Liberal Arts & Social Sciences International Journal (LASSIJ)
eISSN: 2664-8148 (online)
https://www.ideapublishers.org/index.php/lassij
Vol. 7, No. 1, (January-June) 2023, pp. 24-38
Research Article | Original Research
https://doi.org/10.47264/idea.lassij/7.1.2

Impact of corporate governance on firm performance: a case of Pakistan stock exchange

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Abstract

This study investigates the impact of Corporate Governance on Firm Performance. Corporate governance has been operationalized through eight indicators, including the Board Size, Ownership Structure, CEO Duality, Independence of Audit Committee, Firm Size, Firm Age, Firm Leverage, and Firm Growth. At the same time, the Firm's performance has been factored into Return on Assets and Return on Equity. Pakistan stock exchange has been used as the unit of analysis, taking 100 public listed firms from the non-financial sector as the sample. Using suitable statistical tools, data around the study variables have been collected and analyzed for ten years, i.e., 2013-2022. The findings reveal that lean board size, moderate leverage, CEOs serving on various boards, high independence on audit committees, large firm size, young firms, and sustainable growth positively impact the firm performance. High leverage has been found to have an adverse impact on firms' profitability, especially in the wake of high interbank offered rates. These findings are important to practitioners, corporate regulators, and researchers. Future studies are recommended to take more indicators from the corporate governance index into account for understanding their impact on firm performance.

Article History

Received: 24-Mar-2023

Revised: 24-Apr-2023

Re-revised: 28-May-2023

Accepted: 30-May-2023

Published: 08-Jun-2023

Keywords: PSX, CGI, corporate governance, firm performance, board size, firm age, firm growth, audit committee.

How to Cite: Khan, K. M. & Mahmood, Z. (2023). Impact of corporate governance on firm performance: a case of Pakistan stock exchange. *Liberal Arts and Social Sciences International Journal (LASSIJ), 7*(1), 24-38. https://doi.org/10.47264/idea.lassij/7.1.2

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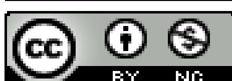


1. Introduction

The corporate governance has attracted significant attention from researchers and practitioners in the recent past, for its ability to influence the firm performance. This study aims at measuring the impact of selected indicators of corporate governance on the firm performance for selected firm listed at Pakatan Stock Exchange (PSX). Corporate governance today, stands as a well-defined and measurable phenomenon. It is now considered as a corner stone for a firm's success or failure. In the same context, the securities and exchange commission (SEC) globally, have revised their respective code of corporate governance. A better corporate governance code ensures the protection of stakeholders'' interests within the firm, in addition of ensuring the existence of fair and equitable markets for the economic actors.

The corporate governance in based on the principles of accountability, transparency, responsibility, and risk management. The corporate governance index (CGI) measures the effectiveness of the corporate governance mechanism. It comprises of five sub-indices including, disclosure, board structure, ownership structure, shareholders rights, board procedures, and control on related party transactions. Each sub-indices contains a set of indicators, which indicate the degree of a firm's compliance towards the code of corporate governance. Better compliance is expected to result in better firm performance in addition on exhibiting better corporate citizenship on the part firm.

Based on, but not limited to, the principles of accountability, fairness, transparency, assurance, leadership, and stakeholders' management, the corporate governance is a system of processed, practices, and rules to govern or control a corporate entity (Chaarani et. al., 2022). A good corporate governance system ensures the provision of integrity, transparency, fairness, and efficiency to financial markets. While a poor corporate governance system allows the growth of malpractices within the financial markets along with lack of stakeholders trust in the market regulators' ability to protect their stakes in the market (Zafar, 2022). It may also lead to lack of accountability, negligence, corruption, frauds, and even corporate failure in form of defaults and bankruptcies (Jayasekara et. al., 2022). There are various dimensions of corporate governance, however the relevant ones taken into account for the purpose of this study have been discussed in the review of literature.

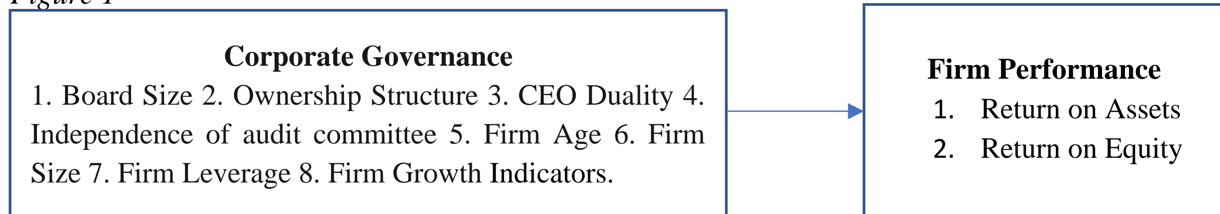
The findings reveal that these indicators effect the firm performance with different degree and magnitude. These findings are of material significance for the corporate regulators and firm managers, in terms of enhanced compliance towards the code of corporate governance and better firm performance. Furthermore, these findings add towards the existing body of knowledge on Pakistan stock exchange, which is emerging stock exchange, and needs researchers' attention to understand the challenges unique to this market. These findings also help in improving the corporate governance index for the Pakistan stock exchange.

Based on the studies encountered in the corporate governance, the key objective of the study

is to investigate the relationship between corporate governance and firm's performance regarding economy of Pakistan. Concisely, yet encompassing the circumference of this study, the theoretical framework and related hypotheses of this study are;

1.1. Conceptual framework of the study

Figure 1



Source: Author

1.2. Study hypotheses

H1: Board size impacts the Firm Performance
H2: Ownership structure impacts the Firm Performance
H3: CEO Duality impacts Firm Performance
H4: Independence of Audit Committee impacts the Firm Performance
H5: Firm's Age impacts the Firm Performance
H6: Firm's Size impacts the Firm Performance
H7: Firm Leverage impacts Firm Performance
H8: Firm's Return on Assets impacts the Firm Performance

2. Literature review

Firm performance is dependent on the alignment of the shareholders (as principal) interest and the interest of managers (as agent) within the firm, as contended by the agency theory (Bussin et. al., 2023). Any misalignment between the interest of principals and agents results in higher agency costs (Amin et. al., 2022). The incurrence of agency cost does not guarantee a perfect alignment, rather it is an attempt to keep the alignment (Tang, 2022). Agency theory contends the same argument, and is considered one of the landmark theories, linking form performance with the alignment between the interest of managers and the principals.

Resource dependence theory is the same context contends the power of firm on its externa environment is pivotal for establishing a competitive advantage for the firm (Zhang et. al., 2022). The external environment for instance the consumers, suppliers, and the board of directors are contingencies of the organizational power (Gebhardt et. al., 2022) The theory argues that organization do have dependence on resources. The organizational environment is the originator of these resources. This environment contains the internal and environment, and actors within such environment.

Though the alignment of interest, and dependence on resources is relevant, nevertheless one tends to take into account the stakeholders theory. The theory contends that the inter connectedness of the relationships between larger set of stakeholders, rather than just the shareholder, creates more value (Poletti & Martinez, 2022). These stakeholders include the shareholders, employees, customers, suppliers, lenders, communities, society, and any others who take interest in the firm. The theory argues that a firm must diligently work to cater for the interests of a larger set of stakeholders to create more value in the future (Ain et. al., 2022).

These theories do provide a theoretical underpinning for this study, but the definition of corporate governance, and operationalization of construct in context of the unit of analysis provides the way forward for an issue/controversy at hand. To address the same, this study has taken into account eight indicators of the corporate governance, namely, board size, ownership structure, CEO duality, independence of audit committee, firm size, firm age, firm leverage, and firm growth. These indicators have been studied for their ability to impact the firm performance, which has been factored as return of assets and return on equity. These indicators along with the operational meaning of the corporate governance are discussed in the following paras.

At average large board size is found to be less effective in resolving the agency issues effecting the firm performance, as compared to the lean board size (Disli et. al, 2022). The larger board size may be constituted for equitable representation, but the effectiveness and efficiency of the board for enhancing the firm performance goes in the backdrop (Ria, 2023). The choice between creating an effective board size or a representative board size is never an easy one. Equitable representation is often considered as collective wisdom, which may or may not result in effective to create more value but is usually consensual (Marquez et. al., 2022).

Ownership structure may be defined as the distribution of equity by identity of the equity owners, in addition to the distribution of equity with regards to capital and voting rights (Rojahn & Zechser, 2022). The concentration of ownership in fewer hands, like many in Pakistan, where controlling percentage of shares is kept within the family, results in a family lead decision, rather than the financial objective (Miloud, 2022). There are arguments on both sides of the ownership structure and concentration. This study has studied the effect of ownership structure on the firm performance.

Independence of audit committee plays an important role in determining performance of a firm (Lutfi et. al., 2022). This independence is pivotal for preventing the insiders from influencing the work of independent third-party auditors, and the work of oversight committee (Rahman & Ali, 2022). The importance of the audit committee’s independence needs not to be undermined, as the audit committee does impact the board’s decisions and plans (Shrivastav, 2022). The board’s understanding of the audit committee’s roles and responsibilities may help the firm in achieving its desired performance (Buallay & Al-Ajmi, 2020). This performance may not only be kept restricted to achieving the target growth and profit, but also the market position, better

compliance towards the code of corporate governance, corporate citizenship, and harmony among various stakeholders.

The firm size means the scale of volume or operations produced by a single firm (Zuhroh, 2019). Firm size is usually categorized as small, medium, and large. The firm size effect, known as to be the empirical evidence that the risk-adjusted returns are larger for small firms than the large ones, does have its place in the literature about corporate governance. It is important to study the firm size as it significantly affects the profitability and efficiency of the firm (Sondakh, 2019). Firm size effects the firm' financial performance positively when proxied by the return on assets (Husna & Satria, 2019). It may also indicate the rate of growth within a firm in terms of its sales volume, assets, and employees.

A firm' age is the length of time in years, a firm has been in existence, although some believe that the existence is to begin from the date of firm's listing on a recognized exchange (Younis & Sundarakani, 2020). Firm age has been an important determinant of the firm's performance, and the argument exists on both sides. Some studies tend to find the convex relationship between firm's age and its profitability, suggesting that firms tend to perform less better with age (Ardito et. al., 2019). Others suggest the creation of organizational experience as the firm ages. This experience tends to handle the untoward situations better as compared to the young firms (Ayuba et. al., 2019). Some argue that firm tends to perform better as it gets experienced. It gets to now its strengths and weaknesses better, which in turn yield a better profitability (Almoneef & Samontaray, 2019). It is also argued that the young firms induce effective learning, which helps them grow better and increase performance over time (Chatterjee et. al., 2021).

Firm's leverage has been a long-debated indicator for firm value and performance, as capital structure is one of the traditionally researched areas. Even the test books present views on both sides, where some argue that capital structure effects the firm value, while other present results for the opposite, that it doesn't. The financial leverage indicates the amount of debt in firm's assets or its comparison with the amount of shareholders' equity in the firm (Slehat et.al., 2020). Financial leverage is an important indicator for the firm's debt burden, while the supplementary ratios / information signifies the firm ability to retire the debt (Ibrahim & Isiaka, 2020).

Growth of a firm occurs when it grows, which is usually expressed in terms of increase is sales, profit, employment, value addition etc. It also involves the diversification of firm into the new markets occurring through internationalization or acquisitions (Mehmood et. al., 2019). It is important to differentiate the firm growth from the firm size, as the later means the financial size of a firm expressed in suitable terms, while the growth refers to the rate of increase in the size (Sohl et. al., 2020). Pertinent to mention that firms tend to change size, cost structure, and capital structure according to the state of economy, though the aim is the enhance performance, value, and profitability (Bodlaj et. al., 2020).

Firm performance may be referred as how well or poor firm performs over a period (Bhagat & Bolton, 2019). A firm performing good brings long-term gains to its stakeholders, in addition of generating economic opportunities and financial propositions (Ahdal et. al., 2020). Such a firm would also enhance return to its employees, produce quality products, allow fair competition, and do value addition to the business sector it operates in. There are many indicators of measuring the firm performance including the revenue, return, profitability, market share, cash flow, values addition etc. This study has taken a single indictor, i.e., the return, and to be specific, the return on assets, and return on equity only.

Return on equity and return on assets are a few of the established measures of evaluating the firm performance. Both these measures are based on the financial data reported in financial statements of a firm. Being accounting information, this information is based on accounting convention of prudence, conservatism, timeliness, measurement, and substance over form. Return on equity is computed by dividing the net income attributable to common shareholders by the average equity of the firm during the year. While the return on assets is computed through dividing the operating income by average assets of firm during the year.

3. Methodology

Though there are many indicators in total, this study has taken the board size (BS), ownership structure (OS), CEO duality (CD), independence of audit committee (IC), firm size (FS), firm age (FA), firm leverage (FL), and firm growth (FG) as the indictors of corporate governance (CG). The impact of these indicators has been observed of the firm performance (FP), which has been operationalized into return of assets (RA) and return on equity (RE). Pakistan stock exchange (PSX) has been used as the unit of analysis for this study, where 100 public listed firm from non-financial sector have been studied for a period 2013-2022 to observe the impact of corporate governance on the firm performance.

A sample of 100 publicly listed firm on PSX, from the non-financial sector has been taken. Data for a period of nine years, i.e., 2013-2022 has been gathered round the indicators of corporate governance (CG), and the firm performance (FP). The CG has been operationalized as the board size (BS), ownership structure (OS), CEO duality (CD), independence of audit committee (IC), firm size (FS), firm age (FA), firm leverage (FL), and firm growth (FG). While the FP has been operationalized as return on assets (RA) and return on equity (RE).

There are 100 numbers (N) of cross-sections and 9 are time intervals (T), containing both cross sections and time series, thus the panel data having (N×T) 900 observations. Initially, Phillips Peron, Levin Lin and Chu test are used to confirm the absence of the panel roots in the data at 5% level of significance. After this panel data model are being employed to find out the relationship between the dependent and independent variable. Firstly, the stationary test is performed to confirm the absence of unit root in the data. Therefore, the Phillips Peron test, the Levin Lin test, and the Chu test are used to confirm the absence of the panel roots in the data

at 5% level of significance. Secondly, the first model that is employed for the empirical analysis is Pooled OLS can be stated by the equation given below:

$$\Upsilon_{it} = \acute{\alpha}_i + \beta X_{it} + \mu_{it}$$

The above equation indicates the simple model of pooled regression in which Υ is dependent variables for *i* cross section at a time period t, and *X* is the indicator of the independent variables. To capture the diversification effect, it is better to adopt fixed or random effect model, to be chosen on the basis of Haussmann Test. However, between choosing the effect and common models, F-test and Bruesch Pagon test is employed. Hypothesis of Haussmann Test can be illustrated as:

H_0: Random Effect Model is Appropriate (Reject if Prob<0.05)

H_1: Fixed Effect Model is Appropriate

Equation for the Fixed Effect Model with Fixed Cross-Sections can be given as:

$$\Upsilon_{it} = \acute{\alpha}_i + \beta X_{it} + F_i + \mu_{it}$$

F_i captures the firms' specific effect with fixed cross-sectional effect. However, random mean effect equation can be given as:

$$\Upsilon_{it} = \acute{\alpha}_i + \beta X_{it} + \varepsilon_i + \mu_{it}$$

4. Analysis, findings, and discussion

To analyze the relationship between the FP and CG, three different models, i.e., pooled, random, and fixed effect are after confirming the absence of unit root in the series. In the first equation returns on assets has taken as the indicator of the firms' performance. The empirical findings under all three models are being given in the table 2. In Pooled OLS it is being examined that board structure, and ownership structure are negatively related with the firm performance as RA, whereas all other variables are positively related with the firm performance. Moreover, CEO duality, independence of audit committee, and firm leverage are significantly related with the firms' performance. The results suggests that the CEO duality increases the firm performance by 5.6 units, independent of audit committee increase the firm performance by 12 units, and one unit increase in leverages increase the firm performance by .02 units. However, there is 28% variation in dependent variable is due to the independent variable, the value of Durbin Watson suggests no auto-correlation and the model is overall good fit.

Haussmann test suggests acceptance of the null hypothesis which suggests the appropriation

of the random effect model. Meaning there by that the board structure is negatively related with the firm performance, whereas all other independent variables are positively related with firms' performance. However, the independence of audit committee, and firm leverage is significantly related with the firm performance. Independence of audit committee increases the firm performance by 12.3 units and one unit increase in leverages increase the firm performance by 0.02 units. Moreover, there is 28% variation in the dependent variable due to independent variables. Durbin Watson test exhibits the absence of auto-correlation, suggesting that the overall model is a good fit.

Table 1: Impact of corporate governance indicators on returns on assets

Variables	Pooled OLS		Random Effect		Fixed Effect	
	Coefficient	t-Stats	Coefficient	t-Stats	Coefficient	t-Stats
C	-11.89	-0.62	-14.85	-0.66	-50.53	-1.10
BS	-0.44	-0.43	-0.07	-0.06	2.95	1.29
OS	-0.67	-0.34	-1.18	-0.51	-6.99	-1.36
CD	5.59	2.03*	5.13	1.60	-0.41	-0.07
IC	12.06	4.19*	12.29	3.62*	11.71	1.34
FA	0.00	-0.65	0.00	-0.71	0.00	-1.93
FS	1.70	0.89	1.89	0.84	7.19	1.43
FL	0.02	17.56*	0.02	17.77*	0.02	17.26*
FG	0.01	0.66	0.02	0.75	0.02	0.92
R-Square	0.28		0.28		0.40	
D.W.	1.93		2.09		2.27	
F-Statistics	43.91		43.21		4.93	
H Test			0.33			

In the second part, relationship between the independent variables, and the firm performance as RE, has been presented under three different panel data models after confirming the absence of unit roots in the series. The table 2.2 suggests the empirical results as: In Pooled OLS, all the independent variables are positively related with RE, except the ownership structure and the firm size. However, only the firm size is significantly related with firms' performance at 5% level of significance. One unit increase in size decreases the firm performance by .01 units. There is only 1% variation in the dependent variable that is due to independent variables, there is auto-correlation and the model is not a good fit.

Haussmann test suggests the acceptance of the alternative hypothesis, provided that the fixed effect model is more appropriate, where effect along the cross sections is being analyzed. Results show that the ownership structure, CEO duality, firm size, and firm leverage are negatively related with the firm performance. Moreover, ownership structure, firm growth, firm size, and firm leverage are significantly related with firm performance. Family ownership decreases the returns on equity by 81 units. One unit increase in growth (sales growth) increases

the return on equity by 80.82 units. One unit increase in size of the firm decreases the returns on equity by 0.01 units. One unit increase in leverages decreases the returns on equity by 0.02 units. Moreover, only 15% variation in the dependent variable is due to the independent variable. Model is overall good fit and there is no auto correlation.

Table 2: Impact of corporate governance indicators on returns on equity

Variables	Pooled OLS		Random Effect		Fixed Effect	
	Coefficient	t-Stats	Coefficient	t-Stats	Coefficient	t-Stats
C	5.00	0.05	-0.93	-0.01	-603.91	-2.45
BS	0.18	0.03	0.39	0.07	14.32	1.17
OS	-3.77	-0.36	-4.51	-0.43	-81.64	-2.96*
CD	22.25	1.53	22.12	1.50	-5.33	-0.16
IA	17.27	1.13	17.27	1.12	4.57	0.10
FL	0.00	-0.72	0.00	-0.73	-0.02	-2.30*
FG	0.02	0.00	0.62	0.06	80.82	3.00*
FS	-0.01	-2.72*	-0.01	-2.74*	-0.01	-2.41*
FA	0.02	0.21	0.03	0.22	0.05	0.44
R-Square	0.01		0.01		0.15	
D.W.	1.31		1.32		2.00	
F-Statistics	1.38		1.37		2.26	
H-Test			0.0008			

5. Conclusion

In light the findings, it is concluded that the indicators of corporate governance have varying impact on RA and RE. For RA, the independence of audit committee, and firm leverage significantly influence the RA. For RE, the ownership structure, firm leverage, firm growth, and firm size significantly influence the RE. This contrast reveals an interesting combination of the predictor for the firm performance which has been operationalized as RA and RE. This poses an important question to the board of directors where they can decide between maximizing their personal gains as RE, or maximize the return for the firm RA. Although increase in RA is likely to result in the increase of RE, but it might involve a lag which the board of director may or may not be willing to allow. Nevertheless, these findings distinguish the predictors of the firm performance, with the standpoint of return on assets and return on equity.

This study's findings are useful for the owners and managers of the non-financial sector public limited companies listed on PSX. These findings help the owners and managers to align their interest, hence reducing the agency costs and maximizing the returns for the firm. These results are also beneficial for the investors, suppliers, debt holders and other stakeholders for making decisions regarding investment.

These findings assist in improving the abilities of the corporate regulators to regulate the firms in a transparent manner. These also help the managers to improve their short term and long-term decision makings for financial and managerial strategies. The study may help in minimization of costs regarding corporate governance and increases the corporate performance of companies. These findings may also be advantageous for the future studies researchers in the area of improving the firm performance and corporate regulatory framework.

6. Limitations and recommendation for the future research

This study has been kept limited to the non-financial sector firm listed on PSX. Future studies are recommended to consider the financial sector firms listed on PSX, and for that matter other financial exchanges in the region may also be considered. Furthermore, this study has taken only eight indicators of the corporate governance index. The index contains close to two dozen indicators. Future studies may consider taking additional / other indicators into account for studying the impact of corporate governance indicators on the firm performance. Also, the firm performance has been operationalized as return on assets and return on equity for the purpose of this study. Market price of share, being reflective of the firm performance may also be considered in the future studies. In addition, this study has taken 2013-2022 as the study period, which did contain the effect of pandemic, floods, and political turbulence in Pakistan. To rule out any likely effect of abnormalities, any suitable study period may also be taken into account by the future studies.

Declaration of conflict of interest

The author(s) declared no potential conflicts of interest(s) with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship and/or publication of this article.

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