



Advance Journal of Econometrics and Finance

Vol-4, Issue-2, 2026

Advance Journal of Econometrics and Finance

Online ISSN

2959-8990

Print ISSN

2959-8982

<https://ajeaf.com/index.php/Journal/About>

Name of Publisher: SCHOLAR CRAFT EDUCATION & RESEARCH HUB

Review Type: Double Blind Peer Review

Journal Frequency: Quarterly Research Journal (4- Issue)



Internal Control Effectiveness as a Moderator in the Relationship Between Corporate Social Responsibility and Firms' Financial Performance: Evidence from Pakistan

¹Muhammad Ashraf, ²Dr. Khalid Rehman

	Abstract
<p>Muhammad Ashraf PhD Scholar, IBA, Gomal University, D.I. Khan. muhammadashrafucc@gmail.com</p> <p>Dr. Khalid Rehman Assistant Professor, IBA, Gomal University, D.I. Khan. khalidrehman@gu.edu.pk</p>	<p>Corporate Social Responsibility (CSR) has become a decisive strategic issue in companies in developing economies but its nexus with financial performance is still the matter of continuous empirical discussion and especially in the institutional sphere of weak governance structures, unclear regulations and heterogeneous stakeholders. This paper explores the moderating position of internal control effectiveness in the connection among multi-dimensional CSR and financial performance of firms in the Pakistani corporate environment. Based on a synthesized theoretical context, rooted in the Stakeholder Theory, Legitimacy Theory, Agency Theory, Social Contract Theory, and Environmental Theory and supported by Resource-Based View (RBV) and Institutional Theory, the research hypothesis is that the strong offices of internal control enhance the CSR-performance connection through quality of governance, transparency, and optimization of resources. The proposed study will have a mixed-method quantitative design which involves the use of both primary and secondary data. The structured questionnaire surveys conducted on a five-point scale (likert scale) were used to measure firm level practices of CSR across seven theoretically based dimensions: Economic, legal, ethical, philanthropic, environmental, stakeholder and governance as a primary source of data. Two globally accepted compliance framework networks were used to operationalise the internal control effectiveness: the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework and the Sarbanes-Oxley Act (SOX) compliance indicators. To create three performance proxies of financial performance Return on Assets (ROA), Return on Equity (ROE) and the Q ratio of Tobin, which reflects accounting-based and market-based aspects of performance, secondary data were obtained through audited financial statements and Bloomberg databases. Four control variables at firm level are included: the size of firms, the age of firms, financial leverage, and high levels of research and development (R&D). The sample includes non-financial Pakistani companies that belong to the Pakistan Stock Exchange (PSX) during [202025]. The hypothesized relationships are tested using moderate regression analysis (hierarchical with moderated) with the help of panel data methods, such as fixed-effects and random-effects. Two-Stage Least Squares can resolve the endogeneity issues. (2SLS) estimation. The empirical evidence indicates that: (i) the CSR dimensions are positively and differentially related to the financial performance; (ii) internal control effectiveness positively mediates the CSR-financial performance relationship, which supports the governance-sustainability nexus. (iii) The size of the firm, leverage, age and R&D all play a significant role in determining the strength of this relationship in the Pakistani institutional environment. This research has taken part in the emerging yet developing literature on CSR in the South Asian emerging markets by offering the first work of exhaustive empirical analysis of internal controls as a boundary to the CSR performance relationship. The results have important policy and regulatory implications to corporate boards, regulators, and investors in Pakistan, guiding the design of CSR mandates, governance codes enforced, by the Securities and Exchange Commission of Pakistan (SECP), and the internal audit standards that comply with international best practice.</p>
Keywords:	Corporate Social Responsibility (CSR); the Internal Control Effectiveness; Financial Performance; COSO Framework; SOX Compliance; Return on Assets; Return on Equity; Tobins Q; Stakeholder Theory; Legitimacy Theory; the Agency Theory; the Social Contract Theory; the Environmental Theory; the Institutional Theory; the Resource-Based View; the Pakistan Stock Exchange; the Emerging markets, the Corporate Governance



Advance Journal of Econometrics and Finance

Vol-4, Issue-2, 2026

1. INTRODUCTION

Corporate Social Responsibility (CSR) has become a mainstream element of corporate strategy in the current global business landscape, having progressed from being a niche notion of philanthropy to a strategic imperative (Carroll, 1991; Porter & Kramer, 2006). Corporate enhance their accountability to a variety of stakeholders such as investors, regulators, consumers and civil society, not just their financial, but also social, ethical, environmental and governance performance (Freeman, 1984; Donaldson & Preston, 1995). This conceptual shift is reflective of a recognition that corporate success in the long run involves responsible corporate decision-making (Eccles, Ioannou, & Serafeim, 2014). This has led to a proliferation of the academic literature on CSR over the past 30 years, producing a large body of both theoretical and empirical research that explores CSR from a variety of interdisciplinary angles such as management, accounting, finance and economics (Margolis & Walsh, 2003; Aguinis & Glavas, 2012).

Particularly, the relationship between CSR and corporate performance has generated much research, but the empirical evidence remains inconclusive (Berman, Wicks, Kotha, & Jones, 1999; Orlitzky, Schmidt, & Rynes, 2003; Margolis, Elfenbein, & Walsh, 2007). One body of research shows a positive link, by suggesting that CSR contributes to a firm's reputation, decreases information uncertainty, fosters goodwill among stakeholders, and thus culminates in enhanced financial performance (Waddock & Graves, 1997; Barnett & Salomon, 2012). However, some research shows a negative or non-significant association, with the argument that CSR spending is discretionary and reduces profitability, at least in the short term (Friedman, 1970; McWilliams & Siegel, 2000). Varying results have been reconciled by differences in the way CSR has been measured, industries studied, research methods, locations, and an oversight of contextual processes that provide a moderating effect on the CSR-performance relationship (Surroca, Tribó, & Waddock, 2010; Wang, Dou, & Jia, 2016).

A major weakness of existing research is its focus on unidimensional CSR, which fails to account for the multidimensionality of corporate social responsibility (Carroll, 1979; Turker, 2009). Carroll's (1991) breakdown of CSR into four dimensions (economic, legal, ethical, and philanthropic) in his widely acclaimed pyramid suggests a hierarchical theoretical framework for defining the multiple obligations of business corporations (Carroll, 1991; Schwartz & Carroll, 2003). Subsequent researchers have extended the CSR paradigm to include environmental responsibilities, stakeholder management and corporate governance as additional key dimensions that reflect sustainability concerns in today's business environment (Elkington, 1997; Clarkson, 1995; Aguilera et al., 2007). Against a backdrop of extensive CSR coverage in research literature, the role of internal control systems as a form of corporate governance that moderates the CSR-financial performance relation has been largely overlooked (Doyle, Ge, & McVay, 2007; Ge & McVay, 2005). The effectiveness of internal control is the extent to which an entity's control environment, risk assessment, control activities, information and communication, and monitoring policies and procedures operate together to secure the integrity of financial reporting, enhance operational performance and ensure compliance with laws and regulations (COSO, 2013; SEC, 2003). The Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework offers framework for assessing the effectiveness of internal control with five interrelated components (COSO, 2013; Kinney, 2000). Similarly, the Sarbanes-Oxley Act (SOX) of 2002 requires management and auditor evaluation of internal control over financial reporting (ICFR), in turn setting a stringent compliance framework that has been adopted globally (Doyle et al., 2007; Ashbaugh-Skaife, Collins, & Kinney, 2007).

The Pakistani corporate sector offers an interesting empirical setting to analyse the relationship between CSR, internal control and financial performance. Given its institutional shortcomings, low contract enforcement, higher concentration levels, and underdeveloped capital markets, Pakistan is an interesting empirical ground where corporate governance inefficiencies and CSR paradox are more accentuated (Javeed & Lefen, 2019; Rashid, 2015). The Securities and Exchange Commission of Pakistan (SECP) has made progressive reforms such as Code of Corporate Governance and CSR disclosures for listed corporations (SECP, 2017; Awan & Akhtar, 2014). But little empirical research has been done on the impact of these reforms (Ahmed & Hamdan, 2015). In this context, the current paper aims to achieve to four broad objectives. First, to empirically investigate the association between multi-dimensional CSR and financial performance (ROA, ROE, Tobin's Q) of Pakistani listed firms (Carroll, 1991; Orlitzky et al., 2003)). Second, to examine the influence of the effectiveness of internal control (COSO and SOX) on the CSR-physical performance relationship (COSO, 2013; Jensen & Meckling, 1976). Third, to investigate the impact of the control variables at firm level on the strength of these relationships (Fama & French, 1993). Fourth, to provide policy implications for the SECP and the listed companies on PSX (SECP, 2017).

This research contributes in a number of ways to theory, methodology and practice. Theoretically, this study enriches the CSR-performance debate by unearthing the hitherto overlooked dimensionality of the effectiveness of internal control (Surroca et al., 2010; Wang et al., 2016). From a research methodology point of view, it introduces a mixed-methods approach by integrating primary and secondary data (CSR through primary survey data; financial through secondary data), the seven-dimensional approach to CSR measurement (Turker, 2009), and the COSO-SOX approach to internal control (COSO, 2013). This research provides first systematic evidence from Pakistan about this

triple relationship (Javeed & Lefen, 2019; Rashid, 2015). The rest of the paper is organized as follows: Section 2 synthesises the literature and proposes hypotheses; Section 3 outlines the theoretical frameworks; Section 4 explains the research method; Section 5 discusses empirical findings; and Section 6 concludes with insights and implications for practice and policy, and opportunities for future research (cf. Hair et al., 2019).

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Theoretical Foundations

2.1.1 Stakeholder Theory

Stakeholder Theory, first proposed by Freeman (1984), remains one of the most popular theories of CSR. It proposes firms must consider the relationships with all parties that affect or are affected by the firm's operations and that fulfilling the legitimate expectations of the diverse group of stakeholders is essential for corporate success (Freeman, 1984; Donaldson & Preston, 1995). Organisations that willingly engage in CSR activities signal stakeholder responsiveness, and in turn accumulate positive reputation, eliminate costs of stakeholder conflicts, and improve their financial performance (Jones, 1995; Hillman & Keim, 2001). Mitchell, Agle and Wood (1997) further developed stakeholder theory by identifying a salience model, which prioritises stakeholders by their urgency, legitimacy and power, offering a systematic approach to allocate CSR resources. In Pakistan, the SECP's Code of Corporate Governance explicitly calls for stakeholder disclosure, institutionalising stakeholder accountability in the regulatory requirements of listed companies (SECP, 2017; Javeed & Lefen, 2019).

2.1.2 Legitimacy Theory

Legitimacy Theory (Suchman, 1995; Dowling & Pfeffer, 1975) suggests that firms have a social contract with society such that access to and participation in the market space is dependent on having actions endorsed by society as consistent with social norms, values and beliefs (Deegan, 2002). CSR actions are used as legitimacy strategies to demonstrate congruence with societal expectations, which helps to avoid the potential for regulatory fines, consumer boycotts and reputation risk that could negatively impact financial performance (Palazzo & Scherer, 2006; Deegan & Unerman, 2006). Internal controls further bolster legitimacy by adding credibility to corporate social responsibility (CSR) reports, ensuring that management's social activities align with corporate strategy (Cohen, Krishnamoorthy, & Wright, 2004).

2.1.3 Agency Theory

Jensen and Meckling's (1976) Agency Theory forms the basis for the theory of why we study internal controls as a governance mechanism in the CSR performance nexus. The theory views the firm as a set of contracts between principals (shareholders) and agents (managers) where information asymmetry and conflicting interests result in the potential for manager opportunism at shareholder expense (Fama & Jensen, 1983). Internal controls reduce agency costs by limiting managerial discretion, improving transparency of financial reporting, and ensuring CSR investments are deployed to benefit stakeholders rather than providing opportunities for managers to entrench (Bushman & Smith, 2001; Cohen et al., 2004). The SOX Act's requirements under Section 302 and 404 provide its precepts through CEO/CFO certifications of and independent auditor attestations of internal controls (Ashbaugh-Skaife et al., 2007; Doyle et al., 2007).

2.1.4 Social Contract, Environmental, RBV, and Institutional Theories

Social Contract Theory (Donaldson & Dunfee, 1994) defines CSR as the discharge of moral duties that firms owe to their stakeholders and helps to build social trust and legitimacy that spill over into significant economic benefits (Deegan & Unerman, 2006). Environmental Theory (Bansal & Roth, 2000) explains firms' environmental obligations and how environmental leadership forms the basis of a strategic resource that facilitates competitive differentiation and regulatory responsiveness (Sharma & Vredenburg, 1998). The Resource-Based View (Barney, 1991) treats CSR capabilities and effective internal control systems as firm-specific resources that meet the criteria of value, rarity, imperfect imitability, and non-substitutability, and form a foundation for competitive advantage (Hart, 1995; Russo & Fouts, 1997). Institutional Theory (DiMaggio & Powell, 1983) elucidates the impact of coercive regulatory forces (SECP governance codes), mimetic industry forces, and normative professional forces (COSO, IFAC) that govern CSR isomorphic practices among Pakistani companies (Jamali & Mirshak, 2007; Scott, 1995).

2.2 CSR Dimensions and Financial Performance

2.2.1 Economic and Legal CSR Dimensions

The economic dimension of CSR is the basic responsibility in the CSR pyramid proposed by Carroll (1991) and includes firms' responsibility to be profitable, meet shareholder expectations, and create jobs and wealth (Turker, 2009; Matten & Moon, 2008). Research also shows the economic dimension is a significant antecedent of accounting-based financial performance (Waddock & Graves, 1997; Orlitzky et al., 2003). The legal dimension involves firms operating in accordance with laws, regulations and court cases

(Carroll, 1991; McWilliams & Siegel, 2001). In Pakistan, the Companies Act 2017 and the Code of Corporate Governance set the legal framework for listed companies to operate within (SECP, 2017; Awan & Akhtar, 2014). Companies that go beyond the legal norm to ensure compliance minimise the risk of litigation and fines, leading to indirect financial gains (Barnett & Salomon, 2012; Surroca et al., 2010).

2.2.2 Ethical, Philanthropic, and Environmental CSR Dimensions

The ethical dimension includes activities that corporations should do out of moral obligations even if not required by law (Carroll, 1991; Jones, 1995). In Pakistan, where there are high perceptions of corruption, ethical CSR is a critical factor for attracting foreign investment and high - quality customers (Transparency International, 2023; Javid & Iqbal, 2010). Carroll's philanthropic dimension includes voluntary corporate activities contributing to the well-being of society, going beyond the legal and ethical obligations (Carroll, 1991; Brammer & Millington, 2008). A study on philanthropic CSR shows that it constitutes the most conspicuous form of CSR engagement in Pakistan based on Zakat and Sadaqah in Islamic tradition (Jamali, 2008; Lund-Thomsen & Lindgreen, 2014). The environmental dimension deals with energy efficiency, greenhouse emissions, waste reductions, and the use of green production processes (Bansal & Roth, 2000; Elkington, 1997). A meta-analysis of 39 primary studies by Dixon-Fowler et al. (2013) showed that financial performance is positively affected by firm's environmental performance (Russo & Fouts, 1997).

2.2.3 Stakeholder and Governance CSR Dimensions

The stakeholder dimension embodies Freeman's (1984) normative advice, involving firms' efforts to engage, understand and manage the legitimate demands of primary and secondary stakeholders (Clarkson, 1995; Mitchell et al., 1997). Sound stakeholder engagement practices minimize information asymmetry, build or increase relational and social capital that contribute to firm performance by increasing employee and customer loyalty, supplier trust, and goodwill with the local community (Jones, 1995; Hillman & Keim, 2001). The CSR corporate governance dimension refers to firms' responsibilities to uphold ethical, transparent and responsive leadership that safeguards the interests of all stakeholders (Jo & Harjoto, 2012; Harjoto & Jo, 2011). Pakistan has improved governance practices through the SECP's Code of Corporate Governance, which constantly enhances board independence, audit committees, and disclosure of related-party transactions (SECP, 2017; Rashid 2015).

2.3 Internal Control Effectiveness: COSO and SOX Frameworks

The effectiveness of internal control is the result of the integrated system of policies, procedures and practices aimed at attaining reliable financial reporting, efficient operations, and compliance with laws and regulations (COSO, 2013; Kinney, 2000). COSO's Internal Control - Integrated Framework (2013) views internal control as a process comprising of five components: control environment, risk assessment, control activities, information and communication, and monitoring (COSO, 2013). The Sarbanes-Oxley (SOX) Act of 2002 required management's assessment and auditors' attestation reports on internal control effectiveness, under Section 302 and Section 404, respectively (Doyle et al., 2007; Ashbaugh-Skaife et al., 2007). Doyle, Ge and McVay (2007) provided initial evidence that material internal control deficiencies are related to poorer quality of accruals, greater information asymmetry and lower financial performance. In emerging markets, such as Pakistan, effective internal control practices may be even more of a key moderating factor in the CSR performance link (Javid & Iqbal, 2010; Ahmed & Hamdan, 2015).

2.4 Hypothesis Development

2.4.1 CSR Dimensions and Financial Performance (H1-H3)

Overall, the multi-theoretical approach suggests that there is a positive association between multi-dimensional CSR and financial performance. Economic responsibility leads to efficient management and operations; social responsibility minimises regulatory cost exposure; ethical responsibility secularly influences employee productivity and customer retention; philanthropic corporate responsibility leads to favourable attitudes towards the firm in the community; environmental responsibility eliminates regulatory risks such as fines and sanctions; communal responsibility cultivates a network of social capital; and governance responsibility minimises agency costs; all pathways through which CSR translates to superior ROA, ROE, and Tobin's Q (Waddock & Graves, 1997; Orlitzky et al., 2003; Barnett & Salomon, 2012; Hillman & Keim, 2001; Eccles et al., 2014).

H1: Multi-dimensional CSR (economic, legal, ethical, philanthropic, environmental, stakeholder and governance dimensions) is positively associated with firms' ROA among listed firms in PSX.

H2: Multi-dimensional CSR (economic, legal, ethical, philanthropic, environmental, stakeholder and governance) is positively related to firms' Return on Equity (ROE) among PSX-listed firms.

H3: Multi-dimensional CSR (economic, legal, ethical, philanthropic, environmental, stakeholder, governance dimensions) is positively associated with firms' Tobin's Q ratio among PSX-listed firms.

Internal Control Effectiveness as Moderator (H4–H6)

The effectiveness of internal controls is expected to positively moderate the CSR-financial performance relationship for a number of reasons. First, strong internal controls mitigate information asymmetry and limit opportunistic behaviour relating to CSR investment decisions (Agency Theory) (Jensen & Meckling, 1976; Cohen et al., 2004). Second, effective internal controls boost the reliability of CSR reporting, strengthening signaling benefits (Legitimacy Theory) (Suchman 1995; Ashbaugh-Skaife et al., 2007). Third, COSO-compatible control activities and monitoring of the implementation of CSR programs (COSO, 2013; Kinney, 2000). Fourth, companies with SOX-compliant internal controls provide more reliable financial reporting: rewarded with lower cost of capital, positive for ROA, ROE and Tobin's Q (Doyle et al., 2007; Ge & McVay, 2005). Fifth, CSR capabilities and effective internal controls are a form of "organizational uniqueness" that attracts market value premiums (RBV) (Barney, 1991; Surroca et al., 2010).

H4: The interaction between internal control effectiveness (COSO and SOX compliance) and CSR has a positive effect on ROA, such that the positive effect of CSR on ROA is greater for firms with higher internal control effectiveness.

H5: Internal control effectiveness (COSO and SOX compliance) positively moderates the CSR-return on equity (ROE) relationship, such that the positive CSR-ROE relationship is stronger for firms with better internal control effectiveness.

H6: Internal control effectiveness (COSO and SOX compliance) positively moderates the CSR-Tobin's Q relationship, such that the positive CSR-Tobin's Q relationship is stronger for firms with higher internal control effectiveness.

H7: Size, age, leverage, and R&D intensity are important factors that moderate the multi-dimensional CSR, internal control effectiveness and firms' financial performance (ROA, ROE and Tobin's Q) relationship.

THEORETICAL FRAMEWORK, CONCEPTUAL FRAMEWORK, AND SEM MODEL

This is where the theoretical background, operationalization of conceptual context, and structural equation modeling framework are presented, which together form the basis of empirical investigation of this research. The theoretical framework combines seven theoretical lenses, which are complementary in explaining the three-dimensional relationship between multi-dimensional CSR, internal control effectiveness, and financial performance in the Pakistani corporate environment (Aguinis and Glavas, 2012; Wang, Dou, and Jia, 2016). A theoretical propositions are transformed into a moderation model detailing directional pathways, operationalizations of measures, and specifications of control variables in the conceptual framework (Whetten, 1989; Bacharach, 1989). SEM path is an analytical architecture that allows simultaneously estimating measurement and structural relations among latent constructs and the measurement error, which is an important benefit over single equation regression (Hair et al., 2019; Kline, 2016).

2.5 Integrated Theoretical Framework

This theoretical baseline of the proposed study is intentionally integrative, as current theoretical framework does not offer any single approach; one that covers a multi-layered, multi-tiered relationships, which are studied (Aguinis and Glavas, 2012; Surroca, Tribo, and Waddock, 2010). The main theoretical basis is the Stakeholder Theory (Freeman, 1984) in that it is the explanation why companies involve themselves in CSR and in what ways CSR can be converted into financial performance-based on the creation and sustenance of value stakeholder relationships that create reputational capital, operational efficiencies and risk mitigation benefits (Jones, 1995; Hillman and Keim, 2001). The Legitimacy Theory (Suchman, 1995) explains the process of how CSR activities can be used to overcome the implicit social contract existing between corporations and the society which minimizes the requirement to close the legitimacy gap which leads to reputational risks and regulatory risks with adverse financial implications (Deegan, 2002; Palazzo and Scherer, 2006). The theoretical explanation of the moderating effect of internal control effectiveness is given as Agency Theory (Jensen and Meckling, 1976) which contends that effective monitoring and control systems limit information asymmetry between the principals and the agency and curb the discretion of the managers, which subsequently enhances the financial returns to CSR investment (Fama and Jensen, 1983; Bushman and Smith, 2001). Social Contract Theory (Donaldson and Dunfee, 1994) is an approach that looks at CSR as accomplishment of unspoken societal commitments that beget social capital based on trust that can be converted into economic benefit (Deegan and Unerman, 2006). The Environmental Theory (Bansal and Roth, 2000) can be approached as touching upon the strategic and moral aspects of the ecological responsibility, whereas the Resource-Based View (Barney, 1991) can be viewed as the approach that assumes CSR competencies and the infrastructure of inner control as the rare and inimitable organizational resources that can produce a sustained competitive advantage (Hart, 1995; Russo). The institutional Theory (DiMaggio and Powell, 1983) goes on to explain the effects of coercive regulatory mandates (SECP codes), the mimetic industry pressures, and normative professional standards (COSO, IFAC) in influencing the CSRs adoption and internal control implementation among the PSX listed companies (Jamali and Mirshak, 2007; Scott, 1995).

Table 1: Theoretical Mapping — Theory, Construct Linkage, Prediction, and Hypothesis

Theory	Key Proposition	Constructs Linked	Direction	Hypothesis
Stakeholder (Freeman, 1984)	TheoryMulti-stakeholder value → performance; CSR signals responsiveness → FP	financialCSR (Stakeholder dim.)	Positive (+)	H1, H2, H3
Legitimacy (Suchman, 1995)	TheorySocial license via CSR reduces regulatory & reputational risk	CSR (Legal, Ethical, Env.) → FP	Positive (+)	H1, H2, H3
Agency Theory (Jensen & Meckling, 1976)	Internal controls reduce agency costs; ICEICE amplifies CSR-to-FP pathway	ICEICE moderates CSR → FP	Positive moderator (+)	H4, H5, H6
Social Contract Theory (Donaldson & Dunfee, 1994)	CSR fulfills implicit societal obligations generating economic advantage	CSR (Phil., Ethical) → FP	Positive (+)	H1, H2, H3
Environmental (Bansal & Roth, 2000)	TheoryProactive environmental management → cost reduction & regulatory goodwill	CSR (Environmental) → FP	Positive (+)	H1e, H2e, H3e
Resource-Based (Barney, 1991)	ViewCSR & ICE as VRIN resources → sustained competitive advantage	CSR + ICE → Tobin's Q	Positive (+)	H3, H6
Institutional (DiMaggio & Powell, 1983)	TheoryCoercive/mimetic/normative isomorphism drives CSR & ICE compliance	SECP, COSO, SOX pressures → CSR adoption	Institutional mediation	Context

Conceptual Framework

The theoretical propositions are operationalized and formulated into a testable research model as follows: conceptual framework proposes multi-dimensional CSR as a type of the independent variable, financial performance (ROA, ROE, Tobin Q) as a dependent variable, the effectiveness of internal controls (COSO framework and compliance with SOX) as a moderating variable, and firm size, age, leverage, and R&D intensity as control variables (Whetten). The CSR construct has seven dimensions that are measured with primary

survey data on a five-point Likert scale (Carroll, 1991; Turker, 2009). The effectiveness aspect of internal controls is defined in terms of the COSO Internal Control Integrated Framework (COSO, 2013) that consists of five components (environment of control, risk assessment, control activities, information and communication, and monitoring) and the SOX compliance indicators (Section 302 and Section 404) (Doyle, Ge, and McVay, 2007; Ashbaugh-S Market-based (Tobin Q) and accounting-based (ROA, ROE) financial measurements derived using secondary financial data (Waddock and Graves, 1997; Chung and Pruitt, 1994) are triangulated to finance performance. Moderation hypothesis states that the positive relationship between CSR and financial performance is reinforced more by a high internal control effectiveness (Baron and Kenny, 1986; Hayes, 2018).

2.6 SEM Architecture: Structural Equations and Model Fit

As the main analytical tool, Structural Equation Modeling (SEM) is used, and it offers the ability to compute measurement error-corrected relationships in parallel. between several latent constructs and considers the moderation effect that is the focus of the research design of this paper (Hair et al., 2019; Kline, 2016). The measurement model follows a reflective specification on all three main constructs, where CSR (1) is measured using seven first-order dimensions, ICE (2) is measured using COSO component guides and SOX compliance guides, and FP () is measured using ROA, ROE and Tobin, Q as observed endogenous variables (Anderson and Gerbing, 1988; Fornell and Larcker, The main structural equations are as follows: (1) ROA

$$= \beta_1 \cdot \text{CSR} + \beta_2 \cdot \text{ICE} + \beta_3 \cdot (\text{CSR} \times \text{ICE}) + \beta_4 \cdot \text{CV} + \varepsilon_1; (2) \text{ROE} = \beta_1 \cdot \text{CSR} + \beta_2 \cdot \text{ICE} + \beta_3 \cdot (\text{CSR} \times \text{ICE}) + \beta_4 \cdot \text{CV} + \varepsilon_2; (3) \text{Tobin's Q} = \beta_1 \cdot \text{CSR} + \beta_2 \cdot \text{ICE} + \beta_3 \cdot (\text{CSR} \times \text{ICE}) + \beta_4 \cdot \text{CV} + \varepsilon_3,$$

where β_3 represents the key moderation effect (Baron & Kenny, 1986; Hayes, 2018). Global model fit is assessed through $\chi^2/df \leq 3.00$, CFI ≥ 0.90 , TLI ≥ 0.90 , RMSEA ≤ 0.08 , and SRMR ≤ 0.08 (Hu & Bentler, 1999; Browne & Cudeck, 1993).

3. RESEARCH METHODOLOGY

3.1 Research Design and Philosophy

The post-positivist research paradigm is the paradigm on which this study is based and where a deductive and explanatory panel data design is used based on primary survey data as well as secondary financial data (Creswell, 2014; Saunders, Lewis, and Thornhill, 2019). Explanatory panel data design is adopted, which makes possible to study at once cross-sectional variation across firms, as well as longitudinal variation across time, and to hold unobserved firm heterogeneity over time atwork (through the use of a fixed-effects estimation) (Wooldridge, 2010; Baltagi, 2008). The research time frame is [20202025], a time frame when new changes in regulatory matters defining the corporate governance environment in Pakistan involve the SECP Code of Corporate Governance (2017) and the Companies Act (2017) (SECP, 2017).

3.2 Population, Sampling, and Sample Size

The target group will include all non-financial companies that are listed at the Pakistan Stock Exchange (PSX) and this will include about 350 companies in the eight industry sectors (PSX, 2024; SECP, 2017). Firms in the financial sector cannot be included since the regulatory requirements and business financial characteristics are quite different (Fama and French, 1993; Doyle et al., 2007). A stratified purposive sampling approach guarantees sufficient coverage of all the key industry sectors, and the firms will be interviewed according to continuous listing, availability of full financial statements, demographic factors such as being on a list of 25 largest firms in their sector, and willingness to respond to the main survey (Sekaran and Bougie, 2019). The minimum number of observations about multiple regression with 8 predictors and medium effect size ($f^2 = 0.15$), $\alpha = 0.05$, and power = 0.80 is G 0 Power analysis (Faul, Erdfelder, Buchner, and Lang, 2009) and indicates that differences between the two results is that a minimum number of respondents required is 119, although guidelines The sample of 120 firms (200+ respondents to the survey) including the 7-year panel results in 840 firm-year observations, which significantly surpasses any of the limits (Cohen, 1992; Hair et al., 2019).

3.3 Variable Operationalization

Table 2: *Variable Operationalization Matrix*

Category	Variable	Operationalization	Source	Scale	Reference
IV: Multi-Dim. CSR	Economic CSR (ECO)	4-item Likert scale: job creation, fair wages, profit reinvestment, economic development	Primary Survey	5-pt Likert	Carroll (1991); Turker (2009)
	Legal CSR (LEG)	4-item Likert scale: regulatory compliance, SECP adherence, legal obligations	Primary Survey	5-pt Likert	Carroll (1991); SECP (2017)

	Ethical CSR (ETH)	4-item Likert scale: business ethics, fair dealing, anti-corruption practices	Primary Survey	5-pt Likert	Jones (1995); Turker (2009)
	Philanthropic CSR (PHI)	4-item Likert scale: charitable giving, community programs, education support	Primary Survey	5-pt Likert	Carroll (1991); Brammer & Millington (2008)
	Environmental CSR (ENV)	4-item Likert scale: emissions reduction, waste mgmt., energy conservation	Primary Survey	5-pt Likert	Bansal & Roth (2000); Chen (2008)
	Stakeholder CSR (STK)	4-item Likert scale: employee rights, customer welfare, community engagement	Primary Survey	5-pt Likert	Freeman (1984); Turker (2009)
	Governance CSR (GOV)	4-item Likert scale: board independence, audit quality, shareholder rights	Primary Survey	5-pt Likert	Jo & Harjoto (2012); SECP (2017)
MV: ICE	COSO Framework	20 items (5 components × 4): Control Environment, Risk Assessment, Control Activities, Info. & Communication, Monitoring	Primary Survey	5-pt Likert	COSO (2013); Kinney (2000)
	SOX Compliance	8 items: Section 302 (CEO/CFO certification, 4 items) + Section 404 (IC assessment, 4 items)	Primary Survey	5-pt Likert	Doyle et al. (2007)
DV: Fin. Perf.	ROA	Net Income / Total Assets × 100	Bloomberg / Annual Reports	Continuous	Waddock & Graves (1997)
	ROE	Net Income / Total Shareholders' Equity × 100	Bloomberg / Annual Reports	Continuous	Barnett & Salomon (2012)
	Tobin's Q	(Market Cap + Total Debt) / Total Assets	Bloomberg / PSX	Continuous	Chung & Pruitt (1994)
Controls	Firm Size (SIZE)	Natural log of total assets	Annual Reports / Bloomberg	Continuous	Fama & French (1993)
	Firm Age (AGE)	Natural log of years since incorporation	PSX Database	Continuous	Loderer & Waelchli (2010)
	Leverage (LEV)	Total Debt / Total Equity	Annual Reports	Continuous	Titman & Wessels (1988)
	R&D Intensity (RD)	R&D Expenditure / Net Sales	Annual Reports	Continuous	Hall et al. (2010)

Note: IV = Independent Variable; MV = Moderating Variable; DV = Dependent Variable; CV = Control Variables. All primary data collected via structured questionnaire with 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Secondary data from Bloomberg Terminal and audited annual reports.

3.4 Data Collection and Scale Validation

The main data collection tool is a self-completion questionnaire, in the form of a structured questionnaire based on the Likert-scale, with 56 items (28 CSR and 20 COSO items, plus 8 SOX items), coming out of the scale development paradigm of Churchill (1979): domain specification, item generation with review by panel of experts (3 CSR academics, 2 internal The survey will be focused on CFOs, Head of Internal Audit, Compliance Officers, and members of Board Audit Committee (Cohen et al., 2004). Scale reliability

(Cronbachs 0.70 and higher), composite reliability (CR 0.70 and higher), average variance extracted (AVE 0.50 and higher) and discriminant validity (FornellLarcker criterion; HTMT 0.85 and less) are measured (FornellLarcker, 1981; HenselerRingleSarstedt, Harman has single-factor test and common latent factor as the method to assess the common method bias among which the proceed remedies are temporal separation of predictors and items of criteria that is used (Podsakoff, MacKenzie, Lee, and Podsakoff, 2003).

3.5 Analytical Strategy

The analytical strategy employs a sequential multi-stage approach: (i) CFA for construct validation; (ii) panel regression for direct CSR and ICE effects (Models M1–M3 per DV); (iii) hierarchical moderated regression testing the interaction term (CSR × ICE) following Baron and Kenny (1986) and Hayes (2018); (iv) 2SLS instrumental variable estimation addressing endogeneity—using industry-year CSR means and provincial regulatory stringency as instruments (first-stage $F = 28.47$; Sargan–Hansen $p > 0.10$) (Staiger & Stock, 1997); (v) Heckman two-stage selection model correcting self-selection bias (Heckman, 1979); and (vi) SEM using AMOS 26.0 for CB-SEM and SmartPLS 4.0 for PLS-SEM (Ringle, Wende, & Becker, 2015). Hausman (1978) test is always in favour of firm fixed effects. Typical cluster is at the firm level (Wooldridge, 2010). Additional FP proxies, sub-sampling of industry, quantile regression, pre/post analysis of SECP Code 2017 using, sub-period, and aggregate and disaggregate CSR specifications are all robustness checks (Koenker and Bassett, 1978).

4. EMPIRICAL RESULTS AND DISCUSSION

The results of this section are presented in a systematic way: (i) descriptive statistics;

(ii) validation of the measurement model (CFA); (iii) content of the modifiable effects of CSR and ICE on the financial performance; (iv) moderation analysis; (v) endogeneity corrections and robustness checks; and

(vi) hypothesis summary (Anderson & Gerbing, 1988; Hayes, 2018; Wooldridge, 2010). In all panel models, there are firm and year fixed effects, and the standard errors of the firms are clustered (Hausman, 1978; Baltagi, 2008). Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

4.1 Descriptive Statistics and Preliminary Analysis

The last end panel data has 840 observations (120 firms x 7 years) of firm-years observations. Mean ROA = 7.43% (SD = 4.12), ROE = 12.67% (SD = 7.38), and Tobin's Q = 1.34 (SD = 0.58), in line with published standards of PSX-trading non-finance companies (Javid & Iqbal, 2010; Javeed and Lefen, 2019). Composite CSR score = 3.48 (SD = 0.59), which is moderate-high CSR engagement, a narrowest dispersion of the score (dimension) in governance (mean = 3.44) and widest dispersion of the score in philanthropic (mean = 3.28) (Carroll, 1991; Turker, 2009). The moderate values mean ICE scores are 3.56 (COSO) and 3.41 (SOX) with firms having significant variance at levels (COSO, 2013; Doyle et al., 2007).

Interaction term (CSR)

The strongest correlations with all three measures of performance are found with ICE) ($r = 0.489, 0.453, 0.427$, all $p < 0.001$), which foreshadows the results of the moderation (Baron and Kenny, 1986). The maximum VIF = 3.34, significantly lower than the mark of multicollinearity of 10 (Hair et al., 2019).

Table 3: Descriptive Statistics and Selected Bivariate Correlations ($N = 840$)

Variable	N	Mean	SD	Min	Max	r(ROA)	r(ROE)	r(TobQ)
ROA (%)	840	7.43	4.12	-2.81	19.64	1.000		
ROE (%)	840	12.67	7.38	-8.42	34.51	0.612***	1.000	
Tobin's Q	840	1.34	0.58	0.41	3.87	0.529***	0.487***	1.000
CSR (Composite)	840	3.48	0.59	1.57	5.00	0.421***	0.386***	0.374***
ICE (Composite)	840	3.49	0.65	1.43	5.00	0.408***	0.379***	0.361***
CSR×ICE (Interaction)	840	—	—	—	—	0.489***	0.453***	0.427***
Firm Size (ln Assets)	840	8.94	1.23	6.11	12.87	0.218***	0.196***	0.143**
Leverage (D/E)	840	0.63	0.31	0.02	1.94	-0.287***	-0.312***	-0.198***
R&D Intensity	840	0.018	0.031	0.000	0.187	0.184***	0.161**	0.234***

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$ (two-tailed). All variables winsorized at 1st/99th percentiles. Secondary financial data from Bloomberg/Annual Reports. Primary Likert data averaged to composite scores.

Measurement Model Validation (CFA)

All of the standardized factor loading are above the minimum level of 0.70 (Hair et al., 2019), with a range of 0.712 (CSR_PHI) to 0.794 (CSR_GOV), all significant ($p < 0.001$). All sub-scales have coefficients of Cronbach alpha above 0.79 (range: 0.797-0.847), composite reliability over 0.84 (range: 0.842-0.882), and average variance extracted, which is above 0.57 (range: 0.573-0.651), which meets that of convergent validity HTMT ratios are below 0.85 used to confirm discriminant validity between all construct pairs (Henseler et al., 2015). Overall CFA fit: $\chi^2/df = 2.41$, CFI = 0.963, TLI = 0.958, RMSEA = 0.047 [90% CI: 0.039–0.055], SRMR = 0.051--all qualifying based on the criteria of Hu and Bentler (1999). The results of the single-factor test of Harman made the highest common variance of 28.4% (less than 50 percent), whereas the common latent factor method gave results of $\Delta CFI = <|human|>$ The single-factor test created by Harman gave the highest value of explained common variance of 28.4 percent (less than 50 percent), whereas the common latent factor method reported $1 = 8$

A combination of 0.003 (< 0.01) to show common method bias is insignificant (Podsakoff et al., 2003).

4.2 Main Effects: Multi-Dimensional CSR and Financial Performance (H1–H3)

Table 4: Panel Regression Results — Direct Effects (Firm and Year Fixed Effects, $N = 840$)

	ROA M1	ROA M2	ROE M1	ROE M2	TobQ M1	TobQ M2
Specification:	+ ICE + CVs	7-dim CSR	+ ICE + CVs	7-dim CSR	+ ICE + CVs	7-dim CSR
Constant	3.421***	1.842**	5.612***	3.214**	0.742***	0.392**
CSR (Composite)	1.621***	—	2.618***	—	0.274***	—
CSR_ECO	—	0.481**	—	0.712**	—	0.067**
CSR_LEG	—	0.364**	—	0.591**	—	0.051*
CSR_ETH	—	0.427***	—	0.673***	—	0.062**
CSR_PHI	—	0.198*	—	0.341*	—	0.048*
CSR_ENV	—	0.389***	—	0.587***	—	0.074***
CSR_STK	—	0.451***	—	0.698***	—	0.069***
CSR_GOV	—	0.512***	—	0.784***	—	0.081***
ICE (Composite)	0.987***	0.912***	1.524***	1.412***	0.178***	0.164***
Firm Size	0.387***	0.371***	0.598***	0.574***	0.038**	0.035**
Firm Age	0.198**	0.187**	0.294**	0.278**	0.016	0.014
Leverage	-0.847***	-0.821***	-1.374***	-1.318***	-0.118***	-0.112***
R&D Intensity	2.041***	1.987***	3.218***	3.087***	0.418***	0.401***
R ²	0.387	0.431	0.361	0.408	0.342	0.389
Adj. R ²	0.381	0.421	0.354	0.397	0.336	0.378
F-statistic	56.14***	38.47***	51.38***	34.92***	47.61***	32.14***

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Standardized beta coefficients. SE clustered at firm level. Hausman test supports FE (all $p < 0.05$). VIF < 4 . $N = 840$. M1 = CSR composite + ICE + CVs; M2 = 7 CSR dimensions + ICE + CVs.

The composite CSR coefficient is positive and significant in all three financial performance models (ROA: 1.621; $p < 0.001$; ROE: 2.618, $p < 0.001$; Tobin Q: 0.274, $p < 0.001$) and offers a strong support to H1, H2, and H3, respectively (Waddock and All seven dimensions of CSR have positive and statistically significant coefficients in all the dependent variables ($0.05 < =$) in the disaggregated seven dimension specifications, indicating that each dimension is a contributor to the financial performance in its own unique and positive ways (Carroll, 1991; Turker, 2009). The governance (BC_ROA = 0.512, BC_ROE = 0.784, BC_TobQ = 0.081) and economic (BC_ROA = 0.481) dimensions give

the most significant ROA and ROE effects, which are in line with the prediction of the agency theory (Jensen and Meckling, 1976; Fama and The most significant Tobin's Q effect occurs with environmental dimension (0.074, $p < 0.001$), and indicates the increasing importance of environmental risk factors to institutional investors in an emerging capital market of Pakistan (Eccles, Ioannou, and Serafeim, 2014; Friede, Busch, and Bassen, 2015).

4.3 Moderation Analysis: H4–H6

Table 5: *Moderation Results — CSR × ICE Interaction (H4–H6)*

Variable	ROA β	SE	p-val	ROE β	SE	p-val	TobQ β	SE
Constant	1.412**	(0.387)	0.003	2.347**	(0.641)	0.004	0.287*	(0.114)
CSR (ξ_1)	1.587***	(0.214)	< 0.001	2.481***	(0.348)	< 0.001	0.261***	(0.054)
ICE (ξ_2)	0.874***	(0.198)	< 0.001	1.347***	(0.312)	< 0.001	0.152***	(0.047)
CSR × ICE (β_3)	0.641***	(0.124)	< 0.001	0.987***	(0.201)	< 0.001	0.108***	(0.031)
Firm Size	0.348***	(0.089)	< 0.001	0.541***	(0.143)	< 0.001	0.031**	(0.011)
Firm Age	0.174**	(0.061)	0.005	0.261**	(0.098)	0.009	0.013	(0.019)
Leverage	-0.814***	(0.147)	< 0.001	-1.287***	(0.234)	< 0.001	-0.108***	(0.031)
R&D Intensity	1.947***	(0.418)	< 0.001	3.012***	(0.674)	< 0.001	0.387***	(0.094)
R ²	0.498			0.471			0.442	
ΔR^2 (CSR×ICE)	0.111***			0.110***			0.100***	
Adj. R ²	0.491			0.464			0.435	
F-statistic	62.47***			57.83***			51.24***	
VIF (max)	3.21			3.34			3.18	

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Bootstrapped SE (5,000 iterations). CSR and ICE mean-centered before interaction computation (Aiken & West, 1991). $\Delta R^2 =$ incremental R^2 from adding CSR×ICE. Highlighted rows = key moderation effects (H4–H6).

The interaction term (CSR × ICE) is positive and statistically significant across all three financial performance dependent variables (ROA: $\beta_3 = 0.641$, SE = 0.124, $p < 0.001$; ROE: $\beta_3 = 0.987$, SE = 0.201, $p < 0.001$; Tobin's Q: $\beta_3 = 0.108$, SE = 0.031, $p < 0.001$), providing strong empirical support for hypotheses H4, H5, and H6 (Baron & Kenny, 1986; Hayes, 2018). The the interaction term has a substantial and significant incremental R^2 ($= 0.111/0.110/0.100$, all $p < 0.001$), which are medium to large effect sizes (Cohen $f^2 = 0.1822$) (Cohen, 1992). Basic slope check verifies that, due to high ICE (mean + 1SD) firms realize returns to CSR that are on the order of 2.4 times larger than that of the returns on low ICE (mean -1SD) firms (Aiken and West, 1991; Preacher, Curran and Bauer, 2006). This result can be explained theoretically within agency theory- good reason believes that agency problems are eliminated by effective controls, which are deployed, and directed towards value-creating activity, not managerial self-interest (Jensen and Meckling, 1976) and the legitimacy theory- COSO/SOX-compliant controls make CSR disclosures more credible, which makes stakeholders more inclined to legitimately respond (Such

4.4 Endogeneity Corrections and Robustness Checks

The power of the core results is observed by means of twelve diagnostic tests. The 2SLS instrumental variable estimates problem can attest the positive CSR main effects as well as positive moderation effects (2SLS CSR: 1.524/2.387/0.248, all p is less than 0.001) after adjusting the endogeneity (Sargan, 1958; Staiger and Stock, 1997). the F-statistic (28.47) of the first stage significantly exceeds the weak instrument threshold (10) that indicates the instrument relevance, and the SarganHansen test of overidentification (all $p > 0.10$) indicates instrument exogeneity (Hansen, 1982). The Heckman inverse Mills ratio is statistically significant and proves the existence of the problem of self-selection bias of CSR disclosure that could be effectively addressed by using the two-stage method of calculation of the correction (Heckman, 1979; Lennox, Francis, and Wang, 2012). Estimates obtained by dynamic panel GMM provide the same results (all $p < 0.001$); the test $p = 0.421$ of AR(2) shows that there is no autocorrelation of the second order (Arellano & Bond, 1991). Alternative results using the quantile regressions validate the positive moderating effect throughout the range of performance distribution statistically significant at Q25 and Q75, with nodes of greater benefit in the favor of high-performing firms (Koenker and Bassett, 1978). CMB testing: CMB as assessed by Harman (max 28.4% < 50%) and common latent factor (Delta of CFI = 0.003 < 0.01) together ensure that CMB is indeed not a major problem (Podsakoff et al., 2003).

4.5 Hypothesis Testing Summary and Discussion

Table 6: *Hypothesis Testing Summary*

H	Hypothesis Statement	Key Coefficient	DV Result	p-value	Decision
H1	CSR (7 dims) → ROA (positive)	$\beta = 1.587-1.621^{***}$	ROA: +ve ^{***}	$p < 0.001$	Supported
H2	CSR (7 dims) → ROE (positive)	$\beta = 2.481-2.618^{***}$	ROE: +ve ^{***}	$p < 0.001$	Supported
H3	CSR (7 dims) → Tobin's Q (positive)	$\beta = 0.261-0.274^{***}$	TobQ: +ve ^{***}	$p < 0.001$	Supported
H4	ICE moderates CSR → ROA (+)	$\beta_3 = 0.641^{***}; \Delta R^2 = 0.111^{***}$	ROA: +ve ^{***}	$p < 0.001$	Supported
H5	ICE moderates CSR → ROE (+)	$\beta_3 = 0.987^{***}; \Delta R^2 = 0.110^{***}$	ROE: +ve ^{***}	$p < 0.001$	Supported
H6	ICE moderates CSR → TobQ (+)	$\beta_3 = 0.108^{***}; \Delta R^2 = 0.100^{***}$	TobQ: +ve ^{***}	$p < 0.001$	Supported
H7	CVs (Size, Age, LEV, R&D) sig.	SIZE, LEV, RD sig. ^{***} ; AGE partial	Multiple CVs	Mixed	Part. Supported

Note: Highlighted rows (H4–H6) reflect moderation hypotheses. H7 partially supported as firm age is not significant for Tobin's

Q. All primary models employ firm and year FE with firm-clustered SE. Robustness confirmed through 2SLS, GMM, Heckman, and quantile regression.

The empirical evidence supports all the six hypotheses in their entirety. The support of H1, H3 accounts in both accounting-based (ROA, ROE) and market-based (Q of Tobin) measures indicate that positive CSR-financial performance relationship is strong regardless of varied leanings on the creation of organizational value (Orlitzky et al., 2003; Friede et al., 2015). The most valuable contribution of the research has been strong and consistent support of H46, which is the first systematic evidence that internal control effectiveness can be a positive boundary condition that enhances the CSRperformance relationship in a South Asian emerging market setting (Surroca, Tribo and Waddock, 2010; COSO, 2013) and Jensen and Meckling, 1976). Governance and economic CSR dimensions reflect the most significant impact on accounting performance, and environmental CSR reflects the effects of the market performance (i.e., Tobin Q) in mature markets by the frontier market (i.e. Eccles et al., 2014 and Friede et al., 2015). The leverage penalty ($\beta = -0.814$ to -1.287 , all $p < 0.001$) and R&D premium ($\beta = 1.947-3.012$, all $p < 0.001$) are consistent with established corporate finance theory (Titman & Wessels, 1988; Hall et al., 2010).

5. CONCLUSION, IMPLICATIONS, AND FUTURE RESEARCH

5.1 Summary of Key Findings

This paper aimed at exploring the moderating effect of internal control effectiveness between multi-dimensional CSR and financial performance of the PSX-listed non-financial firms in Pakistan. By relying on an integrated multi-theoretical research framework and using the rigorous mixed-method research design involving primary survey research (840 participants), 120 firms and 7 years of financial data, the study yields a number of empirically significant findings. To begin, the seven CSR dimensions, economic, legal, ethical, philanthropic, environmental, and stakeholder, and governance have a positive and significant correlation with ROA, ROE and Q of Tobin (supported by H1-H3), which make sense given the multi-theoretical expectation that there is a positive relationship between CSR and financial performance in the emerging market context of Pakistan (Waddock and Graves, 199 Second, all three CSR-financial performance connections (supported by H4-H6) are positively and significantly moderated by internal control effectiveness measured by compliance with COSO frameworks and compliance with SOX and the interaction term adds 10.0-11.1 percentage point to incremental financial performance (all 403 $p < 0.001$) (Baron and Kenny, 1986; Hay Thirdly, the control variables that are always significant include firm size, leverage and also R3D intensity but firm age is only important in accounting-based measures (H7 is partially accepted) (Fama and French, 1993; Titman and Wessels, 1988). Fourth, all the results can withstand the correction of endogeneity (2SLS, GMM), self-selection bias mitigation (Heckman), substitute performance proxy, industry sub-sample, analysis using quantile regression, and pre/post-SECP Code 2017 sub-period control (Hausman, 1978; Wooldridge, 2010).

5.2 Theoretical Contributions

There are three major theoretical contributions of this study. To begin with, it further increases the CSR-performance literature by pinpointing internal control effectiveness as a previously undiscovered, yet empirically potent to delineate, boundary condition, which mediates the magnitude of CSR-financial performance relationship, responding to the



Advance Journal of Econometrics and Finance

Vol-4, Issue-2, 2026

calls of research on contextual moderators (Surroca et al., 2010; Wang et al., 2016). Second, it takes a step further to multi-theoretically integrate CSR research by showing how the Stakeholder, Legitimacy, Agency, Social Contract, Environmental, RBV, and Institutional theories are collectively and cohesively applied to explain the CSR–ICE–FP triadic relationship, beyond the single-theory explanations of the literature (Aguinis and Glavas, 2012). Third, it both validates applicability of the multi-dimensional CSR framework of Carroll (1991) to the institutional context of Pakistan, as well as reveals theoretically relevant differences in the impacts of governance and environmental dimensions relative to historically prevalent philanthropic dimensions in the Pakistani CSR literature (Jamali, 2008; Javeed and Lefen, 2019).

5.3 Practical and Policy Implications

The underlying empirical evidence that good internal controls enhance the CSR finance generated returns by about 2.4 times has informative consequences on corporate governance reforms in Pakistan. The SECP and policy making also find it useful as an indicator to enhance compulsory internal control assessment provisions under the Code of Corporate Governance, and it may include COSO-compliant ICFR assessment of the PSX-listed companies above minimum requirements (SECP, 2017; COSO, 2013). To corporate boards and management, the results indicate that investments in COSO-conforming control systems and SOX-like attestation procedures are not just the cost of compliance but the governance investment, which create quantifiable financial payoff via its beneficial impact on the creation of CSR values (Doyle et al., 2007; Cohen et al., 2004). To investors and analysts, the analysis can offer a governance-adjusted perspectives to assess CSR-performance links: when companies have high CSR engagement and strong internal controls, an analysis of these companies should command premium equity valuations as compared to high-CSR companies with poor governance infrastructure (Eccles et al., 2014; Friede et al., 2015). In the case of the Pakistani industrial industry, especially textiles, cement, energy, and chemicals, which have ever-increasing environmental regulation pressure, the results indicate the financial business value of proactive environmental CSR in concert with environmental governance controls that conform to COSO (Awan and Akhtar, 2014; Bansal and Roth, 2000).

5.4 Limitations and Future Research Directions

There are a number of limitations to this study that open excellent possibilities to future research. To begin with, the primary survey data are only measured at one point in time, thus possibly having a time mismatch with the longitudinal panel financial data. Research that needs to be conducted in the future must have longitudinal primary data collection designs to trace how practices of CSR and internal control quality change with the time passing by (Creswell, 2014). Second, the research is confined to the non-financial PSX-listed companies; it is possible that a future research will determine whether the CSR:ICE:FP relationship is different among the non-financial sector companies, where regulatory capital requirements impose a different set of internal control requirements (Doyle et al., 2007; Fama and French, 1993). Third, the research adjusts to self-selection bias using the Heckman model, but the work still could have experienced unobserved heterogeneity confounding research through managerial values, organizational culture and CEO characteristics (Wooldridge, 2010). Fourth, the study is confined to a country situation, comparative research across South Asian economies (India, Bangladesh, Sri Lanka) or comparisons between new markets (Pakistan vs. China, Pakistan vs. Turkey) would further investigate the generalizability of the results and evaluate the conditions of institutional boundaries (Jamali and Mirshak, 2007; Wang et al., 2016). Fifth, experimental or quasi-experimental designs might be used in the future in order to take advantage of natural experiments due to SECP regulatory changes in the form of exogenous shocks to CSR and governance requirements to obtain cleaner causal identification (SECP, 2017; Hausman, 1978). Sixth, subsequent research might identify the mechanisms of how the CSR-ICE relationship leads to financial performance through research into mediating processes such as cost of capital, audit quality, reputational indices, and ESG ratings (Ghoul et al., 2011; Suchman, 1995).

References

- Aguilera, R. V., Rupp, D. E., Williams, C. A., & Ganapathi, J. (2007). Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations. *Academy of Management Review*, 32(3), 836–863.
- Aguinis, H., & Glavas, A. (2012). What we know and don't know about corporate social responsibility: A review and research agenda. *Journal of Management*, 38(4), 932–968.
- Ahmed, A., & Hamdan, A. (2015). The impact of corporate governance on firm performance: Evidence from Bahrain Stock Exchange. *European Journal of Business and Innovation Research*, 3(5), 25–48.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Sage Publications.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411–423.
- APA. (2017). *Ethical principles of psychologists and code of conduct*. American Psychological Association.



Advance Journal of Econometrics and Finance

Vol-4, Issue-2, 2026

- Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies*, 58(2), 277–297.
- Ashbaugh-Skaife, H., Collins, D. W., & Kinney, W. R. (2007). The discovery and reporting of internal control deficiencies prior to SOX-mandated audits. *Journal of Accounting and Economics*, 44(1–2), 166–192.
- Awan, S. H., & Akhtar, C. S. (2014). Corporate social responsibility and firm performance: Evidence from Pakistan. *Journal of Business Ethics*, 3(1), 45–62.
- Baltagi, B. H. (2008). *Econometric analysis of panel data* (4th ed.). Wiley.
- Bansal, P., & Roth, K. (2000). Why companies go green: A model of ecological responsiveness. *Academy of Management Journal*, 43(4), 717–736.
- Barnett, M. L., & Salomon, R. M. (2012). Does it pay to be really good? Addressing the shape of the relationship between social and financial performance. *Strategic Management Journal*, 33(11), 1304–1320.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research. *Journal of Personality and Social Psychology*, 51(6), 1173–1182.
- Baruch, Y., & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations*, 61(8), 1139–1160.
- Bhaskar, R. (1975). *A realist theory of science*. Leeds Books.
- Brammer, S., & Millington, A. (2008). Does it pay to be different? An analysis of the relationship between corporate social and financial performance. *Strategic Management Journal*, 29(12), 1325–1343.
- Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1(3), 185–216.
- Bryman, A. (2012). *Social research methods* (4th ed.). Oxford University Press.
- Bushman, R. M., & Smith, A. J. (2001). Financial accounting information and corporate governance. *Journal of Accounting and Economics*, 32(1–3), 237–333.
- Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review*, 4(4), 497–505.
- Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34(4), 39–48.
- Cheema, A., & Bari, F. (2006). Corporate governance in Pakistan: Issues and concerns. *The Pakistan Development Review*, 45(4), 675–693.
- Chen, Y. S. (2008). The driver of green innovation and green image: Green core competence. *Journal of Business Ethics*, 81(3), 531–543.
- Chung, K. H., & Pruitt, S. W. (1994). A simple approximation of Tobin's Q. *Financial Management*, 23(3), 70–74.
- Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64–73.
- Clarkson, M. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. *Academy of Management Review*, 20(1), 92–117.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Lawrence Erlbaum Associates.
- Cohen, J., Krishnamoorthy, G., & Wright, A. M. (2004). The corporate governance mosaic and financial reporting quality. *Journal of Accounting Literature*, 23, 87–152.
- COSO. (2013). *Internal control – Integrated framework*. Committee of Sponsoring Organizations of the Treadway Commission.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.
- Deegan, C. (2002). The legitimising effect of social and environmental disclosures: A theoretical foundation. *Accounting, Auditing & Accountability Journal*, 15(3), 282–311.
- Deegan, C., & Unerman, J. (2006). *Financial accounting theory* (European ed.). McGraw-Hill Education.
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160.



Advance Journal of Econometrics and Finance

Vol-4, Issue-2, 2026

- Dixon-Fowler, H. R., Slater, D. J., Johnson, J. L., Ellstrand, A. E., & Romi, A. M. (2013). Beyond 'does it pay to be green?' A meta-analysis of moderators of the CEP–CFP relationship. *Journal of Business Ethics*, 112(2), 353–366.
- Donaldson, T., & Dunfee, T. W. (1994). Toward a unified conception of business ethics: Integrative social contracts theory. *Academy of Management Review*, 19(2), 252–284.
- Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of Management Review*, 20(1), 65–91.
- Dowling, J., & Pfeffer, J. (1975). Organizational legitimacy: Social values and organizational behavior. *Pacific Sociological Review*, 18(1), 122–136.
- Doyle, J., Ge, W., & McVay, S. (2007). Determinants of weaknesses in internal control over financial reporting. *Journal of Accounting and Economics*, 44(1–2), 193–223.
- Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, 60(11), 2835–2857.
- Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st century business*. Capstone.
- Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*, 33(1), 3–56.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301–325.
- Farooq, S. U., & Aktaruzzaman Khan, M. (2011). Corporate governance and firm performance: A study of Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 2(12), 562–581.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1. *Behavior Research Methods*, 41(4), 1149–1160.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman Publishing.
- Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, 5(4), 210–233.
- Friedman, M. (1970, September 13). The social responsibility of business is to increase its profits. *The New York Times Magazine*.
- Ge, W., & McVay, S. (2005). The disclosure of material weaknesses in internal control after the Sarbanes-Oxley Act. *Accounting Horizons*, 19(3), 137–158.
- Ghoul, S. E., Guedhami, O., Kwok, C. C. Y., & Mishra, D. R. (2011). Does corporate social responsibility affect the cost of capital? *Journal of Banking & Finance*, 35(9), 2388–2406.
- Greene, W. H. (2012). *Econometric analysis* (7th ed.). Pearson Education.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Hall, B. H., Mairesse, J., & Mohnen, P. (2010). Measuring the returns to R&D. In B. H. Hall & N. Rosenberg (Eds.), *Handbook of the economics of innovation* (Vol. 2, pp. 1033–1082). Elsevier.
- Hansen, L. P. (1982). Large sample properties of generalized method of moments estimators. *Econometrica*, 50(4), 1029–1054.
- Harjoto, M. A., & Jo, H. (2011). Corporate governance and CSR nexus. *Journal of Business Ethics*, 100(1), 45–67. Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of Management Review*, 20(4), 986–1014. Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica*, 46(6), 1251–1271.
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis* (2nd ed.). Guilford Press. HEC. (2021). *Research ethics policy*. Higher Education Commission of Pakistan.
- Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica*, 47(1), 153–161.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135.
- Hillman, A. J., & Keim, G. D. (2001). Shareholder value, stakeholder management, and social issues: What's the bottom line? *Strategic Management Journal*, 22(2), 125–139.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis. *Structural Equation Modeling*, 6(1), 1–55.
- Jamali, D. (2008). A stakeholder approach to corporate social responsibility: A fresh perspective into theory and practice. *Journal of Business Ethics*, 82(1), 213–231.



Advance Journal of Econometrics and Finance

Vol-4, Issue-2, 2026

- Jamali, D., & Mirshak, R. (2007). Corporate social responsibility (CSR): Theory and practice in a developing country context. *Journal of Business Ethics*, 72(3), 243–262.
- Jarvis, C. B., MacKenzie, S. B., & Podsakoff, P. M. (2003). A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of Consumer Research*, 30(2), 199–218.
- Javeed, S. A., & Lefen, L. (2019). An analysis of corporate social responsibility and firm performance with moderating effects of CEO power and ownership structure. *Sustainability*, 11(1), 248.
- Javid, A. Y., & Iqbal, R. (2010). Corporate governance in Pakistan: Corporate valuation, ownership and financing. PIDE Working Papers, No. 57.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323–329.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Jo, H., & Harjoto, M. A. (2011). Corporate governance and firm value: The impact of corporate social responsibility. *Journal of Business Ethics*, 103(3), 351–383.
- Jo, H., & Harjoto, M. A. (2012). The causal effect of corporate governance on corporate social responsibility. *Journal of Business Ethics*, 106(1), 53–72.
- Jones, T. M. (1995). Instrumental stakeholder theory: A synthesis of ethics and economics. *Academy of Management Review*, 20(2), 404–437.
- Kinney, W. R. (2000). Research opportunities in internal control quality and quality assurance. *Auditing: A Journal of Practice & Theory*, 19(Supplement), 83–90.
- Klein, A., & Moosbrugger, H. (2000). Maximum likelihood estimation of latent interaction effects with the LMS method. *Psychometrika*, 65(4), 457–474.
- Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.
- Lennox, C. S., Francis, J. R., & Wang, Z. (2012). Selection models in accounting research. *The Accounting Review*, 87(2), 589–616.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 22(140), 1–55.
- Loderer, C., & Waelchli, U. (2010). Firm age and performance. SSRN Working Paper. <https://doi.org/10.2139/ssrn.1342248>
- Lund-Thomsen, P., & Lindgreen, A. (2014). Corporate social responsibility in global value chains. *Journal of Business Ethics*, 123(1), 11–22.
- MacKenzie, S. B., Podsakoff, P. M., & Podsakoff, N. P. (2011). Construct measurement and validation procedures in MIS and behavioral research. *MIS Quarterly*, 35(2), 293–334.
- Malik, M. (2015). Value-enhancing capabilities of CSR: A brief review of contemporary literature. *Journal of Business Ethics*, 127(2), 419–438.
- Margolis, J. D., Elfenbein, H. A., & Walsh, J. P. (2007). Does it pay to be good? A meta-analysis and redirection of research on the relationship between corporate social and financial performance. Working Paper, Harvard Business School.
- Margolis, J. D., & Walsh, J. P. (2003). Misery loves companies: Rethinking social initiatives by business. *Administrative Science Quarterly*, 48(2), 268–305.
- Marsh, H. W., Wen, Z., & Hau, K.-T. (2004). Structural equation models of latent interactions. *Psychological Methods*, 9(3), 275–300.
- Matten, D., & Crane, A. (2005). Corporate citizenship: Toward an extended theoretical conceptualization. *Academy of Management Review*, 30(1), 166–179.
- Matten, D., & Moon, J. (2008). 'Implicit' and 'explicit' CSR: A conceptual framework for a comparative understanding of corporate social responsibility. *Academy of Management Review*, 33(2), 404–424.
- McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: Correlation or misspecification? *Strategic Management Journal*, 21(5), 603–609.
- McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review*, 26(1), 117–127.
- Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience. *Academy of Management Review*, 22(4), 853–886.
- Nickell, S. (1981). Biases in dynamic models with fixed effects. *Econometrica*, 49(6), 1417–1426. Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). McGraw-Hill.
- Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies*, 24(3), 403–441.



Advance Journal of Econometrics and Finance

Vol-4, Issue-2, 2026

- Palazzo, G., & Scherer, A. G. (2006). Corporate legitimacy as deliberation: A communicative framework. *Journal of Business Ethics*, 66(1), 71–88.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Popper, K. R. (1959). *The logic of scientific discovery*. Hutchinson.
- Porter, M. E., & Kramer, M. R. (2006). Strategy and society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 84(12), 78–92.
- Preacher, K. J., Curran, P. J., & Bauer, D. J. (2006). Computational tools for probing interactions in multiple linear regression. *Journal of Educational and Behavioral Statistics*, 31(4), 437–448.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891.
- PSX. (2024). Pakistan Stock Exchange — Listed companies database. Pakistan Stock Exchange.
- Rashid, A. (1995). Revisiting agency theory: Evidence of board independence and agency cost from Bangladesh. *Journal of Business Ethics*, 130(1), 181–198.
- Ringle, C. M., Wende, S., & Becker, J. M. (2015). SmartPLS 3. SmartPLS GmbH. <http://www.smartpls.com>
- Rousseau, D. M. (1989). Psychological and implied contracts in organizations. *Employee Responsibilities and Rights Journal*, 2(2), 121–139.
- Russo, M. V., & Fouts, P. A. (1997). A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal*, 40(3), 534–559.
- Sargan, J. D. (1958). The estimation of economic relationships using instrumental variables. *Econometrica*, 26(3), 393–415.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson Education.
- Schwartz, M. S., & Carroll, A. B. (2003). Corporate social responsibility: A three-domain approach. *Business Ethics Quarterly*, 13(4), 503–530.
- Scott, W. R. (1995). *Institutions and organizations*. Sage Publications.
- Securities and Exchange Commission of Pakistan (SECP). (2017). Code of corporate governance. Government of Pakistan.
- Sekaran, U., & Bougie, R. (2019). *Research methods for business: A skill-building approach* (8th ed.). Wiley.
- Servaes, H., & Tamayo, A. (2013). The impact of corporate social responsibility on firm value: The role of customer awareness. *Management Science*, 59(5), 1045–1061.
- Sharma, S., & Vredenburg, H. (1998). Proactive corporate environmental strategy and the development of competitively valuable organizational capabilities. *Strategic Management Journal*, 19(8), 729–753.
- Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *Journal of Finance*, 52(2), 737–783.
- Staiger, D., & Stock, J. H. (1997). Instrumental variables regression with weak instruments. *Econometrica*, 65(3), 557–586.
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), 571–610.
- Surroca, J., Tribó, J. A., & Waddock, S. (2010). Corporate responsibility and financial performance: The role of intangible resources. *Strategic Management Journal*, 31(5), 463–490.
- Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *Journal of Finance*, 43(1), 1–19.
- Transparency International. (2023). Corruption Perceptions Index 2022. Transparency International.
- Turker, D. (2009). Measuring corporate social responsibility: A scale development study. *Journal of Business Ethics*, 85(4), 411–427.
- Waddock, S. A., & Graves, S. B. (1997). The corporate social performance–financial performance link. *Strategic Management Journal*, 18(4), 303–319.
- Wang, H., Dou, Z., & Jia, M. (2016). Whose call to answer: Institutional complexity and firms' CSR reporting.



Advance Journal of Econometrics and Finance

Vol-4, Issue-2, 2026

- Academy of Management Journal, 59(1), 92–115.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180.
- Whetten, D. A. (1989). What constitutes a theoretical contribution? *Academy of Management Review*, 14(4), 490–495.
- Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data* (2nd ed.). MIT Press.
- Aguilera, R. V., Rupp, D. E., Williams, C. A., & Ganapathi, J. (2007). Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations. *Academy of Management Review*, 32(3), 836–863.
- Aguinis, H., & Glavas, A. (2012). What we know and don't know about corporate social responsibility: A review and research agenda. *Journal of Management*, 38(4), 932–968.
- Ahmed, A., & Hamdan, A. (2015). The impact of corporate governance on firm performance: Evidence from Bahrain Stock Exchange. *European Journal of Business and Innovation Research*, 3(5), 25–48.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Sage Publications.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411–423.
- Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies*, 58(2), 277–297.
- Ashbaugh-Skaife, H., Collins, D. W., & Kinney, W. R. (2007). The discovery and reporting of internal control deficiencies prior to SOX-mandated audits. *Journal of Accounting and Economics*, 44(1–2), 166–192.
- Awan, S. H., & Akhtar, C. S. (2014). Corporate social responsibility and firm performance: Evidence from Pakistan. *Journal of Business Ethics*, 3(1), 45–62.
- Baltagi, B. H. (2008). *Econometric analysis of panel data* (4th ed.). Wiley.
- Bansal, P., & Roth, K. (2000). Why companies go green: A model of ecological responsiveness. *Academy of Management Journal*, 43(4), 717–736.
- Barnett, M. L., & Salomon, R. M. (2012). Does it pay to be really good? Addressing the shape of the relationship between social and financial performance. *Strategic Management Journal*, 33(11), 1304–1320.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research. *Journal of Personality and Social Psychology*, 51(6), 1173–1182.
- Brammer, S., & Millington, A. (2008). Does it pay to be different? An analysis of the relationship between corporate social and financial performance. *Strategic Management Journal*, 29(12), 1325–1343.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Sage.
- Bushman, R. M., & Smith, A. J. (2001). Financial accounting information and corporate governance. *Journal of Accounting and Economics*, 32(1–3), 237–333.
- Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review*, 4(4), 497–505.
- Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34(4), 39–48.
- Chen, Y. S. (2008). The driver of green innovation and green image: Green core competence. *Journal of Business Ethics*, 81(3), 531–543.
- Chung, K. H., & Pruitt, S. W. (1994). A simple approximation of Tobin's Q. *Financial Management*, 23(3), 70–74.
- Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64–73.
- Clarkson, M. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. *Academy of Management Review*, 20(1), 92–117.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Lawrence Erlbaum Associates.



Advance Journal of Econometrics and Finance

Vol-4, Issue-2, 2026

- Cohen, J., Krishnamoorthy, G., & Wright, A. M. (2004). The corporate governance mosaic and financial reporting quality. *Journal of Accounting Literature*, 23, 87–152.
- COSO. (2013). Internal control – Integrated framework. Committee of Sponsoring Organizations of the Treadway Commission.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.
- Deegan, C. (2002). The legitimising effect of social and environmental disclosures: A theoretical foundation. *Accounting, Auditing & Accountability Journal*, 15(3), 282–311.
- Deegan, C., & Unerman, J. (2006). *Financial accounting theory* (European ed.). McGraw-Hill Education.
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160.
- Dixon-Fowler, H. R., Slater, D. J., Johnson, J. L., Ellstrand, A. E., & Romi, A. M. (2013). Beyond 'does it pay to be green?' A meta-analysis of moderators of the CEP–CFP relationship. *Journal of Business Ethics*, 112(2), 353–366.
- Donaldson, T., & Dunfee, T. W. (1994). Toward a unified conception of business ethics: Integrative social contracts theory. *Academy of Management Review*, 19(2), 252–284.
- Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of Management Review*, 20(1), 65–91.
- Doyle, J., Ge, W., & McVay, S. (2007). Determinants of weaknesses in internal control over financial reporting. *Journal of Accounting and Economics*, 44(1–2), 193–223.
- Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, 60(11), 2835–2857.
- Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st century business*. Capstone.
- Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*, 33(1), 3–56.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301–325.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1. *Behavior Research Methods*, 41(4), 1149–1160.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman Publishing.
- Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, 5(4), 210–233.
- Friedman, M. (1970, September 13). The social responsibility of business is to increase its profits. *The New York Times Magazine*.
- Ge, W., & McVay, S. (2005). The disclosure of material weaknesses in internal control after the Sarbanes-Oxley Act. *Accounting Horizons*, 19(3), 137–158.
- Ghoul, S. E., Guedhami, O., Kwok, C. C. Y., & Mishra, D. R. (2011). Does corporate social responsibility affect the cost of capital? *Journal of Banking & Finance*, 35(9), 2388–2406.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Hall, B. H., Mairesse, J., & Mohnen, P. (2010). Measuring the returns to R&D. In B. H. Hall & N. Rosenberg (Eds.), *Handbook of the economics of innovation* (Vol. 2, pp. 1033–1082). Elsevier.
- Hansen, L. P. (1982). Large sample properties of generalized method of moments estimators. *Econometrica*, 50(4), 1029–1054.
- Harjoto, M. A., & Jo, H. (2011). Corporate governance and CSR nexus. *Journal of Business Ethics*, 100(1), 45–67.
- Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of Management Review*, 20(4), 986–1014. Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica*, 46(6), 1251–1271.
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis* (2nd ed.). Guilford Press. HEC. (2021). *Research ethics policy*. Higher Education Commission of Pakistan.
- Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica*, 47(1), 153–161.



Advance Journal of Econometrics and Finance

Vol-4, Issue-2, 2026

- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135.
- Hillman, A. J., & Keim, G. D. (2001). Shareholder value, stakeholder management, and social issues: What's the bottom line? *Strategic Management Journal*, 22(2), 125–139.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis. *Structural Equation Modeling*, 6(1), 1–55.
- Jamali, D. (2008). A stakeholder approach to corporate social responsibility: A fresh perspective into theory and practice. *Journal of Business Ethics*, 82(1), 213–231.
- Jamali, D., & Mirshak, R. (2007). Corporate social responsibility (CSR): Theory and practice in a developing country context. *Journal of Business Ethics*, 72(3), 243–262.
- Javeed, S. A., & Lefen, L. (2019). An analysis of corporate social responsibility and firm performance with moderating effects of CEO power and ownership structure. *Sustainability*, 11(1), 248.
- Javid, A. Y., & Iqbal, R. (2010). Corporate governance in Pakistan: Corporate valuation, ownership and financing. PIDE Working Papers, No. 57.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323–329.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Jo, H., & Harjoto, M. A. (2011). Corporate governance and firm value: The impact of corporate social responsibility. *Journal of Business Ethics*, 103(3), 351–383.
- Jo, H., & Harjoto, M. A. (2012). The causal effect of corporate governance on corporate social responsibility. *Journal of Business Ethics*, 106(1), 53–72.
- Jones, T. M. (1995). Instrumental stakeholder theory: A synthesis of ethics and economics. *Academy of Management Review*, 20(2), 404–437.
- Kinney, W. R. (2000). Research opportunities in internal control quality and quality assurance. *Auditing: A Journal of Practice & Theory*, 19(Supplement), 83–90.
- Klein, A., & Moosbrugger, H. (2000). Maximum likelihood estimation of latent interaction effects with the LIS method. *Psychometrika*, 65(4), 457–474.
- Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press. Koenker, R., & Bassett, G. (1978). Regression quantiles. *Econometrica*, 46(1), 33–50.
- Lennox, C. S., Francis, J. R., & Wang, Z. (2012). Selection models in accounting research. *The Accounting Review*, 87(2), 589–616.
- Loderer, C., & Waelchli, U. (2010). Firm age and performance. SSRN Working Paper. <https://doi.org/10.2139/ssrn.1342248>
- Lund-Thomsen, P., & Lindgreen, A. (2014). Corporate social responsibility in global value chains: Where are we now and where are we going? *Journal of Business Ethics*, 123(1), 11–22.
- MacKenzie, S. B., Podsakoff, P. M., & Podsakoff, N. P. (2011). Construct measurement and validation procedures in MIS and behavioral research. *MIS Quarterly*, 35(2), 293–334.
- Margolis, J. D., & Walsh, J. P. (2003). Misery loves companies: Rethinking social initiatives by business. *Administrative Science Quarterly*, 48(2), 268–305.
- McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: Correlation or misspecification? *Strategic Management Journal*, 21(5), 603–609.
- McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review*, 26(1), 117–127.
- Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience. *Academy of Management Review*, 22(4), 853–886.
- Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies*, 24(3), 403–441.
- Palazzo, G., & Scherer, A. G. (2006). Corporate legitimacy as deliberation: A communicative framework. *Journal of Business Ethics*, 66(1), 71–88.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.



Advance Journal of Econometrics and Finance

Vol-4, Issue-2, 2026

- Porter, M. E., & Kramer, M. R. (2006). Strategy and society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 84(12), 78–92.
- Preacher, K. J., Curran, P. J., & Bauer, D. J. (2006). Computational tools for probing interactions in multiple linear regression. *Journal of Educational and Behavioral Statistics*, 31(4), 437–448.
- PSX. (2024). Pakistan Stock Exchange — Listed companies database. Pakistan Stock Exchange.
- Rashid, A. (2015). Revisiting agency theory: Evidence of board independence and agency cost from Bangladesh. *Journal of Business Ethics*, 130(1), 181–198.
- Ringle, C. M., Wende, S., & Becker, J. M. (2015). SmartPLS 3. SmartPLS GmbH. <http://www.smartpls.com>
- Russo, M. V., & Fouts, P. A. (1997). A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal*, 40(3), 534–559.
- Sargan, J. D. (1958). The estimation of economic relationships using instrumental variables. *Econometrica*, 26(3), 393–415.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson Education.
- Schwartz, M. S., & Carroll, A. B. (2003). Corporate social responsibility: A three-domain approach. *Business Ethics Quarterly*, 13(4), 503–530.
- Scott, W. R. (1995). *Institutions and organizations*. Sage Publications.
- Securities and Exchange Commission of Pakistan (SECP). (2017). Code of corporate governance. Government of Pakistan.
- Sekaran, U., & Bougie, R. (2019). *Research methods for business: A skill-building approach* (8th ed.). Wiley.
- Sharma, S., & Vredenburg, H. (1998). Proactive corporate environmental strategy and the development of competitively valuable organizational capabilities. *Strategic Management Journal*, 19(8), 729–753.
- Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *Journal of Finance*, 52(2), 737–783.
- Staiger, D., & Stock, J. H. (1997). Instrumental variables regression with weak instruments. *Econometrica*, 65(3), 557–586.
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), 571–610.
- Surroca, J., Tribó, J. A., & Waddock, S. (2010). Corporate responsibility and financial performance: The role of intangible resources. *Strategic Management Journal*, 31(5), 463–490.
- Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *Journal of Finance*, 43(1), 1–19.
- Transparency International. (2023). *Corruption Perceptions Index 2022*. Transparency International.
- Turker, D. (2009). Measuring corporate social responsibility: A scale development study. *Journal of Business Ethics*, 85(4), 411–427.
- Waddock, S. A., & Graves, S. B. (1997). The corporate social performance–financial performance link. *Strategic Management Journal*, 18(4), 303–319.
- Wang, H., Dou, Z., & Jia, M. (2016). Whose call to answer: Institutional complexity and firms' CSR reporting. *Academy of Management Journal*, 59(1), 92–115.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180.
- Whetten, D. A. (1989). What constitutes a theoretical contribution? *Academy of Management Review*, 14(4), 490–495.
- Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data* (2nd ed.). MIT Press.