

# *Does Corporate Philanthropy Contribute to Product Market Competition?*

## *-The Complementary Role of Advertising Investment*

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**Abstract**—Despite the relationship between CSR initiatives and firm performance has been a subject of extensive investigation, existing research rarely focuses on the complementary role of advertising investment in exploring the boundary mechanism for the financial implications of corporate social responsibility. This study investigates a theoretical framework that hypothesizes (1) the impact of corporate philanthropy on product market competition and (2) the role of advertising investment in explaining the variability of this impact among different firms. Empirical analysis of secondary information for Chinese firms listed on stock exchanges from 2010–2016 shows that corporate philanthropy can indeed promote product market competition, and the results also indicate that advertising investment plays a complementary role in the corporate philanthropy-product market competition relationship.

**Keywords**—Corporate philanthropy; Product Market Competition; Advertising Investment

### I. INTRODUCTION

Corporate social responsibility (CSR) has become a controversial issue with heated debate in the contemporary competitive market environment. Scholars with multidisciplinary approach have continually attempted to provide managers with some answers about the relationship between CSR initiatives and firm performance, such as its market value and various business risks. The organizational behavior and strategy research focus on investors' response to CSR [1] [2], and the marketing research perspective focuses on consumers' response to CSR. Despite these efforts, empirical research examining the financial implications of CSR initiatives has generated mixed results, revealing a positive, negative, curvilinear, or even insignificant effect [3]. Although the existing literature of corporate social responsibility provides rich and useful insight into whether and how CSR initiatives affect financial performance of firms, the conflicting findings need further investigation.

This study intends to carry out research from the following two aspects. First, this study focuses on corporate philanthropy,

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which is the focus of criticism from neoclassical economists. Specifically, combining the two opposing views from agent theory [4] and stakeholder theory [5]. Second, by creating greater visibility and familiarity, advertising help firms enjoy more and effective information channels to communicate with product market and generate more positive consumer-based responses (i.e., more market awareness and aroused interest in its existing products and the company), leading to future sales, profits, and market competition [6] [7]. Therefore, this study investigates a theoretical framework that hypothesizes (1) the impact of corporate philanthropy on product market competition and (2) the role of advertising investment in explaining the variability of this impact among different firms.

This study is organized as follows: Firstly, the conceptual background and framework are outlined in the literature review section, and this is followed by theoretical hypothesis among corporate philanthropy, product market competition and advertising investment. Then, the methodology section describes the empirical context, including the data and sample, measurement and econometrics model, which are applied to test the proposed hypothesis empirically. The final two sections report empirical results and conclude with a general discussion of theoretical and managerial implications, limitations and directions for further research.

### II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

#### A. Corporate Philanthropy

Corporate philanthropy refers to gifts or monetary contributions donated by companies to social and charitable causes, which are associated with support for education, culture, or the arts; minorities or health care; or for disaster relief [8] [9]. Corporate philanthropy is the discretionary category of corporate social responsibility, which extends beyond the other three levels of corporate social responsibility identified by Carroll (1979), namely, economic activities, legal requirements, and ethical issues.

Empirical research examining the corporate philanthropy–financial performance relationship has also produced mixed results, revealing a positive, negative, curvilinear, or even insignificant effect, therefore, the benefits generated from philanthropy and charitable giving remain relatively less

verifiable [9], which has been the focus of much criticism from neoclassical economists [10]. On the one hand, “strategic philanthropy” can raise corporate image and reputation, and also accumulate the value of its “moral capital” [11], meanwhile, a number of investors are willing to invest in firms that have reliable philanthropic records. Furthermore, “strategic philanthropy” can also lower the risk of reputational losses and ensure key resources from stakeholders, thus providing insurance-like protection [12]. The above evidence indicate that companies can benefit from community-based corporate philanthropy.

On the other hand, quite a few researchers have argued that corporate philanthropy affects corporate financial performance negatively. Primarily, corporate philanthropy may largely become a complete corporate expenditure that put scarce resources into actions unrelated to operations and strategies for a number of companies, which diverts from the goal of creating maximum value for shareholders [10]. Moreover, managers are likely to take advantage of philanthropy to improve their personal reputations and to advance their careers [8].

### *B. Corporate Philanthropy and Product Market Competition*

According to marketing-related research, corporate philanthropy is an intangible marketing asset, which will affect the consumers’ cognitive relationship with the company [13], and further affects consumers’ identification with products, brands and organizations [14] [15]. And the positive consumer cognition association and the organizational identification will further affect consumers’ evaluation of products or brands [16], which will create a competitive intangible asset or brand asset for the firms and help them acquire the indispensable “reputation capital” or “moral capital”, therefore increase the frequency of consumer purchases, customer satisfaction and loyalty and create positive word of mouth, ultimately promote the market share growth and enhance competitive advantage.

Moreover, corporate philanthropy can bring scarce tangible or intangible resources and capabilities to firms, such as R&D capability, innovation capability, efficient human capital, efficient organizational processes, and corporate culture with a sense of social responsibility. By rethinking the products and markets, redefining the productivity of the value chain, promoting the healthy development of the local social ecology of the company [17], ultimately integrating social responsibility into corporate strategy, resources, capabilities, processes, business model and interaction with stakeholders, which will promote the product market competition for firms.

Based on the above discussion, we can draw the preliminary judgment that firms behaving more active in the performance of corporate philanthropy are more likely to receive the recognition and support from consumers and other stakeholders, which can improve product sales and product purchase rates. And firms will also obtain better investment opportunities compared with industry competitors, such as investing in production or sales, purchasing high-quality assets, even merging with stronger rivals etc. Therefore, corporate philanthropy can play its strategic role in the relative product market growth and the enlargement of relative market share in

the industry. In consequence, this study first proposes hypothesis 1.

*Hypothesis 1: All else being equal, corporate philanthropy is positively associated with product market competition.*

### *C. The Complementary Role of Advertising Investment*

The extant literature reveals that the relationship between corporate philanthropy and product market competition depends on other situational factors or contingency variables, such as advertising investment [18]. Relevant research shows that visibility of the firms is closely related to the positive response of their stakeholders, such as consumers, visibility of the firms can affect the willingness of consumers to pay the premiums [19]. The strategic connotation of corporate philanthropy is the need to attract the attention of stakeholders, and then get their good impression of the firms [20].

Marketing literature shows that advertising exerts important influence on market awareness, firm competition, consumer preferences and brand image [21], directly or indirectly affects the product sales and financial value [22]. In addition, advertising also acts as an information communication mechanism for the existing and potential consumers’ awareness of products, brands, and corporate philanthropy initiatives, which can enhance the information environment and information intensity of the firms, thus improve the understanding of firms, products and other activities, including corporate philanthropy initiatives [23].

Based on the above discussion, we recognize that advertising can probably act as an information communication mechanism, which reduces the information asymmetry between consumers and firm products, brands, corporate philanthropy-related initiatives, and facilitates the firms to obtain differentiated competitive advantage. With the complementary role of advertising, the accumulation of “brand equity”, “reputation capital” and “moral capital” from corporate philanthropy-related initiatives can effectively gain attention and recognition from consumers and other stakeholders, which directly or indirectly affects the product sales and financial value [22].

*Hypothesis 2: The positive relationship between corporate philanthropy and product market competition increases with its advertising spending.*

## III. RESEARCH METHODOLOGY

### *A. Data and Sample*

Two data sources are used: the Hexun.com and the China Stock Market and Accounting Research (CSMAR) database. As one of the largest databases on Chinese listed firms, CSMAR serves as the primary source of information on Chinese stock markets and the financial statements of China’s exchange-listed firms (Wang and Qian 2011). As an additional control for reverse causality, we introduce a time lag between corporate philanthropy (in year  $t-1$ ) and product market competition (in year  $t$ ) in our model to ensure that the effect is running from corporate philanthropy to product market competition (Luo and Bhattacharya 2009).

## B. Measurement

### Dependent Measures:

**Product Market Competition.** Based on the research of Lu and Han (2013), this study measures the market competition through the relative product market growth in the industry (*zgrowth*), and define *zgrowth* as follows:

$$zgrowth_{i,t} = (growth_{i,t} - indmeangrowth_t) / indstdgrowth_t$$

where *zgrowth<sub>i,t</sub>* is the relative product market growth in the industry for firm *i* in year *t*, *growth<sub>i,t</sub>* is the revenue growth rate for firm *i* in year *t*, *indmeangrowth<sub>t</sub>* is the average revenue growth rate for all firms in the industry in year *t*, *indstdgrowth<sub>t</sub>* is the standard deviation of revenue growth rate for one firm in the industry in year *t*, hence, *zgrowth<sub>i,t</sub>* shows the quantile for firm *i* in year *t* of revenue growth rate within one industry during the same year, which depicts the relative product market growth in the industry for firm *i* in year *t*, namely, the relative growth rate for firm *i* in year *t*.

### Independent Measures:

**Corporate Philanthropy.** We measure corporate philanthropy with CSR evaluating system of Hexun.com's source. We measure corporate philanthropy with the dimension of social responsibility (composed of charitable donations) in the CSR evaluating system.

**Moderating Variables.** In this study, we set advertising spending as dummy variable, if there is an advertising spending, the value will be 1, otherwise the value will be 0. In addition, this study also examines the relationship between corporate philanthropy and product market competition from the perspective of property rights, so we set advertising spending as dummy variable (state) as well, When the firm is state-owned, the value will be 1, otherwise the value will be 0.

### Control Variables:

Drawing from previous studies, in this study, we control the variables that have important impact on the product market competition, and select firm size, financial leverage, growth, and annual and industry indicators as control variables.

## C. Econometric Model

### Model Specification for Hypothesis 1

To test the hypothesis H1, this study draws from Campello (2006), Lu and Han (2013), and takes variables that may affect

the product market competition into account, constructs the following model to verify the impact of corporate philanthropy on the product market competition:

$$zgrowth_{i,t} = \beta_0 + \beta_1 csr_{i,t-1} + \beta_2 size_{i,t-1} + \beta_3 lev_{i,t-1} + \beta_4 lev_{i,t-2} + \beta_5 growth_{i,t-1} + \beta_6 growth_{i,t-2} + \sum yeardummy + \sum industrydummy + \epsilon_{i,t} \quad (1)$$

### Model Specification for Hypothesis 2

To test the hypothesis H2, we firstly divide the sample into two sub-samples with advertising spending and no advertising spending, and then construct the  $csr_{i,t-1} * ad_{i,t-1}$  and the following model to explore the role of advertising investment on the market competition effect of corporate philanthropy:

$$zgrowth_{i,t} = \beta_0 + \beta_1 csr_{i,t-1} + \beta_2 ad_{i,t-1} + \beta_3 csr_{i,t-1} * ad_{i,t-1} + \beta_4 size_{i,t-1} + \beta_5 lev_{i,t-1} + \beta_6 lev_{i,t-2} + \beta_7 growth_{i,t-1} + \beta_8 growth_{i,t-2} + \sum yeardummy + \sum industrydummy + \epsilon_{i,t} \quad (2)$$

## D. Empirical Results

### Multivariate Tests of Hypothesis 1

Table I presents results of Hypothesis 1, which predicts the positive association between corporate philanthropy and product market competition. In testing our hypothesis, we adopt a stepwise approach. Model 1 is the simplest model, in this model, we only add *size*, *lev*, and *growth* to the control variables to observe its relationship to product market competition. In Model 2, we add *csr* to Model 1, For Model 1 in Table I, the regression results indicate support for Hypothesis 1 because lagged *csr* indeed promotes *zgrowth* ( $\beta=0.00199, p<0.1$ ). Finally, in Model 4, we controll *size*, *lev*, *growth*, industry, and year, the regression results further reveal that corporate philanthropy is significantly and positively associated with product market competition as we expected ( $\beta=0.00470, p<0.05$ ). Thus, the data support H1, in other words, corporate philanthropy can indeed promote product market competition.

**TABLE I. REGRESSION RESULTS OF CORPORATE PHILANTHROPY ON PRODUCT MARKET COMPETITION (HYPOTHESIS 1)**

	Model (1) <i>zgrowth</i>	Model (2) <i>zgrowth</i>	Model (3) <i>zgrowth</i>	Model (4) <i>zgrowth</i>
<i>size<sub>t-1</sub></i>	-0.00775*** (-4.22)	-0.00921*** (-4.88)	-0.0161*** (-6.65)	-0.0159*** (-6.20)
<i>Lev<sub>t-1</sub></i>	0.146*** (5.92)	0.149*** (6.24)	0.150*** (5.86)	0.148*** (5.65)
<i>lev<sub>t-2</sub></i>	-0.0968** (-2.66)	-0.0980** (-2.72)	-0.0913** (-2.58)	-0.0900* (-2.58)
<i>growth<sub>t-1</sub></i>	0.00739 (0.92)	0.00681 (0.82)	0.00584 (0.69)	0.00730 (1.04)
<i>growth<sub>t-2</sub></i>	0.00621* (2.37)	0.00554 (1.90)	0.00523 (1.53)	0.00355 (0.72)
<i>csr</i>		<b>0.00199*</b> <b>(2.54)</b>	<b>0.00463**</b> <b>(2.99)</b>	<b>0.00470**</b> <b>(3.13)</b>
<i>N</i>	9863	9863	9863	9863
<i>F Value</i>	5.00	5.10	5.21	2.58
Adjusted R <sup>2</sup>	0.008	0.009	0.045	0.103

a. \*, \*\*, \*\*\* indicate statistical significance at p<0.1, p<0.05, and p<0.01, respectively.

### Multivariate Tests of Hypothesis 2

Table II presents results of Hypothesis 2, which predicts the moderating effect of advertising investment. As shown in Table II, we first add the hypothesized moderators-advertising spending in Model 1, and analyze the interaction effect between corporate philanthropy and advertising investment (*ad\* csr*) on product market competition (*zgrowth*), and the regression results lend support for this prediction ( $\beta=0.00193$ ,  $p<0.05$ ), which reveal the positive moderating effect of advertising spending. Furthermore, we divide all observations

into two sub-samples with ad spending and no ad spending. As shown in Table II, in Model 2 (the ad spending sample), the results suggest that corporate philanthropy has a stronger positive influence ( $\beta=0.00521$ ,  $p<0.01$ ) on product market competition for firms with advertising spending, however, the regression results ( $\beta=0.00266$ ,  $p>0.1$ ) indicate no significant relationship between corporate philanthropy and product market competition as shown in Model 2. The above analysis shows that the positive relationship between corporate philanthropy and product market competition increases with its advertising spending.

**TABLE II. REGRESSION RESULTS OF MODERATING EFFECT OF ADVERTISING INVESTMENT (HYPOTHESIS 2)**

	Model (1) <i>zgrowth</i> All observations	Model (2) <i>zgrowth</i> <i>ad spending</i>	Model (3) <i>zgrowth</i> <i>no ad spending</i>
<i>csr</i>	0.00298 (1.41)	<b>0.00521***</b> <b>(3.56)</b>	<b>0.00266</b> <b>(1.75)</b>
<i>ad_dum</i>	-0.0158*** (-6.95)		
<i>ad* csr</i>	<b>0.00193**</b> <b>(2.74)</b>		
<i>size<sub>t-1</sub></i>	-0.0160*** (-6.38)	-0.0157*** (-6.71)	-0.0209*** (-6.79)
<i>lev<sub>t-1</sub></i>	0.148*** (5.58)	0.149*** (4.76)	0.181* (2.43)
<i>lev<sub>t-2</sub></i>	-0.0889* (-2.48)	-0.0979** (-2.99)	-0.0835 (-1.06)
<i>growth<sub>t-1</sub></i>	0.00766 (1.07)	0.00974 (1.18)	-0.00600 (-0.89)
<i>growth<sub>t-2</sub></i>	0.00174 (0.33)	0.00489 (0.80)	-0.00874** (-2.76)
<i>N</i>	6761	5187	1576
<i>F Value</i>	5.40	4.17	5.21
Adjusted R <sup>2</sup>	0.050	0.046	0.045

b. \*, \*\*, \*\*\* indicate statistical significance at p<0.1, p<0.05, and p<0.01, respectively.



#### IV. CONCLUSION AND DISCUSSION

This study investigates the product market competition effect of corporate philanthropy for further exploration into the puzzle about the relationship between corporate social responsibility and value creation. Based on the empirical test of product market, the results first show that corporate philanthropy contribute to the enhancement of relative product market growth for firms in one industry, in other words, corporate philanthropy can play its strategic role in product market competition. In addition, in order to reveal the boundary mechanism of value creation for corporate social responsibility, this study further investigates whether advertising investment can exert a positive influence on the market competition effect of corporate philanthropy. The empirical results suggest that advertising investment has a positive moderating effect on the relationship between corporate philanthropy and product market competition, and this evidence reveals that advertising investment can effectively improve the market competition effect of corporate social responsibility.

Based on the results of this study, our findings can provide some important implications. First, this study reveals corporate philanthropy can play its strategic role in product market competition, which confirms the view of strategic corporate social responsibility, that is, managers and marketers should have an overall understanding of social responsibility from a strategic perspective, “tailoring” the construction of strategic corporate social responsibility system in line with the current business and characteristic of the company, and corporate social responsibility should be integrated into corporate strategy, resources, process, business model and stakeholder interaction. Second, by exploring the moderating role of advertising investment, this study indicates that the strategic effect of corporate philanthropy depends on the integration of internal strategies (such as marketing strategy, advertising) and external actions (such as social responsibility initiatives), which provides a more comprehensive research perspective for exploring the value creation mechanism of corporate social responsibility, and enriches the theoretical boundary of resource-base view.

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