



# CEO Religion and Corporate Social Responsibility: A Socio-behavioral Model

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Received: 27 July 2023 / Accepted: 22 February 2024  
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## Abstract

Studies linking religion to CSR have produced conflicting findings due to a failure to draw distinctions among religious influences and different CSR practices, and to theorize their connection. Drawing on social identity theory and the theory of planned behavior, we first argue that religion will influence CSR when ethical values from a CEO's religious social identification resonate with an aspect of CSR. Second, CEO attitudes congruent with those values and forms of CSR—interpersonal empathy and proactiveness—will strengthen that relationship. Third, the relationship between religious social identification and CSR will be strengthened by a CEO's ability to enact CSR policies, a function of personal and firm market power. Our research on 270 CEOs from 242 publicly traded US firms from 2007 to 2020 supports these relationships.

**Keywords** Corporate social responsibility · CEO religious identification · Social identity theory · Theory of planned behavior

## Introduction

Max Weber in his classic work *The Protestant Ethic and the Spirit of Capitalism* (1930) maintained that religious values could encourage business-related behavior such as risk taking, individualism, and wealth accumulation. Since then, scholars have been exploring possible connections between religion and business conduct—two fundamental bastions of society. With the growing interest in corporate social responsibility (CSR), studies of those relationships have increased. Unfortunately, they have led to conflicting arguments and results, perhaps because much of the literature is purely

normative, while empirical studies of religion's impact on CSR often fail to compare different sources and types of religious influence or CSR (Amer, 2023; Brammer et al., 2007; Su, 2019) or are lacking in replicable measures (see review by Van Aacken & Buchner, 2020). More importantly, too often, studies have failed to theorize the multiple underlying constructs linking religion and CSR, the resulting “black box” furthering the irreconcilability of the findings (Mazereeuw-van der Duijn Schouten et al., 2014; Van Aacken & Buchner, 2020; Weaver & Agle, 2002). We address these shortcomings by proposing and testing a socio-behavioral model of when and how the religion of top executives can influence the CSR of their organizations.

We do so by bridging social identity theory (Hogg, 2016; Tajfel & Turner, 2004) and the theory of planned behavior (Ajzen, 1985; Bosnjak et al., 2020). We argue that for the religion of a CEO to impact corporate behavior three conditions come into play: normative pressures, congruent attitudes, and control over behavior (Ajzen, 1985). In this study, religious social identification serves as a normative pressure, the attitude to behave according to those pressures is reflected by proactive empathy, and behavioral control is the power to act. Thus, first, there must be resonance between the source of religious influence and the type of CSR. In other words, the values associated with an executive's religious identity must resonate with the CSR behavior enacting

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those values (Weaver & Agle, 2002). Second, the relationship between religious identity and CSR is conditioned by attitudes—the willingness to pursue religious values through specific CSR behavior (Ajzen, 1985; Mazereeuw-van der Duijn Schouten et al., 2014). Attitudes common across many religions include prosocial empathy and benevolence (Saroglou, 2006), notions favoring the social aspect of both religion and CSR (Heck, 2009; Ysseldyk et al., 2010). Third, the relationship between CEO religious identity and CSR will be conditioned by behavioral control—the ability to enact policies congruent with the values associated with the religious identification. That can be a function of the power of the CEO and his or her organization. Our study of 270 CEOs from 242 publicly traded US firms from 2007 to 2020 finds support for these relationships.

### Research Contributions

We contribute to the literature on CSR in several ways. First, in bridging social identity theory (Hogg, 2016; Stets & Burke, 2000; Tajfel & Turner, 2004) and the theory of planned behavior (Ajzen, 1985, 2020; Bosnjak et al., 2020), we develop a behavioral model incorporating constructs that support and moderate the relationship between religion and CSR. Specifically, we demonstrate how congruent attitudes and behavioral control—the ability to act—reinforce the connection between the values associated with religious social identity and specific aspects of CSR.

Second, we distinguish among the contextual versus personal sources of religious influence on corporate behavior, specifically, differentiating between geographic sources of influence (e.g. Hilary & Hui, 2009) versus personal religious identification (e.g. Maung et al., 2020)—the latter being a potentially more direct and influential aspect of a CEO's social identity. We also differentiate among specific varieties of CSR related to religious identity and focus on objective characteristics and measurable conditions of religious identification, attitudes, and CSR, thereby enhancing the precision and replicability of the research.

Third, we contribute to the literature on upper echelons (Finkelstein et al., 2009; Hambrick & Mason, 1984; Velte, 2020, 2022) by demonstrating how several important and neglected aspects of CEOs, specifically, their religious identity and attitudes, shape their CSR initiatives.

Fourth, we identify the dimensions for relating religion to CSR that can be used to situate studies of other contexts. These suggest the importance of distinguishing religious contexts, sources, types of CSR, and the connections among them. Although predictions must differ depending on the parameters of these dimensions—the specific religion, source, and type of CSR—the dimensions apply broadly to

studies relating religion to CSR. Moreover, their specification will facilitate more contextualized and therefore cumulative findings in future studies, and guard against overgeneralization. In that spirit, we note that our findings are intended to apply to CEO religiosity in publicly traded US companies.

In what follows, we first review the literature on the relationship between religion and CSR, highlighting current conflicts and gaps and demonstrating opportunities for more integrative and fine-grained theorizing. We then present our theoretical model, before deriving hypotheses, and presenting methods and findings. We conclude with conceptual reflections, limitations, and suggestions for further research.

### The Literature on the Religious Drivers of CSR

Recent reviews find that there are many disagreements in the literature on religion and CSR. That is in part because of a failure to distinguish between different sources of CSR, types of CSR, and national contexts (Amer, 2023; Brammer et al., 2007; Dimic et al., 2024; van Aaken & Buchner, 2020). There has also been a failure to connect religious beliefs to the personal identities and mechanisms linking it to corporate action (Weaver & Agle, 2002).

For example, some studies have examined the relationships between corporate conduct and national religious differences (e.g. Ibrahim et al., 2008; Shu et al., 2022; Su, 2019; Velayutham, 2014). Others have focused on variations in regional religious institutional presence (e.g. Du et al., 2014, 2015), while still others examine the impact of managers' personal religiosity on CSR (e.g. Baxamusa & Jalal, 2016; Mazereeuw-van der Duijn Schouten et al., 2014; Xu & Ma, 2022).

Another source of variation is a focus on different varieties of CSR (e.g. Hilary & Hui, 2009; Iguchi et al., 2022; Oh et al., 2021; Shu et al., 2022). For example, Jenkins and Chapple (2011) and Jenkins et al. (2018) focus on religiosity and the environment, while Kim and Daniel (2016) explore its governance consequences.

Such diversity of focus—personal versus geographic religiosity, environmental versus social CSR, as well as differences in national contexts and religions—has resulted in disparate conclusions about the relationships between CSR and religion (Malik, 2015; Shu et al., 2022). Compare, for example, Ananthrum and Chan (2016), Chou et al. (2016), Harjoto and Rossi (2019) and Iguchi et al. (2022) who studied different contexts, religions, and CSR outcomes, with correspondingly different results. This variation can be useful as it expands our understanding. But when studies

disagree, it is important to identify the sources of that disagreement and reconcile differences.

That reconciliation is made more difficult by a lack of theorization concerning the *conditions that connect religion and CSR* (Graafland et al., 2007; Weaver & Agle, 2002). Specifically, most studies connect religious values directly to CSR behavior, with little attempt to theorize the mechanisms that facilitate, condition, or impede such a relationship (Weaver & Agle, 2002). For example, useful studies by Harjoto and Rossi (2019), Maung et al., (2020) and Xu and Ma (2022) have shown how the religion of the CEO has a positive impact on CSR, but they say less about the personal attitudes and agentic capacity needed to enact religious beliefs through an organization.

We propose that more cumulative knowledge will come from research that (a) distinguishes between the influences of geographic versus personal religiosity; (b) distinguishes between the types or components of CSR; (c) is specific about the context of the study; and (d) explicitly theorizes the personal and organizational links connecting religion and CSR. We pursue these efforts in the hope of producing more contextualized findings and greater precision in relating religious identity to specific types of CSR.

## CEO Religion and CSR: Theoretical Roots

In theorizing the connection between religious identity and CSR, it is useful to specify the causal linkages. If religion represents a core aspect of social identity (Batson et al., 2002, 2005), it may or may not be acted upon. That requires a willingness to do so—a proactive attitude derived from the religion itself and the motivation to enact its values via practices such as empathy and benevolence toward resonant parties influenced by CSR (Saroglou, 2006; Saroglou et al., 2004). In turn, that willingness must be potentiated by ability—the power and discretion to act. Thus, the enactment of CSR-related religious values by a CEO in a corporate context depends on his or her religious identity and values, the attitude or willingness to enact those values via the firm, and the ability and power of the person to do so.

We draw upon two prominent behavioral theories to theorize these relationships between CEO religion and firm CSR. *Social identity theory* (Brown, 2000; Hogg, 2016; Tajfel & Turner, 2004) suggests that people identify with a variety of specific reference groups, such that they come to favor the values or norms of peers within those groups and see themselves as members of those groups, often delineated in contrast to other groups (Gupta et al., 2021). Religious association defines one such group, so that a **religious identity**

may induce adherence to the associated norms and values (Stets & Burke, 2000; Ysseldyk et al., 2010).

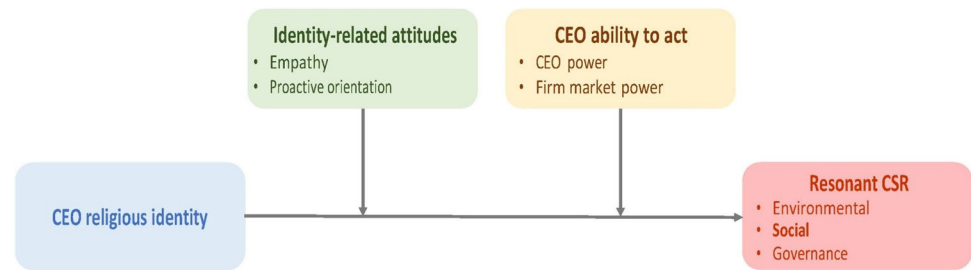
However, the salience of a social identity—the tendency for its norms and values to be enacted—depends on congruent **personal attitudes** that connect those values with specific situations or behaviors (Lalonde & Silverman, 1994; Oakes, 1987; Stets & Burke, 2000). Attitudes can have cognitive, affective, and behavioral components, typically expressed as feelings and actions (Greenwald, 2014). They connect values with behavior, and thus are central to Ajzen's (1985, 1991, 2020) *theory of planned behavior*. In predicting behavior, the theory combines normative factors like the religious values of social identity with personal attitudes. Thus, behavior is influenced not only by identifying with group values but by adopting complementary personal attitudes, empathic compassion, for example, applied to relevant situations. Such value-tied behavior is more likely to occur when people can control their behavior—thus the **ability to act** serves as a third factor influencing behavior (Ajzen, 2020; Conner & Armitage, 1998; Kim & Kim, 2020; Madden et al., 1992; Yuan et al., 2019). In combination, these theories suggest that the values associated with religious social identity, the personal attitudes favoring those values in a related situation, and the ability to enact these will shape behavior (Cordano & Frieze, 2000).

The robustness of this framework is suggested in part by its resonance across other domains. For example, in studies of family business, the willingness and ability of primary actors are seen as preconditions to business conduct, where willingness reflects both social values and personal attitudes (e.g. De Massis et al., 2014). More importantly, the framework can be applied to study religion and CSR in different geographic and religious contexts, and for different varieties of religious influence and CSR.

## A Behavioral Model of Social Identity, Attitudes, and Abilities

The above discussion suggests that **social identity**, the **attitudes** for enacting its values and norms, and the **ability** to do so may each influence behavior, interacting to determine whether and how CEO religiosity influences CSR. Our model is presented in Fig. 1 (see also Table 1). First, the actor, in this case the CEO, must see a connection between their social identity, as reflected by its values and norms, and a related aspect of CSR. In other words, the CEO must relate these normative aspects of a religious social identity to the nature of the CSR action being considered. For

**Fig. 1** A socio-behavioral model of religious identity and CSR



**Table 1** Social identity, attitudes, ability and CSR: framework elements

	Religious social identity (norms and values) <sup>a</sup>	Proactive empathy (personal attitudes)	Ability to act (behavioral control)
Focal relationships	Resonance between CEO religious values and CSR orientation	Attitudes supporting pursuit of religious identity and related CSR initiatives	CEO ability to pursue aspects of CSR consistent with religious identity
Dimensions	Religious social identity	CEO empathy and proactive orientation	CEO power and firm capacity to act
Indicators	Publicly stated CEO religious affiliation	Proxies of charitable donations, gender and age	CEO major ownership; market power and age

<sup>a</sup>Bracketed terms are those favored by scholars of the theory of planned behavior (Ajzen, 1985)

example, if identifying with religious values prioritizes the benevolent prosocial treatment of proximate others, then followers should see that as salutary. If so, the socially beneficent aspect of CSR may be viewed as particularly laudable (Dyck, 2014; MacLeod, 2011; Saroglou, 2006).<sup>1</sup>

However, the values associated with a religious social identity do not necessarily imply that a CEO will possess the **attitude** or willingness to pursue them through CSR (Weaver & Agle, 2002). A religious identity may be adopted superficially or compartmentally and be insufficiently salient to influence firm-related behavior (Oakes, 1987). In other words, an executive may lack the sentiments and willingness to enact religious values at work (Weaver & Agle, 2002). A CEO is more likely to pursue religious norms through his or her firm when embracing attitudes such as empathy and compassion (Dyck, 2014; Vallerand et al., 1992). In addition, there needs to be correspondence between attitudes and behavior—for example, *interpersonal* compassion and the preference for *socially directed* versus, say, governance-oriented CSR (Ajzen, 2020). Indeed, Batson et al. (2005), Saroglou (2006), and others found that religiosity was associated with benevolence toward socially proximate individuals—like family, friends, and employees—but not toward more remote parties: anonymous shareholders or more abstract social causes, for example. It is only *congruent* attitudes that connect religious identity to intended behavior.

Finally, a third element is the perceived **ability** to act (Ajzen, 1985; Andreovski & Miller, 2022; Bosnjak et al.,

<sup>1</sup> If the religion emphasized more abstract views pertaining to the primacy of the natural world, environmentalism might be a more resonant type of CSR for the CEO to embrace (Iguchi et al., 2022).

2020). Individuals are more likely to act according to their religious identities if they sense that they have the power and resources to do so. Thus, CEOs must have adequate authority and sway within their organizations. Ability is also influenced by the condition of the firm—its security and power in the marketplace that affords it the resources or latitude to be socially proactive (Zhang et al., 2018).

In short, we believe that in examining the relationship between religion and CSR these details of normative social identity, personal attitudes, and ability are important influences. Without them aligning to connect religion to CSR, the relationship and theorizing of that association is obscured, and conflicting findings such as those we have referenced are more likely to arise.

## Hypotheses

Our hypotheses follow the structure of our model, relating in sequence to the value resonance between religious identity and CSR, the role of personal attitudes in conditioning that relationship, and the ability to act of the CEO as a final conditioning factor.

### Sources of Religious Influence on CSR: Birthplace, Community, and CEO Religion

There are multiple possible sources of religious influence on CSR. Thus far, the literature has explored three main sources: the primary religion or religiosity of the geographic location of an organization (e.g. Cai et al., 2019; Du, 2017;

Du et al., 2014, 2015; Islam et al., 2021; Koleva, 2021; Murphy et al., 2019), the religion of the birthplace of key corporate actors who could influence the CSR behavior of their organizations (e.g. Lei et al., 2021; Lenski, 1961; Nurunabi et al., 2020), and the personal religious identification of the CEO (e.g. Mazereeuw-van der Duijn Schouten et al., 2014; Dyck & Wong, 2010). As suggested by our discussion of social identity, we believe that the most important and immediate influence of religion on CSR will come from the latter—namely, personal public religious identification of the CEO—the most powerful organizational actor.

The religiosity of the geographic location of a firm's head office may have less direct impact on a person's social identity and thus on CSR (Xu & Ma, 2022). First, that religiosity may not pertain to the CEO who influences CSR practices: an agnostic CEO may live in a religious community and vice versa. An exception might be in homogenously theocratic countries where the values and practices of a religion are impressed upon both CEO identities and CSR conduct, or within highly religious communities (e.g. Murphy et al., 2019). However, it is unlikely that head office locations of major public corporations located in large multi-ethnic, multi-faith, secularized cities would show similar findings. Indeed, such urban secularization has been an important social trend in many parts of North America and Europe (Cox, 2013).

Another potential connection between religion and CSR is via the religiosity of the birthplace of the CEO (e.g. Lei et al., 2021). However, here again there may be little connection with the personal religious identification of executives and their places of birth or their ancestors. Moreover, CEOs may have departed from their birthplace long before the local religion could have influenced them.

By contrast, given that most CEOs do not mention their religious identification in public sources, when a CEO does personally, publicly, and voluntarily identify as being a member of a specific religious group, there is reason to believe that that identity may influence behavior both outside an organization and in acting as a top executive (Dyck, 2014; Dyck & Wong, 2010; Hemingway & Maclagan, 2004; Xu & Ma, 2022). Because most religions, including Christianity, advocate prosocial interpersonal values and behavior (Batson et al., 2005; Heck, 2009; Saroglou, 2006; Wade, 2010)—values consistent with responsible corporate conduct—a positive association is expected between CEO religious identification and firm CSR. As noted, this is less likely to be the case for the religion of the CEOs birthplace or corporate head office location.

**Hypothesis 1** The public personal religious identification of a CEO will be more related to firm CSR than the religiosity of the head office location or that of the CEO's birthplace.

Certainly, others have found that head office religion also has an influence on CSR, particularly in countries with more religious populations and religions other than those dominant in the US (e.g. Brammer et al., 2007; Su, 2019). Moreover, we are not stating that community has no effect on CSR, merely that according to our theoretical model and study locale, CEO religion will have greater impact.

## CEO Religious Identification and the Variety of CSR

As discussed, people define their identities in part as members of social groups and see those groups as embodying resonant values (Tajfel & Turner, 2004). One's religious peers may constitute one such group, and religious affiliation may represent one aspect of a person's social identification (Ysseldyk et al., 2010). When a religion is explicit in its values and normative tenets relating to behavior, then identification with that religion makes it more likely for such behavior to be valued and to take place. By contrast, where a religion is silent on types of behavior, it will have little effect on them.

Thus, it is important that there be a positive resonance between the normative tenets of an executive's religion and specific elements of CSR (Ajzen & Fishbein, 1977; Ashforth & Mael, 1989; Vallerand et al., 1992). For example, most religions emphasize interpersonal ethics and values such as empathy and benevolence and the ethical treatment of others. This is true of Christianity, Judaism, Islam, Buddhism and other religions (e.g. Batson et al., 2002, 2005; Heck, 2009; McCullough et al., 2003; Wade, 2010).

Indeed, there is significant research confirming such prosocial behavior of religious people; but *toward those who are close to them and with whom they are in regular contact* (Batson et al., 2005; McCullough et al., 2003; Saroglou, 2006). That includes family members, friends, neighbors, those whose judgment is valued, and those for whom they are responsible (Saroglou et al., 2004). For a CEO, employees fall into that category. Thus, religious values and religiosity resonate especially well with the social component of CSR (we shall call CSR-S) which prioritizes the positive, socially beneficent treatment of workers and ensuring their well-being and security. That may be reflected by fair employment practices, generous benefits, safe working conditions, contributions to the immediate community, access to healthcare, and similar policies and practices.

By contrast, religious identity and religiosity were *not* associated with more remote affected parties or issues. Saroglou (2006: 3) confirms in his review of the literature and multiple empirical studies that: "We may then expect religiousness to predict prosociality toward close targets in need but to be unrelated to prosociality toward unknown targets." Such more remote "targets" may include anonymous

public shareholders, competitors, laws and regulations, or the broad, often remote community potentially affected by the natural environment.

Thus, given the social and interpersonal focus of many religions and their ancient roots and non-commercial orientations, treatment of the natural environment or issues of corporate governance are usually less emphasized. These more modern concerns are less directly tied to the values advocated by many religions (Batson et al., 2005; Heck, 2009; Saroglou, 2006). Thus, the relationship of religious identification and CSR is less likely to pertain to the natural environment or corporate governance. In other words, there is less reason to expect an association between a CEO's religious identification and the pursuit of environmental aspects of CSR, such as green buildings, biodiversity, and renewable energy, or governance aspects such as standards concerning board membership, ownership structure or accounting practices.

We do qualify this hypothesis. Jenkins and Chapple (2011) and Jenkins et al. (2018), for example, found religiosity to have mixed implications for environmental social responsibility, while Kim and Daniel (2016) have explored its governance consequences by making national comparisons in emerging economies, finding significant variation. Nonetheless, these reviews have highlighted the mixed nature of findings, while reviews by religious scholars have highlighted the prosocial implications of religion toward more proximate parties such as families, friends, and those for whom one is responsible (Saroglou, 2006).

**Hypothesis 2** CEO religious identification will relate more to the social component of CSR, than the environmental or governance components.

### Attitudes as Moderators Between CEO Religion and the Social Component of CSR

Congruent personal attitudes reinforce the link between social identity and specific intended behaviors (Ajzen, 2020). The religious values associated with social identities will have more impact on personal behavior where they are embodied by personal attitudes. Attitudes are a broad psychological category with cognitive, affective, and behavioral components, sometimes expressed as opinions, feelings, and actions (Greenwald, 2014). They are mental representations connecting values and experience with behavior in specific situations.

For example, for individuals who are passively part of a religious demographic, that status is unlikely to influence their attitudes or behavior. By contrast, for more pious believers, their religious values may be manifested in congruent attitudes and behavior toward others. That can be

reflected in personal attitudes such as empathy and a proactive orientation to enact religious values such as care for others (Dyck, 2014; Dyck & Wong, 2010). Specifically, empathic religious executives are especially likely to favor the prosocial aspects of CSR. Their felt affinity toward and responsibility for other people can serve as an important motivator of corporate social responsibility. Conversely, those whose attitudes are less empathic may be less inclined to connect their religious values to the social needs of their firm's stakeholders. In short, CEO empathy toward others will enhance the relationship between CEO religious identification and CSR-S: the social aspect of CSR.

A related attitude is a willingness to act in a proactively beneficent way—to be charitable. Again, this is consistent with the common religious value of “doing unto others” (Heck, 2009; Wade, 2010). Therefore, charitable executives and those with a prosocial attitude—e.g. volunteers—will be more motivated to adopt CSR-S than those who are less charitable, more passive and content with the status quo (Han et al., 2022; Wei et al., 2018). Thus, a charitable and proactive orientation may enhance the relationship between CEO religious identification and CSR-S.

In this research, we could not measure CEO empathy or a proactive orientation directly from our data, and so we had to employ proxies based on consensus findings from prior studies. For *empathy* and compassion, we first looked at charitable donations, a direct measure of benevolence at the discretion of the CEO. We also took as a proxy the gender of the CEO. Studies of both cultural effects and neurological response have found highly consistent and uniform gender differences, whereby females are significantly more empathic and compassionate than males (see, for example, Chen et al., 2014; Christov-Moore et al., 2014; DeHart-Davis et al., 2006; Eisenberg et al., 1989; Lennon & Eisenberg, 1987; Mercadillo et al., 2011; Schulte-Ruther et al., 2008; and many others). More recently, studies have shown that female CEOs in health care organizations tended to do more to enhance the compassionate treatment of patients than their male counterparts (Galstian et al., 2018; Silvera & Clark, 2021). Female executives also are said to have a positive effect on socially directed CSR (Boukattaya & Omri, 2021; Madison et al., 2021). Thus, there is significant evidence that gender can serve as a proxy for attitudes of empathy and compassion.

The second attitude expected to enhance the relationship between CEO religion and CSR-S is a *willingness to engage in proactive behavior*—a tendency to enact one's values in personal and organizational life. Again, we employed a demographic proxy for that behavior—namely the age of the CEO. Studies have found that proactive social voluntarism is most common when individuals are in their mid-40 s, a young age for a CEO (Norris, 2004). Youth is typically

associated with more physical energy and active engagement (Speakman & Westertherp, 2010) as well as more socially proactive behavior (Bertolino et al., 2011). Indeed, numerous studies have found that younger CEOs tend to be more proactive than older ones (Barba Navaretti et al., 2022; Cho & Kim, 2017; Serfling, 2014; Wiersema & Bantel, 1992). Thus, we employ CEO age (younger than 50) as a proxy for a proactive orientation.

**Hypothesis 3a** CEO empathy, proxied by gender and charitable contributions, will positively moderate the relationship between religiosity and CSR-S.

**Hypothesis 3b** CEO proactiveness, proxied by youthfulness, less than 50 years old, will positively moderate the relationship between religiosity and CSR-S.

### Ability to Enact CSR of the CEO and the Firm

Even when a CEO's religious identification resonates with elements of CSR, he or she requires the power and resources to behave accordingly. For example, CEOs with little influence are less able to undertake discretionary initiatives such as CSR than those with ample decision-making power. One indicator of CEO influence is ownership stake in the company. CEOs who are major owners of a company have more discretion to make decisions. First, they may have enough ownership to overrule less significant owners or board members (Ghosh et al., 2007). Second, even when they are not the largest owners in the company, their ownership aligns their incentives with the interests of other shareholders, enhancing their discretion. This is in part because significant ownership of CEOs reassures board members that they are emotionally invested in and identify with the company and its future (Chin et al., 2013), thereby deserving more latitude to enact discretionary priorities (Ghosh et al., 2007). By contrast, CEOs who are minimal owners have less direct power vis-à-vis boards and other owners, and perhaps less credibility with board members; that may restrict their ability to pursue discretionary CSR initiatives (Oh et al., 2016).

Another factor influencing a CEO's perceived ability to invest in CSR is market power (Cottrill, 1990). Where a firm is struggling competitively with large rivals, its CEO may need to limit investments in CSR to prioritize revenues and profit. But when it is an influential player with abundant market share, the CEO is more likely to have the confidence and reputation to invest in CSR initiatives (Hutzschenreuter & Kleindienst, 2013). The same holds true when the firm has more market power due to market share concentration, which can provide a strong competitive position from which to engage in costly CSR activities not connected directly

to revenue generation (Islam et al., 2021; Lee et al., 2018). Table 1 and Fig. 1 summarize our model.

**Hypothesis 4a** CEO power conferred by personal ownership and discretion will positively moderate the relationship between CEO religiosity and CSR.

**Hypothesis 4b** Firm market power will positively moderate the relationship between CEO religiosity and CSR.

## Method

### Sample

We manually collect a sample of US CEOs of public firms with personal information available from the Marquis Who's Who database, which claims to provide "unmatched coverage of the lives of today's leaders and achievers from the USA and around the world, and from every significant field of endeavor." Specifically, we start with CEOs of S&P 1500 firms from 2007 to 2020, identify their names in Execucomp, and manually collect their self-identified religious beliefs (if any) and birthplace information. We drop CEOs not covered by Who's Who and those not disclosing birthplace information. To ensure appropriate matching, we drop CEOs whose years of birth do not match Execucomp records. We then merge the data with the MSCI ESG database for ESG (i.e., CSR) ratings, and with the American Religion Data Archive (ARDA) database for CEO birthplace and firm community religiosity. In the process, we drop firms not covered by MSCI ESG and CEOs whose birthplaces are not covered by ARDA (including CEOs born outside the US). Finally, we obtain financial data from Compustat, and drop firms with missing financial information or negative book equity values. Our final sample consists of 270 CEOs from 242 firms and 1507 firm-year observations.

### Personal Religious Belief

As noted, data on CEO religious belief was from Marquis Who's Who. Each year, Marquis surveys high profile individuals in all fields and publishes biographical information from the questionnaires sent to these individuals. We define a dummy variable *Religious CEO* which equals 1 if the CEO self-identifies her religious belief, and 0 otherwise. We note that religious affiliations are self-reported, and disclosure of religion is completely voluntary. We argued that compared to the CEOs who choose not to disclose their religion—most of our sample—those who voluntarily do so are more likely to adhere to and enact its values and norms because

public disclosure suggests social identification with a religion (Maung et al., 2020). Although CEOs may not report their religion for various reasons, that is unlikely to bias our findings in any systematic way.

### Birthplace Religiosity

We manually collect the CEO's birthplace city and date of birth from Marquis Who's Who and identify its county. Following Hilary and Hui (2009), we measure religiosity using church membership data from the American Religion Data Archive (ARDA). ARDA provides data for church and church membership at the county level in 1952, 1971, and each decade afterward; for each CEO, we use the ARDA data published for the decade the CEO was born, or closest to the CEO birth year (for example, a CEO born in 1962 is linked to 1971 ARDA data)<sup>2</sup>. We then define the level of religiosity at the CEO birthplace county (*Birthplace Religiosity*) as the number of church-affiliated members divided by the total county population. In some cases, a big city (e.g. New York) may be linked to multiple counties, and we use the average religiosity of all associated counties.

### Headquarters' Religiosity

To identify a firm's headquarters religiosity, we first obtain the zip code of the firm's headquarters location from Compustat and then identify the county code associated with the zip code. Like for birthplace religiosity, headquarters religiosity (*HQ Religiosity*) is church membership divided by total county population. We use 2010 ARDA data for headquarters religiosity, because 2010 is the only year during our sample period (2007–2020) that ARDA data are published.

### Corporate Social Responsibility: ESG

Data for corporate social responsibility are from MSCI ESG. Serafeim and Yoon (2023) argue that compared to other CSR rating sources, MSCI has the broadest coverage of US firms and is best in predicting future ESG (i.e., CSR) developments and associated market reactions. Each year, MSCI utilizes multiple sources, including annual reports, government data, investor presentations, news media, and direct communication with the companies, to assess over 30 ESG key issues that represent risks and opportunities for a firm and its industry. Key issues are then grouped into three main categories, representing the Environment (E), Social (S), and Governance (G) pillars. The environmental pillar covers issues such as carbon and toxic emissions, packaging

waste, and renewable energy. The social pillar is focused on issues of human capital development, health and safety issues, access to social opportunities, and product liability. The governance pillar covers issues such as board structure, shareholder rights, executive compensation, and tax transparency. MSCI calculates a score for E, S, and G by aggregating key issues under each according to the impact and time horizon of a risk or opportunity. MSCI also calculates an overall ESG (i.e., CSR) score as a weighted average of key issues. Each score ranges from 0 to 10; a higher number indicating the firm leads its industry in managing ESG risks and opportunities.

### Other Variables

We include geographic controls for CEO birthplace location and firm headquarters location poverty, education, and population. These controls are included to avoid endogeneity due to their relationships to ESG or religiosity. Specifically, education and poverty rate are documented to affect both local religiosity (e.g. Lenski, 1961; Stark, 1972) and ESG (Ioannou & Serafeim, 2012), while Husted et al. (2016) show that populous major cities or financial centers encourage ESG engagement. Poverty rate is the percentage of people living under the federal poverty threshold based on household size and family makeup. Education is defined as percentage of population over the age of 25 with a bachelor's degree or higher. Population is the natural logarithm of county population. These data are from the decennial US Census Bureau. Because birthplace characteristics could affect religious beliefs mostly in the childhood family environment, we measure these in the decennial year closest to the CEO's birth. Because ethnicity has been shown to affect religiosity (Iannaccone, 1998), and red/blue party affiliation is often linked to ESG (Hong & Kostovetsky, 2012), we also consider birthplace ethnic diversity—percentage white, and headquarters county red-blue political balance from electoral maps—Republican proportion in the recent presidential election.

At the CEO level, we control for the natural logarithm of CEO age and gender, and CEO compensation, obtained from ExecuComp. Borghesi et al. (2014) show female and younger CEOs to invest more in CSR. Multiple studies also show that compensation of top-level managers may relate to CSR efforts as may CEO ownership (Berrone & Gomez-Mejia, 2009; Coombs & Gilley, 2005).

We also control for conventional firm level characteristics in the literature that may influence a firm's ESG engagement. Specifically, we adopt the natural logarithm of total book assets to control for firm size. We include ROA (net income/total book assets) and Book/Market (book value of equity/market value of equity) because firms with superior performance and market valuations tend to make greater ESG commitments (Ioannou & Serafeim, 2012). We also control

<sup>2</sup> One limitation of the approach is that we cannot observe when CEOs left their birthplace locations, and hence cannot rule out the possibility that some CEOs may have moved right after birth.



for leverage (long term debt/total assets) because easy access to finance can boost corporate social responsibility (Cheng et al., 2014). All these variables are from Compustat.

## Results

Table 2 reports descriptive statistics. The ESG ratings and three pillars of E, S and G show similar standard deviations and their means all cluster around 5 out of 10. As for religiosity, we see that only 16.3% of our sample CEOs identify with a religious group, while approximately half the population in their birthplace county and firm headquarters county are religious.<sup>3</sup> Religiosity levels of CEO birthplace and firm headquarters are not significantly different. The distribution of control variables confirms that large firms tend to locate in blue, more populous counties with better education. CEOs are mostly male and born mostly in white counties.

The correlation matrix is presented in Table 3. The three pillars of ESG are highly correlated. When examining their correlations with religiosity measures, we find that religious CEOs are associated with higher overall ESG ratings and S ratings, but not higher E. Birthplace and headquarters religiosity are not positively associated with ESG; if anything, the correlation coefficients are negative.

Table 4 regresses ESG and its three components, E, S, and G, on our three measures of religiosity, along with control variables. To absorb industry, year, and state effects, we include fixed effects for SIC 2-digit industries, years, and states. In columns 1–4, the variable of interest is *Religious CEO*. In columns 5–8, the variable of interest is *Birthplace Religiosity*. In columns 9–12, the variable of interest is *HQ Religiosity*.

The main findings in Table 4 support Hypothesis 1. Specifically, whereas there is a positive and significant association between CEO personal religious belief and overall ESG ratings, we do not find such association for CEO birthplace religiosity or firm headquarters religiosity. It appears that religion has its strongest association with ESG when a CEO voluntarily identifies as being a religious adherent; in contrast, a CEO's growing up in a religious environment or working for a firm located in a religious environment does not relate much to firm overall ESG.

Despite the positive correlations among E, S, and G, their associations with religiosity vary. The strong positive association between *Religious CEO* and ESG is almost completely attributable to the S pillar (column 3), where the coefficient for Religious CEO is 0.327 (about two thirds of that in column 1) and statistically significant at the 1% level. The

<sup>3</sup> The county religiosity values are the percentages of county population that are church members, following Hilary and Hui (2009). These values are similar to the percentage reported in Hilary and Hui (2009).

**Table 2** Summary statistics

Variable	Obs	Mean	SD	Min	Max
<i>ESG and components</i>					
ESG	1.507	4.745	2.302	0.000	10.000
E	1.507	5.124	2.088	0.760	10.000
S	1.507	4.629	1.692	0.400	8.610
G	1.507	5.482	2.035	0.900	10.000
<i>Religiosity measures</i>					
Religious CEO	1.507	0.163	0.370	0.000	1.000
Birthplace religiosity	1.507	0.457	0.183	0.041	0.755
HQ religiosity	1.507	0.508	0.097	0.309	0.747
<i>Control variables</i>					
Red HQ county	1.507	0.145	0.352	0.000	1.000
HQ poverty rate	1.507	0.115	0.047	0.027	0.246
HQ education	1.507	0.216	0.071	0.096	0.441
HQ population	1.507	13.775	0.939	10.663	16.069
Birthplace poverty rate	1.507	0.132	0.071	0.038	0.515
Birthplace education	1.507	0.057	0.019	0.019	0.110
Birthplace population	1.507	13.127	1.574	8.348	15.881
Birthplace white%	1.507	0.858	0.144	0.274	0.999
Log (CEO age)	1.507	4.071	0.114	3.738	4.564
Female CEO	1.507	0.063	0.243	0.000	1.000
Log (compensation)	1.507	8.853	1.365	-6.908	11.816
Log (assets)	1.507	9.233	1.549	5.667	13.590
ROA	1.507	0.061	0.076	-0.300	0.270
Leverage	1.507	2.282	4.782	-24.431	34.634
Book/market	1.507	0.610	0.241	0.135	1.368
Donation	1.507	0.104	0.306	0.000	1.000
CEO ownership	1.507	1.638	4.275	0.000	36.314
Market share	1.507	0.055	0.084	0.000	0.601
Herfindahl index (HHI)	1.507	0.089	0.095	0.021	0.562

This table reports summary statistics of variables used in the study. Continuous variables are winsorized at the 1% and 99% levels

“economic magnitude” of this relationship is also substantial: compared with a non-religious CEO, a religious CEO is associated with an S score which is 0.327 higher (about 7% higher). By contrast, in E and G columns 2 & 4, the coefficient estimates for *Religious CEO* are not significant. Thus, our findings support Hypothesis 2 that CEO religious identification relates significantly to the social component of ESG, but not the environmental or governance components.

Among control variables, we see that female CEOs are associated with higher ESG ratings, confirming that they are more willing to engage in ESG activities in general (Boukattaya & Omri, 2021; Madison et al., 2021; Norris, 2004). Bigger firms also tend to have higher ESG ratings, probably because they can afford ESG initiatives. Among the geographic variables, we see that the red county dummy and poverty rate (for CEO birthplace and firm headquarters) are negatively associated with ESG-S. These results

Table 3 Correlation matrix

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
[1] ESG														
[2] E	0.48													
[3] S	0.60	0.16												
[4] G	0.32	0.07	0.07											
[5] Religious CEO	0.07	-0.02	0.07	0.02										
[6] Birthplace religiosity	-0.10	-0.07	-0.01	-0.03	0.05									
[7] HQ religiosity	-0.16	-0.07	-0.15	-0.07	0.03	0.11								
[8] Red HQ county	-0.09	-0.16	-0.09	0.00	-0.04	-0.07	-0.04							
[9] HQ poverty rate	-0.08	0.02	-0.09	-0.05	0.06	0.12	0.07	-0.20						
[10] HQ education	0.07	0.17	0.03	0.02	0.13	0.09	-0.09	-0.27	-0.17					
[11] HQ population	0.03	0.10	-0.01	0.02	0.06	0.05	0.13	-0.45	0.36	0.13				
[12] Birthplace poverty rate	0.01	-0.01	0.00	0.04	-0.04	-0.23	0.03	-0.06	0.00	0.05	-0.05			
[13] Birthplace education	0.01	0.10	-0.01	0.01	0.04	0.06	-0.10	-0.02	-0.07	0.01	0.03	-0.40		
[14] Birthplace population	-0.02	0.14	-0.07	-0.03	-0.01	0.16	0.05	0.04	0.09	0.12	0.22	-0.29	0.33	
[15] Birthplace white%	-0.03	-0.08	0.00	-0.02	0.00	0.17	0.12	-0.06	0.04	-0.07	0.04	-0.49	-0.17	-0.22
[16] Log(CEO age)	-0.05	0.00	-0.09	-0.09	0.10	0.37	0.05	-0.10	0.10	0.18	0.04	0.12	-0.07	-0.08
[17] Female CEO	0.07	-0.03	-0.02	0.06	-0.04	0.11	0.08	0.02	-0.03	0.04	-0.01	-0.02	0.04	0.10
[18] Log(Compensation)	0.04	0.06	0.00	0.01	-0.16	0.09	0.10	-0.06	0.03	-0.06	0.04	-0.05	-0.06	0.03
[19] Log(Assets)	0.20	0.26	0.09	0.03	-0.01	0.09	0.05	-0.15	0.05	0.03	0.19	-0.01	0.11	0.09
[20] ROA	0.12	0.09	0.09	0.10	0.07	-0.04	-0.02	-0.03	-0.18	0.07	-0.04	0.05	-0.03	-0.04
[21] Leverage	0.00	0.00	-0.03	0.02	-0.02	0.01	-0.06	-0.02	0.03	0.05	-0.02	0.01	0.00	0.01
[22] Book/market	-0.12	-0.13	-0.06	-0.12	-0.08	0.10	0.03	0.07	0.23	-0.14	0.06	-0.12	0.05	0.02
[23] Donation	0.12	0.10	0.14	0.09	0.07	0.13	-0.03	-0.05	-0.01	0.06	0.07	-0.04	0.03	-0.03
[24] CEO ownership	-0.13	-0.02	-0.07	-0.11	0.03	-0.06	-0.10	-0.08	0.03	0.11	0.01	0.16	-0.14	-0.06
[25] Market share	0.14	0.15	0.00	0.09	0.08	-0.01	-0.02	0.00	-0.01	0.04	0.08	0.02	0.09	-0.03
[26] Herfindahl (HHI)	0.03	-0.08	-0.03	0.02	0.01	0.03	-0.02	0.13	0.02	0.02	-0.13	0.00	0.02	-0.10
[1] ESG														
[2] E														
[3] S														
[4] G														
[5] Religious CEO														
[6] Birthplace religiosity														
[7] HQ religiosity														
[8] Red HQ county														
[9] HQ poverty rate														
[10] HQ education														

Table 3 (continued)

	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]
[11] HQ population											
[12] Birthplace poverty rate											
[13] Birthplace education											
[14] Birthplace population											
[15] Birthplace white%											
[16] Log (CEO age)	-0.09										
[17] Female CEO	0.00	-0.05									
[18] Log(Compensation)	0.04	0.02	0.05								
[19] Log(Assets)	-0.04	-0.03	0.03	0.32							
[20] ROA	-0.07	0.00	0.04	0.02	0.03						
[21] Leverage	-0.05	-0.04	0.06	0.04	0.07	-0.09					
[22] Book/market	0.08	0.07	-0.02	0.01	0.04	-0.56	0.03				
[23] Donation	0.02	-0.04	-0.04	0.09	0.28	0.06	-0.02	0.02			
[24] CEO ownership	-0.11	0.20	-0.08	-0.07	-0.15	0.04	-0.05	-0.09	-0.06		
[25] Market share	-0.07	0.03	0.00	0.11	0.41	0.10	0.03	-0.11	0.17	0.02	
[26] Herfindahl (HHI)	-0.03	0.14	-0.02	-0.04	-0.05	0.00	0.01	0.06	0.04	0.00	0.39

This table reports the Pearson pairwise correlation matrix of variables used in the study

are consistent with previous studies (Hong & Kostovetsky, 2012; Ioannou & Serafeim, 2012). Somewhat surprisingly, population education was negatively associated with ESG, especially the S component. This may be due to multi-collinearity between poverty and education.<sup>4</sup> Table 3 reveals these to be negatively correlated; but education does not correlate with ESG or S. We find that if we drop poverty rate, the coefficient and significance of education drop sharply. Hence, the coefficient is biased due to multi-collinearity, but coefficients for our religiosity measures are not affected.

An important consideration in our analyses is that CEO religious identification can be endogenous. One concern is that CEOs of bigger and more profitable firms may feel more confident to reveal their religion, and these firms also tend to have higher ESG ratings (Udayasankar, 2008). To address this possibility, we employ a propensity score matching (PSM) model. First, we regress *Religious CEO* on potential determinants of CEO religious identification: birthplace and firm headquarters religiosity, red headquarters indicator, poverty rate (of birthplace and headquarters), education (of birthplace and headquarters), population (of birthplace and headquarters), white percentage of birthplace, age, gender, compensation, firm size, firm ROA, firm leverage, and firm book/market ratio. This provides each CEO's propensity score to self-identify as religious. We then match each religious CEO with a non-religious CEO who has the closest propensity score and re-estimate our prior regressions with the propensity matched sample. We report the results in Table 5. The rigorous 1:1 closest neighbor PSM method reduces our sample size substantially to 392 observations. However, our key findings hold: CEO personal religious belief remains positively associated with ESG and especially the S pillar, but not with the E or G pillars. In addition to the PSM model, we also tried to directly examine changes in ESG scores around CEO turnovers for better identification of causality. In untabulated results, we show that when a religious CEO replaces a non-religious one, an increase in *Religious CEOs* is associated with an increase in *ESG-S*, but not with the overall ESG, E, or G component.<sup>5</sup> Lastly, one

<sup>4</sup> Our regressions have relatively low variance inflation factors (VIFs), indicating that our results are not subject to severe multi-collinearity. For example, in our baseline S regression concerning CEO personal religion (column 3 in Table 4), the average VIF is 3.17 (excluding fixed effects), far below the commonly used threshold of 10. Most of the variables have low VIF values between 1 and 3, while geographic variables (education, poverty rate and population) have VIF values ranging from 3 to 6.2—again, not too high.

<sup>5</sup> In this set of regressions, we use the change in ESG score after CEO turnover as the dependent variable. The variable of interest is change in the self-identified religion after CEO turnover. A significant limitation of this analysis is that there are only 72 cases of CEO turnovers in our sample, and the regressions have few degrees of freedom and limited power when control variables are included. These results are available upon request.

Table 4 Religion and ESG: personal vs. birthplace vs. headquarters

Dep. Var	(1) ESG	(2) E	(3) S	(4) G	(5) ESG	(6) E	(7) S	(8) G	(9) ESG	(10) E	(11) S	(12) G
Religious CEO	0.479*** (2.66)	- 0.031 (- 0.20)	0.327*** (2.67)	0.073 (0.45)								
Birthplace religiosity												
HQ religiosity												
Red HQ county	- 0.401 (- 1.38)	- 0.408* (- 1.72)	- 1.055*** (- 5.53)	0.795*** (2.84)	- 0.214 (- 1.03)	- 0.311* (- 1.74)	- 0.412 (- 0.99)	0.890* (1.93)	- 0.458 (- 0.45)	- 0.965 (- 0.93)	- 0.996 (- 1.30)	- 2.467*** (- 2.28)
HQ poverty rate	0.131 (0.06)	1.390 (0.70)	- 5.193*** (- 3.41)	8.517*** (3.65)	- 2.267 (- 1.30)	2.644* (1.71)	- 3.442*** (- 2.72)	0.853 (0.52)	0.471 (0.20)	0.763 (0.35)	- 5.377*** (- 3.24)	7.110*** (3.09)
HQ education	- 0.502 (- 0.27)	0.653 (0.44)	- 4.651*** (- 3.82)	3.552*** (1.96)	- 0.379 (- 0.33)	1.019 (1.11)	- 1.081 (- 1.29)	- 0.232 (- 0.22)	- 0.588 (- 0.32)	0.303 (0.19)	- 4.954*** (- 3.87)	2.682 (1.47)
HQ population	- 0.121 (- 1.05)	0.136 (1.38)	- 0.376*** (- 4.18)	- 0.051 (- 0.47)	0.181** (2.07)	0.105 (1.45)	- 0.105 (- 1.49)	0.166** (2.00)	- 0.119 (- 0.97)	0.177 (1.55)	- 0.347*** (- 3.57)	0.048 (0.43)
Birthplace poverty rate	- 1.635 (- 0.97)	- 1.473 (- 1.14)	- 2.465** (- 2.01)	0.594 (0.40)	- 0.480 (- 0.31)	1.555 (1.31)	- 1.845 (- 1.61)	- 0.060 (- 0.04)	- 1.855 (- 1.10)	- 1.507 (- 1.17)	- 2.648** (- 2.17)	0.446 (0.30)
Birthplace education	- 7.083 (- 1.57)	7.150* (1.86)	- 11.054*** (- 3.36)	0.051 (0.01)	- 0.929 (- 0.21)	8.848*** (2.69)	- 6.865** (- 2.17)	1.491 (0.37)	- 6.560 (- 1.42)	7.016* (1.83)	- 10.766*** (- 3.22)	- 0.111 (- 0.02)
Birthplace population	- 0.068 (- 1.33)	0.099** (2.44)	- 0.024 (- 0.66)	- 0.034 (- 0.73)	- 0.037 (- 0.65)	0.155*** (3.58)	- 0.001 (- 0.02)	- 0.084* (- 1.78)	- 0.067 (- 1.31)	0.103** (2.52)	- 0.020 (- 0.56)	- 0.024 (- 0.52)
Birthplace white%	- 0.736 (- 1.05)	0.215 (0.41)	- 0.341 (- 0.79)	- 0.021 (- 0.04)	- 0.121 (- 0.17)	1.000* (1.96)	0.069 (0.16)	- 0.554 (- 0.93)	- 0.624 (- 0.90)	0.235 (0.45)	- 0.245 (- 0.57)	0.062 (0.10)
Log (CEO age)	- 0.918 (- 1.62)	- 0.531 (- 1.06)	- 0.298 (- 0.68)	- 0.639 (- 1.20)	1.017 (0.67)	- 2.323** (- 2.01)	0.081 (0.07)	1.033 (0.80)	- 0.828 (- 1.47)	- 0.516 (- 1.03)	- 0.223 (- 0.51)	- 0.576 (- 1.08)
Female CEO	0.714*** (2.98)	- 0.682*** (- 3.31)	0.408** (2.21)	0.224 (0.81)	0.573** (2.31)	- 0.262 (- 1.40)	- 0.004 (- 0.02)	0.159 (0.60)	0.729*** (3.00)	- 0.663*** (- 3.17)	0.433** (2.30)	0.277 (0.99)
Log (compensation)	0.064 (1.35)	0.000 (0.01)	0.036 (1.58)	0.021 (0.67)	0.027 (0.60)	0.016 (0.53)	0.012 (0.50)	0.001 (0.02)	0.051 (1.13)	0.003 (0.11)	0.029 (1.27)	0.024 (0.79)
Log (assets)	0.301*** (6.12)	0.451*** (10.35)	0.055 (1.52)	- 0.039 (- 0.88)	0.355*** (7.25)	0.407*** (9.62)	0.095*** (2.71)	0.015 (0.35)	0.306*** (6.26)	0.449*** (10.41)	0.056 (1.58)	- 0.043 (- 0.97)
ROA	1.091 (1.19)	0.254 (0.33)	1.210* (1.85)	0.035 (0.05)	0.996 (1.08)	0.432 (0.56)	1.322** (2.06)	- 0.216 (- 0.29)	1.226 (1.33)	0.218 (0.29)	1.283** (1.98)	- 0.011 (- 0.01)
Leverage	- 0.013 (- 0.96)	- 0.002 (- 0.15)	- 0.017** (- 2.20)	- 0.005 (- 0.67)	- 0.005 (- 0.44)	- 0.002 (- 0.23)	- 0.014** (- 2.01)	0.002 (0.29)	- 0.012 (- 0.91)	- 0.002 (- 0.15)	- 0.016** (- 2.19)	- 0.005 (- 0.63)
Book/market	0.414 (1.24)	- 0.407 (- 1.44)	0.501** (2.05)	- 0.358 (- 1.19)	- 0.186 (- 0.56)	- 0.581** (- 2.00)	0.000 (0.00)	- 0.567** (- 2.01)	0.384 (1.14)	- 0.418 (- 1.47)	0.473* (1.93)	- 0.392 (- 1.30)

Table 4 (continued)

Dep. Var	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	ESG	E	S	G	ESG	E	S	G	ESG	E	S	G
Constant	5.009 (1.49)	- 2.117 (- 0.72)	10.340*** (4.15)	3.764 (1.26)	- 7.969 (- 1.10)	3.942 (0.74)	4.302 (0.82)	- 1.903 (- 0.31)	5.173 (1.54)	- 2.079 (- 0.71)	10.485*** (4.18)	3.905 (1.31)
Observations	1,507	1,507	1,507	1,507	1,507	1,507	1,507	1,507	1,507	1,507	1,507	1,507
R-squared	0.334	0.436	0.352	0.253	0.235	0.383	0.249	0.208	0.330	0.436	0.349	0.256

This table reports the regressions of ESG and its three components (E, S, and G) on CEO personal religion, CEO birthplace religion, and firm headquarters religion. All regressions include industry, year, and state fixed effects. Heteroskedasticity robust *t*-values are reported in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively

may also argue that there could be other CEO level variables, such as CEO cultural background, that influence ESG scores. Whereas it is difficult to rule out this possibility, this should not be of great concern as our sample covers only US born CEOs, and we include birthplace characteristics that shape CEO cultural values as control variables in all our regressions. In summary, our baseline findings were not likely driven by endogenous CEO religious identification.

To evaluate Hypotheses 3a and 3b, we consider three proxies for CEO attitudes toward S: empathy, proxied by gender and charitable donations, and proactiveness, proxied by age. We define a *Female CEO* dummy which equals 1 if a CEO is female; a *Young CEO dummy*, which equals 1 if a CEO is younger than 50; and a *Donation* dummy, which equals 1 if the firm has made a philanthropic donation of at least one million during the year.<sup>6</sup> Otherwise the dummy variables are set to 0. In Table 6, we interact *Religious CEO* with the *Female CEO* dummy, the *Young CEO dummy*, and the *Donation* dummy. These interaction terms are statistically significant and positive. These results support both Hypotheses 3a and 3b that CEO gender and charitable donations (empathy) or age (proactiveness) can substantially enhance the positive effect of religious identification on ESG, especially S.

In addition to an attitude of willingness, their power and resources can play an important part in how CEOs enact ESG (Kim & Kim, 2020; Yuan et al., 2019). We consider two dimensions. The first is CEO ownership. Whereas more ownership suggests interest alignment between CEOs and shareholders, enhancing the discretion of the former, it also may give the CEO enough voting power or influence to be well-entrenched (Morck et al., 1988). Second, we consider the external competition as firms facing such external threats are less likely to engage in CSR activities. (Hutzschenreuter & Kleindienst, 2013).

Table 7 reports regression results using CEO ownership as a proxy for CEO power. We consider two CEO ownership thresholds: one is 5% (*Powerful CEO 5%*), and the other is the median CEO ownership in our sample (*Powerful CEO Median*). *Powerful CEO 5%* and *Powerful CEO Median* are dummies equaling 1 if the CEO ownership is greater than 5% and the sample median, respectively, and 0 otherwise. We find that the interaction terms absorb almost all the effect of *Religious CEO*. In other words, our results are particularly strong for CEOs with high firm ownership, consistent with Hypothesis 4a.

In Table 8, we consider firm market power which may enhance a CEO's ability to devote firm resources to engaging

<sup>6</sup> The donation data is taken from the Million Dollar List compiled by the Indiana University Lilly Family School of Philanthropy.

**Table 5** Propensity score matching

Dep. Var	(1) ESG	(2) E	(3) S	(4) G
Religious CEO	0.778** (2.29)	0.224 (0.91)	0.668*** (3.17)	- 0.311 (- 1.02)
Red HQ county	- 0.974 (- 1.27)	0.220 (0.33)	- 1.329* (- 1.96)	1.171 (1.28)
HQ poverty rate	0.349 (0.07)	2.653 (0.71)	- 7.336** (- 2.16)	7.226 (1.40)
HQ education	4.186 (1.17)	1.705 (0.58)	- 0.225 (- 0.08)	- 0.080 (- 0.02)
HQ population	- 0.582* (- 1.91)	0.153 (0.66)	- 0.315 (- 1.23)	- 0.141 (- 0.49)
Birthplace poverty rate	- 9.404*** (- 2.47)	- 3.515 (- 1.00)	- 1.654 (- 0.46)	3.664 (0.93)
Birthplace education	- 34.492*** (- 2.72)	- 4.519 (- 0.46)	- 23.505** (- 2.46)	19.714* (1.82)
Birthplace population	- 0.171 (- 1.24)	- 0.068 (- 0.58)	- 0.089 (- 0.90)	0.032 (0.24)
Birthplace white%	- 1.513 (- 0.69)	- 4.053* (- 1.97)	1.257 (0.68)	1.832 (0.84)
Log (CEO age)	- 4.846*** (- 3.20)	- 2.486* (- 1.82)	- 2.613** (- 2.13)	- 0.009 (- 0.01)
Female CEO	0.649 (0.60)	- 1.485* (- 1.83)	0.368 (0.42)	0.606 (0.66)
Log (compensation)	- 0.021 (- 0.20)	- 0.054 (- 0.80)	- 0.005 (- 0.12)	0.119** (2.20)
Log (assets)	0.507*** (4.09)	0.541*** (6.07)	0.275*** (3.56)	- 0.015 (- 0.15)
ROA	2.125 (1.14)	1.574 (1.16)	- 0.603 (- 0.51)	1.024 (0.79)
Leverage	- 0.027 (- 1.36)	- 0.009 (- 0.49)	- 0.025** (- 1.99)	0.008 (0.43)
Book/market	- 0.161 (- 0.20)	- 0.422 (- 0.74)	- 0.453 (- 0.83)	- 0.703 (- 1.05)
Constant	29.853*** (3.85)	8.599 (1.19)	18.907*** (3.05)	1.335 (0.20)
Observations	392	392	392	392
R-squared	0.454	0.592	0.554	0.410

This table reports the regressions of ESG and its three components (E, S, and G) on CEO personal religion based on the propensity score matching (PSM) model. All regressions include industry, year, and state fixed effects. Heteroskedasticity robust *t*-values are reported in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively

in ESG. Specifically, we define *HHI* (Herfindahl Index) as the sum of the squared market share of sales of each firm in the SIC 2-digit industry. *High HHI* equals 1 if a firm is in an industry with higher than median HHI (i.e., there is less competition), and 0 otherwise. *High Market Share* equals 1 if a firm has an above-median market share (measured by percentage of sales of the total sales in the SIC 2-digit industry) and 0 otherwise. When we include interaction terms of *Religious CEO* with these two dummies, we show that the interaction terms are statistically significant at the 5% level and positive, consistent with Hypothesis 4b.

## Post Hoc Analysis

Although the literature does not provide clear guidance on which religions are more pro-ESG compared to others, some studies seem to suggest that different religions may embrace tenets associated with their unique cultural and social contexts, and hence different components of ESG. In “Appendix 1,” we offer preliminary results based on different CEO personal beliefs (i.e., Protestant, Catholic, and Other). Most religious CEOs in our sample self-identify as Christians (about 68.4%), with 34.3% self-identifying as Protestants and 34.1% self-identifying as Catholics. Other religions are too rare in our sample to afford meaningful conclusions. Thus, in this study, the association between CEO religion and the social component of the ESG is indeed mainly driven by Christian CEOs. These results are consistent with studies on the proactive social initiatives associated with Christian values (e.g. “do unto others”) (Dyck, 2014; Dyck & Wong, 2010; Vallerand et al., 1992).

Finally, we conducted additional tests to ensure the robustness of our results—all available from the authors. Specifically, in untabulated tests we find that our results are virtually the same when we drop birthplace and headquarters variables from the regressions and exclude non-Christian CEOs from the sample. In addition, results are robust when we use per capita income instead of poverty rate at CEO birthplace or firm headquarters or use population density instead of total population. In “Appendix 2,” we replicate our main analyses in an expanded sample formed by excluding birthplace religiosity for which there is much data missing. We show that personal religiosity remains a significant predictor for ESG and S in a vastly larger sample of over 12,000 observations.

**Table 6** Conditioning from attitudinal proxies: age, gender, and donation

Dep. Var	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	ESG	E	S	G	ESG	E	S	G	ESG	E	S	G
Religious CEO	0.270 (1.41)	- 0.047 (- 0.29)	0.168 (1.34)	0.150 (0.87)	0.178 (0.92)	- 0.321* (- 1.91)	0.169 (1.27)	0.004 (0.02)	0.284 (1.49)	- 0.202 (- 1.31)	0.144 (1.18)	0.190 (1.16)
Religious CEO × young CEO	1.513** (2.41)	- 0.307 (- 0.50)	0.913** (2.02)	- 0.300 (- 0.73)								
Young CEO	- 0.148 (- 0.54)	0.072 (0.30)	- 0.121 (- 0.61)	0.115 (0.46)								
Religious CEO × donation					1.385*** (3.44)	1.602*** (5.22)	0.584** (2.08)	0.741** (2.21)				
Donation					- 0.024 (- 0.10)	- 0.073 (- 0.39)	0.090 (0.49)					
Religious CEO × female CEO									1.920*** (3.05)	2.255** (2.39)	1.804*** (2.61)	- 1.128 (- 1.15)
Female CEO	0.856*** (3.39)	- 0.672*** (- 3.16)	0.402** (2.21)	0.265 (0.92)	0.864*** (3.40)	- 0.676*** (- 3.15)	0.406** (2.15)	0.263 (0.92)	0.708*** (2.74)	- 0.857*** (- 4.41)	0.273 (1.50)	0.345 (1.18)
Red HQ county	- 0.453 (- 1.57)	- 0.416* (- 1.74)	- 1.068*** (- 5.51)	0.795*** (2.81)	- 0.454 (- 1.55)	- 0.445* (- 1.87)	- 1.049*** (- 5.29)	0.762*** (2.69)	- 0.476 (- 1.62)	- 0.477** (- 2.00)	- 1.108*** (- 5.63)	0.814*** (2.89)
HQ poverty rate	0.227 (0.09)	1.108 (0.56)	- 5.063*** (- 3.35)	8.934*** (3.78)	0.535 (0.22)	1.048 (0.53)	- 4.828*** (- 3.16)	8.820*** (3.72)	0.175 (0.07)	0.596 (0.31)	- 5.325*** (- 3.54)	9.135*** (3.89)
HQ education	- 1.306 (- 0.72)	0.774 (0.51)	- 5.035*** (- 4.14)	3.300* (1.81)	- 1.330 (- 0.72)	0.630 (0.42)	- 4.874*** (- 3.92)	3.205* (1.75)	- 1.685 (- 0.91)	0.201 (0.14)	- 5.312*** (- 4.36)	3.567* (1.95)
HQ population	- 0.151 (- 1.25)	0.186* (1.75)	- 0.383*** (- 4.17)	- 0.124 (- 1.08)	- 0.164 (- 1.37)	0.201* (1.92)	- 0.409*** (- 4.34)	- 0.112 (- 0.98)	- 0.203* (- 1.66)	0.157 (1.49)	- 0.436*** (- 4.59)	- 0.102 (- 0.89)
Birthplace poverty rate	- 1.437 (- 0.86)	- 1.438 (- 1.11)	- 2.156* (- 1.79)	0.414 (0.28)	- 1.655 (- 0.99)	- 1.447 (- 1.13)	- 2.411* (- 1.96)	0.436 (0.29)	- 1.765 (- 1.05)	- 1.573 (- 1.22)	- 2.520** (- 2.03)	0.536 (0.36)
Birthplace education	- 6.171 (- 1.34)	7.798** (2.04)	- 10.16*** (- 3.12)	- 0.886 (- 0.19)	- 5.620 (- 1.23)	8.122** (2.13)	- 10.19*** (- 3.08)	- 0.698 (- 0.15)	- 4.909 (- 1.06)	8.972** (2.38)	- 9.316*** (- 2.78)	- 1.485 (- 0.33)
Birthplace population	- 0.063 (- 1.18)	0.102** (2.40)	- 0.008 (- 0.20)	- 0.032 (- 0.67)	- 0.062 (- 1.17)	0.101** (2.40)	- 0.005 (- 0.14)	- 0.033 (- 0.69)	- 0.057 (- 1.07)	0.106** (2.55)	- 0.001 (- 0.03)	- 0.035 (- 0.73)
Birthplace white%	- 0.567 (- 0.80)	0.133 (0.25)	- 0.200 (- 0.46)	0.109 (0.18)	- 0.534 (- 0.75)	0.130 (0.24)	- 0.173 (- 0.39)	0.090 (0.14)	- 0.395 (- 0.56)	0.290 (0.55)	- 0.057 (- 0.13)	0.013 (0.02)
Log (CEO age)	2.393 (1.49)	- 2.851** (- 2.14)	1.092 (0.94)	1.760 (1.09)	2.099 (1.38)	- 2.863** (- 2.32)	1.026 (0.93)	1.602 (1.13)	2.251 (1.48)	- 2.690** (- 2.21)	1.151 (1.05)	1.501 (1.07)
Log (compensation)	0.051 (1.10)	0.005 (0.15)	0.032 (1.37)	0.010 (0.32)	0.049 (1.06)	0.001 (0.03)	0.032 (1.36)	0.009 (0.28)	0.046 (0.97)	- 0.003 (- 0.08)	0.027 (1.17)	0.015 (0.47)
Log (assets)	0.323*** (6.33)	0.438*** (9.92)	0.062* (1.71)	- 0.026 (- 0.59)	0.303*** (5.74)	0.419*** (9.27)	0.063* (1.68)	- 0.043 (- 0.92)	0.326*** (6.39)	0.443*** (10.13)	0.063* (1.74)	- 0.030 (- 0.66)

Table 6 (continued)

Dep. Var	(1) ESG	(2) E	(3) S	(4) G	(5) ESG	(6) E	(7) S	(8) G	(9) ESG	(10) E	(11) S	(12) G
ROA	0.920 (1.01)	0.264 (0.34)	1.229* (1.90)	0.089 (0.12)	0.795 (0.87)	0.100 (0.13)	1.216* (1.85)	-0.027 (-0.04)	1.028 (1.11)	0.359 (0.47)	1.299** (1.98)	0.029 (0.04)
Leverage	-0.013 (-0.97)	-0.003 (-0.29)	-0.018** (-2.29)	-0.003 (-0.42)	-0.011 (-0.78)	-0.001 (-0.08)	-0.017** (-2.19)	-0.002 (-0.24)	-0.011 (-0.79)	-0.001 (-0.09)	-0.016** (-2.01)	-0.005 (-0.57)
Book/market	0.391 (1.15)	-0.477 (-1.65)	0.519** (2.13)	-0.268 (-0.87)	0.298 (0.88)	-0.539* (-1.91)	0.503** (2.03)	-0.312 (-1.02)	0.355 (1.05)	-0.477* (-1.68)	0.504** (2.04)	-0.269 (-0.88)
Constant	-10.911 (-1.45)	6.037 (0.96)	3.346 (0.61)	-6.722 (-0.90)	-9.235 (-1.27)	6.226 (1.07)	3.748 (0.72)	-5.881 (-0.89)	-9.629 (-1.33)	5.817 (1.00)	3.666 (0.71)	-5.840 (-0.89)
Observations	1,507	1,507	1,507	1,507	1,507	1,507	1,507	1,507	1,507	1,507	1,507	1,507
R-squared	0.343	0.441	0.361	0.261	0.346	0.451	0.359	0.264	0.342	0.445	0.362	0.262

This table reports the regressions of ESG and its three components (E, S, and G) on CEO personal religion interacted with Young CEO, Female CEO, or Donation. All regressions include industry, year, and state fixed effects. Heteroskedasticity robust *t*-values are reported in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively

## Discussion

We have argued and shown that studies of the relationships between religion and CSR can benefit by distinguishing the sources of religious influence, the nature of CSR, and especially by more explicit theorization of the factors constituting, driving, and conditioning that relationship. By drawing upon social identity theory (Tajfel & Turner, 2004) and the theory of planned behavior (Ajzen, 1985), we developed and tested a socio-behavioral model relating religion to CSR. Our analysis differentiates among the religious sources and types of CSR, specifies how the relationship between the two can be shaped by their normative resonance, and is in turn conditioned by related attitudes and the ability to enact them.

First, we suggested that given its more immediate normative impact, a CEO's personal religious identity would influence CSR more than company location or CEO birthplace. Second, given the focus of most religions on empathy and compassion toward other people (Batson et al., 2005; Heck, 2009; Saroglou, 2006), we argued that the above relationship would be stronger for the social versus environmental or governance aspects of CSR. We then noted the importance of congruent personal attitudes and ability in conditioning this relationship. Our hypotheses were supported by our main analyses, robustness tests and propensity matching to minimize endogeneity. In brief, we found that CEOs who publicly identified their religion did indeed tend to pursue the social aspects of CSR rather than other aspects, and that this relationship was conditioned by resonant empathic attitudes and the personal and organizational ability to engage in CSR initiatives.

Our bridging of social identity theory (Tajfel & Turner, 2004) with the theory of planned behavior (Ajzen, 1985) allowed us to develop a socio-behavioral model that will also be useful for relating other types of identity with related aspects of CSR, such as environmentalism and governance arrangements. For example, might democratic or liberal identities foster green practices (Chin et al., 2013)? Would conservative or libertarian identities affect governance practices? Which personal attitudes, abilities and facilitators of discretion will condition those relationships? In short, the roles played by personal attitudes—beliefs, emotions, and cognitions—warrant more exploration for their relationship with different kinds of religious identities and CSR (Castro-Gonzalez et al., 2019). Another topic of potential interest could be to investigate the influence of religious heterogeneity of the top management team on the nature of CSR initiatives, or alternatively, the impact of religious heterogeneity versus uniformity in the community or organization.

Our analysis demonstrates that in examining the influence of religion on CSR, subsequent studies should take care to distinguish sources of religious influence, for example, the



**Table 7** Conditioning by CEO power

Dep. Var	(1) ESG	(2) E	(3) S	(4) G	(5) ESG	(6) E	(7) S	(8) G
Religious CEO	0.220 (1.10)	- 0.143 (- 0.79)	0.130 (0.91)	- 0.088 (- 0.48)	0.107 (0.51)	- 0.182 (- 0.99)	0.069 (0.47)	- 0.128 (- 0.66)
Powerful CEO 5%	- 0.972*** (- 3.77)	0.418* (1.88)	- 0.389* (- 1.66)	- 0.944*** (- 3.25)				
Religious CEO × powerful CEO 5%	2.423*** (3.85)	0.927** (2.09)	1.331*** (3.05)	1.278 (1.27)				
Powerful CEO median					- 1.019*** (- 4.41)	0.403** (1.99)	- 0.507*** (- 2.66)	- 0.861*** (- 3.12)
Religious CEO × powerful CEO median					2.358*** (4.82)	0.418 (0.99)	1.233*** (3.38)	1.289** (2.11)
Red HQ county	- 0.318 (- 1.01)	- 0.349 (- 1.33)	- 1.173*** (- 5.31)	0.679** (2.09)	- 0.249 (- 0.78)	- 0.281 (- 1.06)	- 1.134*** (- 4.98)	0.682** (2.10)
HQ poverty rate	- 1.431 (- 0.56)	0.140 (0.07)	- 5.987*** (- 3.61)	8.654*** (3.29)	- 1.471 (- 0.57)	1.175 (0.55)	- 6.022*** (- 3.50)	8.201*** (3.06)
HQ education	- 1.780 (- 0.85)	0.927 (0.50)	- 5.361*** (- 3.67)	1.422 (0.64)	- 2.004 (- 0.94)	1.711 (0.90)	- 5.565*** (- 3.68)	1.075 (0.46)
HQ population	0.008 (0.06)	0.268** (2.27)	- 0.361*** (- 3.37)	- 0.038 (- 0.29)	0.035 (0.27)	0.235** (1.98)	- 0.344*** (- 3.24)	- 0.013 (- 0.10)
Birthplace poverty rate	0.217 (0.12)	0.270 (0.19)	- 1.863 (- 1.36)	1.238 (0.74)	0.706 (0.40)	0.546 (0.39)	- 1.590 (- 1.14)	1.377 (0.82)
Birthplace education	- 4.094 (- 0.81)	12.940*** (3.11)	- 9.871** (- 2.54)	1.031 (0.21)	- 2.747 (- 0.53)	14.005*** (3.34)	- 9.265** (- 2.33)	1.350 (0.27)
Birthplace population	- 0.067 (- 1.17)	0.130*** (2.72)	- 0.005 (- 0.11)	- 0.065 (- 1.24)	- 0.052 (- 0.92)	0.129*** (2.72)	0.001 (0.03)	- 0.052 (- 1.00)
Birthplace white%	0.014 (0.02)	0.459 (0.78)	- 0.157 (- 0.32)	0.101 (0.15)	0.179 (0.23)	0.457 (0.78)	- 0.085 (- 0.17)	0.197 (0.29)
Log (CEO age)	2.777 (1.63)	- 3.398** (- 2.51)	1.237 (0.99)	2.167 (1.31)	3.194* (1.83)	- 3.320** (- 2.45)	1.544 (1.21)	2.329 (1.38)
Female CEO	0.902*** (3.27)	- 0.553** (- 2.37)	0.495** (2.46)	0.269 (0.86)	0.903*** (3.27)	- 0.509** (- 2.15)	0.486** (2.40)	0.260 (0.82)
Log (compensation)	- 0.008 (- 0.09)	0.000 (0.00)	0.011 (0.31)	- 0.058 (- 1.05)	0.010 (0.12)	0.012 (0.25)	0.021 (0.65)	- 0.049 (- 0.90)
Log (assets)	0.244*** (4.13)	0.380*** (7.86)	0.000 (0.01)	- 0.081 (- 1.64)	0.224*** (3.84)	0.389*** (7.88)	- 0.009 (- 0.24)	- 0.097* (- 1.92)
ROA	1.238 (1.22)	- 0.605 (- 0.70)	1.380* (1.79)	0.859 (0.95)	1.263 (1.25)	- 0.682 (- 0.78)	1.385* (1.80)	0.918 (1.01)
Leverage	0.013 (1.07)	0.008 (0.60)	- 0.006 (- 0.73)	- 0.002 (- 0.20)	0.013 (1.09)	0.008 (0.63)	- 0.006 (- 0.73)	- 0.002 (- 0.20)
Book/market	0.760** (2.10)	- 0.119 (- 0.40)	0.787*** (2.90)	- 0.092 (- 0.27)	0.705* (1.94)	- 0.159 (- 0.53)	0.752*** (2.79)	- 0.103 (- 0.30)
Constant	- 11.200 (- 1.37)	9.016 (1.41)	5.555 (0.93)	- 13.385* (- 1.74)	- 14.576* (- 1.74)	8.289 (1.28)	3.439 (0.56)	- 14.767* (- 1.86)
Observations	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310
R-squared	0.367	0.488	0.352	0.285	0.372	0.488	0.355	0.285

Table reports the regressions of ESG and its three components (E, S, and G) on CEO personal religion interacted with high-ownership CEO dummies. All regressions include industry, year, and state fixed effects. Heteroskedasticity robust *t*-values are reported in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively

**Table 8** Conditioning by firm market power

Dep. Var	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	ESG	E	S	G	ESG	E	S	G
Religious CEO	- 0.412 (- 1.53)	- 0.989*** (- 3.81)	- 0.227 (- 1.24)	- 0.431* (- 1.73)	- 1.744*** (- 3.03)	- 0.673 (- 1.26)	- 1.028** (- 2.31)	- 0.396 (- 0.73)
High market share	0.850*** (3.27)	0.079 (0.40)	0.661*** (3.47)	- 0.221 (- 0.96)				
Religious CEO × high market share	1.320*** (3.75)	1.549*** (4.74)	0.770*** (3.07)	0.955*** (2.90)				
High Herfindahl HHI					- 0.229 (- 0.49)	- 0.866** (- 2.13)	0.176 (0.58)	1.150*** (3.09)
Religious CEO × high HHI					2.239*** (3.92)	0.633 (1.16)	1.335*** (3.00)	0.540 (0.98)
Red HQ county	- 0.562* (- 1.94)	- 0.547** (- 2.27)	- 1.147*** (- 5.72)	0.719** (2.51)	- 0.564* (- 1.92)	- 0.440* (- 1.80)	- 1.153*** (- 5.74)	0.723** (2.53)
HQ poverty rate	0.325 (0.14)	1.277 (0.66)	- 5.188*** (- 3.50)	9.188*** (3.88)	- 0.145 (- 0.06)	0.772 (0.39)	- 5.348*** (- 3.49)	8.859*** (3.75)
HQ education	- 2.361 (- 1.31)	0.376 (0.25)	- 5.711*** (- 4.68)	3.336* (1.81)	- 1.737 (- 0.94)	0.594 (0.40)	- 5.175*** (- 4.13)	3.184* (1.74)
HQ population	- 0.133 (- 1.10)	0.210** (2.01)	- 0.380*** (- 4.04)	- 0.116 (- 1.01)	- 0.184 (- 1.52)	0.191* (1.80)	- 0.416*** (- 4.42)	- 0.126 (- 1.10)
Birthplace poverty rate	- 2.139 (- 1.30)	- 1.763 (- 1.38)	- 2.731** (- 2.27)	0.300 (0.20)	- 1.539 (- 0.92)	- 1.321 (- 1.02)	- 2.358* (- 1.91)	0.381 (0.25)
Birthplace education	- 5.890 (- 1.28)	8.298** (2.20)	- 10.337*** (- 3.11)	- 0.422 (- 0.09)	- 5.429 (- 1.19)	7.852** (2.06)	- 9.952*** (- 2.97)	- 0.671 (- 0.15)
Birthplace population	- 0.073 (- 1.36)	0.089** (2.12)	- 0.012 (- 0.31)	- 0.040 (- 0.84)	- 0.063 (- 1.17)	0.107** (2.52)	- 0.008 (- 0.21)	- 0.041 (- 0.86)
Birthplace white%	- 0.520 (- 0.73)	0.060 (0.11)	- 0.165 (- 0.37)	0.033 (0.05)	- 0.539 (- 0.76)	0.127 (0.24)	- 0.193 (- 0.43)	0.090 (0.14)
Log (CEO age)	1.310 (0.86)	- 3.868*** (- 3.14)	0.552 (0.49)	0.983 (0.68)	2.000 (1.31)	- 2.893** (- 2.30)	0.932 (0.85)	1.551 (1.10)
Female CEO	0.691*** (2.76)	- 0.749*** (- 3.61)	0.294 (1.62)	0.248 (0.87)	0.850*** (3.39)	- 0.674*** (- 3.18)	0.407** (2.18)	0.242 (0.85)
Log (compensation)	0.056 (1.07)	0.002 (0.05)	0.037 (1.52)	0.007 (0.21)	0.052 (1.08)	0.006 (0.18)	0.033 (1.39)	0.009 (0.30)
Log (assets)	0.054 (0.70)	0.337*** (5.33)	- 0.135** (- 2.37)	- 0.027 (- 0.39)	0.324*** (6.31)	0.434*** (9.80)	0.062* (1.68)	- 0.020 (- 0.45)
ROA	0.804 (0.89)	0.120 (0.16)	1.133* (1.76)	0.002 (0.00)	0.817 (0.88)	0.284 (0.37)	1.119* (1.70)	- 0.045 (- 0.06)
Leverage	- 0.012 (- 0.92)	- 0.003 (- 0.33)	- 0.017** (- 2.19)	- 0.004 (- 0.47)	- 0.012 (- 0.86)	- 0.002 (- 0.20)	- 0.017** (- 2.13)	- 0.004 (- 0.53)
Book/market	0.137 (0.40)	- 0.727*** (- 2.59)	0.377 (1.51)	- 0.425 (- 1.36)	0.381 (1.12)	- 0.457 (- 1.60)	0.516** (2.08)	- 0.281 (- 0.91)
Constant	- 3.668 (- 0.50)	11.679** (1.98)	7.466 (1.40)	- 2.995 (- 0.45)	- 7.303 (- 1.00)	7.473 (1.24)	4.893 (0.93)	- 6.610 (- 1.00)
Observations	1.507	1.507	1.507	1.507	1.507	1.507	1.507	1.507
R-squared	0.357	0.454	0.372	0.266	0.345	0.443	0.361	0.266

Table reports the regressions of ESG and its three components (E, S, and G) on CEO personal religion interacted with high market power and high Herfindahl (HHI) index dummies. All regressions include industry, year, and state fixed effects. Heteroskedasticity robust *t*-values are reported in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively

religiosity of head office or CEO birthplace locations versus the expressed religious identity of focal actors. In addition, it will be useful to consider the different types of CSR and their resonance with different religious beliefs and degrees of religiosity. These precisions should facilitate more contextualized and therefore cumulative findings in future studies, and caution against overgeneralization.

Certainly, our study has limitations. As noted, we do not wish to suggest that a religious identity always leads to socially proactive CSR or that those who are not religious will de-emphasize CSR. Moreover, our data were limited in that our sample consisted mostly of American born CEOs of public US firms identifying as members of a branch of Christianity: as noted we caution generalization beyond that context. Thus, we urge studies into the influence of other religions on CEO and CSR behavior and in different geographic and religious contexts. In addition, the relationships we propose are likely to vary in intensity as a function of how devoutly CEOs practice their religion—i.e., the salience of that identity—something we could not measure directly. Also, due to our focus on objective indicators, we employed multiple proxies for CEO empathy and proactive proclivity. It will be useful for other researchers to assess these qualities via qualitative or questionnaire studies directly polling CEOs and their associates. Finally, like most cross-sectional studies and despite our efforts to establish robustness, it is impossible to rule out endogeneity in our analyses. Again, fine-grained analyses will be useful to tease out the subtle causal effects between religion, CSR priorities, and CSR.

### Appendix 1: ESG and Different Religions

This table reports the effect of different CEO religious beliefs on firm ESG and its three components (E, S, and G). The variables of interest are dummies for Protestant and Catholic CEOs. All regressions include industry, year, and state fixed effects. Heteroskedasticity robust *t*-values are reported in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Dep. Var	(1) ESG	(2) E	(3) S	(4) G
Protestant CEO	0.583** (2.24)	- 0.454** (- 2.14)	0.545*** (2.87)	- 0.245 (- 0.93)
Catholic CEO	0.534*	0.275	0.419**	0.354

Dep. Var	(1) ESG	(2) E	(3) S	(4) G
Red HQ county	(1.73) - 0.395	(1.05) - 0.403*	(2.05) - 1.048***	(1.49) 0.801***
HQ poverty rate	(- 1.36) 0.707	(- 1.70) 1.460	(- 5.47) - 4.820***	(2.86) 8.693***
HQ education	(0.30) - 0.101	(0.75) 0.804	(- 3.16) - 4.343***	(3.79) 3.768**
HQ population	(- 0.05) - 0.133	(0.54) 0.121	(- 3.51) - 0.381***	(2.08) - 0.066
Birthplace poverty rate	(- 1.15) - 1.511	(1.22) - 1.899	(- 4.24) - 2.278*	(- 0.62) 0.272
Birthplace education	(- 0.88) - 6.987	(- 1.44) 6.598*	(- 1.82) - 11.006***	(0.18) - 0.403
Birthplace population	(- 1.54) - 0.055	(1.72) 0.100**	(- 3.34) - 0.013	(- 0.09) - 0.030
Birthplace white%	(- 1.08) - 0.745	(2.45) 0.229	(- 0.35) - 0.366	(- 0.67) - 0.015
Log (CEO age)	(- 1.07) - 0.765	(0.44) - 0.593	(- 0.85) - 0.175	(- 0.02) - 0.658
Female CEO	(- 1.36) 0.742***	(- 1.18) - 0.710***	(- 0.40) 0.434**	(- 1.23) 0.208
Log (compensation)	(3.10) 0.045	(- 3.45) - 0.000	(2.36) 0.022	(0.75) 0.016
Log (assets)	(0.99) 0.311***	(- 0.01) 0.443***	(0.98) 0.063*	(0.52) - 0.043
ROA	(6.33) 1.116	(10.24) 0.241	(1.74) 1.208*	(- 0.98) 0.026
Leverage	(1.22) - 0.012	(0.31) - 0.003	(1.87) - 0.017**	(0.03) - 0.006
Book/market	(- 0.92) 0.397	(- 0.26) - 0.474	(- 2.14) 0.499**	(- 0.80) - 0.416
Constant	(1.18) 4.328	(- 1.64) - 1.672	(2.03) 9.690***	(- 1.37) 3.975
Observations	(1.28) 1.507	(- 0.57) 1.507	(3.86) 1.507	(1.32) 1.507
R-squared	0.334	0.438	0.354	0.255

## Appendix 2: Regressions with the Expanded Sample

This table reports regression results with the expanded sample that does not require CEO birthplace information. All regressions include industry, year, and state fixed effects.

Heteroskedasticity robust *t*-values are reported in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Dep. Var	(1) ESG	(2) E	(3) S	(4) G	(5) ESG	(6) E	(7) S	(8) G
Religious CEO	0.218** (2.38)	0.096 (1.36)	0.191*** (2.71)	− 0.085 (− 0.98)				
HQ religiosity					− 0.398 (− 1.41)	− 0.078 (− 0.31)	− 0.510** (− 2.21)	− 0.441 (− 1.53)
Red HQ county	− 0.380*** (− 5.46)	− 0.117* (− 1.84)	− 0.326*** (− 6.06)	− 0.081 (− 1.18)	− 0.381*** (− 5.46)	− 0.117* (− 1.84)	− 0.326*** (− 6.04)	− 0.080 (− 1.16)
HQ poverty rate	− 1.513** (− 2.46)	− 0.108 (− 0.21)	− 1.124** (− 2.37)	0.491 (0.81)	− 1.636*** (− 2.68)	− 0.140 (− 0.26)	− 1.270*** (− 2.67)	0.399 (0.66)
HQ education	0.358 (0.83)	0.697* (1.86)	− 0.387 (− 1.21)	0.371 (0.89)	0.229 (0.53)	0.666* (1.76)	− 0.545* (− 1.67)	0.260 (0.62)
HQ population	− 0.026 (− 0.89)	− 0.014 (− 0.56)	− 0.076*** (− 3.40)	− 0.090*** (− 3.14)	− 0.016 (− 0.54)	− 0.012 (− 0.46)	− 0.064*** (− 2.78)	− 0.080*** (− 2.71)
Log (CEO age)	− 0.518*** (− 3.36)	− 0.151 (− 1.13)	0.033 (0.28)	− 0.818*** (− 5.40)	− 0.493*** (− 3.22)	− 0.141 (− 1.06)	0.057 (0.49)	− 0.822*** (− 5.43)
Female CEO	0.303*** (3.41)	0.171** (2.30)	− 0.022 (− 0.35)	0.324*** (4.18)	0.306*** (3.44)	0.172** (2.31)	− 0.019 (− 0.30)	0.324*** (4.18)
Log (compensation)	0.018 (0.97)	0.011 (0.70)	0.004 (0.24)	0.036** (2.24)	0.015 (0.81)	0.010 (0.61)	0.001 (0.08)	0.038** (2.37)
Log (assets)	0.226*** (13.76)	0.358*** (25.20)	− 0.031** (− 2.46)	0.039*** (2.59)	0.230*** (14.01)	0.359*** (25.41)	− 0.028** (− 2.21)	0.038** (2.51)
ROA	0.495** (2.45)	− 0.274 (− 1.48)	0.688*** (4.76)	0.816*** (4.17)	0.503** (2.48)	− 0.270 (− 1.46)	0.694*** (4.80)	0.811*** (4.14)
Leverage	− 0.225* (− 1.86)	− 0.445*** (− 4.02)	− 0.008 (− 0.09)	0.006 (0.05)	− 0.235* (− 1.95)	− 0.449*** (− 4.06)	− 0.018 (− 0.20)	0.005 (0.04)
Book/market	− 0.340*** (− 6.28)	− 0.498*** (− 10.19)	− 0.061 (− 1.55)	− 0.103** (− 2.13)	− 0.343*** (− 6.34)	− 0.499*** (− 10.22)	− 0.064 (− 1.62)	− 0.101** (− 2.10)
Constant	3.794*** (4.10)	1.135 (1.55)	3.820*** (5.39)	7.502*** (7.40)	3.845*** (4.16)	1.123 (1.53)	3.922*** (5.52)	7.693*** (7.57)
Observations	12,129	12,129	12,129	12,123	12,129	12,129	12,129	12,123
R-squared	0.151	0.285	0.164	0.153	0.151	0.285	0.163	0.154

**Funding** No funding was received to assist with the preparation of this manuscript. The authors declare they have no financial interests.

### Declarations

**Conflict of interest** Isabelle Le Breton-Miller declares that she has no conflict of interest. Danny Miller declares that he has no conflict of interest. David Tang declares that he has no conflict of interest. Xiaowei Xu declares that she has no conflict of interest.

**Ethical approval** For this type of study formal consent is not required.

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