Cogent Business & Management

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/oabm20

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To cite this article: Sajead Mowafaq Alshdaifat, Esraa Esam Alharasis, Noor Hidayah Ab Aziz, Ishraq Bataineh & Hamzeh Al Amosh (2025) Governance in crisis: do different types of ownership influence firm performance in GCC countries amid Covid-19?, Cogent Business & Management, 12:1, 2463576, DOI: 10.1080/23311975.2025.2463576

To link to this article: https://doi.org/10.1080/23311975.2025.2463576

Published online: 04 Mar 2025.

COGENT BUSINESS & MANAGEMENT
2025, VOL. 12, NO. 1, 2463576
https://doi.org/10.1080/23311975.2025.2463576

ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

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Governance in crisis: do different types of ownership influence firm performance in GCC countries amid Covid-19?

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ABSTRACT

This research examines how various ownership composition, such as royal, family, state, director, foreign, and block-holders, affect the performance of firms in the GCC region during the Covid-19 pandemic. The sample includes 373 non-financial GCC firms and the research uses the OLS regression technique with data from 2020 to 2023. To fix the endogeneity, a 'two-step system GMM estimation' was adopted. The analysis found that family, block-holder, and director ownership of Covid-19 had a favourable impact on ROE, whereas royalty and state ownership had a negative impact. Regarding Tobin's Q, the findings revealed that family ownership was substantial and positive, whereas block-holder, royal, and foreign ownership were significant and negative. The findings of this work are significant for investors, regulators, and management, particularly those seeking to improve a company's capital market performance through ownership changes during crises in emerging economies such as the Covid-19 outbreak. The study's outcomes provide authorities with insights into how they might regulate and monitor corporate activity, particularly amid unpredictable market conditions. To the authors' knowledge, this is the first study to look into the influence of diverse ownership arrangements on business performance in the context of Covid-19 in emerging countries such as the GCC.

ARTICLE HISTORY
Received 6 September 2024
Revised 27 January 2025
Accepted 31 January 2025

KEYWORDS
Ownership structure; firm performance; Covid-19; agency theory; GCC countries

SUBJECTS
Accounting; Financial Accounting; Corporate Governance

1. Introduction

Ownership plays a pivotal role in shaping a firm's governance, strategic direction, and overall performance, especially in times of crisis. It determines who controls decision-making, influences risk-taking behavior, and affects resource allocation. Different ownership structures such as family, government, and foreign ownership can lead to varying approaches to managing risks, responding to challenges, and seizing opportunities. It is obvious that ownership is a key factor in determining how well a company performs. The interests of managers and shareholders are sometimes at odds, which leads to issues that impair business performance (Shubita, 2023). While corporate directors are the shareholders' agents in charge of allocating corporate resources to maximise shareholder wealth, shareholders are the principals (Jensen & Meckling, 1976). Considering the common belief that a company's performance is impacted by its relationship with its ultimate owner or owners, research on ownership structure is still of interest.

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Most research on ownership structure has been done on developed-country companies, with an emphasis on conflicts of interest between owners and management (Boshnak, 2023). However, concentrated ownership is a common feature of emerging economy businesses, which can cause conflict between majority and minority shareholders and impair business performance. The variety of owner types in these nations further complicates this connection by potentially intensifying opposing interests. Focussing on ownership categories such as royal, family, state, director, foreign, and block-holders can be a productive way to investigate these conflicts and gain a better understanding of the relationship between ownership structure and firm performance.

While, a quickly expanding Covid-19 pandemic and ongoing viral changes pose significant economic threats, particularly to publicly traded enterprises (Alharasis et al., 2024a, 2024b; Jin et al., 2021). The pandemic introduced new risks for businesses, such as fluctuations in revenue due to lockdown measures or a shift in consumer behaviour. The Covid-19 epidemic has been identified as having a wide range of negative effects on global economies and businesses. Increasing Covid-19 instances affect profits for enterprises listed in 107 countries, with unfavourable implications (Hu and Zhang, 2021). Publicly traded firms in GCC countries faced numerous problems and opportunities as a result of the pandemic's effects on the global and regional economies (Alshdaifat et al., 2024a; Boshnak, 2023; Makki & Alqahtani, 2023). However, the Covid-19 dilemma is unique in its complexity and scope, posing new and unprecedented challenges even for the most resilient and adaptable enterprises (Eckey and Memmel, 2023). Covid-19 has impacted a wide number of businesses worldwide. Recent research shows that the outcomes differ greatly depending on the unique characteristics of the enterprises and industries involved (Amore et al., 2022; Ding et al., 2021; Eckey and Memmel, 2023; Perwitasari et al., 2022). This motivates a study into whether the ownership structure can function as a deciding factor in determining enterprise performance throughout the epidemic. During the current epidemic, there appears to be little research into the relevant relationships between ownership structures and corporate performance (Atayah et al., 2022; Mishra & Mishra, 2023). We enhance prior research by examining the impact of various ownership arrangements (including royal, family, state, director, foreign, and block-holders) on firms' performance amid Covid-19. Al-Janadi (2021) states that the GCC countries possess a distinctive ownership system characterised by the presence of royal ownership alongside various forms of common ownership. The distinctive circumstances of the GCC countries make it intriguing and compelling to undertake this study amidst the Covid-19 pandemic.

GCC nations present a distinctive governance environment marked by concentrated ownership, high state involvement, and evolving regulatory frameworks. GCC non-financial listed corporation shares are 39% institutionally owned (Zeitun, 2014). Strong Middle Eastern institutional ownership promotes firm performance. Our research is ideal for the GCC region and could apply to other growing economies for many reasons. First, wealthy households, government, and quasi-government groups possess most of this land (Santos & ASantos@imf.org, 2015). Major GCC block-holders own 45%–56% of shares, indicating concentration. Second, the region's financial markets have evolved considerably in the past two decades, attracting regional and worldwide investors and needing more transparency and investor protection. MSC included UAE and Qatari stock exchange marketplaces in its Emerging Market places Index in May 2014 due to financial market reforms. Kem (2012) reports that GCC markets had 0.8% share volume, 1.1% banking assets, 1.3% equity market capitalisation, and 0.2% debt securities issued compared to the global total in 2010. Kem (2012) reported that GCC markets are significant for global cross-border debt issuance since investors may easily access them despite their size. While awareness of good governance and improved disclosure has grown gradually, the conservative and protectionist investment culture in the region, which manifests itself in weak information disclosure and unwillingness to relinquish ownership and control by large block-holders, still makes full adoption of governance practices and transparency measures difficult (Boshnak, 2023).

Thus, the purpose of this article is to investigate how various ownership arrangements impact the GCC enterprises' performance during the Covid-19 pandemic. Although the empirical findings are not entirely consistent, a number of researchers have examined the crucial corporate governance feature of ownership structure and its impact on corporate performance. The impact of various ownership arrangements on corporate financial performance is a crucial topic. There is minimal evidence for developing countries, and the majority of studies have concentrated on businesses in industrialised nations. To the best of our knowledge, no prior research has examined the impact of ownership structure characteristics

on business performance in emerging markets like the GCC region. This work aims to increase our understanding of this relationship (Amin & Hamdan, 2018). It enhances the research of Amin and Hamdan (2018) in a number of ways. It adds current data to the growing body of research on ownership structure and firm success. It is unique in that it aims to resolve the contradictory results of previous studies by investigating the effects of different ownership structures (royal, family, state, director, foreign, and block-holders) on business performance as well as other firm-specific features. A number of aspects relating to knowledge-building are addressed in this work. First, there are few previous studies done on Covid-19 (2022, Amore et al., 2022). Therefore, this study provides a new perspective on the relationship between ownership structure and corporate performance in the covid-19 era. Second, GCC listed companies are found to have a diverse ownership structure. These several ownership types are probably going to show different reactions to emergencies like the Covid-19 epidemic. Thus, this paper investigates in-depth the effect on financial indicator (ROE) and firm value measures (Tobin's Q) of a wider spectrum of ownership structures, including royal, family, state, director, foreign, and block-holding ownership. Along with an investigation of firm-specific elements, this study is being conducted to address issues with past studies whose outcomes did not align. Third, this paper differs greatly from past related studies since it seeks to advance our knowledge of how factors in an ownership structure impact business in emerging markets. The study uses a fresh dataset covering the years 2020 to 2023, thereby promoting a more modern and thorough knowledge of this intricate link. Last, to guarantee the robustness of the panel regression model, this study uses both 'dynamic panel GMM modelling'.

This research made use of information gathered from 1865 firm-year observations of non-financial GCC companies between the years 2020 and 2023. It is possible for investors, regulators, and management to gain knowledge from the Covid-19 outbreak in order to enhance the performance of their company in the capital market by modifying the ownership structure of the company in markets that are still developing. This study contains important empirical evidence regarding the GCC regions, which includes a country that has a mixed economy, regulations, and environment that is representative of Arab and Middle Eastern countries (Alharasis, 2024a, 2024b). As a result of these findings, the criteria for validation and cross-sectional generalisation of this research have been expanded. This is due to the fact that the Middle Eastern countries that were researched have cultural and institutional configurations that are closely related to one another and follow accounting standards that are comparable. This study is important for investors, regulators, and management, especially those looking to improve a company's capital market performance through ownership changes during crises in emerging economies like the Covid-19 outbreak. The study's findings give authorities insights on how they might regulate and monitor company activities, especially in volatile market conditions.

The rest of the paper is arranged in several sections. Section 2, where the literature is reviewed, and hypotheses developed. Section 3 provides data selection, research models, and variable measurement. Section 4 presents the results while Section 5 presents the conclusion.

2. Relevant literature review and hypotheses development

According to agency theory (AT), conflicts arise when there is a separation between ownership and management, leading to issues in information flow and potential misalignment of interests (Jensen & Meckling, 1976). Managers may prioritize their own goals over those of the shareholders, exacerbating agency problems. This theoretical framework forms the basis of much ownership structure research, particularly in corporate governance, as scholars seek to understand and mitigate these conflicts (Beatty & Harris, 1999). However, stewardship theory (ST) offers a contrasting perspective, proposing that managers, as stewards, are motivated to act in the organization's best interests, aligning their goals with those of shareholders (Davis et al., 1997). These differing views are critical for understanding the potential dual effects of ownership structures on firm performance.

Ownership structure is a key driver of corporate governance outcomes and varies by context. For example, Warokka et al. (2012) found that concentrated ownership can improve monitoring of management decisions and align with shareholder interests. In the GCC however social and institutional factors create unique dynamics. The prevalence of royal ownership (ROW) creates different governance challenges and opportunities as ROW is like government ownership, where social, tribal, and political connections are intertwined with

corporate governance practices (Alazzani et al., 2021; Habtoor et al., 2019; Shubita, 2022). GCC royal family members are on the boards of many companies; over 60% of listed companies have royal family members on their boards (TNI., 2008). While this helps local firm development and stakeholder engagement (Bamahros et al., 2022) the literature shows mixed results on its impact on firm performance. On one hand royal influence can secure resources and oversight, and align management and shareholder interests (Al-Nasser, 2019). On the other hand royal involvement can lead to conflicts of interest, lack of accountability, and rent-seeking behaviors that harm firm performance (Al-Hadi et al., 2016; Tawfik et al., 2023).

Empirical studies provide further detail. For example, Almarhabi et al. (2023) found that connected firms in the GCC get better loan terms and lower borrowing costs. But that comes at a cost as firms put royal family interests above broader shareholder goals (Saeed et al., 2016). This duality is more pronounced during crises like Covid-19 where royal family connections can exacerbate resource allocation disparities and create both risks and opportunities for firms.

Despite all this, there is still a gap. The existing literature does not provide much analysis on how different theoretical frameworks such as the resource-based view (RBV) can explain the relationship between ownership structure and firm performance. RBV argues that unique ownership types such as ROW can give firms access to valuable resources and competitive advantage (Barney, 1991). The question is whether the benefits outweigh the costs of conflict and inefficiency, especially in the GCC context. Moreover, while foundational studies have examined the role of ownership structures in general, there is a dearth of research specifically addressing how these structures interact with regional factors such as regulatory frameworks, market characteristics, and cultural influences in the GCC. For instance, regulatory interventions designed to mitigate agency conflicts may vary significantly across GCC countries, influencing the effectiveness of governance mechanisms tied to ownership.

This review highlights the need for a more comprehensive and context-specific analysis of ownership structures and their performance implications. By focusing on ROW during the Covid-19 crisis, our study addresses these gaps, thus the following hypothesis is developed:

H1. There is a negative relationship between royal ownership (ROW) and firm performance during COVID-19 among non-financial listed firms in GCC countries.

Family ownership (FAOW) is a common business structure in GCC countries with a long-term orientation, strong family values, and succession planning (Arayssi & Jizi, 2020; Daher-Nashif et al., 2021). This ownership style is associated with stability and sustainability as family businesses prioritize long-term growth over short-term profits (Garas & ElMassah, 2018). FAOW is linked to concentrated ownership which gives families great control over strategic decisions. This is backed by stewardship theory which states that family members as stewards of the business are naturally motivated to work in the best interest of the organization and align their objectives with the long-term performance of the firm (Davis et al., 1997). However, family ownership is not without challenges. The close-knit nature of family businesses can lead to conflicts of interest and inefficiencies due to overlapping family and management roles (Arayssi et al., 2020; Shubita & Alrawashedh, 2023a). These challenges align with agency theory which highlights the potential conflicts between family members in executive positions and other stakeholders, especially minority shareholders (Jensen & Meckling, 1976). These dualities make family businesses a key area of research in corporate governance as scholars try to understand the complex relationship between ownership structure and firm performance.

Research on FAOW and firm performance shows mixed results. For example, research has consistently shown that family firms outperform non-family firms due to their stability and governance (Buchanan et al., 2023). Block (2021) found that family firms in the GCC have lower debt levels which is linked to better performance. Bazhair and Sulimany (2023) and Al-Ahdal et al. (2023) found that FAOW improves the performance of non-financial firms in Saudi Arabia, Oman and UAE. This means owned family-owned businesses in the region have robust governance structures with family members in executive positions that improve oversight and decision-making (Bataineh, 2021). However, other research has shown the limits of FAOW. Boshnak (2023) found a negative correlation between Saudi listed firms' performance and certain ownership structure variables which means concentrated family ownership can sometimes lead to risk averse behavior. These contradictory results mean the impact of FAOW on performance may vary depending on contextual factors such as the regulatory environment, market dynamics, and cultural norms (Ab Aziz et al., 2024).

During the Covid-19 pandemic family businesses showed great resilience. For example, Perwitasari et al. (2022) found that family-owned businesses outperformed other types of businesses in terms of profitability and market performance during the pandemic. This is in line with the resource-based view (RBV) which highlights the unique resources of family businesses such as their ability to use family ties and shared values to navigate disruptions (Barney, 1991). Miroshnychenko et al. (2024) and Alharasis and Mustafa (2024) also mentioned the adaptability of family businesses, they can recover from the crisis by using internal resources and cohesive leadership. Kinias, (2022) and Amore et al. (2022) also found that family businesses with high managerial involvement performed better during the pandemic as aligned interests among family members enable swift and effective decisionsdecision-making.

Despite all this, there are still a lot of gaps in the literature. Few studies have empirically looked at the relationship between FAOW and firm performance during external shocks like COVID-19. And the mechanisms through which family firms are resilient during crises are not well explored. For example, how do cultural and institutional factors in the GCC shape the strategic responses of family firms to disruptions. And while FAOW is linked to good governance, how do these firms balance family and management priorities during times of uncertainty. Filling these gaps is important to understand the broader implications of family ownership in the GCC. Based on these findings and gaps, the following hypothesis:

H2. There is a positive relationship between Family ownership (FAOW) and firm performance during COVID-19 among non-financial listed firms in GCC countries.

State ownership (SOW) refers to the government's control and management of a firm or organization, representing a close partnership between the government and the entity (Xie et al., 2021). In the GCC, SOW is prevalent across industries, characterized by high ownership concentration and significant government shareholding (Alshammari, 2022; Queiri et al., 2021). This ownership structure plays a dual role: it provides stability and government backing while also posing challenges related to governance and agency costs. According to agency theory (AT), the separation of ownership and management can result in agency problems, such as conflicts between majority state owners and minority shareholders (Jensen & Meckling, 1976). In the GCC, where civil law systems provide limited legal recourse, these problems are worse. Minority shareholders face significant risks, including wealth expropriation by dominant state stakeholders especially when there are no robust legal protections (Martínez-García et al., 2021). Although post-2008 reforms improved minority shareholder rights, there are still many regulatory gaps (IMF, 2018). Empirical studies generally show that SOW negatively affect firm performance. For example, Martínez-García et al. (2021) found that state ownership in GCC countries hinders business outcomes due to inefficiencies and agency costs. Queiri et al. (2021) also found that SOW has negative impact on listed firms in Oman due to mismanagement and lack of market driven accountability. This is in line with resource dependence theory (RDT) which states that excessive dependence on government resources can limit firms' ability to adapt to market dynamics and reduce operational efficiency (Pfeffer & Salancik, 1978).

The Covid-19 pandemic exposed the weaknesses of state-owned enterprises (SOEs). Governments often prioritized social and economic stability over profitability and therefore inefficient resource allocation (Wu & Xu, 2021). SOEs are more likely to be driven by political duties and less responsive to market signals and therefore unable to respond to crises (Van Essen et al., 2013). The pandemic worsened existing agency issues by increasing the likelihood of wealth expropriation and weakening minority shareholder protections. Despite these drawbacks SOW may have advantages in crises. Van Essen et al. (2013) suggested that stakeholders in SOEs rely on long term contracts and government support to protect their interests during turbulent times. This is in line with stewardship theory which argues that state actors can act as stewards of the public interest and use their power to stabilize companies during economic crises (Davis et al., 1997). However, the success of this stewardship depends on institutional factors such as governance frameworks and regulatory oversight which vary greatly across GCC countries. The literature also identifies gaps to be filled. For example while SOW is often associated with inefficiencies it is not clear if these inefficiencies are due to agency costs or broader institutional factors specific to the GCC. Also there is very little research on the resilience of SOEs to crisis such as the Covid-19 crisis. Understanding how state ownership affects companies' response to crises may provide insights into the trade-offs between stability and performance.

H3. There is a negative relationship between state ownership (SOW) and firm performance during COVID-19 among non-financial listed firms in GCC countries.

Director ownership (DOW) in a company is a key way to align management incentives with shareholder interests and reduce agency problems. According to agency theory when directors own shares their financial interests are tied to other shareholders and goals become congruent and self serving behaviour is reduced (Jensen & Meckling, 1976). This alignment leads to better performance as management are incentivised to make decisions for long term value creation (Alharasis, 2023).

The empirical evidence supports the agency theory. For example Al-Ahdal et al. (2023) and found that DOW positively affects firm performance in UAE and Oman, the role of managerial equity in increasing shareholder value. Al Farooque et al. (2020) found that managerial decision making in Thai firms is towards firm performance which is consistent with shareholder wealth maximisation. Rashid (2020) also found that firms listed on Bangladesh Stock Exchange with high DOW have better profitability and market value. All these findings together shows the positive relationship between managerial ownership and firm performance across different markets.

However, the relationship between DOW and firm performance is not linear. Entrenchment theory says that too much managerial ownership can lead to entrenchment where managers get too much control and accountability goes down and potentially harm the firm. For example Ogabo et al. (2021) found that managerial ownership positively impacts firm performance in UK FTSE 350 companies but this effect diminishes beyond 5% ownership threshold, no more benefits and entrenchment risks. So we need to maintain the right balance of managerial equity to avoid the negative effects. During crises like Covid-19, the role of DOW is even more important. Ding et al. (2021) found that firms with managerial ownership were better able to navigate pandemic disruption, they used their alignment of interests to sustain profitability and adapt to uncertainty. This supports the stewardship theory which says that managers with equity stakes will act as stewards of the organization, prioritise long term survival and performance over short term gains (Davis et al., 1997).

While these studies show the benefits of DOW, there are still gaps in the literature. For example, no attention has been given to how context variables such as industry characteristics or governance frameworks moderate the relationship between DOW and firm performance. Also, the role of DOW in the unique institutional setting of the GCC where ownership structures are often tied to cultural and political factors has not been studied. Given this background, it is proposed that DOW will positively impact firm performance during Covid-19 by aligning managerial and shareholder interests and resilience in times of uncertainty.

H4. There is a positive relationship between director ownership (DOW) and firm performance during COVID-19 among non-financial listed firms in GCC countries.

Foreign ownership (FOW) is seen as an indicator of firm quality as foreign investors choose firms with better performance prospects for their investments (Batten & Vo, 2015). FOW is crucial in emerging economies especially in the GCC countries where attracting foreign direct investments (FDIs) is a top priority for policymakers. FDIs bring in capital and technology and management practices to local firms to align with international standards and enhance their strategic capabilities (Al-Janadi, 2021). Hence, this leads to better corporate performance and competitiveness. Empirical studies show strong evidence of the positive impact of FOW on firm performance. For example, Boshnak, (2023) found that foreign ownership had a positive impact on firm performance in Saudi Arabia, similar to Bangladesh (Rashid, 2020), Malaysia (Ahmed et al., 2022), Indonesia (Nofal, 2020) and Europe (Iwasaki et al., 2022). These studies show that FOW can strengthen firms through better governance, more transparency and strategic expertise brought in by foreign investors.

From an agency theory (AT) perspective FOW introduces complexity. Jensen and Meckling (1976) argue that foreign investors increase agency conflicts if management has freed access to resources. Foreign investors want more control over management decisions to mitigate expropriation risk and to enforce good investment strategies (Jensen, 1986). These safeguards lead to risk averse behavior but also to overly cautious investment policies and hence limited growth opportunities and lower investment efficiency. The GCC region has its own challenges in attracting and retaining foreign investment. Al-Janadi (2021) notes that Middle Eastern countries lack robust investor friendly policies which hinders FDI inflows.

For example Saudi Arabia restricted foreign ownership until 2015 when reforms allowed foreign participation in certain sectors (Amin & Hamdan, 2018). Despite these reforms Amin and Hamdan (2018) found a negative relationship between FOW and firm performance in Saudi Arabia, implying that limitations in institutional frameworks and policy implementation still hinder the realization of the benefits of FOW.

The Covid-19 pandemic adds another layer of complexity. While the pandemic affected global investment flows, the impact on FOW in the GCC has been overlooked. Batra et al. (2023) argued that we need to understand how FOW affects company performance during crises, citing policy uncertainty that will compound the problems foreign investors face. For instance, lack of clear investment plans and increased risk aversion during the pandemic may have undone the good of FOW on business performance. Based on this theoretical and contextual framework, it is proposed that the relationship between FOW and company performance during the Covid-19 pandemic will be negative due to lack of institutional support and uncertainty. This hypothesis will shed light on the subtle role of FOW in a crisis situation, especially in the GCC context.

H5. There is a negative relationship between foreign ownership (FOW) and firm performance during COVID-19 among non-financial listed firms in GCC countries.

Block-holder ownership (BOW) is where a single individual or a small group of individuals hold a large proportion of the company's shares, typically 5% or more (Younas et al., 2021). This concentration of ownership gives them control over voting rights and the running of the company, which is more common in emerging markets than developed ones (Armitage et al., 2017). Institutional factors play a big role in shaping the prevalence and power of BOW across different countries, the degree of ownership concentration and who the block-holders are, which in turn affects agency conflicts (Aguilera & Crespi-Cladera, 2016; Yeh, 2019). The dual effect of BOW on firm performance has been studied extensively. On one hand, the concentration of ownership can exacerbate type II agency problems between controlling and minority shareholders as block-holders may put their personal interests above the firm's interests and therefore harm performance (Boyd & Solarino, 2016). Empirical studies have shown that agency conflicts arising from concentrated ownership can negatively affect firm performance (Abdallah & Ismail, 2017; Al Farooque et al., 2019; Queiri et al., 2021).

On the other hand, BOW can mitigate type I agency problems between shareholders and management by allowing block-holders to monitor and influence managerial decisions (Jensen & Meckling, 1976; Shleifer & Vishny, 1997). This monitoring role aligns management's interest with that of shareholders, reduces agency costs and improves firm performance (Eisenhardt, 1989). Recent studies have shown positive correlation between ownership concentration and firm performance as larger shareholders can supervise and guide administrators (Kao et al., 2019; Karim et al., 2023; Khan et al., 2020; Nashier & Gupta, 2023; Rashid, 2020). The impact of BOW on firm performance is more pronounced during crisis times like Covid-19 pandemic. During such periods, block-holders will exert more pressure on managers to optimize resource allocation and operational efficiency. This is in line with Albitar et al. (2022) who found that big shareholders played a vital role in improving corporate performance during the pandemic. The concentrated ownership structure can be a stabilizing force that motivates managers to prioritize long term value creation over short-term challenges. Given the theoretical and empirical evidence, we expect positive relationship between BOW and firm performance during Covid-19 pandemic. This hypothesis recognizes the unique role of block-holders in mitigating agency problems and steering firms towards resilience and efficiency in times of uncertainty.

H6. There is a positive relationship between block-holder ownership (BOW) and firm performance during COVID-19 among non-financial listed firms in GCC countries.

3. Collection of research data and sampling

3.1. Data selection

The primary data set used for this study spans 2020 to 2023. Data on ownership structure were gathered from the annual reports of non-financial companies listed in the UAE, Saudi Arabia, Oman, Bahrain, Kuwait, and Qatar markets. In certain cases, supplementary information was obtained from official

Table 1. Sample choice technique.

Study's sample	Total firms	Pooled
Preliminary sample	427	2135
(–) Firms with missing data	(54)	(270)
Total sample	373	1865

Source: Authors' own creation.

Table 2. Yearly sample distribution based on country.

Country	2020	2021	2022	2023	Total	%
UAE	56	56	56	56	224	15.02
KSA	157	157	157	157	628	42.09
Oman	37	37	37	37	148	9.91
Bahrain	19	19	19	19	76	5.09
Kuwait	79	79	79	79	316	21.18
Qatar	25	25	25	25	100	6.71
Total (GCC)	373	373	373	373	**1492**	**100%**

Source: Authors' own creation.

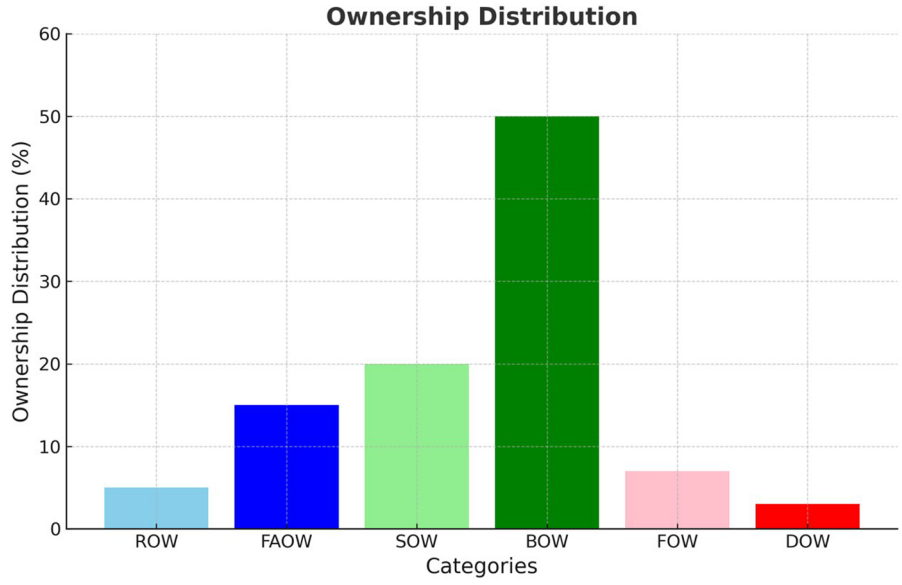

Figure 1. Sample distribution based on ownership.

company websites and stock exchange. Financial information was taken from Thomson Reuters DataStream. In the initial step of the sample selection, a total of 427 publicly traded enterprises were picked, however 54 firms were discarded due to a lack of sufficient information, resulting in 373 firms and 1865 firm-year observations as reported in Table 1. Table 2 shows the sample's overall distribution by country. More than half of the sample comes from Saudi Arabia (42.9%), while 21.18% of the sample is from Kuwait; the UAE is 15.02% of the sample; Oman is 9.91%; Qatar is 6.71%; and Bahrain is 5.09%.

As shown in Figure 1 below, block ownership is the dominant form of ownership (47.7%) which means concentrated ownership structures that ensure control but limit minority shareholder participation in GCC. Family ownership is 12.6% which reflects the traditional family-run businesses in the region, state ownership is 9.4% which shows the significant presence of government-backed entities in key sectors. Foreign ownership is minimal at 2.1% which could be due to regulatory or market barriers to international investment and Royal ownership is limited with 1.0% which means it is still at the inception level. Directors' ownership is the smallest 0.7% which means management have limited personal stakes in GCC.

3.2. Research design and variables measurement

3.2.1. Research design

This study analyses the effect of ownership structure on the firm's performance during the Covid-19 pandemic using a multivariate regression analysis methodology. We utilised the OLS regression model,

adjusting for year and industry fixed effects, in accordance with a number of past research, such as those by Amara et al. (2025), Alshdaifat et al. (2024b), Queiri et al. (2021), Ogabo et al. (2021), and Nashier and Gupta (2023). The following are the models we employ:

Model (1):

$$\begin{aligned}\text{ROE} = {} & \beta_0 + \beta_1 \text{ROW}_{it} + \beta_2 \text{FAOW}_{it} + \beta_3 \text{SOW}_{it} + \beta_4 \text{DOW}_{it} + \beta_5 \text{FOW}_{it} + \beta_6 \text{BOW}_{it} + \beta_7 \text{SIZE}_{it} + \beta_8 \text{LEV}_{it} \\ & + \beta_9 \text{LIQ}_{it} + \beta_{10} \text{GROWTH}_{it} + \beta_{11} \text{LOG\_AGE}_{it} + \beta_{12} \text{BIG4}_{it} + \text{YearEF} + \text{IndFE} + \varepsilon\end{aligned}$$

Model (2):

$$\begin{aligned}\text{Tobin's Q} = {} & \beta_0 + \beta_1 \text{ROW}_{it} + \beta_2 \text{FAOW}_{it} + \beta_3 \text{SOW}_{it} + \beta_4 \text{DOW}_{it} + \beta_5 \text{FOW}_{it} + \beta_6 \text{BOW}_{it} + \beta_7 \text{SIZE}_{it} + \beta_8 \text{LEV}_{it} + \beta_9 \text{LIQ}_{it} \\ & + \beta_{10} \text{GROWTH}_{it} + \beta_{11} \text{LOG\_AGE}_{it} + \beta_{12} \text{BIG4}_{it} + \text{YearEF} + \text{IndFE} + \varepsilon\end{aligned}$$

This study investigates the control variables that have been consistently identified as significant determinants in firm performance models. Specifically, the variables of Size, LEV, LIQ, GROWTH, LOG_AGE and BIG4, which have been used in previous studies on firm performance (Al Nasser, 2019; Boshnak, 2023; Queiri et al., 2021; Shubita, 2023b) (see Appendix 1 for definitions of all variables).

3.2.2. Variables measurement

3.2.2.1. Dependent variable: firm performance. In this study, to evaluate the company performance, two ratios –ROE and Tobin's Q. Tobin's Q is the ratio of the market value of the business, equal to the sum of fair market value of equity plus total liabilities to the book value of total assets (Alshdaifat et al., 2024a; Atiyah et al., 2024; Aziz et al., 2024). On the other hand, ROE offers an accounting view on the usage of shareholders' funds to make returns through an appraisal of operational profits. It is computed using the formula: net income is usually obtained by dividing the total net income by the company's net equity.

3.2.2.2. Independent variable: ownership structure. In evaluating the ownership structure of the firm, several proxies were utilized (Alharasis, 2023):

- Royal Ownership (ROW): Percentage of shares owned by the royal to the total outstanding shares of the firm.
- Family Ownership (FAOW): The level of family ownership (not affiliated with royal families) and is obtained by dividing the total of family-owned shares on the total shares in the firm.
- State Ownership (SOW): Proportion of government's equity to the total equity of the firm.
- Director Ownership (DOW): This is calculated by adding together the number of shares owned by CEOs and the executive directors, and then dividing the sum by the total number of shares in the firm.
- Foreign Ownership (FOW): This can be computed as the percentage of the total shares of the firm that is owned by foreign investors.
- Block-holder Ownership (BOW): This is the extent of ownership by the greatest shareholders, particularly those shareholders with more than 5% of the firm's total outstanding shares.

3.2.3 Diagnostic tests

A number of statistical tests were run to evaluate the models that were suggested for this study's fitness. These included the heteroscedasticity, multicollinearity, outlier, and normalcy tests that Hair et al. (2010) proposed. All of the continuous data were trimmed at the 1% level in order to lessen the impact of measurement outliers. The residuals' probability plot and histogram along with the normal curve (Appendix 2: Figure A1, A2 and A3) were used to perform the normality test. The variance inflation factor (VIF) measurements were used to verify the high co-linearity. Table 3 below's VIF value illustrates that none of the independent variables had a value greater than 2, proving that multicollinearity did not exist. Additionally, the model's heteroscedasticity was handled by estimating the unbiased standard errors of the OLS using the robust standard errors approach.

Table 3. The Pearson correlation matrices.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	VIF
ROE	1.000														–
Tobin's Q	0.271*	1.000													–
ROW	0.015	−0.041	1.000												1.023
FAOW	0.080*	0.147*	0.228*	1.000											1.433
SOW	0.117*	−0.049*	−0.047	−0.229*	1.000										1.642
DOW	0.024	−0.001	0.061*	−0.029	−0.071*	1.000									1.088
FOW	0.034	−0.063*	−0.032	−0.050*	0.029	−0.087*	1.000								1.052
BOW	0.175*	−0.071*	0.103*	0.272*	0.325*	−0.031	0.085*	1.00							1.033
SIZE	0.189*	−0.146*	0.092*	−0.091*	0.354*	−0.026	0.106*	0.094*	1.000						1.46
LEV	−0.072	0.021	0.005	0.115*	−0.033	0.008	0.024	−0.036	0.085*	1.000					1.334
LIQ	0.056*	0.019	−0.052*	−0.075*	0.084*	0.004	−0.078*	0.037	0.044	−0.202*	1.000				1.489
GROWTH	0.286*	0.061*	0.063*	0.029	0.086*	0.031	−0.019	0.009	0.008	0.125*	−0.016	1.000			1.463
LOG_AGE	−0.017	−0.072*	0.008	−0.012	0.000	0.015	−0.091*	0.054*	−0.053*	−0.039	−0.109*	0.035	1.000		1.131
BIG4	0.041	0.005	0.001	0.062**	0.053*	−0.003	−0.014	−0.028	0.064*	−0.024	0.075**	−0.025	0.003	1.000	1.018

Notes: Significant results at the 0.10 levels are denoted by *. All variables are defined in Appendix 1.
Source: Authors' own creation.

Table 4. Descriptive statistics.

Variables	Mean	Median	SD	Min	Max
ROE	.037	.05	.149	−.33	.31
Tobin's Q	1.54	1.18	.984	.58	4.26
ROW	.01	0	.028	0	.122
FAOW	.125	0	.212	0	.842
SOW	.093	0	.191	0	.812
DOW	.008	0	.024	0	.09
FOW	.021	0	.061	0	.25
BOW	.473	.507	.259	0	.92
SIZE	19.955	19.883	1.718	15.135	26.711
LEV	.439	.435	.229	.075	.846
LIQ	2.068	1.45	1.768	.33	7.13
GROWTH	.061	.04	.29	−.451	.679
LOG_AGE	3.252	3.30	.505	2.197	3.989
BIG4	.561	1	.496	0	1
N	*1865*				

Note: All variables are defined in Appendix 1.
Source: Authors' own creation.

4. Empirical results

4.1. Descriptive and correlation analysis

The descriptive statistics for the variables utilized in the regression analysis are summarized in Table 4. In general, firms have a market value that exceeds their book value, and they generate a modest return on equity, which suggests moderate profitability. The performance measures, Tobin's Q and ROE, have mean (median) values of 1.54 (1.18) and 0.037 (0.05), respectively. The mean (median) of ROW for the ownership structure variables is 0.01 (0), with a standard deviation of 0.028. This indicates that related royal ownership is minimal and exhibits low variability across firms. The mean (median) of FAOW is 0.125 (0), with a standard deviation of 0.212. This suggests that, despite the fact that a small number of firms have substantial family ownership, the majority do not, resulting in significant variability. The mean (median) of SOW is 0.093 (0), with a standard deviation of 0.191. This indicates that state ownership is present in some firms, but it is generally low and varies significantly among firms. The mean (median) of DOW is 0.008 (0), with a standard deviation of 0.024. This suggests that the level of director ownership is extremely low, with minimal variation across the sample. The FOW metric has a mean (median) of 0.021 (0) and a standard deviation of 0.061, indicating that foreign ownership is generally low, with the majority of firms having little to no foreign stakeholders. Finally, the mean (median) of BOW is 0.473 (0.507), with a standard deviation of 0.259. This suggests that blockholders are considerable in a significant number of firms, and the level of ownership concentration varies significantly among firms.

Pearson correlation is employed to evaluate the correlation between the independent variables in the regression model, as illustrated in Table 4. The mean variance inflation factor (VIF) is computed for each of the developed models in order to conduct an additional assessment of multicollinearity. Multicollinearity is not a concern in the regression models, as the mean VIF is below two in all cases, as the results demonstrate. This implies that the regression estimates are reliable, as the independent variables do not exhibit high correlations with one another.

4.2. Regression analysis result

The regression analysis presented in Table 5, employing the Ordinary Least Squares (OLS) model, examines the impact of ownership structure on firm performance during the COVID-19 pandemic. The results indicate that the models are statistically significant, with F-values of 10.22 for Tobin's Q and 11.37 for ROE, both with p-values below 0.01. This demonstrates that ownership structure has a substantial and statistically significant influence on firm performance during the pandemic. R-squared values of 18.3% for Tobin's Q and 20% for ROE is reasonable as per corporate governance literature (Rahmat et al., 2009). Although these R-squared values are low, they are comparable to other studies in this area, so the results are robust. Results are consistent with agency theory which states that ownership structure affects the alignment of interest between shareholders and management and hence firm performance (Shleifer &

Table 5. Regression results.

Variables	ROE	Tobin's Q
Intercept	−.336*** (−2.06)	3.148*** (4.89)
ROW	−.211** (−1.12)	−1.68** (−2.34)
FAOW	.096** (3.60)	.850*** (2.21)
SOW	−.082** (−0.46)	−.405 (−3.07)
DOW	.319* (1.82)	.491 (1.50)
FOW	.038 (0.72)	−0.142** (−0.17)
BOW	.079 *** (2.30)	−.069*** (−1.35)
SIZE	.018*** (1.45)	−.283*** (−1.47)
LEV	−.074*** (−2.03)	.077 (0.96)
LIQ	.026 (1.35)	.012 (0.78)
GROWTH	.122*** (1.49)	.294** (1.26)
LOG_AGE	−.039 (−0.81)	−.130*** (−2.82)
BIG4	.011 (1.95)	−.058 (−1.47)
Year fixed effect	YES	YES
Industry fixed effect	YES	YES
Std. error adj.	robust clustering	robust clustering
Prob > F	0.000	0.000
R-squared	20	18.3
F-test	11.376	10.224
Mean VIF	1.93	1.93
N	*1865*	*1865*

Significant results at the 0.01, 0.05, and 0.10 levels of a two-tailed test are represented by ***, **, and *, respectively. The definitions of all variables are in Appendix 1.
Source: Authors' own creation.

Vishny, 1997). Specifically, the coefficients for royal ownership (ROW) are negative and significant for both ROE and Tobin's Q. This means higher ROW is associated with lower firm performance, possibly due to misalignment of objectives or decision-making inefficiencies as supported by Al-Hadi et al. (2016) and Tawfik et al. (2023). This implies that ROW may pose challenges during crisis times, especially when flexibility and internal alignment are crucial.

While, state ownership (SOW) shows an inverse relationship with both variables, as previous studies have found (Martínez-García et al., 2021; Queiri et al., 2021). The negative effect of SOW may imply limitations such as bureaucratic inefficiencies or lack of responsiveness to market dynamics during crisis. On the other hand, family ownership (FAOW) is positively and significantly related to both ROE and Tobin's Q, as previous research has shown (Al-Ahdal et al., 2023; Bazhair & Sulimany, 2023; Buchanan et al., 2023). This means family owned firms perform better and are more resilient, probably due to centralized decision making, long term orientation and ability to mobilize resources during financial stress.

Interesting enough, block holder ownership (BOW) has no significant effect on Tobin's Q but has a strong positive relationship with ROE. This means during the pandemic, large shareholders like directors may have prioritized profitability over stock market valuation. This is in line with Nashier and Gupta (2023) and Karim et al. (2023) which found that profitability focused strategy can enhance short term operational stability during crisis. This is opposite to Abdallah and Ismail (2017).

The study also shows the relationship between directors' ownership and ROE, supporting agency theory. As mentioned in previous studies (Al Farooque et al., 2019; Al-Ahdal et al., 2023; Ogabo et al., 2021; Rashid, 2020) directors with ownership are motivated to align their interests with the firm's interests and therefore positively impact operational performance. Finally, foreign ownership (FOS) is negatively related to Tobin's Q as found by Al-Janadi (2021) and Amin and Hamdan (2018). This means foreign ownership may not necessarily improve market-based performance during a crisis, maybe due to conflict between foreign and local stakeholders or limited adaptability to local market conditions.

4.3. Robustness check

As a dependent variable in the model, return on asset (ROA) is included to perform a robustness check and assess the association between ownership and company performance. This looks at how the outcomes react to adjustments made to the firm's performance evaluation system. Table 6 presents the regression findings when the ROA is used. As is evident, firm performance is still adversely affected by ROW, SOW, and FOW. Furthermore, FAOW and BOW have a good effect on business performance. The outcomes agree with the main conclusions.

4.4. Endogeneity test

Critiques of regression models frequently highlight endogeneity problems, which result from the association between the error term and the regressors caused by causes such as simultaneity or reverse causality, measurement error, omitted variables, or a combination of these. In order to address these concerns and achieve more resilient and dependable outcomes, we utilized the two-step system GMM estimator constructed by Arellano and Bond (1991). In Table 7, the outcomes of the two-step system GMM estimation, which investigates the effect of different types of ownership in GCC firms on performance, are displayed.

Significantly, all p-values obtained from the Hansen test are more than 0.05, suggesting that the instruments employed are reliable in all regression models. In accordance with the requirements of Generalized Method of Moments (GMM), there exists a notable disparity between the serial correlations

Table 6. OLS regression results for an alternative measure of firm performance (ROA).

Variables	ROA
Intercept	−0.1534*** (−3.27)
ROW	0.0372*** (2.45)
FAOW	0.0862** (1.08)
SOW	−0.0277** (−1.27)
DOW	0.0631 (1.14)
FOW	−0.0275** (−1.34)
BOW	0.0248*** (4.31)
SIZE	0.0098*** (2.58)
LEV	−0.0658*** (−3.25)
LIQ	0.00244** (2.59)
GROWTH	0.0572*** (2.37)
LOG_AGE	−0.0021 (−0.95)
BIG4	0.0037 (1.45)
Year fixed effect	YES
Industry fixed effect	YES
Std. error adj.	robust clustering
Prob > F	0.000
R-squared	24.1
F-test	14.35
N	*1865*

Significant results at the 0.01, 0.05, and 0.10 levels of a two-tailed test are represented by ***, **, and *, respectively. The definitions of all variables are in Appendix 1.
Source: Authors' own creation.

Table 7. Two-step system GMM regression results.

	Two-step system GMM	
Variables	ROE	Tobin's Q
L.ROE	0.423***(2.68)	
L.TQ		0.802***(4.58)
ROW	−0.421**(−1.99)	−1.466*(−1.23)
FAOW	0.245*(1.86)	0.437**(1.29)
SOW	−0.0995**(−0.64)	−0.492(−0.64)
DOW	0.686**(0.58)	0.429(0.28)
FOW	0.0674(1.41)	0.348(0.66)
BOW	0.0430***(0.73)	−0.546**(−1.15)
SIZE	0.0552*(0.44)	−0.0352*(−0.36)
LEV	0.00709**(0.46)	0.0969*(1.07)
LIQ	0.00131(1.72)	−0.00182(−1.87)
GROWTH	0.141***(1.04)	0.0226*(1.44)
LOG_AGE	−0.0259(−0.82)	0.0966(0.72)
BIG4	0.0223(1.18)	−0.0345(−2.47)
Constant	0.0244**(0.61)	0.389**(0.498)
Std. error adj.	robust	robust
Sargan test	23.816	48.923
AR (1)	−3.023***	−4.379***
AR (2)	0.333	−1.708
Number of groups	337	337
Number of instruments	25	27
Observations	*1865*	*1865*
N	*373*	*373*

Significant results at the 0.01, 0.05, and 0.10 levels of a two-tailed test are represented by ***, **, and *, respectively.
Source: Authors' own creation.

of first-order and second-order. This disparity serves to validate the accurate specification of the regression model and reinforces the premise that disruptions in the regression are simply noise. Hence, the application of the two-step system GMM technique does not modify the findings shown in Table 7, which is consistently in line with the main findings of this study.

5. Conclusion

The study focused on 373 GCC-listed companies from 2020 to 2023 and investigated the effect of ownership structure on company performance during the Covid-19 epidemic. Findings indicated that FAOW and company performance were positively correlated, pointing to increased resilience and ability to weather financial crises. BOW had a good effect on ROE but a negative influence on Tobin's Q, indicating that shareholders placed a more priority on steady profits growth and profit maximisation. The agency theory (AT) was supported by the good influence DOW had on ROE. Conflicts between the board and management are indicated by ROW's detrimental effects on ROE and Tobin's Q. ROE was negatively impacted by SOW, indicating that companies with significant state ownership may find it difficult to attain acceptable ROE as a result of ineffective operations or interference from the government. Tobin's Q showed a negative correlation with FOW.

These findings have significant implications for both theory and practice. The study extends agency theory by demonstrating how ownership structures interact with firm performance during an unprecedented crisis. For example, the superior performance of family-owned firms during the pandemic suggests the importance of centralized decision-making and resilience, which could be valuable insights for policymakers and business leaders.

From a practical perspective, family-owned businesses should leverage their inherent governance strengths, such as agility and long-term orientation, to navigate future crises effectively. For policymakers, the findings highlight the need for targeted support mechanisms for state-owned enterprises to mitigate inefficiencies and improve responsiveness during economic shocks.

These findings are important for the policymakers and investors in the GCC region as they offer insights on how to improve corporate governance and ownership reactions during the phases of economic downturns. Moreover, this study provides the best approximation on how Covid-19 impacted ownership structure of corporates in portfolio and benefits the GCC regulators. The findings of the research stress the need to review investor protection laws, as well as providing a new methodology for studying the effects of the pandemic on business performance, insisting on how concentrations of ownership affect this relationship in the emerging economies with high concentration of ownership, like the countries of the GCC.

As a result, this work adds significantly to the body of existing emphasising on the GCC region, it offers fresh viewpoints on how ownership arrangements affect companies' performance in emerging nations amid the Covid-19 pandemic. It was ascertained that different types of ownership structures act differently in crisis environment while revealing strategies corresponding to each type of ownership. Consequently, this research is pioneering in that it provides a comprehensive approach to examining all types of ownership structures in the GCC during the Covid-19 impact period.

This work possesses multiple significant implications. Our findings significantly contribute to the current literature by enhancing our understanding of the crucial role that dispersed ownership and the sorts of majority shareholders or block-holders play in augmenting the value-added function of firm performance. Secondly, these findings are crucial for 'shareholders, management, foreign investors, regulators, and academics' to facilitate the advancement of stock markets by refining best practices, thereby achieving an optimal corporate ownership structure that aligns with the regional corporate governance model. Consequently, the findings may provide recommendations to policymakers advocating for the incorporation of minimal ownership dispersion for publicly traded businesses to facilitate normal trading of their equities. Thirdly, uncovering information regarding business practices in an area marked by a clandestine culture and a hesitance to share data, predominantly governed by family enterprises, is essential for numerous international organisations (e.g. OECD, IFC), regulators, governmental entities, and standard-setting agencies. The results indicate to the parties the necessity of persisting in their endeavours to reform and advance investor

protection, transparency, and disclosure measures to promote the efficiency of financial markets and bolster investor confidence. Fourth, the findings of this study are significant for 'investors, regulators, and management', particularly those who are looking to enhance the performance of a company's capital market through ownership changes in the midst of developing economic crises such as Covid-19. Especially in volatile markets, the findings of the study provide authorities with assistance in regulating and monitoring the operations of companies.

There are a few drawbacks to this work that suggest future research areas. Further research should examine the interplay between ownership structure and company performance in the Covid-19 era, taking into account the usage of moderating or mediating variables like corporate governance variables. Understanding how ownership structure affects firm performance before and after Covid-19 may also be useful. Future studies may provide light on other developing economies that exhibit similar institutional features and ownership arrangements. This study may investigate and validate the existence of a mechanism that establishes a negative link between government and local firm shareholding and financial performance, thereby undermining the core premise of agency theory and the moderating influence of significant shareholders. Future research could include re-examining the relationship between governance and corporate performance in developed nations, taking into account the impact of ownership structures. In essence, based on the idea that 'one size does not fit all,' researchers can explore how distinct governance systems are preferred by organisations with different ownership structures, thereby analysing their impact on corporate performance.

Acknowledgment

Open Access funding provided by the Qatar National Library.

Authors' contributions

Conceptualization, S.M.A and N.H.A.A; data curation, S.M.A; formal analysis, S.M.A; funding acquisition, H.A.A; investigation, H.A.A and S.M.A; methodology, S.M.A, E.E.A and N.H.A.A; project administration, N.H.A.A; software, S.M.A, E.E.A and I.B; resources, S.M.A and I.B; supervision, S.M.A; validation, E.E.A and N.H.A.A; visualization, I.B and H.A.A.; writing—original draft, S.M.A, E.E.A and N.H.A.A; writing—review and editing, S.M.A, E.E.A. and N.H.A.A; All authors have read and approved the final work.

Disclosure statement

No potential conflict of interest was reported by the author(s)

Funding

Funding for this project was provided by Qatar National Library.

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Data availability statement

The dataset used and/or analysed during the current study are available from the corresponding author on reasonable request.

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Appendix 1. Definitions for all variables

Variables	Acronym	Measurements
Return on assets	ROA	Net income divided by total assets
Return on equity	ROE	Net income divided by total shareholders' equity
Tobin's Q	Tobin's Q	Market value of equity plus total debt divided by book value of total assets
Royal ownership	ROW	Percentage of royal-owned shares to total issued shares
Family ownership	FAOW	Percentage of family-owned shares to total issued shares
State ownership	SOW	Percentage of government-owned shares to total issued shares
Director ownership	DOW	Percentage of shares owned by the CEO and executive directors to the total number of shares
Foreign ownership	FOW	Percentage of foreigners-owned shares to total issued shares
Block-holder's ownership	BOW	Owners of 5% or more of a total share
Size	SIZE	Natural logarithm of total assets
Leverage	LEV	Total liabilities divided by total assets
Liquidity	LIQ	Current Assets divided by Current Liabilities
Sales Growth	GROWTH	Sales in the current year minus sales in the previous year divided by sales in the previous year's
Age	LOG_AGE	The natural log of the number of years since the foundation of the firm
BIG4	BIG4	Dummy variable coded as 1 if the audit firm is one of the Big-4 audit firms (PwC, KPMG, Deloitte and E&Y), 0 otherwise.

Source: Authors' own creation.

Appendix 2.

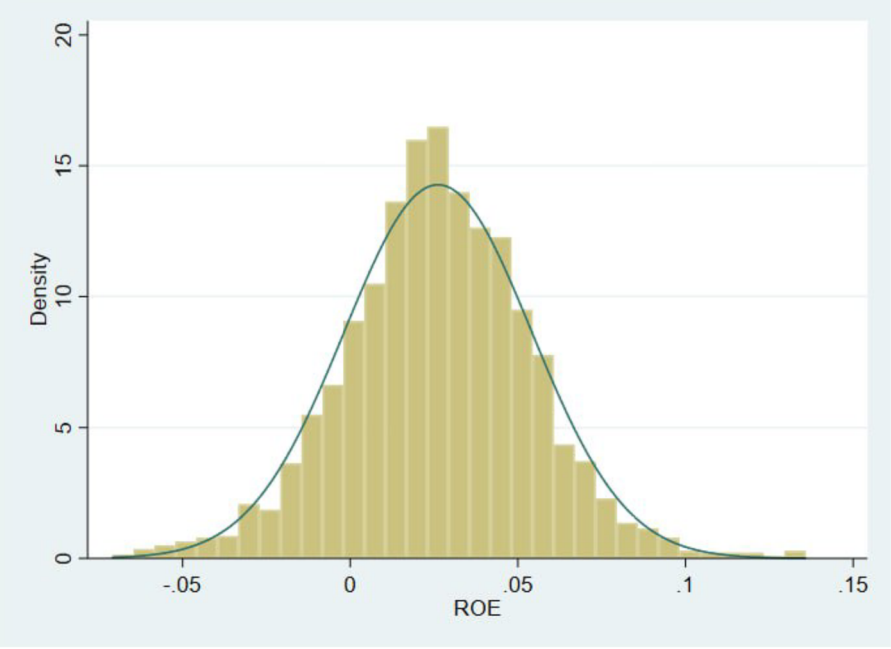

Figure A1. Histogram with a normal curve for the error terms for ROE.

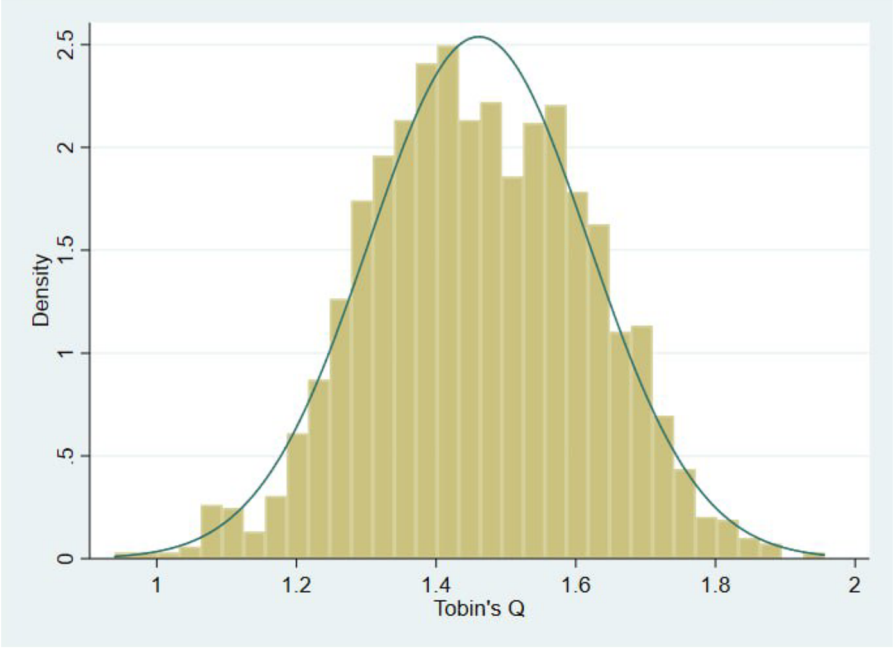

Figure A2. Histogram with a normal curve for the error terms for Tobin's Q.

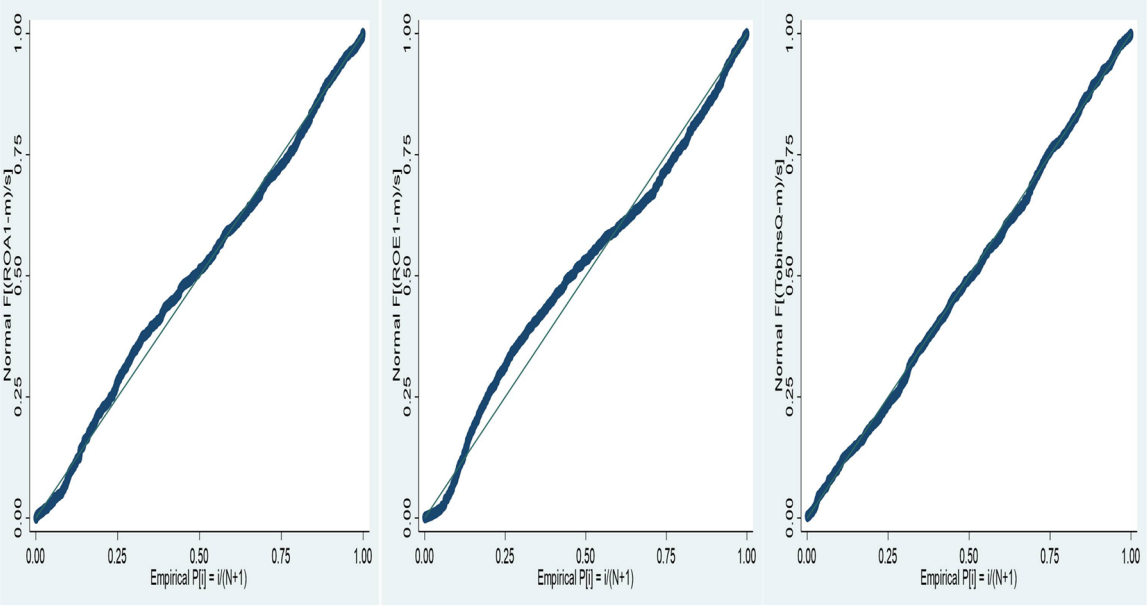

Figure A3. Probability plot of residuals.