



Corporate religiosity and individual decision on conducting entrepreneurial activity: The contingent effects of institutional environments in China

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Abstract

This study draws on the institutional void and institutional support perspectives to examine the contingent effect of institutional environments on the relationship between corporate religiosity and individual entrepreneurial activity in the context of emerging markets. We employ a composite dataset that covers 7109 individuals in 69 major cities across 25 provinces in China. Our study provides convincing evidence that individuals with strong corporate religiosity may be disinclined to conduct entrepreneurial activity in corrupted markets, but are more likely to engage in entrepreneurship in well-developed markets (ones characterized by high levels of marketization). This study displays the interplay of both institutional void and institutional support with corporate religiosity in shaping individual behaviors.

Keywords Entrepreneurial activity · Corporate religiosity · Corruption · Marketization · China

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Entrepreneurship is an activity to deploy and integrate resources to exploit business opportunities and create new value (Bruton, Su, & Filatotchev, 2018; Staniewski, 2016). *Entrepreneurial activity* is commonly defined in terms of starting and managing a business that generates valued goods and services (Greve & Salaff, 2003). It is a key driver of economic development, potentially leading to breakthrough innovation and generating employment opportunities (Gupta, MacMillan, & Surie, 2004). Therefore, understanding the motives underpinning entrepreneurship is important (Gedajlovic, Honig, & Moore, 2013). Religion has established philosophical teachings and ethical norms for a society that may significantly impact entrepreneurship (Du, Jian, Zeng, & Du, 2014). As revealed by prior scholarship (Du et al., 2014; Peng, Sun, Pinkham, & Chen, 2009; Wiseman & Young, 2013), religion establishes behavior expectations and shapes human interactions through its norms and teachings (Parboteeah, Hoegl, & Cullen, 2009). It enables individuals to develop their self-perceptions by being connected with religious groups that share similar values and the moral conduct advocated by such values (Blaine, Trivedi, & Eshleman, 1998). These self-perceptions both reflect individuals' on-going behaviors and regulate these behaviors (Markus & Wurf, 1987).

However, the literature examining the impact of religion or religiosity on individual decisions regarding whether or not to conduct entrepreneurial activity remains underdeveloped. As will be discussed more fully in the literature review, prior studies have provided some important but conflicting findings on the relationship between religion or religiosity and entrepreneurship. Some studies found a positive relationship (e.g., Galbraith & Galbraith, 2007; Henley, 2017; Nwankwo, Gbadamosi, & Ojo, 2012), while others reported non-significant or negative results (e.g., Drakopoulou Dodd & Seaman, 1998; Nair & Pandey, 2006; Wiseman & Young, 2013). According to the contingency perspective (Miller, 1981), these ambiguous and inconsistent findings may result from unexamined contextual conditions that impact the religion/religiosity-entrepreneurship relationship (Parboteeah, Walter, & Block, 2015).

To resolve the inconsistencies among prior findings, this study explores possible contingencies of religiosity on entrepreneurship. Specifically, our research draws upon institutional theory enhanced with the institutional void and institutional support perspectives (Stephan, Uhlaner, & Stride, 2015), and focuses primarily on examining the moderating effects of institutional environments on the impact of religiosity on the individual decision of whether or not to undertake entrepreneurial activity in emerging markets, where institutional factors play a crucial role in business strategies (Peng et al., 2009).

According to the perspectives of institutional support (Zahra & Wright, 2011) and institutional void (Estrin, Mickiewicz, & Stephan, 2013; Mair & Marti, 2009), the institutional environment may either provide a supportive climate that encourages the propensity of religious people to conduct entrepreneurial activities or set up an inhibiting climate that weakens the entrepreneurial activities of religious people because of their beliefs. In contrast to the developed markets and stable institutional environments in the West, emerging markets are in economic transition, and their markets and institutions are not well-developed, thereby creating institutional voids (Bruton et al., 2018; Khoury & Prasad, 2016; Tang, 2010; Zhu, Wittmann, & Peng, 2012). Simultaneously, the development of market-based systems, particularly marketization, provides institutional support (Bruton et al., 2018).

It should also be noted that two related but somewhat distinct terms, "religion" and "religiosity," have both been used in previous studies. Generally, *religion* refers to an

institution or a system of beliefs about people's destiny as well as their relationships with themselves and others such as friends, enemies, and God (Hage & Posner, 2015). *Religiosity* refers to an individual's religious belief and practice, reflecting the extent to which an individual follows religious teachings or beliefs (Holdcroft, 2006). Compared with "religion," "religiosity" captures more details about the degree of individuals' involvement in religion in terms of both beliefs and practices. Drakopoulou Dodd and Gotsis (2007) suggest we can partially resolve prior contradictory findings of the effect of religion if we pay more attention to individuals' religiosity. In line with this suggestion, our study adopts the construct of religiosity rather than the related construct of religion.

Further, some religious disciplines are practiced in groups, namely *corporate religiosity*, such as confession, worship, guidance, and celebration, whereas some religious disciplines are practiced privately or individually, namely *personal religiosity*, such as individual meditation (Foster, 1978; Dyck & Wong, 2010). Specifically, some prior studies regarded religion as a social construct and highlighted its social dimensions or attributes. For example, Weber views a particular religion as a specific group with a particular lifestyle and prestige whose members are bonded with each other (Tracey, 2012). Similarly, Durkheim contends religion is a collective phenomenon in religious communities (Ramp, 2010). In this regard, our study focuses on corporate religiosity rather than personal religiosity.

Our research findings make three main contributions. First, in spite of the light shed by previous research on the important role of religion or religiosity on entrepreneurship, the empirical evidence from this research is conflicting. Adopting the theoretical lens of institutional void and institutional support, we advance this line of scholarship and explore how corporate religiosity affects entrepreneurial activity by demonstrating the contingent effect of institutional environments on the relationship between corporate religiosity and individual entrepreneurial activity. We thereby enrich the entrepreneurship literature by providing valuable empirical evidence that helps resolve inconsistent prior findings. To the best of our knowledge, our study takes the first step to investigate how corporate religiosity interacts with the institutional context to affect individual entrepreneurial activity.

Second, we extend our understanding of who becomes an entrepreneur by adopting a contingency perspective. Prior scholarship has investigated the roles of a variety of individual and environmental elements in promoting or hindering the propensity of individuals conducting entrepreneurial activity. Our study contributes uniquely to this stream of literature by focusing on the interplay of corporate religiosity and institutions (rather than their discrete effects) on entrepreneurship. The presence of contingent effects signals the direction future research should take regarding further exploration of institutional contingencies on the corporate religiosity-entrepreneurship relationship.

Third, despite the increasing importance of emerging markets in the global economy, rather limited scholarly attention has been paid to entrepreneurship in these contexts (Khoury & Prasad, 2016). Our study highlights the important role of the specific institutional impacts from emerging markets on entrepreneurial activities. Emerging markets are characterized by the simultaneous coexistence of both institutional void and institutional support, which makes their institutional environments far more complicated than those of developed markets. Thus, it is crucial to take into account the institutional environment (Pathak & Muralidharan, 2017; Tang, 2010) when examining entrepreneurship in emerging markets (Huang, Liu, & Li, 2016).

Theoretical perspective and hypotheses development

The effect of religion/religiosity on entrepreneurship: A literature review

We summarize the burgeoning literature examining the relationship between religion or religiosity and entrepreneurship in Table 1. Despite the quantity of these studies, they highlight conflicting views and mixed empirical evidence regarding the effect of religion or religiosity on entrepreneurship.

Some scholars have highlighted consistencies between the teachings and traditions of religions and entrepreneurial activity. For example, many religious values encourage self-reliance and hard work and help adherents deal with uncertainty – characteristics fostering entrepreneurial activity (Audretsch, Bonte, & Tamvada, 2013; Parboteeah et al., 2015). Self-actualization, altruism, and helping behaviors are also advocated by many religions (Minton, Kahle, & Kim, 2015; Parboteeah et al., 2015), and entrepreneurship offers a possible way to achieve these goals, as the idea of making people's lives better through innovative new products and services is inherent to entrepreneurship (Drucker, 2011). Additionally, being an active participant in religious activities also provides a supportive milieu for entrepreneurship. The religious community provides the would-be entrepreneur access to resources and provides potential customers with a signal of trustworthiness, a “certificate of moral worth” (Minns & Rizov, 2005), particularly for religious sects where adult admission to the ranks includes a long and detailed review of the new member's character, especially elements of character that speak to business integrity (Weber, 2002).

Some scholars present an opposing logic and find a negative or non-significant relationship between religion and entrepreneurship. That is, there may be contradictions between religious values and entrepreneurial activity that cause religious persons to become less entrepreneurial. For instance, some religious teachings do not encourage followers to proactively pursue material well-being or actively attempt to change their life circumstances (Audretsch et al., 2013). Also, some religious values emphasize the goals of helping others and benefiting society (Parboteeah et al., 2015), while entrepreneurship, especially commercial entrepreneurship, focuses more on the entrepreneurs' personal benefits and their own economic betterment rather than the betterment of society (Stephan et al., 2015).

As summarized in Table 1, the conflicting views and findings in the existing literature merit exploring further religion's influences on entrepreneurship by taking contingencies into account. Generally, the prior research has been conducted at the two levels of individual and country (or state) to observe the relationship between religion or religiosity and entrepreneurship (assessed as self-employment and/or owning a business), which primarily focuses on the main effect while paying little attention to the contextual conditions under which religion or religiosity exerts an influence.

Further, numerous prior studies used the concept of religiosity as a generic, all-encompassing concept rather than considering how religiosity is exercised in practice. Dyck and Wong (2010) clearly distinguished religious disciplines between corporate religiosity and personal religiosity. As highlighted in Table 1, previous studies examining entrepreneurship and religiosity have not fully acknowledged this distinction. To further expand our understanding of entrepreneurship in relations to religious beliefs and practices, our research adopts a contingency perspective, i.e., perspectives of

Table 1 Literature review on religion/religiosity and entrepreneurship

| Literature | Independent variables | Dependent variables | Analysis level | Research focus | Main Findings | Context |
|--|---|---|------------------|---|---|----------------------------------|
| Audretsch et al., (2013) | Religion: Whether an individual belongs to a particular religion | Self-employment | Individual level | The link of different religions, social class, and entrepreneurial choice | Hinduism and Buddhism →self-employment (-) Islam and Jainism →self-employment (+) Christianity→self-employment (n.s.) | India |
| Choi, (2010) | Religious institutions | Ethnic entrepreneurship | Individual level | How religious institutions enhance ethnic entrepreneurship through social capital | Religious institutions→ Ethnic entrepreneurship (+) | Los Angeles Korean community |
| Drakopoulou Dodd and Seaman ,(1998) | Religiosity: the level of religiousness | Entrepreneurship: self-employed and business owners | Individual level | The relationship between the level of religiosity and entrepreneurship | Religiosity→ Entrepreneurship (n.s.) | Britain |
| Galbraith and Galbraith ,(2007) | Religiosity: the degree of incorporating religious tenets within an individual's daily life | Entrepreneurial activity: opportunity and necessity-based entrepreneurs | Country level | The relationship between religiosity, entrepreneurial activity, and economic growth | Religiosity→ Entrepreneurial activity (+) | Christian countries |
| Henley, (2017) | Religion: religious affiliation | Entrepreneurial activity | Country level | The link between religion and entrepreneurship, alongside institutional mediation | Religion→ Entrepreneurial activity (+) | Developed and emerging economies |
| Minns and Rizov, (2005) | Christian affiliation | Self-employment | Individual level | The drivers of self-employment | Christian affiliation→ Self-employment (n.s.) | Canada |
| Nair and Pandey, (2006) | Religion | Entrepreneurship | Individual level | The characteristics of entrepreneurs | Hindu→Entrepreneurship (n.s.) | India |
| Nunziata and Rocco, (2014) | Religious minorities: The | Entrepreneurship | Individual level | The causal effect of religion on the decision to become an entrepreneur | Religion (Protestantism versus Catholicism) → Entrepreneurship (±) | European regions |

Table 1 (continued)

| Literature | Independent variables | Dependent variables | Analysis level | Research focus | Main Findings | Context |
|--|--|--|------------------|---|---|---------------------|
| Nwankwo et al., (2012) | degree of religious adhesion African Pentecostal churches | Entrepreneurship | Individual level | The intersection between religion, spirituality, and entrepreneurship | African Pentecostal churches → Entrepreneurship (+) | UK |
| Parboteeah et al., (2015) | Religion (Christian) | Entrepreneurial activity | Country level | The contingent religion-entrepreneurship link | Religion → Entrepreneurial activity (n.s.), contingent on knowledge investments | Christian countries |
| Wiseman and Young, (2013) | Religiosity, Religion (affiliation) | Entrepreneurship (productive and unproductive) | State-level | The relationship between religion and entrepreneurial activity | Religiosity → Productive entrepreneurship (-) Affiliation → Productive entrepreneurship (mixed, different religions) Religiosity → Unproductive entrepreneurship (n.s.) Affiliation → Unproductive entrepreneurship (n.s.) | U.S. |
| Zelekha, Avnimelech, and Sharabi, (2014) | Religion: affiliation | Entrepreneurship | Country level | The relationship between religion and entrepreneurship | Religion → Entrepreneurship (mixed, different religions) | 176 countries |

institutional void and institutional support, to examine further the contingent effects of institutional environments on the relationship between corporate religiosity and individual entrepreneurial activity.

Theoretical framework: The institutional void and institutional support perspectives

Two contrasting perspectives exist in the institutional theory framework that examine the role institutions play in business practice: Institutional support (Zahra & Wright, 2011) and institutional void (Estrin et al., 2013; Mair & Marti, 2009). Institutional support refers to well-developed institutions, including different types such as market-based systems and other institutions existing prior to capitalism (such as reciprocity, redistribution, and householding) (Biggart & Delbridge, 2004). In this study, we mainly focus on one form of institution, specifically, marketization. Marketization has been widely adopted in previous studies to examine the influence of formal institutions on business activities (Du, 2013; Zhou, Gao, & Zhao, 2016), and is broadly defined as the whole development of formal market-based institutions, reflecting the level of institutional support, such as efficient law enforcement, secure property rights, and effective constraints on the arbitrary power of government (Estrin et al., 2013; Zahra & Wright, 2011). Given marketization as an important institutional support factor, we use it to explore the interplay between institutions and religiosity on entrepreneurship.

In contrast, institutional void refers to “situations where institutional arrangements that support markets are absent, weak, or fail to accomplish the role expected of them” (Mair & Marti, 2009: 419). Specifically, institutional void is closely related to the development of a market system (Bruton et al., 2018). That is, a low level of marketization is usually accompanied by the presence of institutional void. For example, some markets may lack the effective rules or regulations to protect fair competition or monitor the implementation of contracts, thereby leading to frequent government intervention in business operations (Bruton et al., 2018). Findings from prior scholarship suggest that institutional void may prevent a market from functioning efficiently, hamper market development, and impede market participation (Mair & Marti, 2009). As a result, opportunistic agents, including government employees, businesses, or entrepreneurs will strive to exploit these voids (Mair & Marti, 2009). To be specific, corruption, which refers to the “abuse of public power for private gain” (Cuervo-Cazurra, 2006: 807), may arise from inadequate formal market institutions that are supposed to govern the economic interactions (Cuervo-Cazurra, 2006; Tonoyan, Strohmeier, Habib, & Perlitz, 2010). Thus in our paper, we examine corruption as a representative institutional void caused by a low level of market development.

Although different religions may differ in their *direct* effects on entrepreneurship (Audretsch et al., 2013; Wiseman & Young, 2013), the *contingencies* of these effects arising in the institutional context are basically consistent. For example, unethical behaviors that arise in the context of institutional voids, such as corruption, significantly conflict with religious beliefs and practices. Neither Western religions like Christianity nor Eastern religions like Buddhism regard bribery as ethical. McGee, Benk, and Yuzbasi (2015) confirmed that religion significantly deterred bribery. Guiso, Sapienza, and Zingales (2003) also found that there were fewer rent-seeking behaviors in countries with stronger religious beliefs.

Further, drawing upon the two theoretical perspectives of social identity and social norms that emphasize the power of social groups or communities, we suggest that corporate religiosity would significantly affect individuals' ethical practices. That is, the adherents of religions that emphasize corporate religiosity are likely to consider the opinions of their fellow members and adherents (i.e., peer pressure) when making choices with ethical elements. In other words, they will likely consider the beliefs and values of the community when making decisions of an ethical nature. In addition, Lim and Putnam (2010) contended that religious people who regularly participated in public religious practices used those religious institutions to access resources and build social networks. From a social identity perspective, corporate religiosity offers persons membership in a group or community with particular beliefs and symbols, influencing their self-concept (Blaine et al., 1998; Markus & Wurf, 1987), helping them gain a sense of collective self-esteem, and developing strong bonds with other members (Ysseldyk, Matheson, & Anisman, 2010), thereby changing their subsequent behavior, such as reducing their willingness to engage in corrupt activity (McGee et al., 2015). With high levels of status and social support from religious identification, an individual could alleviate any threat to his or her self-concept and collective self-esteem (Tajfel & Turner, 1979). Prior studies also explain the power of religiosity by drawing upon another perspective of social norms (McGuire, Omer, & Sharp, 2012). As contended by this perspective, individuals usually prefer to conform to the peer group they belong to. That is, individuals will behave as expected by their own religious groups, thereby avoiding emotional or ethical discomfort (Du, 2013).

In order to address the inconsistency in previous findings about the association of religion or religiosity to entrepreneurship, rather than primarily examine the main effect of religiosity on entrepreneurship once again, our study rather focuses predominantly on the *joint effects* of corporate religiosity and institutional environments (i.e., institutional void and institutional support) on individual entrepreneurial activity to explore the contingencies of this relationship.

The moderating effect of institutional void: Corruption

If markets are characterized by relatively serious corruption, entrepreneurial organizations may find themselves needing to engage in corrupt activity to foster the success (Tonoyan et al., 2010). They may have to bribe government officials in exchange for regulatory benefits or advantages, in terms of political legitimacy, relaxed regulations, or quick administrative permission (Cuervo-Cazurra, 2006; Li, Yao, & Ahlstrom, 2015). This situation may be particularly severe for start-ups experiencing the liabilities of newness (Tonoyan et al., 2010). Compared with mature or large firms, entrepreneurial firms usually have limited strategic resources or market legitimacy, and it is hard for them to acquire resources through regular market access (Li & Zhang, 2007). Thus, it is not easy in such circumstances for entrepreneurial activities to cleanly break from bribery.

Non-religious people may also be less likely to conduct entrepreneurial activity in a corruptive environment, as corruption increases the cost of doing business and risks of profit expropriation (Anokhin & Schulze, 2009). However, this effect is likely to be particularly pronounced for people with strong corporate religiosity. Through increasing the religious group identification and helping build the social norm in the community (Dyck & Wong, 2010), corporate religious practices help to constrain selfish

impulses that might harm others, subordinate short-term temptations, strengthen collective self-esteem (Baumeister, Bauer, & Lloyd, 2010), and support behavioral tendencies that confer evolutionary fitness to the interests of the community (Rounding, Lee, Jacobson, & Ji, 2012). Thus, corruption creates tension for religious persons conducting entrepreneurial activity. Institutional voids make behaviors like bribery a virtual necessity, while religious beliefs speak strongly against so doing. Accordingly, when institutions are less developed, religious people would consequently disengage from entrepreneurial activities that may involve bribery due to the strong attachment to their social identity in the religious community and pressure of the social norm of their religious group. Religious people would be exposed to great pressure from their fellow members of the same religious communities to not participate in entrepreneurial activity if it is perceived to be linked to corruption. Therefore, we propose that this tension will cause religious people to hesitate in conducting entrepreneurial activity in a corrupt environment, where they can become entangled in unethical practices that conflict with their beliefs and practices.

Hypothesis 1 In markets characterized by high levels of corruption, people high in corporate religiosity are less likely to undertake entrepreneurial activity than they would be in environments characterized by low levels of corruption.

The moderating effect of institutional support: Marketization

In contrast, high marketization will accentuate the positive effect of corporate religiosity on entrepreneurship. First, marketization and corporate religiosity will act jointly to reduce unethical business behaviors. Formal market institutions modify the environment to make corruption less prevalent. Accordingly, religious prohibitions against engaging in unethical behavior will be less necessary or salient. Therefore, when a potential entrepreneur's religion looks favorably on entrepreneurship, religious persons are likely to choose to undertake entrepreneurial activity. Additionally, the resources and network closely associated with corporate religious practices (Lim & Putnam, 2010) could be more fully and efficiently utilized in the presence of developed market institutions.

The second reason why marketization stimulates the religiosity-entrepreneurship link concerns the respect for the gains from entrepreneurial activities. For example, the Protestant work ethic (Weber, 2002) argues that people should benefit from the fruit of their labor. This is much more likely to occur in an institutional environment characterized by institutional support, where expropriation risk is minimized. For example, marketization reduces moral hazards that could otherwise be used to appropriate innovation rents of entrepreneurs, such as intellectual property rights infringement (Li & Zhang, 2007). As a result, religious people are likely to feel encouraged to work hard and pursue innovative entrepreneurial activities, consonant with their collective self-esteem. Therefore, we propose that strong market institutions and corporate religiosity combine to form a coherent framework and enhance entrepreneurial activity.

Hypothesis 2 In markets characterized by high levels of marketization, people high in corporate religiosity are more likely to undertake entrepreneurial activity than they would be in environments characterized by low levels of marketization.

Methodology

The Chinese context

This study chooses China as the research context because the unique and complex context of China yields interesting and important findings (Bruton et al., 2018) which enhance our understanding of entrepreneurship (Huang et al., 2016). Since the Chinese government's calls for nationwide "mass entrepreneurship and grassroots entrepreneurship," China has witnessed a high rate of entrepreneurial activity (Huang et al., 2016), and the contribution of the private sector to national GDP surpassed 50% in 2004 (Zhou, 2011). Despite increasingly prolific entrepreneurship, institutional environments in China have encountered some challenges (Zhou, 2011). With China's transition from a government-oriented to a market-oriented system comes significant imbalance in institutional environments (Verbeke & Yuan, 2013). Although the central government is developing a uniform institutional framework, local authorities have the freedom to interpret and enforce regulatory rules in order to manipulate economic development or intervene in business activities (Ambler & Witzel, 2004). Accordingly, the levels of institutional development differ greatly across cities or provinces (Zhou, 2011), thereby providing an interesting context for us to study the impact of regional conditions on entrepreneurship.

Additionally, with the reform and opening policy in China, religions have revived rapidly since the early 1980s (Du, 2013). In China's diverse religious context, Buddhism is the most influential. Despite the fact that Christianity is a relative newcomer in China, it is also active and prominent. By the end of 2010, among more than 1.2 billion Chinese, there have been up to 300 million Buddhists and 67 million Christians (Du et al., 2014). As reported by the State Administration for Religious Affairs of China, there were 33,652 Buddhist temples in 2015. As estimated by the *Telegraph*, the number of Christians in China is growing steadily so that China may have more Christian churchgoers (a reflection of religiosity) than America within 15 years (Phillips, 2014).

Data and sample

To test our hypotheses, we compiled several secondary data sources from China, thereby reducing concerns about common method bias. One main data source is the China Labor-force Dynamics Survey (CLDS), which was developed by the Center for Social Science Survey (CSS) at Sun Yat-sen University (2012), along with another 27 partner universities or colleges.¹ This nationwide survey was developed to generate fundamental and solid data for conducting high-quality academic studies in the social sciences. The CLDS contains individual-level information about demographics, entrepreneurial activity, and religious activities closely related to our study. To enhance sample representativeness, the CLDS employed the PPS sampling approach.² More than 800 enumerators were carefully trained, and they conducted face-to-face interviews using the Computer Assisted Personal Interviewing (CAPI) approach.

¹ Despite the data drawn from the CLDS, the opinions are the authors' alone. Please refer to <http://css.sysu.edu.cn> for more information about the CLDS data.

² PPS is the abbreviation of "probability proportional to size" in which the selection probability for each sample is set to be proportional to its sizes.

Another primary data source for institutional environments is the Investment Climate Survey (ICS) conducted by the World Bank in 2005.³ By conducting face-to-face interviews with business owners and top managers, the ICS collected a broad range of qualitative and quantitative information about business environments, such as institutional void. The ICS sampled 100 industrial firms in each city, except for four municipalities where 200 firms were sampled, to investigate the business environments of 120 cities in China. In addition, we obtained marketization data from the NERI Index (Fan, Wang, & Zhu, 2011). This composite index used the Economic Freedom of the World methodology to measure the development of market-based institutions in different regions in China. Regions in China differed significantly in their degrees of market development.

We matched the three data sources, excluded missing data, and developed a unique dataset of 7109 individuals in 69 major cities across 25 provinces. In total, 11.6% of individuals conducted entrepreneurial activities, and 15.3% were religious adherents who regularly attend corporate religious practices. The two percentages paralleled the statistics of the total CLDS sample (10.5 and 15.8%, respectively).

Measures

Dependent variable For the measurement of *entrepreneurial activity*, the CLDS survey asked each individual to report the revenue they earned from business operations other than employment wages and property income. Generally, if an individual reported such revenue, then he or she was launching or managing an economic venture. This approach is simple but effective in judging whether an individual conducts entrepreneurial activity. Accordingly, we created a dummy variable recording the presence or absence of entrepreneurial activity. The same measurement approach has been used in prior studies (Parboteeah et al., 2015; Troilo & Zhang, 2012).

Independent variable In the CLDS survey, *corporate religiosity* was measured as the frequency that an individual attended group religious rituals or activities. Greenfield and Marks (2007) found that more frequent religious attendance would generate stronger religious social identity, thereby exerting greater effects on individuals' psychology and behaviors. Previous studies (Conroy & Emerson, 2004; Wiseman & Young, 2013) also used the same or a similar indicator. As Conroy and Emerson (2004) contended, the frequency of religious service attendance "provides the best and most consistent measure of religiosity" (Conroy & Emerson, 2004: 387).

Moderators Cai, Fang, and Xu (2011) contended that a firm's expenditures on entertainment, travel, and conferences were commonly used to bribe government officials, entertain clients and suppliers, and satisfy managerial excess; and thus these expenditures reflected business corruption. Thus, we measured *corruption* as the average expenditure per employee on entertainment, travel, and conferences, aggregating all firm data at the city level (Dong & Torgler, 2013) to provide a city-wide score for

³ Please refer to <http://www.enterprisesurveys.org/nada/index.php/catalog/382> for more information about ICS data.

corruption. The NERI Index of Marketization provides the measurement of *marketization*, and it incorporates five sub-indices: government-market relationship, non-state economy, product market development, factor market development, and legal or other intermediary institutes.

Controls We controlled for basic demographics such as *age* and *gender*, as entrepreneurial activity may decline with age because of risk aversion (Levesque & Minniti, 2006), and men might be more active in entrepreneurship than women (Olson et al., 2003). We included *political identity* to control for its impact on entrepreneurship in China (Zhao & Lu, 2016). We expect *education* will be related to entrepreneurship because education offers individuals important knowledge and skills and helps them capture business opportunities (Davidsson & Honig, 2003). *Physical health* could impact an individual's ability to start new businesses (Troilo & Zhang, 2012). In addition, we controlled for *social status* because high status was usually associated with the access to financial capital and other resources which influence individual decisions regarding entrepreneurial activities. Also regarded as “a substitute for the risks that are inherent in decisions or situations” (Welter & Smallbone, 2006: 466), *trust* could lower the risks and reduce the transaction costs of entrepreneurial activities. We measured *social support* as the number of close friends or acquaintances who offered financial, emotional or decision-making support. Additionally, in all the regressions, we controlled for the dummies of religious affiliations to reduce the potential concern that different religions differentially affect outcomes. All of the above individual-level controls were drawn from the CLDS survey. Finally, we controlled regional per capita *GDP* to avoid regional differences in entrepreneurial activity arising from different levels of local economic development.

Results

Because our dependent variable, entrepreneurial activity, was dichotomous, we used the Logit regression. We reported both unstandardized coefficients and marginal effects to understand and interpret the results (Ai & Norton, 2003). Marginal effects provide a good approximation of the rate of change in the dependent variable that is produced by a 1-unit change in the independent variable. To reduce concern about model misspecification, we employed robust standard errors in all regressions. Specifically, we ran the regressions of both partial models containing each interaction term respectively and full models containing all interaction terms.

Moderating effects

Table 2 presents the descriptive statistics and correlation matrix. In general, the correlations are not high, and multicollinearity does not appear to be a serious concern. There is a positive correlation between marketization and corruption. It

Table 2 Descriptive statistics and correlation matrix

| Variable | Mean | S.D. | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. |
|-----------------------------|------|------|---------|---------|--------|---------|---------|---------|---------|--------|---------|--------|---------|------|------|
| 1. Entrepreneurial activity | .11 | .32 | 1.00 | | | | | | | | | | | | |
| 2. Corporate religiosity | .35 | 1.23 | .01 | 1.00 | | | | | | | | | | | |
| 3. Corruption | 3.77 | 2.42 | -.02 | -.04*** | 1.00 | | | | | | | | | | |
| 4. Marketization | 6.64 | 1.51 | -.04*** | -.01 | .21*** | 1.00 | | | | | | | | | |
| 5. Age | 3.64 | .38 | .02 | .03** | .02* | -.03*** | 1.00 | | | | | | | | |
| 6. Gender | .48 | .50 | .07*** | -.06*** | -.03** | .01 | -.01 | 1.00 | | | | | | | |
| 7. Political identity | .11 | .31 | -.05*** | -.07*** | .04*** | -.04*** | .10*** | .11*** | 1.00 | | | | | | |
| 8. Education | 2.77 | 2.40 | -.03** | -.08*** | .22*** | .01 | -.25*** | .06*** | .30*** | 1.00 | | | | | |
| 9. Physical health | 1.94 | .80 | -.04*** | .05*** | -.01 | -.10*** | .29*** | -.09*** | -.05*** | .17*** | 1.00 | | | | |
| 10. Social status | 4.11 | 1.99 | -.01 | .00 | -.03** | -.01 | -.03** | -.03*** | .08*** | .09*** | -.11*** | 1.00 | | | |
| 11. Trust | 2.77 | .57 | .00 | .02* | -.01 | -.02 | .19*** | .02 | .06*** | -.02* | .00 | .06*** | 1.00 | | |
| 12. Social support | 2.39 | .87 | .00 | .01 | .02 | .01 | .08*** | .12*** | .13*** | .09*** | -.07*** | .07*** | .11*** | 1.00 | |
| 13. GDP | 1.78 | .51 | -.01 | -.07 | .64*** | .50*** | -.06*** | -.02 | -.00 | .18*** | -.10*** | -.02* | -.03*** | -.01 | 1.00 |

***, $p < .01$; **, $p < .05$; *, $p < .1$

might be partially explained by the on-going and dynamic institutional transition into market mechanism (Gong & Zhou, 2015). In addition, we mean-centered the respective variables before we generated interaction terms.

As our study tests hypotheses at the individual level while individuals are clustered across regions, we need to check the intra-class correlation coefficient (ICC), the proportion of total variance contributed by the region-level variance, estimating how much of the variance in the dependent variables resides between regions (Autio, Pathak, & Wennberg, 2013). Therefore, we first ran a “null model,” a random-effect logit regression model without any predictor or control. The ICC values indicate that only 2.9% of the variance in entrepreneurial activity resides between regions, much lower than the score of 7%, a threshold recommended (Autio et al., 2013) to determine whether multilevel models should be used. Thus, it is not necessary to employ a multilevel method in this study.

Although our primary area of interest in this study is the contingent effect of corporate religiosity on entrepreneurship, we also briefly examine the direct effect of corporate religiosity on entrepreneurship. As reported in Model 1 of Table 3, we found no significant effect of corporate religiosity on entrepreneurship ($\beta = -.001$, $p > .1$). This suggests the correctness of exploring contingencies, as it is likely that contingent relationships may be “masking” an underlying main effect. In Model 2, the moderating effect of corruption is significantly negative ($\beta = -.032$, $p < .05$). That is, in the presence of corruption, individuals high in corporate religiosity have reduced incentives to conduct entrepreneurial activities, supporting Hypothesis 1. Model 3 examines the moderating effect of marketization, and the coefficient is significantly positive ($\beta = .043$, $p < .01$). In other words, in the presence of relatively developed market-supporting institutions, corporate religiosity exerts a stronger effect on entrepreneurial activity, supporting Hypothesis 2. Furthermore, the two interaction results are confirmed again in the full model (Model 4).

Confirmation of moderating effects

Ai and Norton (2003) argued that the interpretation of interaction effects in nonlinear models like Logit differed substantially from interpretations in OLS models. It may not be appropriate to judge an interaction effect only by observing the coefficient’s statistical significance reported in the Logit model because the interaction effect varies in its magnitude and significance from observation to observation. Following the suggestion of Ai and Norton (2003), we ran the STATA “INTEFF” command to plot the interaction effect for each observation. As demonstrated by the mean value of the marginal interaction effects for all observations, the interaction effect of corporate religiosity and corruption is significantly negative ($\beta = -.003$, $p < .05$), and marketization is significantly positive ($\beta = .004$, $p < .01$).

We further plotted the marginal interaction effect for each observation. As illustrated in Fig. 1a, almost all observations show a negative interaction of corporate religiosity and corruption; in Fig. 1b, all observations demonstrate a positive interaction of corporate religiosity and marketization. This further confirms the moderating effect of corruption and marketization in their anticipated directions.

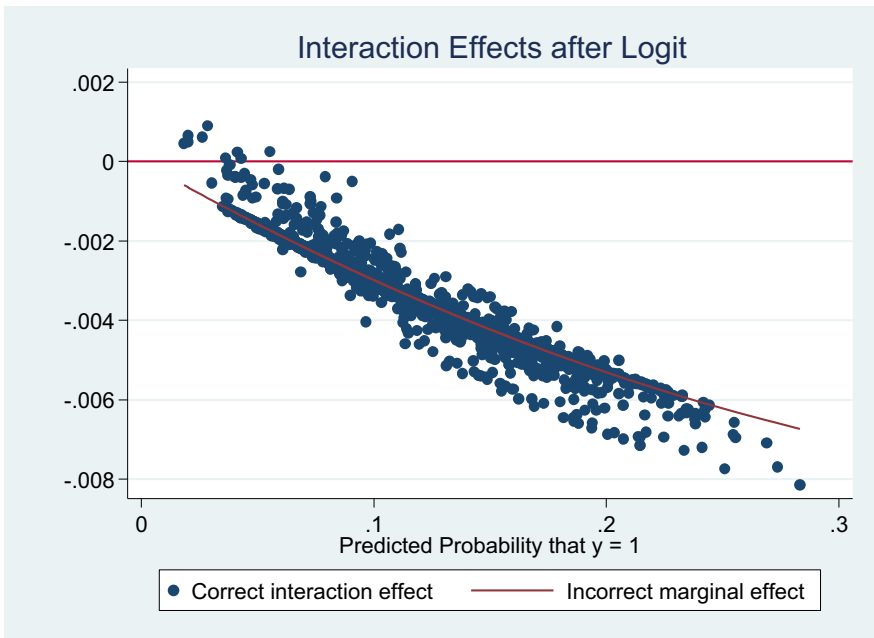
Table 3 Moderating effects

| | | Dependent: Entrepreneurial Activity | | | | | | | |
|-------------------------|---------------|-------------------------------------|-----------------|--------------------------|-----------------|--------------------------|-----------------|---------------------------|------------------|
| | | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
| | | Coefficient | Marginal Effect | Coefficient | Marginal Effect | Coefficient | Marginal Effect | Coefficient | Marginal Effect |
| Independent | | | | | | | | | |
| Corporate religiosity | | -0.01 (.043) | -0.000 | -0.22 (.047) | -0.002 | .004 (.044) | .000 | -.032 (.049) | -.004 |
| Corruption | | -0.10 (.021) | -0.001 | -0.15 (.021) | -0.002 | -0.10 (.021) | -0.001 | -0.19 (.022) | -0.002 |
| Marketization | | -1.18*** (.029) | -0.12*** | -1.17*** (.029) | -0.12*** | -1.19*** (.029) | -0.12*** | -1.15*** (.029) | -0.12*** |
| Interaction | | | | | | | | | |
| Corporate religiosity * | Corruption | | | -0.32** (.016) | -0.003** | | | -0.58*** (.019) | -0.006*** |
| Corporate religiosity * | Marketization | | | | | .043*** (.015) | .004*** | .071*** (.018) | .008*** |
| Control | | | | | | | | | |
| Age | | .289*** (.086) | .029*** | .292*** (.086) | .030*** | .279*** (.086) | .028*** | .280*** (.086) | .028*** |
| Gender | | .471*** (.077) | .048*** | .470*** (.077) | .047*** | .472*** (.077) | .048 | .473*** (.077) | .048*** |
| Political identity | | -.627*** (.158) | -.063*** | -.627*** (.157) | -.063*** | -.626*** (.158) | -.063*** | -.629*** (.157) | -.063*** |
| Education | | -.019 | -.002 | -.018 | -.002 | -.019 | -.002 | -.017 | -.002 |

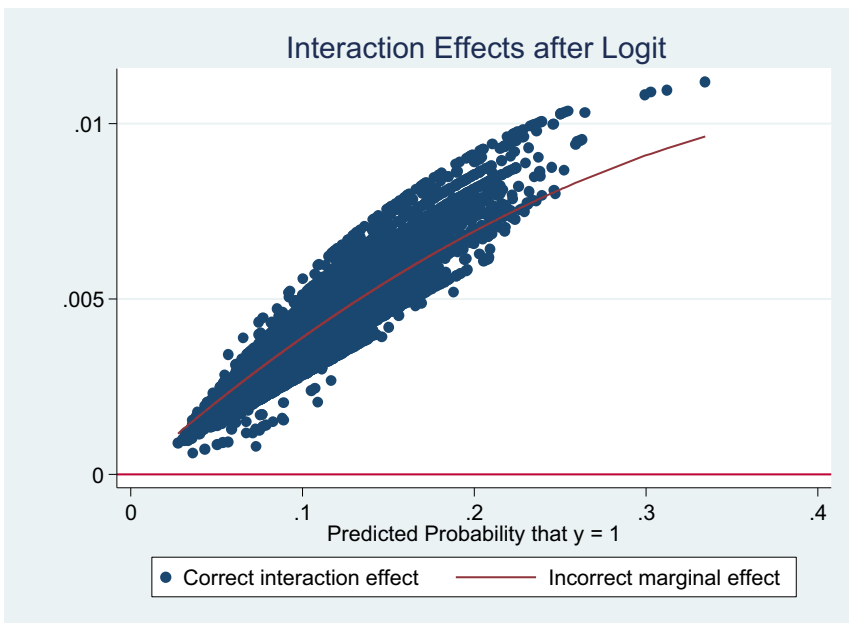
Table 3 (continued)

| | | Dependent: Entrepreneurial Activity | | | | | | | |
|------------------------------------|---|-------------------------------------|-----------------|--------------------|-----------------|--------------------|-----------------|--------------------|-----------------|
| | | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
| | | Coefficient | Marginal Effect | Coefficient | Marginal Effect | Coefficient | Marginal Effect | Coefficient | Marginal Effect |
| Physical health | | (.018) -1.93*** | -.020*** | (.018) -1.94*** | -.020*** | (.018) -1.88*** | -.019*** | (.018) -1.86*** | -.019*** |
| | | (.050) | | (.050) | | (.050) | | (.050) | |
| Social status | | -.005 | -.001 | -.006 | -.001 | -.004 | -.000 | -.005 | -.001 |
| | | (.019) | | (.019) | | (.019) | | (.019) | |
| Trust | | -.037 | -.004 | -.039 | -.004 | -.038 | -.004 | -.041 | -.004 |
| | | (.068) | | (.068) | | (.068) | | (.068) | |
| Social support | | -.014 | -.001 | -.011 | -.001 | -.016 | -.002 | -.011 | -.001 |
| | | (.043) | | (.043) | | (.043) | | (.043) | |
| GDP | | .104 | .011 | .111 | .011 | .097 | .010 | .104 | .010 |
| | | (.113) | | (.113) | | (.113) | | (.114) | |
| Religion affiliations (dummies) | Y | | | Y | | Y | | Y | |
| <i>pseudo R</i> ² | | .019 | | .020 | | .020 | | .023 | |

(1) ***, $p < .01$; **, $p < .05$; *, $p < .1$. The significance of the coefficients of the interaction term of corporate religiosity and corruption in Model 2 and Model 4 is 0.042 and 0.002 separately; The significance of the coefficients of the interaction term of corporate religiosity and marketization in Model 3 and Model 4 is 0.005 and 0.000 separately. (2) Robust standard errors are reported in parentheses



a



b

Fig. 1 a Moderating effect of corruption. b Moderating effect of marketization

Robustness checks

To reduce the concern that there might be differences between entrepreneurship in the form of self-employment versus entrepreneurship as business ownership (Shane, 2003), we conducted a robustness check by eliminating self-employment from entrepreneurship and examining the results using only entrepreneurship measured as business ownership. The results are consistent with those of Model 4, indicating that our results do not depend on our measure of entrepreneurship. In addition, it is possible that using expenditures on entertainment, travel, and conferences is too broad a measure of corruption, and may inadvertently incorporate a number of legitimate business expenses. To test for this possibility, we remeasured corruption using only entertainment expenditures. Our results did not significantly change using this measure.

To interpret the moderating effect of institutional environments in a direct manner, we conducted subgroup analyses to compare the impact of corporate religiosity on entrepreneurial activity at a low and high level of corruption or marketization. Corporate religiosity has a significantly positive effect on entrepreneurial activity at a low level of corruption ($\beta = .071$, $p < .05$) while exerting no significant effect at a high level ($\beta = -.058$, $p > .1$); conversely, religiosity has a significantly positive effect at a high level of marketization ($\beta = .130$, $p < .01$) but a non-significant effect at the low level ($\beta = -.049$, $p > .1$).

Furthermore, in order to assess whether our results were robust across religions, we selected one Western religion, namely Protestantism, and one Eastern religion, specifically Buddhism, both of which were major or dominant religions in China, and examined their effects separately (Du, 2017). In essence, these regression results show a consistent pattern for religions having corporate religious practices: corruption weakens the effect of religiosity – whether Buddhist or Protestant – on entrepreneurial activity, while marketization strengthens their effects.

Discussion

Drawing upon the perspectives of institutional void and institutional support, our study examined the contingent effects of multiple facets of institutional environments on the relationship between corporate religiosity and individual decision-making regarding entrepreneurial activity in an emerging market, specifically China. In markets characterized by institutional voids such as corruption, corporate religiosity exerts a constraining influence: Persons high in corporate religiosity are less inclined to pursue entrepreneurial activity because doing so may require them to engage in business practices that run counter to their religious group identity. In contrast, in markets with well-developed institutions (high levels of marketization), religiosity fosters entrepreneurial activity because market-based institutions protect persons high in corporate religiosity from confronting unethical choices.

This study makes important theoretical contributions as it pioneers the examination of how corporate religiosity interacts with institutional void and institutional support to influence entrepreneurial behaviors. In so doing, this research not only helps us understand the distinctness and complexity of

entrepreneurial activity in emerging markets, but also contributes to understanding the impacts of institutional environments in emerging markets.

Practical implications

This research presents several implications for both entrepreneurs and policymakers in emerging markets. First, potential entrepreneurs should be very careful in evaluating their institutional environment and identifying the ethical risks involved in undertaking entrepreneurial activity, and whether they feel comfortable accepting those risks. As shown in this study, unethical practices present in markets depress the entrepreneurial activity of persons with strong corporate religiosity. Thus, from a policy perspective, this exerts a dampening effect on desirable entrepreneurial activity. Therefore, to help and encourage more entrepreneurial activity, governments should establish a more “healthy” business environment. To do so, on the one hand, governments should establish a strong market-based system by developing and enforcing regulatory rules while ensuring a “level playing field.” On the other hand, governments should implement an anti-corruption policy to eliminate bribery from business activities.

Limitations and future directions

We must interpret our findings within the possible limitations of this study. First, as shown in our robustness checks, while different religions such as Protestantism and Buddhism may have different perspectives on the value of entrepreneurial activities, they have consistent responses to some unethical behaviors. Future research can explore the detailed differences among various religions, and possibly develop a typology of the effects of religion on entrepreneurial activity.

The scale we used to measure religiosity mainly focuses on the frequency of group religious activities attendance, which might be able to provide an account of corporate religiosity, but fails to fully capture unobservable personal religiosity. For example, as Du and colleagues (Du, 2013, 2017; Du et al., 2014) suggest, some people with strong religiosity may choose to engage in private religious practice in their homes rather than attend public religious ceremonies. As a result, future studies should develop a profound scale that integrates the effects of both corporate and personal religiosity on entrepreneurial activity and perhaps more interestingly, conduct a comparative study of the effects of corporate religiosity and personal religiosity on entrepreneurship. Also, our study focuses on examining the overall effect of corporate religiosity on entrepreneurial activity but future studies should explore how different corporate spiritual disciplines make separate or unique effects on entrepreneurship in the presence of unethical practices. For example, according to Dyck and Wong (2010), confession requires that religious persons recognize and confess their own shortcomings or problems that conflict with their religious beliefs, such as unethical practices potentially involved in business activities; worship (not limited to some activities such as weekly gatherings) encourages religious persons to find and see good in others, thereby generating a community in which religious persons share ethical values and strengthen their religious beliefs; guidance emphasizes social support generated from religious identification, encouraging religious persons to ask for help from others to do right things and avoid ethical discomfort; and celebration refers to the response to the

implement of positive practices or changes, which could provide feedback to the first step of confession as religious persons confess new unethical practices again.

Furthermore, the insights we generate in this article on the institutional context of the religiosity-entrepreneurship relationship do not differentiate between the types of entrepreneurship. However, entrepreneurship, broadly speaking, includes commercial entrepreneurship, which emphasizes economic achievements, and social entrepreneurship, which emphasizes pro-social goals and social wealth (Stephan et al., 2015). As social entrepreneurship focuses on economic activities benefiting multiple stakeholders, there may be more alignment between religious values and ethical and social behaviors than there is in the commercial entrepreneurship context. Further, as social entrepreneurship attempts to address a wide range of social problems (Estrin et al., 2013), in environments rife with institutional voids such as corruption, the society may abound with social problems, which may trigger social needs for social entrepreneurship from religious persons (Zahra, Gedajlovic, Neubaum, & Shulman, 2009). However, these distinctions between types of entrepreneurship may be somewhat mitigated by realizing that all entrepreneurship, regardless of its type, presumes a desire to better people's lives (Drucker, 2011). In addition, scholars have called on business to create shared value as a means of enhancing firm performance and aligning stakeholder interests to increase firm value creation (Freeman, Harrison, & Wicks, 2007), suggesting that the barrier between types of entrepreneurship is somewhat permeable. Therefore, future studies could identify the different effects of religiosity on commercial and social entrepreneurship, coupled with contextual factors in the institutional environment. Scholars could advance knowledge by accessing data that distinguishes between social and commercial entrepreneurship.

Finally, while our study focuses on the strengthening or weakening effects of formal institutions interplayed with religiosity on entrepreneurial activities, future research can pay more attention to the role of religiosity in ameliorating institutional void. For instance, people with strong corporate religiosity may seek to make their environment less corrupt. The joint action and mutual support available in corporate religious institutions may facilitate the coordinated effort necessary to change societal norms, and entrepreneurs who are part of a corporate religious environment may find the social support needed to individually challenge the norms in a corrupt environment to make it less so by developing non-profit or for-profit organizations that care for the marginalized (Plowman et al., 2007).

In conclusion, as the largest emerging market with dynamic institutions, China provides an appropriate and interesting context for our topic. Although it shares many common features with other emerging markets, there are still numerous differences among emerging economies. Thus, we should be cautious about generalizing our research results in other contexts. Future studies examining other emerging markets are required. Additionally, as is the case of use of the secondary data, there are some minor limitations, such as a small ICC score of 2.9%. In the future, when more data sources are available, future research could be conducted to further validate the results in this study.

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