

The Relationship between Corporate Social Responsibility and Economic Performance due to the Moderating role Advertising and Firm Size in listed Companies in Tehran Stock Exchange

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Abstract: The purpose of this paper is investigating the relationship between corporate social responsibility and economic performance due to the moderating role advertising and firm size in listed companies in Tehran Stock Exchange. In this study used a sample of 80 companies in the years 2009 until 2013 and social accountability was measured by Tobin's Q. In addition, the research hypothesis was analyzed using multiple regressions. The results show that corporate social responsibility with economic performance in companies with low levels of advertising and ads isn't lower compared to firms with high levels of advertising and ads and the correlation between corporate social responsibilities with economic performance in small companies isn't lower compared to large companies.

Keywords: Corporate Social Responsibility, Firm Advertising, Firm Size, Economic Performance.

Introduction

Today, companies can not only through operational and financial activities successful in competition and associate with self-customers. In today's world, we needs to more than makes. In the current era consumers and society expected responsibility companies and consider activities and their operations for next generation. In recent years, customers, employees, suppliers, community groups, governments, and some share- holders have encouraged firms to undertake additional investments in corporate social responsibility (CSR). Some firms have responded to these concerns by devoting more resources to CSR. The Corporate Social Responsibility (CSR) has a long history, which evolved with the development of businesses and that has been meeting the emerging needs of the society. It has been in practice mainly in the western countries in one form or another. The modern concept and form of CSR has appeared through a transition that started during the early twentieth century. During that period, calls for CSR came from outside the corporate in the form of unions (Venkatraman, 1986; Carroll, 1999).

Generally regression-based studies constitute advanced, multivariate statistical analyses which are able to assess not only the variance explained by a set of independent variables, but also how influential each individual variable is once its interaction with other control variables is accounted for. In the context of this paper, three studies are of particular relevance as they (like this paper) utilize Tobin's q as a (arguably superior) measure of economic performance that has been used in related contexts (Johnson, 1987; Wagner, 2010). Participation in the Program is

expected to have different impacts on the current and expected long run economic performance of a firm. While a large part of the costs of participation are likely to be incurred immediately following the participation decision, many of its benefits may only be realized in the long run. Therefore the impact of Program participation on current and on long-term economic performance of firms needs to be measured separately. So, this research is trying to answer the following question: Is there a relationship between social responsibility and economic performance?

Review of literature

Starting from the 1950s in the world of scientific and business literature, especially the U.S., the problems of business and society is dedicated to many informative research materials, which offers concepts that can be associated with corporate social responsibility. Among them were the most popular ones that are tied to the definitions: the actual "corporate social responsibility", "Corporate Social Performance," "corporate social integrity." Constantly evolving, these concepts just replaced each other as accumulated the previous achievements. In the 1980s this series continued the concept of "business ethics", "corporate philanthropy", "corporate social policy", "and management of stakeholders." At the beginning of the XXI century theories of "sustainable development", "corporate citizenship", "corporate sustainability", "corporate reputation" and "socially responsible investment", "Corporate Social Reporting", and others came along (Madrakhimova, 2013; Ansari, 2008).

Development of hypotheses

Based on the above study we consider the following hypotheses:

H1. Corporate social responsibility with economic performance in companies with low levels of advertising and ads is lower compared to firms with high levels of advertising and ads,

H2. The correlation between corporate social responsibilities with economic performance in small companies is lower compared to large companies.

Materials and Methods

In terms of goal this research is applied and considering the nature is descriptive research. In this study independent variable is disclosure of corporate social responsibility (DCSR) and the dependent variable economic performance. In addition, return on assets and age are control variables and mediating variable is advertising intensity firm. We use the method to remove systematic for sample selection. In this research to collect data of Tehran Securities Exchange Technology Management Company website and the Tehran Stock Exchange website. However, study sample shall be made with respect to following limitations: (Table 1 shows these limitations)

Table 1. Limitations and Sample selection.

Sample selection	number
The total number of listed companies in Tehran Stock Exchange at the end of 2013	468
Limitations:	
Listed companies after 2009	(40)
Deleted companies for 2009 to 2013	(106)
Investment and holding companies	(77)
Enterprise that changed the financial year	(46)
Companies that were not fully disclosed.	(119)
Final Sample	80

After restrictions remaining 80 companies.

$$Q_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 SIZE_{it} + \beta_3 CSR * SIZE_{it} + \beta_4 ROA_{it} + \beta_5 AGE_{it} + \varepsilon_{it} \quad (1)$$

$$Q_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 ADVER_{it} + \beta_3 CSR * ADVER_{it} + \beta_4 ROA_{it} + \beta_5 AGE_{it} + \varepsilon_{it} \quad (2)$$

The method of measuring the variables of these models includes:

Q_{it} : Economic performance firm i in year t,

CSR_{it} : Disclosure of corporate social responsibility firm i in year t,

$SIZE_{it}$: Firm size firm i in year t,
 $ADVER_{it}$: Advertising intensity firm i in year t,
 ROA_{it} : Return on assets firm i in year t,
 AGE_{it} : Age firm i in year t,
 $\epsilon_{i,t}$: Error regression model.

Results

Table 2 shows the descriptive statistics data 80 Firm. The results show that average Tobin's Q is 7.475 and median is 3.52 and standard deviation in this variable is 11.05 and average CSR is 3.756 and median is 3.00 and standard deviation is 2.668. In addition, average ADVER is 0.003 and median is 0.001 and standard deviation in this variable is 0.007. Average firm size is 13.61 and median is 13.50 and standard deviation is 0.007 and average ROA is 10.09 and median is 7.68 and standard deviation in this variable is 12.98. Also, average AGE is 16.46 and median is 15.00 and standard deviation in this variable is 8.78.

Table 2. Descriptive Statistics.

Statistics	Q	CSR	ADVER	SIZE	ROA	AGE
Average	7.475812	3.756410	0.003884	13.61436	10.09406	16.46581
Median	3.525000	3.000000	0.001500	13.50500	7.685000	15.00000
Maximum	75.49000	12.00000	0.081800	18.45000	54.53000	37.00000
Minimum	0.010000	0.000000	0.000100	10.07000	-34.00000	3.000000
Standard deviation	11.05638	2.668458	0.007184	1.370852	12.98145	8.787971
Skewness	3.096304	0.699626	6.485347	1.271004	0.530614	0.942096
Kurtosis	14.07317	3.357249	63.69140	6.150332	4.792589	3.038346

Table 3 shows the Pearson correlation matrix. The correlation between the variables in level $\text{sig} \leq 0.01$ and $\text{sig} \leq 0.05$. According to the results this test there is a positive correlation between the variables of Tobin's Q and CSR, SIZE at the level of 0.05 and there is a positive correlation between the variables of Tobin's Q and ROA, AGE at the level of 0.01. In addition, there is a positive correlation between the variables of CSR and SIZE at the level of 0.01 and there is a positive correlation between the variables of ADVER and AGE at the level of 0.01. Also, there is a negative correlation between the variables of ROA and AGE at the level of 0.01.

Table 3. Pearson correlation matrix.

		Q	CSR	SIZE	ROA	AGE
Q	Pearson Correlation	1	-	-	-	-
	Sig. (2-tailed)		-	-	-	-
	N	397	-	-	-	-
CSR	Pearson Correlation	0.119*	1	-	-	-
	Sig. (2-tailed)	0.015		-	-	-
	N	397	400	-	-	-
SIZE	Pearson Correlation	0.121*	0.268**	1	-	-
	Sig. (2-tailed)	0.016	0.000		-	-
	N	397	400	400	-	-
ROA	Pearson Correlation	0.391**	-0.051	0.056	1	-
	Sig. (2-tailed)	0.000	0.309	0.261		-
	N	397	400	400	400	-
AGE	Pearson Correlation	0.151**	0.005	0.050	-0.157**	1
	Sig. (2-tailed)	0.003	0.927	0.315	0.002	
	N	397	400	400	400	400

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed)

Chow test applied to panel data set or combination. The results show that (Table 4) in model 1 F-statistic is 15.167 df is 52.176 and p-value is 0.000 and in model 2 F-statistic is 79.312 df is 79.312 and p-value is 0.000. Then, the null hypotheses are rejected and data are panel.

Table 4. Chow- Test.

H ₀	Model	df	F-statistic	p-value	Result
Pooled data	Model 1	52,176	15.167057	0.000	Rejected
Pooled data	Model 2	79,312	11.974421	0.000	Rejected

Hausman test will determine use of the fixed effects model or random effect. According to the probability of more than 5%. So the hypothesis H1 (fixed effects model) is rejected. Table 5 shows in model 1 p-value is 0.0023 and χ^2 is 18.55 and df is 5 and in model 2 p-value is 0.0687 and χ^2 is 10.24 and df is 5. So, in model 1 the null hypothesis is rejected and we used fixed effects model and model 2 the null hypothesis is accept, then we used Random effects model.

Table 5. Husmuns Test.

H ₀	Model	p-value	df	X ²	Result
Fixed effects model	Model 1	0.0023	5	18.553818	Rejected
Random effects model	Model 2	0.0687	5	10.240937	Accept

One of the assumptions of the regression model is heterogeneity of variance test. We chose Breusch-Pagan test. The results indicated that the test error is less than 5%. Therefore, there is heterogeneity of variance.

Table 6. Heterogeneity of variance test.

H ₀	Model	p-value	X ²	Result
The variance is equal	Model 1	0.0000	90.79	Rejected
The variance is equal	Model 2	0.0000	167.25	Rejected

The estimated coefficient for CSRD, ADVER, CSRD*ADVER, ROA and Age variables Significant levels greater than 5%. Then, variables haven't significant correlation with economic performance. Also, table 7 shows R2 in model is 0.63 and adjusted R-squared is 0.60 and F-statistic is 41.08. So, 63 percent of the dependent variable depends on the following variables and hypothetically rejected. Thus, corporate social responsibility with economic performance in companies with low levels of advertising and ads isn't lower compared to firms with high levels of advertising and ads,

Table 7. Results hypothesis 1.

Variable	Coefficient	Standard deviation	F-statistic	Sig	VIF
C	-2.138719	0.800775	-2.670811	0.0080	----
CSRD	0.140540	0.057495	2.444403	0.0151	1.00
ROA	0.179180	0.015193	11.79369	0.0000	1.03
AGE	0.486076	0.054761	8.876374	0.0000	1.03
R-squared		0.893074			
Adjusted R-squared		0.865150			
F-statistic		31.98301			
Sig		0.0000			
Durbin-Watson stat		1.840070			

The estimated coefficient for CSRD, ADVER, CSRD*SIZE, ROA and Age variables Significant levels greater than 5%. Then, variables haven't significant correlation with economic performance. Also, table 8 shows R2 in model is 0.43 and adjusted R-squared is 0.39 and F-statistic is 11.97. So, 43 percent of the dependent variable depends on the following variables and hypothetically rejected. Thus, the correlation between corporate social responsibilities with economic performance in small companies isn't lower compared to large companies.

Table 8. Results hypothesis 2.

Variable	Coefficient	Standard deviation	F-statistic	Sig.	VIF
C	2.901401	10.00337	0.290042	0.7582	-----
CSRD	-0.326472	0.331910	-0.983614	0.3259	4.13
SIZE	0.269889	0.616864	0.437517	0.6620	4.49
CSRD*SIZE	0.103164	0.240439	0.429065	0.6828	4.29
ROA	0.260126	0.037220	6.988901	0.0000	1.04
AGE	0.016696	0.083821	0.199191	0.8422	1.03
R-squared	0.432767				
Adjusted R-squared	0.391677				
F-statistic	11.97182				
Sig	0.0000				
Durbin-Watson stat	1.617009				

For greater certainty, we need to test the normality of residuals. As the histogram chart 1 shows the remaining of the normal distribution, and Skewness is 0.195 and Kurtosis is 2.376. Also Jarque-bera is 5.279. So, results show that with certainty remaining of the normal distribution and histogram chart 1 shows the remaining of the normal distribution, and Skewness is 0.189 and Kurtosis is 2.57. So, Jarque-bera is 5.44. So, results show that with certainty remaining of the normal distribution

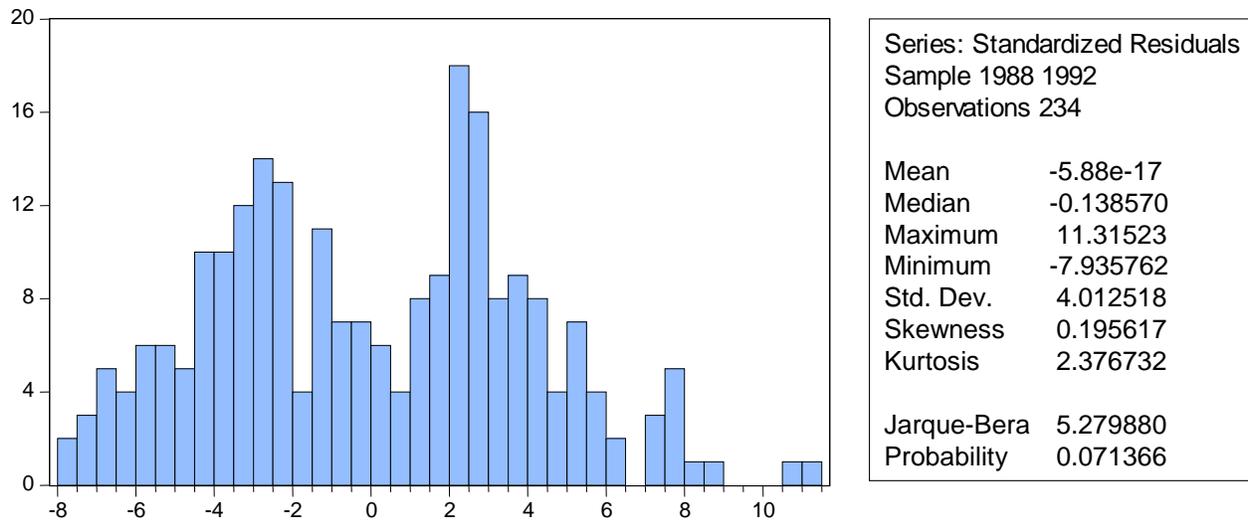


Figure 1. Test results normal distribution of the error components.

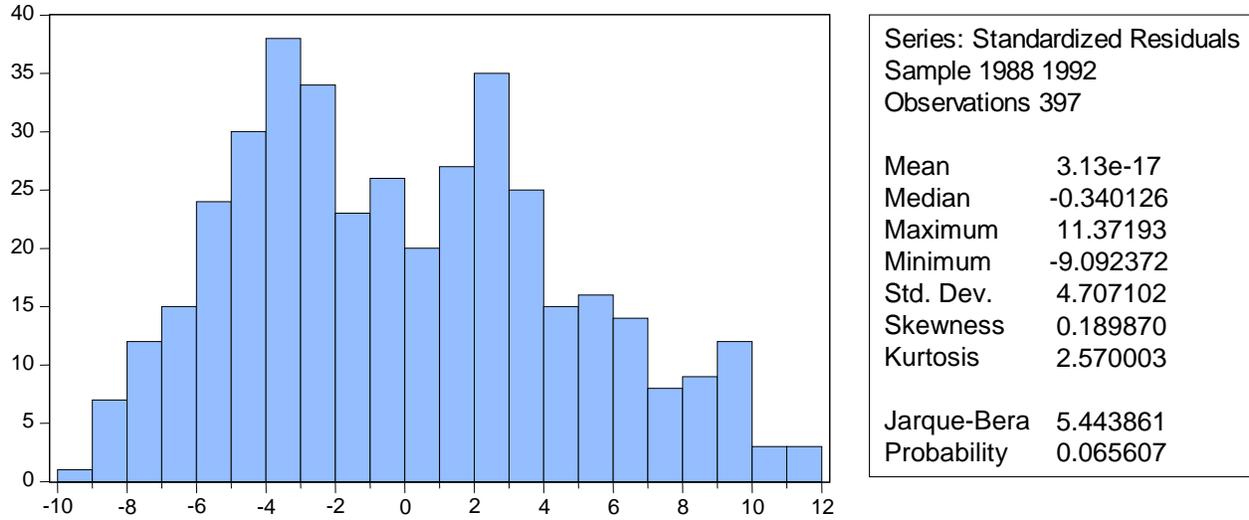


Figure 2. Test results normal distribution of the error components.

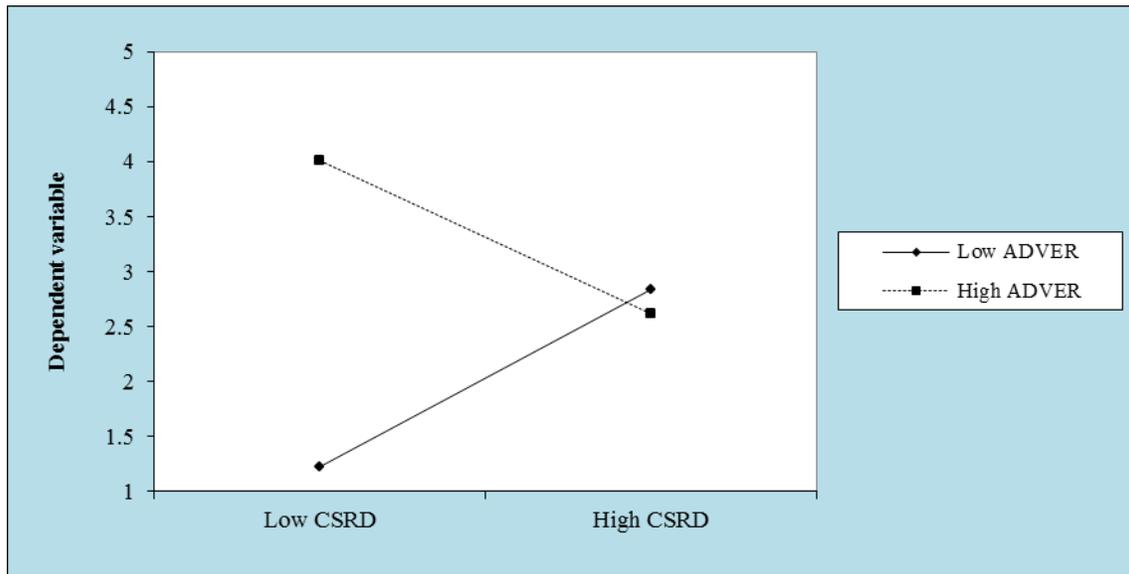


Figure 3. The relationship between disclosure of social responsibility and economic performance due to the moderating role advertising.

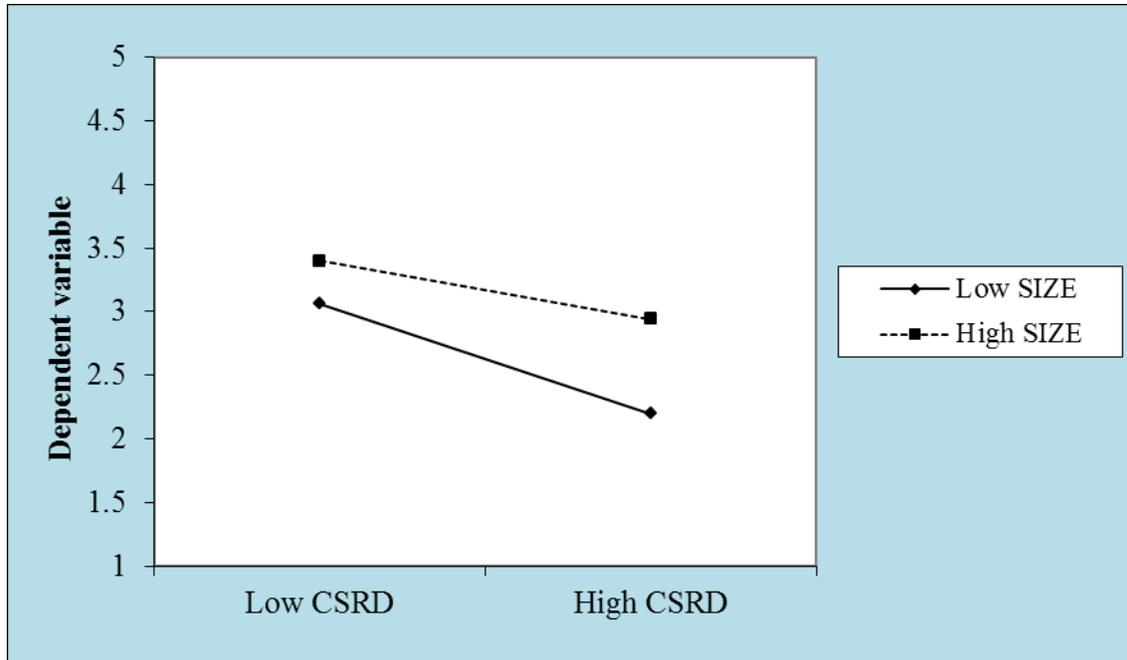


Figure 4. The relationship between disclosure of social responsibility and economic performance due to the moderating role firm size.

Conclusion

In this study mentioned the relationship between corporate social responsibility and economic performance due to the moderating role advertising and firm size in listed companies in Tehran Stock Exchange during the years 2009-2013. This study show that corporate social responsibility with economic performance in companies with low levels of advertising and ads isn't lower compared to firms with high levels of advertising and ads and the correlation between corporate social responsibilities with economic performance in small companies isn't lower compared to large companies. One of the important limitations in this study was:

1. Difficult to determine the value of the companies that isn't trading shares in stock.
2. Not report the cost of advertising in the financial statements.

At the last the following suggestion is addressed for the future studies considering longer time period and study long-term goal for company.

Conflict of interest

The authors declare no conflict of interest

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