Major Shareholder Tunneling and Irrational Donations

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Abstract: Based on the definition of rational and irrational charitable donations by enterprises, this article attempts to further clarify the micro mechanism by which agent conflicts lead to irrational donations by enterprises. This article starts from the perspective of the second type of proxy conflict) and examines the complete mechanism of proxy conflict affecting irrational donations by enterprises. Starting from specific mechanisms of corporate governance such as institutional shareholding and independent directors, it examines its governance effect on non ideal donations by enterprises. Thus providing management inspiration for suppressing irrational donation behavior of enterprises.

Keywords: Irrational donations; Institutional shareholding; Independent director system; The second type of proxy conflict;

1 Introduction

This article attempts to define rational and irrational charitable donations by enterprises. Rational charitable donations are a tool for both agents and enterprises to gain both fame and fortune, which can enhance the value of the enterprise. They are part of the total revenue of charitable donations that exceeds the total cost, presenting a "strategic perspective". However, irrational charitable donations are a means for agents to sacrifice profits for the enterprise, which can damage the value of the enterprise, it is the proportion of the total cost of charitable donations that exceeds the total revenue, presenting a "agency perspective". Based on existing literature[1][2][5][6], this paper analyzes the internal mechanism of the alienation of corporate charitable donation behavior from the perspectives of explicit cost, implicit cost, direct benefit, and indirect benefit. Therefore, the value effect of corporate charitable donations is essentially the net effect presented after the total cost of adding explicit and implicit costs, and the total benefit of adding direct and indirect benefits is offset each other.

Based on this definition, this article mainly analyzes the impact of the second type of agency conflict, namely the "insider" problem of major shareholders, on irrational donations within a framework of agency conflict theory. It also examines the moderating effect of marketization on the relationship between the shareholding of major shareholders and irrational charitable donations of enterprises. On the inhibitory path[3][4], the introduction of institutional investors can effectively suppress irrational charitable donations by listed companies. The higher the shareholding ratio of institutional investors, the smaller the amount of irrational charitable donations by the company. The establishment of an independent director system can

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also effectively suppress the manipulation of listed companies by major shareholders for irrational charitable donations due to selfish motives.

The marginal contribution of this article is reflected in: firstly, attempting to define charitable donations as rational charitable donations and irrational charitable donations; The second is to verify the inhibitory mechanism of irrational charitable donations from the perspective of the second type of agency conflict.

2 Research Assumptions

2.1 The Conflict of Major Shareholders' Agency and the Irrational Donation of Enterprises

The shareholding of major shareholders has two impacts on irrational charitable donations: on the one hand, based on the "supervision effect" and the "less tunneling effect", the shareholding of major shareholders will reduce the level of irrational charitable donations; On the other hand, based on the "more hollowing out effect", the shareholding of major shareholders will increase the level of irrational charitable donations.Therefore, this article proposes the following opposite hypothesis:**H1a:** The higher the shareholding of major shareholders in a company, the lower the level of irrational charitable donations, and the "supervision" effect and "minimum tunneling" effect are established; **H1b:** The higher the shareholding of major shareholders, the higher the level of irrational charitable donations, and the "more hollowing out" effect is established;

2.2 The regulatory effect of marketization degree

A large number of studies have found that the degree of marketization can effectively lower the second type of agency costs and effectively suppress the "tunneling" of major shareholders towards small and medium-sized shareholders. One is that a higher degree of marketization is often accompanied by strong information sharing and flow mechanisms, which can slow down the asymmetric state of internal information held by major shareholders and small and medium-sized shareholders, allowing external shareholders and small and medium-sized shareholders to more comprehensively supervise the behavior of major shareholders [7][8][9], Secondly, the high degree of marketization effectively compresses the space and possibility for major shareholders to obtain private benefits through opportunistic actions, which makes the implementation of high premium mergers and acquisitions, related party transactions, and other actions by major shareholders face strong decision-making resistance, but also increase opportunity costs due to the relative reduction of private benefits[10].Based on this, this article proposes the following assumptions:**H2a:** If the "supervisory effect" and "minimum tunneling" effects are established, the negative correlation between major shareholder shareholding and irrational charitable donations will be strengthened in regions with higher marketization levels; **H2b:** If the "more hollowing out" effect is established, the higher the degree of marketization in regions and enterprises with higher major shareholder holdings, the stronger the positive correlation between major shareholder holdings and irrational charitable donations will be;

2.3 The Supervision Mechanism of Shareholders and the Governance of Unreasonable Donations

Institutional shareholding is often regarded as an important external supervision mechanism for enterprises, especially under the strong professional ability of institutional investors, private information holdings, and stronger market influence advantages, shareholding institutions can form a strong supervisory effect on major shareholders . Firstly, both during and after a company's listing, there is a demand for institutional investors to be introduced. Institutional investors not only bring liquidity to the listed company, but also endorse its operational and technical capabilities, attracting potential partners. However, the introduction of institutional investors directly changes the equity structure of the listed company, this in turn affects the governance structure and resource allocation efficiency of the company.Based on this, this article proposes the following opposite hypothesis:**H3a:** Institutional shareholding will significantly reduce the irrational charitable donations of listed companies; **H3b:** Institutional shareholding will significantly increase the irrational charitable donations of listed companies.

In listed companies with concentrated equity[4], independent directors can reduce agency conflicts between major shareholders and minority shareholders, thereby to some extent suppressing irrational charitable donations by major shareholders based on their own selfish motives.However, at the same time, independent directors may not be able to shake the company's governance structure due to their lack of actual decision-making power, and may make negative choices such as abstaining from taking action due to the influence of major shareholders. Based on this, this article proposes the following assumptions:**H4a:** The proportion of independent directors is significantly negatively correlated with the level of irrational charitable donations by enterprises; **H4b:** The proportion of independent directors is significantly positively correlated with the level of irrational charitable donations by enterprises.

3 Research Design

3.1 Samples and data

This article selects A-share listed companies on the Shanghai Stock Exchange and Shenzhen Stock Exchange from 2009 to 2021 as the original sample to study the impact of private interest motivation of major shareholders on irrational charitable donations by companies. In order to ensure the reliability of the sample data, this article draws on past research and processes the original sample as follows: (1) exclude the samples of listed companies that have significant events such as ST, * ST, PT, etc. during the sample period; (2) Excluding listed companies in the financial industry from the sample; (3) Excluding the sample of listed companies with missing values in relevant variables; (4) In order to prevent extreme values from interfering with the final regression results, this article conducts tail reduction on continuous variables at the 1% and 99% levels. After the above processing, a total of 13792 companies were obtained with annual paired sample data.The relevant data and financial indicators of listed companies in this article mainly come from Guotai An Database and Wind Database, and some of the data comes from Fan Gang's "China Provincial Marketization Index Report".

3.2Research Design

In order to verify hypotheses H1a and H1b, this article constructs model (1) to examine the relationship between the shareholding ratio of the largest shareholder and irrational charitable donations by enterprises, and to explore whether the increase in control of the largest shareholder brings about "more tunneling effects" or "less tunneling effects".

$$\mathrm{ECP}_{i,t} = a_0 + \beta_1\mathrm{First}_{i,t} + \beta_2\mathrm{S}h\mathrm{rz}_{i,t} + \beta_3\mathrm{Manafee}_{i,t} + \beta_4\mathrm{Dsrs}_{i,t} + \beta_5\mathrm{Customer}_{i,t} + \beta_6\mathrm{HII}_{i,t} + \beta_7\mathrm{Employee}_{i,t} + \beta_8\mathrm{Audit}_{i,t} + \beta_9\mathrm{Size}_{i,t} + \beta_{10}\mathrm{Cas}h_{i,t} + \beta_{11}\mathrm{Age}_{i,t} + \beta_{12}\mathrm{Lev}_{i,t} + \beta_{13}\mathrm{Roa}_{i,t} + \beta_{14}\mathrm{Growt}h_{i,t} + \gamma_1\mathrm{Year}_t + \gamma_2\mathrm{Industry}_t \quad (1)$$

In order to verify hypotheses H2a and H2b, this article sets up model (2) to examine whether the degree of marketization in the region where listed companies are located is expected to have a moderating effect on the correlation between the shareholding ratio of major shareholders and irrational charitable donations.

$$\mathrm{ECP}_{i,t} = a_0 + \beta_1\mathrm{Market}_{i,t} + \beta_2\mathrm{First}_{i,t} + \beta_3\mathrm{Market} * \mathrm{First}_{i,t} + \beta_4\mathrm{Ms}h_{i,t} + \beta_5\mathrm{Dual}_{i,t} + \beta_6\mathrm{Manafee}_{i,t} + \beta_7\mathrm{Customer}_{i,t} + \beta_8\mathrm{HII}_{i,t} + \beta_9\mathrm{Size}_{i,t} + \beta_{10}\mathrm{Cas}h_{i,t} + \beta_{11}\mathrm{Age}_{i,t} + \beta_{12}\mathrm{Lev}_{i,t} + \beta_{13}\mathrm{Roa}_{i,t} + \beta_{14}\mathrm{Growt}h_{i,t} + \beta_{15}\mathrm{Employee}_{i,t} + \gamma_1\mathrm{Year}_t + \gamma_2\mathrm{Industry}_t \quad (2)$$

In order to verify hypotheses H3a and H3b, this article sets up model (3) to explore the correlation among the components of institutional investor shareholding in the equity structure of listed companies and irrational charitable donations, and to investigate whether the increase in institutional shareholding ratio brings about supervision over major shareholders or collusion with major shareholders.

$$\mathrm{ECP}_{i,t} = a_0 + \beta_1\mathrm{Inst}_{i,t} + \beta_2\mathrm{First}_{i,t} + \beta_3\mathrm{Ms}h_{i,t} + \beta_4\mathrm{Dual}_{i,t} + \beta_5\mathrm{Manafee}_{i,t} + \beta_6\mathrm{Customer}_{i,t} + \beta_7\mathrm{HII}_{i,t} + \beta_8\mathrm{Employee}_{i,t} + \beta_9\mathrm{Size}_{i,t} + \beta_{10}\mathrm{Cas}h_{i,t} + \beta_{11}\mathrm{Age}_{i,t} + \beta_{12}\mathrm{Lev}_{i,t} + \beta_{13}\mathrm{Roa}_{i,t} + \beta_{14}\mathrm{Growt}h_{i,t} + \gamma_1\mathrm{Year}_t + \gamma_2\mathrm{Industry}_t \quad (3)$$

In order to verify hypotheses H4a and H4b, this article sets up model (4) to investigate whether the introduction of the independent director system can suppress the irrational charitable donation behavior of listed companies and alleviate agency conflicts between major shareholders and minority shareholders.

$$\mathrm{ECP}_{it} = a_0 + \beta_1\mathrm{Indep}_{i,t} + \beta_2\mathrm{First}_{i,t} + \beta_3\mathrm{Ms}h_{i,t} + \beta_4\mathrm{Dual}_{i,t} + \beta_5\mathrm{Manafee}_{i,t} + \beta_6\mathrm{Customer}_{i,t} + \beta_7\mathrm{HII}_{i,t} + \beta_8\mathrm{Employee}_{i,t} + \beta_9\mathrm{Size}_{i,t} + \beta_{10}\mathrm{Cas}h_{i,t} + \beta_{11}\mathrm{Age}_{i,t} + \beta_{12}\mathrm{Lev}_{i,t} + \beta_{13}\mathrm{Roa}_{i,t} + \beta_{14}\mathrm{Growt}h_{i,t} + \gamma_1\mathrm{Year}_t + \gamma_2\mathrm{Industry}_t \quad (4)$$

4 Empirical estimation and conclusion analysis

4.1 Benchmark Model Results

In order to verify hypothesis H1a and hypothesis H1b, this article conducts corresponding regression analysis according to model (1). Considering the complexity of the impact of major shareholder shareholding on corporate governance, this article will group the entire sample based on the proportion of major shareholder shareholding. Tong Yan et al. found that the largest shareholder with a shareholding ratio of over 50% and a shareholding ratio of below 50% exhibits different tendencies. Based on this study, this article divides the samples into two groups: the group with low shareholding ratio of major shareholders and the group with high shareholding ratio of major shareholders. Number of 14841 and 3075 samples were obtained, respectively, and group regression was used to explore the impact of the shareholding ratio of major shareholders on irrational charitable donations of listed companies.

Table 1. Group test results of major shareholder shareholding and irrational donations by listed companies

	(1)low shareholding	(2) high shareholding		(1)low shareholding	(2) high shareholding
Shrz	0.106**(2.11)	0.762**(2.11)	Roa	1.570***(7.64)	5.852***(6.51)
Manafee	0.871***(3.83)	1.173(1.50)	Cash	0.155(0.74)	-1.473***(-2.74)
Dsrs	-0.097*(-1.65)	-0.008(-0.06)	Age	0.166***(7.30)	0.197***(3.42)
First	0.448***(3.20)	1.147**(2.29)	Growth	0.000(0.60)	0.004(0.92)
Customer	0.418***(9.20)	0.434***(3.42)	_cons	1.483***(3.71)	3.354***(3.50)
HHI	-0.282***(-3.48)	0.256(1.28)	var(e.ecp)	2.480***(62.16)	2.845***(25.12)
Employee	0.130***(6.91)	0.184***(4.03)	Industry effects	Yes	Yes
Audit	-0.223***(-2.71)	0.148(1.17)	time effect	Yes	Yes
Size	-0.072***(-3.34)	-0.239***(-4.61)	*N*	14841	3075
Lev	-0.148(-1.59)	0.447*(1.69)			

Note: "*", "* *", and "* * *" respectively indicate significant at the 10%, 5%, and 1% levels; The values in parentheses represent the t-statistic.

Table 1 presents the regression results obtained using the Tobit model. According to the regression results, whether in the group with low major shareholder shareholding or the group with high major shareholder shareholding, the explanatory variable of major shareholder shareholding (first) is significantly positively correlated with the coefficient of the dependent variable of irrational charitable donations (ECP). Among them, the coefficient of the group with low major shareholder shareholding is significantly positively correlated at the 1% level, the regression results of model (1) indicate that the increase in the proportion of major shareholders has a significant driving effect on the irrational charitable donations of listed companies, and the control variables such as equity balance, consumer sensitive industries, employee size, company age, company size, and profitability have a significant impact on the irrational charitable donations of listed companies.

The regression results of this model support that the impact of major shareholders on irrational charitable donations of listed companies is based on the "more tunneling effect", rather than the "supervisory effect" and "less tunneling effect", and the conclusion remains consistent in the case of grouping, which satisfies hypothesis H1b. The "more tunneling effect" means that major shareholders, starting from selfish motives, have to some extent triggered tunneling behavior by major shareholders in order to maximize their personal interests. This regression results clarifies the hidden motivation behind the irrational charitable donation behavior of the first major shareholder of a listed company.

According to the research by [5], the degree of infringement by the largest shareholder of listed companies in China on small and medium-sized shareholders is higher than that of developed countries such as the United States and the United States, and even the infringement of large shareholders on small and medium-sized shareholders is to some extent underestimated. The tunneling behavior of listed companies is seen by major shareholders as a substitute for obtaining cash dividends. According to the model results, especially in the case of insufficient legal protection for small and medium-sized shareholders, the optimal choice for major shareholders is to conduct tunneling behavior on listed companies. Due to information asymmetry within the company, it is often only discovered after the tunneling behavior of major shareholders has already occurred.

In order to achieve their selfish motives, major shareholders of listed companies are often observed to realize their equity value through related party transactions and equity pledges. In addition, major shareholders also have the ability to obtain personal benefits through charitable donations. And although major shareholders use wealth that belongs to all shareholders, they can enjoy the majority of the benefits, such as improving personal social reputation and status, maintaining good political and business relationships with the government, and obtaining more political resources from individuals. The benefits of these invisible goals are often sustainable, and even after major shareholders withdraw from the listed company, they still have certain effectiveness. In this process, the major shareholders exchange the high-quality resources of the listed company for their own profits, and at the same time, the major shareholders exchange a small cost for disproportionate personal benefits. That is, the irrational charitable donation behavior of the listed company is an opportunistic behavior implemented by the major shareholders of the company with rational economic characteristics in the name of fulfilling social obligations, aim at satisfy personal selfish motives.

4.2 The moderating effect of marketization degree

In order to verify hypotheses H2a and H2b, this article constructs a cross term variable between the degree of marketization and the shareholding of major shareholders according to the set model (2), and adds it to the regression model for multiple regression analysis to examine whether the degree of marketization in the region where the listed company is located has a moderating effect on irrational charitable donations, and what kind of moderating effect it has, thus verifying the second set of hypotheses. This article uses the Tobit model, and the regression results of these two tests are shown in Table 2.

Table 2. Regression Results of Major Shareholders' Shareholdings, Degree of Marketization, and Unreasonable Charitable Donations of Listed Companies

	(1)No regulatory effect	(2)The regulatory effect		(1)No regulatory effect	(2)The regulatory effect
Market		0.053^{***}(5.55)	Cash	0.460^{**}(2.42)	0.517^{***}(2.71)
mar_fir		-0.080^{***}(-6.53)	Age	0.192^{***}(8.52)	0.152^{***}(6.52)
Msh	0.339^{***}(2.90)	0.337^{***}(2.88)	Roa	0.066(0.55)	0.116(0.97)
Dual	0.046(1.39)	0.035(1.06)	Growth	0.000(0.67)	0.000(0.62)
Manafee	0.335^{***}(2.70)	0.659^{***}(3.08)	Lev	-0.179^{**}(-2.38)	-0.150^{**}(-1.98)
First	0.324^{***}(3.21)	0.429^{***}(3.65)	_cons	1.951^{***}(5.67)	1.481^{***}(4.17)
Customer	0.448^{***}(10.37)	0.460^{***}(10.61)	var(e.ecp)	2.588^{***}(66.75)	2.558^{***}(66.79)

HHI	-0.206***(-2.72)	-0.200***(-2.64)	Industry effects	Yes	Yes
Employee	0.128***(7.38)	0.131***(7.51)	time effect	Yes	Yes
Size	-0.102***(-5.38)	-0.090***(-4.72)	*N*	17916	17916

According to the regression results of model (2) shown in Table 2, it can be seen that after controlling for the influence of relevant variables, the regression coefficient between the variable major shareholder shareholding (first) and the variable irrational charitable donation (ECP) is 0.324, which is significantly positive at the 1% level. This means that the proportion of major shareholder shareholding has a significant promoting effect on the irrational charitable donation of listed companies; Secondly, we can also see the specific moderating effect of marketization degree on the relationship between major shareholder shareholding and irrational charitable donations of listed companies. By constructing a cross term variable (mar_fir) between the variable major shareholder shareholding (first) and the variable marketization degree (Market), we found that its regression coefficient with the dependent variable enterprise's irrational charitable donations is -0.080, with a t-value of -6.53, which is significantly negative at the 1% level, this also indicates that the degree of marketization has a negative moderating effect on the positive correlation between the shareholding ratio of major shareholders and the irrational charitable donations of enterprises. The higher the degree of marketization, the smaller the positive effect of the shareholding ratio of major shareholders on the irrational charitable donations of listed enterprises. Hypothesis H2b is valid. In addition, variables such as manager shareholding, management expense ratio, consumer sensitive industries, industry competitiveness, employee size, company size, cash flow, company age, and company capital structure are also significant in the regression.

From the perspective of information management, the fundamental reason for the formation of opportunistic behavior in enterprises is information asymmetry, which is caused by inconsistent perceptions of information between users and providers. Asymmetric information leads to different levels of information transparency between the major shareholders and other small and medium-sized shareholders of listed companies in their business decisions. However, in regions with lower levels of marketization, this semi transparency of information enhances the motivation of the major shareholders of listed companies to embezzle the company's value resources for selfish purposes, and to some extent provides convenient conditions.

At the same time, in regions with a higher degree of marketization, listed companies have a more favorable internal and external information environment, and the large shareholder meeting of the company is particularly concerned by external stakeholders to a certain extent. The large shareholder of the listed company is almost a semi public role, which effectively supervises the specific decisions of the large shareholder of the company and suppresses the irrational charitable donation behavior of the listed company. In addition, according to existing research on performance prediction of listed companies, the higher degree of regional marketization brings about a better internal and external information environment for enterprises, which effectively strengthens the accuracy of external investors using accounting information of listed companies to predict performance, reduces the possibility of selection errors, and forces major shareholders of enterprises to make rational decisions and fulfill their responsibility to protect the rights and interests of numerous stakeholders.

4.3 An Analysis of the Inhibition Path of Unreasonable Donations by Enterprises

In order to verify hypotheses 3a and 3b, 4a and 4b, this article introduces models (3) and (4) to explore whether the introduction of institutional investors and the establishment of an independent director system can effectively suppress the selfish motives of major shareholders in listed companies, or whether the establishment of an independent director system is as expected, and improve the governance structure of listed companies. In order to verify the two hypotheses, this article applies the Tobit model for regression analysis, and the regression results are shown in Table 3.

Table 3. Institutional shareholding, independent director system, and irrational donations of listed companies

	(1)Institutional shareholding	(2)Independent director system		(1)Institutional shareholding	(2)Independent director system
Inst	-0.396***(-5.68)		Cash	0.601***(3.15)	-0.057(-0.29)
Indep		-0.358**(-2.02)	Age	0.146***(6.46)	0.205***(9.30)
Msh	-0.008(-0.06)	0.293**(2.51)	Lev	-0.148*(-1.96)	-0.135(-1.54)
Dual	0.065*(1.94)	0.050(1.51)	Roa	0.146(1.23)	1.852***(9.04)
Manafee	0.661***(3.09)	0.938***(4.33)	Growth	0.000(0.65)	0.000(0.70)
First	0.544***(6.15)	0.316***(3.06)	_cons	1.602***(4.59)	2.117***(5.97)
Customer	0.454***(10.46)	0.419***(9.69)	var(e.ecp)	2.585***(66.72)	2.574***(66.76)
HHI	-0.230***(-3.02)	-0.185**(-2.45)	Industry effects	Yes	Yes
Employee	0.133***(7.62)	0.134***(7.71)	time effect	Yes	Yes
Size	-0.076***(-3.96)	-0.109***(-5.72)	*N*	17916	17916

In Table 3, columns (1) and (2) correspond to models (3) and (4), respectively. The dependent variables are all irrational charitable donations from listed companies, while in column (1), the explanatory variable is institutional investor shareholding (Inst), with a regression coefficient of -0.396 and significant at the 1% level. That is to say, the higher the shareholding ratio of institutional investors, the more they can suppress the irrational charitable donation behavior of listed companies. At the same time, the variables in the regression results such as concurrent employment, management expense rate, consumer sensitive industries, industry competition level, employee size, enterprise size, cash flow, enterprise age, and enterprise capital structure are also significant.

The regression results of the model strongly support the mainstream research findings that institutional investors' shareholding can form effective supervision over listed companies. Although there is vicious competition among institutional investors and collusion between institutional investors and controlling shareholders to embezzle company assets in the capital market, institutional investors, as rational economic individuals, first of all, will deeply participate in corporate governance for the purpose of maximizing equity value, this includes but is not limited to appointing directors and other means to effectively constrain the dark box operations of controlling shareholders. For the long-term research and development layout, distribution network management, and other business policies of listed companies, long-term institutional investors will instead use their high-quality resources in their professional fields to assist and support them.

Secondly, companies with a higher proportion of institutional investors' shareholding have a higher quality of information disclosure regarding social responsibility and other content. This is because the higher the proportion of institutional investors' shareholding, the more they require the right to know about actual decisions such as internal management and external operations of listed companies.

Finally, due to the fact that institutional investors can weaken the information advantage of major shareholders through research and other means, effectively supervise and constrain their selfish behavior, thus optimizing the decision-making mechanism to a certain extent and protecting the rights and interests of small and medium-sized investors. According to Choice data, in 2021, institutional investors conducted institutional research on 2039 listed companies in the capital market (excluding individual investors and other investors), with a total of 247,200 times of research, compared to 2020, it has increased by 64.58%, indicating that institutional investors maintain a strong desire to conduct institutional research on listed companies, resulting in higher information transparency and greatly suppressing the selfish behavior of major shareholders.

In column (2), the explanatory variable is the proportion of independent directors (Indep), with a regression coefficient of -0.358, which is significant at the 5% level. The increase in the proportion of independent directors in the board of directors can also effectively suppress the irrational charitable donation behavior of listed companies. This result means that independent directors, as compliance supervisors, professional advisors, and indirect democratic mechanisms for shareholders of rising companies, not only possess professional abilities in financial and legal affairs, but also fully fulfill their own responsibilities, thus effectively balancing the control of the company. In addition, variable managers' shareholding, management expense ratio, consumer sensitive industries, industry competition level, employee size, enterprise size, enterprise age, and profit level are also significant.

In China, due to the existence of the principle of majority capital, most members of the board of directors are spokespersons of major shareholders, and the higher the controlling proportion of major shareholders, the more directors can represent them. As a result, the board of directors of listed companies becomes their own institution and cannot represent the rights and interests of all shareholders. At the same time, some listed companies have problems such as unclear division of labor within their governance structure, chaotic distribution of board power, and insufficient supervision by the supervisory board, which leads to the ability and opportunity of major shareholders of listed companies to use their company wealth for personal gain and encroach on the rights and interests of small and medium-sized shareholders. As a supplement to the corporate governance system, the independent director system can to some extent compensate for the above-mentioned problems, clarify the delegation relationship between the board of directors and shareholders, and achieve resonance with the direct democratic mechanism of shareholders.

5 Conclusion

(1) In the equity system of listed companies, the higher the shareholding ratio of the controlling shareholder ranking first, the more irrational charitable donations the company makes, indicating that there is a "more tunneling effect" of major shareholders within the decision-making structure of listed companies. Major shareholders can not only monetize their equity value through covert operations such as related party transactions to obtain monetary benefits, but also smoothly obtain various non monetary benefits through specific charitable donations that conceal personal wishes and demands. It is precisely due to the "selfish" charitable donations of major shareholders in many listed companies that a large number of companies have implemented excessive charitable donations beyond their own donation payment capacity.

(2) The degree of marketization in the region where listed companies are located will negatively regulate the positive correlation between the shareholding ratio of major shareholders and irrational charitable donations of enterprises. In regions with lower levels of marketization, enterprises have a greater dependence on government resources, and government intervention in regional enterprises is also strong. Therefore, in order to obtain favorable government resources and create close political and business relationships, enterprises will actively assume social responsibility. Charity donations are the main way to achieve this, while listed enterprises seek political resources from enterprises, it is difficult to detect the use of company wealth for personal gain in order to obtain their own non monetary benefits, which has led to the proliferation of irrational charitable donations in areas with lower levels of marketization. In areas with higher levels of marketization, resources flow faster in the market, and companies have lower dependence on government resources.

(3) The introduction of institutional investors can effectively suppress irrational charitable donations by listed companies. The higher the shareholding ratio of institutional investors, the smaller the amount of irrational charitable donations by the company. For listed companies with higher shareholding ratios by institutional investors, both before and after joining the shareholder layer, they can initiate on-site research, which can capture the irrationality of the company's current and past decisions based on the business knowledge and financial skills of institutional investors. In addition, the higher the presence of institutional investors in listed companies, the higher the information transparency of the company. The external world can better grasp the information dynamics of the company, weaken the information asymmetry relied on by the private behavior of major shareholders, and thus suppress unreasonable charitable donations.

(4) The establishment of an independent director system can also effectively suppress the manipulation of listed companies by major shareholders for irrational charitable donations due to selfish motives. This means that if there are regulatory issues in the listed company where independent directors serve, it will not only affect their current part-time jobs but also their future external employment. Moreover, compared to members of the supervisory board, regulatory issues in listed companies will also bring higher loss costs to independent directors. Therefore, the independent board of directors tends to fulfill its obligations diligently, utilize its professional knowledge, and choose a higher level of supervision while providing professional advisory services.

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