Moderating Role of Corporate Social Responsibility for the Effect of Managerial Ability on Financial Performance: Evidence from an Emerging Economy

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Abstract: The present study endeavours to examine the moderating role of corporate social responsibility (CSR) in the interaction between managerial ability (M.A.) and firm performance (F.P.). For estimation, the study analysed an unbalanced panel of 219 non-financial listed firms on the Pakistan Stock Exchange (PSX) for 2008-2021. Fixed effect regression with robust standard errors clustered at the firm level is applied to address the concerns of heteroscedasticity and autocorrelation. Findings show that overall managerial ability enhances firm performance. Furthermore, research has established a positive correlation between CSR and a company's financial performance. In addition, the interaction between M.A. and CSR has a substantial positive correlation with F.P. The results reveal that CSR positively moderates the linkage between M.A. and F.P. and behaves as a complement. The ongoing research is limited to the non-financial sector; however, the study findings are unquestionably valuable for corporate investors and managers in the context of developing economies.

Keywords: Managerial Ability, Corporate Social Responsibility, Firm Performance, Fixed Effect, Hausman.

1. Introduction

In the dynamic and competitive landscape of the business world, the performance and success of a firm are often intricately linked to the quality of its management. Skilled and capable managers can navigate challenges, capitalise on opportunities, and lead their organisations toward sustainable growth and profitability (Dong & Doukas, 2021). The concept of managerial ability has long been a subject of interest for researchers, investors, and stakeholders alike, as it plays a crucial role in determining the fate of a company. However, the relationship between managerial ability and firm performance is a complex, one-dimensional correlation. Instead, an intricate interplay of factors characterises it, influencing how management skills impact a firm's overall performance.

Existing literature has yielded valuable insights regarding the significance of strong leadership and management capabilities in enhancing firm performance (Bertrand & Schoar, 2003; Naushad et al., 2020). According to Demerjian, Lev, and McVay (2012), competent managers have a deeper understanding of
business operations and product demand. However, they are more accurate in forecasting market dynamics and technological innovation. Similarly, Ting, Tebourbi, Lu, and Kweh (2021) have indicated that distinct qualities of managerial competence, such as strategic vision and decision-making skills, play a vital role in driving firm performance. Additionally, observers have frequently noted that managers possessing enhanced capabilities exhibit heightened expertise and analytical capacity, enabling them to effectively oversee the organisation's operational activities, risk management, and human resources. This, in turn, positively influences the company's overall performance (Bertrand & Schoar, 2003; Shin et al., 2015). Stewardship theory asserts that directors can best serve shareholders by increasing their utility instead of their interests (Chrisman, 2019). Prior research has often approached this topic from isolated perspectives, failing to account for the potential moderating effects of various factors that could influence the strength of the interaction.

However, in the current dynamic and challenging environment, only focusing on the immediate impact of managerial ability on organisational performance may not effectively capture a manager's capacity to maintain a sustainable competitive edge. Many researchers have conducted managerial ability, CSR, and firm performance interactions in different ways, and they obtained inconsistent and divergent results (Baird et al., 2012; Carroll, 2021; Inam et al., 2021; Lu et al., 2021). Due to these inconclusive findings of prior research, this research attempts to examine another aspect of managerial ability, CSR, and firm performance in the Pakistani context. This study intends explicitly to evaluate the role of CSR as a moderator in the relationship between managerial ability and company performance.

CSR and managerial ability are crucial determinants that substantially impact firms’ performance. Several scholars have emphasised the combined impact of managerial expertise and CSR initiatives. The interplay between these two variables can significantly influence the overall performance of an organisation. Previous studies have shown that when managers strategically incorporate CSR into their business operations, it positively influences the firm's value (Bagnoli & Watts, 2003; Baron, 2001). Moreover, Cho and Lee (2019) disclose that the discretionary nature of CSR initiatives contributes to improving corporate financial performance and is associated with managerial efficiency. Enterprises are the collection of different intellectuals and owners, and owing to the conflicting strands of principal and agent, CSR activities are deemed vital to settle such opportunism (Doukas & Zhang, 2021).

Moreover, Godfrey (2005) asserted that CSR initiatives are more amenable to managerial preferences. Additionally, talented and proactive managers prefer CSR spending, while less skilled managers are reluctant. A minority of researchers believe that CSR expenditure is squandered. CSR initiatives, such as environmentally friendly practices, community involvement, and ethical business operations, can enhance a company's reputation and improve stakeholder engagement. A skilled manager who effectively communicates and implements CSR strategies can enhance the company's reputation and foster stronger stakeholder relationships (Maury, 2022). Consequently, this can result in heightened brand loyalty, customer trust, and investor confidence, thereby positively influencing the firm's performance.

However, CSR initiatives can either strengthen or weaken the impact of managerial ability on the firm's performance outcomes. If it strengthens the impact, then it will behave as a complement. The signs of interaction and managerial ability coefficients are the same in this situation. Nevertheless, when CSR and managerial ability complement each other, firms can benefit from a more sustainable, profitable, and responsible business approach. On the other hand, CSR and managerial ability behave as substitutes if the signs of the interaction coefficients and managerial ability are opposite. Therefore, this study has contributed by filling this significant literature gap in the prior studies.

Our work contributes to the existing body of knowledge in the following ways: First, managerial ability and CSR have been the focus of in-depth research in industrialised nations (Clacher & Hagendorff, 2012; Jo & Harjoto, 2012; Johnson et al., 2018; Muller & Kolk, 2010); there may be a need for more information and awareness of how these ideas apply to the business environment in Pakistan. By filling in these gaps,
we may increase the body of knowledge and make it more diverse globally. Second, most research conducted in Pakistan has relied on survey methodologies, which may introduce issues related to non-response and sample representativeness. In light of this, our study has incorporated a sample of 219 publicly listed firms and used the CSR Index and MA-Scores (Ali et al., 2020; Ikram et al., 2019; Ramzan et al., 2021). Third, only some previous studies have examined the effects of managerial skill and CSR on a company's financial performance. Only some studies have considered all three variables (Arora & Dharwadkar, 2011; Javeed & Lefen, 2019; Jiang et al., 2021; Jo & Harjoto, 2012). The key innovation of our study is investigating the moderating function of CSR between managerial ability and business financial performance. Fourth, we confirm through an estimation model whether CSR plays its role as a complement or substitute for managerial ability and its effects on the firm's performance.

The subsequent sections of this work are categorised as follows. The second portion explains the literature review and hypothesis formation. The third portion discusses sample selection, data collection, variable construction, and empirical methods. Section 4 commentary adds insight into the empirical findings and discussion. The final section addresses the conclusions drawn and explores the policy implications.

2 Literature Review and Hypotheses Development

2.1 Managerial Ability and Firm Performance

Managerial ability plays a pivotal role in a company's achievements and is a significant element in mitigating agency conflicts. It encompasses a range of skills, talents, and attributes that enable managers to effectively lead and make decisions that positively impact the organisation (Ashiq et al., 2022; Naushad et al., 2020). According to stewardship theory, directors can best serve shareholders by increasing their utility instead of their interests. Managers with higher abilities are expected to act more diligently, make better decisions, and align their actions with the interests of the firm's shareholders (Chrisman, 2019). As a result, higher managerial ability should lead to better firm performance. In alignment with the theory, Demerjian et al. (2012) explored the relationship between manager traits and F.P. The findings indicated that managerial ability directly impacts financial outcomes and overall firm success. Several studies, such as (Bamber et al., 2010; Bertrand & Schoar, 2003), have investigated the significance of managers' characteristics in affecting corporate success and demonstrated that several leaders- and firm-specific elements influence firm demeanours.

Similarly, Huang and Xiong (2022) conducted a study in China. They observed a positive correlation between M.A. and F.P. The results highlight the importance of effective managers in boosting the value of a company, especially under challenging circumstances. Furthermore, Andreou, Ehrlich, and Louca (2013) experimented to investigate the impact of M.A. on F.P. for 2747 U.S. non-financial firms. He emphasised that managers with exceptional abilities should prioritise safeguarding their reputation and avoiding actions that could jeopardise it. It is acknowledged that even competent management may occasionally become involved in fraudulent activities.

However, there is another perspective, as mentioned in the second school of thought. This viewpoint suggests that more capable managers might engage in ill-advised actions such as investment manipulation or earnings management. Despite their capabilities, these actions have negative consequences and diminish the firm's overall value (Francis et al., 2008; Malmendier & Nagel, 2011; Petrou & Procopiou, 2016). Francis et al. (2008) assess the relationship between CEOs' reputations and the company's earnings quality indicators. The study's findings indicate that CEOs with higher reputation levels tend to be associated with lower earnings quality. Managers with good reputations are more inclined to manipulate their earnings to influence how labour and stock market stakeholders perceive the company. However, these actions ultimately have adverse effects. The negative consequences of such actions on profitability, reputation, and value emphasise the importance of ethical conduct and a significant requirement for implementing efficient governance mechanisms to identify and mitigate fraudulent activities within organisations.
In Pakistan, few studies examined the relationship between M.A. and F.P. Inam Bhutta et al. (2021) analysed the relationship between management talent and F.P. using a sample of 246 firms listed on the Pakistan Stock Exchange from 2009 to 2017. The study findings suggest that managers who demonstrate competence have a notable and positive influence on the F.P. Similarly, Ahmed, Shah, Iqbal, and Arshad (2022) analysed a sample comprising 100 businesses listed on the KSE 100 Index in Pakistan, spanning 2014 to 2020. The primary objective is to investigate the impact of managerial skills on company performance, with a specific focus on the domain of risk management. The study's findings indicate a positive association between managers' risk-taking capabilities and companies' overall performance. Managers with extraordinary risk-taking abilities are more adept at capitalising on opportunities while managing and minimising organisational risks. Overall, conducting more research with an extensive data set on M.A. and F.P. in the Pakistani context would provide valuable insights for academia and practitioners.

**H$_1$**: Managerial ability is significantly and positively associated with the firm performance.

### 2.2 CSR and Firm Performance

The correlation between CSR and F.P. has been extensively examined in various research studies conducted in developed and emerging economies (Baird et al., 2012; Yu & Choi, 2014). The stakeholder paradigm is utilised in research investigating the direct correlation between CSR and firm performance (F.P.). According to Freeman's (2010) stakeholder theory, organisations' stakeholders who control resources, such as employees, customers, suppliers, and investors, can aid in implementing corporate decisions. A corporation can avoid errors that lead stakeholders to undermine or obstruct corporate objectives by focusing on stakeholder needs and expectations (Wang et al., 2016). CSR disclosure and F.P. may have a favourable association because CSR disclosure partially reflects what the company has done regarding CSR activities. Several studies have documented positive correlations between CSR and F.P., indicating that involvement in socially responsible initiatives may enhance financial outcomes (Amini & Dal Bianco, 2017; Blacconiere & Patten, 1994). This perspective argues that CSR initiatives can enhance employee satisfaction, strengthen company goodwill, and improve stakeholder relationships. These positive relationships may translate into better access to capital and overall financial success for the firm. Likewise, Javeed and Lefen (2019) provide insight into the empirical connection between CSR and F.P. in Pakistan. Researchers found a positive correlation between CSR and financial performance (F.P.) as social initiatives boost businesses' trust in their internal and external surroundings.

Similarly, Bacinello, Tontini, and Alberton (2020) developed maturity models to examine the influence of CSR Management (CSRM) on Strategic Innovation Management (SIM) and the impact of those traits on F.P. The study was founded on resource-based theory and employed structural equation modelling for a sample of 154 Brazilian businesses. The study's findings indicated that CSRM positively influences SIM, and both CSRM and SIM positively influence F.P. Moreover, the results (Cordeiro & Tewari, 2015; Cormier & Magnan, 2014; Guo et al., 2020) suggest a positive relationship between CSR practices and financial performance. Their research has observed that companies engaged in socially responsible initiatives typically demonstrate strong financial performance.

However, It is noteworthy to mention that several studies have identified negative correlations between CSR and F.P. This perspective suggests that CSR activities can increase costs for firms as they allocate resources to charitable contributions, social development programs, and environmental protection measures (Hussaini et al., 2021). This increased expenditure on CSR may result in lower profitability. According to agency theory, CSR is often perceived as a financial burden for shareholders, potentially resulting in reduced short-term profitability (Harper et al., 2020). The allocation of resources to CSR initiatives can be perceived as an extra cost for businesses, potentially resulting in decreased profits. Likewise, a research study conducted in Brazil by Crisóstomo, de Souza Freire, and De Vasconcellos (2011) established a negative correlation between CSR and F.P.
Given these conflicting findings, a research gap still calls for further investigation to attain more conclusive and satisfactory results regarding the relationship between CSR and F.P. The subsequent hypothesis was formulated based on the literature review presented earlier:

\[ H_2: \text{CSR is significantly and positively associated with better firm performance.} \]

2.3 Managerial ability and Firm performance: The moderating role of CSR

Managers with higher abilities may be more effective at identifying and implementing CSR initiatives, which can positively affect various aspects of F.P. CSR practices, such as responsible environmental stewardship, ethical decision-making, and strong stakeholder relationships, which can contribute to long-term value creation and improved financial performance. In this scenario, the presence of CSR practices amplifies the positive impact of M.A. on F.P. The company gains advantages from practical managerial skills and a dedication to CSR, resulting in improved financial, social, and environmental results. A study by M. K. Khan, Naeem, and Xie (2022) conducted on Chinese listed firms spanning the period from 2010 to 2019 indicates a positive correlation between the managerial competence of CEOs and the implementation of sustainable practices within these firms. The researchers discovered that the managerial competence of CEOs encourages sustainable practices. Additionally, M. K. Khan, Zahid, Shahzad, Hussain, and Kitendo (2022) found a positive relationship between the CEO's ability and firm-level CSR, suggesting that effective managers can act as catalysts for integrating CSR into the organisational fabric. Their skills, decision-making abilities, resource allocation, stakeholder engagement, and emphasis on accountability contribute to higher levels of CSR performance at the firm level.

Several studies show CSR’s benefits. CSR engagement enhances economic value by augmenting the accessibility of essential materials (Bacinello et al., 2020; Cochran & Wood, 1984), assisting the business in advertising its products and services and recruiting and retaining skilled workers (Turban & Greening, 1997). Jiang et al. (2021) indicate that CSR moderates the association between female executives and firm performance in China. Gender-diverse boards focusing on CSR can enhance the firm's reputation and stakeholder relations. Improved stakeholder relationships can lead to increased customer loyalty, access to capital, and a more supportive business environment, all of which can contribute to better financial performance. Stakeholder theory also suggests that a company’s primary goal should be its stakeholders’ well-being rather than profit maximisation (Chrisman, 2019). Lu et al. (2021) posit that CSR plays a significant role in influencing and regulating firm performance and internal corporate governance. The presence of CSR practices within the organisation influences this positive relationship.

Moreover, this study is the first to examine the role of CSR in M.A.'s effect on F.P., filling the existing literature gap by addressing this significant association. Our study offers valuable insights into the broader implications of CSR for corporate success.

\[ H_3: \text{Corporate Social Responsibility positively moderates the relationship between managerial ability and firm performance.} \]

Figure -1

**Model:** Research Model for the Effect of Managerial Ability on firm performance using CSR as a moderator.
3. Methodology

3.1 Sample Selection

Table 1 shows the selected sample of 219 non-financial companies registered on the Pakistan Stock Exchange (PSX) from 2008 to 2021. Over 14 years (2008–2021), Pakistan's market encompassed approximately all distinct economic and financial areas. Research initially excluded financial sector companies from the 552 quoted companies due to their unique characteristics and operations within a separate regulatory and legal framework. Secondary data for the sample group were obtained from the Pakistani stock exchange, the State Bank of Pakistan, and companies' financial statements.

Table 1

<table>
<thead>
<tr>
<th>Selected Sample from 2008 to 2021</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The firms are publicly traded on the Pakistan Stock Exchange.</td>
<td>552</td>
</tr>
<tr>
<td>Less: The entities encompass commercial banks, insurance companies, investment banks, leasing companies, and modarabas.</td>
<td>(130)</td>
</tr>
<tr>
<td>Less: Companies' participants were excluded from the sample due to insufficient data or were removed during the sampling period.</td>
<td>(203)</td>
</tr>
<tr>
<td>Final Sample</td>
<td>219</td>
</tr>
</tbody>
</table>

3.2 Measurement of Variables

Table 2 shows a description of the explanatory variable called "Firm Performance," which is measured using market-based (Tobin's Q) and accounting-based (ROA) short-run performance indicators. ROA and Tobin's Q are the same (N. et al., 2020; Kyere & Ausloos, 2021); however, for further determination of the cause of the positive, negative, or substantial correlation between managerial ability and enterprises’ efficacy, CSR, therefore, acts as a moderating factor. The present study aims to assess the impact of sales growth potential, firm size, leverage, and firm age while controlling for other endogenous factors (Feng et al., 2017; Latif et al., 2017).

3.2.1 Managerial Ability (Independent Variable)

In compliance with Demerjian et al. (2012), in this research investigation, a two-step approach is employed to quantify managerial ability score (Anom, 2018; PHAN, 2021; Ting et al., 2021). M.A. score is estimated
by employing Data Envelopment Analysis (DEA) to determine a company's industry-specific input-output efficiency in the first phase. The output variable in equation (1) is the firm's sales. The input variables are the cost of goods sold (CGS), selling, general and administrative expenditure (SG&A), property, plant, and equipment (PPE), research and development expenditures (R&D), and intangible assets (Intan). The following optimisation procedure calculates the firm's efficiency score, which ranges from 0 to 1 (Equation 1). The score for firms on the efficient frontier is one, while the score for the least efficient firms is zero.

\[
\max \theta = \frac{\text{Sales}}{V_1 \text{CGS} + V_2 \text{SG&A} + V_3 \text{PPE} + V_4 \text{R&D} + V_5 \text{Intan}}
\]  

Equation 1

However, the M.A. component and firm-specific variables can influence how the DEA method determines a company's efficiency score. During the second phase, Demerjian et al. (2012) conducted a regression analysis of the efficiency score at the firm level, using firm-specific parameters to assess the impact of M.A.

\[
FE = \alpha_0 + \alpha_1 \ln \text{TA} + \alpha_2 MS + \alpha_3 PFCF + \alpha_4 \ln \text{Age} + \epsilon
\]  

Equation 2

In this context, the variable \(\ln \text{TA}\) represents the natural logarithm of the book value of total assets. M.S., conversely, denotes market share, which is the ratio of a firm's sales to the total sales within the same industry. PFCF (positive free cash flow), a dummy variable, takes the value of one when the free cash flow is positive and zero otherwise. Lastly, \(\ln \text{Age}\) signifies the natural logarithm of the firm's age.

3.2.2 Firm Performance (Dependent Variable)

3.2.2.1 Market-based performance (Tobin’s Q)

Tobin's Q research uses market indicators. It is an alternative measure of the financial performance of the firm. A high Q value suggests the firm operates well from the market perspective (C. et al., 2002). Tobin's Q ratio is dividing the sum of market capitalisation and total debt by total assets.

\[
\text{Tobin's } Q = \frac{\text{MVS} + \text{Book value of ST & LT Debt}}{\text{(Total Asset (FA,CA,Inv))}}
\]  

Equation 3

Where

- MVS= Market value of the stock, i.e. Equity
- ST= Short term debt,
- LT= long-term debt,
- FA= Fixed asset,
- CA= Current asset,
- Inv= Inventory

If the Tobin Q > 1 value confirms that the market value exceeds the firm value assets and vice versa (El-Faitoury, 2014; Kalantonis et al., 2021; C. Weir et al., 2002). The existing literature argues that a higher value of Q performs better in the market (Tan & Peng, 2003; A. et al., 2002).

3.2.2.2 Accounting-based short-run performance (ROA)

Return on assets is a conventional accounting-based performance measurement proxy employed in the study under investigation, following (Mahoney et al., 2008) consistent; if the value of ROA is less than 5%, it usually means that the firm is stagnant. Beyond that threshold, the organisation effectively employs its assets to generate growth. Traditionally, enterprises with a greater ROA are supposed to be successful (Kyere & Ausloos, 2021). The formula for capturing performance is as follows.

\[
\text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}}
\]  

Equation 4
3.2.3 Corporate Social Responsibility (Moderating Variables)

Many studies have developed CSR measuring indices, most of which cover comparable elements, such as minority rights, shareholder rights, individual freedoms, and human rights. Using the Carroll (2021) framework, researchers in Pakistan developed a questionnaire to quantify CSR (Asrar-ul-Haq et al., 2017). A study in China established a CSR index based on 63 factors, including stakeholder rights, labour, and humanity, and conducted an impartial operation (Han & Stoel, 2017). The current research provides a CSR index based on the company's community, employee, customer/product, and environmental CSR factors and evaluates its implementation and results (Xia et al., 2018).

3.2.4 Control Variables

This study considers the firm's size, leverage, growth prospects, and age to account for any potential external influences affecting the company's value. In order to control for F.Z., it is common practice to employ a size proxy such as the natural logarithm of the book value of total assets. The value may react differently to changes in leverage, as suggested by (Bamber et al., 2010). The leverage (LEV) calculation by (Dimitropoulos et al., 2010) uses the ratio of total long-term debt to total assets. Growth companies are risky due to their inflated profit expectations, even though their value creation potential is high (Krishnan & Parsons, 2008). The ongoing study incorporates sales growth (GW) likelihood as a control variable to capture the effect of CSR by comparing current sales to sales from the previous year.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Acronyms</th>
<th>Measurement</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Performance</td>
<td>F.P</td>
<td>Calculated by Tobin Q (T.Q.) Return on Asset (ROA)</td>
<td>(Latif et al., 2017; Tabassam &amp; Khan, 2021)</td>
</tr>
<tr>
<td>Managerial ability</td>
<td>M.A</td>
<td>The managerial ability measure obtained by Demerjian et al. (2012)</td>
<td>Demerjian et al., 2012; Lee et al., 2018; Anom., 2018; Ting et al., 2021; PHAN, 2021</td>
</tr>
<tr>
<td>Corporate Social Responsibility</td>
<td>CSR</td>
<td>Develop a CSR index based on the firm's community, employees, customers / Products, and environmental dimensions.</td>
<td>(Xia et al., 2018; Zaho et al. 2010).</td>
</tr>
<tr>
<td>Firm size</td>
<td>F.Z</td>
<td>It is calculated as the natural logarithm for the book value of total assets.</td>
<td>(Latif et al., 2020; Tabasam &amp; Khan, 2021).</td>
</tr>
<tr>
<td>Sales growth</td>
<td>G.W</td>
<td>This is the proportional rise in sales from the prior year.</td>
<td>(Abbott et al., 2004); Salehi et al., 2018)</td>
</tr>
<tr>
<td>Firm age</td>
<td>AGE</td>
<td>Time was considered when the company had first registered with the Pakistan Stock Exchange.</td>
<td>(Kamran &amp; Shah, 2014; Tabasam &amp; Khan, 2021)</td>
</tr>
<tr>
<td>Leverage</td>
<td>LEV</td>
<td>Calculated as a total long-term debt divided by total assets.</td>
<td>(Dimitropoulos and Asteriou, 2010).</td>
</tr>
</tbody>
</table>

3.3 Model Estimation

To reflect the direct impact of managerial ability and CSR on firm performance, we have constructed the following econometric model:

\[ TQ_{i,t} = \gamma_0 + \gamma_1 MA_{i,t} + \gamma_2 CSR_{i,t} + \gamma_3 AGE_{i,t} + \gamma_4 GW_{i,t} + \gamma_5 LEV_{i,t} + \gamma_6 FZ_{i,t} + \mu_{i,t} \]
The positive sign of the interaction term (MA×CSR) concludes that CSR enhances the effect of M.A. on the F.P. relationship and will behave as a complement. The significant negative sign concluded that the M.A. and F.P. relation is weaker and will behave as a substitute.

4. Results and Discussion

4.1 Descriptive Analysis

Table 3 presents the statistical values that form the foundation for data analysis. All variables fall within normal ranges, as seen by the descriptive values. Hence, data from the endogenous construct may be utilised for future studies.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Median</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Std.Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>0.055</td>
<td>0.033</td>
<td>0.160</td>
<td>-0.0882</td>
<td>4.128</td>
</tr>
<tr>
<td>TQ</td>
<td>1.542</td>
<td>0.988</td>
<td>2.350</td>
<td>0.781</td>
<td>1.356</td>
</tr>
<tr>
<td>MA</td>
<td>0.504</td>
<td>0.988</td>
<td>2.350</td>
<td>0.000</td>
<td>0.500</td>
</tr>
<tr>
<td>CSRI</td>
<td>12.467</td>
<td>12.000</td>
<td>31.000</td>
<td>0.000</td>
<td>6.803</td>
</tr>
<tr>
<td>FZ</td>
<td>15.405</td>
<td>15.366</td>
<td>20.882</td>
<td>10.142</td>
<td>1.813</td>
</tr>
<tr>
<td>LEV</td>
<td>0.705</td>
<td>0.587</td>
<td>18.466</td>
<td>-1.081</td>
<td>1.853</td>
</tr>
<tr>
<td>AGE</td>
<td>1.519</td>
<td>1.505</td>
<td>1.771</td>
<td>6.000</td>
<td>17.152</td>
</tr>
<tr>
<td>GW</td>
<td>6.663</td>
<td>6.644</td>
<td>7.595</td>
<td>5.689</td>
<td>0.593</td>
</tr>
</tbody>
</table>

4.2 Correlation Matrix

Table 4 exhibits the Pearson correlation statistics among variables and displays that neither the correlation nor the analysis of covariance reveals any evidence of multicollinearity. The study results demonstrate a direct and statistically significant relationship between M.A. and the performance metrics of T.Q. and ROA with the coefficient values (0.017) and (0.023). In line with other variables discussed, F.Z. correlates positively with T.Q. and M.A. The coefficient values are (0.010) and (0.178), respectively. However, F.Z. negatively correlates with return on assets ROA (-0.022). Similarly, sales growth positively correlates with CSRI, MA, T.Q. and ROA.
Table 4
Correlation Matrix

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROA</th>
<th>TQ</th>
<th>MA</th>
<th>CSRI</th>
<th>FZ</th>
<th>LEV</th>
<th>AGE</th>
<th>GW</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TQ</td>
<td>0.0001*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MA</td>
<td>0.0179**</td>
<td>0.0230**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSRI</td>
<td>0.0118**</td>
<td>0.05847**</td>
<td>0.1797*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FZ</td>
<td>-0.0225***</td>
<td>0.0103***</td>
<td>0.1783**</td>
<td>0.3626</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>0.0001***</td>
<td>0.0439**</td>
<td>-0.0901</td>
<td>0.1028**</td>
<td>-0.2258**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>-0.0130***</td>
<td>0.0669*</td>
<td>0.1796**</td>
<td>0.1221**</td>
<td>0.2154</td>
<td>-0.0545***</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>GW</td>
<td>0.1270*</td>
<td>0.2900**</td>
<td>0.2521**</td>
<td>0.0150**</td>
<td>0.0611**</td>
<td>0.0491**</td>
<td>0.012</td>
<td></td>
</tr>
</tbody>
</table>

Note: Hetero - Auto consistent Standard Errors as suggested by Newey and West (1987)
***significant at 1%, ** significant at 5%, * significant at 10%

Table 5 presents the estimated fixed effects regression coefficients for the interaction between M.A. and corporate financial valuation, incorporating CSRI as a moderator. Model-1 is analysed for the testing of hypothesis (H1, H2 & H3). For analysis, the fixed effect regression with robust standard error option and cluster option has been used in the study to correct any issue of unobserved heterogeneity and serial correlation. The robust standard error and cluster technique correct any cross-section and serial correlation problems in the data (Wooldridge, 2013).

The direct effect of M.A. on T.Q. is consistent, and the results indicate a statistically significant positive relationship in all of the models as (β1 = 0.187, p < 0.01, β2 = 0.178, p < 0.05. The positive and significant coefficients show that M.A. optimises the company’s efficiency (T.Q.) (Istianingsih, 2021; Sakawa et al., 2021). Moreover, table 5 also depicts the estimates of moderating variable CSRI. The interaction term is positively and significantly associated with 5%, although the CSRI coefficient depicts a positive and statistically significant correlation (p:05). The interaction term coefficient (MA*CSRI) is positively significant (0.080, p < 0.05). These findings illustrated that the possibility of CSRI moderates the relationship between M.A. and T.Q. The significant positive sign concluded that the MA-FP relationship is more substantial and will behave as a complement. The findings were consistent with stakeholder theory, which argues that CSR is essential for increasing shareholder value and inspiring a more comprehensive range of stakeholders to take action in the public interest. The company's size and sales growth are statistically significant, while its age is positive.

Table 5
Fixed Effect Results for TQ

<table>
<thead>
<tr>
<th>Variables</th>
<th>TQ</th>
<th>TQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td>0.187*</td>
<td>0.178**</td>
</tr>
<tr>
<td></td>
<td>(0.115)</td>
<td>(0.084)</td>
</tr>
<tr>
<td>CSRI</td>
<td>0.534**</td>
<td>0.322**</td>
</tr>
<tr>
<td></td>
<td>(0.126)</td>
<td>(0.157)</td>
</tr>
<tr>
<td>MA*CSRI</td>
<td></td>
<td>0.080**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.028)</td>
</tr>
<tr>
<td>FZ</td>
<td>-0.015***</td>
<td>-0.015***</td>
</tr>
</tbody>
</table>

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Table 6 shows that the direct effect of M.A. on ROA is consistent and positively significant in all the models as ($\beta = 0.006$, $p < 0.001$) supported hypothesis H1. The positive and significant coefficients show a positive impact of M.A. on ROA. On average, the interaction term is positively significant at a 1% significance level, and the CSRI coefficient is positive and significant at $p < 0.01$. The interaction term coefficient (MA*CSRI) is positive and significant ($0.079$, $p < 0.05$). The results conclude that CSRI significantly moderates the relationship between M.A. and ROA. As both M.A. and the interaction term (CSRI*MA) coefficients are positive, it concludes that the behaviour of CSRI with M.A. confirms its nature as a complement.

**Table 6**

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROA</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td>0.006***</td>
<td>0.004***</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.001)</td>
</tr>
<tr>
<td>CSRI</td>
<td>0.058***</td>
<td>0.058***</td>
</tr>
<tr>
<td></td>
<td>(0.022)</td>
<td>(0.022)</td>
</tr>
<tr>
<td>MA*CSRI</td>
<td>0.079*</td>
<td>(0.046)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FZ</td>
<td>-0.012***</td>
<td>-0.012***</td>
</tr>
<tr>
<td></td>
<td>(0.003)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>GW</td>
<td>0.023***</td>
<td>0.023***</td>
</tr>
<tr>
<td></td>
<td>(0.003)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>LEV</td>
<td>0.033***</td>
<td>0.033***</td>
</tr>
<tr>
<td></td>
<td>(0.003)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>AGE</td>
<td>0.042***</td>
<td>0.042***</td>
</tr>
<tr>
<td></td>
<td>(0.012)</td>
<td>(0.012)</td>
</tr>
</tbody>
</table>

| Firms fixed effects | YES | YES |
| Year fixed effects  | YES | YES |
| R-squared           | 0.44 | 0.49 |
| Firms included      | 219 | 219 |
| Hausman Test        | 0.001 | 0.000 |

Note. Hetro -Auto consistent Standard Errors as suggested by Newey and West (1987)

***significant at 1%, ** significant at 5%, * significant at 10%
4.3 Discussion

4.3.1 Managerial Ability and Firm Performance

The study's conclusions showed how M.A. affected both ROA and T.Q. The direct effect of M.A. on ROA and T.Q. is positive and significant. These results align with the previous studies of (Bamber et al., 2010; Bertrand & Schoar, 2003; Tabassam & Khan, 2021) envisaged that the relationship between M.A. and F.P. These studies demonstrate that several leader- and firm-specific elements influence firm behaviours. The managers' personality traits and professional competencies are the major forces behind the efficient utilisation of assets. Baker and Kim (2020) recently demonstrated that companies with managers with greater emotional intelligence and cognitive ability outperform their competitors. Results are inconsistent with the study of (Francis et al., 2008), which suggests that more capable managers might engage in ill-advised actions such as investment manipulation or earnings management. Despite their capabilities, these actions typically have negative consequences and diminish the firm's overall value.

Moreover, previous research by (Ahmed et al., 2022; Inam Bhutta et al., 2021) has corroborated these findings, indicating a positive relationship between M.A. and F.P. in Pakistani firms. The study's findings determine that a competent manager, effectively overseeing the company's operations, can positively impact the company's success. When managers possess the necessary skills, knowledge, and competencies to lead and make strategic decisions, they can contribute to improved performance outcomes for the company (Huang & Xiong, 2022). In this case, stewardship theory supports the positive impact of managerial ability. This theory asserts that managers serve as stewards, fulfilling their role in serving the organisation and its diverse stakeholders (Chrisman, 2019). They are motivated to maximise firm performance and pursue long-term sustainability rather than pursue self-interest or opportunistic behaviour (Andreou et al., 2013; Chang et al., 2010).

4.3.2 CSR and Firm Performance

The study's findings demonstrate a positive correlation between CSR adoption and business performance. The results align with a previous study (Cormier & Magnan, 2014; Guo et al., 2020; Javeed & Lefen, 2019), which concluded that well-implemented CSR measures enhance corporate performance and foster sustainability. By integrating CSR into their strategies and operations, companies can enhance their reputation, manage risks, drive innovation, engage employees, and create long-term value, leading to improved performance outcomes. Stakeholder theory confirms that CSR improves business reputation and relationships in this context. Additionally, stakeholder theory recognises that Businesses function within a complex web of interconnected relationships with diverse stakeholders, encompassing customers, employees, suppliers, communities, and regulatory bodies. A company's actions can significantly impact various stakeholders, who, in turn, can also substantially influence the company. By actively participating in CSR initiatives, firms demonstrate their commitment to meeting stakeholder expectations, addressing concerns, enhancing their reputation, and fostering positive relationships.

Furthermore, a prior study by Cordeiro and Tewari (2015) shows how a company's CSR initiatives may strengthen relationships with stakeholders and, as a result, increase business revenue, which is consistent with our findings. The involvement of stakeholders is crucial from some perspectives to accomplishing a company's performance (Ben Salem, 2022; Johnson et al., 2018). Similarly, Javeed and Lefen (2019) supported the importance of CSR for firm performance in the Pakistani market. The study found a positive correlation between CSR and F.P., with social initiatives enhancing businesses' trust in their internal and external surroundings.

4.3.3 Moderating Role of CSR

The interaction term (MA*CSR) coefficient in statistical analysis shows a significant positive association with ROA and T.Q. The significant positive sign concluded that the MA-FP relationship is more robust and will behave as a complement. Results indicate that CSR can moderate the relationship between M.A. and
F.P. by enhancing stakeholder relationships, reputation, risk management, and innovation. Effective CSR implementation can strengthen M.A.’s positive influence on F.P., ultimately enhancing overall organisational outcomes. These findings correspond with earlier empirical research (Jiang et al., 2021). They have looked into how CSR affects the financial success of businesses and board gender diversity in the Chinese industry.

Stakeholder theory supports these findings since managers efficiently utilise CSR to save business stakeholders’ interests (Calton, 2018). Moreover, Baird et al. (2012) indicate that Effective CSR practices promote positive relationships with stakeholders such as customers, suppliers, communities, and regulators. Strong stakeholder relations can lead to increased collaboration, support, and trust, which can moderate firm performance positively. According to scholars, implementing CSR activities may raise businesses’ reputations and help them gain a competitive edge; thus, managers are encouraged to approve CSR practices to involve their stakeholders and boost their firms’ reputations (Skudiene & Auruskeviciene, 2012). Furthermore, managers should convince stakeholders that they are vital to their organisations. It would guarantee that the corporation actively engages in CSR activities since such initiatives may improve customer loyalty.

5. Conclusion

5.1 Findings

This study pertains to research conducted in Pakistan, a developing country, focusing on 219 non-financial enterprises listed on the Pakistan Stock Exchange (PSX) over 14 years (2009-2021). The study derived the estimate using panel regression, specifically a fixed effect model, and we also performed the Hausman test. The present study integrates significant insights into the literature by determining a correlation between M.A., CSR and F.P. Next, how CSR moderates the correlation between M.A. and F.P. is analysed. The study's findings demonstrate a positive and statistically significant correlation between M.A. and F.P. The findings above justify the idea that capable managers improve the competence of financial disclosure, mitigate information asymmetry and optimise the financial value of their firms. In addition, our findings indicate that CSR improves a firm value. When implemented effectively, CSR initiatives can have several potential benefits that positively impact financial performance.

Moreover, CSR Positively moderates the relationship between M.A. and F.P. It concludes that the behaviour of CSRI with M.A. is more robust and acts as a complement. CSR is a powerful instrument for enhancing the interaction between management and shareholders in the Pakistani market, where stakeholder mistrust is already prevalent. Our findings have substantial theoretical and managerial consequences for policymakers and managers.

5.2 Implications

The findings of our study hold substantial implications for both theoretical and practical domains, particularly for policymakers and managers. The ongoing study contributes to the existing research by illustrating how CSR moderates the relationship between managerial ability and firm performance. Regarding theoretical implications, as per the Stewardship theory, managers’ concern for their reputation and desire for career progression motivates them to serve the shareholders’ best interests, minimising agency costs for the organisation (Donaldson & Davis, 1990). The notion highlights that influential leader may influence their decisions about strategy and structure, directly impacting the success of their organisations. While CSR can control and monitor managerial activities, its primary purpose extends beyond maximising profit. CSR involves being accountable to shareholders and investors by providing transparent financial reporting and ethical business practices. Stakeholder theory suggests that businesses can achieve better financial performance by actively considering the interests and well-being of all stakeholders. By nurturing positive stakeholder relationships, building a solid reputation, mitigating risks, fostering innovation, and
adopting a long-term perspective, firms can create sustainable value that positively influences their business value.

Additionally, our research holds significant implications for policymakers. This study provides valuable insights for investors and regulators operating within the Pakistani business context, as it enhances their understanding of the significance of managerial ability and its potential impact on various aspects of business operations. Further, they have the potential to enhance comprehension of CSR. Many companies worldwide, including Pakistan, have recognised the importance of CSR in promoting sustainable and ethical business practices. Developing a national CSR policy by the government is imperative; it requires a consultative process that engages various stakeholders. Including perspectives from various stakeholders would facilitate identifying and prioritising developmental requirements within the nation and the policy challenges that necessitate attention. Furthermore, the government should encourage, recognise, and compensate companies that make CSR contributions so that they are more tempted to get involved in community welfare sectors. In addition, the government should grant tax exemptions to firms that aid and participate in welfare activities.

Moreover, our findings suggest that considering managers’ career concerns is crucial when formulating policies to encourage investment in CSR. Policymakers can create an enabling environment that motivates managers to embrace CSR as a strategic priority and drive positive organisational change. In addition, Management training should be an ongoing process to keep pace with the evolving business landscape. This includes attending industry conferences, participating in workshops, pursuing executive education programs, and encouraging continuous learning within the organisation. By continuously updating their knowledge and skills, leaders can better support their teams and foster a culture of innovation, leading to improved company results and sustained growth.

5.3 Limitations and Recommendations

The phenomenon of generalisation is evident in the research investigation. This study evaluated only 219 listed firms due to time and budget constraints. Collecting and extracting data from non-registered firms is quite troublesome and time-consuming. Pakistani non-listed firms may be considered for further analysis. The banking sector is outside this study’s scope because of its distinct capital structure, unique regulations and accounting practices. Therefore, these results cannot be generalised.

Furthermore, this study focuses on a single emerging economy. In future studies, it is possible to perform a comparative analysis of industrialised and emerging economies. Moreover, researchers must explore different measurement approaches to comprehend M.A. and its influence on F.P. By doing so, we can better assess the long-term implications and contribute to advancing management theory and practice.

Since the linked research is still in its infancy, additional effects of CSR marketing and customer purchasing behaviour must be examined. While CSR marketing has recently attracted significant attention and recognition as a strategy for businesses to showcase their social and environmental initiatives, it is essential to acknowledge that research in this area is ongoing, and there is still much to explore. To fully understand the influence of CSR marketing on customer purchasing behaviour, it is crucial to conduct comprehensive studies across various countries and consider a range of events and tactics.

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