employee-friendly measure and the religiosity measures supports the direction of causality implicit in our religious morality hypothesis.

Additional Tests

The implications of firm size may also be a concern. If a firm size is relatively small, the impact of where the firm’s headquarters is located may be much larger compared to

the influence exerted by the location of the headquarters of a large multinational company whose management is recruited internationally and which has multiple branches in multiple locations. For smaller firms, it might make sense to look only at how the religiosity of the local community within which the firm is headquartered influences its employee decisions. For larger companies, however, employee policies may differ widely depending on where a branch is situated and so, our intuitions may suggest that the influence of the religiosity of the local community where the firm is headquartered may be highly attenuated. To address this issue, we divide the firms in our sample into three groups: (1) the 30 % smallest firms, (2) the 30 % largest firms, and (3) all other firms. We then assess the influence of firm size by comparing groups (1) and (2). Table 10 presents the results regarding the impact of firm size on the relation between the firm's employee relations scores (EMPREL) and our measure of religiosity (REL). Our results, based on comparing the impact of the 30 % smallest and the 30 % largest firms, show that the coefficients on REL in EMPREL I regressions are all positive and significant at the one percent level. Contrary to our intuition, then our findings suggest that global companies might not be so global after all when it comes to the extent to which their employee policies are influenced by the religiosity of the local community in which their headquarters are located.

Issues related to the location of firms' headquarters may also be thought to affect the results of our study. If a firm's headquarters is located near the border of a county, its managers may actually live in an adjacent county and so be influenced by a religiosity that is different from the religiosity of the county in which the firm itself is headquartered. The particular form of religiosity that may influence the decisions of a firm's managers may thus depend on which part of the county the firm's headquarters is located (i.e., at the center or near its borders), on the transportation facilities available to managers, on road density, etc., suggesting that possible spatial effects may affect our results. We address this issue in the following way. In order to capture spatial dependence in the error terms, religiosity variables associated with the counties surrounding each county are introduced. We begin by defining the level of religiosity of the nearest county to a firm's headquarters as REL_I and define the level of religiosity of the firm's second nearest county as REL_II.¹⁴ We then calculate the

correlation between our employee relations scores (EMPREL) and our nearest county religiosity measure (REL I), and do the same for our second nearest county religiosity measure (REL II). We report the results of our REL_I regressions in Panel A and our REL_II regressions in Panel B of Table 11. In both Panels A and B, while the associations between EMPREL and REL_I as well as between EMPREL and REL_II are positive and significant after controlling for various firm and demographic variables, our main positive association of EMPREL and REL remains intact. Thus these results imply that our main positive relation between EMPREL and REL is not influenced by whether firm headquarters are located near to, or distant from, adjacent counties, i.e., that the suggested spatial effect does not affect our results.

Discussion

Our study generally confirms our religious morality hypothesis: firms headquartered in areas with higher religiosity tend to engage in more employee-friendly practices (see Tables 4, Panel A; 5, Panel A, 6, Panel A). Such practices have been shown to improve the likelihood that a firm will secure the SLO. The association between religiosity and employee-friendly initiatives remains robust after being tested against several financial and demographic control variables (see Tables 4, 5, 6). Moreover, the association remains intact after being subjected to the dynamic panel system generalized method of moment designed to mitigate the effects of endogeneity (Table 8); after being subjected to the Granger causality test to address the issue of the direction of causality (Table 9); after being tested for the potential effects of firm size (Table 10); and after being tested for a potential space effect related to the location of a firm within a county (Table 11 Panels A and B).

Nevertheless, although our study shows that firms headquartered in areas with higher levels of religiosity generally tend to engage in more employee-friendly practices, the association between religiosity and employee-friendly practices is rather complex. This complexity emerges when our main religiosity construct (REL) is broken down into its three major components: Catholic religiosity, mainline Protestant religiosity, and evangelical Protestant religiosity. As Table 5 Panel B suggests, these three components of religiosity have heterogeneous effects on the employee decisions a firm's management makes.

¹⁴ We obtain the County Distance Data from the National Bureau of Economic Research (NBER) website. <http://www.nber.org/data/county-distance-database.html>. County Distances are great-circle distances calculated using the Haversine formula. The Haversine formula is an equation important in navigation, giving great-circle distances between two points on a sphere from their longitudes and latitudes. It is a special case of a more general formula in spherical

Footnote 14 continued
trigonometry, the law of Haversines, relating the sides and angles of spherical triangles (source: Wikipedia).

Table 6 Panel B indicates that while Catholic religiosity and mainline Protestant religiosity have a positive influence on a firm's employee relations, evangelical Protestant religiosity has relatively smaller influence than mainline Protestant and Catholic religiosities. That is, evangelical Protestant religiosity seems to provide less impact on employee-friendly firm initiatives.

When we disaggregate our employee relations measure by separating firm initiatives that benefit employees from firm initiatives that harm employees, we find additional support for our religious morality hypothesis. Consistent with our hypothesis, our results in Table 7 Panel A show that higher levels of religiosity are positively associated with higher levels of initiatives that benefit employees, while negatively associated with initiatives that harm employees. In other words, religiosity seems to encourage firms to adopt initiatives that benefit employees, while discouraging practices that harm employees. Nevertheless, when we break our main religiosity construct into its three major components, we again find heterogeneous effects. As Table 7 Panel B suggests, mainline Protestant religiosity seems to be the largest contributor to religiosity's positive influence on firm initiatives that benefit employees, while Catholic religiosity seems to be the largest contributor to religiosity's negative influence on firm initiatives that harm employees. But, paradoxically, evangelical Protestant religiosity actually seems to be less associated with firm initiatives that benefit employees and be more associated with firm initiatives that harm employees.

Finally, if we disaggregate our employee relations measure even further by separating out the specific kinds of initiatives that make up the category of beneficial employee initiatives, and likewise separating out the specific kinds of initiatives that make up the category of harmful employee initiatives, we find even greater heterogeneity in the influence exerted by the three main components of our religiosity construct. We find, in fact, that each of the three forms of religiosity has some degree of both positive and negative influences on a firm's employee relations. As Table 7 Panels C and D indicate, mainline Protestant religiosity, on the positive side, encourages firms to provide profit-sharing programs, employee involvement programs, retirement benefits, health and safety programs, and "other" benefits, while discouraging firms from engaging in activities that lead to substantial fines, or involve major health and safety violations; however, on the negative side, mainline Protestant religiosity seems to discourage beneficial union relations while encouraging poor union relations and "other" activities harmful to employees. Catholic

religiosity, on its positive side, encourages employee involvement programs and "other" benefits while discouraging firm activities that lead to substantial fines or that involve major health and safety violations, significant workforce reductions, and under-funded pension plans or inadequate retirement benefits; but on the negative side, Catholic religiosity discourages beneficial union relations, while it encourages "other" activities harmful to employees. Evangelical Protestant religiosity, on its positive side, discourages firms from maintaining poor union relations; on its negative side, however, evangelical Protestant religiosity also provides less impact on firms from providing beneficial union relations, or profit-sharing programs, or employee involvement programs, or health and safety programs, or "other" employee benefits, while it has less influence on firm activities that result in substantial fines or that involve major health and safety violations, or workforce reductions, or under-funded pension plans or inadequate retirement benefits.

To summarize, then, while religiosity generally has a positive influence on local firms' employee-friendly initiatives, the three major components of religiosity—Catholic religiosity, mainline Protestant religiosity, and evangelical Protestant religiosity—differ in the kind of influence each exerts. While the influences of Catholic religiosity and mainline Protestant religiosity are largely positive, the influence of evangelical Protestant religiosity is relatively smaller, although each of the three types of religiosity exerts some degree of both positive and negative influence on employee-friendly firm initiatives.

It is not completely clear to us why the influence of evangelical Protestant religiosity on employee-friendly programs appears to be relatively smaller. Part of the explanation for this influence may be that because evangelicals hold that the overriding responsibility of every Christian is to "evangelize" (Bebbington 1989), evangelicals may see efforts to improve employee relations as a distraction from the more urgent and weightier responsibility of evangelizing the world; this may lead evangelicals to discount the value of investing in employee-friendly initiatives. In addition, many evangelical Protestants are "dispensationalists." Dispensationalists believe that "the world is nearing its end with the imminent return of Jesus." Dispensationalist evangelicals may reason that since the end of the world is imminent, efforts spent trying to improve the world by improving employee relations would be a waste of time (Balmer 2006). Thus, these considerations would suggest that evangelical Protestant religiosity should have little or no positive influence on employee-friendly programs.

Significance

Our study contributes to the research literature within several distinct domains. First, and most importantly, our study identifies a factor that influences the likelihood that firms will gain the social license to operate (SLO). The results of our study show that the religiosity of a region influences the extent to which the managements of firms headquartered in that region provide workers with jobs that are characterized by fair treatment and employee-friendly practices. Previous research has shown that fair and favorable treatment of stakeholders increases the likelihood that a company will acquire the SLO (Moffat and Zhang 2014). Our study implies, therefore, that higher levels of local religiosity can lead a firm's managers to provide employees with the kinds of working conditions that will increase the likelihood that the firm will receive the SLO. Religion thus has a positive impact on firms' ability to secure the SLO.

Our study also contributes to the research on a construct that is closely related to the SLO, i.e., to the research on CSR. Employees are one of the most significant—in certain respects the most significant—stakeholders of a company, and investments in programs that benefit employees are seen within the CSR literature as being part of a company's investments in CSR (Mitchell et al. 1997; Gibson 2000; Kaler 2002; Crane and Matten 2004). Our study suggests, therefore, that investments in CSR, at least those that affect this key stakeholder group, are influenced by religious considerations.

Thirdly, our study supports the view that the teachings of religious denominations can affect the behaviors of those who live among adherents of these denominations (Regnerus 2003; Welch et al. 1991; Ellison et al. 1997). This contributes to the expanding psychological and sociological literature on the impact of religiosity on behavior. A substantial number of studies have established that religiosity affects the moral decisions of adolescents (Donahue and Benson 1995; Brownfield and Sorenson 1991; Baier and Wright 2001; Bearman and Bruckner 2001), the voting behavior of adults (Manza and Brooks 1997; Regenerus et al. 1999; Greeley and Hout 2006; Hirschl et al. 2009), the everyday decision making of adults (Schieman 2011), the honesty of college students (Perrin 2000), adult intentions to comply with the law (Grasmick et al. 1991a, b), and adult premarital sex (Barkan 2006). To this, we can now add that community religiosity affects the CSR decisions of managers and makes attainment of the SLO more likely.

Fourth, our study confirms the hypothesis that religious beliefs play a significant role in American business life as

several observers have suggested (Geyer and Baumeister 2005; Welch et al. 2006; Melé 2012a, b). In particular, we show that religious beliefs play a role in corporate decisions regarding how employees are treated.

Finally, we believe that our study has important implications for managers, particularly those who want to secure the SLO for their companies. Our study shows that the religiosities surrounding a firm's headquarters will influence the extent to which the firm implements employee-friendly programs and will also influence the kind of employee programs the firm will have a tendency to implement and the kind it will tend to fail to implement. Our study suggests, for example, that if a firm is embedded in a community of evangelical Protestants, the firm may have a tendency to avoid employee-friendly programs while paying less attention on practices that could damage employee relations; and if it is embedded in a largely Catholic community, it is likely to have a tendency to avoid programs harmful to employees but also have a tendency to fail to implement programs that are beneficial to employees. Since securing the SLO requires that the firm implement employee programs that are fair and favorable toward employees, the tendencies generated by the religiosities surrounding the firm should be identified and dealt with if the firm is to succeed in its attempts to secure the SLO. The manager who wants to secure an SLO for his company, then, should determine what kinds of religiosities surround the firm's headquarters and the kind of employee relations associated with those religiosities in order to ensure that the firm implements the kind of employee programs that can increase the likelihood of securing the SLO.

Limitations

Our study has a number of limitations. First, while this study uses various econometric methods to deal with the endogeneity issue, both the religiosity data obtained from the American Religion Data Archive (ARDA) and the demographic data obtained from the U.S. Census Bureau are not available on an annual basis. Following prior research (e.g., Hilary and Hui 2009; Dyreng et al. 2010; Grullon et al. 2010; El Ghouli et al. 2012), we employ a linear interpolation method to obtain values for 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. Thus, we conduct our regressions using only the years for which we have direct survey data on religiosity (1990, 2000, and 2010) in our untabulated results. Although the sample size is much smaller, the significant and positive association

between employee relations and religiosity measure suggests that our linear interpolation does not create systematic noise in our main results.

Second, 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; nevertheless, KLD does not reveal its basis for weighting each screening category with a binary (0 and 1) code. 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. Another caveat in our use of the KLD data is its unbalanced panel structure and certain construct validity issues (Chatterji et al. 2009). A related problem with the KLD data is that the early years of the panel contained a selection effect. In the 1990s, firms in the KLD database included those in the S&P 500 plus those selected for the Domini 400 Social Index, where selection for the latter was based on the KLD strengths and concerns. To alleviate this selection bias, we included year-fixed effects in both the fixed effect regressions and dynamic GMM estimation. Moreover, in spite of all these issues, 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 elements of CSR.

Third, and most obviously, 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 (e.g., Micklethwait and Wooldridge 2009). European rating agencies like EIRIS and certainly VIGEO and Sustainalytics put far more stress on the employee issue and have long lists of indicators that are not covered by KLD. It is therefore quite possible that what seems like a very employee-friendly company in the US is considered not employee friendly at all in France or in Germany. Consequently, without further study, we cannot claim that our conclusions necessarily apply to the managements of other nations. Moreover, our study focused on the religiosity of the Christian denominations. Only additional research can show that non-Christian religiosities will exert the same kind of influences that we describe in this study.

Overall, despite these limitations, we consider our main empirical findings an important first step toward understanding the nexus between community religiosity and those employee-friendly practices that are advocated by religious groups and that provide a necessary (but perhaps

not sufficient) condition for the SLO. We believe that it will be fruitful if future studies can gather more detailed data of top managers' specific religious affiliations and conduct empirical studies examining the relation between those managers' religious affiliation and the employee programs they adopt. While their main focus is neither the specific religious affiliation of top management, nor the relationship between religiosity and employee practices, we believe that the recent efforts of Kutcher et al.'s (2010) survey-based research (collecting employee's response regarding the religiosity–job stress relation) could suggest viable ways to approach the study of the relationship between religiosity and behavior at a yet deeper level than our study provides.

Conclusion

In this paper, we examine the empirical association between community religiosity and a firm's employee-friendly initiatives in order to ascertain whether and how religion might influence the conditions that make achievement of the SLO more likely. Based on a large and extensive sample of the U.S. data on firms' employee relations and the degree of local community religiosity, we find a positive association between the level of community religiosity and local firms' employee-friendly initiatives, implying that community religiosity encourages the kind of employment that facilitates achievement of the SLO. Because these employee issues are also part of a company's overall stance on corporate social responsibility, our finding implies that religion also plays a role in management decisions to support CSR initiatives for employees.

The positive association we found between community religiosity and employee-friendly corporate initiatives remained robust under various econometric methods including fixed effect regressions and dynamic GMM regressions. We believe that this robust positive association between religiosity and employee-friendly initiatives clearly supports our religious morality hypothesis and provides useful guidance for the manager who seeks to achieve the SLO for his company.

Appendix

See Table 12.

Table 12 KLD employee relations

Strengths

Union Relations(EMP_STR_A): The company has taken exceptional steps to treat its unionized workforce fairly. KLD renamed this strength from Strong Union Relations

No-Layoff Policy(EMP_STR_B): The company has maintained a consistent no-layoff policy. KLD has not assigned strengths for this issue since 1994

Cash Profit Sharing(EMP_STR_C): The company has a cash profit-sharing program through which it has recently made distributions to a majority of its workforce

Employee Involvement(EMP_STR_D): The company strongly encourages worker involvement and/or ownership through stock options available to a majority of its employees; gain sharing, stock ownership, sharing of financial information, or participation in management decision making

Retirement Benefits Strength(EMP_STR_F): The company has a notably strong retirement benefits program. KLD renamed this strength from Strong Retirement Benefits

Health and Safety Strength(EMP_STR_G): The company has strong health and safety programs

Other Strength(EMP_STR_X): The company has strong employee relations initiatives not covered by other KLD ratings

Concerns

Union Relations(EMP_CON_A): The company has a history of notably poor union relations. KLD renamed this concern from Poor Union Relations

Health and Safety Concern(EMP_CON_B): The company recently has either paid substantial fines or civil penalties for willful violations of employee health and safety standards, or has been otherwise involved in major health and safety controversies

Workforce Reductions(EMP_CON_C): The company has made significant reductions in its workforce in recent years

Retirement Benefits Concern(EMP_CON_D): The company has either a substantially under-funded defined benefit pension plan or an inadequate retirement benefits program. In 2004, KLD renamed this concern from Pension/Benefits Concern

Other Concern(EMP_CON_X): The company is involved in an employee relations controversy that is not covered by other KLD ratings

Source KLD Research & Analytics, Inc

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