

The Impact of Corporate Giving on Corporate Financial Performance and Stock Market

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Keywords: Corporate donation, Financial performance, Stock market, Propensity score matching, Ordinary least squares regression

Abstract: Corporate donations represent an important form of fulfilling corporate social responsibility. Presently, the academic community has not reached a consistent conclusion regarding the relationship between corporate donations and corporate financial performance or the stock market. This paper examines the financial indicators and corporate donation data of A-share listed companies on the Shanghai and Shenzhen stock exchanges in China from 2008 to 2020. Employing propensity score matching and ordinary least squares regression methods, it aims to analyze the impact of corporate donations on corporate financial indicators and the stock market. The study reveals two main findings: First, during the pandemic, corporate donations have a significantly positive effect on corporate financial performance and the stock market. Second, corporate donations do not have a significantly positive effect on corporate financial performance and the stock market. This paper further investigates the conclusions: First, during the COVID-19 pandemic, the Chinese government intensified its policies on corporate donations. Second, corporate donations incur excessive costs. Third, the return cycle of corporate donations is too long. Fourth, there is a phenomenon of blind donations by companies. Based on these findings, this paper proposes recommendations for companies: First, enterprises should allocate internal resources reasonably. Second, enterprises should establish a good corporate reputation and image. Third, enterprises should establish a comprehensive cost management system. This paper provides insights into decision-making regarding corporate social donations.

1. Introduction

Since the 1990s, charity has gradually become an important supplement to the social security system in China and has emerged as a significant form of the third distribution of social wealth. With economic development and the widespread use of the Internet, corporate donations, as a form of charity, have attracted increasing attention. Since 2011, companies consistently being the largest contributors to charitable causes in China. While pursuing profitability, companies are also actively fulfilling their responsibilities as "citizen companies." On February 11, 2018, the Chinese Ministry of Finance and the State Administration of Taxation issued a notice regarding the policy of deducting corporate income tax before tax on charitable donations. According to the notice, donations made by enterprises to charitable activities and public welfare causes through public welfare organizations or government agencies at the county level or above, within 12% of the annual total profit, are allowed

to be deducted when calculating the taxable income; any amount exceeding 12% of the annual total profit can be carried over and deducted within the next three years when calculating the taxable income. The government also implements corresponding policies to encourage corporate charitable donations during major disasters. At the beginning of 2020, the novel coronavirus pneumonia (COVID-19) epidemic swept across China. The Chinese government promptly issued a series of policies to combat the COVID-19 epidemic. Among them, the Announcement on Donation Tax Policies to Support the Prevention and Control of Novel Coronavirus Infection (No. 9 of 2020) explicitly states that enterprises and individuals who donate cash and goods to cope with the COVID-19 epidemic through public welfare organizations or government agencies at or above the county level are allowed to deduct the full amount when calculating taxable income. Donations received by government agencies, public welfare organizations, and hospitals responsible for epidemic prevention and control should be used specifically for responding to the COVID-19 epidemic and must not be diverted for other purposes.

Corporate donations, as one of the external manifestations of corporate social responsibility, are an important way for companies to give back to society. So, what impact does corporate donations have on the development of the company itself? Is corporate donation a "win-win" behavior? This article takes the perspective of the company itself to study the impact of corporate donations on corporate financial performance and the stock market.

The article is structured as follows: the first part is the introduction, which introduces the background of the analysis and the research objectives; the second part is the literature review, covering both domestic and international literature; the third part is the research design, which presents research hypotheses, introduces the source of the sample and the meanings of variables, and introduces the model settings of the PSM and OLS models used in this study; the fourth part is the empirical analysis, where PSM and OLS models are used to analyze the selected samples and draw conclusions; the fifth part is the conclusion and recommendations, which analyzes the conclusions drawn from the empirical analysis and provides suggestions.

2. Literature Review

Corporate philanthropy is one way for companies to fulfill their social responsibility. According to Fu Yong, companies engaging in philanthropic donations always stand to benefit. From the perspective of business development, it can increase product sales and added value. From a societal impact standpoint, it can enhance the company's reputation and image in society. Regarding internal company development, it can boost employee cohesion and enhance employee pride^[1]. Zheng Ling et al. believe that engaging in corporate donations to a certain extent helps to reduce the risk of companies in the stock market, but this relationship is largely influenced by the institutional environment in China and the relationship between government and enterprises^[2]. Friedman, from the perspective of agency theory, believes that corporate donations are an irrational behavior for corporate managers to win personal reputation and status, thus potentially having a negative impact on corporate development^[3]. Zhang Zhengang et al. argue that there is a nonlinear relationship between corporate donations and corporate financial performance and the stock market^[4]. Subjective factors also influence research results. If companies cannot make donation decisions in a timely manner, balance the scale of donations, and determine the form of donations, and cannot effectively coordinate among various stakeholders, the impact of corporate donations on corporate financial performance and the stock market becomes uncertain^[5]. In summary, it is difficult to draw a unified conclusion on the impact of corporate donations on financial performance and the stock market based solely on certain factors.

According to Carroll's corporate social responsibility pyramid, corporate social responsibility is

divided into four levels: economic responsibility, legal responsibility, ethical responsibility, and philanthropic responsibility^[6]. Some companies engage in charitable donations for political purposes, self-development, or self-interest of managers^[7]. As companies progress through different levels of social responsibility, societal expectations vary accordingly. When a company's responsibility reaches the ethical level, it aligns with societal values and complies with basic ethical requirements. When a company operates at the philanthropic level, it engages in social welfare activities without compromising its principles, thereby enhancing its corporate image^[8]. During major public emergencies, companies, driven by ethical considerations and the need to cater to public values, may shift their motivation for charitable donations from the philanthropic level to the ethical level. Therefore, during major public emergencies, the motives and purposes of corporate donations may also change. Research by Zhu Jigao et al. shows that companies that made large donations during the Wenchuan and Ya'an earthquakes did not experience significant improvements in their future market performance and financial performance^[9].

This paper extends previous research in the following ways: First, in light of the COVID-19 pandemic, two types of corporate donation variables are introduced. Empirical analysis is conducted to examine the long-term (2008-2020) and COVID-19 pandemic-specific impacts of corporate donations on corporate financial performance and the stock market. The results are then analyzed comprehensively to address the questions posed in the introduction from multiple perspectives. Second, this paper utilizes the Propensity Score Matching (PSM) model to overcome sample selection bias. Scores are calculated using the Logit model, and companies that made donations during the pandemic are matched with those that did not make donations during the pandemic.

3. Research Design

3.1. Theoretical Analysis and Research Hypotheses

Based on the research direction of this paper, the null hypothesis is proposed as follows:

H0: Corporate donations have no significant positive effect on corporate financial performance and the stock market.

During major public emergencies such as earthquakes and pandemics, the public expects high-profile large companies to respond promptly and engage in corporate donation activities. Such actions demonstrate the active assumption of social responsibility by corporations^[10]. From the perspective of a corporation, charitable donations during a pandemic may incur certain economic losses, especially when most businesses suffer from bleak operating performance under the pandemic conditions. The economic benefits derived from corporate donations have a long realization period. In a sense, most corporate donations during a pandemic are contrary to the economic responsibility of the enterprise and may lead to economic losses. However, in today's society with strong information timeliness, the effect of corporate charitable donations in garnering public recognition is immediate. Furthermore, in the long term, increasing trust in the company within society is conducive to its long-term competitiveness^[11].

Based on the above, the following hypotheses are proposed in this paper:

H1: Corporate donations during the pandemic have a significant positive effect on corporate financial performance.

H2: Corporate donations during the pandemic have a significant positive effect on the stock market performance of the company.

Corporate donation activities have gradually become a strategic investment behavior. However, there is no consensus in the academic community regarding how corporate donations affect company performance and the underlying mechanisms. Some studies suggest that corporate donations have a positive impact on company performance, but donations beyond a certain limit may also impose

burdens on companies, leading to negative outcomes^[12]. However, the majority of scholars argue that corporate donations have a positive impact on corporate financial performance and stock market performance^[13]. This is attributed to the following three reasons: firstly, corporate donations create a positive social image for the company^[14]; secondly, corporate donations bring resources necessary for the company's survival and development^[15]; thirdly, corporate donations can enhance corporate value to a certain extent without compromising the company's core values^[16].

Based on the above, the following hypotheses are proposed in this paper:

H3: Corporate donations have a significant positive effect on corporate financial performance.

H4: Corporate donations have a significant positive effect on the stock market performance of the company.

3.2. Sample Selection and Data Sources

This paper selects financial indicators and corporate donation data of A-share listed companies on the Shanghai and Shenzhen stock exchanges from the first quarter of 2008 to the fourth quarter of 2020 as the sample. The financial indicator data of the companies are sourced from authoritative Chinese domestic databases such as the CSMAR database and the WIND database. Specifically, the corporate financial indicator data are obtained from the WIND database, while the corporate donation data are sourced from the corporate social responsibility database within the CSMAR database. The database data are screened to exclude unreported or missing samples. Finally, a non-balanced panel dataset comprising a total of 3,652 companies and 122,926 observations is obtained.

3.3. Variable Setting and Definition Explanation

This paper sets a total of 11 variables. Among them, there are 3 dependent variables, namely asset return rate, closing price, and earnings per share. There are 6 explanatory variables, namely whether to make pandemic donations, social donations, firm size, asset-liability ratio, tangible asset-liability ratio, and Tobin's Q value. There are 2 control variables, namely industry and time. The definitions of variables are presented in Table 1.

3.3.1. Dependent Variable

1) Return on Assets (ROA): Return on Assets, also known as asset return rate, is calculated as net profit after tax divided by total assets. It is a measure of how much net profit is generated per unit of assets and is a useful indicator for assessing a company's profitability relative to its total asset value. In this paper, we adopted ROA as a measure of corporate financial performance for analysis, drawing from literature related to corporate financial performance^[17].

2) Closing Price: The closing price refers to the stock market closing price, which is the volume-weighted average price of all transactions in the last minute before the final transaction of the security on that day (including the final transaction). If there are no transactions on a given day, the closing price is the same as the previous closing price. The closing price is the most direct indicator reflecting the performance of a listed company in the stock market^[18]. In this paper, we selected the closing price as one of the indicators to measure the performance of the corporate stock market^[19].

3) Earnings Per Share (EPS): Earnings per Share, also known as earnings per share or after-tax earnings per share, is calculated as net profit after tax divided by the total number of shares. EPS represents the net profit or loss attributable to each ordinary shareholder for each share held. Drawing from Liu Lin's research, this paper selected EPS as another indicator to measure the performance of the corporate stock market^[20].

3.3.2. Explanatory Variables

1) Whether to Make Epidemic Donations: Selected from the Chinese Public Health Emergency Incident Database (PHEIC) in the CSMAR database, this dataset includes a list of donations made by Chinese companies for epidemic prevention (as of March 15, 2020). The paper selected A-share listed companies in the Shanghai and Shenzhen stock markets from this list as samples. This variable is a dummy variable, denoted by *ifdonate*. If a company has engaged in epidemic donations, *ifdonate* is assigned a value of 1, if a company has not engaged in epidemic donations, *ifdonate* is assigned a value of 0.

2) Social Donations: The data is sourced from the corporate social responsibility reports of listed companies in the CSMAR database, specifically from the table containing information on corporate social donations. Additionally, the natural logarithm transformation is applied to the values in this dataset after adding 1 to each value.

3.3.3. Control Variables

1) Industry: The industry classification in this study follows the China Securities Regulatory Commission Industry Classification Standard (2012). The selected sample companies belong to 19 industry categories, including mining, electricity, heat, gas, and water production and supply; real estate; construction; transportation; warehousing and postal services; education; finance; residential services, repair, and other services; scientific research and technical services; agriculture, forestry, animal husbandry, and fishery; wholesale and retail; water conservancy, environmental, and public facilities management; health and social work; culture, sports, and entertainment; information transmission, software, and technology services; manufacturing; accommodation and catering; comprehensive and leasing business services.

2) Time: Time refers to the date when financial indicators of the company are reported or disclosed.

3) Enterprise Size: Enterprise size in this study is represented by the total assets reported by the company at the end of the reporting period, and the data values are processed by taking the natural logarithm.

4) Asset Liability Ratio: The asset liability ratio is calculated as total liabilities divided by total assets. Also known as the debt-to-asset ratio, it measures the company's ability to operate using funds provided by creditors and reflects the safety level of loans granted by creditors. It is obtained by comparing the total liabilities of the company with its total assets, reflecting the proportion of liabilities in all assets of the company.

5) Tangible Asset Liability Ratio: The tangible asset liability ratio is calculated as total liabilities divided by tangible assets. It is an extension of the asset liability ratio and is a more objective indicator for evaluating a company's debt-paying ability.

6) Tobin's Q Value: Tobin's Q value is calculated as the market value (stock price) of the company divided by the replacement cost of the company. Tobin's Q value is used to measure whether the market value of an asset is overestimated or underestimated. When Tobin's Q value is less than 1, the market price of the company is less than the replacement cost of the company, and the operator tends to expand the company through acquisitions to establish enterprise expansion. The company will not purchase new investment goods, so investment expenditure decreases. When Tobin's Q value is greater than 1, the market price of the company is higher than the replacement cost of the company, and the company issues fewer shares while buying more investment goods, leading to an increase in investment expenditure. When Tobin's Q value equals 1, the investment and capital costs of the company reach dynamic (marginal) equilibrium.

The variable definitions are shown in Table 1.

Table 1: Variable Definitions

Variable name	Variable symbol	Variable definition
Whether to make a pandemic donation (as of March 15, 2020)	ifdonate	Dummy variable, where 1 is assigned if an epidemic corporate donation is made, and 0 if not
Return on assets	ROA	The ratio between return on investment and total investment
Closing price	stock	The volume-weighted average price of all trades in the minute before the last trade of the security of the day (including the last trade). If there is no transaction on that day, the previous closing price shall be the closing price on that day.
Earnings per share	EPS	The ratio of after-tax profits to total equity
Enterprise scale	size	The natural log of total assets at the end of the period
Asset-liability ratio	lev	Total liabilities/Total assets
Tangible debt ratio	tangible_rate	Tangible assets/Total assets
Tobin's q value	tobinQ	Market price (share price)/ Replacement cost of the business
Corporate donations	donate	Total social donations of the statistical year
Industry	industry	Dummy variables, according to the CSRC Industry Classification Standard (2012)
Time	date	Dummy variables, statistical deadlines for each indicator

3.3.4. Specification of Model

1) Propensity Score Matching (PSM)

The basic principle of propensity score matching is based on the "counterfactual framework," whereby multidimensional indicators are used to derive propensity scores for the studied individuals. According to these scores, similar individuals from the control group are matched to the treatment group, transforming multidimensional matching into score matching, thereby overcoming the mathematical computational challenges posed by dimensional problems. To overcome sample selection bias, propensity score matching is employed to match companies that made epidemic-related donations with those that did not. Individual indicators from the samples in the years 2019-2020 are selected for analysis. Based on whether epidemic donations were made, companies are divided into treatment and control groups. Companies that made epidemic donations are assigned to the treatment group, while those that did not are assigned to the control group.

First, the probability of companies making epidemic donations, i.e., the propensity score, is calculated using a Logit regression model, as follows:

$$P(X_i) = Pr[ifdonate = 1|X_i] = \frac{\exp(\beta X_i)}{1 + \exp(\beta X_i)} \quad (1)$$

Where $P(X_i)$ represents the probability of a company making epidemic donations, i.e., the propensity score of the company, X_i is the multidimensional feature vector affecting whether a company makes epidemic donations; β is the coefficient corresponding to the multidimensional feature vector.

Using equation (1), the propensity score value for each company can be calculated. Then, the nearest neighbor matching method is employed to match each company that made epidemic donations

with the most similar company that did not, and the Average Treatment Effect on the Treated (ATT) is used to evaluate the differences in financial performance and stock market performance between the treatment group and the control group.

2) Ordinary Least Squares (OLS) Regression

Ordinary Least Squares (OLS) regression seeks to find the best function match for data by minimizing the sum of squared errors. Firstly, annual data from 2018 to 2020 is selected from the sample. Regression is conducted separately for Return on Assets (ROA), Closing Price, and Earnings Per Share (EPS) to investigate the extent to which corporate epidemic donations affect corporate financial performance and the stock market. The formula is as follows:

$$EPS/stock/ROA = b_0 + b_1ifdonate + b_2size + b_3lev + b_4tangible_rate + b_5tobinQ + e \quad (2)$$

Next, annual data from 2008 to 2020 is selected from the sample. Regression is conducted separately for Return on Assets (ROA), Closing Price, and Earnings Per Share (EPS) to investigate the extent to which corporate donations affect corporate financial performance and the stock market. The formula is as follows:

$$EPS/stock/ROA = c_0 + c_1donate + c_2size + c_3lev + c_4tangible_rate + c_5tobinQ + e' \quad (3)$$

Where b_0 and c_0 represent intercepts; b_1 represents a one-dimensional vector of coefficients indicating the impact of whether the enterprise engages in epidemic donations on Return on Assets (ROA), Closing Price, and Earnings Per Share (EPS); c_1 represents a one-dimensional vector of coefficients indicating the impact of social donations on ROA, Closing Price, and EPS; b_2 and c_2 represent one-dimensional vectors of coefficients indicating the impact of enterprise scale on ROA, Closing Price, and EPS; b_3 and c_3 represent one-dimensional vectors of coefficients indicating the impact of the debt-to-asset ratio on ROA, Closing Price, and EPS; b_4 and c_4 represent one-dimensional vectors of coefficients indicating the impact of tangible asset liability ratio on ROA, Closing Price, and EPS; b_5 and c_5 represent one-dimensional vectors of coefficients indicating the impact of Tobin's q value on ROA, Closing Price, and EPS; e and e' represent residuals. The sign of b_1 reflects whether the impact of epidemic donations on corporate financial performance and the stock market is positive or negative, and the magnitude of b_1 reflects the extent of this impact. The sign of c_1 reflects whether the impact of corporate donations on corporate financial performance and the stock market is positive or negative, and the magnitude of c_1 reflects the extent of this impact.

4. Empirical Analysis

4.1. Descriptive Statistics

Table 2 reports the observations, means, standard deviations, minimum and maximum values of all selected variables (excluding industry and time). The statistical results show that 4.87% of the sample companies engaged in epidemic donations. The mean return on assets (ROA) is 4.738%, with a minimum of 0.0001% and a maximum of 6482%, indicating a considerable disparity. The mean earnings per share (EPS) is 0.28 yuan, with a standard deviation of 0.478. The maximum EPS is 6,428 yuan, suggesting that apart from a few large values, the overall data differences are relatively small. The mean closing price is 15.99 yuan, with a standard deviation of 20. The minimum price is 0.68 yuan, and the maximum is 1,669 yuan, indicating significant data disparities. Furthermore, the standard deviations of the debt-to-asset ratio, tangible asset liability ratio, and Tobin's q value are 460, 25.67, and 239.9, respectively, showing notable data disparities as well. The mean of social donation amount is 0.48, indicating an overall modest amount.

Table 2: Descriptive statistics

Variable	Observed value	Mean value	Standard deviation	Minimum value	Maximum value
ifdonate	122 926	0.00487	0.0696	0	1
ROA	122 926	4.738	26.27	0.0001	6 482
EPS	122 926	0.28	0.478	0.0001	32.8
stock	122 926	15.99	20	0.68	1 669
size	122 926	22.03	1.372	10.84	28.64
lev	122 926	48.11	460	0.024	130 334
tangible_rate	122 926	85.68	25.67	0.0153	4 420
tobinQ	122 926	4.391	239.9	0.153	43 075
donate	122 926	0.48	1.629	0	18.92

Table 3 reports the correlation coefficients between explanatory variables. From the coefficients in the table, it can be observed that the correlation coefficients between explanatory variables are all less than the multicollinearity threshold of 0.7. This indicates that there is no severe multicollinearity among the explanatory variables, which will not interfere with the subsequent regression results.

Table 3: Correlation index

	donate	size	lev	tangible_rate	tobinQ
donate	1				
size	0.011*	1			
lev	0	-0.052***	1		
tangible_rate	-0.022***	-0.212***	0.004	1	
tobinQ	0	-0.066***	0.209***	0.007	1

Note: ***, **, and * indicate significance levels at the 1%, 5%, and 10% levels, respectively. The same applies below.

4.2. Propensity Score Matching (PSM)

4.2.1. Propensity Score Estimation

Table 4: The influence of internal factors on corporate donation decision under epidemic situation

Variable	ifdonate
EPS	0.018*** (3.44)
size	0.041*** (10.84)
lev	0.000 (0.34)
tangible_rate	0.000 (0.70)
ROA	0.000 (0.93)
Observations	3650
Adjusted R-squared	0.052
industry FE	YES

Note: The numbers in parentheses represent z-values or p-values. The same applies below.

Propensity scores are estimated using a logistic regression model. Then, companies that made donations during the epidemic are matched with those that did not. This matching process helps in identifying control group companies for those that made donations during the epidemic. Regression

results are presented in Table 4.

From the results, it can be observed that there is a significant positive correlation between whether the company engages in epidemic donations and earnings per share, as well as with the company's scale. However, there is no significant correlation between epidemic donations and asset return rate or asset-liability ratio.

4.2.2. Matching Effect Test

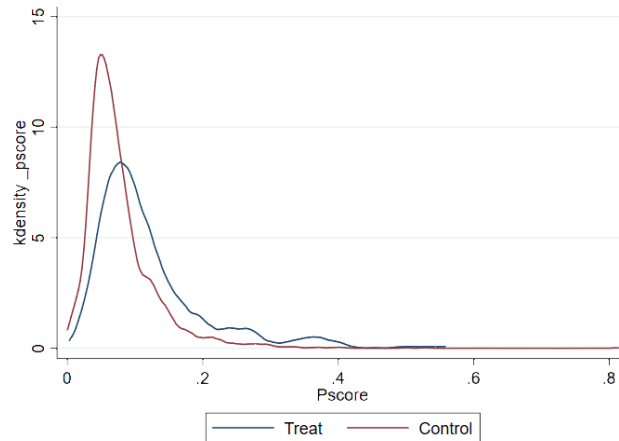


Figure 1: The propensity score values before sample matching

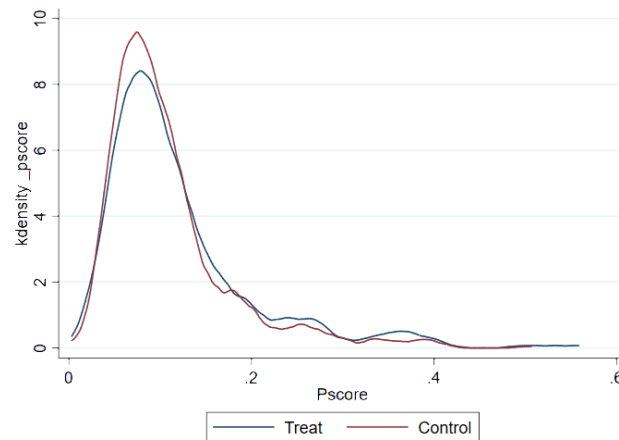


Figure 2: The propensity score values after sample matching

The study employed the nearest neighbor matching method to examine the matching effect. Figures 1 and 2 respectively present the propensity score values before and after PSM matching. The visibly increased overlap in the common support area between the treatment and control groups post-matching demonstrates a good matching effect.

Table 5 presents the results of the matching balance test. The table indicates that before matching, the standardized differences in ROA, firm size, and EPS are all greater than 10%, which significantly decrease after matching. Specifically, ROA and firm size decrease to within 10%. Before matching, the p-values for EPS, ROA, and firm size are all less than 10%, while after matching, the p-values for ROA and firm size are greater than 10%. After matching, all indicators except EPS have p-values greater than 10%, indicating no significant differences between the treatment and control groups. In summary, the imbalance in all matching variables is significantly reduced, thus passing the balance

test.

Table 5: Match balance test

Variable	Matching type	Mean value		Standardization deviation	T-test	
		Treatment group	Anchoring group		T-value	P-value
EPS	Before matching	0.7662	0.3535	37.7	6.36	0.000
	After matching	0.7662	0.6143	13.9	1.93	0.054
size	Before matching	23.039	22.171	60.2	10.76	0.000
	After matching	23.039	23.046	-0.5	-0.06	0.953
Lev	Before matching	43.625	44.952	-3.0	-0.40	0.693
	After matching	43.625	43.34	0.6	0.17	0.863
tangible_rate	Before matching	41.975	42.113	-0.5	-0.08	0.993
	After matching	41.975	42.744	-2.9	-0.40	0.687
ROA	Before matching	7.781	4.6257	26.3	3.83	0.000
	After matching	7.781	8.79	-8.4	-0.68	0.498

4.2.3. Matching Result Analysis

Table 6: Match result

Variable	Sample matching	ATT	Standard deviation	T-value
ROA-2020 year	Before matching	1.4428	0.28	5.16***
	After matching	2.9991	0.35	2.76***

The matching results are presented in Table 6. The table displays the estimated Average Treatment Effect on the Treated (ATT) values, which analyze the impact of whether companies engage in epidemic donations on the Return on Assets (ROA). The table shows that the ATT value before matching is 1.4428, while after matching, the ATT value is 2.9991, passing the significance test at the 1% level. It can be concluded that epidemic donations by companies have a positive impact on the ROA.

4.3. Ordinary Least Squares Regression (OLS)

4.3.1. Regression Analysis of the Impact of Corporate Decision on COVID-19 Donations on Financial Performance and Stock Market

To further explore the extent to which corporate COVID-19 donations impact the return on total assets, regression analyses were conducted separately for three indicators: total asset return rate, earnings per share, and closing price, with the corporate decision on COVID-19 donations as the

independent variable. The regressions controlled for industry variables. The regression results are presented in Table 7.

Table 7: The Impact of Corporate Donation Decisions on Financial Performance and Stock Market under COVID-19

Variable	ROA	EPS	stock
ifdonate	1.507***	0.238***	8.552***
	(4.68)	(3.96)	(4.99)
size	0.028	0.105***	3.526***
	(0.44)	(11.97)	(7.61)
lev	0.020	-0.001**	-0.188***
	(1.50)	(-2.47)	(-13.34)
tangible_rate	0.013***	0.001***	0.041***
	(3.74)	(5.23)	(8.66)
tobinQ	0.565***	0.044***	4.698***
	(6.95)	(6.64)	(10.39)
Constant	4.444***	-1.593***	-23.340*
	(3.71)	(-7.12)	(-1.78)
N	35341	35341	35341
Adjusted R-squared	0.056	0.046	0.121
industry FE	YES	YES	YES

Table 7 regression coefficients show that the regression coefficient for whether the company made pandemic donations on total asset return is 1.507, on closing price is 8.552, and on earnings per share is 0.238, all significant at the 1% level. Therefore, we cannot reject hypotheses H1 and H2, indicating that under the pandemic, corporate donations have a significant positive impact on both financial performance and the stock market.

4.3.2. Regression Analysis of the Impact of Corporate Donations on Corporate Financial Performance and Stock Market

Table 8: The Impact of Corporate Donations on Corporate Financial Performance and Stock Market

Variable	ROA	EPS	stock
ldonate	-0.18**	-0.04***	-0.43
	(-1.99)	(-9.58)	(-1.19)
lsize	-1.51**	0.10***	-0.65***
	(-2.19)	(16.37)	(-2.96)
llev	0.426	0.005*	-0.200
	(0.61)	(1.81)	(-1.54)
ltangible_rate	-0.011*	0.002***	0.127***
	(-1.67)	(4.37)	(6.50)
ltobinQ	0.054	0.000	-0.001***
	(1.11)	(1.40)	(-3.74)
Constant	43.201***	-1.507***	58.908**
	(3.04)	(-5.32)	(2.25)
Observations	29362	29362	29362
Adjusted R-squared	0.149	0.047	0.075
industry FE	YES	YES	YES
year FE	YES	YES	YES

This paper will further expand the scope of research to explore whether corporate donations have a positive impact on corporate financial performance and stock market during 2008-2020. Conducting

ordinary least squares regressions on three indicators, namely total asset return rate, earnings per share, and closing price, along with corporate social donation amount. Controlling for industry and time variables. Regression results are presented in Table 8.

Table 8 regression coefficients indicate that corporate social donations have a slightly negative impact on total asset return rate at a significant level of 5%, with a regression coefficient of -0.000000018. The regression coefficient for corporate social donations on closing price did not pass the t-test, indicating no significant impact. Corporate social donations have a slightly negative impact on earnings per share at a significant level of 1%, with a regression coefficient of -0.000000004. In summary, we can reject hypotheses H3 and H4, indicating that corporate donations do not have a significant positive effect on corporate financial performance and the stock market.

5. Conclusions and Recommendations

5.1. Conclusion Analysis

Corporate donation behavior has been extensively discussed and researched in academia, leading to a wealth of research findings. In this study, we analyze the impact of corporate donations on corporate financial performance and the stock market in the context of the COVID-19 pandemic and draw two conclusions: First, under the pandemic, corporate donations have a significant positive effect on corporate financial performance and the stock market. Second, corporate donations do not have a significant positive effect on corporate financial performance and the stock market. The analysis of these conclusions is as follows.

5.1.1. External Policy Factors

During the COVID-19 pandemic, there was a shortage of medical supplies, daily necessities, and other essential goods, prompting the urgent need for humanitarian assistance from various sectors. Consequently, governments relaxed existing policies and issued multiple incentives to encourage corporate social donations. Enterprises engaging in pandemic-related donations were provided with more favorable conditions. As a result, these enterprises benefited from policy incentives, indirectly enhancing their operational efficiency.

5.1.2. Internal Decision Factor

1) Corporate Donation Cost Consumption

The costs incurred by corporate donations, including cash, goods, and pro bono services, fall within the category of direct costs for the enterprise. The increase in direct costs directly affects the financial performance of the enterprise and indirectly impacts its stock market performance. Additionally, enterprises may need to hire specialized personnel or teams, or establish departments and institutions responsible for designing social donation programs. If the benefits obtained from corporate donations are insufficient to offset the costs incurred, it may have a negative impact on the financial performance and market performance of the enterprise. Furthermore, corporate donations reduce the free cash flow of the enterprise, which, in turn, leads to a decrease in earnings. If the improvement in enterprise performance brought about by donations cannot offset the decrease in earnings, the positive impact of corporate donations on financial performance may be outweighed by negative consequences. Moreover, the reduction in free cash flow adversely affects the enterprise's operations, undermines its competitiveness within the industry, hinders its ability to increase market share, and ultimately results in negative effects on financial performance and stock market performance.

2) Corporate Donation Return Cycle

Generally, corporate donations do not immediately translate into improvements in financial performance or a positive trend in the stock market. The impact of corporate donations on financial performance and the stock market is an indirect process. If corporate management believes that the effect of corporate donations does not meet expectations, they may reduce the corporate donation budget, leading to damage to the corporate social image and thereby affecting the financial performance and stock market performance of the enterprise. During periods of major unexpected social public events, the return cycle of corporate donations is correspondingly shorter than in times without such events, meaning that the impact of corporate donations on financial performance and market performance is more pronounced. However, identifying a scientifically accurate and universally applicable return cycle requires further in-depth research.

3) Agency Cost Theory

Some corporate management teams are willing to engage in corporate donations to maintain a positive image during their management processes. However, from the perspective of maximizing shareholder interests, corporate donations are charitable acts that do not directly or clearly benefit the enterprise. Therefore, shareholders do not want excessive corporate donations. Moreover, as corporate donations increase, they may not enhance returns by improving the corporate social image but instead may negatively affect profits, thereby impacting financial performance and the stock market.

In summary, the factors influencing the impact of corporate donations on financial performance and the stock market are extremely complex. The conclusions of this study provide some reference for corporate decision-making regarding corporate donations. However, deeper research is needed to understand the underlying mechanisms of how corporate donations affect financial performance and the stock market.

5.2. Propose

5.2.1. Allocate Internal Resources Properly

Small and medium-sized enterprises (SMEs) at the stage of development often face resource constraints, and significant donations can easily lead to a decrease in enterprise efficiency. Enterprises are aggregations of resources, and competition among them often revolves around resource competition. With limited resources, SMEs need to make prudent decisions regarding social donations. Within a reasonable scope, they should establish a virtuous cycle between internal and external social resources, benefiting mutually.

5.2.2. Establish a Good Corporate Reputation and Image

The benefits of corporate donations and the corporate social image are not a matter of causality but rather a mutually reinforcing and interdependent relationship. Establishing a positive social image helps facilitate the exchange of internal and external resources, thereby promoting the enhancement of corporate financial performance and stock market position through corporate social donations.

5.2.3. Establish a Sound Cost Management System

Under market economy conditions, enterprises should adopt a systematic management approach to costs, treating cost management as a comprehensive system project. This approach emphasizes the holistic and overall perspective, conducting comprehensive analysis and research on the objects, content, and methods of cost management within the enterprise. This not only benefits enterprises in making correct decisions regarding social donations but also contributes to their long-term development.

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