



IMPACTS OF CORPORATE SOCIAL RESPONSIBILITY ON FIRM PERFORMANCE MEDIATING ROLE OF INVESTMENT INEFFICIENCY

Naeem Khan ¹, Qaisar Ali Malik ^{1*}

¹ Department of Economics & Finance, Faculty of Business & Technology, Foundation University, Islamabad, PAKISTAN.

ARTICLE INFO

Article history:

Received 20 February 2020

Received in revised form 18

May 2020

Accepted 27 May 2020

Available online 19 June 2020

Keywords:

Pakistan Stock Exchange;
Non-Financial
Companies; Hausman
Test; Fixed Effect Model;
Balance Sheet Analysis;
Panel Data; Return on
Assets; SCR investment.

ABSTRACT

Corporate social responsibility (CSR) emerged as an important component for companies in the past two decades. CSR attained a distinctive position among researchers and practitioners. CSR is well explored in developed countries with less contribution from developing countries. This empirical study focuses on the mediating role of investment inefficiency (INV) in CSR and firm performance (FP) relationship. Data is collected from the non-financial sector. The panel regression technique is employed for data analysis. The fixed-effect model is used in the study as indicated by the probability of the Hausman test. This study results reveal that CSR and FP relationship is fully mediated by INV.

Disciplinary: Management and Economic Sciences, Investment Policy, Corporate Social Responsibility (CSR).

©2020 INT TRANS J ENG MANAG SCI TECH.

1 INTRODUCTION

Society demands from the companies to play a more desirable role, by not limiting themselves to provide only goods and services to customers but to act and perform social activities as well (Cho et al. 2019). There are several studies on CSR particularly considerable attention that has been received by CSR and firm performance (FP) link. However, this relationship needs further exploration (Blasi et al. 2018; Lee & Kim 2017). Neo-classical theory suggests a negative association of this link, because CSR expenditures divert funds from those investments which can be profitable (Bird et al. 2007). Most studies on the CSR-FP link shows a negative association (Moore, 2001). Stakeholder theory suggests there should be a good relationship between the company with its stakeholders. Theory further states that CSR expenditures may increase financial performance indirectly (WU, 2006).

In recent years, top executives and academic circles are allocating considerable resources and time to develop Corporate Social Responsibility strategies. Through CSR practices, they can maintain better relations with the stakeholders, who can influence the company. So the investment of CSR must be considered as an investment but not as a cost. This will lead companies to minimize risk in the long run (EU, 2001).

It has been noted that all the investment decisions concerning financial situations are different and independent in the perfect financial market. Also, investment decision should be made in a way to carry those projects which yield positive NPV and vice versa (Modigliani & Miller, 1958). It has been reported in the literature that deviation of a prediction in investment is mainly because of two reasons i.e. Agency cost and free cash flows (Guariglia, 2016).

The study of CSR is imperative in developing nations due to different institutional structures and business systems, which is leading to different connotations of CSR (Rehan and Qureshi, 2019). The CSR and FP link is explored extensively in a developed part of the world however there exists an inconclusive association between the variables (Blasi et al. 2019). Ansong and Agyemang (2017) documented that the contradictory results of CSR and FP could be due to some neglected mediating variables. Most literature on CSR and FP shows a positive relationship between these two variables. However, there exists need to understand whether it is a direct relationship or some mediating/moderating variable is influencing their association. Waheed & Malik (2019) call for an investigation into inconclusive association in a developing country like Pakistan. The study will examine the effect of CSR on FP by adding investment inefficiency (INV) as a mediating variable. Moreover, this is the first attempt as per the author's knowledge to explore the mediating role of investment inefficiency in the CSR-FP link.

The relationship between CSR and FP is explored by many studies with positive, negative, and neutral results. The findings of the association of this link are still unconcluded (Blasi et al. 2018). A possible reason for conflicting results could be due to some unexplored mediating or moderating variables that need to be explored (Ansong and Agyemang, 2017). Most of the work on this association is done in the developed part of the world that shows mixed findings. There are few studies on CSR and FP link in developing nations. So, there is a need to explore the linkages of CSR and FP with Investment Inefficiency (INV) as a mediating variable, in the relationship of CSR and FP.

2 LITERATURE REVIEW

Choongo (2017), Malik & Nadeem (2014), Ahamed et al. (2014) documented a positive relationship between CSR and FP. Iqbal et al. (2013) explored the effect of CSR on the Islamic and conventional banking system of Pakistan on profitability. The regression model shows CSR and profitability measures have a significant relationship. Alshammari (2015) explored the association of CSR and performance, Reputation and institutional investors are used as moderating variables. The findings suggest that reputation and institutional investors moderate the CSR-FP relationship.

Carroll (1979) contributed the three aspects of the model that are the major questions by academics and managers' concern. The first question is what to be included in the CSR. The second question is that what are the social issues that must be addressed by the organizations. The third

question is; what philosophy of organization for social responsiveness? He further states that it is helpful to the managers to conceptualize the main issues.

Lee et al. (2017) found a significant relationship between four dimensions of CSR with reputation. However, there is an insignificant association between discretionary activities and corporate reputation. Turban and Greening (1997) found that CSP of the firm improves firm ratings, reputation, and allure for employers. They also suggest that companies may have a competitive advantage by having an attractive environment for the workplace, because of their performance in regards to quality products and services.

Rafique et al. (2017) studied environmental reporting as a component of CSR that resulted in better financial performance and governance in corporations. In addition to that, impacts of corporate reputation on customer behavior, employees and investor are also important factors that influence firms' performance. Results reported in the study inform that CSR is effecting firm reputation positively. Waddock and Graves (1997) discussed the direction of the CSR-FP link. The findings of their study showed that CSR depends on FP with a positive relationship.

Ansong and Agyemang (2017) argued that CSR and firm performance relationship has conflicting results. A possible reason for these conflicting results could be due to some missing or neglected mediating variable(s) in CSR and FP relationship. The finding of their study confirms that those firms that have comfortable capital access are performing better. The finding of their study also indicates CSR and firm reputation have a positive relationship. Malik and Kanwal (2018) examined how CSR disclosure impacts in pharmaceutical firms in Pakistan. For the measurement of variables, quantitative variables were used for the analysis. Findings suggest that brand equity mediates the CSR-FP relationship. CSR and FP association is reported (Saeidi et al., 2014). However, he argued that there exists a need to check the association through some mediating variables. Findings suggest that the CSR-FP relationship is fully mediated.

Cochran and Wood (1984) found a positive correlation between financial variables and CSR. Firms have older assets facing lower CSR ratings. Older firms are less flexible to adopt social change. Moreover, McGuire et al. (1988), to explore the CSR-FP link using accounting-based measures including Return on Assets (ROA), total assets (TA), and sales growth, concludes a positive relationship between CSR and FP.

Benlemlih and Bitar (2016) found a significant positive relationship between CSR and investment efficiency. While commenting CSR with its relational inconsistencies researchers argued that literature on CSR with investment efficiency is quite rare. Investment in CSR is a useful way to improve investment efficiency. Borghesi et al. (2014) found that more cash flows exhibit a higher level of CSR. Bhandari and Javakhadze (2017) conducted an empirical analysis of 1992-2014 data. The result showed that Tobin's Q and investment association is lesser for firms that are more socially responsible. Deng et al. (2013) suggested firms that positively involved in stakeholder integrations with CSR activities always enhance their profitability and long-term goals of organizational success. Cornell and Shapiro (1987) documents that if stakeholder's expectations are not met then it will create market fear which in return leads to loss of profit for the firm. They argued firm performance increases when a firm responds to stakeholder's implicit claims. High CSR companies always

consider the stakeholder's expectations, this leads to better firm performance.

H1: There exists a positive relationship between CSR and FP

H2: Investment Inefficiency mediates in the relationship between CSR and FP

3 METHODOLOGY

Data for 253 non-financial firms is collected for 2007-2016. Data sets have been collected from "balance sheet analysis", and financial statements published by companies on official websites. Figure 1, the dependent variable of the study is Firm Performance (FP), which is measured using Return on Assets (ROA), in-line with Malik and Nadeem (2014). CSR is an Independent variable and it is measured through CSR monetary spending ratio (Pyo and Lee 2013; Ehsan and Kaleem, 2012; Lin et al. 2009). Investment Inefficiency is a mediating variable in the study, measured through the Chen et al. (2011) model. The study uses control variables, which include Size, Leverage, and Age, in line with (Feng et al. 2018). The fixed-effect model is used in the study as proposed by the Hausman test. To test the mediation of investment inefficiency (INV) between CSR and ROA, the methodology of Baron and Kenny (1986) is employed. The following are four modeled equations of this study.

$$ROA_{i,t} = \beta_0 + \beta_1 CSR_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 AGE_{i,t} + \beta_4 LEVERAGE_{i,t} + \varepsilon_{i,t} \quad (1).$$

$$ROA_{i,t} = \beta_0 + \beta_1 INV_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 AGE_{i,t} + \beta_4 LEVERAGE_{i,t} + \varepsilon_{i,t} \quad (2).$$

$$INV_{i,t} = \beta_0 + \beta_1 CSR_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 AGE_{i,t} + \beta_4 LEVERAGE_{i,t} + \varepsilon_{i,t} \quad (3).$$

$$ROA_{i,t} = \beta_0 + \beta_1 CSR_{i,t} + \beta_2 INV_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 AGE_{i,t} + \beta_5 LEVERAGE_{i,t} + \varepsilon_{i,t} \quad (4).$$

The terms $\beta_1, \beta_2, \beta_3,$ and β_4 are regression coefficients and ε represents the model error while β_0 is constant. The subscripts $i,$ and t are company and year for consideration.

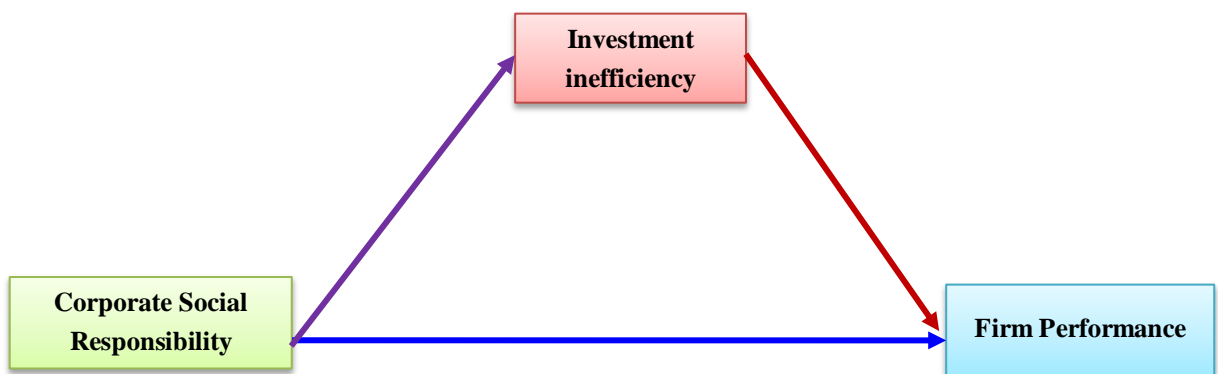


Figure 1: Research Model, showing the relationship between CSR, INV, and FP.

4 RESULTS AND DISCUSSION

This paper used Baron and Kenny's (1986) approach for regression, to explore the mediating effect of investment inefficiency in the CSR and FP link, using four steps: First, a significant association between CSR and FP is needed. Second, it is also required that CSR and investment inefficiency are also significant. Third, there must be a significant association between investment inefficiency and FP. Fourth, to establish that investment inefficiency mediates in CSR-FP relationship, the effect of CSR on FP should be insignificant.

4.1 DESCRIPTIVE STATISTICS

Table 1, the calculated descriptive statistics show that no discrepancy is found in the data. All variables are within acceptable bounds. Hence, data of stated variables can be employed for further analysis.

Table 1: Descriptive Statistics

	ROA	CSR	INV	SIZE	AGE	LEV
Mean	0.037	0.013	0.030	15.199	3.459	0.617
Median	0.031	0.002	-0.613	15.035	3.433	0.598
Maximum	1.784	7.086	1209.1	20.194	5.049	8.187
Minimum	-2.642	-13.779	-7.479	9.180	1.098	0.004
SD	0.127	0.385	24.068	1.635	0.496	0.383
Skewness	-1.802	-15.376	50.144	0.214	-0.321	6.219
Kurtosis	107.295	712.787	2519.516	3.184	3.823	88.153
Probability	0.000	0.000	0.000	0.000	0.000	0.000
Observations	2530	2530	2530	2530	2530	2530

4.2 CORRELATION ANALYSIS

From the correlation statistics results, Table 2 shows no issue of multicollinearity. Table 2 indicates that there is a positive association of ROA with all the variables except LEV and INV. CSR is negatively associated with all the variables. INV and SIZE are positively correlated. INV is negatively associated with AGE and LEV (leverage). There is a positive correlation between AGE and SIZE. Moreover, AGE is negatively associated with LEV. SIZE is negatively associated with LEV.

Table 2: Correlation analysis results

	ROA	CSR	INV	AGE	SIZE	LEV
ROA	1					
CSR	0.013	1				
INV	-0.006	-0.001	1			
AGE	0.034	-0.001	-0.004	1		
SIZE	0.140	-0.014	0.033	0.121	1	
LEV	-0.392	-0.010	-0.031	-0.116	-0.201	1

4.3 REGRESSION ANALYSIS

Table 3 reports regression results and test all models developed. Results of Model (1) shows CSR impact on FP. Findings suggest that the coefficient is positive and significant ($\alpha = 0.05$, $P < 5\%$), which shows CSR positively impacts ROA. For control variables, SIZE is significantly and negatively impacting ROA while AGE and LEV are insignificant. Model (2) is developed to analyze the impact of INV on ROA. Results reveal that the estimated coefficient is negative and significant ($\alpha = -0.000$, $P < 5\%$). This communicates that investment inefficiency has a negative impact on ROA, whereas SIZE and LEV are significantly and negatively affecting ROA. Model (3) is formulated to test the effect CSR on INV, Results reveal that the estimated coefficient is negative and significant ($\alpha = -0.045$, $P < 5\%$). It shows that CSR has a negative impact on investment inefficiency. Control variable SIZE is significantly and positively impacting INV while AGE and LEV are also significant but negatively impacting investment inefficiency (INV). Model (4) tests the

impact of CSR and INV on ROA. Results reveal that ROA and CSR are statistically insignificant ($\alpha = 0.005$, $P > 5\%$), while ROA and INV are statistically significant ($\alpha = -0.000$, $P < 5\%$). Findings confirm that investment inefficiency fully mediating the association of CSR and ROA.

Table 3: Regression Results.

Variables	Model 1	Model 2	Model 3	Model 4
	ROA	ROA	INV	ROA
CSR	0.005		-0.731	0.005
	(0.044)		(0.045)	(0.314)
	[2.015]		[-2.587]	[1.006]
INV		-0.000		-0.000
		(0.050)		(0.042)
		[-1.955]		[-2.143]
Size	-0.032	-0.029	12.882	-0.029
	(0.007)	(0.000)	(0.000)	(0.000)
	[-2.669]	[-4.674]	[9.288]	[-4.708]
Age	0.024	0.020	-19.026	0.020
	(0.392)	(0.288)	(0.000)	(0.286)
	[0.855]	[1.061]	[-4.383]	[1.065]
Lev	-0.163	-0.166	-16.801	-0.166
	(0.135)	(0.000)	(0.000)	(0.000)
	[-1.492]	[-16.107]	[-7.419]	[-16.104]
R ²	0.416	0.417	0.188	0.417
Adj R ²	0.351	0.351	0.096	0.351
F	6.344	6.362	2.060	6.341
Prob. Of F	0.000	0.000	0.000	0.000

Parenthesis Contains (P Values), [t values]

From data analysis of 253 listed non-financial companies of Pakistan stock exchange (PSX) for 2007-2016, the fixed-effect model is utilized as suggested by the Hausman test. After analysis of data, both hypotheses H1 and H2 are accepted in this study.

5 CONCLUSION

This study is an attempt to explore the mediating effect of investment inefficacy (INV) on CSR and FP relationship. A literature survey shows there exists positive, negative, or no relationship in CSR and FP. Ansong and Agyemang (2017) debated on the relational inconsistency of CSR and FP and argued that association is inconclusive perhaps due to some overlooked mediating variable. Owing to considerable inconsistency in the relationship of CSR and FP, the variable of investment inefficacy is a mediating variable in the study. This study fills the gap to analyze the impact of CSR and FP with the mediating role of Investment Inefficiency in the context of Pakistan.

The study results show that Investment Inefficiency (INV) fully mediates the association between CSR and the FP. Findings reveal that investment inefficiency reduces the firms' performance. A firm engaged in CSR practices can improve its financial performance by reducing the effect of investment inefficiency, which in return will lead to an increase in the firm's performance. From this study, policymakers of developing countries are cautioned to consider the contrary effects of investment inefficiency while designing CSR policies for their organizations.

6 AVAILABILITY OF DATA AND MATERIAL

Data can be made available by contacting the corresponding authors

7 REFERENCES

- Agyemang, O.S., & Ansong, A. (2017). Corporate social responsibility and firm performance of Ghanaian SMEs: Mediating role of access to capital and firm reputation. *Journal of Global Responsibility*, 8(1), 47-62.
- Ahamed, W.S.W., Almsafir, M.K., & Al-Smadi, A.W. (2014). Does corporate social responsibility lead to an improvement in firm financial performance? Evidence from Malaysia. *International Journal of Economics and Finance*, 6(3), 126-138.
- Alshammari, M. (2015). Corporate social responsibility and firm performance: The moderating role of reputation and institutional investors. *International Journal of Business and Management*, 10(6), 15.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
- Benlemlih, M., & Bitar, M. (2016). Corporate social responsibility and investment efficiency. *Journal of Business Ethics*, 148(3), 647-671.
- Bhandari, A., & Javakhadze, D. (2017). Corporate social responsibility and capital allocation efficiency. *Journal of Corporate Finance*, 43, 354-377.
- Bird, R., Hall, A.D., Momentè, F., & Reggiani, F. (2007). What corporate social responsibility activities are valued by the market? *Journal of Business Ethics*, 76(2), 189-206.
- Blasi, S., Caporin, M., & Fontini, F. (2018). A multidimensional analysis of the relationship between corporate social responsibility and firms' economic performance. *Ecological Economics*, 147, 218-229.
- Borghesi, R., Houston, J.F., & Naranjo, A. (2014). Corporate socially responsible investments: CEO altruism, reputation, and shareholder interests. *Journal of Corporate Finance*, 26, 164-181.
- Chen, F., Hope, O.-K., Li, Q., & Wang, X. (2011). Financial reporting quality and investment efficiency of private firms in emerging markets. *The Accounting Review*, 86(4), 1255-1288.
- Cho, S.J., Chung, C.Y., & Young, J. (2019). Study on the Relationship between CSR and Financial Performance. *Sustainability*, 11(2), 343.
- Cochran, P.L., & Wood, R.A. (1984). Corporate social responsibility and financial performance. *Academy of management journal*, 27(1), 42-56.
- Cornell, B., & Shapiro, A.C. (1987). Corporate stakeholders and corporate finance. *Financial Management*, 5-14.
- Deng, X., Kang, J.K., & Low, B.S. (2013). Corporate social responsibility and stakeholder value maximization: Evidence from mergers. *Journal of financial economics*, 110(1), 87-109.
- Ehsan, S., & Kaleem, A. (2012). An empirical investigation of the relationship between corporate social responsibility and financial performance (Evidence from the manufacturing sector of Pakistan). *Journal of Basic and Applied Scientific Research*, 2(3), 2909-2922.
- EU. (2001). *Promoting a European Framework for Corporate Social Responsibility: Green Paper*. Office for Official Publications of the European Communities.
- Feng, Y., Chen, H.H., & Tang, J. (2018). The impacts of social responsibility and ownership structure on the sustainable financial development of China's energy industry. *Sustainability*, 10(2), 301.
- Iqbal, N., Ahmad, N., & Kanwal, M. (2013). Impact of corporate social responsibility on the profitability of Islamic and conventional financial institutions. *Applied Mathematics in Engineering, Management, and Technology*, 1(2), 26-37.

- Lin, C.H., Yang, H.L., & Liou, D.Y. (2009). The impact of corporate social responsibility on financial performance: Evidence from business in Taiwan. *Technology in Society*, 31(1), 56-63.
- Malik, M.S., & Nadeem, M. (2014). Impact of corporate social responsibility on the financial performance of banks in Pakistan. *International Letters of Social and Humanistic Science*, 10(1), 9-19.
- Malik, M.S., & Kanwal, L. (2018). Impact of Corporate Social Responsibility Disclosure on Financial Performance: Case Study of Listed Pharmaceutical Firms of Pakistan. *Journal of Business Ethics*, 150(1), 69-78.
- McGuire, J.B., Sundgren, A., & Schneeweis, T. (1988). Corporate social responsibility and firm financial performance. *Academy of management journal*, 31(4), 854-872.
- Modigliani, F., & Miller, M.H. (1958). The cost of capital, corporation finance, and the theory of investment. *The American Economic Review*, 48(3), 261-297.
- Moore, G. (2001). Corporate social and financial performance: An investigation in the UK supermarket industry. *Journal of Business ethics*, 34(3-4), 299-315.
- Pyo, G., & Lee, H. Y. (2013). The association between corporate social responsibility activities and earnings quality: Evidence from donations and voluntary issuance of CSR reports. *Journal of Applied Business Research*, 29(3), 945-962.
- Rafique, M.A., Malik, Q.A., Waheed, A., & Khan, N.U. (2017). Corporate governance and environmental reporting in Pakistan. *Pakistan Administrative Review*, 1(2), 103-114.
- Rehan, M.H., Qureshi, Q.A. (2019). Impacts of Corporate Social Responsibility (Economic, Social & Environmental) on Customers Loyalty in Islamic Banks. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, 10(10), 10A10L, 1-8. DOI: 10.14456/ITJEMAST.2019.133.
- Saeidi, S.P., Sofian, S., Saeidi, P., Saeidi, S.P., & Saaeidi, S.A. (2015). How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of business research*, 68(2), 341-350.
- Turban, D. B., & Greening, D. W. (1997). Corporate social performance and organizational attractiveness to prospective employees. *Academy of Management Journal*, 40(3), 658-672.
- Waddock, S. A., & Graves, S. B. (1997). The corporate social performance–financial performance link. *Strategic Management Journal*, 18(4), 303-319.



Naeem Khan is a PhD Scholar at Foundation University Rawalpindi, Pakistan. He has received his MS degree from Riphah International University Islamabad. He is a Lecturer at University of Sargodha, Pakistan. He is also a Lecturer at Capital University Islamabad, Pakistan. His interests include Capital Structure, Working Capital Management, Corporate Social Responsibility, Portfolio Risk and Return.



Dr Qaisar Ali Malik received his M.Phil. and Ph D in Finance. He is a Fellow Member of ICMA Pakistan. His core interests are in the areas of Financial Reporting & Analysis, Cost Management & Analysis and Corporate Finance Decisions, Corporate Governance Mechanisms, Corporate Social Responsibility, Investment analysis, Financial Inclusion, and Knowledge Management.