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Examining the Interactive Effect of Advertising Investment and Corporate Social Responsibility on Financial Performance

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Abstract: This article explores the interactive effect of advertising investment and corporate social responsibility (CSR) on financial performance by selecting 2431 listed companies that participated in the professional evaluation of Hexun.com as the research sample, with a total of 12,471 observed values. The panel regression, analysis and hypotheses tests were conducted to examine the interactive effect of advertising investment and CSR on financial performance. There are four empirical findings. First, an advertising investment plays a significant role in improving corporate financial performance. Second, actively fulfilling CSR can effectively upgrade the financial performance of an enterprise. Third, different functional mechanisms will not change the positive impact of CSR on financial performance. Fourth, the interaction between advertising investment and CSR has a significant positive correction on financial performance. Combining the advertising investment with CSR they have a remarkable complementary effect on financial performance. Based on these findings, this article claims that to maximize the advertising effect, company managers should actively carry out business activities and conduct appropriate advertising investments from the perspective of CSR. In other words, to enhance the return on marketing activities and strengthen the promotion of financial performance by advertising investment, company managers should pay more attention to fulfilling CSR and take advantage of the reputational and social images generated by CSR to bring greater market value and financial growth.

Keywords: interactive effect; advertising investment; corporate social responsibility; financial performance; complementary effect

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1. Introduction

As the social environment changes, important stakeholders (such as the government, suppliers, consumers, etc.) often control the key resources related to the survival and development of enterprises (Frooman 1999). Therefore, through image and reputation management, enterprises can win the recognition and support of stakeholders, and further obtain the needed resources (Pfeffer and Salancik 1978). As an important way for companies to shape their own reputation, advertising can effectively increase their reputation in the market and improve their brand value (Liu 2018). Actually, the average annual growth rate of Chinese corporate advertising investment in the past decade has exceeded 10% (Niu and Wang 2017). Advertising investment is an important form of a company's intangible asset investment, which can demonstrate competitiveness and predictably affect the company's future cash flow scale and diversity (Huang and Wen 2018). So, when companies are increasing sales and market share, they must fully consider the impact of advertising investment on corporate performance to control the cost well.

CSR is one of the practices strategically implemented in recent years by the business community, and it can be defined as international private business self-regulation (Sheehy

2015). From different academic reflections, it is a successful practice that consists of the voluntary commitment of companies to provide value to society through its activities, generating a triple economic-social-environmental impact on its environment (Lee and Yang 2022). CSR has lately been seen as an important feature in contemporary business, and plays a special role in the sustainable development of enterprises. At the end of the 1990s, about 90% of enterprises began to regard CSR as a core component of their corporate goals. More and more corporations are taking an interest in CSR. On 21 May 2020, the "Country Garden Hurun China Social Entrepreneurship 2020" pointed out that the number of companies that published CSR reports in China increased from 32 reports in 2006 to 2907 in 2018. At the same time, the content of CSR research is becoming more extensive and deeper, which shows that CSR is more valued in China.

Advertising and CSR have become strategic choices, affecting corporate reputation and brand image (Jahdi and Acikdilli 2009). The marketing literature suggests that Advertising and CSR could improve the image and reputation of companies before consumers and allow them to achieve corporate reputation, which has reach as an enterprise synonym for identity, image, goodwill, esteem, and prestige (Guo et al. 2022). In the past, most studies have discussed the impact of advertising investment or CSR on financial performance, respectively, and rarely comprehensively discussed the impact of advertising investment and CSR on financial performance. This paper focuses on what kind of relationship does advertising investment and CSR have on financial performance. Is it a "substitution effect" or "complementary effect"? We will explore it further below.

Through combing current research status, many scholars mainly focus on the relationship between advertising investment and financial performance, or the relationship between CSR and financial performance, while few of the literature put the above three factors into the same framework for research. Based on this, this article tries to propose that advertising investment and CSR not only have a direct impact on financial performance, but when coexisting in the company, these two may interact with each other to adjust their influence on financial performance. Therefore, this article uses "advertising investment and CSR" as the interactive term to discuss its interactive effects in the process of influencing financial performance.

Based on the stakeholder theory, signaling theory, and reputation theory, the research idea is that advertising investment and CSR will not only directly affect financial performance, but also affect each other. One is the behavior of enterprises to promote CSR through advertising can improve the social image, thereby enhancing financial performance. On the other hand, CSR improves corporate reputation and wins public recognition and favor, thereby expanding advertising effect and enhancing financial performance. Specifically, to a certain extent, CSR can bring a good social image and positive reputation capital to the company, which will be the key clues and cognition for consumers to check the effectiveness and reliability of marketing campaigns. This will further stimulate the market to have positive feedback for these advertisements so as to achieve the promotion effect of advertising investment on corporate financial performance.

2. Literature Review and Hypothesis Development

2.1. The Impact of Advertising Investment on Financial Performance

Advertising is an important tool for corporates to increase brand awareness and expand market share, and will affect financial performance. Research has fully shown that advertising investment can beneficially affect a corporate competitive position, product/service competitive advantage, consumer preference, and brand image. Companies can increase advertising budgets to improve sales and dilute the unit product cost, thereby reducing the risk of higher sales prices caused by rising production costs. Through further studying 125 companies in America, advertising investment can deepen corporate differentiation and generate brand premium, bringing positive effects to financial performance (Peterson and Jeong 2010). From the perspective of analysts, Luo and de Jong (2012) use a large longitudinal dataset with 1052 companies over 20 years to analyze the impact of advertising spending on firm value. The result shows that by disclosing advertisement spending information, companies can effectively reduce financial risks and create financial value. These findings indicate that if analysts discover more advertising spending and reflect it in their earnings forecast, advertising benefits are more likely to convert to financial value. By taking the Turkish banking industry as a research sample, Acar and Hüseyin (2017) proved that there is a significant positive correlation between advertising costs and financial performance. Through studying listed companies in South Korea from 2012 to 2026, Xu et al. (2019) found that for large companies, there is a significant positive correlation between advertisement and financial performance. At the same time, some scholars also believe that the impact of advertising investment on financial performance is diverse. For example, by using 30-year data from 1175 U.S. companies as the research sample, Steenkamp and Fang (2011) found that advertising has a significant contribution to financial performance, but it will change as the business cycle changes. During the economic contraction period, advertising investment has a greater impact on profits and market share. Through research on the data of 1754, A-share listed companies in China, Huang and Wen (2018) found that advertising expenditures have a significant promotion effect on the ROA and Tobin's Q value, and the effect on the next two periods is still obvious. The research further shows that advertising investment can not only enhance brand effect and brand awareness but also enhance the corporate value and reputation, finally achieving company premiums. In further analysis, Sun and Huang (2013) found that among large-scale enterprises and state-holding enterprises in China, advertising spending can significantly promote financial performance. Chen and Xing (2019) explored the impact of marketing ability on the interactive relationship between "corporate philanthropy and corporate performance" from a market perspective. The result shows that the stronger the marketing capabilities of China companies, the stronger role of corporate philanthropy in improving financial performance.

Based on previous research, the signaling theory, proposed in 1973 by the American Nobel laureate in economics, Michael Spence, indicates that advertising can alleviate asymmetric information and, to a certain extent, can inform the quality of products/services to consumers. This kind of signal can effectively reduce consumer search costs, increase product demand, improve product/service awareness and consumer brand loyalty, and achieve sales growth and performance improvement. (Wu and Huang 2018). Next, according to the reputation theory proposed by Kreps and Wilson (1982), advertisements can create brand image, provide the value of intangible assets, reduce risks in all kinds of markets, and have a positive role in financial performance (Luo and de Jong 2012). According to the above analysis, this article comes up with the following hypothesis:

H1 (Advertising strengthens financial performance hypothesis)**.** *Advertising investment has a positive impact on financial performance.*

2.2. The Impact of CSR on Financial Performance

Margolis et al. (2009) have given evidence of an overall positive relationship between CSR and firm performance. So actively fulfilling CSR can help companies increase competitive advantages and enhance financial performance by affecting marketing orientation. Details are as follows:

Firstly, build a positive brand image and create new revenue growth points as follows: from the perspective of theoretical analysis, Cornell and Shapiro (1987) pointed out that CSR can meet the self-benefits of stakeholders except for shareholders and also help companies improve reputation and social image, thereby increasing financial performance. Zhu et al. (2014) believe that as the market becomes more competitive, traditional products/services bring lower market premiums to companies. Therefore, actively responding to the requirements of stakeholders, taking the initiative to commit to social responsibility, and seeking business strategy for added value can build a positive brand image and bring good market premiums. Saeidi et al. (2015) used 205 Iranian manufacturing and consumer products companies as the research sample to explore the relationship between CSR and financial performance. The result demonstrates that CSR can increase financial performance indirectly by improving reputation, brand image, and competitive advantages. Rossi et al. (2021) applied linear regressions with panel data using the Thomson Reuters ASSET4 database from European countries in analyzing data from 225 listed companies between 2015 and 2019. The results indicate a positive effect between CSR practice and the firms' financial performance. Higher financial performance is experienced by firms that are more involved in CSR operations.

Secondly, reduce the agency costs and the uncertainty of development and enhance the revenue growth capacity as follows: implementing active CSR strategy can weaken the degree of asymmetric information between enterprises and stakeholders, greatly alleviate the financing constraints, reduce the agency costs of managers, and improve corporate performance (Ran et al. 2016). Wang and Tian (2017) selected 260 company environment protection events in China as empirical research samples. They found that publishing environment protection events can improve the social value and market value and bring excessive profits to stakeholders. However, the announcement of adverse environmental events sometimes will reduce the stock value in the short term. In addition, CSR can be used as a special signaling tool to effectively reduce the cost for investors to obtain target information and exclude noise, improve financing capabilities, reduce the financial risks, debt default risks, and idiosyncratic risks, and bring significant growth to financial performance (Zhang and Wei 2021; Zhou et al. 2020; Jiang 2019; Jo and Na 2012). Akisik and Gal (2016) found that CSR reports, after strict examination and effective internal control, can greatly reduce the potential risks of corporate management and contribute to the sustainable growth of financial performance. Using the Tobit model and threshold regression model, Yang (2016) concluded that active CSR implementation plays a key role in improving company effectiveness, financial performance, and revenue growth capability. Kaur and Singh (2021) confirm that companies investing in CSR activities are proficient in generating higher returns for their shareholders and can raise their sales by increasing demand for products that perhaps enhance profitability and overall development of the companies.

In conclusion, based on stakeholder theory and reputation theory, this article suggests that winning the recognition and trust of stakeholders from CSR activities can greatly improve corporate reputation, build a positive social image, and can also reduce the risk of uncertainty in the development, ultimately bringing the improvement of financial performance and company value. Therefore, this article comes up with the following hypothesis:

H2 (CSR strengthens financial performance hypothesis)**.** *CSR has a positive impact on financial performance.*

Baron (2001) first divided CSR into strategic corporate social responsibility (strategic CSR) and altruistic corporate social responsibility (altruistic CSR). From the perspective of behavioral motivation, he used "strategic CSR" to represent corporate strategic behavior that takes social responsibility with the purpose of maximizing profits. Based on this, this article further explores the impact of CSR on financial performance in different dimensions. Oh et al. (2017) believed that strategic CSR is a business activity in which companies acquire profits through their professional knowledge of products and services. Actively achieving strategic CSR has a positive promotion effect on financial performance. Fu et al. (2018) believe that strategic CSR is a social responsibility behavior that starts from the strategic dimension, contains CSR into the corporate strategic vision, and closely connects to the implementation of development goals. Cui and Li (2018) came up with the theory that strategic CSR is the social responsibility performed for shareholders, employees, suppliers, customers, and consumers. Besides, strategic CSR supporters Walker and Kent (2013), Quan et al. (2015) pointed out that active implementation of CSR is beneficial to promoting social status and is a way to build a good reputation and win high praise, playing a significant role in sustainable development. Chen (2004) found that strategic CSR can help companies establish positive interactions with stakeholders, and the implementation of strategic CSR can significantly enhance the advantages. Sayekti (2015) considered the stakeholder theory and believed that CSR is the strategic investment behavior of companies, which can affect consumers' responses and decisions to a certain extent. So, CSR has invisible marketing and reputation effects, and creates competitive advantages for companies, thereby boosting financial performance. Therefore, this article comes up with the hypothesis below:

H2a (Strategic CSR strengthens financial performance hypothesis)**.** *Strategic CSR has a positive effect on financial performance.*

In contrast, Lantos (2001, 2002) came up with the idea of "Altruistic CSR," which focuses on the benefits of various stakeholders to help society alleviate public welfare shortage, regardless of whether it is beneficial to the corporate itself, such as charity responsibility exercised by companies. Altruistic CSR supporter Campbell (2007) believed that companies' obligation fulfillment is selfless, unrequited, completely voluntary, and reflects their image as good citizens. On this basis, Kim et al. (2012) thought companies were unable to gain direct profits from altruistic CSR and thereby regarded altruistic CSR as charitable donations. Ghosh (2020) pointed out that altruistic CSR is a kind of CSR form beyond moral behavior. Companies voluntarily contribute time or money to certain stakeholder groups, even at the expense of partial profitability.

Companies actively fulfill altruistic CSR, and perform duties of environment protection, charitable donations, etc., which can help build a positive citizenship image and can be transformed into a competitive advantage in the market (Cui and Li 2018). Bragdon and Marlin (1972) conducted an empirical study on the relationship between CSR and financial performance for the first time and found that active fulfillment of CSR and great attention to environmental protection can promote financial performance. During discussing the relationship between Chinese corporate environmental performance and financial performance, Hu (2012) found that active environmental governance can bring both environmental performance and financial performance at the same time, which is a win-win behavior. Lv et al. (2015) pointed out that altruistic CSR can reflect the selflessness of a company. Although it will increase the costs in the short team, it can fully demonstrate a contribution to the public, which will be beneficial to improving social perception and corporate reputation and reduce the risks of uncertainty. From the perspectives of stakeholders, Feng et al. (2017) analyzed 1877 U.S. firms from 1991 to 2011 and found that the impact of CSR initiatives on customers, government departments, the public, and other stakeholders is the key to improving financial performance. Sánchez-Infante Hernández et al. (2020) explored the effects of CSR in different dimensions on the financial performance of 278 Spanish companies. The result shows that when companies carry out social responsibility activities for economic growth, social harmony, and environmental protection, which can significantly improve financial performance. Therefore, this article comes up with the hypothesis below:

H2b (Altruistic CSR strengthens financial performance hypothesis)**.** *Altruistic CSR has a positive effect on financial performance.*

2.3. The Interactive Effect of Advertising Investment and CSR on Financial Performance

Advertising and CSR have become a strategic choice of behavior (Wang et al. 2014) and an important way for enterprises to improve their competitive advantages. It is needed for companies to invest considerable resources to conduct marketing campaigns and achieve CSR. Due to the limited resources, whether their investment of them can be effectively used has always been a question that business managers urgently seek to solve. Based on this, this article further explores the interactive effect of advertising investment and CSR on financial performance and compares and analyzes the differences in the interactive effects while CSR in different dimensions.

This article suggests that in addition to their respective positive impact on financial performance, advertising investment, and CSR will interact with each other and improve financial performance together. According to the reputation theory, CSR can enhance corporate reputation capital, brand recognition, and customer loyalty, and advertise itself as a company with a sense of social responsibility. In recent years, consumers have paid more attention to CSR implementation and use this to measure corporate social image. Therefore, the research on CSR and consumer awareness will be the focus of future research (Kim et al. 2010). Through combing the existing research, the interactive effect of advertising investment and CSR has the following forms:

First, advertising investment positively regulates the impact of CSR on financial performance. Jahdi and Acikdilli (2009) argued that marketing tools, such as advertisements, can play a major role in conveying information on CSR and a more socially responsible image. Zhao et al. (2015) found that, in China, corporate visibility positively regulates the relationship between CSR and financial performance. Therefore, during taking CSR, companies should pay more attention to strengthening advertising and other marketing activities to increase corporate visibility, thereby promoting financial performance. Based on the perspective of consumer cognition, Hu et al. (2016) mainly explored the mechanism of Chinese companies' CSR on market value. The results showed that the interaction between CSR and advertising intensity has a significant positive impact on market value, and they proposed that when actively fulfilling CSR, companies should utilize advertisement to enhance customers' sense of identity, expand market share and, finally, increase the corporate value. Through the method of group testing, Guo and Hu (2016) explored the moderating effect of the marketing capabilities of Chinese listed companies on the relationship between CSR and financial performance from 2010 to 2014. The result shows that the stronger company's marketing capabilities, the greater effect of CSR on improving financial performance. Rahman et al. (2017) used 264 U.S. companies in the KLD Research & Analytics, Inc. (KLD) Social Ratings Database from 2000 to 2009 as a research sample to investigate the moderating effect of advertising intensity on the relationship between CSR and marketing performance. The result shows that the more advertising spending, the stronger the positive relationship between CSR and marketing performance. Some scholars have also explored from the perspective of charitable donations, an important manifestation of CSR. For example, Chen and Xing (2019) researched the influence of marketing capabilities on the relationship of "philanthropy -corporate performance" from the market perspective. The result demonstrates that the stronger a company's marketing capabilities, the greater effects of philanthropy on improving corporate performance. Gu and Ouyang (2017) based on Chinese listed companies from 2008 to 2014 and concluded that for companies with a higher degree of marketization and higher marketing level, their charitable donations could strengthen financial performance better. Zhang et al. (2010) used the data on Chinese firms' philanthropic response to the 2008 Sichuan earthquake and found that advertising intensity is positively correlated with the possibility and amount of corporate donations. At the same time, this positive advertising intensity philanthropic giving relationship is stronger in competitive industries, and firms in competitive industries are more likely to donate.

Secondly, CSR positively regulates the impact of advertising investment on financial performance. According to the signaling theory, enterprises' active engagement in CSR can show a sense of social responsibility and send positive signals to consumers through advertising and other marketing communications tools. Finally, it can build a good image in the market to further improve financial performance (Qian et al. 2015a, 2015b). Roberts and Dowling (2002) stated that CSR could bring a positive reputation effect, which can maximize the advertisement returns and corporate value and thereby greatly increase sales. Assaf et al. (2017) selected hotel and restaurant industries in the United States to find out the potential influence of CSR on the relationship between advertising investment and corporate performance. The result proved that CSR positively regulates the relationship between advertising spending, corporate revenue and value, and companies with higher CSR levels always have higher benefits from advertising investment. From the perspective of investors, Yim et al. (2019) took 265 U.S. companies in 8 different industries as the research sample and pointed out that the synergy between marketing capabilities and CSR reduces the asymmetric information between a firm's socially responsible business practices and its customers. Through advertising activities, companies show their CSR and confidence in product quality, which can improve corporate reputation, reduce shareholders' concerns about future performance expectations, enhance shareholders' investment confidence, increases the positive cash flow, and, in turn, result in positive financial performance. From the consumer perspective, companies' active CSR fulfillment and advertisement can alleviate the information asymmetry between consumers and companies, reduce consumer perceived risks and market transaction costs, and increase purchasing intentions. In the opinion of most consumers, if a company can actively perform CSR, it is usually responsible, reliable, and trustworthy, which can enable consumers to positively respond to the company's advertisement. In addition, combined with the reputation theory, this article can conclude that actively fulfilling CSR can accumulate reputation capital for the company. Moreover, it can provide positive clues to consumers to check the reliability and effectiveness of marketing activities, and ultimately strengthen performance growth brought by advertising investment.

The above statements both demonstrate that advertising investment and CSR can play a moderating role in the process of affecting corporate financial performance by the other one. The specific performance of the interactive effect between advertising investment and CSR on financial performance is as follows: advertising investment positively regulates the impact of CSR on financial performance. Moreover, CSR positively regulates the impact of advertising investment on financial performance. Just because of the mutual adjustment to promote financial performance, companies actively undertaking CSR and reasonable advertising investment can play a complementary effect on financial performance, in which "1 + 1 > 2". Due to the complementary effect, companies need to pay attention to advertising investment while undertaking CSR. Therefore, for companies, advertising investment and CSR have complementary effects that reinforce each other, which is an integrated strategy decision. Based on this and from the two dimensions of CSR, this article proposes the following hypotheses:

H3 (The interaction between advertising investment and CSR strengthens the financial performance hypothesis)**.** *Advertising investment and CSR have an interactive effect on financial performance (complementary effect).*

H3a (The interaction between advertising investment and strategic CSR strengthens the financial performance hypothesis)**.** *Advertising investment and strategic CSR have an interactive effect on financial performance (complementary effect).*

H3b (The interaction between advertising investment and altruistic CSR strengthens the financial performance hypothesis)**.** *Advertising investment and altruistic CSR have an interactive effect on financial performance (complementary effect).*

In summary, the research model of this article is shown in Figure 1.

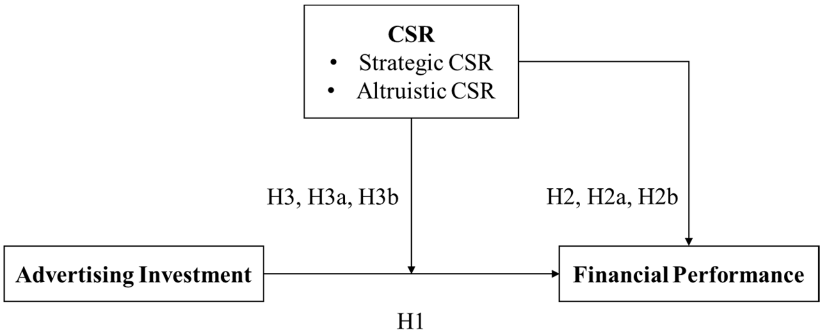

Figure 1. Research model of advertising investment, CSR, and financial performance.

3. Research Design

3.1. Research Model

To verify the effect of advertising investment on financial performance, the effect of different dimensions of CSR on financial performance, and the interactive effect of advertising investment and CSR on financial performance, this paper follows the below two steps to building an empirical model:

The first step is to empirically analyze the effect of advertising investment on financial performance and the effect of different dimensions of CSR on financial performance. The empirical model refers to the research models of Zhang et al. (2010), Assaf et al. (2017), and Yim et al. (2019). The research model of Zhang et al. (2010) mainly focused on the relationship between corporate philanthropy and advertising investment. In fact, corporate philanthropy is one category of CSR, and it is an important way for companies to fulfill their social responsibilities. Therefore, based on the research model of Zhang et al. (2010) and combined with the research model of the synergy effect of CSR and advertisement on the financial performance of Yim et al. (2019), this article draws the following research model on advertising investment, CSR and financial performance as shown in the following Model (1):

First, from Model (1), we can observe the regression coefficient α_1 between advertising investment (*Ln_AE*) and financial performance (*Tobin_Q*). If the number is positive, it means that advertising investment can positively affect financial performance.

$$\begin{aligned} Tobin\_Q_{i,t} = \alpha_0 + \alpha_1\, Ln\_AE_{i,t} + \alpha_2\, Ln\_RD_{i,t} + \alpha_3\, Ln\_Size_{i,t} + \alpha_4\, Lev_{i,t} + \alpha_5\, Ln\_Age_{i,t} \\ + \alpha_6\, Soe_{i,t} + \alpha_7\, MI_{i,t} + \alpha_8\, Ind_{i,t} + \alpha_9\, Year_{i,t} + u_{i,t} \end{aligned} \quad (1)$$

In addition, to divide the CSR into different dimensions, this article respectively substitutes corporate social responsibility (*CSR*), strategic CSR (*St_CSR*), and altruistic CSR (*Al_CSR*) into CSR of Model (2) to explore and the corresponding models are represented as (2-1), (2-2), (2-3); regress Model (2) and observe the regression coefficient β_1 between corporate social responsibility (CSR) and financial performance (*Tobin_Q*). If the number is positive, it means that advertising investment can positively affect financial performance.

$$\begin{aligned} Tobin\_Q_{i,t} = \beta_0 + \beta_1\, CSR_{i,t} + \beta_2\, Ln\_RD_{i,t} + \beta_3\, Ln\_Size_{i,t} + \beta_4\, Lev_{i,t} + \beta_5\, Ln\_Age_{i,t} \\ + \beta_6\, Soe_{i,t} + \beta_7\, MI_{i,t} + \beta_8\, Ind_{i,t} + \beta_9\, Year_{i,t} + \theta_{i,t} \end{aligned} \quad (2)$$

In the second step, to test whether there is an interactive effect between advertising investment and CSR on financial performance, this paper refers to the moderating effect model of CSR on advertising investment and financial performance of Assaf et al. (2017) and introduces the interaction of "advertising investment and CSR". At the same time, to avoid multicollinearity, this article builds the interaction term after decentralizing the two variables. In addition, this article respectively substitutes corporate social responsibility (*CSR*), strategic CSR (*St_CSR*), and altruistic CSR (*Al_CSR*) into CSR of Model (3) to explore, and the corresponding models are represented as (3-1), (3-2), (3-3), the specific model is established as follows:

$$\begin{aligned} Tobin\_Q_{i,t} = {} & \gamma_0 + \gamma_1\, Ln\_AE_{i,t} + \gamma_2\, CSR_{i,t} + \gamma_3\, (Ln\_AE_{i,t} \times CSR_{i,t}) + \gamma_4\, Ln\_RD_{i,t} + \gamma_5\, Ln\_Size_{i,t} \\ & + \gamma_6\, Lev_{i,t} + \gamma_7\, Ln\_Age_{i,t} + \gamma_8\, Soe_{i,t} + \gamma_9\, MI_{i,t} + \gamma_{10}\, Ind_{i,t} + \gamma_{11}\, Year_{i,t} + \omega_{i,t} \end{aligned} \quad (3)$$

Finally, regression is drawn on the Model (3) that simultaneously adds independent variable advertising investment (*Ln_AE*), corporate social responsibility (*CSR*), and the interaction term ($Ln\_AE \times CSR$). To check the interactive effect between advertising investment and CSR, it is necessary to observe the significance and sign of the regression coefficient γ_3 of the interaction item between advertising investment and CSR ($Ln\_AE \times CSR$). If the interaction coefficient is obviously positive, the marginal effect of one variable increases with the increase in the other, so there is a complementary relationship. On the contrary, if the interaction coefficient is obviously negative, the marginal effect of one variable decreases with the increase in the other, so there is a substitution relationship. So, when the regression coefficient γ_3 of the interaction term ($Ln\_AE \times CSR$) is deemed to be positive, it indicates that advertising investment and CSR have a complementary effect on financial performance when the regression coefficient γ_3 of the interaction term ($Ln\_AE \times CSR$) is deemed to be negative, it shows that advertising investment and CSR have a substitution effect on financial performance.

It is noteworthy that in the models (1), (2), (3), i and t represent the t-th year of the i-th company, and adding *Ln* in front of the variable indicates that the variable is the value after taking the natural logarithm.

3.2. Variable Definitions

The variable definitions are shown in Table 1.

Table 1. Variable definitions.

	Symbol	Name	Definitions
Dependent variable	*Tobin_Q*	Financial Performance	Tobin's Q value, (common stock value + preferred stock book value + debt book value)/total asset book value
Independent variable	*Ln_AE*	Advertising Investment	The natural logarithm of "advertising promotion expenses"
	CSR	Corporate Social Responsibility	Social Responsibility Evaluation Index of listing companies on Hexun.com
	St_CSR	Strategic CSR	Evaluation scores on the performance of the rights and interests of shareholders, employees, suppliers, customers, and consumers in the social responsibility of listed companies from Hexun.com
	Al_CSR	Altruistic CSR	Evaluation scores of environmental and social performances in the social responsibility of listed companies from Hexun.com
Control variable	*Ln_RD*	R&D	The natural logarithm of "R&D expenditure"
	Ln_Size	Size	The natural logarithm of the total assets at the end of the year
	Lev	Debt-to-Asset Ratio	The ratio of the total debts to total assets at the end of the year
	Ln_Age	Listing Years	Ln (year of current year-year of listing + 1)
	Soe	Ownership Structure	State-owned enterprises are defined as 1, and non-state-owned enterprises are defined as 0
	MI	Marketization Index	Marketization Index of the company's location (Marketization Index)
	Ind	Industry	Dummy variables. According to the 2012 industry classification of the China Securities Regulatory Commission, the manufacturing industry uses two-digit codes, and other industries use major categories.
	Year	Year	Dummy Variables

(1) Dependent variables. With reference to Belu and Manescu (2013), this article selects *Tobin_Q* to measure the corporate financial performance. The calculation is as follows: financial performance (*Tobin_Q*) = (common stock value + preferred stock book value + debt book value)/total asset book value.

(2) Independent variables. ① Advertising investment: This article uses the "Advertising Promotion Expenses" indicator in the Choice Economic Database of East Money Information Co., Ltd. (Shanghai, China) to measure. ② CSR: Refer to the relevant literature, such as Hu et al. (2018), Shou et al. (2020), Cui and Li (2018), and select the social responsibility ranking data from Hexun.com Listed CSR database to measure. On the one hand, this indicator can evaluate the quality of CSR information disclosure. On the other hand, it can reflect CSR performance Because it is based on the stakeholder theory and from comprehensive perspectives of employees, stockholders, consumers, creditors, community, government, environmental protection, etc. So, the measurement of CSR is comprehensive and authoritative. It should be noted that the higher the CSR, the better the performance of the CSR. In addition, to further distinguish strategic CSR (*St_CSR*) from altruistic CSR (*Al_CSR*), this article refers to Cui and Li (2018). In this method, the score of strategic CSR (*St_CSR*) is the sum of scores rated for shareholder responsibility, employee responsibility, and supplier interests, customer benefits and rights while the score of altruistic CSR (*Al_CSR*) is the sum of the scores rated for environmental responsibility and social responsibility.

3.3. Sample

At first, this paper selects 2431 listed companies that participated in the professional evaluation of Hexun.com as the research sample. It should be noted that the social responsibility report evaluation index in Hexun.com's database is the disclosure of CSR performance in the previous year. For example, the CSR information disclosed by a listed company in 2011 is calculated based on the data in 2010, so the value is the CSR score in 2010.

Secondly, this article chooses 2011–2019 as the study period because the social responsibility report evaluation index disclosed by Hexun.com's database is from 2010 to 2019. However, due to the 2010 "advertising investment" data cannot be queried in the database of East Money Information Co., Ltd., China Stock Market Accounting Research (CSMAR), etc. The sample period is from 2011 to 2019.

Moreover, this article uses Stata 16.0 to demonstrate the data of samples. In the process of research data consolidation, the research samples are selected according to Table 2.

Table 2. Empirical data selection process.

Selection Process	Samples	Observations
Original Sample of Listed Corporate Social Responsibility in Hexun.com	3829	33,157
(1) Exclude the missing observations of advertising investment data	976	13,827
(2) Exclude the observations of ST and *ST companies with unstable profitability	144	3027
(3) Exclude financial industry observations with large industry differences	53	308
(4) Exclude the missing observations of other variables	225	3524
Sample Data	2431	12,471

Finally, a total of 12,471 observations of 2431 listed companies are obtained, which is unbalanced data. Besides, the empirical research data are extracted from three major databases. The advertising investment data come from the Choice database of East Money Information Co., Ltd., the CSR data come from the authoritative Hexun.com's listed corporate social responsibility database; the rest of the research data come from the CSMAR database.

4. Results and Discussion

4.1. Descriptive Statistics

Table 3 provides descriptive statistics of the main variables, including the mean, median, standard deviation, minimum, maximum, and observations.

Table 3. Descriptive statistics of the main variables.

Variables	Mean	Med	Std	Max	Min	N
Tobin_Q	3.029	2.341	2.157	12.704	0.917	12,471
Ln_AE	15.482	15.295	2.351	21.154	9.859	12,471
CSR	23.445	22.120	14.290	73.820	−3.430	12,471
St_CSR	18.032	17.480	9.724	50.530	−1.830	12,471
Al_CSR	5.418	4.160	5.830	26.770	−8.560	12,471
Ln_RD	17.759	17.744	1.385	21.406	13.779	12,471
Ln_Size	21.997	21.832	1.181	25.677	19.952	12,471
Lev	0.386	0.368	0.198	0.864	0.049	12,471
Ln_Age	8.484	6.000	7.058	25.000	0.000	12,471
Soe	0.257	0.000	0.437	1.000	0.000	12,471
MI	8.301	9.054	1.630	10.000	3.370	12,471

Note: 1. It is a descriptive statistical table of the main variables under the full sample. 2. Dependent variables are *Tobin_Q*, representing financial performance. 3. Independent variables are *Ln_AE*, *CSR*, *St_CSR*, *Al_CSR*, representing advertising investment, CSR, strategic CSR and altruistic CSR, respectively. 4. Control variables are *Ln_RD*, *Ln_Size*, *Lev*, *Ln_Age*, *Soe*, *MI*, representing R&D investment, size, debt-to-asset ratio, listing years, ownership structure, marketization index. Below is the same.

For financial performance (*Tobin_Q*), the mean value from 2011 to 2019 is 3.029. The standard deviation is 2.157, and it is 0.71 times the mean. This shows that the profitability difference among different listed companies is particularly significant. For advertising investment (*Ln_AE*), the mean, standard deviation, maximum, and minimum are 15.482, 2.351, 21.154, and 9.859, respectively, indicating that there is a large difference in advertising investment among companies. For corporate social responsibility (*CSR*), the average value is 23.445, the standard deviation is 14.290, and the value difference is comparatively large. This indicates that the performance of CSR varies greatly among companies, the performance level is relatively low, and awareness of CSR needs to be improved. Comparing CSR in different dimensions, we can find that the strategic CSR (*St_CSR*) score (the mean is 18.032) is significantly higher than the altruistic CSR (*Al_CSR*) score (the mean is 5.418), which shows that companies perform CSR mainly from the corporate strategic decision, focusing on the rights and interests of shareholders, employees, suppliers, customers, and consumers. While altruistic CSR performance is relatively weak, and more incentives and supervision from the government are urgently needed (Cui and Li 2018). In addition, the difference in control variables is also great; that is, the main research variables may vary greatly.

4.2. Correlation Test

To preliminarily analyze the relationship between advertising investment, CSR, and financial performance, this paper conducts a correlation coefficient test, as shown in Table 4. The Pearson correlation coefficient between advertising investment (*Ln_AE*) and financial performance (*Tobin_Q*) is 0.075, which represents a significant positive correlation ($p < 1\%$). It indicates that more advertising investment from companies can promote financial performance, which preliminarily verifies the H1.

Table 4. Correlation test of main variables.

	Tobin_Q	*Ln_AE*	*CSR*	*St_CSR*	*Al_CSR*	*Ln_RD*	*Ln_Size*	*Lev*	*Ln_Age*	*Soe*	*MI*
Tobin_Q	1.000										
Ln_AE	0.075 ***	1.000									
CSR	0.011	0.212 ***	1.000								
St_CSR	0.054 ***	0.194 ***	0.951 ***	1.000							
Al_CSR	−0.062 ***	0.196 ***	0.860 ***	0.662 ***	1.000						
Ln_RD	−0.150 ***	0.307 ***	0.135 ***	0.178 ***	0.038 ***	1.000					
Ln_Size	−0.415 ***	0.414 ***	0.178 ***	0.145 ***	0.193 ***	0.548 ***	1.000				
Lev	−0.360 ***	0.111 ***	−0.101 ***	−0.185 ***	0.058 ***	0.193 ***	0.549 ***	1.000			
Ln_Age	−0.256 ***	0.198 ***	−0.022 **	−0.104 ***	0.119 ***	0.144 ***	0.486 ***	0.400 ***	1.000		
Soe	−0.224 ***	0.067 ***	0.081 ***	0.033 ***	0.140 ***	0.115 ***	0.369 ***	0.315 ***	0.486 ***	1.000	
MI	0.090 ***	0.018 **	0.011	0.040 ***	−0.040 ***	0.174 ***	−0.034 ***	−0.068 ***	−0.159 ***	−0.190 ***	1.000

Note: 1. It shows the correlation test of main variables under the full sample. 2. ***, **, means reaching the significance level of 1%, and 5% respectively. Below is the same.

Regarding the relationship between corporate social responsibility (*CSR*) and financial performance (*Tobin_Q*), this article finds that the Pearson correlation coefficient is 0.011, which is not significant. Therefore, this article needs further analysis to verify the H2.

In addition, to further distinguish different dimensions of CSR, this paper calculates that the Pearson correlation coefficient between strategic CSR (*St_CSR*) and financial performance (*Tobin_Q*) is 0.054, which is a significant positive correlation at the level of 1%. It indicates that the active strategic CSR performance helps to improve the corporate financial performance, which initially verifies H2a. However, the Pearson correlation coefficient between altruistic CSR (*Al_CSR*) and financial performance (*Tobin_Q*) is -0.062, which is a significant negative correlation at the 1% level. This indicates that the performance of altruistic CSR is negatively correlated with financial performance, which is contradictory to the H2b proposed in this article. It needs to be further explored.

Meanwhile, based on the verification results of the correlation between CSR and financial performance, we can conclude that due to the different dimensions of CSR, there is a certain difference in the relationship between CSR and financial performance. So it can also reflect why there is still a certain degree of controversy in the academic community for their relationship. Therefore, it is necessary to further discuss.

This article needs to research more into the Pearson correlation coefficient between the main variables. According to the previous literature, a Pearson correlation coefficient greater than 0.7 indicates a collinearity between the indicators. From Table 4, the absolute values of the correlation coefficients among most variables in this paper are far lower than 0.7. Therefore, we can conclude that serious multicollinearity is less likely to exist in this model.

4.3. Regression Analysis and Hypothesis Testing

To verify the impact mechanism of advertising investment, CSR on financial performance, and the interactive effect of advertising investment and CSR on financial performance, this article refers to Assaf et al. (2017). First, examine the impact of advertising investment and different dimensions of CSR on financial performance, respectively. Secondly, the interaction item of "advertising investment and CSR" is introduced to verify the interactive effect; finally, carry out a robustness test.

(1) Test of the relationship between advertising investment and financial performance

Table 5 shows the regression analysis results of advertising investment and financial performance. The model passed the F test, and the F value reached a significant level, indicating that advertising investment has an undoubtedly positive impact on financial performance. The detail is as follows:

Table 5. Regression analysis results of advertising investment and financial performance.

		H1: *Tobin_Q* **Model (1)**
Constant		15.595 *** (41.132)
Independent variable	*Ln_AE*	0.098 *** (12.665)
Control variable	*Ln_RD*	0.082 *** (5.112)
	Ln_Size	−0.751 *** (−33.551)
	Lev	−1.471 *** (−15.359)
	Ln_Age	−0.011 *** (−3.829)
	Soe	−0.145 *** (−3.550)
	MI	−0.017 * (−1.750)
	Ind	control
	Year	control
N		12,471
Adjusted R^2		0.416
F		287.086

Note: 1. It is the regression analysis result of advertising investment and financial performance. 2. ***, * means reaching the significance level of 1%, and 10%, respectively. Below is the same. 3. The value in parentheses indicates the value of *t*. Below is the same.

H1 (advertising strengthens financial performance hypothesis) verifies the improving effect of advertising investment on financial performance. It has been found that the coefficient of advertising investment (*Ln_AE*) is 0.098, which is significantly positive at the 1% level. Therefore, H1 is verified, demonstrating that advertising investment has a significant positive impact on financial performance.

This shows that advertising investment and financial performance are positively correlated, and the significance is quite stable, indicating that advertising investment is indeed a strong factor driving financial performance growth. This finding is similar to the conclusions of scholars such as Acar and Hüseyin (2017), Xu et al. (2019), etc.

(2) Test of the relationship between CSR and financial performance

Table 6 shows the regression analysis results of CSR in different dimensions and financial performance. The impact of CSR, strategic CSR, and altruistic CSR on financial performance are respectively shown in Model (2-1), Model (2-2), and Model (2-3) in Table 6. The above models have passed the F test, and the F value has reached a significant level, indicating that different dimensions of CSR all have a significant impact on financial performance. The details are as follows:

Table 6. Regression analysis results of CSR in different dimensions and financial performance.

		H2: *Tobin_Q* Model (2-1)	H2a: *Tobin_Q* Model (2-2)	H2b: *Tobin_Q* Model (2-3)
Constant		15.681 *** (40.538)	15.932 *** (41.091)	15.157 *** (39.621)
Independent variable	*CSR*	0.010 *** (8.234)		
	St_CSR		0.018 *** (10.392)	
	Al_CSR			0.009 *** (3.057)
Control variable	*Ln_RD*	0.110 *** (6.863)	0.101 *** (6.286)	0.119 *** (7.451)
	Ln_Size	−0.718 *** (−32.307)	−0.731 *** (−32.837)	−0.690 *** (−31.319)
	Lev	−1.378 *** (−13.992)	−1.259 *** (−12.578)	−1.543 *** (−16.018)
	Ln_Age	−0.008 *** (−2.761)	−0.006** (−2.019)	−0.010 *** (−3.479)
	Soe	−0.211 *** (−5.171)	−0.216 *** (−5.308)	−0.196 *** (−4.802)
	MI	−0.019 * (−1.937)	−0.021 ** (−2.062)	−0.017 * (−1.646)
	Ind	Control	Control	Control
	Year	Control	Control	Control
N		12,471	12,471	12,471
Adjusted R2		0.411	0.413	0.409
F		282.027	284.223	278.834

Note: 1. It is the regression analysis results of CSR in different dimensions and financial performance. 2. ***, **, * means reaching the significance level of 1%, 5%, and 10% respectively. Below is the same. 3. The value in parentheses indicates the value of *t*. Below is the same.

H2 (Altruistic CSR strengthens financial performance hypothesis) verifies whether CSR can improve financial performance. This paper finds that H2 is valid, and the details are as follows: When H2 is established, the coefficient of corporate social responsibility (*CSR*) should be significantly positive. From the results of Model (2-1) in Table 6, the coefficient of corporate social responsibility (*CSR*) is 0.010, which is significantly positive at the 1% level. The results are consistent with expectations, indicating that active CSR performance can effectively improve the financial performance; that is, a higher CSR score always reflects better financial performance.

CSR needs to be classified according to different dimensions, and the empirical results are shown in Model (2-2) and Model (2-3). After calculation, the coefficient of strategic CSR and altruistic CSR are 0.018 and 0.009, respectively; both are significantly positive at the 1% level. The results are consistent with expectations and can verify H2a (Strategic CSR strengthens financial performance hypothesis) and H2b (Altruistic Strategic CSR strengthens financial performance hypothesis), indicating that both strategic CSR and altruistic CSR have a significant positive impact on financial performance. This conclusion is in line with the research of Chen (2004), which shows that strategic CSR can help companies establish positive interactions with stakeholders, and the implementation of strategic CSR can significantly enhance competitive advantage. Moreover, this paper finds that the coefficient of strategic CSR (St_CSR) is 0.018, while that of altruistic CSR (Al_CSR) is 0.009. The higher coefficient indicates that strategic CSR has a stronger effect on optimizing financial performance than altruistic CSR.

In summary, H2, H2a, and H2b are all valid; that is, the higher the CSR score, the better financial performance. This result is consistent with the research of Saeidi et al. (2015), Yang (2016), and so on, which can be summarized as follows. Enterprises' active CSR fulfillment is conducive to optimizing their financial performance. At the same time, the result further shows that the mechanism under different dimensions will not change the positive correlation between CSR and financial performance. Actively fulfilling strategic CSR and altruistic CSR can significantly optimize the financial performance. Based on the above conclusions, managers can take CSR as part of the business strategy, actively promote CSR in different dimensions, and use it as a marketing strategy to differentiate from competitors for the purpose of building corporate reputation and bringing revenue to shareholders. So, to create a good corporate image, companies should achieve more CSR to advertise themselves.

(3) The interactive effect test of advertising investment and corporate social responsibility on financial performance

To further test whether the interactive effect of advertising investment and CSR on financial performance exists and to explore what kind of effect it is, this article draws on the empirical method of Assaf et al. (2017) to construct Model (3). The model also includes independent variable advertising investment (*Ln_AE*), corporate social responsibility (*CSR*), and the interaction of "advertising investment and CSR" ($Ln\_AE \times CSR$). In addition, to avoid multicollinearity, this article constructs the interaction term after decentralizing advertising investment (*Ln_AE*) and corporate social responsibility (*CSR*).

H3 (The interaction between advertising investment and CSR strengthens the financial performance hypothesis) verifies the interactive effect (complementary effect) of advertising investment and CSR on financial performance. This paper finds that H3 is valid, and the detailed description is as follows: when H3 is effective, the coefficient of the interaction term ($Ln\_AE \times CSR$) needs to be significantly positive. From the results of Model (3-1) in Table 7, advertising investment (*Ln_AE*) and corporate social responsibility (CSR) have significant effects on financial performance (*Tobin_Q*). The coefficient of advertising investment (*Ln_AE*) is 0.089, which is significantly positive at the 1% level; the coefficient of corporate social responsibility (*CSR*) is 0.007, which is also significantly positive at the 1% level. These are also evidence of the establishment of H1 and H2. Meanwhile, the coefficient of the interaction term ($Ln\_AE \times CSR$) is 0.003, which is significantly positive at the 1% level. This shows that the marginal effect of advertising investment increases with the increase in CSR or CSR increases with the increase in advertising investment, confirming that the interactive effect between them on financial performance is a "complementary effect". In summary, H3 is valid; that is, advertising investment and CSR have an interactive effect (complementary effect) on financial performance.

This article needs to further distinguish the CSR dimensions. From the models (3-2) and (3-3) in Table 7, the interaction items of strategic CSR and altruistic CSR are both significant at the 1% level. The positive result verifies that H3a (The interaction between advertising investment and strategic CSR strengthens the financial performance hypothesis) and H3b (The interaction between advertising investment and altruistic CSR strengthens the financial performance hypothesis) are both valid. By comparing the coefficients of them, it can be found that the coefficient of the interactive term of strategic CSR ($Ln\_AE \times St\_CSR$) IS 0.006 and that of the interactive term is 0.005. The difference indicates advertising investment and strategic CSR have a stronger impact on financial performance than altruistic CSR. So, when companies fulfill CSR and advertise this action, they can transmit positive citizen signals to various stakeholders (shareholders, employees, suppliers, customers, consumers, etc.), establish a good social image, and finally strengthen the improvement of financial performance.

In summary, companies with higher advertising investments are more able to optimize financial performance when performing CSR. At the same time, companies with better CSR performance are more able to optimize financial performance when investing in advertising. It demonstrates that advertising investment and CSR have complementary effects in the process of optimizing financial performance. Therefore, companies can use advertising as a carrier to deepen their CSR behavior and market visibility, enhance their social image as good citizens, and achieve marketing effects. From the perspective of consumers, this action can expand the familiarity of consumers, thereby strengthening consumers' purchase intentions, value recognition, and the purchasing power of products and services. From the perspective of shareholders, this action can reduce their concerns for future performance, and enhance investment confidence, thereby enhancing the financial performance of the company further.

Table 7. Regression analysis results of the interactive effect of advertising investment and CSR on financial.

		H3: *Tobin_Q* **Model (3-1)**	**H3a:** *Tobin_Q* **Model (3-2)**	**H3b:** *Tobin_Q* **Model (3-3)**
Constant		16.315 *** (42.248)	16.573 *** (42.863)	15.785 *** (41.219)
Independent variable	*Ln_AE*	0.089 *** (11.598)	0.088 *** (11.410)	0.095 *** (12.303)
	CSR	0.007 *** (5.653)		
	St_CSR		0.014 *** (7.730)	
	Al_CSR			0.004 (1.322)
Interactive term	*Ln_AE* × *CSR*	0.003 *** (8.177)		
	Ln_AE × *St_CSR*		0.006 *** (9.559)	
	Ln_AE × *Al_CSR*			0.005 *** (4.352)
Control variable	*Ln_RD*	0.081 *** (5.037)	0.073 *** (4.535)	0.085 *** (5.304)
	Ln_Size	−0.786 *** (−34.704)	−0.797 *** (−35.200)	−0.761 *** (−33.747)
	Lev	−1.322 *** (−13.515)	−1.225 *** (−12.328)	−1.448 *** (−15.089)
	Ln_Age	−0.010 *** (−3.571)	−0.009 *** (−3.076)	−0.011 *** (−3.896)
	Soe	−0.164 *** (−4.038)	−0.171 *** (−4.218)	−0.148 *** (−3.638)
	MI	−0.021 ** (−2.078)	−0.021 ** (−2.140)	−0.019 * (−1.868)
	Ind	Control	Control	Control
	Year	Control	Control	Control
N		12,471	12,471	12,471
Adjusted R^2		0.421	0.424	0.417
F		275.717	278.960	270.817

Note: 1. It is the regression analysis results of CSR in different dimensions and financial performance. 2. ***, **, * means reaching the significance level of 1%, 5%, and 10% respectively. Below is the same. 3. The value in parentheses indicates the value of t. Below is the same.

4.4. Robustness Test

To ensure the robustness of the empirical results, this paper adopts two methods, one more period observation, and variable substitution, to carry out the robustness test. First, one more period observation. To solve the endogeneity that interferes with the results, this article chooses to use independent variable advertising investment (*Ln_AE*) and corporate social responsibility (*CSR*) to extend for one more period. Second, replace financial performance indicators. Based on references from Assaf et al. (2017), this paper uses the natural logarithm of the company's market value (*Ln_Value*) instead of Tobin_Q as a measure of financial performance and re-examines all models involved. The natural logarithm of the company's market value (*Ln_Value*) = Ln (tradable stock market value + non-tradable stock value + debt market value).

Due to the limited space, this article will not show the results of the robustness test. After empirical tests, it is found that there is no significant difference in the empirical results. Therefore, the empirical results of this study should be robust.

5. Conclusions

This article uses "advertising investment and CSR" as an interactive variable to mainly explore the interactive effects of advertising investment and CSR on financial performance. First, examine the impact of advertising investment on financial performance and the impact of CSR in different dimensions on financial performance. Secondly, substitute the "advertising investment and CSR" interaction to verify the interactive effect. Finally, conduct a robustness test. This paper selects 2431 listed companies that participated in the professional evaluation of Hexun.com as the research sample with a total of 12,471 observed values. The main conclusions are summarized as follows:

(1) Advertising investment is positively correlated with financial performance, and the correlation has always been significant, which is in line with the "advertising strengthen financial performance hypothesis" proposed in this article. This demonstrates that advertising investment is a key factor driving the growth of financial performance. To a certain extent, it plays a role in expressing their confidence in product quality to consumers, enhancing consumers' brand awareness and value recognition, and promoting sales growth, finally achieving the goal of strengthening corporate performance.

(2) Actively fulfilling CSR can effectively improve the financial performance; that is, the more actively engaged in CSR, the better the financial performance, which is in line with the "CSR strengthens financial performance hypothesis" proposed in this article. This result is consistent with the view of Saeidi et al. (2015) that a company's active commitment to CSR is conducive to optimizing its financial performance. For companies, CSR is a major manifestation of intangible assets, which can prompt consumers to perceive the company's sense of social responsibility more strongly as a good citizen, create a sales premium for products, improve corporate reputation, and then create corporate value, finally improving financial performance.

(3) Different mechanisms will not change the positive impact of CSR on financial performance, which is in line with the "strategic CSR strengthens financial performance hypothesis" and "altruistic CSR strengthens financial performance hypothesis" proposed in this article. This article categorizes CSR based on different dimensions. Among them, strategic CSR is from the perspective of corporate strategy, classifies CSR into corporate vision, and closely connects to corporate development goals to achieve CSR, which is mainly for shareholders, employees, suppliers, customers, and consumers. On the other hand, altruistic CSR is the CSR for the environment and the public. The empirical results show that both strategic CSR and altruistic CSR have a significant positive impact on financial performance, but strategic CSR has a stronger effect on optimizing financial performance than altruistic CSR. This result is consistent with the opinion of Oh et al. (2017). Therefore, company managers can take CSR as a part of the company's business strategy. They can actively fulfill responsibilities for different dimensions of CSR and use it as a marketing strategy to differentiate from competitors with the purpose of building corporate reputation and bringing benefits for shareholders. Based on this conclusion, to build a good corporate image, companies are able to achieve more CSR to advertise themselves.

(4) When advertising investment and CSR co-exist, both of them have significant complementary effects on financial performance, which is in line with the "the interaction between advertising investment and CSR strengthens the financial performance hypothesis" proposed in this article. Advertising investment and CSR have an interactive effect on financial performance (complementary effect). To explore the interactive effects, this article substitutes the interaction of "advertising investment and CSR" and further determines the type of interactive effects. From the empirical results, the interaction between advertising

investment and CSR has a significant positive impact on financial performance. The marginal effect of advertising investment shall increase with more CSR fulfillment, or the CSR fulfillment increases with the increase in advertising spending. Therefore, their effects on financial performance are the "complementary effect". This result is also a supplement to Assaf et al. (2017), which believe that CSR positively regulates the positive impact of advertising investment on sales growth and market value. On this basis, this article explores the interactive effects of advertising investment and CSR on financial performance. The result shows that in the process of improving financial performance, advertising investment and CSR are particularly important. The two act as mutual "catalysts" to help companies build a good social image and improve their reputation. On the one hand, it can gain the identity and loyalty of consumers, thereby enhancing the market's competitive position and strengthening its financial performance. On the other hand, the complementary effects of advertising investment and CSR can alleviate the asymmetry of information between the company and its customers, reduce shareholders' concerns about the future performance, enhance shareholders' investment confidence, and bring positive financial performance.

In summary, CSR can improve the market effect and performance of advertising investment. Under the complex economic environment, companies should avoid the lack of CSR behaviors. While actively fulfilling CSR, companies should actively strengthen the CSR disclosure to alleviate the adverse consequences caused by asymmetry information. So, advertising investment is particularly critical. To enable advertising and marketing activities to play a huge leverage role, business managers should actively carry out business activities from CSR, conduct reasonable and appropriate advertising, pay attention to fulfilling CSR, make full use of the reputation capital and social image brought by CSR to enhance the advertisement returns, strengthening the promotion of advertising investment on financial performance, thereby creating greater market value and financial growth.

The innovation of this research is that it breaks out the research scope of the direct impact of advertising investment and CSR on financial performance. It further explores the interactive effects and influencing factors between CSR and advertising investment (driving factors) on financial performance (performance results) for the first time, enriches material in which advertising investment and CSR are interactive variables, and provides new empirical evidence and research ideas to realize the role of advertising investment, CSR, and their interaction effects on financial performance comprehensively.

Despite the implications of the above results, there are some limitations. It is necessary to study the cumulative effect of advertising investment and CSR. For example, it usually takes a long term for an enterprise to build its brand through advertising investment, which requires long-term and sustainable discussion on samples. In addition, this paper takes "advertising investment and CSR" as the interactive variable to study its mechanism on financial performance, which is just one of the keys to opening the "black box". Other variables, such as industry uncertainty and institutional differences, are also one of the factors for enterprises to implement social responsibility behaviors and advertising activities. However, whether they also provide boundary conditions for the role of CSR, advertising investment, and financial performance will become the conception and direction of subsequent research.

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