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CORPORATE CHARITABLE DONATION UNDER THE THEORY OF ORGANIZATIONAL LEGITIMACY FROM THE PERSPECTIVE OF LISTED COMPANIES' VIOLATIONS IN A REGIONAL INSTITUTIONAL ENVIRONMENT

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ABSTRACT

This paper studies the legitimacy of listed companies from the perspective of violation. We use the violation data of all A-share non-financial listed companies in Shanghai and Shenzhen from 2006 to 2019 and look at the relationship between corporate violation and charitable donation, and the possible influence of the regional institutional environment of enterprises and the degree of association between enterprises and government on the relationship between corporate violations and charitable donations. Compared with violations at the organizational level, enterprises with violations at the executive level are more active regarding charitable donations. The moderating effect indicates that the institutional environment level of the geographical region where the enterprise is located strengthens the negative relationship between the offending enterprise and charitable donation. After dividing into congenital and acquired government enterprise association, the congenital Government Enterprise Association has a strengthening effect on the charitable donation behavior of illegal enterprises.

Contribution/Originality: The innovation of this study lies in the theoretical mechanism with the combination of the legitimacy theory, system theory and resource dependence theory. Additionally, new regulatory variables were introduced, for instance, regional institutional environments and the enterprise–government relationship.

1. INTRODUCTION

Charity, as the main way of the third distribution which is the allocation of social resources and wealth by means of collection and voluntary donation, will promote the vigorous development of philanthropy in the new era. At the same time, charitable donation is also one of the ways for enterprises to obtain, maintain and strengthen their legitimacy. This paper studies the relationship between listed companies taking part in illegal behavior and their charitable donation behavior to explore the legal operational behavior of companies under the legitimacy crisis, considering the influence of institutional environment and the degree of association between enterprises and government on the relationship. The conclusions of this research can provide decision-making guidance for enterprise managers in reputation repair and legitimacy reconstruction. Following the introduction, Section 2

contains the research background and hypothesis development, Section 3 details the research design, Section 4 comprises empirical test and result analysis, and Section 5 discusses the conclusions.

Corporate charitable donation is not only altruistic selfless contribution but is also used for self-protection and self-interest. Most of the existing research regards corporate charitable donation as a self-protection mechanism, and few regard corporate charitable donation as a "self-remedy" measure after being punished and damaging the company's reputation. Therefore, based on the logic of "self-help" after the event, this paper intends to explore the following questions: First, is there any significant connection between the charitable donation behavior of listed companies that have committed violations? Second, what kind of charitable donation behavior will listed companies show after breaking the rules? Third, will there be significant differences in charitable donation behaviors of listed companies with different property rights? Fourth, in the unique institutional environment of China, how will different levels of regional institutional environment and the relationship between enterprises and the government affect this relationship? Based on these questions, this paper attempts to use qualitative and quantitative methods to explore the relationship between listed companies' violations and corporate charitable donation behavior, as well as the regulatory role played by the institutional environment where the company is located and the association between government and enterprise. The specific research framework is shown in Figure 1.

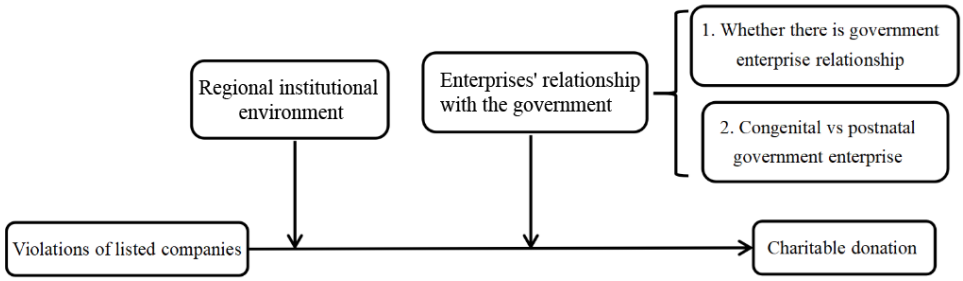

Figure 1. Research framework

2. THEORETICAL ANALYSIS AND RESEARCH HYPOTHESIS

2.1. Organizational Legitimacy Theory

The strategic perspective of organizational legitimacy emphasizes in-depth exploration from the traditional perspective of strategic management, that is, from the perspective of organizations, we discuss how organizations take strategic measures to achieve greater success (Oliver, 1997) and obtain legitimacy within the social scope. This view considers legitimacy as a special strategic resource that an organization can obtain from the external environment, and the process is controllable. In the view of resource-based theory, an organization can achieve its objectives with such competitive advantage resources (Beelitz & Merkl-Davies, 2012; Deephouse, Bundy, Tost, & Suchman, 2017; Kostova & Zaheer, 1999). Enterprises' influence on the process of legitimacy through active strategic planning is emphasized (Kostova & Zaheer, 1999). Although legitimacy cannot be directly observed, the process of enterprises gradually eliminating the legitimacy crisis can be analyzed. The legitimacy of the system from the perspective of research adopted the social group's "look inward" point of view (the enterprise is seen in a certain environment, and the selection and use of resources must conform to the social system and the specification), and the strategic perspective of legitimacy adopted the managers' "to see" point of view, which emphasizes that the enterprise that can use resource optimization and configuration to actively obtain organizational legitimacy. However, modern enterprises are confronted with the challenge of strategic choice and the pressure of institutional environment at the same time in the operation process. Enterprises have to use resources to maintain position in their fields (Vanhamme & Grobben, 2009). Therefore, for modern enterprises, how to successfully obtain, maintain and restore organizational legitimacy is very important for their survival and development. As Suchman (1995) pointed out, organizations not only face institutional pressure from the external environment, but also face challenges of strategic operation. The key goal of crisis repair after an enterprise violates the rules is how to

manage stakeholders' perception of the enterprise and reduce the negative impact of the violation. On the one hand, from a strategic perspective, legitimacy is regarded as a special, controllable and strategically significant resource of an organization, and enterprises can exert influence and control over the process of corporate legalization through proactive strategic design and behavior (Kostova & Zaheer, 1999). On the other hand, corporate strategy also has timeliness. According to the length of planning time, corporate strategy can be divided into short-term, medium-term and long-term strategies. Therefore, enterprises in the post-crisis stage need to repair their legitimacy strategically, systematically and in stages.

Additionally, the timing of corporate social responsibility (CSR) activities has a crucial impact on the effect of reputation repair. In the Tainuo poisoning incident in 1982, for example, Johnson & Johnson's swift and decisive response turned the crisis into an opportunity. Nevertheless, there are controversial thoughts about the motives of corporate charitable giving, if the company makes clear and society-oriented donation actions in a short time after violating the regulations, it may actually be detrimental for it to get out of the reputation dilemma. Online reviews are more detrimental to companies that donate heavily after the crisis. If it is considered premeditated and with suspicious motives, it will backfire. It will not only fail to increase the positive reputation of the enterprise, but it will also reduce the reputation capital established by the enterprise (Godfrey, 2005). Therefore, high-reputation enterprises facing severe crises can better mitigate the negative effects by delaying charitable activities, that is, it is a more sensible choice for enterprises to reduce charitable donations in the short term. Based on the analysis from two different perspectives of legitimacy theory, this paper proposes the following hypothesis:

H1: Compared with non-illegal enterprises, illegal enterprises are less willing to donate to charity.

The types of corporate violations are divided into two categories – executive level violations and organizational level violations. Among them, organizational violations include enterprise breach of contract, false disclosure or misleading information in financial statements, omission or non-standard information disclosure, all of which are closely related to the stakeholders of enterprises. Godfrey, Merrill, and Hansen (2009) found that negative events reduce the value of enterprises, but they did not find a significant difference in enterprise value between enterprises that made charitable donations and those that did not. Because of the information asymmetry, illegal operations at the organizational level are not easy to find, and the cost is relatively low. Second, donations made in a company's name generally do not enhance an executive's personal reputation, and such spending is recouped by future performance. Therefore, corporate executives may be less motivated to carry out violations at the organizational level. Correspondingly, the opposite may be true for violations at the executive level. When the internal governance mechanism of a company is not perfect, the managers may use their own internal information to seek profits for themselves. Secondly, the behavior of entrepreneurs can influence the brand equity of enterprises, which is the corporate window, and the public will transfer their positive or negative impression of the entrepreneurs to their products, i.e., the products of enterprises with highly reputable entrepreneurs will also be perceived to be reliable. Consequently, when violations of senior management occur, enterprises will more actively use charitable donations to divert public attention and save the corporate reputation.

H2: Compared with violations at the organizational level, those at the senior management level who violate the rules have a stronger willingness to donate to charity.

In addition, because the types and degrees of enterprises' violations are different, the severity of punishment imposed by regulators is also different. Generally speaking, listed companies are punished in the following ways: criticism, warning, condemnation, fine, confiscation of illegal income, cancellation of business license (ordered to close), and market prohibition, among others, and the severity of punishment gradually increases. This paper attempts to explore whether there is a relationship between the degree of punishment of enterprises in violation and charitable donation, and if there is a relationship, will it be affected by other factors.

H3a: The heavier the penalty, the stronger the willingness of the enterprise to donate to charity.

H3b: The more serious the punishment, the less willing the enterprise is to donate to charity.

2.2. Institutional Theory

In the middle of the 20th century, the development of institutional theory can be divided into the early old institutional theory and the late new institutionalism theory of organizational sociology. The institutional theory mentioned in this paper refers to the new institutionalism theory. New institutionalism was born in the 1970s, and its core ideological elements came from two papers published by Meyer (1977) and the institutional principle of formal organization proposed by Meyer and Scott (1983) later. Neo-institutionalism believes that organizations will inevitably be affected by the institutional environment, which plays a very important role in the organization's business decisions (DiMaggio & Powell, 1983). Therefore, on the one hand, an organization is subject to, and has to comply with, the pressure from the institutional environment and is adaptable to the environment according to the theory of institutionalism. On the other hand, an organization can also affect the environment and can actively take measures to influence the change of the external environment to suit the development of the organization.

2.2.1. Institutional Environment, Violations of Listed Companies and Charitable Donations

Since its reform and opening up, China has made remarkable achievements, for instance, the country's legal environment has improved significantly, but further improvements are still needed, the most obvious is the big gap between the regional legal environment levels. Additionally, due to the weak level of legal environment as well as the social and economic development levels, the pressure of public health, poverty and a series of social problems and challenges and the lack of government revenue are affecting the local government's support in these areas. Hence, the help from enterprises is desperately needed by the local government. As a reward, the local government may help enterprises with government policies, other resources, or political status. Therefore, in such a region, the government may encourage and praise the charitable donation behavior of local enterprises and place strong pressure to donate on other enterprises in the region. Hence, the following hypothesis is proposed in this paper:

H4: The institutional environment level of the geographical region where the enterprise is located negatively moderates the negative relationship between the offending enterprise and charitable donation (strengthens the effect).

2.3. Resource Dependency Theory

The theory of resource dependence, which originated in the 1940s and rose in the 1970s, emphasizes the importance of enterprises' function of obtaining resources from the environment and is one of the theories studying the life cycle of organizations. Pfeffer and Salancik (1978) believed that the resources needed by organizations might have strong importance and high scarcity, which the organization itself cannot produce. Consequently, the ability of an organization to establish and maintain a good interactive relationship with the surrounding environment to obtain these resources is crucial. In terms of resources, the scarcity and irreplaceability as well as the factors influencing their survival and development determines enterprises' dependence on resource holders. Moreover, the resource dependence theory believes that different organizations may depend on each other based on the resources each other has (mutual dependence), rather than the one-way dependence between organizations.

2.3.1. The Government–Enterprise Association, Violations of Listed Companies and Charitable Donations

As an informal tacit cooperation between the government and enterprises, the government–enterprise connection helps enterprises to enjoy resource support and diversified information and opportunities from the government to a certain extent. Government–enterprise association enables enterprises to achieve higher legitimacy, scarce resources, stable social status and a stronger ability to expand domestic and foreign markets. In addition, when financial fraud is discovered by law enforcement authorities, the efficiency of law enforcement is lower than that of enterprises that do not have a government–enterprise connection (Yi & Donghua, 2017).

From the perspective of resource dependence theory, charitable donation is a strategy for enterprises to cope with the complex and changeable external environment. It can help organizations obtain key external resources

needed for daily operations and reduce the risk and harm of external shocks (Wang & Qian, 2011). Moral capital can be gained from charitable donation (Godfrey, 2005). However, those enterprises without the "father love effect" may be more motivated to display social responsibility behaviors to ease the pressure of legitimacy after their own violations. Therefore, the following hypothesis is proposed in this paper:

H5: A negative correlation between government and enterprises regulates the negative relationship between illegal enterprises and charitable donations (strengthens the effect).

From the perspective of property rights, ownership determines that state-owned enterprises are not purely non-profit organizations, they need to share certain social pressures. Meanwhile, they have the advantage of resource superiority and a variety of investment opportunities and policy priority convenience (Kornai, 1998). Hence, state-owned enterprises reflect the political rent-seeking behavior more. State-owned enterprises will bear greater pressure from public opinion after the occurrence of violations, but this will not fundamentally affect their ability to acquire resources since state-owned enterprises have social functions, such as maintaining social stability and promoting employment. Therefore, it is necessary to find out the root cause of the problem, investigate the fault and prevent the reoccurrence of the problem. It is not urgent to re-establish and maintain access to resources. Therefore, compared with state-owned enterprises, non-state-owned enterprises may be more motivated to regain government legitimacy through donation after being investigated and punished, thus showing a stronger tendency of political rent-seeking. Wang, Cui, Vu, and Feng (2020) divide the association between government and enterprise into two types: congenital and acquired. Specifically, "congenital" as opposed to "acquired," refers to innate, natural properties. Therefore, this paper defines the innate government–enterprise connection as the innate political connection between enterprises and the government, which can be regarded as an innate resource endowment of enterprises with long-term stability. According to this definition, state-owned enterprises belong to this category. Moreover, the strength of the innate political ties of state-owned enterprises varies with the level of government departments to which they belong. Wang et al. (2020) found that resources which state-owned enterprises can obtain in the process of FDI are obviously different by studying cases in the investment of state-owned enterprises in China's construction industry in Africa. For instance, in some large overseas investment projects, only a handful of central enterprises are allowed to participate, while local state-owned enterprises are excluded. In this paper, private enterprises are selected as the representatives of the acquired political connection, which is mainly reflected in the government appointment of prestigious state organs by private executives after they achieve certain goals, such as becoming a representative of the National People's Congress, or CPPCC, showing the continuous cooperation and benefit exchanges between enterprises and the government. Therefore, the following hypothesis is proposed in this paper:

H6: The innate negative association between government and enterprises moderates the negative relationship between illegal enterprises and charitable donations (strengthens the effect).

H7: Acquired government–enterprise association negatively moderates the relationship between illegal enterprises and charitable donations (strengthens the effect).

3. RESEARCH DESIGN

3.1. Sample Selection and Description

This paper took the relationship between listed companies' irregularities and corporate charitable donations as the research object and selected all non-financial A-share listed companies in Shanghai and Shenzhen from 2006 to 2019 as the initial sample source. The following screening was conducted: (1) Eliminate the special treatment (ST) and special treatment with delisting warning (*ST) company samples because these companies may carry out fraud or beautification, which may cause the results to appear deviated. Therefore, these are eliminated in this paper. (2) Eliminate financial industry company samples, such as the financial insurance companies that are strictly controlled by the state. The market factors are small, which is not suitable for the general enterprise research method. Also,

the financial statements of the financial insurance industry and other industries are not entirely consistent and can influence the credibility of the research conclusion. (3) Exclude the companies that have been listed for less than one year. (4) Eliminate samples with missing data. After processing the above, 4277 sample observation values were obtained, and the study was carried out. As shown in Table 1, the number of listed companies punished for violations from 2006 to 2019 has been listed in the Guotaian database. It can be seen that the violations of listed companies have been increasing almost year-on-year since 2006. By 2019, the number of violations was nearly 30 times that of 2006, and the number of companies that violated the rules was nearly 22 times that of 2006. After processing the original data, a total of 4277 sample observation values of violations and non-violations were obtained. The statistical data of illegal companies are shown in Table 2, Table 3 and Table 4. A total of 1,554 listed companies are involved in violations. In terms of the provinces where the offending companies are located, they are mainly in the economically developed eastern regions where listed companies are concentrated, and Guangdong province accounts for 16.73% of the total, ranking first. From the perspective of the ownership nature of enterprises, non-state-owned enterprises account for 67.31% and state-owned enterprises account for 32.69%, among which central state-owned enterprises account for 9.97% and local state-owned enterprises account for about 22.72%.

Table 1. Announced events and annual distribution of listed companies.

Year	Announcement of the Event			Listed Companies		
	Violations	Not Bad	Subtotal	Violations	Not Bad	Subtotal
2006	22	10	32	21	10	31
2007	23	17	40	21	16	37
2008	28	27	55	27	26	53
2009	48	62	110	45	57	102
2010	38	39	77	38	38	76
2011	106	57	163	100	53	153
2012	281	66	347	234	61	295
2013	277	142	419	231	125	356
2014	376	140	516	224	125	349
2015	447	310	757	314	248	562
2016	419	204	623	301	162	463
2017	349	232	581	251	173	424
2018	407	306	713	313	237	550
2019	658	569	1227	453	373	826
Combined	3479	2181	5660	2573	1704	4277

Table 2. Industry distribution of illegal listed companies.

First class industry name	In violation	Proportion
Manufacturing	989	63.64%
Information transmission, software and information technology services	113	7.27%
Wholesale and retail	79	5.08%
Electricity, heat, gas and water production and supply	59	3.80%
The real estate industry	53	3.41%
The construction industry	47	3.02%
The mining industry	38	2.45%
Leasing and business services	32	2.06%
Transportation, warehousing and postal services	28	1.80%
Farming, forestry, animal husbandry and fishery	28	1.80%
Water conservancy, environment and public facilities management	27	1.74%
Culture, sports and entertainment	26	1.67%
Public administration, social security and social organization	9	0.58%
Health and social work	9	0.58%
Scientific research and technology services	8	0.51%
Education	6	0.39%
Accommodation and catering	3	0.19%
Total	1554	100.00%

Table 3. Distribution of illegal listed companies in provinces.

Province	In violation	Proportion
Guangdong	260	16.73%
Zhejiang	152	9.78%
Jiangsu	141	9.07%
Shanghai	102	6.56%
Beijing	94	6.05%
Shandong	88	5.66%
Sichuan	69	4.44%
Fujian	66	4.25%
Hunan	58	3.73%
Henan	52	3.35%
Hubei	49	3.15%
Anhui	45	2.90%
Liaoning	34	2.19%
Chongqing	33	2.12%
Shanxi	30	1.93%
Guangxi	26	1.67%
Ji Lin	26	1.67%
Shaanxi	26	1.67%
Tianjin	25	1.61%
Hainan	23	1.48%
Hebei	21	1.35%
Heilongjiang	20	1.29%
Jiangxi	20	1.29%
Xinjiang	18	1.16%
Gansu	15	0.97%
Inner Mongolia	14	0.90%
Yunnan	12	0.77%
Guizhou	10	0.64%
Ningxia	9	0.58%
Qinghai	9	0.58%
Tibet	7	0.45%
Total	1554	100.00%

Table 4. Distribution of illegal listed state-owned enterprises/non-state-owned enterprises.

Variables	State-owned enterprises		State-owned enterprises	Total
	Central	Place		
Number	155	353	1046	1554
Proportion	9.97%	22.72%	67.31%	100%

3.2. Data Sources

Listed company data used in this article were taken from the Guotaian database's company research series library containing data collected since 1994. The data included in the violation handling database come from the Shenzhen Stock Exchange, Shanghai Stock Exchange and the Securities Regulatory Commission. In addition, the data on corporate charitable donations come from the column of "non-operating income and expenditure", disclosed in the notes of the financial statements in the China Stock Market & Accounting Research (CSMAR) database. In order to ensure the accuracy and integrity of the data, the data disclosed in the basic database of Chinese Research Data Services Platform (CRDSP) are used. The regional institutional environment of a company's location is measured by the comprehensive score of the marketization index and subdivision index published by Wang, Fan, and Yu (2007). The related data of enterprises' government and enterprises are referenced to the Guotaian and Wind databases, and the data related to corporate finance and governance are all from the Guotaian database.

3.3. Variable Selection and Measurement

3.3.1. Explained Variables

Corporate donation: enterprises need to go through the necessary procedures to make decisions on charitable donations. Illegal events usually have a certain lag when affecting the behavior of corporate charitable donations, and internal influence may be caused by reverse causation, among other reasons. Hence, referring to the practices of Dai, Pan, and Feng (2014), this paper adopted the treatment method that lags behind the issuance of the violation punishment announcement. Specifically,

(1) Corporate charitable donation (Don_m): This paper referred to the research of Dai et al. (2014) and set dummy variables to represent the tendency or enthusiasm for corporate charitable donation. If the enterprise's charitable donation expenditure is greater than 0, the value is 1; otherwise, the value is 0.

(2) Scale of corporate charitable donation (Don): In the robustness test, this paper referred to existing literature by Dai et al. (2014) and Du and Chen (2016), who added 1 to the level value of the donation amount (unit: 100 million yuan) and then took the natural logarithm.

3.3.2. Explanatory Variables

Violation by a listed company: The following methods are used to measure violation committed by a listed company in this article:

(1) Whether the company violates the rules (V_1): Referring to existing literature (Khanna, Kim, & Lu, 2015), dummy variable V_1 is used to measure the violations of listed companies in this paper. If a company is found to have committed violations in the audit of CSRC, Shanghai Stock Exchange or Shenzhen Stock Exchange in the same year, it is recorded as 1; otherwise, it is recorded as 0.

(2) Senior management/organization level irregularity (V_2): If the enterprise executives have taken part in illegal buying and selling of company stocks or other economic crimes, a value of 1 is assigned, and if the enterprise is punished for breach of contract, false disclosure or misleading statement of accounting information, omission or non-standard information disclosure, the value is 0.

(3) Degree of punishment for violations of the company (V_3): In the Guotaian database, listed companies are punished by way of criticism, warnings, condemnation, fines, confiscation of illegal income, cancellation of business license, market prohibition and others. The sample data does not include two types of penalties: cancellation of business license and market prohibition. Therefore, according to the degree of punishment, this paper marks the punishment methods as: 0 - other, 1 - criticism, 2 - warning, 3 - blame, 4 - fine, 5 - confiscation of illegal gains.

3.3.3. Adjusting Variables

(1) Regional institutional environment (RIE): In this paper, the marketization relative progress index of the province, autonomous region, or municipality where listed companies are registered was used to measure the institutional environment. The data comes from the Marketization Index Report of Provinces in China (2017 edition) published by Fan and Wang. Articles on charitable donation in Chinese enterprises make extensive use of the above institutional environment data (Wang & Qian, 2011) and these research results expand the research boundary and also prove that corporate charitable donation is closely related to the institutional environment. The marketization index is composed of five aspects, reflecting specific aspects of marketization – the relationship between government and market (RBGM), the development of the non-state-owned economy (DNOE), the development degree of the product market (DDPM), the development degree of the factor market (DDFM), the development of market intermediary organizations, and the legal environment (LE). In order to ensure the reliability and robustness of the results, this paper not only adopts the market composite index synthesized according to the equal weight, but also adopts each sub-index to test the robustness of the role played by the market composite index.

(2) Government–enterprise association (GEA): Currently, there is no unified measurement of the association between government and enterprises in the academic circle. This paper divides the association between government and enterprises into two types, congenital association and acquired association, by referring to the classification set out by Wang et al. (2020). First of all, the dummy variable GEA_1 measures whether there is a government–enterprise association. If there is a congenital or acquired government–enterprise association, it is marked as 1; otherwise, it is marked as 0. Second, the dummy variable GEA_F2 measures whether there is a congenital association between government and enterprise. If there is, it is marked as 1; otherwise, it is marked as 0. Third, the dummy variable GEA_F3 measures the level of the innate association between government and enterprise. If a central enterprise belongs to the central level, it is marked as 1; if a provincial or municipal state-owned enterprise belongs to the local level, it is marked as 0. Fourth, the dummy variable GEA_L4 measures whether there is an acquired association between government and enterprise. If there is, it is marked as 1; otherwise, it is marked as 0. Fifth, the dummy variable GEA_L5 measures the level of the acquired government–enterprise association. The acquired government–enterprise association is also distinguished from the central government or the local government. Specifically, if a private company has senior executives who were or are central government officials, National People's Congress (NPC) deputies or Chinese People's Political Consultative Conference (CPPCC) members, the private company is defined as being connected with the central government and the enterprise, and the value is 1. The value is 0 if the private company has a senior executive who was or is a member of the local government, local people's congress or local People's Political Consultative Conference.

3.3.4. Control Variables

In order to exclude the influence of other relevant factors on corporate charitable giving and obtain the impact estimate of the main effect, reference was made to the existing research on corporate charitable giving (Brammer & Millington, 2008). This study controlled the following variables:

A. Listing Time (Age): Measured by the natural logarithm of the company's listing years.

B. Enterprise Size: Enterprise size is widely regarded as a very important factor affecting corporate charitable donation (Burlingame & Frishkoff, 1996). This paper took the natural logarithm of the total assets of an enterprise at the end of the year.

C. Company Growth: (Total assets at the end of the period–Total assets at the beginning of the period)/total assets at the beginning of the period.

D. Return on Assets (ROA): Profitability reflects the availability of resources available for charitable donation. Since the amount of idle resources is related to the profit or return rate of the enterprise, the higher the return on assets, the better the performance of the enterprise in charitable donation (Adams & Hardwick, 1998). This paper used Net profit/Year-end total assets.

E. Asset–Liability Ratio (ALR): Stakeholder-oriented enterprises tend to make specific decisions related to their capital structure. This is calculated by Year-end total liabilities/Year-end total assets.

F. Equity Concentration (EC): This article took the top 10 shareholder ownerships. Ownership concentration reflects the degree of concentration of company decisions (Johnson & Greening, 1999).

G. Industry Competitiveness (IC): This paper drew on previous studies (Fernandez & Santalo, 2010) and adopted the Herfindahl–Hirschman Index to measure the degree of industry competition. In the formula, X is the main business income of enterprise I ($HHI = \sum(X_i/X)^2$, $X = \sum X_i$). The industry classification is done according to the China Securities Regulatory Commission. The larger the IC, the smaller the degree of competition, and the smaller IC, the greater the degree of competition.

H. R&D Investment Ratio (RDIR): McWilliams and Siegel (2011) found that there is a highly positive correlation between corporate R&D investment and charitable donation. In this paper, R&D investment/gross operating income is used to measure the proportion of R&D investment among enterprises.

I. Cash Ratio: Cash and the cash equivalent balance at the end of the period/total assets at the end of the period reflects the relative abundance of a company's financial resources, especially cash, and it is also a form of redundant resources. A large number of empirical studies have shown that corporate cash flow is closely related to corporate charitable donation (Brammer & Millington, 2008; Seifert, Morris, & Bartkus, 2004) so this paper took it as a control variable and assumes the same degree of cash richness among companies.

J. Board Size: the natural logarithm of the number of board members is used in this paper. The higher the number of board members, the larger the scale, indicating that the more likely the board is to consider the interests of stakeholders (Johnson & Greening, 1999).

All variables are described and measured below in Table 5.

Table 5. List of variable definitions.

Variable Type	Variable Name		Variable Symbol	Variable Description
Explained variables	Corporate charitable giving		Don_m	The value is 1 if the donation expenditure is greater than 0, and 0 otherwise
	Scale of corporate charitable donations		Don	The natural logarithm of the horizontal value of the donation amount plus 1
Explanatory variables	Whether the company breaks the rules		V_1	In this paper, dummy variables are used to measure listed companies' violations. If the company is found to have violations by CSRC, Shanghai Stock Exchange or Shenzhen Stock Exchange in the same year, the value is 1; otherwise, the value is 0
	Violation at senior management/organization level		V_2	If an enterprise is punished for illegal stock trading by its executives or economic crimes committed by its executives, the value will be 1; if the enterprise is punished for breach of contract, false disclosure or misleading information in financial statements, omission or non-standard information disclosure, the value will be 0
	Degree of punishment for violation of company rules		V_3	According to the degree of punishment, the punishment shall be marked as: 0 - other; 1 - criticism; 2 - warning; 3 - blame; 4 - fine; 5 - confiscation of illegal gains
Adjustable variables	Regional institutional environment		RIE	The comprehensive score of the Marketization Index published by scholar Wang et al. (2007) is used to measure this variable. It also includes the relationship between government and market (RBGM), the development of non-state-owned economy (DNOE), the development degree of product market (DDPM), the development degree of factor market (DDFM), the development of market intermediary organizations, legal environment (LE) and other sub-indexes.
	Enterprise association		GEA_1	If it belongs to the innate/acquired association between government and enterprise, the value is 1; otherwise, the value is 0
	Congenital connection between government and enterprise	Congenital connection between government and enterprise	GEA_F2	If it is a state-owned enterprise, the value is 1; otherwise, the value is 0

Variable Type	Variable Name		Variable Symbol	Variable Description
		Congenital government–enterprise association level	GEA_F3	The value is 1 for a state-owned enterprise subordinate to the central government, and 0 for a local state-owned enterprise
	Acquired links between government and enterprise	Acquired links between government and enterprise	GEA_L4	The value is 1 if an enterprise has a senior executive who used to be an official of a central or local organization, a deputy to the National People's Congress, or a member of the CPPCC. Otherwise, the value is 0
		Acquired level of government–enterprise association	GEA_L5	The value is 1 if the enterprise has a senior executive who used to be an official of a central government agency, a deputy to the National People's Congress, or a member of the National Committee of the Chinese People's Political Consultative Conference (CPPCC). The value is 0 if the enterprise has a local government–enterprise connection
Control variables	Time to market		Age	The natural logarithm of listed years
	Enterprise scale		Size	The natural logarithm of a firm's total assets at the end
	Company growth		Grow	(Total assets at end - Total assets at beginning)/Total assets at beginning
	Return on assets		ROA	A measure of a business's profitability, equal to net profit per total year-end assets
	Asset–liability ratio		ALR	Total ending liabilities/Total ending assets
	Equity concentration		EC	The shareholding ratio of the top ten shareholders is used to measure the equity concentration
	Industry competitiveness		IC	The Herfindahl–Hirschman Index is used to reflect the intensity of market competition
	R&D investment ratio		RDIR	R&D investment/gross operating revenue
	Cash asset ratio		Cash	Ending cash and cash equivalents balance/Ending total assets
	Board size		Board	The natural logarithm of the number of board members

3.4. Model Construction

The explained variable (Don_m) in this paper is a discrete binary selection variable with only two values, namely donation or non-donation. At the same time, referring to the research of Du and Chen (2016) and Dai et al. (2014), this paper chose the Logit model to test the hypothesis of whether the sample enterprise makes charitable donations. Therefore, the following model is constructed:

$$Don\_m = \beta_0 + \beta_1 V + \beta_2 Age + \beta_3 Size + \beta_4 Grow + \beta_5 ROA + \beta_6 Lev + \beta_7 Index + \beta_8 HHI + \beta_9 RD + \beta_{10} Cash + \beta_{11} Board + \varepsilon \quad (1)$$

In the robustness test, referring to the study of Dai et al. (2014), the scale of corporate charitable donation (Don) was used to replace the explained variable of corporate charitable donation (Don_m), and the traditional linear regression model was used for empirical verification:

$$Don = \beta_0 + \beta_1 V + \beta_2 Age + \beta_3 Size + \beta_4 Grow + \beta_5 ROA + \beta_6 Lev + \beta_7 Index + \beta_8 HHI + \beta_9 RD + \beta_{10} Cash + \beta_{11} Board + \varepsilon \quad (2)$$

Among them, V in Equation 1 and Equation 2 includes V_1, V_2, V_3, and Don_m and Don are all variables that the punishment of listed companies' violations is delayed by one period, β_0. It's a constant term, and β_1 to β_{11} are the parameter terms to be estimated, and ε is the error term.

4. EMPIRICAL TEST AND RESULT ANALYSIS

4.1. Descriptive Statistics

Table 6 presents the descriptive statistics and group descriptive statistics by company violation are shown in Table 7.

Table 6. Descriptive statistics.

Variable Symbol	Variable Name	Sample Size	Mean	Standard Error	Minimum Value	Maximum Value
Don_m	Corporate charitable giving	4277	0.706	0.456	0	1
Don	Scale of charitable donation	4277	0.013	0.052	0	1.32
V_1	Whether the company breaks the rules	4277	0.602	0.490	0	1
V_2	Violation at senior management/organization level	4277	0.280	0.449	0	1
V_3	Degree of penalty for violation	2573	0.736	1.340	0	5
GEA_1	Enterprise association	4277	0.701	0.458	0	1
GEA_F2	Congenital connection between government and enterprise	4277	0.298	0.457	0	1
GEA_F3	Congenital government–enterprise association level	1274	0.301	0.459	0	1
GEA_L4	Acquired links between government and enterprise	3003	0.574	0.495	0	1
GEA_L5	Acquired level of government–enterprise association	1725	0.544	0.498	0	1
RIE	Regional institutional environment	4277	8.444	2.063	0.650	12.25
RBGM	The relationship between government and market	4277	6.757	1.760	14.29	10.65
DNOE	The development of the non-state economy	4277	9.071	1.861	0.940	13.44
DDPM	The development degree of the product market	4277	8.324	1.288	1.310	10.61
DDFM	The degree of development of the factor markets	4277	7.502	2.904	1.120	15.87
LE	The development of market intermediary organization and legal environment	4277	10.56	5.819	0.700	24.33
Age	Time to market	4277	2.330	0.653	0.713	3.403
Size	The enterprise scale	4277	22.01	1.179	19.41	25.18
EC	Equity concentration	4277	0.547	0.150	0.0132	0.971
Grow	Company growth	4277	0.146	0.4660	0.500	3.590
ROA	Return on assets	4277	0.00048	0.1270	0.713	0.184
ALR	Asset–liability ratio	4277	0.4730	0.2210	0.0560	1.055
IC	Industry competitiveness	4277	0.0992	0.0926	0.0151	1.000
Board	Board size	4277	2.2370	0.1770	1.610	2.940
RDIR	R&D investment ratio	4277	0.0356	0.0595	0	1.516
Cash	Cash asset ratio	4277	0.1360	0.1180	6.10 e-05	0.993

Table 7. Group descriptive statistics by company violation (V_1).

Variable Symbol	Variable Name	No violation (V_1 = 0)					Company violation (V_1 =1)				
		Sample Size	Mean	Standard Error	Minimum Value	Maximum Value	Sample Size	Mean	Standard Error	Minimum Value	Maximum Value
Don_m	Corporate charitable giving	1704	0.733	0.443	0	1	2573	0.688	0.463	0	1
Don	Scale of charitable donation	1704	0.015	0.058	0	1.320	2573	0.012	0.047	0	1.190
V_2	Violation at senior management/organization level	1704	0.654	0.476	0	1	2573	0.033	0.178	0	1
V_3	Degree of penalty for violation	-	-	-	-	-	2573	0.736	1.340	0	5
GEA_1	Enterprise association	1704	0.675	0.469	0	1	2573	0.719	0.450	0	1
GEA_F2	Congenital connection between government and enterprise	1704	0.268	0.443	0	1	2573	0.318	0.466	0	1
GEA_F3	Congenital government–enterprise association level	457.0	0.322	0.468	0	1	817	0.290	0.454	0	1
GEA_L4	Acquired links between government and enterprise	1247	0.556	0.497	0	1	1756	0.588	0.492	0	1
GEA_L5	Acquired level of government–enterprise association	693.0	0.556	0.497	0	1	1032	0.536	0.499	0	1
RIE	Regional institutional environment	1704	8.555	2.069	0.650	12.25	2573	8.371	2.057	0.650	12.25
RBGM	The relationship between government and market	1704	6.759	1.825	14.29	10.65	2573	6.755	1.715	14.29	10.65
DNOE	The development of the non-state economy	1704	9.132	1.855	0.940	13.44	2573	9.031	1.863	0.940	13.44
DDPM	The development degree of the product market	1704	8.285	1.299	1.310	10.61	2573	8.349	1.280	1.310	10.61
DDFM	The degree of development of factor markets	1704	7.677	2.989	0.660	15.87	2573	7.387	2.840	1.120	15.87
LE	The development of market intermediary organization and legal environment	1704	10.92	5.900	0.410	24.33	2573	10.33	5.754	0.700	24.33
Age	Time to market	1704	2.292	0.653	0.713	3.369	2573	2.356	0.652	0.718	3.403
Size	The enterprise scale	1704	21.98	1.160	19.41	25.18	2573	22.03	1.192	19.41	25.18
EC	Equity concentration	1704	0.5480	0.1470	0.0909	0.944	2573	0.546	0.151	0.0132	0.971
Grow	Company growth	1704	0.1580	0.4720	0.500	3.590	2573	0.138	0.462	0.500	3.590
ROA	Return on assets	1704	0.0085	0.1250	0.713	0.184	2573	0.006	0.128	0.713	0.184
ALR	Asset–liability ratio	1704	0.4470	0.2150	0.0560	1.055	2573	0.4900	0.223	0.0560	1.055
IC	Industry competitiveness	1704	0.1000	0.0954	0.0151	1.000	2573	0.0986	0.0906	0.0151	0.807
Board	Board size	1704	2.2370	0.1760	1.610	2.940	2573	2.2360	0.1780	1.610	2.940
RDIR	R&D investment ratio	1704	0.0377	0.0595	0	1.516	2573	0.0342	0.0595	0	1.516
Cash	Cash asset ratio	1704	0.1400	0.1230	0.0001	0.993	2573	0.1340	0.1150	6.10 e-05	0.972

4.2. Correlation Test

The correlation coefficients among the variables are shown in Table 8. Whether an enterprise makes charitable donations (Don_m) is significantly correlated with most variables V_1, V_2, V_3 at the level of 1%. The size of the donation (Don) is significantly correlated with the level of acquired political relevance (GEA_L5), time since going public (Age), size (Size), equity concentration (EC), growth (ROA) and board size (Board) at the level of 1%. Among them, the longer the listing time, the weaker the intention of charitable donation, but in terms of the scale of charitable donation, the longer the listing time, the larger the scale of charitable donation. From the perspective of enterprise size, large enterprises are higher than small enterprises in both philanthropic donation willingness and absolute amount, which may be due to the different richness of redundant resources. According to the index of equity concentration, the higher the proportion of the top 10 shareholders, the higher their donation intention and amount. From the perspective of return on assets (ROA), the higher an enterprise's return on assets, the better its efficiency, and therefore, the more surplus funds it has to invest in charitable activities, which has been confirmed by many researchers. Regarding the asset–liability ratio (ALR) from the enterprise level, previous studies have confirmed that an enterprise's financial debt is negatively related to its charitable donations, mainly because the enterprise's high debt will assert a heavy burden and pressure as it can't raise higher returns on investment projects, and enterprises can only focus on the returns of general projects to repay debt. However, this is not reflected in the correlation coefficient table. The amount of R&D investment of enterprises is inversely proportional to their enthusiasm to donate, which is consistent with the actual situation, mainly because the resources of enterprises are often limited, and the more money invested in R&D, the less money will be devoted to charity. From the perspective of institutional environment, the regional institutional environment (RIE), the development of the non-state-owned economy (DNOE), the development degree of the product market (DDPM), the development of market intermediary organizations, and the legal environment (LE) are significantly positively correlated with the willingness of enterprises to make charitable donations (V_1). From the perspective of the government–enterprise association, the scale of charitable donation of enterprises with a government connection at the central level is significantly higher than that of enterprises at the local level. It can be seen from the table that the correlation coefficient of several variables exceeds 0.5, including V_1 and V_2, and the correlation between RIE, RBGM, DNOE, DDPM, DDFM and LE is relatively high. Among them, RBGM, DNOE, DDPM, DDFM and LE exist as the robustness test of RIE. However, in the subsequent regression analysis, these variables appear independently in the model and do not affect each other.

4.3. Regression Analysis

4.3.1. Main Effect Analysis

As shown in Table 9, the relationship between the offending company and the donation (Don_m) of the enterprise is studied. Logistic regression is conducted between the violation (V_1) of the company, the violation (V_2) of the senior management/organization, the punishment degree of the violation (V_3) of the company and the charitable donation (Don_m) of the enterprise. Model 1 is the basic model containing only control variables. By adding explanatory variable V_1 into Model 1, Model 2 is obtained, which is the logistic regression between enterprise violation (V_1) and enterprise charitable donation (Don_m). Similarly, Model 3 is the logistic regression between the violation at the executive/organizational level (V_2) and whether the enterprise makes charitable donations (Don_m). Model 4 is the logistic regression between the punishment based on the degree of violation (V_3) and whether the enterprise makes charitable donations (Don_m).

Table 8. Correlations of variables.

Variables	Don_m	Don	V_1	V_2	V_3	GEA 1	GEA 2
Corporate charitable giving (Don_m)	1						
Scale of charitable giving (Don)	0.164 ***	1					
Whether the company violates the rules (V_1)	0.048 ***	0.031 **	1				
Violations by senior management/organization (V_2)	0.060 ***	0.00100	0.478 ***	1			
Degree of punishment for violation (V_3)	0.071 ***	0.0140	.	0.00500	1		
Government–enterprise association (GEA_1)	0.044 ***	0.0170	0.047 ***	0.00400	0.0110	1	
Congenital association between government and enterprise (GEA_F2)	0.027 *	0.00500	0.053 ***	0.087 ***	0.00500	0.425 ***	1
Congenital government–enterprise association level (GEA_F3)	0.073 ***	0.052 *	0.0330	0.0190	0.00600	.	.
Acquired Association between Government and enterprise (GEA_L4)	0.043 **	0.0280	0.032 *	0.042 **	0.0180	.	.
Acquired government–enterprise association level (GEA_L5)	0.083 ***	0.098 ***	0.0190	0.0390	0	.	.
Regional institutional environment (RIE)	0.055 ***	0.0110	0.044 ***	0.035 **	0.051 **	0.358 ***	0.224 ***
Relationship between government and market (RBGM)	0.00200	0.0240	0.00100	0.048 ***	0.0170	0.0100	0.115 ***
Development of non-state-owned Economy (DNOE)	0.076 ***	0.0110	0.027 *	0.0100	0.049 **	0.343 ***	0.246 ***
Development degree of the product market (DDPM)	0.033 **	0.0100	0.0240	0.0130	0.0180	0.035 **	0.127 ***
Degree of development of factor markets (DDFM)	0.00400	0.0180	0.049 ***	0.0190	0.051 ***	0.292 ***	0.089 ***
Development of market intermediary organization and legal environment (LE)	0.067 ***	0.0170	0.050 ***	0.037 **	0.050 **	0.374 ***	0.211 ***
Time to market (Age)	0.052 ***	0.048 ***	0.047 ***	0.132 ***	0.033 *	0.035 **	0.335 ***
Enterprise size (Size)	0.278 ***	0.302 ***	0.0190	0.035 **	0.109 ***	0.0230	0.240 ***
Equity concentration (EC)	0.089 ***	0.084 ***	0.00900	0.0140	0.067 ***	0.0160	0.00200
Company growth	0.083 ***	0.055 ***	0.0220	0.045 ***	0.049 **	0.124 ***	0.032 **
Return on assets (ROA)	0.190 ***	0.107 ***	0.057 ***	0.074 ***	0.089 ***	0.197 ***	0.051 ***
Asset–liability ratio (ALR)	0.00700	0.032 **	0.095 ***	0.093 ***	0.0210	0.040 ***	0.211 ***
Industry competitiveness (IC)	0.053 ***	0.0100	0.00800	0.0170	0.00500	0.111 ***	0.0160
Size of the board	0.114 ***	0.093 ***	0.00200	0.00700	0.033 *	0.191 ***	0.236 ***
R&D investment ratio (RDIR)	0.053 ***	0.034 **	0.029 *	0.039 **	0.041 **	0.138 ***	0.155 ***
Cash-to-assets ratio	0.02500	0.00500	0.028 *	0.059 ***	0.0140	0.120 ***	0.00200
Variables	GEA 3	GEA 4	GEA 5	RIE	RBGM	DNOE	DDPM
Congenital government enterprise association level (GEA_F3)	1						

Acquired association between government and enterprise (GEA_L4)	.	1					
Acquired government–enterprise association level (GEA_L5)	.	.	1				
Regional institutional environment (RIE)	0.051 *	0.363 ***	0.00700	1			
Relationship between government and market (RBGM)	0.0150	0.081 ***	0.072 ***	0.644 ***	1		
Development of non-state-owned economy (DNOE)	0.00100	0.347 ***	0.052 **	0.783 ***	0.569 ***	1	
Development degree of the product market (DDPM)	0.116 ***	0.02600	0.146 ***	0.236 ***	0.461 ***	0.536 ***	1
Degree of development of factor markets (DDFM)	0.107 ***	0.351 ***	0.086 ***	0.711 ***	0.226 ***	0.365 ***	0.207 ***
Development of market intermediary organization and legal environment (LE)	0.062 **	0.373 ***	0.0240	0.921 ***	0.443 ***	0.595 ***	0.0100
Time to market (Age)	0.0120	0.141 ***	0.0280	0.076 ***	0.143 ***	0.045 ***	0.070 ***
Enterprise size (Size)	0.0100	0.113 ***	0.141 ***	0.0230	0.091 ***	0.045 ***	0.082 ***
Equity concentration (EC)	0.0190	0.0190	0.066 ***	0.026 *	0.00400	0.0180	0.0150
Company growth	0.00700	0.170 ***	0.0160	0.067 ***	0.00600	0.057 ***	0
Return on assets (ROA)	0.0250	0.206 ***	0.050 **	0.080 ***	0.040 ***	0.065 ***	0.0180
Asset–liability ratio (ALR)	0.096 ***	0.067 ***	0.0260	0.061 ***	0.056 ***	0.055 ***	0.029 *
Industry competitiveness (IC)	0.0110	0.135 ***	0.0150	0.125 ***	0.033 **	0.138 ***	0.044 ***
Size of the board	0.0110	0.123 ***	0.082 ***	0.152 ***	0.053 ***	0.128 ***	0.047 ***
R&D investment ratio (RDIR)	0.125 ***	0.086 ***	0.043 *	0.181 ***	0.052 ***	0.149 ***	0.0100
Cash-to-assets ratio	0.112 ***	0.153 ***	0.0230	0.036 **	0.0140	0.072 ***	0.036 **
Variables Symbol	DDFM	LE	Age	Size	EC	Grow	ROA
Degree of development of factor markets (DDFM)	1						
Development of market intermediary organization and legal environment (LE)	0.623 ***	1					
Time to market (Age)	0.0230	0.073 ***	1				
Enterprise size (Size)	0.073 ***	0.035 **	0.272 ***	1			
Equity concentration (EC)	0.0160	0.035 **	0.346 ***	0.167 ***	1		
Company growth	0.055 ***	0.075 ***	0.051 ***	0.164 ***	0.203 ***	1	
Return on assets (ROA)	0.112 ***	0.081 ***	0.114 ***	0.126 ***	0.182 ***	0.293 ***	1
Asset–liability ratio (ALR)	0.0140	0.061 ***	0.291 ***	0.348 ***	0.131 ***	0.0190	0.301 ***
Industry competitiveness (IC)	0.098 ***	0.109 ***	0.064 ***	0.061 ***	0.0250	0.00100	0.0210
Size of the board	0.130 ***	0.137 ***	0.071 ***	0.252 ***	0.057 ***	0.038 **	0.113 ***
R&D investment ratio (RDIR)	0.187 ***	0.162 ***	0.162 ***	0.112 ***	0.0200	0.047 ***	0.133 ***

Cash-to-assets ratio	0.027 *	0.0230	0.164 ***	0.214 ***	0.119 ***	0.103 ***	0.192 ***
	ALR	IC	Board	RDIR	Cash		
Asset–liability ratio (ALR)	1						
Industry competitiveness (IC)	0.036 **	1					
Size of the board	0.107 ***	0.00400	1				
R&D investment ratio (RDIR)	0.188 ***	0.0180	0.083 ***	1			
Cash-to-assets ratio	0.410 ***	0.081 ***	0.032 **	0.099 ***	1		

Note: *, ** and *** indicate that the estimated coefficient value is significant at the 10%, 5% and 1% levels, respectively.

Table 1. Logistic regression analysis of the main effect of corporate violations and charitable giving.

Variables	Model 1	Model 2	Model 3	Model 4
	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)
Time to market (Age)	0.459 ***	0.455 ***	0.437 ***	0.515 ***
	(7.12)	(7.05)	(6.72)	(6.25)
Enterprise size (Size)	0.656 ***	0.657 ***	0.655 ***	0.666 ***
	(16.30)	(16.29)	(16.26)	(13.06)
Equity concentration (EC)	0.539 *	0.529 *	0.500 *	0.751 **
	(1.95)	(1.91)	(1.80)	(2.15)
Company growth	0.039	0.041	0.046	0.049
	(0.45)	(0.48)	(0.54)	(0.46)
Return on assets (ROA)	2.072 ***	2.052 ***	2.048 ***	2.075 ***
	(6.42)	(6.36)	(6.35)	(5.04)
Asset-liability ratio (ALR)	0.636 ***	0.603 ***	0.614 ***	0.583 **
	(3.18)	(3.01)	(3.07)	(2.29)
Industry Competitiveness (IC)	1.058 ***	1.061 ***	1.069 ***	1.228 **
	(2.81)	(2.82)	(2.84)	(2.53)
Size of Board	0.505 **	0.501 **	0.498 **	0.007
	(2.38)	(2.36)	(2.35)	(0.03)
R&d Investment Ratio (RDIR)	1.303 **	1.334 **	1.320 **	1.182
	(2.02)	(2.06)	(2.05)	(1.46)
Cash to assets ratio	0.251	0.237	0.268	0.359
	(0.75)	(0.71)	(0.80)	(0.82)
Whether the company violates the rules (V_1)		0.199 ***		
		(2.68)		
Violations by senior management/organization (V_2)			0.247 ***	
			(2.98)	
Degree of punishment for violation (V_3)				0.039
				(1.15)
Constant	12.730 ***	12.634 ***	12.829 ***	11.603 ***
	(14.65)	(14.52)	(14.74)	(10.69)
Observations	4277	4277	4277	2573

Note: *** P < 0.01, ** P < 0.05, * P < 0.1. Z-statistics are in parentheses.

The empirical results of Model 1 to Model 4 show that the time of company listing (Age) is significantly negatively correlated with whether a company makes charitable donations (Don_m) at the level of 1%, indicating that the longer a company is listed, the less willing it is to make charitable donations. The coefficient of company size (Size) is significantly positive, indicating that company size has an important impact on corporate charitable donation behavior. Specifically, the larger the company is, the stronger the donation intention will be, which is consistent with the conclusion drawn by Brammer and Millington (2008). The negative correlation between equity concentration (EC) and the charitable donation intention of enterprises is not very significant with only a 90% confidence degree, indicating that the more dispersed the ownership of the company, the more willing it is to donate. The coefficient of return on assets (ROA) is significantly positive, indicating that profitability is significantly positively correlated with corporate donation. The coefficient of liability-to-assets ratio (Lev) shows that the company's debt level is significantly negatively correlated with its charitable donation intention, which also indicates that enterprises with a high debt level are unable to carry out charitable donation activities, which is consistent with the actual situation. The coefficient of industry competition (IC) is significantly negative because the larger IC, the lower the degree of industry competition. Therefore, the negative correlation here indicates that the industry competition is fierce. The significantly positive coefficient of board size indicates that the larger the board size, the more likely the enterprise is to make charitable donations. The coefficient of R&D investment ratio (RDIR) is significantly negative, indicating that the more an enterprise invests in R&D, the less resources it will have available for charitable donation, and thus a lower donation intention. Unfortunately, the coefficients of corporate growth and cash-to-assets ratio are not significant.

Model 2 studies the relationship between enterprise violation (V_1) and enterprise donation. The regression coefficient of enterprise violation (V_1) is -0.199, the z-value is -2.68, and the p-value is less than 0.01. The coefficient is very significant. According to the theory of legitimacy, the strategic perspective regards legitimacy as a special, controllable and strategically significant resource of an organization, and believes that enterprises can exert influence and control over the process of corporate legitimacy through proactive strategic design and behavior (Kostova & Zaheer, 1999). Meanwhile, the timing of enterprises' social responsibility activities has a crucial impact on the effect of reputation repair, and it is necessary to repair the damaged legitimacy of enterprises in a strategic, planned and phased manner. The weak enthusiasm of listed companies for making charitable donations in the short term after a violation may be a short-term strategic choice after weighing the advantages and disadvantages. If a listed company commits an explicit, socially oriented donation action in the short term after a violation, it may actually be detrimental for the company to get out of the reputational predicament. Therefore, if a listed company violates laws and regulations due to its own misconduct and causes damage to its reputation and status, a short-term charitable donation is likely to be regarded as impiety of purpose, resulting in the "Backfire Effect" and may be subject to public criticism. In the end, another crisis of public opinion or trust on the company may be triggered, which will once again hurt the reputation of the company (Brown & Dacin, 1997). Therefore, in the short term, enterprises may lose their enthusiasm to save their damaged reputation by fulfilling their social responsibility. In addition, enterprises facing a crisis of legitimacy may better mitigate the negative effects by delaying charitable activities, i.e., reducing charitable donations in the short term. Therefore, Hypothesis 1 is verified, that is, compared with non-offending enterprises, the offending enterprises are less willing to donate to charity.

Model 3 is the study of senior management/organization level irregularity (V_2) and whether the enterprise donates. The relationship between the executive layer/organization violations (V_2) of the regression coefficient is 0.247, the z-value is 2.98, and the p-value is less than 0.01. The coefficient is significant, and the results show that compared with organization level irregularity, enterprises with senior management that commit violations are more likely to make charitable donations. This result can be interpreted as an analysis from the perspective of violations by senior executives. The behavior of entrepreneurs can influence the brand equity of enterprises, which is the

window of corporate image, and the public will transfer the good or bad impression of entrepreneurs to the good or bad impression of their products and may think that the products of enterprises with a high reputation of entrepreneurs are reliable. Therefore, compared with violations at the organizational level, enterprises with violations at the senior management level will be more motivated to make up for negligence and save corporate reputation by performing social responsibility. Hence, Hypothesis 2 has been verified.

Model 4 studies the relationship between the degree of punishment for corporate violations (V_3) and whether the enterprise donates. The empirical results show that there is no significant correlation between the degree of punishment for corporate violations and the charitable donation of the enterprise. Hence it is assumed that H3a and H3b have been verified.

4.3.2. Analysis of Regulatory Effects

In order to test the moderating effect of regional institutional environment and government–enterprise association on the charitable donation activity of illegal enterprises, this paper constructed the following models:

$$Don\_m = \beta_0 + \beta_1 V\_3 + \beta_2 \mathrm{Mkt} + \beta_3 V\_3 * \mathrm{Mkt} + \beta_4 Age + \beta_5 Size + \beta_6 Grow + \beta_7 ROA + \beta_8 Lev + \beta_9 Index + \beta_{10} HHI + \beta_{11} RD + \beta_{12} Cash + \beta_{13} Board + \varepsilon \quad (3)$$

Equation 3 tests the moderating effect of regional institutional environment (RIE) on the relationship between the offending enterprise and its charitable donations. In the formula, V_3 is the punishment degree of the offending enterprise, and RIE is the market index that measures the regional institutional environment.

$$Don\_m = \beta_0 + \beta_1 V + \beta_2 \mathrm{Pc} + \beta_3 V * \mathrm{Pc} + \beta_4 Age + \beta_5 Size + \beta_6 Grow + \beta_7 ROA + \beta_8 Lev + \beta_9 Index + \beta_{10} HHI + \beta_{11} RD + \beta_{12} Cash + \beta_{13} Board + \varepsilon \quad (4)$$

Equation 4 tests the moderating effect of government–enterprise association (GEA) on the charitable donation of illegal enterprises. In the formula, V refers to the violations, including whether the company violates the rules (V_1) and the senior management/organization violates the rules (V_2). It also includes government–enterprise association (GEA_1), congenital government–enterprise association (GEA_F2), congenital government–enterprise association level (GEA_F3), acquired government–enterprise association level (GEA_L4) and acquired government–enterprise association level (GEA_L5).

4.3.2.1. The Regulatory Effect of Institutional Environment on the Relationship Between Illegal Enterprises and their Charitable Donations

As shown in Table 10, Model 5, Model 6, and Model 7 jointly test the moderating effect of regional institutional environment (RIE) on the relationship between offending enterprises and their charitable donations. It should be noted that in the process of verifying the moderating effect, the cross terms are all the product of the corresponding independent variable and the moderating variable after centralization. From the empirical results, it can be seen that in model 5 without adjustment variables, there is no significant correlation between the degree of punishment for violations of the company (V_3) and corporate charitable donations. This has been proved in the previous main effect model test. In model 6 with only adjustment variables (RIE), the result is still not significant.. The independent variable is added to the Model 7 company violation penalty degree (V_3) and the regulating variable of regional institutional environment (RIE) after the cross terms of the regression coefficient at the 1% level of significance is negative, indicating that the institutional environment level with high and low degrees of negative regulating companies was sent (V_3) and the level of corporate philanthropy showed a negative relationship between performance for a strengthening effect. Combined with the above assumptions, this can be interpreted as the regional institutional environment level being good, efficient in system construction and

implementation, enterprise property rights and the legitimate rights and interests can be a good guarantee, the allocation of key resources depend more on market mechanism, not the government, and enterprises' reliance on the government is not particularly high. Hence, the better the institutional environment of the geographical region in which the enterprise is located, the less active the offending enterprise is in rebuilding its reputation and legitimacy through charitable donations and meeting the expectations and demands of the government.

Table 10. Regulatory effect of regional institutional environment (RIE) on the relationship between illegal enterprises and their charitable donations.

Variable	Model 5	Model 6	Model 7
	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)
Time to market (Age)	0.515 ***	0.507 ***	0.504 ***
	(6.25)	(6.08)	(6.05)
Enterprise size (Size)	0.666 ***	0.653 ***	0.654 ***
	(13.06)	(12.09)	(12.09)
Equity concentration (EC)	0.751 **	0.757 **	0.749 **
Company growth	(2.15)	(2.14)	(2.12)
	0.049	0.028	0.025
Return on assets (ROA)	(0.46)	(0.25)	(0.22)
	2.075 ***	2.142 ***	2.139 ***
Asset–liability ratio (ALR)	(5.04)	(4.87)	(4.86)
	0.583 **	0.547 **	0.543 **
Industry competitiveness (IC)	(2.29)	(2.10)	(2.08)
	1.228 **	1.074 **	1.082 **
Size of the board	(2.53)	(2.23)	(2.25)
	0.007	0.084	0.067
R&D investment ratio (RDIR)	(0.03)	(0.30)	(0.24)
	1.182	1.537 *	1.515 *
Cash-to assets ratio	(1.46)	(1.70)	(1.69)
	0.359	0.339	0.322
Degree of punishment for violation (V_3)	(0.82)	(0.76)	(0.72)
	0.039	0.036	0.041
Regional Institutional Environment (RIE)	(1.15)	(1.10)	(1.25)
		0.059 ***	0.061 ***
		(2.61)	(2.69)
Degree of punishment for violation * Regional Institutional Environment (V_3 * RIE)			0.001 ***
			(2.91)
Constant	11.603 ***	11.576 ***	11.570 ***
	(10.69)	(10.04)	(10.00)
Observations	2573	2573	2573

Note: ***, ** and * are significant at the 1%, 5% and 10% levels, respectively.

4.3.2.2. Moderating Effect of Government–Enterprise Association with Illegal Enterprises and their Charitable Donation Relationship

As shown in Table 11, Table 12, Table 13, and Table 14, Models 8–40 jointly test the moderating effect of government–enterprise association (GEA) on the relationship between offending enterprises and their charitable donations. We investigated the relationship between government and enterprise (GEA_1), congenital association between government and enterprise (GEA_F2), congenital association level between government and enterprise (GEA_F3), acquired association level between government and enterprise (GEA_L4), level between government and enterprise (GEA_L5) and whether the company violates the rules (V_1), violation of senior management level/organization level (V_2) and the punishment degree of the company's violation (V_3)). The regression coefficient of GEA_1 in Model 9 is significantly negative, indicating that compared with enterprises without a government–enterprise association, enterprises with a government–enterprise association are less willing to donate

to charity. However, in Model 10, the cross term of GEA_1 and V_1 is added, but no significant result is obtained. Model 11 joined the congenital enterprise association (GEA_F2), and the regression coefficient is negatively related to the 1% significance level, which suggests that associated with congenital enterprise than not associated with congenital enterprise charity will lower. According to the article about enterprise classification, the result can be explained from another angle, that is, non-state-owned enterprises are more enthusiastic about making charitable donations than state-owned enterprises. Model 12 shows that when the cross term of GEA_F2 and V_1 is added, the significant negative coefficient indicates that the congenital association between government and enterprise (GEA_F2) has a reinforcing effect on the negative relationship between corporate irregularity (V_1) and corporate charitable donation (Don_m). According to the resource dependence theory, the property rights of state-owned enterprises have the advantage of resource superiority, a variety of investment opportunities, and the added convenience of policy priority (Kornai, 1998). Consequently, although state-owned enterprises may endure great pressure after violations are made public, it will not fundamentally affect their ability to access resources. For those enterprises that are not subject to the "father effect", in order to maintain the survival of enterprises, they may show a stronger willingness to donate. Model 13 further studies the influence of different levels of innate government–enterprise connection (central/local) on donation behavior. The results show that the higher the level of state-owned enterprises, the lower the enthusiasm for making charitable donations, that is, the central state-owned enterprises are less enthusiastic than the local state-owned enterprises. The results of Model 14 are not significant and fail to demonstrate the moderating effect of the level of innate government enterprise association on the main effect of corporate irregularity (V_1) and corporate charitable giving (Don_m).

As shown in Table 11, the moderating effect of government–enterprise association tested in Models 15 to 21 on the main effect of violation (V_2) and corporate charitable donation (Don_m) at the executive/organizational level is consistent with the results of GEA_1, GEA_F2, and GEA_F3 separately added to the model, which will not be repeated here. Only the model containing cross terms will be explained. In Model 17, the cross term of violations at the senior management/organization level and the association between government and enterprise (GEA_1) was added, and the regression and results were not significant. In Model 19, the cross term of violations at the senior management level/organization level and the association between government and enterprise (GEA_F2) was added. The results show that the congenital government–enterprise association has a strengthening effect on the main effect of the violation of the executive level/organization level (V_2) and the charitable donations of the enterprise (Don_m). In other words, in the enterprises with the congenital government–enterprise association, the enthusiasm of the violation of the executive level is higher than that of the charitable donation of the organization level.

Table 11. Moderating effects of congenital government–enterprise association on corporate violation and corporate charitable donation.

Variables	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)
Time to market (Age)	0.455 ***	0.448 ***	0.449 ***	0.359 ***	0.360 ***	0.134	0.131
	(7.05)	(6.91)	(6.92)	(5.31)	(5.32)	(0.98)	(0.97)
Enterprise size (Size)	0.657 ***	0.643 ***	0.643 ***	0.671 ***	0.672 ***	0.430 ***	0.434 ***
	(16.29)	(15.94)	(15.94)	(16.58)	(16.60)	(6.68)	(6.73)
Equity concentration (EC)	0.529 *	0.568 **	0.564 **	0.410	0.405	1.878 ***	1.888 ***
	(1.91)	(2.04)	(2.03)	(1.47)	(1.45)	(3.82)	(3.83)
Company growth	0.041	0.010	0.010	0.081	0.083	0.052	0.045
	(0.48)	(0.12)	(0.11)	(0.95)	(0.97)	(0.29)	(0.25)
Return on assets (ROA)	2.052 ***	2.372 ***	2.375 ***	2.208 ***	2.217 ***	4.095 ***	4.057 ***
	(6.36)	(7.14)	(7.14)	(6.80)	(6.83)	(4.17)	(4.14)
Asset–liability ratio (ALR)	0.603 ***	0.511 **	0.506 **	0.477 **	0.466 **	0.007	0.019
	(3.01)	(2.54)	(2.51)	(2.36)	(2.30)	(0.02)	(0.05)
Industry competitiveness (IC)	1.061 ***	0.858 **	0.861 **	1.013 ***	1.011 ***	0.368	0.354
	(2.82)	(2.27)	(2.27)	(2.68)	(2.68)	(0.52)	(0.50)
Size of the board	0.501 **	0.691 ***	0.689 ***	0.687 ***	0.692 ***	0.918 **	0.902 **
	(2.36)	(3.20)	(3.19)	(3.19)	(3.21)	(2.28)	(2.24)
R&D investment ratio (RDIR)	1.334 **	1.669 **	1.676 **	1.522 **	1.512 **	1.401	1.402
	(2.06)	(2.41)	(2.42)	(2.30)	(2.29)	(0.82)	(0.82)
Cash-to-assets ratio	0.237	0.050	0.048	0.054	0.058	0.884	0.839
	(0.71)	(0.15)	(0.14)	(0.16)	(0.17)	(1.26)	(1.19)
Whether the company violates the rules (V_1)	0.199 ***	0.183 **	0.181 **	0.191 **	0.193 ***	0.344 **	0.331 **
	(2.68)	(2.46)	(2.42)	(2.57)	(2.58)	(2.52)	(2.42)
Government–enterprise connection (GEA_1)		0.433 ***	0.433 ***				
		(4.97)	(4.97)				
Whether the company violates the rules * Government-enterprise association (V_1*GEA_1)			0.147				
			(0.89)				
Congenital association between government and enterprise (GEA_F2)				0.433 ***	0.423 ***		
				(4.91)	(4.78)		
Whether the company violates the rules * Congenital association between government and enterprise (V_1*GEA_F2)					0.278 *		
					(1.69)		

Congenital government–enterprise association level (GEA_F3)						0.421 *** (3.05)	0.399 *** (2.86)
Whether the company violates the rules * Congenital association level between government and enterprise (V_1*GEA_F3)							0.395 (1.37)
Constant	12.634 *** (14.52)	12.538 *** (14.41)	12.538 *** (14.41)	13.589 *** (15.18)	13.637 *** (15.22)	9.305 *** (6.28)	9.368 *** (6.32)
Observations	4277	4277	4277	4277	4277	1274	1274

Note: ***, ** and * are significant at 1%, 5% and 10% levels respectively.

Table 12. Moderating effects of congenital government–enterprise association on violations of senior management/organization level and the main effect of corporate charitable donation.

Variables	Model 15 Corporate Charitable Giving (Don_m)	Model 16 Corporate Charitable Giving (Don_m)	Model 17 Corporate Charitable Giving (Don_m)	Model 18 Corporate Charitable Giving (Don_m)	Model 19 Corporate Charitable Giving (Don_m)	Model 20 Corporate Charitable Giving (Don_m)	Model 21 Corporate Charitable Giving (Don_m)
Time to market (Age)	0.437 ***	0.429 ***	0.429 ***	0.342 ***	0.343 ***	0.105	0.097
	(6.72)	(6.58)	(6.58)	(5.04)	(5.05)	(0.77)	(0.71)
Enterprise size (Size)	0.655 ***	0.641 ***	0.641 ***	0.669 ***	0.672 ***	0.431 ***	0.433 ***
	(16.26)	(15.91)	(15.90)	(16.55)	(16.59)	(6.70)	(6.72)
Equity concentration (EC)	0.500 *	0.539 *	0.540 *	0.383	0.369	1.828 ***	1.839 ***
	(1.80)	(1.94)	(1.94)	(1.37)	(1.32)	(3.71)	(3.72)
Company growth	0.046	0.015	0.015	0.086	0.089	0.058	0.055
	(0.54)	(0.17)	(0.17)	(1.00)	(1.04)	(0.33)	(0.32)
Return on assets (ROA)	2.048 ***	2.372 ***	2.373 ***	2.202 ***	2.206 ***	3.998 ***	4.001 ***
	(6.35)	(7.14)	(7.14)	(6.79)	(6.80)	(4.08)	(4.08)
Asset–liability ratio (ALR)	0.614 ***	0.517 **	0.518 **	0.489 **	0.483 **	0.067	0.076
	(3.07)	(2.57)	(2.57)	(2.42)	(2.39)	(0.18)	(0.20)
Industry competitiveness (IC)	1.069 ***	0.861 **	0.860 **	1.020 ***	1.010 ***	0.328	0.310
	(2.84)	(2.28)	(2.27)	(2.70)	(2.67)	(0.46)	(0.43)
Size of the board	0.498 **	0.691 ***	0.691 ***	0.683 ***	0.682 ***	0.895 **	0.873 **
	(2.35)	(3.19)	(3.20)	(3.16)	(3.16)	(2.23)	(2.17)
R&D investment ratio (RDIR)	1.320 **	1.654 **	1.656 **	1.506 **	1.498 **	1.409	1.396
	(2.05)	(2.40)	(2.41)	(2.30)	(2.28)	(0.82)	(0.81)
Cash-to-assets ratio	0.268	0.076	0.077	0.085	0.094	0.790	0.743
	(0.80)	(0.22)	(0.23)	(0.25)	(0.28)	(1.12)	(1.05)
Violations by senior management/organization (V_2)	0.247 *** (2.98)	0.245 *** (2.95)	0.246 *** (2.95)	0.235 *** (2.82)	0.247 *** (2.95)	0.374 ** (2.28)	0.373 ** (2.28)

Government–enterprise connection (GEA_1)		0.441 *** (5.06)	0.441 *** (5.06)				
Violation by senior management/organization * Government–enterprise association (V_2*GEA_1)			0.022 (0.12)				
Congenital association between government and enterprise (GEA_F2)				0.430 *** (4.87)	0.413 *** (4.63)		
Violations at senior management/organization level * Congenital association between government and enterprise (V_2*GEA_F2)					0.335 * (1.76)		
Congenital government–enterprise association level (GEA_F3)						0.401 *** (2.91)	0.365 ** (2.56)
Senior management/organization level violation * Congenital government–enterprise association level (V_2*GEA_F3)							0.374 (1.06)
Constant	12.829 *** (14.74)	12.727 *** (14.61)	12.725 *** (14.61)	13.771 *** (15.38)	13.836 *** (15.43)	9.650 *** (6.50)	9.648 *** (6.50)
Observations	4277	4277	4277	4277	4277	1274	1274

Note: ***, ** and * are significant at the 1%, 5% and 10% levels, respectively.

Table 13. The moderating effect of congenital government–enterprise association on the degree of punishment for violations and the main effect of corporate charitable donation.

Variables	Model 22	Model 23	Model 24	Model 25	Model 26	Model 27	Model 28
	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)
Time to market (Age)	0.515 ***	0.512 ***	0.512 ***	0.409 ***	0.407 ***	0.220	0.231
	(6.25)	(6.19)	(6.18)	(4.74)	(4.71)	(1.28)	(1.34)
Enterprise size (Size)	0.666 ***	0.653 ***	0.653 ***	0.684 ***	0.683 ***	0.454 ***	0.447 ***
	(13.06)	(12.78)	(12.78)	(13.35)	(13.32)	(5.75)	(5.66)
Equity concentration (EC)	0.751 **	0.768 **	0.769 **	0.607 *	0.608 *	1.760 ***	1.635 ***
	(2.15)	(2.20)	(2.20)	(1.72)	(1.72)	(2.98)	(2.74)
Company growth	0.049	0.017	0.018	0.099	0.100	0.059	0.015
	(0.46)	(0.16)	(0.17)	(0.92)	(0.93)	(0.26)	(0.07)
Return on assets (ROA)	2.075 ***	2.406 ***	2.411 ***	2.261 ***	2.257 ***	3.959 ***	3.978 ***
	(5.04)	(5.67)	(5.68)	(5.45)	(5.44)	(3.24)	(3.25)
Asset–liability ratio (ALR)	0.583 **	0.465 *	0.467 *	0.428 *	0.424 *	0.035	0.129
	(2.29)	(1.81)	(1.82)	(1.66)	(1.65)	(0.07)	(0.27)
Industry competitiveness (IC)	1.228 **	1.033 **	1.031 **	1.154 **	1.158 **	0.613	0.707
	(2.53)	(2.11)	(2.11)	(2.37)	(2.37)	(0.71)	(0.81)
Size of the board	0.007	0.167	0.170	0.210	0.205	0.115	0.193
	(0.03)	(0.61)	(0.62)	(0.77)	(0.75)	(0.24)	(0.40)
R&D investment ratio (RDIR)	1.182	1.527 *	1.547 *	1.370 *	1.369 *	2.226	2.487
	(1.46)	(1.77)	(1.79)	(1.66)	(1.66)	(1.09)	(1.21)
Cash-to-assets ratio	0.359	0.163	0.168	0.161	0.152	0.989	0.858
	(0.82)	(0.37)	(0.38)	(0.36)	(0.34)	(1.08)	(0.93)
Degree of punishment for violation (V_3)	0.039	0.040	0.038	0.037	0.040	0.011	0.014
	(1.15)	(1.18)	(1.13)	(1.09)	(1.18)	(0.20)	(0.24)
Government–enterprise connection (GEA_1)		0.444 ***	0.440 ***				
		(3.94)	(3.91)				

Degree of punishment for violation * Association between government and enterprise (V_3*GEA_1)			0.054 (0.71)				
Congenital association between government and enterprise (GEA_F2)				0.475 *** (4.27)	0.479 *** (4.30)		
Degree of punishment for violation * Congenital association between government and enterprise (V_3*GEA_F2)					0.077 (1.09)		
Congenital government–enterprise association level (GEA_F3)						0.567 *** (3.35)	0.555 *** (3.24)
Degree of punishment for violation * Congenital level of government-enterprise association (V_3*GEA_F3)							0.365 *** (2.79)
Constant	11.603 *** (10.69)	11.461 *** (10.56)	11.465 *** (10.56)	12.751 *** (11.35)	12.720 *** (11.32)	8.169 *** (4.53)	8.279 *** (4.58)
Observations	2573	2573	2573	2573	2573	817	817

Note: ***, ** and * are significant at the 1%, 5% and 10% levels, respectively.

Table 14. The moderating effect of acquired government–enterprise association on the main effect.

Variables	**Model 29**	**Model 30**	**Model 31**	**Model 32**	**Model 33**	**Model 34**	**Model 35**	**Model 36**	**Model 37**	**Model 38**	**Model 39**	**Model 40**
	Corporate Charitable Giving (Don_m)	**Corporate Charitable Giving (Don_m)**	**Corporate Charitable Giving (Don_m)**	**Corporate Charitable Giving (Don_m)**	**Corporate Charitable Giving (Don_m)**	**Corporate Charitable Giving (Don_m)**	**Corporate Charitable Giving (Don_m)**	**Corporate Charitable Giving (Don_m)**	**Corporate Charitable Giving (Don_m)**	**Corporate Charitable Giving (Don_m)**	**Corporate Charitable Giving (Don_m)**	**Corporate Charitable Giving (Don_m)**
Time to market (Age)	0.440 *** -5.37	0.440 *** -5.37	0.399 *** -3.71	0.399 *** -3.71	0.429 *** -5.22	0.428 *** -5.21	0.396 *** -3.67	0.392 *** -3.63	0.497 *** -4.67	0.494 *** -4.63	0.524 *** -3.75	0.523 *** -3.73
Enterprise size (Size)	0.840 *** -15.45	0.840 *** -15.44	0.856 *** -11.72	0.856 *** -11.71	0.838 *** -15.4	0.838 *** -15.4	0.855 *** -11.71	0.856 *** -11.71	0.878 *** -12.28	0.877 *** -12.26	0.901 *** -9.47	0.901 *** -9.45
Equity concentration (EC)	0.392 -1.12	0.392 -1.12	0.272 -0.59	0.265 -0.57	0.403 -1.15	0.405 -1.15	0.27 -0.58	0.272 -0.59	0.157 -0.35	0.153 -0.34	0.04 -0.07	0.04 -0.07
Company growth	0.101 -0.99	0.1 -0.98	0.138 -1.15	0.137 -1.14	0.101 -0.99	0.104 -1.02	0.138 -1.15	0.135 -1.13	0.142 -1.11	0.144 -1.13	0.202 -1.41	0.202 -1.41
Return on assets (ROA)	2.069 *** -5.73	2.069 *** -5.73	4.305 *** -4.88	4.304 *** -4.87	2.072 *** -5.74	2.077 *** -5.76	4.334 *** -4.9	4.323 *** -4.89	2.174 *** -4.68	2.184 *** -4.7	4.315 *** -3.87	4.315 *** -3.87

Asset–liability ratio (ALR)	0.626 ** -2.52	0.625 ** -2.52	0.029 -0.08	0.024 -0.07	0.626 ** -2.52	0.634 ** -2.55	0.023 -0.07	0.015 -0.04	0.596 * -1.85	0.600 * -1.86	0.09 -0.2	0.09 -0.2
Industry competitiveness (IC)	0.992 ** -2.17	0.993 ** -2.17	0.533 -0.98	0.526 -0.97	0.999 ** -2.18	0.986 ** -2.16	0.533 -0.98	0.521 -0.96	1.093 * -1.78	1.086 * -1.77	0.613 -0.84	0.614 -0.84
Size of the board	0.831 *** -3.17	0.830 *** -3.16	0.831 ** -2.34	0.842 ** -2.37	0.832 *** -3.17	0.838 *** -3.19	0.838 ** -2.37	0.846 ** -2.39	0.432 -1.26	0.436 -1.27	0.172 -0.37	0.171 -0.37
R&D investment ratio (RDIR)	2.087 *** -2.65	2.088 *** -2.65	3.360 *** -2.97	3.366 *** -2.97	2.077 *** -2.64	2.099 *** -2.66	3.318 *** -2.94	3.336 *** -2.96	2.063 ** -2.06	2.120 ** -2.1	3.160 ** -2.13	3.159 ** -2.13
Cash-to-assets ratio	0.276 -0.69	0.276 -0.69	0.209 -0.42	0.197 -0.39	0.287 -0.72	0.3 -0.75	0.216 -0.43	0.201 -0.4	0.529 -1.01	0.532 -1.01	0.092 -0.14	0.092 -0.14
Whether the company violates the rules (V_1)	0.1 -1.1	0.099 -1.09	0.1 -0.83	0.094 -0.78								
Acquired association between government and enterprise (GEA_L4)	0.259 *** -2.6	0.259 *** -2.6										
Whether the company violates the rules * Acquired association between government and enterprise (V_1* GEA_L4)		0.024 -0.13										
Acquired government–enterprise association level (GEA_L5)			0.182 -1.54	0.181 -1.53								
Whether the company violates the rules * Acquired association level between government and enterprise (V_1* GEA_L5)				0.179 -0.75								
Violations by senior management/organization (V_2)					0.144 -1.46	0.154 -1.55	0.053 -0.42	0.047 -0.37				
Acquired association between government and enterprise (GEA_L4)					0.266 *** -2.67	0.266 *** -2.67						
Senior management/organization level violation * Acquired association between government and enterprise (V_2* GEA_L4)						0.202 -0.99						

Acquired government–enterprise association level (GEA_L5)							0.182 -1.54	0.191 -1.61				
Senior management/organization level violation * Acquired level of government–enterprise association (V_2* GEA_L5)								0.246 -0.98				
Degree of punishment for violation (V_3)									0.043 -0.99	0.042 -0.97	0.089 -1.55	0.089 -1.55
Acquired association between government and enterprise (GEA_L4)									0.240 * -1.85	0.235 * -1.81		
Degree of punishment for violation * Acquired association between government and enterprise (V_3* GEA_L4)										0.108		
Acquired government–enterprise association level (GEA_L5)										-1.25	0.261 * -1.71	0.261 * -1.71
Degree of punishment for violation * Acquired level of association between government and enterprise (V_3* GEA_L5)												0.002 -0.02
Constant	17.602 *** -14.54	17.599 *** -14.54	18.627 *** -11.22	18.646 *** -11.23	17.677 *** -14.61	17.697 *** -14.62	18.715 *** -11.3	18.762 *** -11.31	17.333 *** -11.02	17.310 *** -11	17.855 *** -8.48	17.852 *** -8.44
Observations	3003	3003	1725	1725	3003	3003	1725	1725	1756	1756	1032	1032

Note: ***, ** and * are significant at the 1%, 5% and 10% levels, respectively.

As shown in Table 13, the moderating effect of government–enterprise association on the main effect of punishment degree for violation (V_3) and corporate charitable donation (Don_m) tested in Models 22–28 is shown. The cross term between government–enterprise association (GEA_1) and congenital government–enterprise association (GEA_F2) and V_3 is added into Model 24 and Model 26, respectively, but the regression coefficient does not show as significant. In Model 28, the cross term of the congenital government–enterprise association level (GEA_F3) and V_3 was added, and the regression coefficient was significantly positive, indicating that the congenital government–enterprise association level weakened the negative relationship between the degree of punishment for violations (V_3) and corporate charitable donations (Don_m). The negative correlation between the degree of punishment for violation and the enthusiasm for charitable donation is weaker.

As shown in Table 14, Models 29–40 tested the moderating effect of the acquired government–enterprise association on the main effect, and no significant results were obtained in the empirical study, that is, there is no significant correlation between the acquired government–enterprise association and the charitable donations made by illegal enterprises. In addition, from the coefficient of acquired government–enterprise association (GEA_L4) in the table, it can be seen that enterprises with acquired government–enterprise association have lower enthusiasm for charitable donation.

In summary, the hypothesis verification of this study is detailed below.

4.4. Robustness Test

4.4.1. Removal of Selected Samples

4.4.1.1. Exclusion of the 2008 Charitable Donation Samples

Enterprises often make charitable donations to gain the attention of the market. In the face of natural disasters, corporate charitable donations may be positively interpreted as socially responsible behavior that actively fulfills their social responsibilities. Therefore, enterprises may use post-disaster donations to eliminate the negative impact caused by violations and regain the favor and praise of the public. In view of this, this paper refers to existing literature (Dai et al., 2014) and removed samples involving charitable donations in 2008. Table 15 shows the results of the second empirical study. It can be seen that the empirical results are consistent with the existing results, so the results obtained above are credible.

Table 15. Regression of charitable giving samples excluding 2008.

Hypothesis	Result
H1: Compared with non-illegal enterprises, illegal enterprises are less willing to donate to charity.	Confirmed
H2: Compared with violations at the organizational level, those at the senior management level who violate the rules have a stronger willingness to donate to charity.	Confirmed
H3a: The heavier the penalty, the stronger the willingness of the enterprise to donate to charity.	Rejected
H3b: The more serious the punishment, the weaker the willingness of the enterprise to donate to charity.	Rejected
H4: The institutional environment level of the geographical region where the enterprise is located negatively moderates the relationship between the offending enterprise and charitable donation, that is, strengthens the effect.	Confirmed
H5: Government–enterprise association negatively moderates the relationship between illegal enterprises and charitable donations, that is, strengthens the effect.	Rejected
H6: The innate negative association between government and enterprise moderates the negative relationship between illegal enterprises and charitable donations, that is, strengthens the effect.	Confirmed
H7: Acquired government–enterprise association negatively moderates the relationship between illegal enterprises and charitable donations, that is, strengthens the effect.	Rejected

4.4.1.2. Retain Samples After the 18th National Congress of the CPC

Since the 18th National Congress of the Communist Party of China, many changes have taken place in all aspects of Chinese society, and the capital market has been continuously developed and improved. In this paper, the samples after the 18th National Congress of the Communist Party of China are retained, as shown in Table 16. The empirical findings are consistent with the previous results, so it will not be repeated here.

Table 16. Regression of samples retained after the 18th National Congress of the CPC.

Variables	(1) Corporate Charitable Giving (Don_m)	(2) Corporate Charitable Giving (Don_m)	(3) Corporate Charitable Giving (Don_m)	(4) Corporate Charitable Giving (Don_m)
Time to market (Age)	0.470 *** (6.91)	0.468 *** (6.88)	0.451 *** (6.59)	0.522 *** (6.04)
Enterprise size (Size)	0.683 *** (15.72)	0.682 *** (15.70)	0.680 *** (15.66)	0.672 *** (12.36)
Equity concentration (EC)	0.502 * (1.72)	0.491 * (1.68)	0.469 (1.60)	0.749 ** (2.04)
Company growth	0.091 (1.04)	0.093 (1.06)	0.097 (1.11)	0.104 (0.96)
Return on assets (ROA)	1.874 *** (5.71)	1.863 *** (5.68)	1.862 *** (5.68)	1.861 *** (4.46)
Asset–liability ratio (ALR)	0.740 *** (3.50)	0.710 *** (3.35)	0.719 *** (3.39)	0.640 ** (2.37)
Industry competitiveness (IC)	1.072 ** (2.48)	1.073 ** (2.48)	1.078 ** (2.50)	1.275 ** (2.31)
Size of the board	0.403 * (1.77)	0.409 * (1.79)	0.407 * (1.78)	0.086 (0.30)
R&D investment ratio (RDIR)	1.115 * (1.75)	1.147 * (1.79)	1.146 * (1.79)	0.995 (1.24)
Cash-to-assets ratio	0.225 (0.63)	0.201 (0.57)	0.224 (0.63)	0.486 (1.06)
Whether the company violates the rules (V_1)		0.175 ** (2.22)		
Violations by senior management/organization (V_2)			0.224 ** (2.52)	
Degree of punishment for violation (V_3)				0.036 (0.99)
Constant	13.051 *** (14.03)	12.971 *** (13.92)	13.130 *** (14.09)	11.904 *** (10.25)
Observations	3825	3825	3825	2321

Note: ***, ** and * are significant at the 1%, 5% and 10% levels, respectively.

4.4.2. Replace the Explained Variable

As shown in the table, the enterprise charitable donation scale (Don) is used to replace the explained variable of whether the enterprise makes charitable donations (Don_m). An OLS regression was carried out between corporate violation (V_1), senior management/organization violation (V_2), corporate penalty for violation (V_3) and corporate charitable donation scale (Don). Model 41 contains all control variables, and Model 42 is obtained by adding explanatory variable V_1 to Model 41, that is, the OLS regression between enterprise violation (V_1) and enterprise charitable donation scale. Similarly, Model 43 is the OLS regression between executive/organizational violations (V_2) and corporate charitable donation scale. Model 44 is the OLS regression between the degree of punishment for corporate violations (V_3) and the scale of corporate charitable donation.

Among the empirical results of Models 41 and 42, only the coefficients of company size (Size), return on assets (ROA) and asset–liability ratio (ALR) are significant at the level of 1%, and the regression coefficient of cash-to-

asset ratio (Cash) is significantly positive at the level of 5%, indicating that the richer the cash resources of an enterprise, the higher the level of charitable donation. The coefficient of company growth is weak and significant, indicating that the more the company grows, the lower its level of charitable giving, which is consistent with the actual situation. The scale of the board of directors (Board) shows that there was no significant correlation with the level of charitable giving, which may be due to the scale of the board of directors not reflecting its composition. Model 42 is the enterprise scale of the offense (V_1) and charitable donations (Don). The regression coefficient is -0.003, the z-value is 1.94, the p-value is less than 0.1, and the coefficient is significant, which shows that compared with non-illegal enterprises, illegal companies make fewer charitable donations. Model 43 studies the relationship between executive/organizational violations (V_2) and charitable donation size (Don), and the empirical results are not significant. Model 44 studies the relationship between the degree of punishment for corporate violations (V_3) and the scale of corporate charitable donation, and the empirical results are not significant. To sum up, the empirical results are basically consistent with the above. The OLS regression results of corporate violations and charitable donations are shown in Table 17.

Table 17. OLS regression of corporate violations and charitable donations.

Variables	Model 41	Model 42	Model 43	Model 44
	Scale of Charitable Giving (Don)	Scale of Charitable Giving (Don)	Scale of Charitable Giving (Don)	Scale of Charitable Giving (Don)
Time to market (Age)	0.001 (0.70)	0.001 (0.66)	0.001 (0.67)	0.000 (0.02)
Enterprise size (Size)	0.014 *** (9.52)	0.014 *** (9.53)	0.014 *** (9.50)	0.012 *** (7.10)
Equity concentration (EC)	0.003 (0.52)	0.003 (0.55)	0.003 (0.52)	0.001 (0.08)
Company growth	0.002 * (1.70)	0.002 * (1.73)	0.002 * (1.70)	0.002 (1.16)
Return on assets (ROA)	0.018 *** (5.55)	0.018 *** (5.49)	0.018 *** (5.53)	0.018 *** (4.79)
Asset–liability ratio (ALR)	0.012 *** (3.10)	0.011 *** (2.98)	0.012 *** (3.05)	0.010 ** (2.35)
Industry competitiveness (IC)	0.002 (0.12)	0.001 (0.11)	0.002 (0.11)	0.006 (0.36)
Size of the board	0.004 (1.03)	0.004 (1.01)	0.004 (1.02)	0.005 (1.03)
R&D investment ratio (RDIR)	0.006 (0.80)	0.006 (0.85)	0.006 (0.81)	0.000 (0.02)
Cash-to-assets ratio	0.015 ** (2.34)	0.015 ** (2.38)	0.015 ** (2.34)	0.017 ** (2.34)
Whether the company violates the rules (V_1)		0.003 * (1.94)		
Violations by senior management/organization (V_2)			0.000 (0.10)	
Degree of punishment for violation (V_3)				0.001 (0.80)
Constant	0.302 *** (9.09)	0.301 *** (9.10)	0.303 *** (9.14)	0.255 *** (6.59)
Observations	4277	4277	4277	2573
R-squared	0.101	0.102	0.101	0.089
F test	0	0	0	0
R2_a	0.0989	0.0995	0.0986	0.0848
F	17.98	16.44	16.36	10.92

Note: ***, ** and * are significant at the 1%, 5% and 10% levels, respectively.

4.4.3. Replace Explanatory Variables

As the violation of senior management is basically the violation of operation, and the violation of organization is basically the violation of information disclosure, the two have a high correlation. Hence, the management

layer/information disclosure violation is selected here to replace the violation of senior management layer/organization layer (V_2) to test the robustness of the empirical results mentioned above and shown in Table 18. The empirical results of Model 46 show that when other conditions remain unchanged, the philanthropic donation intention of enterprises with violations is higher. The results were significantly consistent with those obtained when V_2 was used as explanatory variable.

Table 18. Relationship between business violations/information disclosure violations and corporate charitable donations.

Variables	Model 45	Model 46
	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)
Time to market (Age)	0.459 *** (7.11)	0.444 *** (6.85)
Enterprise size (Size)	0.656 *** (16.30)	0.652 *** (16.17)
Equity concentration (EC)	0.539 * (1.95)	0.547 ** (1.97)
Company growth	0.039 (0.45)	0.041 (0.48)
Return on assets (ROA)	2.072 *** (6.42)	2.055 *** (6.38)
Asset–liability ratio (ALR)	0.636 *** (3.18)	0.610 *** (3.05)
Industry Competitiveness (IC)	1.058 *** (2.81)	1.073 *** (2.85)
Size of the board	0.505 ** (2.38)	0.491 ** (2.32)
R&D investment ratio (RDIR)	1.303 ** (2.02)	1.336 ** (2.08)
Cash to assets ratio	0.251 (0.75)	0.270 (0.81)
Operating Violation/Information Disclosure Violation (OV/IDV)		0.161 ** (2.13)
Constant	12.730 *** (14.65)	12.697 *** (14.61)
Observations	4277	4277

Note: ***, ** and * are significant at the 1%, 5% and 10% levels, respectively.

4.4.4. Replacing adjustment Variables

In order to verify the robustness of the results, the subdivision indexes of the market-oriented composite index are selected here. The development of the non-state-owned economy (DNOE), the development degree of the factor market (DDFM), the development of market intermediary organizations and the legal environment (LE) are used to test the robustness of the empirical results of the moderating effect of regional institutional environment (RIE) on the main effect model. The results are shown in Table 19. Three variables and the degree of the companies were sent (V_3) with cross terms in the confidence level of 95% or more significant negative correlation. The results show that from the perspective of the adjustment of the external system environment, the system of geography environment of enterprise level on a negative relationship between enterprises and charitable giving increase the strengthening effect. In the region of the institutional environment level, the more good that is done, the more serious the punishment of listed companies is, the less positive they will be regarding making charitable donations, which is consistent with the above results.

Table 19. Moderating effect of market segmentation indicators on the relationship between illegal enterprises and their charitable donations.

Variables	Model 47	Model 48	Model 49	Model 50	Model 51	Model 52	Model 53
	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)	Corporate Charitable Giving (Don_m)
Time to market (Age)	0.515 ***	0.509 ***	0.507 ***	0.513 ***	0.514 ***	0.508 ***	0.505 ***
	(6.25)	(6.08)	(6.06)	(6.16)	(6.17)	(6.10)	(6.06)
Enterprise size (Size)	0.666 ***	0.647 ***	0.647 ***	0.671 ***	0.672 ***	0.648 ***	0.649 ***
	(13.06)	(12.02)	(12.02)	(12.42)	(12.43)	(11.99)	(11.97)
Equity concentration (EC)	0.751 **	0.765 **	0.761 **	0.744 **	0.743 **	0.759 **	0.743 **
	(2.15)	(2.17)	(2.16)	(2.10)	(2.10)	(2.15)	(2.10)
Company growth	0.049	0.021	0.021	0.053	0.051	0.022	0.019
	(0.46)	(0.19)	(0.18)	(0.48)	(0.46)	(0.20)	(0.17)
Return on assets (ROA)	2.075 ***	2.159 ***	2.159 ***	2.054 ***	2.045 ***	2.176 ***	2.175 ***
	(5.04)	(4.92)	(4.92)	(4.70)	(4.68)	(4.94)	(4.92)
Asset–liability ratio (ALR)	0.583 **	0.523 **	0.521 **	0.590 **	0.592 **	0.531 **	0.528 **
	(2.29)	(2.01)	(2.00)	(2.29)	(2.30)	(2.03)	(2.02)
Industry competitiveness (IC)	1.228 **	1.000 **	1.003 **	1.263 ***	1.277 ***	1.055 **	1.066 **
	(2.53)	(2.06)	(2.07)	(2.64)	(2.67)	(2.20)	(2.22)
Size of the board	0.007	0.106	0.101	0.031	0.037	0.093	0.074
	(0.03)	(0.38)	(0.37)	(0.11)	(0.14)	(0.34)	(0.27)
R&D investment ratio (RDIR)	1.182	1.623 *	1.617 *	1.090	1.091	1.564 *	1.526 *
	(1.46)	(1.74)	(1.74)	(1.33)	(1.33)	(1.72)	(1.69)
Cash-to-assets ratio	0.359	0.287	0.279	0.363	0.361	0.358	0.327
	(0.82)	(0.64)	(0.62)	(0.82)	(0.81)	(0.80)	(0.73)
Degree of punishment for violation (V_3)	0.039	0.034	0.036	0.040	0.042	0.036	0.043
	(1.15)	(1.04)	(1.09)	(1.21)	(1.29)	(1.09)	(1.32)
Development of non-state-owned economy (DNOE)		0.092 ***	0.094 ***				
		(3.75)	(3.75)				
Degree of punishment for violations * Development of non-state-owned economy (V_3 * DNOE)			0.001 ***				
			(2.62)				
Degree of development of factor markets (DDFM)				0.011	0.011		
				(0.68)	(0.67)		
Degree of punishment for violation * Degree of development of factor markets (V_3 * DDFM)					0.001 ***		
					(2.50)		
Development of market intermediary organizations and legal environment (LE);						0.025 ***	0.026 ***
						(3.08)	(3.13)
Development of market intermediary organizations and legal environment (V_3 * LE)							0.000 **
							(2.34)
Constant	11.603 ***	11.655 ***	11.516 ***	11.677 ***	11.686 ***	11.494 ***	11.495 ***
	(10.69)	(10.84)	(9.99)	(10.08)	(10.08)	(9.97)	(9.97)
Observations	2573	2573	2573	2573	2573	2573	2573

Note: ***, ** and * are significant at the 1%, 5% and 10% levels, respectively.

5. RESEARCH CONCLUSIONS

Based on the data of non-financial A-share listed companies in Shanghai and Shenzhen from 2006 to 2019 as samples, this paper connected companies with their charitable donations through the theory of legality and studied the relationship between listed companies' illegal behaviors and charitable donations. Through empirical analysis, the research conclusions are as follows. First, there is indeed a certain relationship between listed companies that commit violations and their charitable donations. Specifically, illegal listed companies were less motivated to make charitable donations than non-illegal companies. The weak enthusiasm of listed companies for charitable donation in the short term after the violation may be a short-term strategic choice after weighing the advantages and disadvantages. If listed companies make a clear and social oriented donation in a short time after violating the rules, it may actually be detrimental to companies themselves. Other studies have found that online reviews are even more detrimental to companies that donate heavily after a crisis. Therefore, when a listed company violates laws and regulations due to its own misconduct and its reputation is damaged, if it carries out corporate social responsibility activities such as charitable donation within a short period after the violation, the company may suffer another public opinion crisis or trust crisis, causing further damage to its reputation. Considering this, reducing charitable donation in the short term seems to be a more sensible strategic choice.

On the other hand, it is likely that the punishment of listed companies is lighter and the penalties may not have a great negative impact, which can be confirmed from the sample. Moreover, the ultimate benefit of charitable donations is uncertain, so companies do not make charitable donations of any amount. Therefore, this paper believes that it is futile to try to cover up by means of donation in the short term when the violation has been exposed. Consequently, in the short term, enterprises may lose their enthusiasm to save their damaged reputation by fulfilling their social responsibility. In conclusion, the result that the offending enterprises are less motivated to donate to charity than the non-offending enterprises has some credibility.

Second, compared with violations at the organizational level, companies with violations at the executive level are more motivated to donate to charity. As the effect of charitable donation on reputation is a long-term rather than an immediate effect, the direct victims of organizational violations are the majority of small and medium investors, while the beneficiaries of donations are only part of the company group. In addition, most corporate donations are blind and follow the trend and do not fully realize the role of donations to help enterprises recover their reputations. From the perspective of violation of senior management, due to the lack of internal control of the company, the managers may use their own internal information to seek profits for themselves. At the same time, the good reputation effect generated by charitable donation is not only beneficial to the organization, but also can bring high visibility to executives and expand their social influence.

Third, from the moderating effect of the external institutional environment, the institutional environment level of the geographical region where the enterprise is located strengthens the negative relationship between the offending enterprise and charitable donation. Additionally, in regions with a better institutional environment level, listed companies will be punished more severely and their charitable donation enthusiasm will become weaker. Therefore, the better the institutional environment of the geographical region in which the enterprise is located, the less active the offending enterprise is in rebuilding its reputation and legitimacy through charitable donations and meeting the expectations and demands of the government.

Fourth, from the perspective of the regulatory effect of the characteristics of government linkages within enterprises, there is no significant correlation between government enterprise linkages and charitable donations of illegal enterprises. However, after dividing it into congenital and acquired government enterprise association, it is found that congenital government enterprise association has a strengthening effect on the charitable donation behavior of illegal enterprises. Specifically, on the premise that the violations of listed companies with the main effect are negatively related to the enthusiasm of charitable donation, illegal enterprises with congenital government enterprise association have a weaker enthusiasm for making charitable donations than illegal

enterprises without congenital government enterprise association. From another perspective, compared with non-state-owned illegal listed companies, state-owned illegal listed companies have less enthusiasm to make charitable donations.

According to the theory of resource dependence, the property right attribute of state-owned enterprises gives them unique resource advantages, and at the same time, they can give priority to a variety of investment opportunities and policy convenience. Therefore, for state-owned enterprises, what needs to be done after violating the rules is often to find out the root cause of the problem, investigate the fault and prevent reoccurrence. It is not so urgent to re-establish and maintain access to its resources through a variety of ways. Non-state-owned enterprises that do not have the "fatherly effect" may be disconnected from their hard-working channels to establish and maintain relationships after their own violations, and their internal and external legitimacy will also be questioned. In order to maintain the survival of enterprises, they may be more motivated to display social responsibility behaviors to ease the pressure on legitimacy, regain the recognition and support of the government, and establish and maintain political relations with the government to show a stronger willingness to donate.

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