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The Moderating Effect of Competition in the Product Market on the Relation of Corporate Social Responsibility and Debts Ratio

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Abstract

Corporate Social Responsibility (CSR) concept is closely related to the notion of sustainable development, and the outcome of the sustainable development approach is specific consideration to disclosure and reporting of CSR. One factor that is less considered in the Iranian economic environment and research is the competitive nature of the product market in today's highly competitive and sensitive environment. So, the main aim of this paper is to investigate the moderating effect of competition in the product market on the debts ratio and the CSR relation among companies listed on the Tehran Stock Exchange. The independent variable in this study is CSR, and the dependent variable is the debts ratio. In order to investigate this issue, the research sample was determined using the systematic elimination method, and 97 companies were selected for seven years from 2012 to 2018. Multivariate regression was used to analyze the data and test the hypothesis. For this purpose, the output-oriented BCC model has been used to measure companies' CSR, and the Lerner index has been used to represent competition in the product market. The results show that high competition in the product market moderates the relationship between CSR and debts ratio. In other words, when competition in the product market is high, Firms adopt lower debt ratios by fulfilling their social responsibilities. The investigation of the moderating effect of the competition is the distinguishing feature of our research compared to other studies. Therefore, players of industry, business, creditors, and investors should pay attention to the intensity of competition in the market.

JEL Classification: G32; G34; G38; J31; J33

Keywords: Corporate Social Responsibility, Lerner Index, Competition in The Product Market, Debts Ratio.

Introduction

People need financial information for decision-making, and accounting information is one of their informational resources. Financial reporting literature specifies the role of financial information and its usefulness in decision-making. The Financial Accounting Standards Board (FASB) and the Iranian Board of Accounting Standards-Setting have emphasized in the theoretical foundations of financial reporting the necessity of providing financial information in a way that is useful in the decision-making process of individuals (Khoshtinat & Esmaeeli, 2005). One of the accounting items prepared in financial reporting is "debts," which is one of the key resources of financing among companies. Debts are usually considered one of the financial risk measures and indicators of the capital structure of companies. It is also a

factor for predicting and guiding investment and economic decision-making. The presence of debts in the financial structure due to the tax advantage reduces the company's cash outflows.

On the other hand, interest costs and defaults at the maturity date increase the possibility of financial risk. Investors can use accounting information about firms' debts to make better decisions about trading. Stocks (Hejazi & Yousefiasl, 2018), creditors, and financial providers can also decide on granting any financial facilities.

One of the factors affecting corporate social responsibility (CSR) is the debts ratio that exists in their financial statements and leads to the disclosure of their information. CSR relates to ethical issues in a company's behavior and decision-making around human resources management, environmental protection, work-related health, social relations, and relationships with suppliers and customers (Khajavi & et al., 2011). agency theory has ignored the relationship between CSR and a firm's debt since investing in CSR is considered a misuse of a company's resources by managers (representatives). However, management studies (i.e., Bae, 2011 and Grullon, 2018) suggest that companies with higher CSR will experience lower capital costs. Companies increase transparency and decrease information asymmetry by disclosing CSR. In addition, from the investors' point of view, companies with high CSR have a lower risk. As a result, they would face lower capital constraints, and investors demand lower risk premiums to maintain such stocks (Sheikh, 2018). For this reason, it could be expected that CSR affects the number of debts of companies affected by product market competition as one of the regulatory mechanisms in the financing process (Balakrishnan & Cohen, 2011; Namazi & et al., 2014).

Grullon & et al. (2002) state that paying attention to the competition level in the product market during the financing process makes a business entity profitable. On the one hand, competition in the product market motivates firms in the same industries to search for competitors' information; on the other hand, to hide their data to have a competitive benefit. According to Li (2010), competition in the markets will improve the quality of information disclosed by companies, making companies dependent on extra-organizational competitive advantage and encouraging owners to enhance intra-organization corporate governance mechanisms and reduce opportunistic behaviors of managers (Ahmadpour & Farmanbordar, 2015). As an external driving force, competition in the markets causes discipline that encourages managers to make financing and investment decisions that increase the firm's value. CSR helps companies be distinguished and achieve competitive advantage when competition is high. In addition, companies with high CSR behave appropriately with their

employees and protect them from adverse effects. Since higher market competition increases the probability of bankruptcy and there is a positive relationship between debts and the possibility of bankruptcy, companies with high CSR are expected to be more likely to reduce their debt ratio when the possibility of competition is high (Sheikh, 2018).

Therefore, the question arises: Does competition in the product market moderate the relationship between CSR and debt ratio? Therefore, the study's primary purpose and focus are to investigate the moderating effect of competition in the product market on the relations between CSR and the debts ratio of listed companies in the Tehran Stock Exchange (TSE). The importance of the study is that it shows regulators, investors, corporate executives, and other decision-makers about the relations between product market competition, CSR, and debts ratio and helps them make more informed decisions accordingly. We will present the research literature, research hypothesis, sample, and hypothesis test in the following. Finally, after presenting and analyzing the findings, we will conclude and discuss the results.

Literature Review

The business environment in which companies operate today is highly competitive. Companies must face many factors nationally and internationally to survive and expand their activities through new investments (MasoumiNia, 2004). Competition in the product market means that different firms have close competition in the production and selling of their goods and are not superior to each other; otherwise, the market tends to monopoly or oligopoly (Khodamipour & Bazraei, 2013). Literature suggests that intense competition in the product market derives efficient acts of managers (Allen & Gale, 2000). Caves (1980) also states that competition drives managers to communicate more with shareholders and increase efficiency. Competition in the market leads to increased transparency and decreased information asymmetry and cost of capital, as similar and comparable information can be obtained from other active competitors in the market and be used to confirm the claims and information provided by the company's management (Soleymankhan & Pourzamani, 2017). The economic consequences of an asymmetric information environment are shrinking financial markets and risks such as increased costs. Due to these potential negative consequences, most countries have stepped up to eliminate information asymmetry and improve the transparency of financial reporting and have taken measures such as reporting on observing CSR requirements.

CSR refers to the optional participation of companies in sustainable development beyond official requirements, a method used to reduce the gap between firms and stakeholders' expectations by presenting and disclosing additional data with a sustainability approach (Hasas et al., 2014). Even though there is still no agreement among researchers and organizations on how to measure CSR and identify its dimensions and indicators, however, many international criteria and standards have been proposed by researchers such as Branco and Rodriguez (2008), Khan & et al. (2016) and Saleh & et al. (2010) and by standard-setting organizations such as Dow Jones Sustainability Indices (DJSI), Global Reporting Initiative (GRI), and The MSCI KLD 400 Social Index (KLD). The central part of CSR is the incentives to prepare business units to respond to the legitimacy of stakeholders' expectations (Turker, 2009); Meeting these expectations depends on managers' attitudes towards their policies and approaches to solving companies' problems (McCarthy & et al. 2017). CSR helps reduce information asymmetry between organizational individuals and conflict between groups and agency problems.

Previous studies have shown that companies are more likely to spend in CSR as a distinct tactic when markets are competitive (Siegel & Vitaliano, 2007; Fisman & et al., 2008; Declerck & M'Zali, 2012; Fernández-Kranz & Santaló, 2010). In a highly competitive environment, any investment in CSR reflects management's attempts to increase the value of the firm and protect its job or profession from more elevated risk. Empirical evidence indicates that when market competition is high, CSR will have a positive relationship with the value of the firm (Jia & Shi, 2014; Ryu & et al., 2016; Sheikh, 2018). Higher market competition rises the likelihood of failure because of low margins, especially for companies with high financial costs (Schmidt, 1997). The competitiveness of the product market can be an essential factor in choosing suitable financing methods. A company that produces and sells unique products compared to its competitors can dominate the market and impose monopoly conditions on the market (MasoumiNia, 2004), which will lead to the company not being afraid to use more debts than similar companies (Nikbakht & et al., 2018). When competition is high, any slight competitive advantage increases cash flows more than usual.

Heinkel & et al. (2001) and El-Ghoul & et al. (2011) showed that companies with high CSR have lower capital costs, enabling them to access money for their projects at a lower? Price. The lower cost of stock ownership represents a competitive advantage for companies with high CSR. Therefore, with higher CSR, companies are more likely to use lower capital costs and reduce debts when acting in more competitive markets. In addition, previous

literature has shown that companies that behave correctly with their employees use lower debts in their statement of financial position to protect their stakeholders from the destructive effects of bankruptcy (Verwijmeren & Derwall, 2010; Bae & et al., 2011). Since higher market competition increases the probability of bankruptcy and debts levels positively affect the possibility of bankruptcy, companies with higher CSR are more likely to reduce the debt ratio when the market competition is high. (Sheikh, 2018). So, competition in the product market is a factor that influences the composition of companies' financial resources. To achieve the research goal and based on the theoretical and research foundations, we proposed the research hypothesis as follows:

Competition in the product market has a moderating effect on the relationship between CSR and debts ratio.

Using leverage as a central variable, as well as the investigation of the moderating effect of competition, and finally, using DEA to measure CSR, is the main distinguishing feature of our study compared to others.

Empirical studies

In the following, we review the latest research in the CSR context. Bardos & et al. (2020) showed that CSR indirectly raises the firm's value through competition in the product market. Nair & et al. (2019) found the relations between CSR disclosure and financial transparency among Indian companies for 400 observations in 2014-2017. They concluded that disclosure would improve financial transparency and the quality of user data. Disclosure of CSR as representative of financial and non-financial disclosure has been widely used. Hence, disclosing CSR leads to improved financial transparency throughout the company's life and facilitates the process of capital facilitation in different ways. Yang & et al. (2018) demonstrated a positive relationship between CSR and corporate leverage in firms listed on the Chinese Stock Exchange.

Sheikh (2018) found that CSR is negatively related to local and market leverage. However, this relationship is the result of competition in product markets. In particular, CSR only has a negative impact on a firm's leverage when competition in product markets is high. When competition is low, CSR does not affect leverage. The study of Benlemlih and Potin (2018) suggested that CSR has a significant negative effect on reducing financial risk. Harjoto (2017) examined the impact of CSR on operational and financial leverage using a sample of 8,116 observations from 1991–1991. He found that CSR and the power of corporate social responsibility (CSR) have a positive (negative)

relationship with the degree of operational leverage (financial leverage). Mitani (2014) showed that regardless of the competition type of companies, the companies competitive position is essential in determining their capital structure. He indicated that capital structure positively affects the competitive position of the market, and the competitive position harms the capital structure. Mishra and Modi (2013) explored the relationship between positive and negative CSR and unsystematic risk. They found that positive CSR crates lower unsystematic risk, and negative CSR raises unsystematic risk. However, the positive effect does not remain in companies with high levels of financial leverage. Pijourlet (2013) showed that firms with higher CSR are more likely to issue shares and have lower leverage than companies with lower CSR. Serafeim & et al. (2011) stated that for companies with high social performance, their managers are more inclined to publicly disclose their social activities because a high level of information transparency reduces information asymmetry between the company and investors, reducing risk. Bae & et al. (2011) also found that companies with higher employee treatment index scores had lower debt ratios. El-Ghoul & et al. (2011) concluded in their research that companies that invested in disclosing CSR in their reports had lower capital costs than those that did not. Guney & et al. (2011) found that the relationship between competition and financing methods is nonlinear and depends on industry type, company size, and firms' growth opportunities. Verwijmeren & Derwall (2010) indicated that companies that have good behavior with employees are more likely to issue shares because their costs are lower. They found that employee health is related to lower leverage ratios.

In Iranian literature, a study by Ghaemi and Saber (2019) indicated a nonlinear third-order cubic relationship between the criteria of the product market competition (including the market share and size) and the debts ratio. Nikbakht & et al. (2018), in a study, explored the relationship between capital structure and the level of competition in the product market of listed companies on the Tehran Stock Exchange. Using Q-Tobin's ratio, market share, product substitutability, number of active companies, and barriers to entry for measuring the percentage of competition in the product market, results showed that product substitutability has a significant positive effect on capital structure. Barriers to entry and the number of active companies significantly adversely affect the capital structure. However, the market share and Q-Tobin's ratio do not significantly affect the debts ratio of companies. Garousi & et al. (2018) found that Investors' estimates of the company's intrinsic value when CSR performance is positive (or negative) without knowing the responsibility rank or using the traditional financial statement- are more (less) than what is. Shams & et al. (2017) showed that competition in the product market significantly

adversely affects the cost of capital of listed companies in the Tehran Stock Exchange. Sepasi & et al. (2017) indicated that competition in the product market significantly negatively affects agency costs and cost of capital. However, a significant relationship exists between product market competition and capital structure. Hajiha and Sarfaraz (2014) indicated that CSR is inversely related to the cost of equity. A study by Sadeghi & et al. (2017) showed that the relationship between market structure and capital structure is nonlinear, which can be due to complex relationships in the market, agency issues, and bankruptcy costs. Setayesh and Kargarfard Jahromi (2011) found that competition in the product market and the capital structure of different industries differ. In the case of using Q-Tobin's ratio and Herfindahl-Hirschman Index (HHI) as a measure of competition in the product market, there is a positive relationship between competition in the product market and the capital structure of companies; However, in the case of using the concentration ratio index of 4 companies, there was evidence to indicate a significant relationship between competition in the product market and capital structure. In addition, their results suggest a nonlinear third-order relation between Q-Tobin's ratio and the capital structure.

Research Methodology

The population of our study is all listed companies in the Tehran Stock Exchange (TSE) from 2012 to 2018. Since it is not possible to access the data of all companies in the scope, and we need data from many companies to compare the competition, inclusion criteria are:

- Listed on the Tehran Stock Exchange prior to 2012.
- The data should be available during the specified time so that the calculations can be done thoroughly.
- The fiscal year ended 10^{th} of March.
- The company should operate in the production field rather than among the companies active in the investment and financial institutes.
- During the study, no change should occur in the fiscal year, and there should be at most three months of cessation of operations so that the results of their financial performance can be comparable.

Considering the abovementioned criteria, 97 companies that met the requirements were selected to test the hypothesis.

Research model and variables

In order to test the hypothesis, equation #1, based on Sheikh (2018), is demonstrated as follows.

Equation #3

$$DR_{i,t+1} = \beta_0 + \beta_1 CSR_{i,t} + \beta_2 (CSR_{i,t} \times LI_{i,t}) + \beta_3 LI_{i,t} + \beta_4 Size_{i,t} + \beta_5 Tax_{i,t} + \beta_6 FCF_{i,t} + \beta_7 Profit_{i,t} + \beta_8 PPE_{i,t} + \beta_9 MTB_{i,t} + \varepsilon_{i,t}$$

In the above equation, we see:

Dependent Variable

Debts Ratio (DR): This is one of the indicators for risk measures and financial leverage, as well as capital structure. This criterion has been used in several studies (such as Guney & et al., 2011; Dudley, 2011; Clayton, 2009) and is measured by dividing the book value of total debts by the book value of total assets.

Independent Variable

Corporate Social Responsibility (CSR): In this study, the Data Envelopment Analysis (DEA) model, the output-oriented BCC model, was used to determine the extent to which companies have fulfilled their CSR optimally. In DEA models for measuring performance in terms of return to scale (RTS), there are two approaches, Charans & et al. (1978), known as CCR, and Banker & et al. (1984), known as BCC. In the CCR approach, the relationship between inputs and outputs follows. That is, for example, if inputs double, also outputs double. In many companies, the constant returns to scale assumption still need to be established, and this approach is appropriate when all companies operate optimally. The BCC approach measures the relative efficiency of units with variable returns to scale. Any multiple of inputs can produce the exact multiple of outputs or less or more in outputs.

Also, DEA models are divided into two categories of inputs and outputs: input-oriented and output-oriented. In an input-oriented model, a unit is inefficient if there is a possibility of reducing any inputs without increasing the other inputs or reducing any outputs. In an output-oriented model, a unit is inefficient if there is a possibility of increasing any outputs without increasing or decreasing other outputs. The above approach is based on the DEA method and implemented by Max-DEA software. The legal, ethical, and voluntary (humanitarian) dimensions are considered input. The economic dimension is considered the output of the DEA model; Each dimension includes the

indicators specified in Table 1. The criteria for each dimension of the CSR measurement model were also defined based on the literature provided in the following.

Table 1. DEA dimensions

DEA Model Inputs	
Legal Dimension	Financial Leverage, Tax Avoidance, Quality of Disclosure, Free Float Ratio, The Employer Share of Insurance Premiums, Non-Executive Ratio, CEO Stability, Auditor Size, Institutional Shareholder Ratio, and Major Shareholder Ratio.
Ethical Dimension	Fairness, Optional Accruals
Voluntary Dimension	Employee Exchange Rates
DEA Model Outputs	
Economic Dimension	Firm Value, Free Cash Flow, Economic Value Added, Asset's Rate of Return, Liquidity Cycle Index, and Financial Resource Efficiency.

Here are some reasons why DEA is implemented for measuring CSR: DEA is a method used to measure the relative efficiency of decision-making units based on their inputs and outputs. Overall, DEA is a valuable tool for measuring the CSR performance of companies as it allows for the incorporation of multiple inputs and outputs, provides objective measurements, identifies best practices, enables comparisons of companies, and is flexible enough to be tailored to specific CSR goals.

Variables of economic, legal, ethical, and voluntary dimensions were entered into Max-DEA to extract the CSR model based on the BCC model. Thus, the variables of the economic dimension were considered as outputs. The variables of legal, ethical, and voluntary dimensions were considered as inputs. Sample companies were also considered as the decision-making unit based on each year-company. The calculated value for the CSR coefficient will be obtained between zero and 1. The closer the value of the coefficient is to 1, the higher the company's efficiency will be in fulfilling CSR (Mousavi & et al., 2017). The operational definitions of each criterion in Table 1 are demonstrated in the following:

Legal Dimension

Financial leverage (LEV): the ratio of long-term liabilities to total assets.

Tax Avoidance (TaxAvo): Five-year average of the effective tax rate. The effective tax rate is equal to the ratio of income tax paid to pre-tax income.

Quality of Disclosure (QD): The published data of the Securities and Exchange Organization.

Free Floating Shares (FFSR): The percentage announced in the annual announcements of the Securities and Exchange Organization.

Employer's share insurance premium (IEC): the ratio of the employer's share insurance cost to the sum of operating costs and cost of goods sold.

Non-executive members of the board of directors (OutBM): the ratio of the number of non-executive directors to the total number of board members

Stability of the CEO (Stability): If the company's CEO has changed in the last two years, the value is zero, and otherwise, the value is one.

Auditor size (AuditSize): If the company's independent auditor is an audit organization, the value is one, and otherwise, zero value is included.

Institutional shareholders (InsOwn): Percentage of shares held by banks, insurance companies, investment companies, pension and investment funds, holdings, organizations, institutions, and state companies.

Significant shareholders (MajOwn): Percentage of shares owned by shareholders who own more than 5% of the company's shares.

Ethical Dimension

Fairness: Obtaining abnormal returns in the stock market indicates a moral hazard caused by unfairness in identifying, measuring, or disclosing information. Based on this, one standard deviation of the monthly abnormal return indicates fairness.

Discretionary accrual items (DAC): To calculate optional accrual items, the Kaznik model is used. Model error sentences are considered optional accrual items.

Voluntary Dimension

Employee exchange (EmpTrans): the ratio of changes in the current year to the number of employees in the previous year.

Economic Dimension

Firm value (TobinsQ): the total book value of liabilities and the market value of the company's shares divided by the company's total assets.

Free cash flow (FCF): calculated from the model of Len and Poulsen.

Economic Value Added (EVA): The following relationship is used.

EVA_it=(NOPAT_it-(WACC_it*Capital_it))/TA_it

Return on assets (ROA): The ratio of net profit before interest and taxes to total assets at the beginning of the financial year.

Cash Cycle (CCC): It is obtained from the following relationship.

CCC=Inv+AR-AP

Financial Resource Efficiency (FRE): One minus the ratio of changes in net profit to percentage changes in sales.

Moderator Variable

This study calculated competition in the product market using the Lerner Index (LI). The Lerner Index is defined as operating profit divided by sales, described in equation #6. This index mainly indicates the feature of market power.

Equation #6

$$LI = \frac{Sales - CGS - SG\&A}{Sales}$$

The competitiveness index is a dummy variable that is between zero and one. If a company's Lerner index is larger than the median In TSE, its value will be one and represent a monopoly; otherwise, its value will be zero, representing a fully competitive market. The acronyms include:

- Sales: net revenue
- CGS: cost of goods sold
- SG&A: Selling, General & Administrative expenses

Control Variables

According to studies by Harris & Raviv (1982), Sunder & Myers (1999), Baure (2004), Huang & Song (2006), and Guney & et al. (2011), the following control variables are used to include the effects of other variables on debts ratio used. In the following, these variables are introduced and the way to be calculated.

Company Size (Size): indicates the size of company operations. The natural logarithm of the company's total assets was used to measure the

company's size following Guney & et al. (2011).

Non-Debts Tax Shield (Tax): Previous studies have shown both a negative (Deangelo & Masulis, 1980) and a positive relationship (Bathala & et al., 1994) between the non-debts tax shield and the debts ratio that is calculated by the ratio of depreciation to total assets.

Free Cash Flow (FCF): Following Lehn and Poulsen (1989), the firm's free cash flow in year t was obtained using equation #3. Higher levels of free cash flow increase the CEO's ability to divert company resources (Sheikh, 2018).

Equation #3

$$FCF = \frac{OI + D - IP - DP - TP}{TA}$$

In which:

- OI: Operating profit at the end of the year t.
- D: Depreciation expense at the end of the year t.
- IP: Interest expense at the end of the year t
- DP: Dividend paid at the end of the year t.
- TP: Taxes paid at the end of the year t.
- TA: Total assets at the end of year t.

Profitability (Profit): This ratio indicates the return on investment in assets. This study used the ratio of operating profit to total assets to calculate the company's profitability. (Guney & et a., 2011).

Fixed Assets (PPE): the ratio of fixed assets to the total assets. Tangible fixed assets can be used as collateral security to reduce the risk of debt representation costs for creditors, as over-investment can transfer assets from creditors to shareholders. Thus, the company's debts are expected to increase with the increase in tangible fixed assets. However, Chang & et al. (2014) believe that companies with higher tangible fixed assets adopt lower leverage since they have fewer information asymmetry problems.

Growth Opportunity (MTB): The ratio of the market value of equity to the book value of equity. It is expected that the higher the market value of companies is, the more capital market participants will consider them.

Data Analyses

Descriptive statistics

To better understand the population being studied and the research variables, it is necessary to describe data before analyzing it. Descriptive analyses of the data are shown in Table 2.

Table 2. Descriptive Statistics of Research Variables

Variable	Symbol	Mean	Median	Max	Min	Standard Deviation
Debts Ratio	DR	0.556	0.571	0.937	0.090	0.182
Corporate Social Responsibility	CSR	0.941	1.000	1.000	0.490	0.085
Competition In the Product Market	LI	0.499	0.000	1.000	0.000	0.500
Company Size	Size	14.132	13.950	19.150	10.227	1.446
Non-Debts Tax Shield	Tax	0.022	0.018	.112	0.000	0.018
Free Cash Flow	FCF	0.070	0.061	0.598	-0.363	0.096
Profitability	Profit	0.226	0.205	0.666	-0.181	0.126
Fixed Assets	PPE	0.236	0.191	0.839	0.004	0.167
Growth Opportunities	MTB	2.466	2.123	8.570	0.301	1.403

To our knowledge, there is no similar study in this field. So, comparing the data in Table 2 with other related studies does not make sense due to the differences in the period and the number of companies. However, the average debts ratio of sample companies in the study period is .555. That is, on average, 55% of their financing is done through debts. The average of 94% of CSR reflects the high CSR of the investigated companies. About 22% of companies were profitable. The average fixed assets account for about 23% of the companies' total assets. The average market value of equity is 2.46 times the book value of equity.

Results of testing hypothesis

First, we test the traditional assumptions of a regression model, such as the Chow test and F-Limer test was used to choose between time-series and cross-sectional data and panel data methods. These tests showed that the panel data method ($P < 0.05$) should be used to estimate the model. Given the significance level obtained from the Hausman test, the panel data method with a fixed-effects approach ($P < 0.05$) was used to estimate the pattern. Then the significance level of the White test was less than 5%. Therefore, the model has an inequality of variance. The generalized least squares estimation method has been used to eliminate the homogeneity of variance generated in the model.

Variance inflation factor (VIF) measures the intensity of multiple lines in regression analysis; collinearity means a linear relationship between explanatory or independent variables. If the value of VIF is less than 10, there is no collinearity. The value of VIF for all variables in this study is less than 10, so there is no problem with collinearity in variables.

The results of the estimated model of the study are presented in Table 3.

$$DR = \beta_0 + \beta_1 CSR + \beta_2 (CSR*LI) + \beta_3 LI + \beta_i Controls + \varepsilon$$

Table 3. Results of testing research hypothesis

Variable	Symbol	Coefficients	T	Significance Level	VIF
Constant Coefficients	C	0.454	4.947	0.000	-
Corporate social responsibility	CSR	-0.046	-2.074	0.039	1.16
Moderating Effect of Competition	CSR*LI	-0.118	-2.477	0.014	1.02
Competition In the Product Market	LI	0.105	2.357	0.019	1.81
Company Size	Size	0.010	1.697	0.090	1.12
Non-Debts Tax Shield	Tax	-0.197	-0.821	0.412	1.83
Free Cash Flow	FCF	0.055	-1.796	0.073	1.69
Profitability	Profit	0.057	-1.605	0.109	2.52
Fixed Assets	PPE	0.012	0.349	0.727	1.56
Growth Opportunities	MTB	-0.001	-0.924	0.356	1.32
Coefficient Of Determination (Adjusted)	Adj R2	(.962) .969			
Durbin–Watson Statistic	DW	2.38			
Fisher Statistic (Significance Level)	F	(0.000) 138.199			
Limer F Statistic (Significance Level)	F	(0.000) 26.045			
Hausmann Statistic (Significance Level)	H	(0.000) 58.440			
White F Statistic (Significance Level)	F	(0.000) 3.706			

Given that the significance level of the Fisher statistic is less than 5%, the significance regression is confirmed at the 95% confidence level. The Durbin-Watson statistic value is between 1.5 and 2.5, so the lack of correlation in the remaining components of the regression model is confirmed. The value of the

adjusted coefficient of determination indicates that the independent variables can explain 96% of the resulting changes in the dependent variable. According to the results of the estimated model in Table 3, the coefficient of CSR is -0.046, and its significance level is less than the error level of 0.05. Thus, there is a significant negative relationship between CSR and debts ratio.

Also, it is observed that when entering the moderating variable (CSR * LI), with a coefficient of -0.118, a significant level of relations between CSR and debts ratio is maintained and is less than the error level of 0.05. This indicates the acceptable effect of the CSR * LI as a moderating variable. Therefore, high competition in the product market significantly moderates the relationship between CSR and debts ratio. In other words, when competition in the product market is higher, the negative impact of CSR on the debts ratio increases. Therefore, the interactive variable coefficient (CSR * LI) is negative.

Discussion and Conclusion

One factor that has received less attention in the economic environment of Iran is the competitive nature of the product market, or in other words, the product market power. CSR also deals with ethical issues regarding company behavior and decision-making on human resources management, environmental protection, occupational health, social relationships, and relationships with suppliers and customers. CSR improves shareholder satisfaction and positively affects the company's reputation. This study explored the moderating effect of competition in the product market on the relationship between CSR and debts ratio. Testing the research hypothesis indicates a negative and significant relation between CSR and debts ratio. In addition, high competition in the product market intensifies the negative relationship between corporate responsibility and debts ratio. In other words, when competition in the product market is higher, the negative impact of CSR on companies' debts ratio increases. This shows that the effects of CSR on the debts ratio of companies are more significant than the competition in the product market. Considering the significance of the coefficient of the moderator variable (CSR * LI), the moderating effect is confirmed. Also, since the direction of the moderator variable and independent variable are the same (both are negative), it is concluded that the moderator variable intensifies the relationship between CSR and the debt ratio.

The findings of this paper are consistent with previous research, which indicates that firms with high CSR disclose more information to provide a positive picture of their performance. CSR leads companies to voluntary

contributions in sustainable development beyond official requirements. It is a way to reduce the gap between firms and stakeholder expectations by presenting and disclosing additional data with a sustainability approach. Therefore, CSR leads to a reduction in asymmetric information between organizational actors and reduces information asymmetry. For this reason, investors and creditors take lower risks for companies with high CSR because CSR provides guarantees such as protection during a weak financial performance. As a result, companies with high CSR face lower capital constraints. Also, since higher competition in the market increases the likelihood of bankruptcy, and the amount of debt is positively related to the probability of bankruptcy, companies with higher CSR are more likely to reduce the debt ratio when market competition is high. The more the managers of companies pay attention to corporate social responsibilities, the more they can increase the company's value through financial decisions and gain the satisfaction of society. The results of the research are consistent with Sheikh (2018).

Given the research results, it can be suggested that the Security and Exchange Organization of Iran adopt laws and regulations that reinforce CSR (from the point of view of customers, employees, environment, shareholders, society, and other stakeholders) and as far as possible, to measure and determine the actual level of CSR over the years of their activity, so that both researchers and companies' stakeholders can use this information. In addition, users can be recommended to pay more attention to the company's competition level to evaluate the company better and ultimately make better decisions and consider it in their decision-making. It is recommended that researchers investigate the relationship between CSR and transparency in financial reporting by industry so that they gain a clearer view of this relationship. Also, it is worth examining the effect of other regulatory mechanisms (i.e., Mandatory disclosure, rating, and ranking) on their relationship. Finally, it is suggested that researchers explore the present study using additional criteria (i.e., measuring CSR directly by its proxies or HHI for competition in the market) to measure the main variables of the research and compare the results.

Researchers constantly need help with the research process beyond their control. So, this research is no exception and has a series of limitations. In examining the level of competition, it is necessary to investigate all the companies active in the product market to achieve a better result. Lerner index mainly indicates the feature of market power and a measure of competition. This index has often been used to measure a firm's market power. This is not possible due to the unavailability of information from non-listed companies.

Thus, in this study, we studied the competition between firms listed on the Tehran Stock Exchange. The level of product competition in the market is affected by various indicators, which cannot be examined due to the lack of measurement criteria. Among these criteria, we can refer to the level of management skills or government support and sometimes intellectual capital in some industries.

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