

## **Religious environment and corporate social responsibility in China: do laws exert any effect?**

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**Abstract:** When studying corporate social responsibility (CSR) in China, this paper notices that religious environment plays an important role. With data of Chinese A-share listed companies from 2010 to 2014, this paper tries to investigate the relationship between corporations' religious environment and CSR performance. Empirical test results show that the better religious environment companies have, the more social responsibility they will perform. In addition, when considering the moderating effect of formal institutions represented by, this paper finds that substitution effect plays the more important role. That is to say, corporations located in lower legal level area will be more affected by religious environment than those located in higher legal level area. This paper also finds that in higher legal level area, the substitution effect of informal institution on the formal system is more obvious.

**Keywords:** Informal institution; Religious environment; Corporate social responsibility; Law

### **1. Introduction**

In the new institutional economics, institutions are divided into formal institution and informal institution. Differ to formal institution, informal institution is more complex in influences as well as forms. China is a giant country with large population, long history and various cultures, so it's obviously unscientific to ignore the informal institution's profound influence but only considering the formal institution when covering Chinese economy. In terms of China's current economic environment, faultiness of market institution, weakness of relevant laws and regulations and strong intervention from the government makes the role of formal institution large-limited (Chen *et al.*, 2008). In addition, the emerging and transition economies cannot transplant sophisticated investors legal protection institution of developed countries completely for the different culture, religion and language (Li and Shen, 2010). In a variety of informal institution, this paper chooses religion as the representative factors because of the following two reasons. First, religion has profound influence on China, Confucianism, Taoism and Buddhism can be seen everywhere. And second, measurement of religious environment is easier than others in China where personal information is not open enough.

Corporate social responsibility was first put forwarded by Oliver Sheldon in 1924. Generally speaking, CSR means the obligation that enterprise should also be responsible for interested party including worker, consumer, environment and community when meet the trustee obligation for stockholders to make profit, specific behavior including do not use child labor or forced labor, Optimization of safe and healthy work environment, autonomic energy conservation and emissions reduction, etc. According to Carroll (1979), CSR is a multi-dimensional construct, consisting of four types of responsibilities: economic, legal, ethical, and discretionary. Nowadays, corporate social responsibility is drawing more and more attention of the economists, relevant theories have been greatly developed and got wide acceptance (Gao, 2012). Research about CSR started in the more prosperous western countries, since in these developed countries, the social responsibility consciousness of enterprises and the public is stronger, thus performance to fulfill CSR is more common (Xin, 2013). According to data of 2016, more than 3500 social responsibility reports was published in China.

This paper holds there are some inevitable connections between CSR and religion in China, for religion can change people's business standard, prevent corporations from violation and be a regional advantage for corporations. Expect for informal institutions represented by religion, can formal institutions such law make

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any difference in this? Answers must be attractive and significant in these fields. In order to validate this viewpoint, this paper takes China A-share listed companies as our samples, companies' CSR score from HEXUN as CSR fulfillment degree, number of important temples within certain range of companies as religious environment, and regional legal level index as legal level, results for model found that corporations' better religious environment can obviously promote their CSR performance. After put moderating variable—law in our model, regression shows that law has a markedly substitution effect on religion in CSR.

This paper has some contributions comparing to previous studies. First, differ to previous studies concentrating on CSR attitudes, corporate values, like Du *et al.* (2013) and Ramasamy *et al.* (2010), this paper focuses on relationship between CSR and institutions including formal institution—law and informal institution—religion. Next, as one of the most important formal institution and informal institution, combined effect of law and religion hasn't been concretely discussed in pervious CSR research, it would a big surprise that law can make so special effect beyond our first expectation.

## **2. Institution background and theoretical analysis**

There is special significance to study the relation between religious environment and CSR of listed companies in China. First, as mentioned above, China has long history for more than 5000-year, it's far longer than some country such as American and Japan, Buddhism, Taoism and Confucianism exist at the same time for a long time, and stably affect Chinese people in at all time. Differ to European Christian, Arab countries' Islam, China's religion fail to form a steady and strong organization like church, and never cause long-term political struggle with nation (Yang, 1961). From the view of ethic, it's sensible to suspect that different religion environment will also lead to people's different CSR expression. Second, Williamson (2009) concluded that institutions cannot be easily transplanted so as to spur economic development. Moreover, since in economic transition stage, China's institutional situation is incomplete, manifesting as inefficiencies of the existing economic and law system. This is a new thinking relative to corresponding conclusions from McGuire *et al.* (2012), whose research is conducted in place where formal institutions are relatively perfect. In addition, China's formal institution in different area is not in the same way, will religious environment make different effects in a country where formal institution is unbalanced and deficient? The answer will be good supplement to research of Callen *et al.* (2011). Third, when study the relationship between religious environment and CSR, studies have to take endogenous problem into account, which is knotty to solve except in China, for Chinese have a lower liquidity than other developed country because of limits in household registration system and tradition that people's unwilling to leave their hometown. In this case, causality between religious environment and CSR can be showed clearly.

This paper holds that there are at least three reasons to explain why religious environment will change CSR performance of listed companies. First, religion can changes people's business standard. Workers with Buddhist faith background obviously pay more attention on CSR than those don't have religious faith background (Brammer *et al.*, 2007). Second, religious environment can influence company's performance in obeying the regulations. Religion contain a kind of ideology that everyone should follows the regulations. Corresponding to this, Chen *et al.* (2013) found that the better religious environment listed company has, the less violation will be discovered; Hilary and Hui (2009) also concluded that company with higher percentage religious belief will be more risk-intolerant in the US. At last, objectively speaking, area with better religious environment tend to have developed tourism or long prosperous history, companies lied here will spontaneously preserve their environment (including natural environment and cultural environment) and reputation which are also regional source of themselves.

## **3. Research method**

### **3.1 Sample and statistics**

This paper chooses non-financial A-share main board listed companies from 2010 to 2014 as initial sample, financial data of which can be acquired from the CSMAR database, after screening 10764 samples in total. In case of being misled by extreme values, this paper also removes them of main continuous variables in 1% level by Winsorization. As for the CSR variable, this paper decides to use data from HEXU database, which has been used by many scholars before (Li and Foo, 2015; Liu *et al.*, 2014; Li *et al.*, 2013). Data about legal level was collected from *The province marketization index of China 2016* wrote by Wang *et al.* (2016).

### 3.2 Variable definition of religious environment

Referring to previous study, when trying to quantify the religious environment, in China, Chen *et al.* (2013) and Du *et al.* (2014) provided a smart method, they used number of Important Temples within certain range of listed company's registered address to describe its religious environment, that's what this paper decide to refer to. According to the notice released by State Council of People's Republic of China in 1983, this paper selects 142 Important Temples which have high popularity and representativeness. That is to say, more Important Temples are located in certain range of listed company means better religious environment. In this paper, certain range was defined as 100 kilometers.

### 3.3 Empirical model

Before building the empirical model, this paper decide to definite related variables as below:

**Table 1 Variables definition**

Variables	Mean
<i>SCORE</i>	corporate social performance
<i>RELIGION_100</i>	corporate religious environment quality
<i>LNGDP</i>	regional economic development level
<i>ROA</i>	corporate ability to make profit
<i>SIZE</i>	corporate size
<i>LEV</i>	company's liabilities
<i>BOARD</i>	board size
<i>INDE</i>	proportion of independent directors in the whole board
<i>AGE</i>	corporate listed year
YEAR, NIND	dummy variables respectively stand for statistic year and corporate industry.

Refer to pervious study about CSR and analysis above, this paper builds the following regression equation to analyze relationship among CSR, religion and other control variables:

$$SCORE = \alpha + \beta_1 * RELIGION_{100} + \beta_2 * LNGDP + \beta_3 * ROA + \beta_4 * SIZE + \beta_5 * LEV + \beta_6 * BOARD + \beta_7 * INDE + \beta_8 * AGE + \sum YEAR + \sum NIND + \varepsilon \quad (1)$$

## 4. Empirical tests and discussion

### 4.1 Descriptive statistical analysis

Table 2 is the descriptive statistic of variables. Some key information can be acquired: (1) Average CSR score for all samples is 27.30 out of 100 points, high to 72.62 and low to 0, coincide with the theory above, CSR in China has not been well performed now. (2) There are 3.432 *Important Temples* within 100 km range of listed company in average, high to 12 and low to 0. (3) About 37.1% of the directors in directorate are independent directors, which also agree with conclusion from Chen and Xie (2011).

**Table2 Descriptive statistics**

variables	N	Mean	SD	Min.	Max.	Median
<i>SCORE</i>	10746	27.30	18.09	0	72.62	21.47
<i>RELIGION_100</i>	10746	3.432	3.434	0	12	2
<i>LNGDP</i>	10746	10.115	0.719	7.651	11.124	10.084
<i>ROA</i>	10746	0.0444	0.0545	-0.136	0.232	0.0386
<i>SIZE</i>	10746	21.90	1.279	19.24	25.78	21.74
<i>LEV</i>	10746	0.447	0.221	0.0438	0.909	0.449
<i>BOARD</i>	10746	8.858	1.772	4	18	9
<i>INDE</i>	10746	0.371	0.0552	0.125	0.800	0.333
<i>AGE</i>	10746	9.482	6.231	0	24	10
<i>LAW</i>	10746	11.874	5.672	0.18	19.89	8.46

#### 4.2 Regression result and analysis for main model

After controlling fixed effect of year and industry, regression result is showed in the following table 3. By the way, robust standard error is used to ensure its robustness and control possible heteroscedasticity and autocorrelation.

**Table 3 Regression result for main model**

variables	(1)Pooled-OLS	(2)FE	(3)RE-GLS
Religion_100	0.091** (2.18)	0.086** (1.78)	0.133** (1.90)
LNGDP	-0.349* (-1.67)	-0.373 (-1.51)	-0.280 (-0.79)
ROA	94.343*** (31.19)	94.332*** (31.83)	81.634*** (29.61)
SIZE	6.245*** (42.37)	6.244*** (43.45)	5.855*** (29.48)
BOARD	0.377*** (3.68)	0.377*** (3.93)	0.325*** (2.66)
INDE	11.251*** (3.66)	11.244*** (3.90)	11.401*** (3.56)
AGE	0.099*** (3.67)	0.099*** (3.62)	0.138*** (3.36)
LEV	-8.423*** (-9.84)	-8.408*** (-9.28)	-6.727*** (-6.32)
Cons	-112.616*** (-29.34)	-114.850*** (-28.68)	-106.349*** (-19.50)
Industry & Year	Controlled		
Adjust-R <sup>2</sup>	0.329	0.329	0.319
F-value	229.83	227.36	-

**Note:** statistically significance at: \*p<10%, \*\*p<5% and \*\*\*p<1%.

After controlling other factor, coefficient of *RELIGION\_100* is observably positive in 5% level, also agree with our anticipation before. Thus it can be confirmed that the better religious environment corporation has, the higher score corporation tends to get, which means better corporate social performance.

#### 4.3 Moderating effect of formal institution

When concerning the moderating effect of formal institution, this paper supposes that there are two fundamental effects formal institution represented by legal level exerts on relationship between religious environment and CSR performance: complementarity effect or substitution effect. Taking the LAW's median 8.46 as boundary, divide 10746 samples into two groups after sort them by LAW<sup>3</sup>, then respectively name them as "higher legal level group" and "lower legal level group".

**Table4 Regression results for different groups**

Variables	Higher legal level group	Lower legal level group
RELIGION_100	-0.290*** (-4.98)	0.650*** (6.64)
LNGDP	-2.456*** (-5.31)	0.017 (0.06)
ROA	95.795*** (21.62)	92.422*** (22.32)
SIZE	6.709*** (32.28)	5.785*** (27.51)
LEV	-6.262*** (-5.08)	-9.919*** (-8.32)
INDE	3.793 (0.93)	16.694*** (3.66)

<sup>3</sup>There are 5079 samples whose LAW is smaller than 8.46, 5352 samples whose LAW is larger than 8.46, so we classify samples whose LAW equals to 8.46 as "lower legal level group" to ensure the uniformity of groups.

Table 4, cont.

AGE	0.140*** (3.78)	0.039 (0.97)
BOARD	0.077 (0.51)	0.538*** (3.87)
R-square	0.367	0.309

Note: statistically significance at: \*p<10%, \*\*p<5% and \*\*\*p<1%. Numbers in the parentheses are t-value.

Table 4 shows that religious environment is associated negatively with CSR score in higher legal level group, but stronger positive correlation is found in lower legal level group. Compared with “higher legal level group”, corporations of “lower legal level group” will get more CSR promotion under the influence of religious environment, law’s substitution effect play a main role in relationship between religious environment and CSR performance. On the contrary, religion can play a more important role in daily governance for area with weaker institution constraints.

Figure 1 describes difference between two groups more visually, indicating that corporations belonging to “lower legal level group” will have higher CSR score when owning better religious environment. This paper supposes that there are two main reasons for this case. First, in advanced regions mentioned above, areas with better religious environment are often economic center, as well as expensive rent and lots of invest opportunities for corporations, that’s what stop them from spending more money and energy to fulfill more CSR; and second, Cheng (2011) has found that one of corporations’ purpose to perform CSR is to reduce financial constraint, so the easier access to finance in these areas can lead to less CSR operations, negative effect of *LNGDP* is also agree with this analysis.

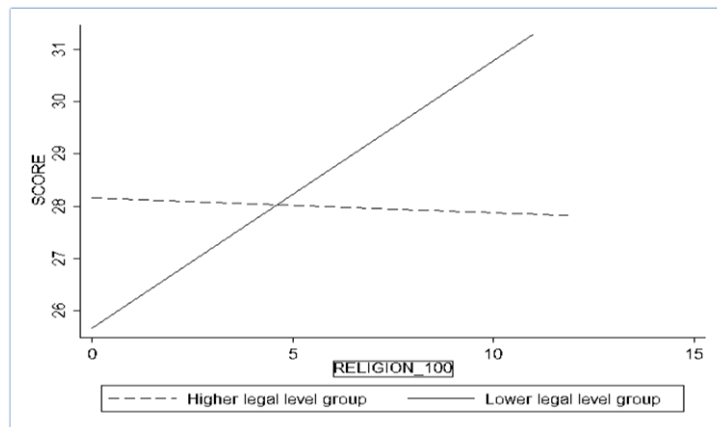


Figure1 Regression fitting lines by group

**4.4 Robustness check**

This paper decides to take robustness checks in several methods below: (1) In consideration of special religious environment especially special role of Tibetan Buddhism and poor economic condition, take out samples belong to Tibet. (2) To avoid influence from regional population, use GDP per person as a variable. (3)Using other method mentioned above to test law’s moderating effect, following table 5 can partially show us regression result. Tests above don’t change our previous findings, so the robustness check passes.

**5. Conclusion**

Apart from formal institution, informal institution represented by religion environment can also make significant influence on corporate decision-making, as well as one of the most important corporate strategies—CSR which has gained more and more attentions and been widely reported in recent years. Empirical test results indicate that, better religious environment and stronger religious influence within certain range of listed companies will propel corporations to have better CSR performance. In addition, when other factors are controlled, corporations located in regions with lower legal level will be more affected by religious environment than high legal level area in CSR operations. The main effect that law generates to

religion is substitution effect, and the effect will be more obvious in places with better established legal system. This paper is good supplement to studies in corporate governance and new institution economics nowadays, especially when come cross problem about religion.

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