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# Corporate Social Responsibility and Financial Performance: The Moderating Role of Ownership Concentration in Turkey

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Received: 29 May 2019; Accepted: 27 June 2019; Published: 2 July 2019



**Abstract:** The objective of this study is to investigate the impact of corporate social responsibility (CSR) engagement on firm financial performance in a developing country, Turkey, and to analyze the moderating role of ownership concentration in the CSR–financial performance relationship. The sample consists of non-financial public firms listed on the Borsa Istanbul (BIST)-100 index and covers the period between 2014 and 2018. Empirical results using an instrumental variable approach show that corporate social responsibility has a positive relationship with financial performance. Furthermore, findings indicate that this relationship is negatively moderated by ownership concentration even when endogeneity is controlled for.

**Keywords:** corporate social responsibility; corporate governance; financial performance; developing countries; ownership concentration; moderation

## 1. Introduction

Nowadays, society makes greater demands on companies to act in a socially responsible manner in addition to their traditional role of providing goods and services [1,2]. Accordingly, the number of studies on corporate social responsibility (CSR) has been rising in academic literature. In particular, the relationship between CSR and financial performance has received considerable attention [3]. However, there is no consensus among the results of these studies [4,5]. Theoretically, neoclassical theory suggests that the relationship between CSR and financial performance is negative because CSR expenditures cause additional costs for the firms and divert funds from more profitable potential investments [6]. This negative relationship was also confirmed by a number of empirical studies e.g., Gollop et al. [7], Moore [8], López et al. [9]. On the other hand, stakeholder theory suggests that companies should engage in good relationships with all stakeholders and that CSR expenditures may improve financial performance through indirect benefits [10]. Moreover, resource-based theory suggests a positive relationship between CSR and financial performance because investment in CSR may help firms develop new internal resources, such as know-how and corporate culture, as well as generate external benefits through corporate reputation [11]. A number of empirical studies confirmed this prediction e.g., Chien [12]. Li et al. [13] investigated equity returns and showed that a portfolio consisting of best CSR companies in the world generated positive abnormal returns. Still, other studies showed no significant association between CSR and financial performance at all [14].

CSR has been defined in many ways by researchers to encompass environmental dimension, relationship with the society, ethical and voluntary dimensions, socio-economic aspects, and relationships with various stakeholders [15]. While there are varying definitions of CSR, in essence, CSR can be considered an extension of firms' efforts to ensure effective corporate governance using sound business practices [16]. Despite the large number of studies on the correlation between CSR and financial

performance, the significance of corporate governance factors for this relationship remains relatively under-investigated [17]. Corporate governance and CSR play an important role in financial markets, however, the moderating impact of corporate governance on the relationship between CSR and financial performance is still unclear [18]. In this study, we focus on one particular corporate governance characteristic, the ownership concentration, and attempt to investigate how it affects firms' financial performance and, more specifically, whether and in which direction it moderates the link between CSR and financial performance.

The investigation of this topic is especially important for developing countries. It has been argued that CSR is context-dependent and different institutional structures and business systems observed in developing countries may lead to different expressions of CSR [19]. In those countries, there are fewer institutions to provide social goods in developing countries, resulting in increasing expectations from companies to fill these gaps by taking CSR initiatives [20]. As a result, the direction of the relationship between CSR and financial performance could be different than that observed in a developed country. Moreover, ownership concentration deserves further investigation because the type-2 agency problem resulting from conflict of interest between controlling shareholders and minority shareholders is an important issue in emerging markets [21].

This study focuses on Turkey, which is a developing country characterized by weak shareholder protection and several corporate governance problems due to lack of transparency and concentrated ownership structures [22]. Although some structural reforms based on common law have been undertaken, most companies still have a concentrated ownership by families [23]. These large shareholders dominate many corporate decisions, including CSR engagement. Accordingly, Turkey provides an appropriate setting to investigate the relationship between ownership concentration, CSR, and financial performance.

It is also important to understand country-specific conditions to investigate CSR in Turkey. Governmental policies in Turkey focus on economic development rather than on long-term social and environmental impacts and there is a lack of strict regulations on these issues [24]. According to the "Corporate Governance Principles" issued by Capital Markets Board of Turkey, companies must explain their CSR policies in their annual reports, but are not obliged to follow a strict set of principles and regulations [25]. In addition to economic fundamentals, cultural characteristics do not encourage CSR in Turkey either. Ararat [26] argues that low future orientation, low humane orientation, and authoritarian culture in Turkey are likely to negatively influence CSR activities.

This study is expected to contribute to the literature in the following ways. First, we provide additional empirical evidence on the relationship between CSR and financial performance. We also control for the endogeneity of CSR using an instrumental variable approach, since better quality firms tend to engage in more CSR activities anyway [16]. Without considering potential endogenous treatment effects, the impact of CSR on financial performance would be overstated [27]. Moreover, Grewatsch and Kleindienst [28] called for more studies on the mediators and moderators of CSR–financial performance relationship. Based on that, our study is one of the few to analyze the importance of a corporate governance characteristic like ownership concentration for the CSR–financial performance relationship in a developing country context. Thus, our empirical analysis of Turkish companies is expected to provide implications to policy makers, managers, and academicians in developing countries.

The remainder of the paper is organized as follows. The second section provides a review of theoretical and empirical studies in the literature. The methodology is elaborated in the third section, while results are provided in the fourth section. The last section summarizes the main findings of the study and concludes with the limitations of the study and suggestions for further research.

## 2. Literature Review

Previous literature contains a number of studies which investigate corporate governance as a channel through which CSR influences financial performance using different proxies and mechanisms. In one such study, Li et al. [29] showed that Chief Executive Officer (CEO) power is positively related to CSR and that CSR is a value-enhancing activity. In another study, Giroud and Mueller [30] focused

on product market competition and showed that firms with weak governance structures have lower equity returns, worse operating performance, and lower market values, but only in industries with low competition. In their study, Li [31] investigated mutual monitoring as a corporate governance proxy and demonstrated that mutual monitoring by the second executive of a firm is positively related to Tobin's Q. Coles et al. [32] focused on CEO tournament while Core and Guay [33] used compensation incentives as corporate governance proxies.

Ownership structure is another corporate governance proxy which has been investigated in the literature. Jensen and Meckling's [34] agency theory provides a theoretical basis to explain the effect of ownership concentration on the relationship between CSR and firm financial performance. According to agency theory, there is a divergence of interest between managers and shareholders in widely held corporations, which could reduce firm value due to managers making decisions in the pursuit of their self-interest rather than to maximize firm value. In this context, CSR can be considered a principal-agent problem due to managers overinvesting in CSR initiatives to improve company reputation as a good social citizen [16]. As a result of this reputation, managers' confidence may be boosted and overconfident CEOs sometimes overinvest or make value-destroying decisions [35].

However, the main agency problem in emerging markets like Turkey is not a conflict of interest between managers and owners, but rather the expropriation of minority shareholders by controlling shareholders [21]. High ownership concentration, especially by families, is prevalent in Turkey [36]. Business groups owned and managed by families are the most common organization type and are characterized by low free-float ratios to preserve the control of the family, which is, in most cases, the major shareholder [37]. High ownership concentration is also considered an outcome of a weak legal environment in Turkey which is a French-origin civil law country and provides less protection to the owners of the firm than common law countries do [38]. In such a business environment, it is of utmost importance to consider the role of ownership concentration when investigating the relationship between CSR and firm financial performance.

The entrenchment hypothesis suggests that managers adopt strategies of entrenchment to preserve their position, maintain their power, and increase their compensation, rather than focusing on value maximization. According to this hypothesis, concentrated ownership structures, like those prevalent in Turkey, could exacerbate agency costs [39]. The incentive of the controlling shareholder to obtain information to control corporate policies may lead to information asymmetries which, in turn, affect decisions in the area of CSR [17]. Information asymmetry may allow managers to hide their true motivations about CSR decisions [40]. Accordingly, CSR decisions in firms with high ownership concentration are more likely to be based on managers' personal interests and not on the best interests of the firm, which could lead to a worsening of financial performance.

As mentioned in the previous section, empirical studies focusing on the role of corporate governance factors for the CSR–financial performance relationship are relatively few in number. In one of those studies, Jo and Harjoto [41] investigated the relationship between CSR, corporate governance, and corporate financial performance in a sample of 2952 US firms for the period 1993–2004. Their results showed that CSR resulting from effective corporate governance indicators, such as board independence, presence of institutional investors, or number of analysts following a firm, positively influences corporate financial performance. Using the same sample, in another study, the authors investigated the impact of governance and monitoring mechanisms on the financial performance of firms on the performance of firms engaging in CSR activities [16]. The study found that the number of analysts following these indicators was positively related to firm value for CSR firms. Board leadership, board independence, blockholders' ownership, and institutional ownership were also found to have a positive, but weaker, impact.

In a study using data from Taiwan, an emerging market, Huang [42] empirically showed that sound corporate governance practices, such as the presence of independent outside directors, foreign institutional shareholders, and domestic financial institutional shareholders, have a positive effect on both CSR and financial performance. However, no direct relationship between CSR and financial

performance was demonstrated. In another emerging market study, Peng and Yang [17] focused specifically on ownership concentration and investigated Taiwanese listed firms for the period 1996–2006. The authors employed hand-collected pollution data as a proxy for CSR and showed that CSR has a positive relationship to financial performance. In addition, results indicated that ownership concentration negatively moderated the relationship between CSR and financial performance.

More recently, Ting and Yin [43] investigated how controlling shareholders' excess control rights affected the relationship between CSR and firm financial performance using a sample of CSR-awarded firms in Taiwan between 2007–2016. The study found that excess control rights significantly affected the relationship between CSR and financial performance, depending on different dimensions of CSR activities. Specifically, customer- and employee-related CSR activities were positively related to both accounting- and market-based measures of financial performance in both low and high excess control firms. Environment-related CSR activities negatively affected accounting-based financial performance in high excess control only. Finally, community-related CSR positively affected accounting-based financial performance in firms with low excess control only.

As for Turkish firms, the relationship between CSR and financial performance has been investigated in a number of studies e.g., Aras et al. [44], Arsoy et al. [45], Özçelik et al. [46] but the role of corporate governance characteristics, including ownership concentration for CSR initiatives, has received relatively little attention. In one of the few studies investigating the relationships between corporate governance, CSR, and financial performance, Sahin et al. [47] focused on board characteristics and showed that board size, CEO duality, and the presence of inside directors were negatively related to financial performance among Turkish public companies. In addition, the presence of independent directors on the board was positively associated with CSR.

In another study, which focused on ownership concentration directly, Kilic et al. [48] investigated a sample of Turkish banks and showed that ownership concentration was negatively associated with CSR disclosure. Additional governance variables including the percentage of independent directors on board and the number of female directors were found to be positively related to CSR disclosure. A potential moderating role of governance variables for the relationship between CSR and firm financial performance has not been investigated for Turkish companies before.

Given the entrenchment hypothesis and the limited number of empirical studies discussed above, we hypothesize that ownership concentration will negatively moderate the relationship between CSR and financial performance in Turkish firms.

### 3. Methodology

#### 3.1. Sample and Data

The initial sample consisted of firms on Borsa Istanbul 100 index in December 2018. Financial firms were excluded because of the unique structure of their financial statements. Firms with excessive missing data were also removed from the sample. As a result, the final sample contained 70 firms. The period of analysis covered the five-year period between 2014 and 2018. Data on financial variables and on the membership to Borsa Istanbul Sustainability Index was obtained from the Emerging Markets Information Services (EMIS) database. Data on ownership concentration was manually collected from the website of the Turkish Public Disclosure Platform [49].

#### 3.2. Variables

The dependent variable was financial performance proxied by a firm's return on assets (ROA). To test the relationship between corporate social responsibility (CSR) and financial performance, a categorical variable was constructed using the Borsa Istanbul (BIST) Sustainability Index which includes companies with high performance on several CSR dimensions, including global warming, draining of natural resources, health, security, and employment [50]. The CSR variable took the value of 1 for firms included in the index in a given year and 0 otherwise. To investigate a potential moderating impact of ownership

concentration, the ownership concentration (OWN) variable, which is the percentage of shares held by the largest shareholder, was used. We also included firm size, leverage, liquidity, exports, diversification, and sales growth as control variables which could affect the financial performance of a firm. Finally, firm age was also calculated to be used as an instrument in instrumental variable (IV) regressions.

Among these control variables, firm size deserves special attention since it is one of the most important characteristics which affects many variables in corporate finance. The three most commonly used firm size proxies in the literature are total assets, total sales, and market value of equity. Dang et al. [51] noted that each of these measures have their own advantages and disadvantages; total assets measures total resources, market capitalization measures growth opportunities, and total sales are related to product market. In this paper, the natural logarithm of total assets was chosen as the firm size proxy because the objective was to measure the total resources of the firm which could be used to generate profit and to finance CSR activities. The calculation methodology for all the variables is provided in Table 1 below.

**Table 1.** Calculation methodology for the variables.

Variable	
ROA	Return on assets calculated by dividing the firm's net profit at the end of a given year by the average of its total assets at the beginning and at the end of that year.
CSR	Categorical variable which takes the value of "1" if the firm is in BIST-Sustainability index, "0" otherwise.
OWN	Ownership concentration defined as the percentage of shares held by the largest owner of the firm.
Firm size	The natural logarithm of the firm's total assets.
Leverage	Leverage defined as the firm's total interest-bearing debt divided by its total assets.
Liquidity	Current ratio defined as the ratio of a firm's current assets divided by its current liabilities.
Export	Categorical variable which takes the value of "1" if the firm derives some of its revenues internationally, "0" otherwise.
Diversification	Categorical variable which takes the value of "1" if the firm is operating in more than one industry, "0" otherwise.
Growth	Percentage change in the firm's net revenues compared to the previous year.
Firm age	The natural logarithm of the number of years since the firm's incorporation.

### 3.3. Model

To test the hypotheses of this study, the following model was used.

$$ROA_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 OWN_{it} + \beta_3 CSR_{it} \times OWN_{it} + \beta_4 X_{it} + \varepsilon_{it}, \quad (1)$$

where  $ROA_{it}$  is the return on assets for firm  $i$  in year  $t$ ,  $CSR_{it}$  is a categorical variable which takes the value of 1 if firm  $i$  is in the Borsa Istanbul Sustainability Index in year  $t$ ,  $OWN_{it}$  is the percentage of shares held by the largest owner of firm  $i$  in year  $t$ ,  $X_{it}$  is a vector of control variables for firm  $i$  in year  $t$ ,  $\beta_0$ ,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ , and  $\beta_4$  are the vectors of the parameters to be estimated, and  $\varepsilon_{it}$  is the error term.

An issue when estimating Equation (1) is the potential endogeneity of the CSR variable, which could arise from two sources. First, there might be a reverse causality from financial performance to CSR. Second, CSR and financial performance may have no direct effect on each other but they might be spuriously correlated through a third variable. In other words, CSR firms may simply have better financial performance than non-CSR firms whether they engage in CSR activities or not. If endogeneity is not controlled for, the impact of CSR on financial performance would be overstated [16].

To address the endogeneity issue in corporate finance, one of the methods suggested by Li [52] is the instrumental variable (IV) technique, which focuses on finding a variable which is correlated with CSR but not correlated with ROA. According to Angrist [53], this technique is suitable even if the second-stage regression is not linear. Following previous literature e.g., Jo and Harjoto [16,41], our choice of instrument is the firm age. As can be seen in Table 3, this variable is significantly



correlated with CSR but not correlated with ROA. Therefore, it would not be correlated with the error term in Equation (1) which makes it a suitable instrument for CSR.

Industry dummies were also included in the model to account for industry-specific factors which could affect financial performance. To minimize the effect of outliers, variables were winsorized at the 5th and 95th percentiles of their pooled distributions across all firm-year observations [54]. Robust standard errors were reported in all regressions.

#### 4. Results

Table 2 below contains the descriptive statistics on our variables. The average return on assets for the firms in the sample is 4.502%. The percentage of CSR firms in the sample is 44.3%. The average percentage of the shares held by the largest shareholder is 53.627%. Firm size, leverage, and liquidity variables register mean values of 6.759, 27.205%, and 1.938, respectively. 54.3% of the firms in the sample derive a portion of their revenues from international transactions, while 48.6% of the firms operate in more than one industry. Finally, the average growth rate in revenue is 22.338%, while the average age of the firms in the sample is approximately 33 years.

**Table 2.** Descriptive statistics.

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
ROA	336	4.502	8.38	−16.63	19.88
CSR	350	0.443	0.497	0	1
OWN	350	53.627	15.125	23	82.2
Firm size	336	6.759	1.286	4.621	9.002
Leverage	336	27.205	21.443	0	69.84
Liquidity	335	1.938	2.123	0.36	9.38
Export	350	0.543	0.499	0	1
Diversification	350	0.486	0.501	0	1
Growth	330	22.338	28.96	−25.634	100.964
Firm age	350	32.689	15.366	8	58

Pairwise correlations among the variables are provided in Table 3 below. As can be seen, none of the correlations exceed 0.7, therefore multicollinearity is not an issue. This is also confirmed by checking the variance inflation factor (VIF) values, which are all less than 10.

**Table 3.** Variance inflation factors (VIFs) and pairwise correlations.

Variables	VIF	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) ROA	–	1.000									
(2) CSR	1.60	0.108 *	1.000								
(3) OWN	1.16	−0.098	−0.092	1.000							
(4) Firm size	1.61	0.214 *	0.262 *	0.168 *	1.000						
(5) Leverage	1.42	−0.619 *	0.147 *	0.036	−0.058	1.000					
(6) Liquidity	1.45	0.475 *	−0.199 *	−0.088	0.061	−0.481 *	1.000				
(7) Export	1.68	0.156 *	0.414 *	0.139 *	0.501 *	0.040	0.006	1.000			
(8) Diversification	1.22	−0.005	0.054	−0.139 *	−0.026	−0.164 *	−0.104	0.146 *	1.000		
(9) Growth	1.02	0.106	0.002	0.027	0.041	0.022	−0.031	−0.019	−0.105	1.000	
(10) Firm age	1.35	0.095	0.541 *	−0.161 *	0.197 *	0.050	−0.132 *	0.366 *	−0.071	0.028	1.000

\* Shows significance at the 0.05 level.

Table 4 contains the pooled regression results. The coefficient of the CSR variable is positive and statistically significant, meaning that CSR firms display better financial performance compared to non-CSR firms. On the other hand, ownership concentration is negatively related to financial performance. The coefficient of the interaction term is negative and significant, meaning that there is an inverse ownership concentration which negatively moderates the relationship between CSR and financial performance. In other words, in firms with higher levels of ownership concentration, CSR engagement is negatively related to financial performance. Among the control variables, firm size,

liquidity, and growth are positively related to financial performance while there is a negative relationship between leverage and ROA.

**Table 4.** Instrumental variables (2SLS) regression.

ROA	Coefficient	Standard Error	t-Value	p-Value	95% Confidence Interval		
CSR	17.650	6.515	2.71	0.007	4.881	30.420	***
OWN	−1.939	0.736	−2.63	0.008	−3.383	−0.496	***
CSR×OWN	−0.257	0.112	−2.29	0.022	−0.476	−0.037	**
Firm size	1.989	0.799	2.49	0.013	0.423	3.556	**
Leverage	−0.225	0.019	−11.79	0.000	−0.262	−0.187	***
Liquidity	1.078	0.197	5.47	0.000	0.692	1.464	***
Export	0.005	0.323	0.02	0.987	−0.628	0.639	
Diversification	0.060	0.048	1.23	0.218	−0.035	0.154	
Growth	0.038	0.011	3.34	0.001	0.016	0.061	***
Constant	2.290	3.800	0.60	0.547	−5.158	9.739	
Mean dependent var		4.433		SD dependent var		8.309	
R-squared		0.494		Number of obs		329	
Chi-square		335.458		Prob > chi2		0.000	

Notes: All variables are truncated at the 1% and 99% levels. The industries are included in models, but the coefficients are not reported. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively. Robust standard errors are reported.

## 5. Conclusions

Due to limited number of studies which investigate moderators and/or mediators for the CSR–financial performance relationship, this area deserves more research attention [28]. The role of corporate governance factors for the CSR–financial performance relationship is especially limited within the context of developing countries. To fill these gaps in the literature, the objective of this study was to investigate the relationship between CSR, ownership concentration, and firm financial performance in a developing country, Turkey, using data from non-financial listed firms on the BIST-100 index for the period 2014–2018. An instrumental variable approach was adopted to control for the endogeneity of the CSR variable.

The first finding which emerged from our analyses is that CSR firms display better financial performance than non-CSR firms. This result is consistent with the stakeholder theory and suggests that, despite the extra costs of engaging in CSR activities, firms benefit from CSR through improved relationships with stakeholders. The result is also consistent with resource-based theory and suggests that firms benefit from CSR through their indirect effect on firms' internal resources and external reputation. Empirically, this finding is consistent with several previous studies in the literature (e.g., [16,17,41]) but contradicts some others (e.g., [7–9]).

Another result which emerged from our study is that ownership concentration acts as a negative moderator of the CSR–financial performance relationship. In other words, CSR activities are beneficial to financial performance for firms with dispersed ownership structures. However, as ownership concentration increases, the strength of this relationship weakens and may even turn negative. This finding is consistent with the expropriation hypothesis and suggests that the incentive of controlling shareholders to obtain information to control corporate policies may lead to information asymmetries which affect decisions in the area of CSR [17]. This result is also consistent with previous empirical studies in the literature (e.g., [17,43]).

Our findings have several implications. First, the positive relationship between CSR and financial performance implies that Turkish firms should place emphasis on CSR activities, despite the costs associated with undertaking such initiatives. Second, the finding of negative moderation of the CSR–financial performance relationship by ownership concentration suggests that the establishment of good control mechanisms is necessary to protect the rights of minority shareholders in firms with concentrated ownership structures because overinvestment in CSR activities leading to worsening financial performance is possible in these firms [43]. Moreover, this finding can help policy-makers and regulators identify how concentrated ownership structures, which are prevalent in emerging markets

like Turkey, affect CSR activities. Regulators can investigate the effectiveness of CSR initiatives in firms with concentrated ownership because CSR in these firms could lead to a worsening of financial performance through the entrenchment effect [17].

Overall, the results of this study were able to improve our understanding of CSR decisions by managers, through which minority shareholders are expropriated in firms with concentrated ownership. However, the study suffers from the following limitations. First, the study employs data from a single developing country, Turkey, to investigate the moderating role of ownership concentration for the relationship between CSR and financial performance. Thus, the results might not be generalizable to other developing countries. Moreover, the study includes only a number of listed firms in Turkey and results could be different if private firms were included in the sample. Future studies might address these limitations by using more comprehensive multi-country samples. In addition, the moderating role of other corporate governance characteristics, such as family ownership, CEO duality, board characteristics, or executive compensation [55,56], could constitute fruitful avenues for further research.

**Funding:** This research received no external funding.

**Conflicts of Interest:** The authors declare no conflict of interest.

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