

ISRG Journal of Arts, Humanities and Social Sciences (ISRGJAHSS)



ISRG PUBLISHERS

Abbreviated Key Title: ISRG J Arts Humanit Soc Sci

ISSN: 2583-7672 (Online)

Journal homepage: <https://isrgpublishers.com/isrgjahss>

Volume – IV Issue - II (March – April) 2026

Frequency: Bimonthly



The impact of Corporate Governance on Firm Performance during the COVID-19 pandemic: A case from Pakistan

Syed Rafid Ali Shah¹, Amin Ullah Khan¹, Basharat Khan¹

¹ School of Economics and Management, Chang'an university, Xi'an 710054, China.

| **Received:** 04.08.2026 | **Accepted:** 08.04.2026 | **Published:** 13.04.2026

*Corresponding author: Syed Rafid Ali Shah

Abstract

This study investigates the impact of corporate governance on firm performance during the COVID-19 pandemic, focusing on non-financial companies listed on Pakistan's KSE-100 Index. The research adopts a quantitative approach to analyze how governance mechanisms influenced the financial performance of firms amidst the economic challenges brought by the pandemic. The sample comprises non-financial firms from the KSE-100 Index, chosen for their significant role in Pakistan's economic landscape, with a focus on sectors unaffected by the unique regulatory frameworks governing financial institutions.

Using regression analysis, the study examines the relationship between corporate governance and firm performance during the crisis period. The results reveal a statistically significant positive relationship between strong corporate governance practices and improved financial performance. This suggests that firms with effective governance structures were better equipped to navigate the disruptions caused by the pandemic, leading to superior financial outcomes.

The findings offer valuable insights into the role of corporate governance in enhancing firm resilience during times of crisis. Additionally, the study contributes to the broader literature on governance in emerging markets and provides actionable recommendations for policymakers, investors, and corporate leaders aiming to bolster governance frameworks for long-term firm sustainability.

Keywords: Corporate Governance, Firm Performance, COVID-19, KSE-100, Non-Financial Companies, Pakistan.

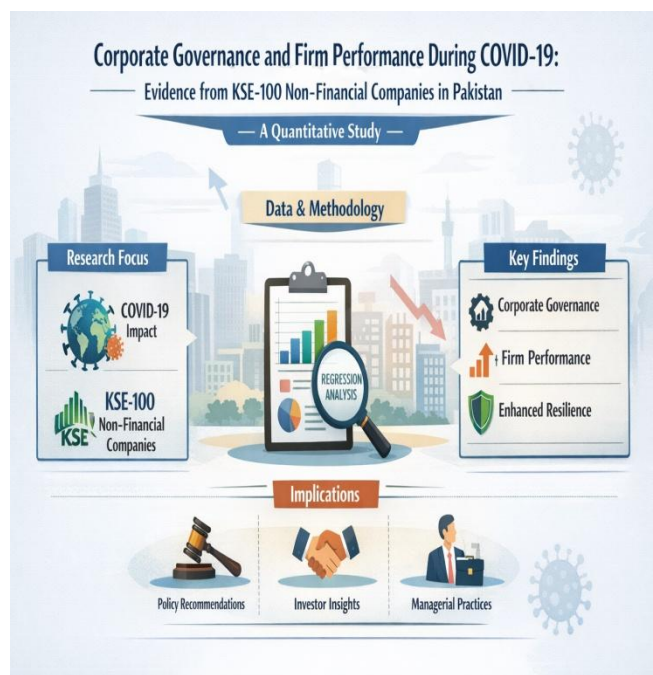


Figure 1. Graphical abstract

INTRODUCTION

The COVID-19 pandemic has had an unparalleled impact on the global economy, with far-reaching consequences for financial markets, corporate governance, and firm performance. As highlighted by Albuiescu (2001), the pandemic triggered a severe economic crisis, which manifested in dramatic downturns in stock markets worldwide. The European and U.S. markets, particularly the Europe 350 and S&P 500 indices, saw significant declines, with the latter losing about one-third of its value within a few weeks of the crisis (Hayden & Hayden, 2021). The disruption caused by the pandemic was not just confined to the financial markets but also reverberated across various sectors, causing immense challenges for firms, especially in emerging markets like Pakistan. Hussain (2020) further underscores the impact of the pandemic on Pakistan's financial markets, notably the KSE-100 Index, which experienced substantial losses during the crisis.

The crisis also exposed vulnerabilities in corporate governance, particularly within firms listed on stock exchanges. As businesses faced unprecedented challenges, the role of the board of directors and governance structures became more critical than ever in ensuring organizational resilience and operational efficiency. According to Mann, Kruger, and Vohs (2020), governance mechanisms directly affect company operations, with decisions made by boards having a profound impact on a company's ability to weather economic storms. During times of crisis, such as the one induced by the COVID-19 pandemic, corporate governance plays a crucial role in managing financial stress, safeguarding liquidity, and maintaining shareholder trust.

In Pakistan, the impact of COVID-19 on corporate governance and firm performance has been particularly significant. The government's response to the pandemic, including lockdowns, mobility restrictions, and social distancing measures, severely disrupted business operations, with particularly adverse effects on small and medium-sized enterprises (SMEs). The financial sector was also impacted, with liquidity issues, declining profits, and increased uncertainty surrounding business continuity. Despite these challenges, some firms demonstrated resilience, largely due

to strong governance frameworks that enabled effective crisis management. However, there remains a lack of comprehensive research into the impact of the pandemic on corporate governance and firm performance in Pakistan, particularly within the industrial and manufacturing sectors. Existing studies have focused on global financial markets, but the specific context of Pakistan's corporate environment has not been sufficiently explored.

This study aims to fill this gap by investigating the relationship between corporate governance and firm performance during the COVID-19 pandemic, specifically focusing on non-financial companies listed on Pakistan's KSE-100 Index. Drawing on quantitative data from secondary sources, including annual reports and the Pakistan Stock Exchange (PSX) website, the study will assess how governance structures such as board size, independence, gender diversity, and the educational and professional background of directors influenced firm performance during the crisis. Previous research, such as that by Shen et al. (2020) and Ramelli and Wagner (2020), has demonstrated that the financial performance of firms is often linked to governance practices, with companies that had robust governance frameworks showing better financial outcomes. This study will contribute to this literature by focusing specifically on the impact of corporate governance on Pakistani firms, offering a unique perspective on the challenges faced by companies in an emerging market during a global crisis.

The findings from this research will provide valuable insights into the role of corporate governance in mitigating the negative effects of the pandemic on firm performance. It will also highlight the importance of certain governance attributes, such as the size and independence of the board, the diversity of directors, and their experience, in enhancing the resilience and sustainability of firms. Moreover, this study will inform policymakers, corporate managers, and investors on the best practices for strengthening governance frameworks to better prepare for future crises. By examining the performance of firms before and after the pandemic, the study will also provide empirical evidence on the effectiveness of governance structures in supporting long-term corporate performance, thus contributing to the ongoing debate on corporate governance and its role in fostering business resilience in the face of global disruptions.

In conclusion, this research seeks to contribute to the existing body of literature on corporate governance and firm performance, with a specific focus on the Pakistani context. By addressing the gap in research on the impact of COVID-19 on corporate governance in emerging markets, the study will offer important implications for corporate governance practices, policy recommendations, and the future resilience of businesses in Pakistan and similar economies facing similar challenges.

LITERATURE REVIEW

Concept of Corporate Governance

The research study conducted by Bhagat and Bolton (2019) result shows that corporate governance encodes the rules, regulations and procedures that, along with their practices, tend to govern and guide organizations to maximize profits. Corporate governance is considered important in defining the criteria of authority, responsibility and empowerment by expanding roles and responsibilities. In addition, SECP (2016) states that the corporate governance structure reflects the sharing of tasks amongst stakeholders, board of directors, management and shareholders and

determines their role in decision-making processes related to corporate affairs. In addition, corporate governance reflects the commitment by Coverman and Welte (2019) to seven principles such as discipline, independence, transparency, accountability, responsibility, societal responsibilities and fairness that rivals its commitment to shareholders and society.

Concept of Firm Performance

Research by Raja Pathirana and Hui (2018) highlights that company performance clarifies the ability of firms to create productivity and profitability by efficiently using human resources with physical resources. Moreover, a firm's performance is measured by five economic factors related to income, productivity, and flows of cash, value additional and marketplace of share. Additionally, the study of Tyvidi and Karami (2021) clearly shows that a company higher performance is often important to the business as it leads to its long-term performance along with higher profitability.

Corporate governance, in general, is an organizational body that reflects the rules, procedures and regulations regarding the management and supervision of organizations in terms of application. This is corroborated by research by Velnampi (2013), who believes corporate governance is necessary to define measures of authority, responsibility and authority, and expanded through the distribution of roles and responsibilities. The corporate governance shows the sharing of tasks amongst stakeholders, management, board of directors and shareholders, and decision-making responsibilities regarding corporate activities (SECP, 2016). Besides, corporate governance shows the company's commitment to seven values such as discipline, accountability, independence, social responsibility, transparency, accountability and justice, which reflect the company's commitment to its shareholders and society (Akbar et al., 2020).

A study by Bhatt and Bhatt (2017) obviously presented that corporate governance is important to provide firms with effective infrastructure to improve the quality of decisions taken by the regulator. In addition, strong corporate governance structures enable ethical decision-making within the company, which helps companies build sustainable businesses and create long-term value for key stakeholders. Aziz (2015) also put forward the idea that good corporate governance contributes to the resilience of organizations in response to environmental changes and challenges, as result to achieve higher firm performance in term of productivity and profitability.

Theoretical Reflection

Agency Theory

The agency theory maintains its importance in the corporate management of organizations, is contributes to solution of problems related to the relations among agents and the principals of doing business. The theory replicates the shareholder as principal and company managing agent. This theory primarily emphases on shorten losses after conflicts of interest amongst the number of shareholder and directors by the Sjogren, Wehmeier, and Palmer (2017). It was established by Panda and Lipsa (2017), where agent are generally responsible for reflecting the client in certain business transactions, reflecting the client's interests regardless of their personal interests. For the moment, the involvement of a helpful agent leads to a conflict of interest between the two parties, which further exacerbates the problem of main agents Vitola, Raimo and Rubino (2020). In this situation, agent theory allows the governance arrangement to moderate

clashes that arise by prioritizing the interests of the client and reimbursing the interests of agents in relations of risk hatred and goal placement. Furthermore, Horeva and Wechtler (2020) stated which corporate governance can understood as an important structure accountable for managing the underlying issue and developing by these guidelines, the agent acts in the superlative interests of the principals.

Stockholders' theory

According to Stakeholders theory emphasizes the interdependent relations of a company with other business participants, clients, stockholders, suppliers, groups of community, investors and workforces. This theory highlights concept of the generation of value of the firm not important but also work for betterment of other stockholders by Freeman and Dmitriev (2017). The base of stakeholder theory is operational maintenance of the relationships between corporate governance and company performance. A study by Jones, Harrison, and Phelps (2018) argues that companies incline towards happening one direction in the marketplace and align their interests of each stakeholder.

Literature Gap

The tendency developing of corporate governance's organizations, the examination field is extended to study the role of corporate governance in all aspects of it. Additionally, the effect of corporate governance's and its characteristics on corporate performances has comprehensively studied, but research on its impact on Covid 19 is limited. Moreover, there is limited research of study have existed showed to examine the association between companies performance and corporate governances from the Pakistani perspective during Covid 19, which will be examined in this research on relationships between them in the context of Pakistan.

Evidence from Literature Review

Impacts of Corporate Governance on Firm Performance

The appearance of competition with its complexity in the business world has increased the importance given to corporate governance to control and manage the organization. The corporate management system improves the unequal exchange of information between the stakeholders, the parties and the company. Improved communication and upgraded corporate governance lead to increased trust and confidence as the company's market value increases and increasing in profitability of the companies. Similarly, a study conducted by Danoshan and Ravitani (2019) they have found that decent corporate governance reduces managerial misconduct through honest financial reporting transparency. Improvement of corporate governance is expressed in the appropriate disclosure and communication of information to all stakeholders. In addition, research by Ahmed and Hamdan (2015) has shown that moral corporate governance is held answerable for restraint throughout organizational system by developing rule and regulations and holding officials responsible for misdemeanours.

This is reflected from work of Alexander et al. (2015) state that good corporate governances generally takes substantial and positive impact on business performances, resulting in profitability and productivity. Job performance is influenced by important corporate governance factors such as size of board, gender variety, and education of board members, international experience, and size of independent executive's board's number. In this context, study by Mohan and Chandra Mohan (2018) supported the idea that organizations can improve corporate governance.

The transparency provided by a company in the disclosure of information is one of the maximum vital features of effective corporate governance. This includes disclosing relevant financial and operational information and monitoring internal governance and regulatory processes Buallay, Hamdan, & Zureigat, (2017) after all the rights and privileges of the shareholders are protected and secured; Along with the autonomous ability of executives to approve the company's strategic plan and the company's critical strategies and goals. Also, the transparency aspect reflects integrity in appointing, supervising and changing leadership as needed. This practice leads to an increase in assurance and self-confidence among stakeholders and ultimately increases the market value of the organizations Zaman, Arslan, & Siddiqui, (2014).

The activities of the company are affected by internal and external factors. The more efficient a company is, the greater the opportunity for growth and maximizing shareholder value. Some of these factors are as follows:

Attitudes of the corporate governance

Corporate governance creates a culture within the organization so that the organization is more committed to a common code of ethical behaviour within the organization. They build culture in the alignment of organizational activities with management-related activities. In addition, the purpose of the board affects its organization and relevant decision-making abilities (Ahmed et al., 2019). If a top manager achieves a culture of innovation, the downstream chain will be in jeopardy and all employees will reflect the characteristics of innovation and creativity.

Policies of Human Resource management

The policy of retention, hiring and firing these policies help reach the workforce in an organized context. If the policy provides support and ensures the fair distribution of resources, employees will be motivated and human resources will be able to keep efficient employees in the organization (İmamoğlu et al., 2019). Likewise, if the mechanisms for evaluating and distributing rewards are ineffective, individuals will be no motivated to work for the interest of organization.

Technological Efficiency

The organizations are renovating rapidly and growing with globalization. This makes their ability to reproduce goods and services more efficiently a great source of competitiveness. In this way, the role of technology helps companies gain and maintain a competitive advantage in every industry Diamantidis and Chatsoglou (2019). This makes them more efficient than their competitors. There are several methods for measuring performance over time with efficacy. It includes financial ratios and non-parametric models.

Role of Corporate Governance on Firm Performance during COVID-19

The Covid-19 phenomenon is having a huge impact on industries and their performances due to the undefined businesses situation and government measures for control Covid-19. A study by Khatib and Noor (2021) highlights that the Covid-19 crisis is important to businesses and affects their productivity and profitability, but corporate governance plays an important role in helping organizations. In the context of Covid-19, the corporate governance structure of organizations has actively adopted the changes in the external environment and offers norms and rules for the efficient operation of companies. The board of directors have addressed unforeseen issues related to adverse impacts and

mitigated the issues by implementing business same strategies appropriate to business environment by Farwis (2021).

Factors affecting Firm Performance during Covid-19

In the research study by Ramelli and Wagner (2020) stated, those companies which have less leverage and more capital resources were fewer affected by widespread of Covid-19. They found compelling evidence that international trade and the role of the value chain are crucial to a firm's value. Stocks in the US and Europe showed volatility when the first case of Covid-19 infection emerged in China. Albuquerque et al (2020) show that hard work on environmental and social performance yields high returns, and hard work on environmental and social performance results in low returns due to customer and investor loyalty to companies. Companies with low environmental and social performance gained more visibility than companies with low CSR.

Dean et al. (2021) also stated that asset hedging results in higher performance for large companies than for small companies. Equity markets charge negative prices for high levels of management ownership, while fund managers charge positive prices for small holdings. The impact of the statement of the 1st case of Covid-19 does not distress everything except the impact of 1st case of death and tremors the stockholder. Then, the governments pronounces new economic and fiscal policies that create uncertainty in stock market around the world, which adversely affects stock returns mentioned by Hayden and Hayden (2021).

Critical Analysis of Literature

It stood emphasized by Khatib et al (2020) role of strategy in corporate governance's strategy in all cases where managers have managerial influence over corporate activities embodied in policies. Beyond these roles, the devastation of Covid-19 suggests a role for board inaction by reducing the risk of indecisiveness and insecurity overshadowed by the disease spare. This prevalent creates more outside risks, forcing managers to modification their investments or capital, executive structures and strategies in the face of shortest and longest terms crises, Shen et al. 2020; Foss, 2020. Enchanting into account all aspects of the pandemic's distracting organizational processes, the dashboard not only highlights the special role of controlling managers, but also requires additional joint efforts to preserve their individuality, freedom and independence. Implementation must be done, role. Policy development with strict monitoring as highlighted by Khatib et al. (2020) is the source.

The Covid-19 pandemic has affected people's quality of life and posed serious challenges for businesses, countries and economies. Accordingly, Fitrisari (2020) stated that Covid-19 and its negative effects adversely affected the activities of publicly traded companies. It has become clear that the pandemic is a threat to the global economy and is putting an increasing burden on international companies and SMEs. Countermeasures to mitigate the negative impact of Covid-19, including curfews, movement restrictions and social distancing policies, limit corporate operations, negatively impacting their productivity and profitability Rapaccini et al. (2020).

Even in the earlier stages, the economic impact of the epidemic is being determined. On the contrary, there is insufficient research on the impact of Covid-19 on the company's capital structure, corporate governance, business performance, as well as aspects related to share repurchases, dividends and strategies. While some research has been done on the impact of Covid-19 on the financial

and monetary performance of organizations, none of the previous research has focused specifically on Pakistani industry. According to Shen et al. (2020) is an exception to this view, which examines the detrimental impact of Covid-19 on the financial performance of listed businesses in China. Additionally, the significant impact of Covid-19 on management, organizational performance and other aspects is clear and needs to be studied to gain broader understanding. This relevant research tends to help highlight the importance of corporate governance in strategic planning and risk management. Moreover, in order to contribute to the current comprehensive research area of the Covid-19 literature, the function of corporate governance along with the key characteristics of the company has been studied in abstract terms in order to improve the performance of Pakistani businesses during Covid-19.

RESEARCH METHODOLOGY

Sample selection and Populations frame

There are more than 500 corporations are listed on Pakistan Stock Exchange and KSE-100 companies will be selected among them due to time limitations in the study.

Unit of analysis

An analysis unit for this study based on frequency finding, availability of access to collection of data from the yearly reports, financial statements, and financial information. The KSE-100 data of companies based on functioning in Pakistan's industrial sector is stock markets of Pakistan.

Type of Study

This study will follow quantitative study. This study is built on an empirical examination of the association between corporates governances and the financial performances of companies registered in Pakistan stock exchange. This requires cross-sectional data collection, statistical modelling, and testing with quantitative study. This studies hypothesis is held by the research philosophy of positivism and the application of the deductive research approach, as both approaches require formulating hypotheses based on previous research and testing them in our institutions.

Time Horizon

The study of research is based on the cross-sectional data. The data collection period is 2019, 2020 and 2021, i.e. the period of the Covid-19 pandemic in Pakistan.

Data collection procedure

The study will use secondary data approaches to be together by extracting financials data from the annuals report of selected corporations to monitor the specified variables. Data will be taken from PSX, Investing.com and annual report of company data from 2019 to 2021 to study the impact during the outbreak of COVID-19, while analysing by STATA software. Data will be collected on selected variants from companies on the KSE-100 list in Pakistan's manufacturing sector.

Corporate governance data, including independence, gender diversity, executive education and international experience of the directors, will be collected manually from the annual report. While the company financial performance data will be collected from the KSE-100 of Pakistan stock exchange.

Variable

The independent variables for the Corporate Governance (CG)

- Board of independent directors (IND)

- Gender diversity (BGD) or Female director: is measurement as ratio among male directors and women directors
- Director's education level (EDU): is measured as two or more than directors have master qualification
- Foreign experience (FE): is measured as two or more than directors have foreign experience

These variable was used by Shen et al. (2020) and Khoreva and Wechtler (2020).

Dependent variables Financial Performance (FP)

- Return on Assets (ROA): also known as returns on the total assets which measure by net profit divided by total assets of the company.
- Return on Equity (ROE): returns on total equity, which measure by net profit divided by shareholder equity of the company.

Controls variable

- Company size (CS): measured in terms of aggregate assets
- Liquidity (LIV): cash to total assets ratio
- Net Asset turnover (NAT): as measured net sales divided by average assets
- Interest cover ratio (ICR): as measured before interest and taxes divided by interest expense
- Current ratio (CR): as measured current assets divide by current liabilities
- Collection period days (CPD): receivable collection day

Data analysis

$$FP = \beta_1 IND_{it} + \beta_2 BGD_{it} + \beta_3 EDU_{it} + \beta_4 FE_{it} + \beta_5 CS_{it} + \beta_6 LIV_{it} + \beta_7 NAT_{it} + \beta_8 ICR_{it} + \beta_9 CR_{it} + \beta_{10} CPD_{it} + \epsilon_i$$

In the first phase, FPs will include ROA measured by accounting-based methods and ROE data will be collected for the period 2020, 2021 and control variables. At the same time, CG data for 2019 will be collected.

RESULTS

Descriptive Statistics

Table 4.1

Descriptive Statistics of Variables

	Mean	S.D.	Min	Max
ROA_mean_2021	11.163	9.451	-3.265	49.870
ROE_mean_2021	17.003	23.747	-7.040	163.735
Independent_director	0.243	0.097	0.083	0.600
Female_director	0.108	0.096	0.000	0.429
EducationMaster_director	0.453	0.137	0.222	0.667
ForeignExp_Directors	0.603	0.489	0.000	1.000
Log_Total_assets	12.611	1.330	8.512	15.363

liquidityratio2019	1.227	1.068	0.270	6.210
netassetsturnover2019	2.219	2.791	0.220	14.290
interestcover2019	31.892	55.844	-2.420	241.850
currentratio2019	1.630	1.257	0.420	7.020
collectionperioddays2019	75.232	122.003	0.000	518.000

Table 4.1 reported the descriptive analysis of the all variables of data. The mean value of ROA Shows the minimum value is more than maximum value of the companies as mean = 11.163 which shows average ROA of the companies with standard deviation of 9.451. While the mean value of ROE indicates the minimum value

of the returns companies have with mean of 17.003 which is shows companies has average return. The participant level of independent director stood with the mean of 0.243, female directors, education and foreign experience are respectively, 0.108, 0.453 and 0.603. Its shows the participant of female directors lowest participants and other variable are average. The mean value of ROA is less than ROE in the year 2021 which means that equity based projects garnered larger results as compared to the profits gained from the utilization of the assets. In terms of the average performance and output of the directors, female directors had the lowest value at 0.108, independent directors stood at 0.243, education directors at 0.453 and foreign experience directors at 0.603. This shows the varying capabilities of directors from different backgrounds.

Table 4.2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
ROA_mean_2021	1.00											
ROE_mean_2021	0.70	1.00										
Independent_director	0.06	0.06	1.00									
Female_director	0.13	0.05	0.23	1.00								
EducationMaster_director	0.08	0.15	-0.05	-0.14	1.00							
ForeignExp_Directors	0.28	0.20	-0.07	-0.02	0.06	1.00						
Log_Total_assets	-0.09	0.01	0.12	-0.20	0.01	0.04	1.00					
liquidityratio2019	0.30	0.05	-0.02	-0.05	0.13	-0.10	0.26	1.00				
netassetsturnover2019	0.17	0.28	0.19	-0.01	-0.04	0.35	-0.05	-0.13	1.00			
interestcover2019	0.26	0.07	-0.15	0.08	0.06	-0.04	-0.06	0.34	-0.09	1.00		
currentratio2019	0.26	0.02	-0.18	0.05	-0.01	-0.10	-0.03	0.76	-0.17	0.52	1.00	
collectionperioddays2019	0.11	0.02	-0.06	-0.10	-0.00	-0.23	0.20	0.47	-0.14	-0.09	0.12	1.00

Correlation Analysis of Variables

Table 4.2 has been reported of the correlation of variables, which tells the relationship between 2 variables and the significant level value of 0.01 to 0.05. The ROA is positive correlation with independent variables which are female and foreign experience of directors has significant. Independent directors and its education are not meet has significance level to be correlated. Among the control variables only total assets is negatively correlated with ROA and also has insignificant impact. In other control variables are positively correlated with ROA.

The ROE is positive correlation with independent variables which are education and foreign experience of directors has significant. Female directors and Independent directors are not meet has significance level to be correlated. In control variables only net asset turnover has significant level, while other variable has insignificant impact on ROE.

Table 4.3

Regression results with mean ROA over 2020 and 2021

	(1)	(2)	(3)	(4)	(5)
VARIABLES	ROA_mean_2021	ROA_mean_2021	ROA_mean_2021	ROA_mean_2021	ROA_mean_2021
Independent_director	7.035*** (0.000)				10.824*** (0.000)
Female_director		10.998*** (0.000)			9.199*** (0.000)
EducationMaster_director			2.899*** (0.000)		3.134*** (0.000)

ForeignExp_Directors				5.871***	6.277***
				(0.000)	(0.000)
Log_Total_assets	-1.176***	-1.006***	-1.113***	-1.307***	-1.199***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
liquidityratio2019	2.689***	2.975***	2.721***	2.672***	2.052***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
netassetsturnover2019	0.693***	0.736***	0.739***	0.401***	0.339***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
interestcover2019	0.033***	0.031***	0.032***	0.034***	0.034***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
currentratio2019	-0.274***	-0.518***	-0.323***	-0.312***	0.156*
	(0.001)	(0.000)	(0.000)	(0.000)	(0.059)
collectionperioddays2019	0.004***	0.004***	0.004***	0.009***	0.012***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	18.494***	16.954***	18.130***	18.700***	11.947***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	24,965	24,965	24,965	24,965	24,965
R-squared	0.191	0.198	0.188	0.263	0.287

Regression is used to examine the relationship between corporate governance characteristic and companies' performance in Pakistan. The regression result are shown in table no 4.3. The regression result of ROA in respect to the output of director's showcase varying results all directors had a positively impacted on the financial performance of the organization which generated a positive relationship between the directors and their expertise to properly utilize the company assets. Only negative relationship that exists between the directors and the company performance is in terms of company size and current ratio which means they are facing difficulties in meeting the short term obligations of the company.

To measure this we used return on assets and the corporate governance has significant impact on firm performance (Khatib & Nour, 2020); (Waheed A. &, 2019). The larger board of size independent directors, more educated directors, number of female directors (gender ratio) and foreign experience increasing in governance structure and strategic connection. Irrespective the Covid-19 effect on directors of board performs to be key factor in improving companies' performance during pandemic.

Table 4.4

Regression results with mean ROE over 2020 and 2021

	(1)	(2)	(3)	(4)	(5)
VARIABLES	ROE_mean_2021	ROE_mean_2021	ROE_mean_2021	ROE_mean_2021	ROE_mean_2021
Independent_director	5.854***				11.297***
	(0.000)				(0.000)
Female_director		13.922***			17.585***
		(0.000)			(0.000)
EducationMaster_director			28.410***		29.544***
			(0.000)		(0.000)
ForeignExp_Directors				6.575***	6.472***
				(0.000)	(0.000)

Log_Total_assets	0.174	0.377***	0.552***	0.019	0.579***
	(0.148)	(0.002)	(0.000)	(0.872)	(0.000)
liquidityratio2019	0.376	0.629**	-1.585***	0.284	-2.323***
	(0.182)	(0.023)	(0.000)	(0.301)	(0.000)
netassetsturnover2019	2.497***	2.535***	2.626***	2.160***	2.221***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
interestcover2019	0.041***	0.039***	0.034***	0.042***	0.035***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
currentratio2019	0.127	-0.092	1.491***	0.144	2.009***
	(0.570)	(0.672)	(0.000)	(0.507)	(0.000)
collectionperioddays2019	0.012***	0.012***	0.018***	0.018***	0.027***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	4.936***	2.361	-11.574***	4.751***	-20.729***
	(0.002)	(0.140)	(0.000)	(0.002)	(0.000)
Observations	24,965	24,965	24,965	24,965	24,965
R-squared	0.092	0.094	0.116	0.106	0.137

The regression analysis of ROE results in showcase varying results. The directors has a positive impact on the financial performance of the company. Which generated a positive relationship between the directors and their expertise to properly utilize the company equity. Other variable has positive relationship that exists between the directors and the company performance. The regression result are shown in table no 4.4. To measure this we used return on equity the corporate governance has significant impact on firm performance (Hassan 2020); (Waheed A. &, 2019). The lager board of size independent directors, more educated directors, number of female directors and foreign experience increasing in governance structure and strategic connection.

Besides, the extent of this board size analysis indicates the education level, gender ratio, foreign experiences and more independent directors has significant impacts on firm performance. So as result in study those companies have well managed things during pandemic which have high level of education, gender ratio (number of female directors higher), foreign experiences of the directors and more independent directors while those companies have not well managed things during Covid-19 pandemic which have lower level of education, gender ratio (number of female directors less), less number of foreign experiences of the directors and less number of director independent directors. The gender diversity seemed to be significantly enhancing form performance in the crisis time. This is because of the diver's insight expectation, knowledge, a more diverse board compared to its counterpart that acts as strategic recourse to the firm in the current crisis. Likewise liquidity has positively correlates with performance Khatib & Nour 2020, indicating that managers tend to increase firms cash level to handle with the operational risk caused by Covid-19 and ensure that's firms can smoothly survive the pandemic. Which result shows companies with higher liquid assets at end of 2019 have better performance in 2020 and 2021 years.

As results corporate governance characteristics efficiently contributed to firm performance. On the other hand education level, gender ratio, foreign experiences and more independent directors has significant impacts on firm performance. It show that qualified and foreign experience directors could contribute to the firm performance through this professionalism.

CONCLUSION AND RECOMMENDATIONS

Covid-19 is not limited to some industry, but it immensely impacted the publicly traded firms in around the world and affected the relationship between corporate governance and firm performance. By the way, as there is a scarcity of research in this field, especially in an emerging market like Pakistan. In this study, we examine the impact of Covid-19 on corporate governance characteristics on firm performance using a sample of KSE-100 76 companies listed on the KSE for the years 2019, 2020 and 2021.

In the Covid-19 crisis influenced all firm characteristics. Furthermore, the regression analysis showed that the board of independent directors' size, gender diversity foreign experience and qualification governance framework that has a substantial positive effect on company results. This is due to a more varied board's diverse insight, aspirations, experience, and context as opposed to its equivalent. The company should have increase in female director ratio and foreigner experience director to increase efficiency in the firm performance.

This research adds to the limited literature by expanding on pandemic effect on various firm level characteristics Covid-19 crisis. This research has a vital contribution to the literature by studying the limited evidence on the effect of Covid-19 on firm performance. According to the knowledge, the attempt of this study is the pioneer study in relation to Covid-19 impact on firm performance in the Pakistan context. However, this study has some drawbacks too. The sample of this study was 100 listed companies

only. If the larger sample has been selected, it would have been depth analysis with valid results.

Future researcher at the time of the study is too early and this study to be repeated with a higher number of sample and including several corporate governance measures such as different ownership structure, risk management, audit committee and family ownership. We recognize that, in addition to corporate governance practices, many other external factors affect corporate decisions during the Covid-19 crisis, such as government policies.

Consent to publish declaration:

Not Applicable.

Declaration of competing interest

The authors of this paper declare that they have no conflicts of interest regarding the publication of this paper.

Author's Contributions

Syed Rafid Ali Shah: Conceptualization (lead); Data curation (equal);

Formal analysis (equal); Methodology (lead); Software (lead);

Validation (lead); Visualization (lead); Writing- original draft (lead).

Amin Ullah Khan: Validation (supporting); Visualization (supporting);

Basharat Khan: Data curation (supporting); Methodology (supporting);

Acknowledgment

The authors would like to thank anonymous reviewers for their valuable comments. They would also like to thank the School of Economic and Management, Chang'an University, Xian 710054, China, for their support.

Data availability

The datasets generated and analyzed during the current study are available upon request

Ethics and consent to participate declaration:

Not Applicable

Funding

National Natural Science Foundation of China (42474161, 42442402, 42104120). Youth

Interdisciplinary Team Project of Chang'an University (300104240917)

References

1. Ahmed, E. and Hamdan, A., 2015. The impact of corporate governance on firm performance: Evidence from Bahrain Bourse. *International Management Review*, 11(2), p.21.
2. Albuquerque, R., Koskinen, Y., Yang, S., & Zhang, C. (2020). Resiliency of environmental and social stocks: An analysis of the exogenous COVID-19 market crash. *The Review of Corporate Finance Studies*, 9(3), 593-621.
3. Ashraf, B. N. 2020. The economic impact of government interventions during the COVID-19 pandemic: International evidence from financial markets. *Journal of Behavioural and Experimental Finance*, 27, 100371. <https://doi.org/10.1016/j.jbef.2020.100371>
4. Bhagat, S. and Bolton, B., 2019. Corporate governance and firm performance: The sequel. *Journal of Corporate Finance*, 58, pp.142-168.
5. Croci, E., Hertig, G., Khoja, L., and Lan, L. L. 2020. The advisory and monitoring roles of the board: Evidence from disruptive events. *SSRN Electronic Journal*, April. <https://doi.org/10.2139/ssrn.3581712>
6. Danoshana, S. and Ravivathani, T., 2019. The impact of the corporate governance on firm performance: A study on financial institutions in Sri Lanka. *SAARJ Journal on Banking & Insurance Research*, 8(1), pp.62-67.
7. Ding, W., Levine, R., Lin, C., & Xie, W. (2021). Corporate immunity to the COVID-19 pandemic. *Journal of Financial Economics*, 141(2), 802-830.
8. Farwis, M., Siyam, M.M., Nazar, M.C.A. and Aroosiya, M.A.C.F., 2021. The Nexus Between Corporate Governance and Firm Performance During COVID-19 Pandemic in Sri Lanka. *Journal of Economics, Finance and Accounting Studies*, 3(1), pp.81-88.
9. F. A., Abdullah, D. F., Hendrawaty, E., and Yahaya, I. S. 2020. Corporate governance mechanisms and capital structure. *Journal of Critical Reviews*, 7(16), 463-471
10. Foss, N. J. (2020). The impact of the Covid-19 pandemic on firms' organizational designs. *Journal of Management Studies*. <https://doi.org/10.1111/joms.12643>
11. Freeman, R.E. and Dmytriiev, S., 2017. Corporate social responsibility and stakeholder theory: Learning from each other. *Symphonya. Emerging Issues in Management*, (1), pp.7-15.
12. Heyden, K. J., & Heyden, T. (2021). Market reactions to the arrival and containment of COVID 19 : an event study. *Finance research letters*, 38, and 101745.
13. Jones, T.M., Harrison, J.S. and Felps, W., 2018. How applying instrumental stakeholder theory can provide sustainable competitive advantage. *Academy of Management Review*, 43(3), pp.371-391.
14. Khatib, S.F. and Nour, A.N.I., 2021. The impact of corporate governance on firm performance during the COVID-19 pandemic: evidence from Malaysia. *Journal of Asian Finance, Economics and Business*, Forthcoming.
15. Khoreva, V. and Wechtler, H., 2020. Exploring the consequences of knowledge hiding: an agency theory perspective. *Journal of Managerial Psychology*.
16. Kovermann, J. and Velte, P., 2019. The impact of corporate governance on corporate tax avoidance—a literature review. *Journal of International Accounting, Auditing and Taxation*, 36, p.100270.
17. Mayhew, K., and Anand, P. 2020. COVID-19 and the UK labor market. *Oxford Review of Economic Policy*, 36, S215-S224. <https://doi.org/10.1093/oxrep/graa017>
18. Panda, B. and Leepsa, N.M., 2017. Agency theory: Review of theory and evidence on problems and perspectives. *Indian Journal of Corporate Governance*, 10(1), pp.74-95.
19. Rajapathirana, R.J. and Hui, Y., 2018. Relationship between innovation capability, innovation type, and firm

- performance. *Journal of Innovation & Knowledge*, 3(1), pp.44-55.
20. Ramelli, S., & Wagner, A. F. (2020). Feverish stock price reactions to COVID 19. *The Review of Corporate Finance Studies*, 9(3), 622-655.
21. SECP, 2021. Corporate Governance. [Online] Available at: <https://www.secp.gov.pk/corporate-governance/corporate-governance/> [Accessed on 17-Nov-2021]
22. Shen, H., Fu, M., Pan, H., Yu, Z., and Chen, Y. 2020. The impact of the COVID-19 pandemic on firm performance. *Emerging Markets Finance and Trade*, 56(10), 2213–2230. <https://doi.org/10.1080/1540496X.2020.1785863>
23. Shogren, K.A., Wehmeyer, M.L. and Palmer, S.B., 2017. Causal agency theory. In *Development of self-determination through the life-course* (pp. 55-67). Springer, Dordrecht.
24. Tajvidi, R. and Karami, A., 2021. The effect of social media on firm performance. *Computers in Human Behavior*, 115, p.105174.
25. Vitolla, F., Raimo, N. and Rubino, M., 2020. Board characteristics and integrated reporting quality: an agency theory perspective. *Corporate Social Responsibility and Environmental Management*, 27(2), pp.1152-1163.
26. Vo, D.H. and Nguyen, T.M., 2014. The impact of corporate governance on firm performance: Empirical study in Vietnam. *International Journal of Economics and Finance*, 6(6), pp.1-13
27. Yahaya, I. S., Senin, A. B. A., Yusuf, M. M., Khatib, S. F. A., and Sabo, A. U. 2020. COVID-19 pandemic and global business challenge are how to survey with business models: A systematic literature review. *Journal of Public Value and Administrative Insight*, 3(3), 82–91. <https://doi.org/10.31580/jpvai.v3i3.1493>