



The Mediating Role of Agency Cost between Corporate Governance and Financial Performance: Evidence from Pakistan Stock Exchange

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ABSTRACT

The study's main objective is to investigate the relationship between corporate governance and the financial success of companies listed on the Pakistan Stock Exchange 100 index in the presence of an agency cost. However, the second goal of this study is to investigate the mediating effect of corporate governance on the financial performance of enterprises listed on the Pakistan Stock Exchange 100 index. The results confirm that leverage, board size, and CEO have a favorable association with ROE. Board independence, MOWN, and institutional investors show a negative correlation with ROE. Furthermore, CEO duality is a major predictor of corporate performance. Duality has a considerable beneficial effect on ROE. According to the studies, institutional owners prefer to receive profits quickly rather than participate in new breakthroughs, which is not beneficial to the organization's long-term development. A statistically significant negative connection is discovered with ROE, indicating that more managerial ownership affects business performance. Too frequent meeting is not always useful and help to improve the firm's performance because it involves more managerial time consumption, more increase expenses in term of travel expenses and directors' fees.



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1. Introduction

Agency means to enter a person called "Principal" in a contractual link with a third party called "agent". The agency relationship is the contractual relationship by which owners engage other persons to look after the functions and forewarn the authority of decision making (Chinelo & Iyiegbuniwe, 2018; Dawood, ur Rehman, Majeed, & Idress, 2023). Agency concept generally exists in large organizations which are being controlled and managed by managers. In that situation, owners are the principal and controllers are the agents. The conflict of interest between managers creates an agency problem owner in this situation. Initially agency problem introduced by Saltaji (2013) who claimed that the agency is expense incurred as a result of the incoherence of interest of management and interested parties.

Basically, ownership division is the primary driver of commission fees. managerial control (Harvey, Lins, & Roper, 2004). Theory clarifies that deep-seated conflict among managers who are controlling the organization and the owners who have to face maximum wealth effects (Demastes, 2011). In other words, agency cost arises when control and ownership of an organization lies in different hands. It means agency cost arises due to conflict of interests. In single owned organizations such problems do not exist. But in large organizations such as corporations, agency cost is of immense important (Khan, Kaleem, & Nazir, 2012). Agency cost is the monitoring, contracting and bonding costs in addition to residual loss (Jenson & Meckling, 1976; Laiho, 2011). There are two forms of commission fees: one develops a mediator between creditors and shareholders cost of debt; and the other arises between external shareholders and internal managers (Tsuji, 2012). The aim of owners (shareholders) of a business is to maximize their personal wealth. Shareholders achieve this objective through managers. When owners and managers have a conflict of interest, it causes agency expenses.

In a corporation, the personal and group interests of these stakeholders are at danger, so corporate governance becomes an important mechanism that focuses on the interests of all stakeholders. Corporate governance is the sum of all the processes, customs, laws, institutions and policies through which a corporation is run and controlled (Alagathurai, 2013). It is the mechanism which provides such processes and structure that help in creating the value for shareholder through handling business affairs in a manner that provide assurance for the security of individuals and collectively the interests of all the stakeholders (Bodaghi & Ahmadpour, 2010). Corporate cultures motivate the managements to undertake such actions and measures that maximize the shareholder's wealth and also reduce the cost of funds (Sheikh & Wang, 2011).

According to La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000) corporate governance is system to protect the outside investor by expropriation of insiders who have more access to information about firm's activities. However, a series of corporate scandals and failure highlighted the issue whether existing corporate governance mechanisms are actually doing that. When the company leadership mechanisms are weak and inefficient then agency problem will be higher (Brennan & Solomon, 2008). During the last decade corporate misconduct and misbehavior caused to economic as well as social losses to many stakeholders which have increased the attention of policy makers and researchers to inquiry the existing mechanisms of corporate governance structures and practices.

The governance of companies has been a controversial research topic in emerging countries for the past fifteen years. Literature emphasizes the necessity of corporate governance to improve financial performance (Alam & Ali Shah, 2013; Javaid & Saboor, 2015). CG is of tremendous importance to economics, behavioral scientists, legal practitioners, financiers, and business owners. Effective CG techniques minimize agency expenses and produce impressive financial results (Khidmat & Rehman, 2014). The primary goal of CG is to protect shareholders' interests against management's self-interest in order to maximize returns. It has highlighted that weak corporate governance practices lead to higher agency problems (Brennan & Solomon, 2008).

Research in the literature has examined how CG directly affects lowering the agency problem, which eventually improves financial performance (Jabbary, Hajiha, & Labeshka, 2013; Shaheen & Nishat, 2005; Weir, Laing, & McKnight, 2002). In many developing nations, investors' rights have been exploited due to a lack of corporate governance mechanisms (Claessens, Djankov, & Lang, 2000). Although it has recently gained popularity following the collapses of Enron, World.com, and Xerox, as well as the Asian financial crisis of 1997. As a result, it is a matter of interest to establish if managers do their duties diligently, they either act responsibly for the benefit of the firm's financial performance and shareholders, or they

maximize their own interests at the detriment of shareholders. If not, what are the possible causes of agency conflict? This circumstance encourages more research into corporate governance procedures in order to effectively oversee and supervise managers.

In this study, the role of agency cost in moderating the link between financial performance and corporate governance among companies listed on the Pakistan Stock Exchange is examined 100 index.

The primary objective of this research is to examine the correlation between corporate governance and the financial success of companies that are publicly offered on the Pakistan Stock Exchange 100 index. The primary objective of this paper is to present a theoretical framework that elucidates the aforementioned association, with a particular emphasis on non-financial organizations. Furthermore, this study aims to investigate the impact of corporate governance on agency costs as a mediating factor and the financial performance of companies listed on the Pakistan Stock Exchange 100 index. In essence, the study seeks to offer meaningful recommendations that are grounded in factual evidence.

The primary goal of the research is to explore the mediating effect of agent expenses on corporate governance and monetary outcomes. There are the following research questions for this project.

- i. Does corporate governance impact monetary outcomes of enterprises listed on the Stock Exchange of Pakistan 100?
- ii. Does agency cost impact financial performance of enterprises included on the Pakistan Stock Exchange 100 index?
- iii. Does agency cost impact the financial performance and corporate governance's link for firms listed on the Pakistan Stock Exchange 100.

2. Literature Review & Hypothesis Development

This section provides information of existing studies conducted in past to develop the hypothesis of study. Proposed conceptual frame work of study is also given here on the basis of researches has been conducted in literature.

2.1. Corporate Governance, Agency Cost and Financial Performance

Institutions and policies to direct administrate and control a corporation (Alagathurai, 2013). CG processes helps a corporation to achieve goals of firm in fair, efficient and transparent manners. It basically provides structure to create the values for shareholder and to maximize the returns for investor by reducing conflicts between stakeholders. The trust and beliefs of investors and lenders is built upon the sound CG practices (Rehman & Shah, 2013). According to La Porta et al. (2000) CG is system to protect the outside investor by expropriation of insiders who have more access to information about firm's activities. Effective implementation of CG practices includes equal dealing of shareholders; protection of rights shareholders and stakeholders; full disclosure and transparency; and fulfillment of boards' responsibilities (Abdullah & Page, 2009; Amir & Nozari, 2015; Brennan & Solomon, 2008). In general, it is said that CG system deals with the consistently directing, controlling & monitoring of management activities; firm's operating and financial decision making; protecting the rights of all stakeholders; ensuring good behaviors; accountability and fair reporting of all actions in accurate, relevant, and in verifiable manner in timely manner leads creating value at large for stakeholders (Alam & Zulfiqar Ali Shah, 2013; Amba, 2014; Anum Mohd Ghazali, 2010).

Scholars has pointed out that CG is mechanism to reduce the agency cost and increase firm performance (Hossain, Cahan, & Adams, 2000). Agency costs occur in term of manager's

self-serving attitudes, excessive privilege consumptions. All these actions result in reduction of shareholder's wealth and reduce the firm performance ultimately. Problems arise due to agency relations in corporation has raised importance of corporate governance practices to be enforced effectively. CG practices are the processes that direct how firm should establish its goals and develop strategies/plans by keeping in view interests of all stakeholders, then monitors implementation of strategies/plans; manage its risk and also reports its performance to stakeholders (Reddy, 2010). All these CG process helps to minimize the conflicts of interests between stakeholders in an effort to lessen the agency issue that ultimately enhance the financial performance of firm. Therefore, CG is a device designed to minimize the agency divergence (Florackis, 2008; McKnight & Weir, 2009).

On the basis of literature following hypothesizes has been developed for the study;

H1: *Corporate governance positive influences the financial performance of the company.*

H2: *Agency Cost mediates the company financial performance and corporate governance's link.*

In this investigation, CG has been measured through board structure and ownership structure of firm.

2.1.1. Board Structure

The directors' board is a basic organ for effective implementation of CG practices in any firm. BOD involve in setting strategic goals, leading, administration, monitoring and controlling business's management. They ensure that company dealing with all its stakeholder in lawful and ethical manners, all the stakeholders clearly communicated all their rights, all shareholders have the received equitable and fair treatment and to align the interests of all parties and eliminate inconsistencies between them (Amir & Nozari, 2015; Rehman & Shah, 2013). The BOD ensures that the company deals with all of its stakeholders in a lawful and ethical manner, that all stakeholders have clearly communicated all of their rights, that all shareholders have received equitable and fair treatment, and that all stakeholders' interests are aligned and that no discrepancies arise between them (Javaid & Saboor, 2015). As a result, the board is one of the main aspects that can impact the firm's performance positively while also playing an effective role major characteristic of board are given below;

Board size

Board size (BS) is a board structure mechanism that shows the total number of board members chosen to lead, control, and monitor management actions. Board size may have an impact on decision-making quality, coherence, and consensus-building capacity (Chen, 2011). According to agency theory, larger boards struggle with coordination lack of cohesiveness, delayed decision making and communication (Walls & Hoffman, 2013). However, literature also indicates that larger board contains diversity of knowledge, skills, experience and education as well. The decisions forward by them are diverse in nature as possessing unique thoughts and ideas. They are representative of multiple stakeholders' interests so with the help of diversified skills and knowledge large board can garner firms' financial position (Hillman, Keim, & Luce, 2001). However, no consensus was discovered in the literature about the influence of board size on supporting and monitoring the firm's manager. For example, some research imply that board size has a positive influence on financial performance and agency costs.

..... whereas other studies found negative impact.....

Board Independence

An independent board can play an important role in assisting and monitoring management in order to reduce agency difficulties and improve the financial condition. Independent (external) board members provide more objective recommendations due to their less involvement in daily operating and management activities. Internal directors generally more emphasized on short term economic goals whereas external members more concerned to pursue the long-term sustainable business perspectives. Today's market environment contains more risks, challenges and innovative opportunities. So, assigning independent board with more diverse expertise and background can bring more innovative thoughts and point of views for firm which may not exist in a more homogeneous environment. Independent board more willingly take risks to engage firm's resource in order to satisfy the need of all stakeholders. Independent directors have stronger stakeholders' orientation because they have diversified skills, background and less financial interest. Independent boards are more effective monitors as they are more concerned about their reputation. They can bond the management discretions to control the agency costs.

Previous studies found that greater board independence perceived better for firm value as news about appointment of outside director who possesses strong ex ante monitoring incentives resulted as positive increase in share price and better credit rating (Ashbaugh-Skaife, Collins, & LaFond, 2006). In contrast other studies found opposite results about large board independence. They argued that outside director has lack of information about firm as compare to insiders who run and manage on daily basis (Brennan & Solomon, 2008; Rehman, 2016). Based on the literature reviewed above, it has been determined that board independence has a mixed influence on financial performance and agency costs, and further investigation is required.

Board Leadership

The board leadership is one of the influencing factors for control mechanisms in CG structure. There are two board structures exist in corporations in first structure indicates the duality of CEO/COB mean one person is holding two different positions as chief executive officer and chairman of board of directors at the same time whereas in second structure separation of CEO/COB positions. Today's intense competition has increased the importance of fast, relevant, accurate and timely (RAT) information flow. Faster and frequent decision making to grape market opportunities depends on RAT information. Under rapid market situations information becomes out dated if delayed or ignored consequently of loss of new opportunities may become more severe. Therefore, duality leadership enables the firms to give quick response to new information, timely decision making due to single person authority that produce more effective outcomes (Christie, Joye, & Watts, 2003; Ibrahim & Samad, 2011). As CEO's duality can lead to managerial desecration because single person holds more authority and decision-making powers. This concentration of power increases conflict of interests among stakeholders that ultimately reduce financial performance. However, literature also advocates the separation CEOs role can enhance board monitoring and as positive influence on financial performance (Chugh, Meador, & Meador, 2010; Haider, Khan, & Iqbal, 2015).

On the basis of above literature, it is assumed that board leadership is an important factor to be study to reduce agency cost and for enhancing financial performance of firm. However, mix results of literature about board leadership impact on financial performance and agency cost lead researcher to further examine this relationship in our context.

Board Monitoring

Another key function of the board structure is monitoring activities, which is assessed by the number of meetings held each year. CG standards urge regular board meetings to ensure appropriate oversight. In addition, the firm must publish the number of meetings held and the attendance at each meeting in its annual report. Board meetings reflect the level of board activities. So, the frequency of board meetings is a technique to improve board performance. Literature-recommended mixed results about governance practices encourage regular board meetings for effective monitoring. The frequency of board meetings is a tool to improve the boards' effectiveness (Awuah-Offei, Osei, & Askari-Nasab, 2011). Too frequent meetings involve increases in expenses like directors' fees, travel expenses, and administrative support requirements. It also disturbs the firm's activities as many of its resources are used in less productive activities (Evans, Evans, & Loh, 2002; Johl, Kaur, & Cooper, 2015). Therefore, it is better to consider the board monitoring activity not only by the number of meetings but also by the presence of independent board members in meetings (Henry, 2004; McKnight & Mira, 2003).

2.1.2. Ownership Structure CG Mechanism

Ownership structure (OWS) indicates to the shares owned by the different categories of investor. Ownership structure can be measured as percentage of share held by institutions, state, domestic individuals, foreign individuals and large block holders in publicly traded firms. However, this study includes institutional and managerial ownership structures to examine their impacts on financial performance and agency cost.

Institutional ownership

Corporation is a legal entity that represents the separation of ownership and control. In publicly listed companies, ownership structure refers to the shares held by individual investors, management, institutions, and significant block holders. It also classified investor ownership as both domestic and foreign. According to the literature, the separation of ownership and control generates agency concerns because managers have more decision-making power and may run the company for their personal advantage rather than shareholder value maximization. In this situation, outsiders with institutional ownership, skill, and professional understanding can drive managers to strive for shareholder wealth maximization (Khan, Lew, & Park, 2015; Usman, Saleem, Mahmood, & Shahid, 2020). According to the second viewpoint, institutional investors are primarily concerned with short-term profits, hence they are uninterested in management monitoring and control for improved performance. They could sell their investment or eliminate incompetent. They titled as passive investors in this said situation.

Generally Institutional investors have huge holdings and can directly influence managerial activities as well as indirectly through stock trading. Thus growing the number of institutional shares can effectively reduce the agency problem while improving business operating performance. According to the literature, A significant part of regulating or overseeing operations is played by institutional investors, which reduces agent issues and improves financial performance (Jameson, Prevost, & Puthenpurackal, 2014; Jiang, 2004; Nicholson & Kiel, 2007; Wellalage & Locke, 2012).

Managerial Ownership

Managerial ownership is regarded as a crucial tool for aligning the interests of managers and shareholders. Managerial ownership motivates managers to increase business value in the genuine sense. Increased ownership aligns manager and shareholder interests, reducing conflicts of interest. Overall, the literature yielded conflicting results regarding the use of

managerial ownership to reduce agency costs and boost financial performance; so, it warrants more investigation in our context.

Agency Cost and Financial Performance

A corporation is a separate legal entity that exists independent of its owners, known as stockholders. Jensen and Meckling (1976) introduced the foundations of agency theory, The goal of a firm is to maximize its market value, which is sometimes incompatible with the goals of managers, who desire to maximize their own personal interests, even if it means going against the interests of owners. This conflict of interest causes one of the most common organizational issues known as the "agency problem," which is especially acute in public organizations (Chugh et al., 2010; Khajavi & Alizadeh Talatpeh, 2015).

Furthermore, Caller and Guerra (2012) proved that both efficacy and autonomy costs are related but dependent on a company's situation. He explained that agency costs have an inverse relationship with dividends, suggesting that they have an adverse relationship with company performance as well. Based on the material mentioned above, it has been hypothesized that

H3: *Agency Cost influences the firm's financial performance.*

3. Proposed Conceptual framework

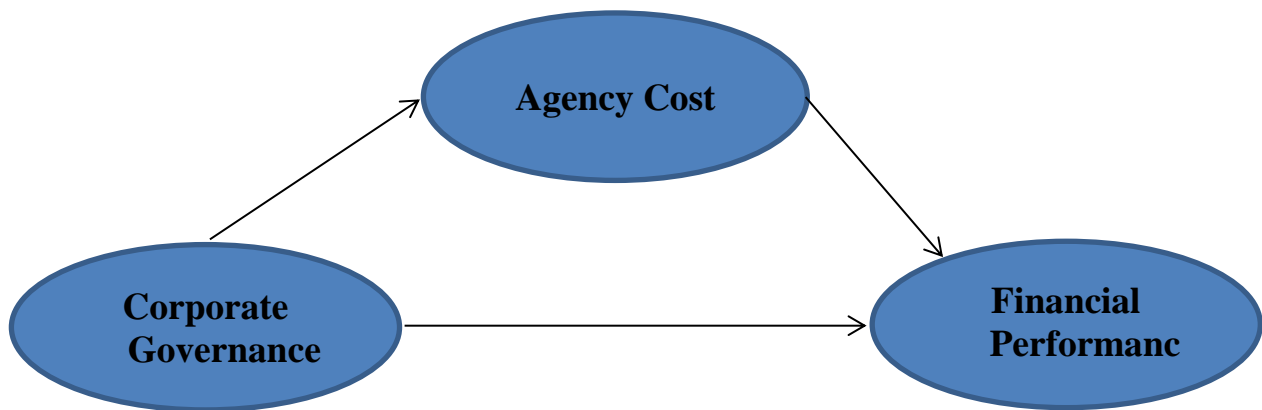


Figure 1: Conceptual Farmwork

4. Research Methodology

4.1. Research Paradigm & Approach

The objectives of this study are to examine the impact of CG on financial performance and to measure the mediating role of agency cost between CG and financial performance. The research approach is based on real problem which needed solution therefore we used the quantitative research approach under the positivism paradigm. Quantitative research approach helps us to find the associations between the variable of study as proposed through hypotheses.

4.2. Population and Sample Size

The population of this study includes all enterprises listed on Pakistan's PSE 100 index. There are 100 corporations listed on Pakistan's PSE 100 Index. Because credible data on publicly traded enterprises is available, this analysis covers listed firms in its sample. In this

study, only non-financial enterprises are included in the 76-firm sample. The data ranges from 2009 to 2016. The sample excludes financial sector firms such as banks and corporations, investment trusts, leasing, mutual funds, and insurance, among others. The omitted firms are described as follows: non-life insurance (n=2), life insurance and investment services (n=8), commercial banks (n=12), and equity and trust (n=2). These firms are omitted. These companies are excluded because of their distinct ownership structure, management structure, corporate governance practices, and income measuring methods. However, data were collected from a total of 65 firms, with enterprises with missing financial information being eliminated from the sample. The study used a balanced panel data technique, and while there were 520 total observations, only 488 were included after missing figures and outliers were removed.

4.3. Data collection

In order to obtain the precise information required to examine the phenomenon and offer effective solutions to the issue, secondary data were used in this study (Mansi & Levy, 2013). The data was gathered from the State Bank of Pakistan's Balance Sheet Analysis BSA (2009-2014), the Open Door for All website (www.opendoors.pk), Business Recorder (www.brecorder.com.pk), and the PSE website. To ensure maximum accuracy, information about corporate governance and ownership structure is carefully gathered from annual reports downloaded straight from the firm's official website. Data collection requires a significant amount of effort and time because most companies only post their most recent yearly reports on their websites. As a result, this analysis only includes 61 non-financial enterprises featured on the KSE 100 index.

4.4. Model Specification

Baron and Kenny (1986) suggested a four-step approach for analyzing the mediation effect. This model posits that we can only assess mediation if the direct effects of the independent variable on the mediator, the mediator on the dependent variable, and the independent variable on the dependent variable are all significant. To assess mediation, the independent variable and mediator were combined into a single regression equation as independent variables. The mediator fully mediates the relationship between the independent and dependent variables if the mediating variable's coefficient stays significant while the independent variable's coefficient drops. The following empirical models are calculated in this work to check.

$$\text{Agency Cost}_{it} = \beta_0 + \beta_1 \text{Corporate Governance}_{it} + \beta_2 \text{Size}_{it} + \beta_3 \text{Leverage}_{it} + \varepsilon_{it} \quad (1)$$

$$\text{Financial Performance}_{it} = \beta_0 + \beta_1 \text{Agency Cost}_{it} + \beta_2 \text{Size}_{it} + \beta_3 \text{Leverage}_{it} + \varepsilon_{it} \quad (2)$$

$$\text{Financial Performance}_{it} = \beta_0 + \beta_1 \text{Corporate Governance}_{it} + \beta_2 \text{Size}_{it} + \beta_3 \text{Leverage}_{it} + \varepsilon_{it} \quad (3)$$

$$\text{Financial Performance}_{it} = \beta_0 + \beta_1 \text{Corporate Governance}_{it} + \beta_2 \text{Agency Cost}_{it} + \beta_3 \text{Size}_{it} + \beta_4 \text{Leverage}_{it} + \varepsilon_{it} \quad (4)$$

Subdivision of equation for each model

$$\text{AU}_{dit} = \beta_0 + \beta_1 \text{Bi}_t + \beta_2 \text{Bini}_t + \beta_3 \text{Decoy}_t + \beta_4 \text{Mont}_t + \beta_5 \text{Ionic}_t + \beta_6 \text{Mont}_t + \beta_7 \text{Size}_{it} + \beta_8 \text{DE}_{it} + \varepsilon_{it} \quad (5)$$

$$\text{ROE}_{it} = \beta_0 + \beta_1 \text{AU}_{dit} + \beta_2 \text{Size}_{it} + \beta_3 \text{DE}_{it} + \varepsilon_{it} \quad (6)$$

$$\text{ROE}_{it} = \beta_0 + \beta_1 \text{Bi}_t + \beta_2 \text{Bini}_t + \beta_3 \text{Decoy}_t + \beta_4 \text{Mont}_t + \beta_5 \text{Ionic}_t + \beta_6 \text{Mont}_t + \beta_7 \text{Size}_{it} + \beta_8 \text{DE}_{it} + \varepsilon_{it} \quad (7)$$

$$\text{ROE}_{it} = \beta_0 + \beta_1 \text{Bi}_t + \beta_2 \text{Bini}_t + \beta_3 \text{Decoy}_t + \beta_4 \text{Mont}_t + \beta_5 \text{Ionic}_t + \beta_6 \text{Mont}_t + \beta_7 \text{AU}_{it} + \beta_8 \text{Size}_{it} + \beta_9 \text{DE}_{it} + \varepsilon_{it} \quad (8)$$

The above-mentioned empirical equation used following abbreviations

Bi_t = Board size at t time in I company, Bini_t = Board Independence at t time in I company, Decoy_t = Duality of chairman at t time in I company, Mont_t = Board Monitoring at t time

in I company, $Ionic_t$ =Institutional Ownership at t time in I company, $MOWN_{it}$ =Managerial Ownership at t time in I company, $Size_{it}$ = Size of firm at t time in I company, $Debt_{it}$ = debt to equity at t time in I company, and ε_{it} =Error Term at t time in I company

4.5. Variables Measurement

4.5.1. Dependent Variable

The dependent variable in this study is financial performance. It is quantified using return on equity (ROE), which is a ratio of net income divided by total equity (Owolabi & Obida, 2012; Soumadi & Hayajneh, 2012).

4.5.2. Independent Variable

The independent variable is corporate governance, as defined by board size, independence, leadership, monitoring, institutional ownership, and management ownership. Board size is calculated as a logarithm (Ln) of the number of board members. Board independence is calculated as the proportion of independent directors on the board divided by the total number of directors (Bai, 2013; Brennan & Solomon, 2008). Board leadership is quantified using a dummy variable with a present value of 1 if duality occurs and 0 otherwise (Abdullah & Page, 2009; Weir & Laing, 2001). Board monitoring is computed using the log of the product of board independent and the number of board meetings held throughout the years (Chen, Shih, Shyur, & Wu, 2012). Institutional ownership is defined as the percentage of shares held by institutions over the total shares revealed in annual financial reports (Alizadeh, Chashmi, & Bahnamiri, 2014). Managerial ownership measured as percentage of shares held by members of board over the total share disclosed in annual financial (Kaserer & Moldenhauer, 2008).

4.5.3. Mediating Variable

The mediating variable in this study is agency cost, which is assessed by asset utilization and reveals how efficiently and successfully management used the firm's assets. It is the ratio of total assets to total sales. A reduction in ratio suggests poor investment decisions, asset misuse, insufficient management efforts, and consumption of perquisites. It is believed that with low asset utilization, firms will face high agency costs (Ang, Cole, & Lin, 2000; Fleming, Heaney, & McCosker, 2005; Singh & Davidson III, 2003; Wang, 2010).

4.5.4. Control Variable

This study uses leverage and size as control variables. There are variances in firm size and performance relationships. Few studies show that huge organizations can benefit from economies of scale, better access to the capital market, more promotional opportunities, and more efficiency in terms of technology, assets, and management. When large firms benefit from economies of scale (Koonin, 2005; Lee & Chen, 2011). However other studies revealed that firm performance reduce by firm size and age due to increased survivability competitive environment in different economies (Park, MacInnis, Priester, Eisingerich, & Iacobucci, 2010; Yasuda, 2005).

Another control variable is leveraging as prior studies indicates that highly leveraged firm has strict monitoring to increase the financial performance (Benkel, Mather, & Ramsay, 2006). According to the literature, there are two forms of potential conflicts of interest: one between shareholders and managers, and the other between shareholders and creditors. Conflicts of interest between shareholders and debt holders are extremely important and develop as a result of substitution impact, underinvestment, and dividend payments. These

conflicts of interest have an impact on agency expenses and lower business financial performance. However, if the project fails, the debt holder will shoulder all of the costs.

Underinvestment difficulties develop when debt is highly risky because the benefits of a project will go to loan holders rather than owners. In this situation, management rejects favorable projects that have the potential to boost the organization's development, value, and performance. The agency concerns of free cash flow occur when it is available to management but not distributed to investors. Management can occasionally stifle an organization's growth and performance by investing available profits in unproductive activities. When debt holders' interest is taken into account, the agency theory gets more difficult. As a result, leverage can be helpful to the firm since it disciplines management through rigorous monitoring and the use of financial covenants in debt contracts. Financial covenants may involve maintaining specified accounting levels such as a specific amount of free cash flow, debt-to-EBITDA ratio, EBITDA-to-interest expenses ratio, and complete information disclosure as a supervisory tool to avoid moral hazard. Managers cannot break these agreements, so they must be more effective. As a result, managers' actions become more transparent, and they are incentivized to create more value for owners. As a result, leverage is included as a control variable and assessed as a debt-to-equity ratio, which is the proportion of total debt divided by total equity.

4.6. Statistical Techniques

The most frequent estimate approaches for regression analysis are OLS and maximum likelihood (ML). Ordinary least squares (OLS) is a widely used regression approach due to its good statistical features and simplicity. The study's goal is to look into the factors of financial success for firms listed on the PSE 100 index, as well as the function of agency expenses in mediating the relationship, from 2009 to 2016. Stata13 is used to analyze data.

5. Data Analysis

5.1. Unit Root Test

Prior to beginning the regression analysis, stationery and data normalcy were verified. Based on Augmented Dickey-Duller, the panel data unit root test is used to determine whether the data are stationary (ADF). Results of table 01 shows that the p-values for all variables are less than significance level < 0.05 therefore we reject H_0 i.e. data contains the unit root and H_a accept that all variables are stationary at level.

Table 1
Unit Root Analysis

Variables	Statistics	p-values
ROE	301.8894	0.0000
BS	58.9076	0.0078
BIND	253.3945	0.0000
DCEO	41.6222	0.0093
BMON	296.4168	0.0000
IOWN	169.8071	0.0028
MOWN	252.5572	0.0000
SIZE	225.6268	0.0000
AU	276.2829	0.0000

5.2. Descriptive Statistics

From results of descriptive table 02 given below it is analyzed that firm's financial performance ROE indicate the mean value of 35.18% with the 54.10% standard deviation. Board size having average value 2.1601 with standard deviation of 22.07% from whom 56% is

independent directors of sample firm. This high percentage point out that board independence is one of the important factors for effective monitoring as well as helpful in reducing agency problems which arises due to self-interest behavior of management. Board size mean value is 2.1601 which equals to the 7 because it has been measured by log natural of total board directors. The duality of CEO having mean value of Result of 15.76% which mean that sample firms where CEO perform dual role is less than 16%. Board monitoring has average value of 3.213 with the standard deviation of 75.65% measured by taking log natural of product of number of meetings held in year and independent board members. While the institutional ownership having 56.33% average value and managerial ownership having mean value of 11.66% of total equity capital. Agency cost measures indicates that an average firm has asset utilization ratio 33.87% with the standard deviation 24.57%. Debt to equity shows an average value 48.19% with the standard deviation 28.11% indicates that majority of firm use leverage as compare to equity. Firm size shows that an average firm uses 23.76% with the standard deviation 25.22%

Table 2
Descriptive Analysis

Variables	Mean	Maximum	Minimum	Std.Dev.	Observations
ROE	0.3518	3.5546	-13.2321	0.5410	488
BS	2.1602	2.9444	1.7918	0.2207	488
BIND	0.5628	1.0909	0.0769	0.2496	488
DCEO	0.1577	1.0000	0.0000	0.3648	488
BMON	3.2137	5.0876	0.0000	0.7565	488
IOWN	0.5633	43.7284	0.0000	3.8738	488
MOWN	0.1166	1.9326	0.0000	0.2091	488
DE	0.4819	0.9915	0.0043	0.2811	488
Size	0.2376	2.4316	0.034	0.2522	488
AU	1.3387	7.0205	1.1355	0.2457	488

5.3. Correlation Analysis

The Correlation is used to determine the association between independent and dependent variables. Values in correlation analysis can be interpreted as weak, moderate and strong correlation. If the value of correlation is less than 0.20 it is called weak correlation whereas if it is more than 0.40 it is considered as moderate but in case value is higher than 0.80 then a strong correlation exists among variables which indicate to multi-co-linearity problem. The results of correlation analysis among CG variables, leverage, size, agency cost and financial performance are given below in table 03. The results show that significantly negative relationship of BIND (-0.21), BMON (-0.16) MOWN (-0.25) and IOWN (-0.12) with ROE while BS (0.14), DCEO (0.13), DE (0.35), size (0.26) and AU (0.31) have found significantly positive relationship with ROE.

Table 3
Correlation Analysis of Corporate Governance and Financial Performance

	ROE	BS	BIND	DCEO	BMON	IOWN	MOWN	DE	Size	AU
ROE	1.00									
BS	0.14*	1.00								
BIND	-0.21**	0.24**	1.00							
DCEO	0.13*	0.16*	-0.24*	1.00						
BMON	-0.16*	-0.31*	-0.27*	0.22	1.00					
IOWN	-0.25*	0.21*	0.29*	0.17	0.20*	1.00				
MOWN	-0.12*	0.35*	-0.26*	0.20	0.13	-0.05*	1.00			
DE	0.35**	-0.14*	0.18	0.16	-0.11	-0.14	-0.21	1.00		
Size	0.26*	0.13*	0.012	0.14	0.13*	0.16	0.10	0.27*	1.00	
AU	0.31*	0.21*	0.24*	-0.18	0.20*	0.21*	0.28*	0.25*	0.30*	1.00

*Significant at 95% level of confidence** Significant at 99% level of confidence

5.4. Ordinary Least Square

The most frequent estimate approaches for regression analysis are OLS and maximum likelihood (ML). OLS is often suggested because to its robust statistical features and ease of use. In this investigation, the ordinary least squares estimation technique was applied.

5.4.1. Heteroskedasticity

One of the essential regression conditions for model fitness is that residual variance be homogeneous. The assumption of heteroskedasticity is tested using the Breusch-Pagan/Cook-Weisberg test. The results of Table 04 demonstrate the problem of heteroskedasticity in data. In the presence of heteroskedasticity, the standard error is biased, affecting the t-test and model significance. As a result, the robust technique is used to address heteroskedasticity while also estimating the regression model unbiasedly.

Table 4
Breusch-Pagan / Cook-Weisberg Test for Heteroskedasticity

Model	Chi2(1)	Sig.
1	295.71	0.0021
2	107.51	0.0000
3	170.03	0.0014
4	377.59	0.0331

5.4.2. Multicollinearity

Multicollinearity is a statistical method that identifies a significant link between two independent variables. In the event of multicollinearity, regression models do not produce trustworthy estimates. To detect multicollinearity, the variance inflation factor (VIF) is used. If the VIF score is larger than 10, it implies multicollinearity, which may lead to biased estimates (Gujarati & Porter, 2003). Table 05 shows the VIF values and suggests that there is no problem with multicollinearity.

Table 5
Variance Inflation Factor

Variable	VIF	1/VIF
AU	2.49	0.401606
BMON	2.33	0.429184
BIND	2.19	0.456621
BS	2.15	0.465116
SIZE	1.81	0.552027
DE	1.66	0.602619
MOWN	1.61	0.662725
IOWN	1.35	0.740740
DCEO	1.21	0.826446
Mean VIF =	1.87	

5.4.3. Regression Analysis

Table 6 demonstrates how the direct relationship between dependent and independent variables is examined using linear regression analysis. It illustrates how independent factors directly affect mediators, how mediating variables directly affect dependents, and how independent variables directly affect dependent variables. In the first equation, independent variables BS, BIND, DCEO, BMON, MOWN, IOWN, DE, and size were regressed on AU, and all variables had a substantial impact on AU. ($\beta = 0.069$, $\beta = 0.11$, $\beta = 0.15$, $\beta = 0.010$, $\beta = 0.09$, $\beta = -1.62$, $\beta = 0.17$, and $\beta = -0.40$ with $p < 0.05$ respectively). In second equation AU regressed on ROE and found significant impact on ROE with ($\beta = 0.13$, $\beta = 0.25$ with $p < 0.05$ respectively). In third equation BS, BIND, DCEO, BMON, MOWN, IOWN, DE and size regressed

on ROE and found significant with ($\beta = 0.35$, $\beta = -0.17$, $\beta = -0.14$, $\beta = 0.04$, $\beta = -0.019$, $\beta = -0.77$, $\beta = 0.25$, and $\beta = 0.17$ with $p < 0.05$ respectively). Overall result revealed that corporate governance and agency cost are significantly influencing the financial performance, thus supporting H_1 and H_3 .

Table 6
Direct Relationships

Independent Variables	Dependent Variable	
	AU	ROE
BS	0.069*	0.35*
BIND	0.11*	-0.17*
DCEO	0.15*	-0.14*
BMON	0.01*	-0.04
MOWN	0.09*	-0.019*
IOWN	-1.62*	-0.77*
DE	0.17*	0.25**
Size	-0.40*	0.13*
AU		0.25*
Adj.R ²	0.31*	0.11*
Prob > F	0.0005	0.0117

5.4.4. Multiple Regressions for Mediation Analysis

This study employed Baron and Kenny (1986) mediation approach. This model posits that we can only assess mediation if the direct impacts of the mediator on the dependent variable, the mediator on the independent variable, and the independent variable on the dependent variable are as follows all significant. To assess mediation, the independent variable and mediator were combined into a single regression equation as independent variables. However, when the coefficients of the mediating and independent variables are significant, the mediator partially mediates the relationship between the two.

As Table 6 shows that all the direct relationships are significant therefore a mediation analysis run through multiple regressions. In multiple regression equation BS, BIND, DCEO, BMON, MOWN, IOWN, DE, Size, DE and AU were regressed on ROE. Results show that statistically significant model with R- square is 39.1% variation in model with significant level $P < 0.05$ which indicates about the partial mediation. BIND, BMON, MOWN and IOWN have significantly negative relationship ($\beta = -0.145$, $\beta = -0.028$, $\beta = -0.006$, $\beta = -0.525$ and with $p < 0.05$) whereas BS, DCEO, DE, size and AU have significantly positive relationship with ROE ($\beta = 0.335$, $\beta = 0.133$, $\beta = 0.224$, $\beta = 0.74$ and $\beta = 0.11$ with the $p < 0.05$).

Table 7
Multiple Regressions

Independent Variables	Dependent Variable (ROE)
BS	0.335*
BIND	-0.145*
DCEO	0.133*
BMON	-0.028*
MOWN	-0.006*
IOWN	-0.525*
DE	0.224*
Size	0.74*
AU	0.11*
Adj.R ²	0.391*
Prob > F	0.0000

5.5. Discussions

Board size has found positive relationship with the ROE and these findings are supported by De Andres and Vallelado (2008); Shukeri, Shin, and Shaari (2012) who said that larger board contain diversity of skills, expertise, knowledge, experience and education. The decisions forward by a large board are absolutely diverse in nature as possessing unique thoughts and ideas. In presence of large board decisions are made in a democratic style not be imposed by the CEO only. It is not easy for a powerful and authoritative CEO to be dominated in the presence of a larger board therefore decisions are made in a democratic style. So, in such a situation the firm performance experience better outcomes with the large board composition. These results also support the resource dependent theory which gives emphasis to larger board that encourages the transparency and accountability to enhance the firm performance Haider et al. (2015); Nicholson and Kiel (2007); Rashid, De Zoysa, Lodh, and Rudkin (2010) who found out non- executive directors had less commitment to their job as they only employed on a part time basis. They also have less technical expertise required to understand issues of business. They meet less frequently and may have insufficient information as compare to executive directors to make efficient decisions. Executive directors govern the business and have better understanding, knowledge regarding day to day operations as non-executives. One of the reasons can be the selection of independent board member is based on favoritism as compare to their expertise and experience.

CEO duality is important determinant of the firm performance. CEO duality has significantly positive influence on ROE. This positive impact of CEO duality on firm performance is also experienced by McGuire, Dow, and Ibrahim (2012); Yasser, Entebang, and Mansor (2011). They found that CEO duality save the information cost and helps in making speedy decisions. This duality also enhances the CEO ownership that require to keep in align the interests of shareholders and CEO. CEO duality is therefore, also a very important factor in order to avoid the conflicts and confusions among other stakeholders as managers and employees as well in workplace and in the market environment. CEO duality also facilitate to impose fewer boss actions and it produces more effective outcomes in favor of the firm and timely decisions are being generated (Chen, Lin, & Yi, 2008; Finkelstein & D'aveni, 1994). Otherwise, firms have to face the conflict at top level which reduces the speed and effectiveness in decision making that finally leads to poor performance (Francis, Hasan, & Wu, 2012).

Result of our study suggests board monitoring is negatively associated with the ROE. Too frequent meeting is not always useful and help to improve the firm's performance because it involves more managerial time consumption, more increase expenses in term of travel expenses and directors' fees. Another reason is that in case of more frequent meetings generally firm resources engaged in less productive activities which have negative influence on firm's performance.

These findings support those of (Seifert, Gonenc, & Wright, 2005) and (Rizvi, 2012). According to the studies, institutional shareholders are more interested in making quick profits than investing in new projects, which is detrimental to the organization's long-term growth. As a result, institutional investors want not just to reap short-term benefits, but also to persuade the board to make decisions that improve short-term income and hence increase dividends.

One of the reasons of performance decline argument claims that institutional investors are generally passive investors because they don't hold their investments in poorly performed firms rather than providing expertise or other resources to monitor those firms in order to increase their performance. Another strategic alignment viewpoint contends that, despite having more professional and technical resources to monitor and control the manager, institutional investors instead support them due to their interpersonal relationship with the investing firm. Institutional investors may also form strategic alliances with managers in order

to gain personal advantages at the expense of other shareholders' interests (Cornett, Marcus, Saunders, & Tehranian, 2007). Another factor could be that financial institutions are only allowed to own equity in firms up to a certain level, which prevents them from becoming effective and active business observers (Yuen, Huang, Burik, & Smith, 2008). Consequently, institutional investor behaviours, which prioritizes short-term returns above long-term benefits, has an impact on corporate performance.

MOWN has a statistically significant negative connection with ROE, indicating that increased management ownership affects company performance. These findings are corroborated by Alam and Zulfiqar Ali Shah (2013); Shah and Hussain (2012), and Konijn, Kräussl, and Lucas (2011). Higher managerial ownership motivates managers to improve their managerial positions by garnering employees' support, even though non-productive staff, which results in lesser dismissal of inefficient personnel and reduced business performance (Boiko, 2022). The findings of this study demonstrated that leverage has a positive and significant relationship with ROE. These findings are similar with (Ahmad, 2014). It suggests that capital structure influences firm performance and motivates managers to use cash efficiently. Increased debt can have a good impact on a firm's performance since it increases stringent supervision of creditors and limits management's ability to use available funds inefficiently. As a result, excessive usage of debt improves the firm's performance. Size is utilized as a control variable in all models and has a significant positive association with ROE. As a firm's size grows, its financial performance improves due to economies of scale, lower transaction costs, easier access to finance sources, and more access to new technology and systems. These findings are comparable to those of (Ntim & Osei, 2011; ZHANG, ZHANG, Hongjie, SEVERIN, & Zhaojun, 2023). As a result, business size has a significant impact on performance.

6. Conclusion

The study sought to look at agency cost's function as a mediator between corporate governance and financial success. Using a sample of 488 firms listed on the Pakistan Stock Exchange 100 Index from 2010 to 2016, the findings suggest that agency cost partially mediates the association the relationship between financial performance and corporate governance. The results also showed that board size, CEO duality, leverage, and scale improve financial performance, whereas board independence, managerial ownership, and institutional ownership lower it.

Therefore, this study provides solid grounds and valuable knowledge in literature for academicians who are interested in this area. Future researches can also use it for better understanding and development of theatrical perspectives in the field of finance. This study may have relevant implications for corporate governance experts, regulators and investors for better understanding of corporate governance, agency cost and financial performance in the context of Pakistan.

Author's Contribution:

Sadia Bent Raza: contributed to the conceptualization of the research, literature review, data collection, analysis, and interpretation of the findings.

Salman Masood Sheikh: provided valuable insights into the theoretical framework of corporate governance, financial performance, and agency cost.

Saif Ur Rahman: contributed to the literature review, data analysis, and interpretation of the findings.

Conflict of interest/ Disclosures:

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