

Corporate Social Responsibility and Financial Performance : Moderating Impact of Product Market Competition

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Abstract

Purpose : This paper, which is based on the idea of “strategic CSR,” examined how product market competition (PMC) affected the relationship between Indian companies’ financial performance (FP) and corporate social responsibility (CSR).

Methodology : The study was conducted on 534 manufacturing firms listed on India’s National Stock Exchange from 2016 to 2021. Based on the Hausman Specification test, this study used a fixed effects panel regression model to test the stated relationships.

Findings : A review of 3,204 firm-year observations revealed that CSR had a detrimental effect on firms’ FP. The relationship between CSR and FP showed a positive moderating influence of PMC, supporting the “strategic CSR” approach, which contends that CSR enhanced FP for businesses operating in a competitive market.

Practical Implications : This analysis validated empirical precedents that showed a favorable association between competition and company FP and a negative influence of CSR. The target audience for this study included academics, managers, stakeholders, and users of CSR data due to the importance of corporate responsibility in today’s world.

Originality : In the Indian context, this study is the first attempt, as far as we are aware, to examine the moderating effect of PMC on the link between CSR and FP.

Keywords : corporate social responsibility, financial performance, India, moderator, product market competition

JEL Classification Codes : G3, M10, M14

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In the 2000s, the academic community became inundated with discussions regarding the “business case of CSR,” which shows the effects of practicing corporate social responsibility (CSR) on corporate financial performance (CFP). A separate body of research in the CSR and CFP literature addresses the fundamental mechanisms that describe how and when CSR impacts businesses’ financial performance. The study of moderators in the literature concerning the relationship between CSR and CFP has aimed to reflect the “when” or the conditions under which CSR leads to boosted or defused performance of firms. These external or internal

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conditions connect the CSR–CFP dynamic of corporate activities to the outside environment or the internal conditions within a firm. The external conditions have been explored using the moderators related to economic, institutional, or industry-related conditions. The internal conditions mostly relate to firm strategies and corporate governance, which have been explored extensively in the Indian context (Patro & Pattanayak, 2017; Shukla & Geetika, 2022). Studies have examined the relationship between CSR and product market competition (PMC) in this distinct stream that focuses on the external factors influencing the CSR–CFP relationship (Fernández-Gago et al., 2020). Although scholars have separately analyzed the effect of PMC and CSR & CSR and CFP (Mishra & Suar, 2010), studies concentrating on the effect of CSR on CFP dependent on the levels of competition are inadequate (Gupta & Krishnamurti, 2021). The primary motive of this study is to analyze the moderating effect of PMC on the impact of CSR on CFP in the case of Indian firms.

The logic of using PMC as a moderator emits from a twin outlook in the literature on the impact of PMC on the CSR stages of firms. The “strategic view” of CSR postulates that CSR acts as a differentiation strategy for firms in competitive markets (Porter & Kramer, 2002). Another justification supports that CSR provides a competitive advantage that reduces risks and assists firms in developing a competitive position and improving their CFP (Dupire & M'Zali, 2018). The reasoning for basing the study in the Indian context arises from various reasons. First, a handful of studies (Gupta & Krishnamurti, 2021) have taken PMC as a moderator between CSR and CFP, and to the degree that we are aware, almost no study specifically focused on the Indian context has analyzed the same.

Studies that have done similar analyses have focussed on banks (Rastogi & Kanoujiya, 2022) or have taken financial distress as an explanatory variable (Kanoujiya et al., 2023). So, this study fills that critical gap. Second, India's competitive environment has become stronger since the economic reforms of 1991. The lowering of entry barriers as a result of liberalization has increased the pressure from the competition (Singla & Singh, 2019). The profitability of firms is a key indicator of company performance, and as competitive pressures rise, market structure changes dramatically (Chakraborty & Biswas, 2020). Third, most theoretical constructs define CSR as voluntary (Gatti et al., 2019). In the Indian context, Section 135 of the “Indian Companies Act 2013” mandates CSR and fixes specific amounts to be invested in designated areas, constraining the companies. One important factor that may influence how developed countries see CSR is the fact that, for example, employee welfare initiatives in India are not covered by CSR.

The present study examines the impact of PMC on the relationship between CSR and CFP for Indian enterprises, taking into account the historical context of strategic CSR, the country's heightened competitive landscape, and its unique institutional framework with regard to mandated CSR investment. The increased competition in the Indian markets, especially concerning the entry of foreign firms, puts intense pressure on the companies. The extent and intensity of competition influence CSR policies considerably (Dupire & M'Zali, 2018). Although research on the impact of PMC on CSR and CFP conducted in other nations guides the nature of the impact, it is not possible to generalize these findings to all developing nations, including India, as they also rely on each nation's institutional framework. Additionally, the study employs the environmental, social, and governance (ESG) scores ascertained by a third-party rating from Bloomberg to measure the value of CSR. Third-party ratings have been used the most in measuring CSR and have superseded the demerits of other methods of measuring CSR in most studies (Sachin & Rajesh, 2022).

Theoretical Context and Hypotheses Development

CSR and CFP Association

Friedman (1970) proposed that the primary goal of a businessman is to amplify profits. Since then, various

theories have explained CSR's impact on CFP. Freeman (1994) proposed that a company's relationship with its stakeholders, like employees, customers, suppliers, and regulators, develops by engaging in socially responsible practices. The “resource-based view” postulated that CSR is a valuable resource that a company possesses that puts it in a strategically advantageous position concerning its competitors (Barney, 1991). CSR also adds to the positive image of a company as a responsible entity and reduces risk (Gupta et al., 2022), further escalating its financial performance. Fulfilling various societal obligations improves relationships between companies and society (Mutuc & Cabrilo, 2022). The appeal of studies concerning the consequence of CSR on CFP firms in developing and emerging countries has grown. Scholars have focused on analyzing the context of distinct economic and institutional factors, which gives novel insights into the studies in these areas (Jamali & Karam, 2018).

In reference to the direction and strength of the relationship between CSR and CFP, Wang et al. (2016) noted that research conducted in wealthy nations had indicated a stronger positive relationship between CSR and CFP than for businesses in developing nations. This notion was contradicted by Mutuc and Cabrilo (2022), who found a negative association of CSR with CFP in the case of developed Asian countries. CSR may not, in all circumstances, generate positive or significant results. The current state in Asian and South Asian countries suggests conflicting evidence about the relationship between CSR and CFP (Mutuc & Cabrilo, 2022). In the Indian context, the contemporary studies that have explored the link between CSR and CFP have given inconsistent results. Considering the latest articles, the studies have found positive (Anderson et al., 2024; Cordeiro et al., 2023; Manimalar & Sudha, 2016; Sardana et al., 2020; Singh & Verma, 2017), negative (Bhatnagar et al., 2023; Jyoti & Khanna, 2021; Mutuc & Cabrilo, 2022; Waris & Din, 2024), and mixed (Ahamed & Tripathi, 2023; Singhania et al., 2024) relationship.

The studies reporting positive results between CSR and CFP have been suspicious about such a relationship due to the misspecification of variables and have even commented on the universality of such findings (Wang et al., 2016). The findings of CSR's impact on CFP, especially in the Indian context, have proven to be mixed with different theoretical underpinnings to explain that being responsible is beneficial for firms. Given this background, it is proposed in the following research/alternate hypothesis:

🔗 **H1**: CSR significantly impacts a firm's financial performance.

Product Market Competition and Corporate Social Responsibility

PMC may have no bearing on a business's ethical claims. Still, it may give suitable motives for companies to be responsible (Dupire & M'Zali, 2018) as it affects the firm's degree of social responsiveness. CSR is a pressure that strategically places firms in a competitive market (Dupire & M'Zali, 2018). “Strategic CSR” postulates that companies are inclined to invest in socially responsible practices in a competitive scenario, providing a distinct competitive advantage (Porter & Kramer, 2002). Social ratings of firms have been tested to be strengthened for firms conducting business in competitive markets (Fernández-Kranz & Santaló, 2010). Conversely, it has been stipulated that companies operating in high competition tend to devote fewer resources to CSR as intense competition dampens profit margins and the motivation to invest in CSR. Still, it is argued that CSR can provide a competitive advantage to firms in more competitive markets (Fernández-Kranz & Santaló, 2010).

CSR and CFP in Industries with High Versus Low Competition

There are two different perspectives on how competition affects the relationship between a company's CFP and CSR. According to one perspective, companies operating in a sector with low levels of competition incur multiple

political expenses and become the focus of activists because of their huge profit margins (Graafland & Smid, 2015). These political costs motivate the firms to participate more in CSR due to the reputational benefits that being responsible brings, implying that in low-competitive industries, the impact of CSR on CFP will be more substantial (Gupta & Krishnamurti, 2021).

Hart (1983) argued that, on the other hand, managerial sloth is reduced by competition in the product market, leading to higher productivity. Firms under competitive pressure gravitate to implement CSR practices to provide a market premium strategically, boost their investment in CSR to set themselves apart from their competition and use strategic CSR to develop deep relationships with stakeholders and gain competitive benefits (Flammer, 2015). Firms may be compelled by market rivalry to enhance their social performance, as superior social performance can provide them with a competitive advantage (Leong & Yang, 2020). Social investment will be more likely in competitive markets, and profitability will be correlated with CSR. The pressure of competing coerces firms to value the shareholders and enhance their CSR engagements, especially with consumers and employees (Flammer, 2015).

A company's decision to engage in strategic CSR is thought to be influenced by external competitive pressure and high levels of competition in a product market, which will support the company's strategic thinking when it comes to CSR implementation (Yu & Liang, 2020). Firms belonging to industries with high competition gain more from fulfilling customers' social expectations than non-competitive industries (Jiao & Shi, 2014). The review of the literature reveals that the studies have predominantly suggested that competition favorably affects the implementation of CSR.

Based on the precedent argument, we propose that competition benefits firms in higher competition than in the low competitive sector. To test the moderating effect of PMC on the relationship between CSR and CFP, we propose the following research hypothesis:

✎ **H2:** PMC moderates the relationship between CSR and the FP of firms.

To establish further robustness to the study, we also analyze the moderating effect of PMC on the association between CSR and CFP by dividing the firm into “high-market competition” and “low-market competition” and propose the following hypothesis:

✎ **H3:** CSR enhances the CFP of firms in highly competitive industries compared to low competitive sectors.

Data and Methods

An analytical study based on a sample of companies listed on the National Stock Exchange (NSE) of India has been used to test the hypotheses for the period between 2016 and 2021. For this study, we have considered the manufacturing companies listed on the NSE. The manufacturing sector is a dominant resourceutilizing and waste-producing sector. Due to this, this sector faces intense pressure from the different stakeholders about their social

Table 1. The Sectoral Information and Categorization of Companies Based on Competition

Sl. No.	Industry	No. of Companies	"Highly Competitive Sectors"	No. of Companies	"Low, Competitive Sectors"	No. of Companies
1	Automobile and Ancillaries	25	Automobile and Ancillaries	25	Chemical and Chemical Products	99
2	Chemical and Chemical Products	99	Construction and Real Estate	37	Communication Services	7
3	Communication Services	7	Construction Materials	37	Diversified Manufacturing	9
4	Construction and Real Estate	37	Consumer Products	19	Diversified	6

5	Construction Materials	37	Diversified Machinery	1	Mining	10
6	Consumer Products	19	Diversified Non-financial Services	2		
7	Diversified	6	Electrical Machinery	7		
8	Diversified Machinery	1	Electricity	10		
9	Diversified Manufacturing	9	Electronics	3		
10	Diversified Non-financial Services	2	Food and Agriculture Products	28		
11	Electrical Machinery	7	Hotels and Tourism	5		
12	Electricity	10	Information Technology	28		
13	Electronics	3	Metal and Metal Products	57		
14	Food and Agriculture-based Products	28	Miscellaneous Manufacturing	28		
15	Hotels and Tourism	5	Miscellaneous Services	20		
16	Information Technology	28	Non-electrical Machinery	22		
17	Metal and Metal Products	57	Plastic Products	12		
18	Mining	10	Textiles	15		
19	Miscellaneous Manufacturing	28	Transport Services	14		
20	Miscellaneous Services	20	Wholesale and Retail Trading	33		
21	Non-electrical Machinery	22				
22	Plastic Products	12				
23	Textiles	15				
24	Transport Services	14				
25	Wholesale and Retail Trading	33				
		534		403		131
		Companies		Companies		Companies

responsibility. Considering the manufacturing companies for which the ESG data were available within the given time frame, a total of 534 companies were found in our sample, with 3,204 firm-year observations. The analysis has been done using EViews software. The firms were divided into various sectors depending on the classification of companies' data obtained from the NSE. The sectoral information and categorization of companies based on competition for the sample of 534 companies has been presented in Table 1.

Variables

Corporate Social Responsibility

The measurement of variables taken in the study is displayed in Table 2. Studies have conceptualized corporate social responsibility differently (Sachin & Rajesh, 2022; Sachdeva et al., 2023; Shetty & Ashalatha, 2022). This study has taken the ESG scores from Bloomberg in the context of Indian companies. Bloomberg delivers data on ESG parameters in more than 2,000 categories relating to CSR in varied areas. With the help of more than 700 research analysts from Bloomberg Intelligence, they provide distinctive scores.

Product Market Competition

PMC was measured based on firms' concentration ascertained employing the Herfindahl Hirschman Index (HHI). HH index has been used in previous studies to measure market competition (Dupire & M'Zali, 2018). The HHI is calculated using the second power of sale of all firms belonging to an industry to which a particular firm belongs. It is calculated by using the formula:

$$HHI = \sum_{i=1}^{N_{jt}} S_{ijt}^2$$

S_{ijt} , S stands for a share of firm i , belonging to industry j in the year t . The percentage of a company's sales to the overall sales of the industry to which it belongs is used to compute the firm's market share. By using the above formula, the market concentration can be measured. The PMC was measured for individual firms, and the values obtained were calculated. The higher the value it gives, the higher the concentration and the less is the competition. The HHI values of industries above the mean values have been classified as more concentrated; hence, the level of competition is low and vice versa. This study also uses firm size, leverage, current ratio, capital intensity, research and development intensity, and sales growth. The measurement of all the variables has been shown in Table 2.

Table 2. Measurement of Variables

Dependent Variables (DV)	Measurement	Source
ROA	Net Income/Average Assets	CMIE PROWESS IQ
ROCE	Earnings Before Interest and Tax/(Shareholder's Equity + Long Term Liabilities)	CMIE PROWESS IQ
Moderating Variable		
Market Competition	HHI Index	Industry sales data from CMIE PROWESS IQ
Independent Variables (IV) and Control Variables		
Environmental, Social , and Governance Score (ESG)		Bloomberg ESG score
Firm's Size	Log of firm's sales	CMIE PROWESS IQ
Current Ratio	Current Assets/Current Liabilities	CMIE PROWESS IQ
Research & Development Intensity	Research and Development Expenditure/Sales	CMIE PROWESS IQ
Capital Intensity	Capital Expenditure/Sales	CMIE PROWESS IQ
Leverage	Debt Equity Ratio	CMIE PROWESS IQ
Sales Growth	Percentage change in sales each year	CMIE PROWESS IQ

Econometric Model

The study used the fixed effects panel regression model to analyze the proposed relationships. The study uses robust standard errors to handle the issue of heteroscedasticity. A three-stage analysis is used to test the hypotheses, as suggested by Helm and Mark (2012), by taking two proxies of CFP to explore the moderating effect of PMC on the association between CSR and CFP.

First, the first model assesses the influence of control variables and examines the relationship between CSR and CFP (Model 1).

$$\text{Basic Model 1} = ROA = \beta_0 + \beta_1 ESG + \beta_2 R\&D + \beta_3 CR + \beta_4 Size + \beta_5 Leverage + \beta_6 Capinst + \beta_7 Salesgrowth + \dots (1)$$

The next model adds the competition variable to the equation to analyze its impact on the DV (Model 2).

$$\text{Basic Model 2} = ROA = \beta_0 + \beta_1 ESG + \beta_2 R\&D + \beta_3 CR + \beta_4 Size + \beta_5 Leverage + \beta_6 Capinst + \beta_7 Salesgrowth + \beta_8 Competition + \dots (2)$$

The third model adds a two-way interaction term between CSR and PMC to test the moderating effect.

$$\text{Basic Model 3} = ROA = \beta_0 + \beta_1 ESG + \beta_2 R\&D + \beta_3 CR + \beta_4 Size + \beta_5 Leverage + \beta_6 Capinst + \beta_7 Salesgrowth + \beta_8 Competition + \beta_8(Competition * CSR) + \dots (3)$$

Analysis and Results

The descriptive statistics for the entire sample is given in Table 3. The mean CSR score is 32.56. The average ROA and ROCE were 5.36 and 7.05, respectively. ROA and ROCE clearly show a substantial standard deviation due to the range of industry sectors in the sample under investigation. The low debt-to-equity ratio of Indian companies is demonstrated by the average leverage of 0.82. The company is 9.82 in size on an average. The firms under investigation have a low rate of innovation, as indicated by the average R&D density of 0.01. The average capital intensity score, which indicates how efficiently businesses use capital, is 0.27. The average current ratio is 2.45, which suggests that the company has a strong short-term liquidity position.

Table 4 shows the correlation coefficient among the dependent variables (DVs) and independent variables (IVs). Correlation analysis determines the bivariate association between the variables under investigation. Additionally, it verifies that the appropriate IV has been considered to prevent the issue of multicollinearity. The correlation coefficients depict a lower magnitude of correlation among the IV. However, prior research (Singla & Samanta, 2019) suggests further testing to investigate the correlation between IV when there is some degree of association, which has been done using variance inflation factor (VIF) analysis.

Table 3. Descriptive Statistics

	CSR	ROA	ROCE	R&D Int.	Capital Int.	LVG	Firm Size	CR	Sale
Mean	32.56	5.36	7.05	0.01	0.27	0.82	9.82	2.45	0.04
Median	31.63	4.86	7.0	0.00	0.26	0.11	9.81	1.56	0.025
Maximum	77.60	80.02	110.0	5.86	0.84	649.73	15.63	73.65	0.44
Minimum	0.00	-121.08	-867.58	0.00	0.00	0.00	0.00	0.01	0.005
Std. Dev.	11.76	10.40	27.42	0.16	0.18	12.25	1.66	3.76	0.03
Observations	3204	3191	3181	3180	3193	3042	3179	3192	3204

Table 4. Correlation Matrix—Pearson Correlation Coefficients

	1	2	3	4	5	6	7	8	9	10
1 CSR	1.00									
2 ROA	0.12***	1.00								

3	ROCE	0.044**	0.39***	1.00							
4	R&D Intensity	-0.06***	-0.19***	-0.20***	1.00						
5	Capital Intensity	0.008	-0.09***	-0.07***	-0.04*	1.00					
6	Leverage	0.06***	-0.08***	-0.06***	-0.005	0.04***	1.00				
7	Size of Firm	0.42***	0.16***	0.14***	-0.08***	0.15***	0.027	1.00			
8	Current Ratio	-0.03	0.15***	0.06***	0.07***	-0.21***	-0.024	-0.25***	1.00		
9	Sales Growth	-0.004	0.05***	0.08***	-0.02	-0.04**	-0.025	-0.03	-0.009	1.00	
10	Competition	0.12***	0.13***	0.01	0.04***	-0.02	-0.027	0.058***	0.03*	-0.008	1.00

Table 5. Variance Inflation Factors

Variable	VIF
CSR	1.244
Size of Firm	1.344
Current Ratio	1.117
Capital Intensity	1.069
Intensity	1.012
Leverage	1.007

The values of VIF factors were calculated, as shown in Table 5. The values are in the tolerable range of close to 1; the issue is not prevalent in the models.

The two proxies of CFP have been analyzed using different models, and the unstandardized values of regression coefficients are shown in Table 6. In the first model (Model 1), the impact of ROA on CSR was done, which depicts a significant negative impact ($\beta = -0.076, p < 0.01$) of CSR on ROA; hence, sufficient evidence indicates that H1 is supported. We can state that CSR has a negative influence on ROA. The competition variable has been added in the second model (Model 2), showing a statistically insignificant relationship to ROA. An interaction term (CSR*competition) has been added to analyze the moderating impact of competition on the CSR–CFP relation in Model 3. The interaction effect ($\beta = -0.002, p > 0.10$) is not statistically significant when ROA is taken as a DV, so we can comment that we could not support H2. Competition fails to moderate the association between CSR and CFP. As calculated and shown in Table 6, the Hausman specification test favors the “fixed-effects” model over the “random-effects model.”

Table 6. Regression Results (Unstandardized Coefficients) Showing the Three-Stage Analysis of the Influence of CSR on CFP Moderated by PMC

DV	ROA (Model 1)	ROA (Model 2)	ROA (Model 3)	ROCE (Model 4)	ROCE (Model 5)	ROCE (Model 6)
Constant	-31.09*** (-11.19)	-30.38*** (-10.71)	-30.38*** (-10.70)	-3.44 (-0.65)	-1.55 (-0.65)	-1.97 (-0.37)
CSR	-0.076***	-0.074***	-0.073***	-0.11***	-0.11***	-0.21***

	(-3.84)	(-3.71)	(-2.56)	(-3.02)	(-2.85)	(-3.85)
R & D	-4.89***	-4.92***	-4.92***	-11.05***	-11.13***	-11.10***
Intensity	(-4.12)	(-4.14)	(-4.14)	(-4.96)	(-4.99)	(-4.98)
Capital	-11.64***	-11.68***	-11.68***	-14.77***	-14.88***	-14.88***
Intensity	(-7.98)	(-8.007)	(-8.07)	(-5.39)	(-5.43)	(-5.44)
Leverage	-0.027***	-0.027***	-0.027***	-0.056***	-0.057***	-0.057***
	(-3.48)	(-3.52)	(-3.52)	(-3.87)	(-3.93)	(-3.94)
Size of Firm	4.36***	4.36***	4.36***	2.00***	2.01***	2.04***
	(15.49)	(15.51)	(15.50)	(3.77)	(3.80)	(3.94)
Current Ratio	0.10**	0.10**	0.10***	0.13	0.13	0.12
	(2.50)	(2.49)	(2.49)	(1.61)	(1.59)	(1.51)
Sales Growth	0.00	0.00	0.00	0.01***	0.01***	0.01***
	(0.64)	(0.65)	(0.65)	(5.36)	(5.38)	(5.42)
Competition		-19.15	-19.11		-51.29*	-53.82*
		(-1.22)	(-1.22)		(-1.74)	(-1.83)
CSR*			-0.002			0.19***
Competition Score			(-0.06)			(2.60)
Observations	3013	3013	3013	3008	3008	3008
F	14.95	14.93	14.89	12.06	12.06	12.07
Adjusted R ²	0.71	0.71	0.71	0.67	0.67	0.66
Hausman	160.63***	169.61***	168.22***	32.95***	36.36***	42.65***
Test- FE vs. RE						

Note. Table 6 presents the regression results of Model (1) to Model (6), testing the moderating effect of PMC on the association between CSR and the CFP using ROA and ROCE.

* depict significance at a 10% level of significance.

** depict significance at a 5% level of significance.

*** depict significance at a 1% level of significance.

In Model 4, the analysis uses the return on capital employed as the DV. The outcomes portray a statistically significant and negative impact ($\beta = -0.11, p < 0.01$) of CSR on ROCE. In Model 5, PMC was added as a predictor variable. It shows a statistically significant coefficient ($\beta = -51.29, p < 0.10$). To test the moderating impact of competition, an interaction term that was added in Model 6 is statistically significant ($\beta = 0.19, p < 0.01$). Since the interaction term is statistically significant, it can be commented that there is a moderating effect of PMC on the relationship between CSR and CFP when we take ROCE as a measure of CFP (Helm & Mark, 2012; Sharma et al., 1981). We have evidence to support H2: Competition dampens the negative association between CSR and CFP as measured by ROCE.

We evaluate H3 to measure the impact of CSR on the CFP of high versus low competitive firms; for this, we divided the companies into low vs. high competition using the HHI index. This provides a robustness check and supplements the investigation to test the moderating effect of PMC on the association between CSR and CFP. Among the 534 enterprises, 403 were in an industry with high competition, and 131 were in one with low rivalry.

The regression results for the companies in high competition are presented in Table 7. A significant negative effect ($\beta = -0.07, p < 0.05$) between CSR and ROA is obtained from the results. When the moderating effect is

Table 7. Regression Results (Unstandardized Coefficients) for Firms Belonging to High Market Competition

DV	ROA (Model 1)	ROA (Model 2)	ROA (Model 3)	ROCE (Model 4)	ROCE (Model 5)	ROCE (Model 6)
Constant	-28.70*** (-10.56)	-28.06*** (-10.08)	-28.01*** (-10.08)	-1.06 (0.19)	-0.39 (0.07)	-0.16 (0.03)
CSR	-0.07** (-3.66)	-0.07*** (-3.47)	-0.06** (-2.29)	-0.12*** (-2.99)	-0.11*** (-2.78)	-0.19*** (-3.49)
R&D Intensity	-14.09*** (-7.26)	-14.01*** (-7.27)	-14.01*** (-7.27)	-24.74*** (-6.43)	-24.75*** (-6.43)	-24.72*** (-6.43)
Capital Intensity	-13.25*** (-8.81)	-13.28*** (-8.83)	-13.28*** (-8.83)	-16.36 (-5.45)	-16.42 (-5.47)	-16.41 (-5.47)
Leverage	-0.025 (-3.68)	-0.02 (-3.76)	-0.02 (-3.76)	-0.05*** (3.9)	-0.05*** (-4.01)	-0.05*** (-4.02)
Size of Firm	4.10*** (14.91)	4.10*** (14.93)	4.10*** (14.89)	1.84*** (3.34)	1.85*** (3.36)	1.90*** (3.45)
Current Ratio	0.08** (2.19)	0.08** (2.19)	0.08** (2.20)	0.10 (1.29)	0.10 (1.30)	0.098 (1.23)
Sales Growth	0.000(.29)	0.000(.28)	0.000(.28)	0.01*** (4.83)	0.013*** (4.83)	0.01*** (4.84)
Competition		-30.37 (-1.14)	-30.11 (-1.13)		-68.93 (-1.29)	-72.34 (-1.36)
CSR*Competition			-0.012 (-3.2)			0.17** (2.14)
Observations	2274	2274	2274	2269	2269	2269
F	18.39	18.35	18.30	15.01	14.98	14.99
Adjusted R ²	0.75	0.75	0.75	0.71	0.71	0.71
Hausman	-118.40***	122.29***	123.83***	17.33**	19.16**	24.15***
Test- FE vs. RE						

Note. Table 7 reports the regression results of Model (1) to Model (6), testing the moderating effect of PMC on the relationship between CSR and CFP using ROA and ROCE for firms belonging to high competition.

* depict significance at a 10% level of significance.

** depict significance at a 5% level of significance.

*** depict significance at a 1% level of significance.

tested, the interaction term is insignificant ($\beta = 0.012, p > 0.01$), signifying no moderating effect. The analysis was done using ROCE, and we obtained a significant negative impact ($\beta = -0.12, p < 0.05$) of CSR on CFP. For the interaction effect, we find a statistically significant positive interaction effect ($\beta = 0.17, p < 0.05$). Hence, for firms belonging to high competition, a moderating impact of CSR on CFP is found to substantiate the “strategic CSR” theory of CSR when we use ROCE as a measure of CFP. Here, we have evidence to support H3, stating that competition dampens the negative relationship between CSR and CFP when we use ROCE in highly competitive firms. However, when the same analysis was done taking firms in the low competition sector, we failed to find the interaction effect of PMC on the CSR–CFP relationship, as evidenced by the results in Table 8.

Table 8. Regression Results (Unstandardized Coefficients) for Firms Belonging to Low Market Competition

DV	ROA (Model 1)	ROA (Model 2)	ROA (Model 3)	ROCE (Model 4)	ROCE (Model 5)	ROCE (Model 6)
Constant	-41.96*** (7.66)	-42.20*** (-7.69)	-42.15*** (-7.68)	-0.34 (-0.06)	1.19 (0.20)	-2.42 (-0.41)
CSR	-0.08*** (-3.12)	-0.08*** (-3.15)	-0.08*** (-3.18)	-0.10 (-1.47)	-0.09 (-1.43)	-0.16*** (-4.01)
R & D Intensity	17.45 (0.58)	17.47 (0.58)	17.40 (0.58)	-5.91** (-2.05)	-5.92** (-2.05)	-8.56 (-0.21)
Capital Intensity	-14.28*** (-5.94)	-14.22*** (-5.91)	-14.16*** (-5.87)	-3.86 (-0.84)	-3.82 (-0.83)	-16.54*** (-4.86)
Leverage	-0.024*** (-3.30)	-0.024*** (-3.31)	-0.024*** (-3.33)	-0.69** (-2.48)	-0.67** (-2.40)	-0.05*** (3.91)
Size of Firm	5.22*** (10.32)	5.24*** (10.35)	5.24*** (10.34)	1.30** (2.40)	1.32** (2.43)	2.14*** (3.89)
Current Ratio	0.020 (0.144)	0.021 (0.155)	0.024 (0.176)	0.25 (1.20)	0.25 (1.20)	0.32 (1.45)
Sales Growth	0.001 (0.47)	0.000 (0.46)	0.000 (0.46)	0.02*** (2.84)	0.02*** (2.84)	0.016*** (4.23)
Competition		-0.19 (-0.84)	-0.51 (-0.78)		-19.45 (-0.56)	0.35 (0.29)
CSR*Competition on Score			0.008 (0.51)			-0.01 (-0.33)
Observations	1210	1210	1210	739	739	1210
F	14.02	13.96	13.88	4.33	3.83	10.21
R ²	0.75	0.75	0.75	0.03	0.03	0.07
Hausman	72.70***	72.99***	72.50***	7.24	7.98	11.55

Test- FE vs. RE

Note. Table 8 depicts the regression results of Model (1) to Model (6), testing the moderating effect of PMC on the association between CSR and CFP using ROA and ROCE on low-competition firms.

* depict significance at a 10% level of significance.

** depict significance at a 5% level of significance.

*** depict significance at a 1% level of significance.

In addition to the hypotheses testing, the interaction effect has been showcased in a graphical form (Dawson & Richter, 2006). We created an interaction plot for the graphical presentation, as seen in Figures 1 and 2. The IV CSR values are plotted on the x-axis, and the DVs, ROA, and ROCE are plotted on the y-axis. The PMC values are displayed on the various lines. In the interaction plot, lines with different slopes suggest the possibility of an interaction effect, while parallel lines indicate the absence of one. In Figure 1, when we take ROA as a DV, we obtain parallel lines reflecting that an interaction effect is absent. On the other hand, in Figure 2, we see that the lines intersect, showing an interaction effect. The influence of CSR on CFP is enhanced in the presence of PMC when we take ROCE as a DV.

Figure 1. Two-way Interaction Effects of PMC on the Relationship Between CSR and ROA

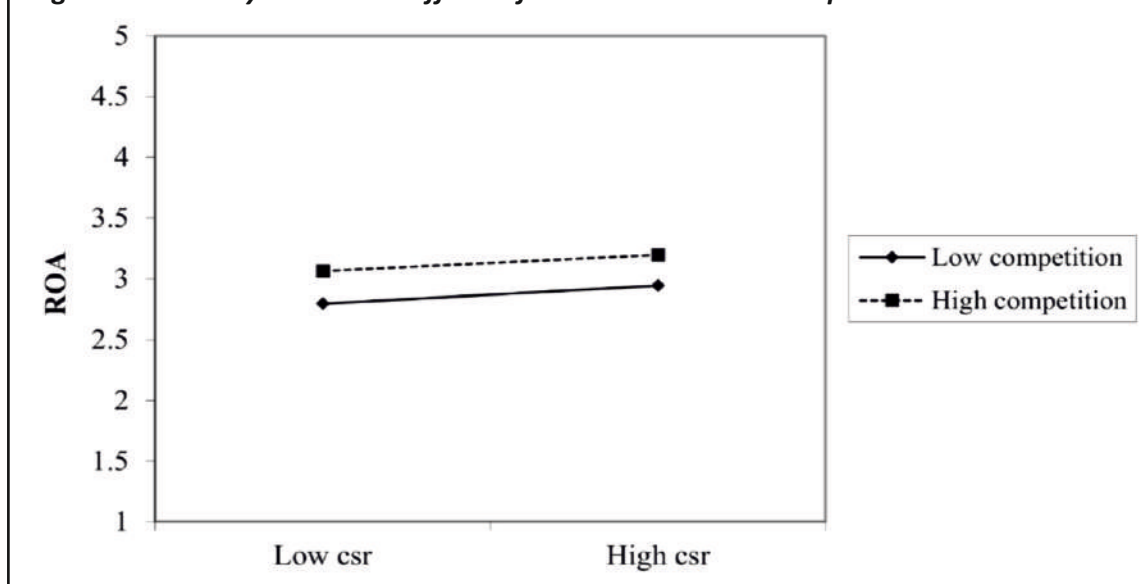
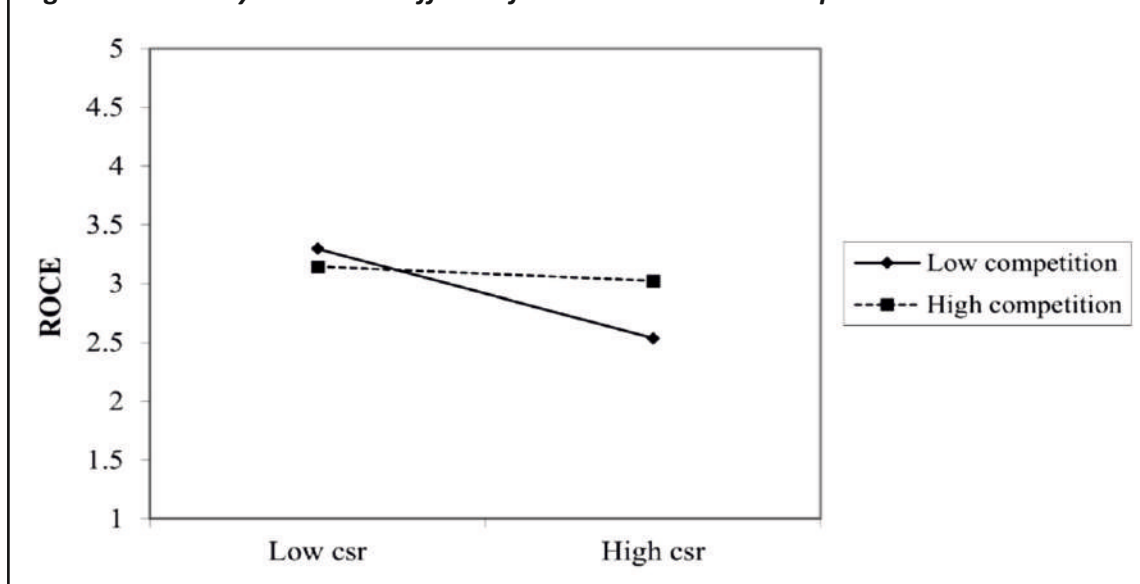


Figure 2. Two-way Interaction Effects of PMC on the Relationship Between CSR and ROCE



Conclusion and Implications

The well-established literature on the “business case of CSR” is covered by the study's conclusions. Based on the neo-classical economic theory—which holds that businesses have a direct cost as a result of their CSR efforts—the current study finds a negative relationship between CSR and CFP. The studies focused on developed countries have mostly found a positive effect of CSR on CFP. The negative impact seen in this study may be ascribed to the mandatory regime concerning CSR in the Indian context. The firms must invest at designated avenues per Schedule VII of the Indian Companies Act 2013, which restricts companies. For example, welfare

activities toward employees are not included in the list, contributing to adverse effects. The detrimental effect of CSR on CFP found in the current analysis shows that, under the terms of the law, investing in CSR burdens society and lowers profitability for businesses. The stakeholders are more receptive to the social activities of industrialized nations since they have long since incorporated CSR practices into their business operations. Indian companies might gain additional advantages from increased stakeholder awareness regarding their social responsibility initiatives.

The empirical analysis also discloses that PMC moderates the association between CSR and CFP when measured by ROCE and shows the absence of interaction when ROA is taken as a proxy of CFP. Due to their distinct definitions and components, competition might impact ROA and ROCE differently based on industry dynamics, market structure, and competitive positioning. The CSR initiatives also impact ROCE differently compared to ROA. CSR practices such as sustainable practices, employee welfare, or community development could potentially enhance operational efficiency, reduce risk, improve brand reputation, and positively impact ROCE. In the case of ROA, CSR initiatives focussed on resource optimization, waste reduction, or energy efficiency, which affect the utilization of assets, might positively influence ROA. Hence, based on different contextual factors mainly relating to the type of CSR activity, its influence individually on ROA and ROCE, as well as the long-term versus short-term impact of the competitive intensity could explain the moderating effect of competition on the CSR–CFP relationship, different for ROA and ROCE. Future researchers can divide CSR activities into various categories and analyze the impact of competition in each of these categories of CSR on the CFP of firms.

When we take up ROCE to measure the impact of PMC on the CSR–CFP relationship, the results of the study support the notion of “strategic CSR,” which states that CSR is beneficial for the CFP when they belong to a competitive sector because of the unique competitive advantages concerning improvement in operational efficiency that arise because of CSR. Although the research findings indicate a negative correlation between CSR and CFP, they do not rule out the possibility that competition may moderate this link.

The study makes some theoretical, managerial, and policy contributions. Theoretically, the study contributes by extending current literature on the study of PMC as a moderator variable between CSR and CFP in studies in the Indian context, where the understanding and analysis of underlying moderators between CSR and CFP is under-researched. This study also provides managers with a vision of their strategic considerations that might affect the choices regarding the identification and implementation of CSR policies and practices, which can provide favorable outcomes for their bottom line. Managers need to do a cost-benefit analysis before pledging to any course with a social impact. Businesses can set themselves apart in a crowded market by concentrating on particular CSR initiatives. A successful CSR program can improve a company's reputation with customers, which is extremely advantageous for businesses, particularly in a market where competition is fierce.

Limitations of the Study and the Way Forward

The research employs measurements of CFP based on accounting; future research can investigate the links found by using indicators based on the market. Differentiating the CFP measurements will help to further elucidate the unique nature of the relationship. This study has concentrated on the ESG score as one metric to measure CSR; future research might examine the impact on the CFP by analyzing the Environmental (E), Social (S), and Governance (G) scores independently. Future research can emphasize extending the studies to account for the voluntary part of investment in CSR, especially in the Indian context. Studies may focus on analyzing the effect of competition in the CSR–CFP relationship for different countries to get a more in-depth viewpoint. This study will develop curiosity among the researcher's fraternity and further the debate on the notion of “when” engaging in CSR benefits companies.

Authors' Contribution

Deepa Sharma envisioned the idea and built the research design of the study. In addition to that, she selected seminal papers for review, downloaded the data, and analyzed the hypotheses. Dr. Suman Chakraborty helped with the initial idea, interpreted the results, and helped in the final editing of the manuscript.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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