Received 24 March 2025
Revised 3 August 2025
27 September 2025
1 December 2025
Accepted 13 December 2025

Board efficiency index, government ownership and financial performance of Shanghai stock exchange companies

Shizong Wu, Saidatunur Fauzi Saidin and Mohammad Noor Hisham Osman
School of Business and Economics, Universiti Putra Malaysia, Serdang, Malaysia, and
Neilson Teruki
Faculty of Humanities, Management and Science, Universiti Putra Malaysia, Bintulu, Malaysia

Abstract

Purpose – This study investigates the impact of a multidimensional board efficiency index (BEI) on firm financial performance (FP) and examines the moderating role of government ownership (GO) in China's emerging market. It addresses gaps in prior literature by integrating six board attributes into a holistic governance metric and testing the government influence.

Design/methodology/approach – Using panel data from 1,226 Shanghai Stock Exchange-listed firms (2018–2022), the study employs a system Generalized Method of Moments (GMM) model to mitigate endogeneity. BEI is constructed by synthesizing board size, independence, CEO duality, meeting frequency, political connections and financial expertise. FP is measured via Economic Value-Added Rate and Tobin's Q. GO is operationalized as a moderating variable, with controls for firm size, leverage, R&D, age and management turnover.

Findings – BEI significantly enhances FP, validating contingency theory's governance–performance linkage. However, GO negatively moderates this relationship, attenuating BEI's efficiency due to socio-political objectives and bureaucratic constraints. Enterprises with high GO exhibit weaker alignment between governance rigor and FP. Robustness checks using alternative performance metrics (ROA and ROE) and fixed-effects models confirm these results.

Research limitations/implications – The focus on Chinese listed firms limits generalizability to other emerging markets. Unobserved factors, such as regional policy variations or market competition, may further influence governance dynamics. Future studies should explore cross-country comparisons.

Originality/value – This research contributes by proposing BEI as a novel composite governance measurement, advancing beyond fragmented analyses of board attributes. Providing empirical evidence from China's hybrid economy, offering policymakers actionable insights to balance state influence with market-driven governance.

Keywords Financial performance, EVA, Corporate governance, Board efficiency index

Paper type Research article

1. Introduction

The efficiency of corporate governance systems has long been established as a cornerstone of organizational resilience and value generation; it has also emerged as a pivotal determinant of organizational success, with board effectiveness occupying a central role in shaping strategic decision-making and long-term financial sustainability (Alshdaifat *et al.*, 2024; Claassen *et al.*, 2023; Zhou *et al.*, 2021). Financial performance (FP), measured such as profitability

Asian Journal of Accounting Research
Vol. 11 No. 3, 2026
pp. 322-338
Emerald Publishing Limited
e-ISSN: 2443-4175
p-ISSN: 2459-9700
DOI 10.1108/AJAR-03-2025-0099

and market valuation, remains a critical indicator of organizational health and governance efficiency (Agha and Pramathevan, 2023; Al-Matari *et al.*, 2022; Din *et al.*, 2021). Extant research has extensively dissected individual board characteristics such as size and independence to evaluate their isolated impacts on FP (Anyigbah *et al.*, 2023; Pucheta-Martínez and Gallego-Álvarez, 2020; Shan *et al.*, 2018).

These studies have provided valuable insights, but their fragmented approach often fails to account for the interactions and combined influence of multiple governance factors operating simultaneously. Board efficiency encompasses a multifaceted construct, integrating structural attributes such as board size and independence, activities like meeting frequency and contextual factors including political connections and professional expertise (Wang *et al.*, 2018). Collectively, these dimensions strengthen the board's monitoring capacity, reduce agency conflicts and support strategic alignment with stakeholder interests (Bagh *et al.*, 2023). Despite these advancements, the interplay between board efficiency and FP remains a subject of ongoing debate, particularly in contexts where government ownership (GO) introduces additional layers of complexity (Hamid and Purbawangsa, 2022; Kyere and Ausloos, 2021).

The ownership structure of a firm is a critical area of research in corporate governance, as it influences governance mechanisms, decision-making efficiency and overall performance. GO exhibits dual characteristics of the "resource effect" and "political intervention effect" (Alrwabdah and Lok, 2024; Boshnak, 2023; Dicko, 2020). On the one hand, state equity participation provides institutional resources such as policy protection and financing advantages, thereby enhancing corporate risk resilience. On the other hand, administrative objective orientation may undermine market incentive mechanisms, resulting in elevated agency costs.

Based on annual reports of listed companies and the CSMAR database, the number of loss-making enterprises in China increased sharply from 73 in 2013 to 223 in 2021. This substantial growth in financially distressed firms highlights challenges in corporate operations and governance. Furthermore, according to the listed company Violation Information Table from the CSMAR database, reported cases of financial fraud increased substantially from 14 in 2012 to 71 in 2021, indicating persistent institutional frictions that hinder the board's ability to translate governance efficiency into financial integrity outcomes (Liu *et al.*, 2024). These trends collectively indicate persistent deficiencies in operational oversight and regulatory frameworks within China's capital markets. Effective board governance and supervision mechanisms are not only critical for corporate FP but also serve as fundamental safeguards for market stability and investor confidence.

This study investigates the moderating effect of GO in the relationship between the board efficiency index (BEI) and FP. While extant literature has extensively examined the impacts of board characteristics on financial outcomes, the systematic examination of board efficiency as a collective governance mechanism remains an underdeveloped research frontier. Through panel data analysis of 1,226 Shanghai Stock Exchange-listed companies (2018–2022), these findings demonstrate that effective board operations significantly enhance FP. However, moderating regression analysis reveals that GO attenuates this relationship.

This study contributes in three significant ways. First, while prior research has predominantly focused on the isolated effects of board characteristics on financial outcomes (Mishra and Kapil, 2018; Zhang *et al.*, 2021), this study advances the discourse by examining board efficiency as a holistic construct, integrating multiple dimensions. Second, this study systematically examines the moderating role of GO, whereas prior research has predominantly focused on the direct effects of ownership structures on FP while overlooking their moderating functions, such as Wati *et al.* (2019) research on the Indonesia Stock Exchange from 2006 to 2014. This investigation addresses this critical gap by empirically validating how GO moderates the relationship between governance and performance, thereby contributing novel insights to the limited scholarship on institutional moderating mechanisms. Finally, while the majority of governance studies have been conducted in developed markets such as the United States (Ozdemir, 2020) and Europe (Kyere

and Ausloos, 2021), this study addresses the under-representation of Asian markets, particularly China, in the literature. Given the prevalence of concentrated ownership structures and state involvement in Asian economies, this research provides critical insights into the unique governance of emerging markets.

The remainder of this study is structured as follows: Section 2 is the literature review and research hypotheses. Section 3 outlines the research design. Section 4 presents the empirical findings and results. Section 5 conducts robustness checks and further analyses. Finally, Section 6 draws the conclusion, and Section 7 presents the limitations of the study.

2. Literature review and hypotheses

2.1 Literature review

2.1.1 Board of Directors. Corporate governance has been extensively studied for its influence on FP. Prior research has primarily focused on addressing agency conflicts (Kyere and Ausloos, 2021; Wang *et al.*, 2018). Agency theory provides a foundational framework for understanding how the board of directors mitigates conflicts between principals and agents (Jensen and Meckling, 1976). It posits that independent and well-structured boards enhance monitoring and reduce managerial opportunism. Consequently, numerous studies have examined the impact of individual board characteristics on FP (Mishra and Kapil, 2018; Pucheta-Martínez and Gallego-Álvarez, 2020; Zhang *et al.*, 2021), such as board size (Kyere and Ausloos, 2021; Lin *et al.*, 2019; Wang *et al.*, 2018), board independence (Mishra and Kapil, 2018), CEO duality (Alves, 2021), board meeting frequency (Chen and Keefe, 2020), political connection of board member (Aguilera *et al.*, 2021; Ahmed and Hussainey, 2023) and directors with financial backgrounds (Lee *et al.*, 2024; Pereira and Filipe, 2022). However, analyzing these attributes in isolation may overlook the board's collective function. Instead, it is more appropriate to conceptualize the board as an integrated system to assess its overall influence on FP. For example, Wattanatorn and Padungsaksawasdi (2021) operationalized board effectiveness by combining indicators such as board meeting frequency, attendance, directors' professional expertise, board size and the number of independent directors into a single composite measure, emphasizing a holistic index rather than isolated board attributes. Similarly, Alshdaifat *et al.* (2024) assessed board effectiveness using dimensions including board independence, size, meeting frequency and CEO duality.

Contingency theory posits that there is no universally optimal organizational structure; instead, the effectiveness of any governance mechanism depends on how well it aligns with contextual and environmental factors (Donaldson, 2001; Fiedler, 1964). Applying this theoretical lens, the study argues that board efficiency is inherently context-dependent and thus cannot be accurately assessed by analyzing individual governance variables in isolation. Instead, the board must be evaluated as a system of interacting characteristics, whose overall effectiveness depends on the internal coherence among its components and its alignment with the firm's broader context.

2.1.2 Government ownership. GO is common across the globe, especially in certain industries of public and national interest (Ke and Wang, 2021; Tihanyi *et al.*, 2019). GO, also known as state ownership, is the ownership of an industry, asset, or business by the state or an agency representing the government (Chang and Lin, 2022; Ting and Lean, 2015; Yatim and Yusoff, 2014). GO is typically measured by the proportion of equity held by local governments, the central government or state-owned enterprises (Aluchna and Kaminski, 2017; Chen *et al.*, 2009; Hsu *et al.*, 2016; Zhou *et al.*, 2021). The characteristics of GO are different from other ownership. GO aims not only to pursue financial returns but also to fulfill social and public policy objectives (Aguilera *et al.*, 2021; Tihanyi *et al.*, 2019). In some industries, the primary purpose of state-owned enterprises is not to make profits, but also to achieve "diversified" government goals (Ke and Wang, 2021; Lin *et al.*, 2016; Yu, 2013). Government shareholders often provide institutional legitimacy and preferential access to policy-driven resources (He and Chen, 2021a, b; Saeed *et al.*, 2016; Wong and Hooy, 2018).

Resource dependence theory explains the strategic role of ownership in shaping FP (Ozdemir, 2020). In corporate governance, it is essential not only to focus on conflicts but also to recognize the value brought by shareholders. Resource dependence theory provides a useful perspective on the connection between ownership and FP (Chou, 2015; Ozdemir, 2020). Pfeffer and Salancik (1978) argue that allowing resource-constrained firms to acquire resources externally through effective governance is a positive and effective approach. Distinct ownership types provide heterogeneous resources that may strengthen external resource access and oversight capacity (Benamraoui *et al.*, 2019; Din *et al.*, 2021; Ducassy and Guyot, 2017). Although resource dependence theory emphasizes the benefits of securing critical resources through external actors, the theory also predicts governance costs when dominant shareholders control key resource channels. Resource providers with administrative authority may shift board priorities to non-economic tasks, reducing strategic flexibility (Hillman *et al.*, 2009).

2.2 Theoretical framework and hypothesis

As a core component of corporate governance, the board serves as an internal control mechanism that monitors managerial actions and ensures alignment with shareholder objectives (García-Ramos and Díaz, 2021; Mishra and Kapil, 2018). To comprehensively explore the impact of the board on FP and eliminate the limitations brought by individual board characteristics, a comprehensive board index is needed for measurement (Alshdaifat *et al.*, 2024; Wattanatorn and Padungsaksawasdi, 2021). BEI integrates the six attributes, weighting board size (negative), independence (positive), CEO duality (negative), meeting frequency (positive), political connections (positive) and professional expertise (positive) to capture the multifaceted nature of board efficiency. According to the contingency theory, the BEI consolidates these factors to provide a comprehensive measure of board effectiveness (Wu *et al.*, 2024). This index addresses the fragmented focus of earlier studies, offering a comprehensive metric to assess how synergistic governance mechanisms collectively shape FP (Arora and Bodhanwala, 2018). Previous research on individual board characteristics finds both positive and negative effects (Mishra and Kapil, 2018; Pucheta-Martínez and Gallego-Álvarez, 2020; Zhang *et al.*, 2021). In China, board of director have been shaped by governance reforms, disclosure pressure and concentrated ownership structures (Wang *et al.*, 2018). Wu *et al.* (2024) find boards that combine independence and financial expertise become more credible governance mechanisms for delivering financial value. This supports a positive stand for the BEI in the China listed-firm context.

H1. BEI is positive related to firm FP.

According to resource dependence theory, GO plays a significant role in FP. In many prior studies, GO has been viewed as detrimental to corporate development, as firms may be compelled to pursue various social objectives, reducing their profit opportunities (Liljeblom *et al.*, 2019; Wati *et al.*, 2019). When government objectives conflict with those of other shareholders, GO can negatively impact performance. However, according to resource dependence theory, GO can actually enhance FP and reduce financing costs due to the government's provision of additional expertise and financial resources (Pfeffer and Salancik, 1978). Firms with GO typically have easier access to capital support, favorable policies, subsidies and other forms of financial assistance. From a long-term perspective, GO tends to focus on the sustainable development of the enterprise and social stability, leading to more conservative business strategies that ensure stability in corporate growth (Boshnak, 2023; Kao *et al.*, 2018). In China, government shareholders control financing access and policy linkages (Ke and Wang, 2021; Lin *et al.*, 2016; Yu, 2013). These links offer stable resource support.

H2. GO is positively related to firm FP.

The moderating role of GO in the governance-performance introduces a critical perspective to contingency theory. While BEI is conventionally theorized to enhance FP through improved monitoring and strategic oversight (Wu *et al.*, 2024), GO often reconfigures these dynamics by embedding socio-political objectives into corporate decision-making (Liao *et al.*, 2022; Wang *et al.*, 2019). GO can reduce managerial discretion and introduce administrative constraints, potentially weakening the financial benefits of strong board efficiency (Iwasaki *et al.*, 2022; Tihanyi *et al.*, 2019).

Moreover, GO often prioritizes social and political objectives over profit maximization, which can dilute the financial benefits associated with high board efficiency (Aguilera *et al.*, 2021; Wang *et al.*, 2019). Empirical studies suggest that in government-controlled firms, even highly efficient boards may struggle to translate governance improvements into enhanced FP due to external political pressures and policy-driven decision-making (Ke and Wang, 2021). Therefore, GO is likely to negatively moderate the relationship between the BEI and FP, potentially attenuating the expected benefits of strong corporate governance practices. In China, high government shareholding reshapes governance settings by adding administrative oversight layers, approval friction and policy-driven priorities (Ke and Wang, 2021; Zhou *et al.*, 2021). These conditions reduce governance autonomy and create an environment misfit for translating board efficiency into financial returns.

H3. GO negatively moderates the relationship between the BEI and FP.

3. Research design

3.1 Sample

This study employs a dataset encompassing firms listed on the Shanghai Stock Exchange (SSE) between 2018 and 2022. To ensure comparability, financial institutions and ST firms were excluded. The refined dataset comprises 1,226 firms, yielding 6,130 firm-year observations for analysis. The starting point of 2018 was deliberately selected because it marked a decisive juncture in China's corporate governance reform. In 2018, major regulatory updates were introduced; most notably the Administrative Measures for the Supervision of State-owned Shares in Listed Companies and the revision of the Code of Corporate Governance for Listed Companies issued by the China Securities Regulatory Commission (CSRC). These measures reinforced the supervisory functions of boards of directors, enhanced the role and qualifications of independent directors, and tightened disclosure and accountability requirements. Within this institutional context, 2018 represents a critical inflection point in China's governance landscape, providing a methodologically sound and contextually meaningful base year for empirical investigation.

3.2 Regression model

The BEI used in this study integrates six key dimensions of board governance: board size, board independence, CEO duality, meeting frequency, political connections and financial expertise. These dimensions were selected based on both previous studies (Alves, 2021; Mishra and Kapil, 2018) and contingency theory (Donaldson, 2001), which emphasize the importance of board effectiveness in adapting to the firm's external environment. The BEI follows a median-based scoring method commonly used in composite governance index research. Board size and CEO dual are scored 1 when the value is below the sample median because prior evidence suggests lower values tend to reduce governance frictions (Alves, 2021; Lin *et al.*, 2019). Board independence, meetings, political connection and financial expertise are scored 1 when the value is above the sample median because higher values are expected to improve board monitoring capacity, resource access and governance involvement (Aguilera *et al.*, 2021; Chen and Keefe, 2020; Lee *et al.*, 2024; Mishra and Kapil, 2018). Each firm-year observation receives a total score between 0 and 6 by adding all 1/0 values.

This produces the BEI, which captures the board's overall governance configuration and context fit. To investigate the H1 and H2, the model adopted and modified from Boshnak (2023) and is used as follows:

$$FP = \beta_0 + \beta_1 INDX_{it} + \beta_2 GO_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 RD_{it} + \beta_6 AGE_{it} + \beta_7 MTO_{it} + \varepsilon_{it}$$

GO is included as a moderating variable, as it plays a critical role in China's economic system. Drawing on resource dependence theory, GO may provide valuable resources and regulatory support. GO refers to the equity proportion directly held or controlled by the state, including central government agencies, local governments or state-owned enterprises acting as government shareholders. GO is measured by the proportion of shares held by the government (Boshnak, 2023). In testing the H3, the moderating model adopted and modified from Pucheta-Martínez and Gallego-Álvarez (2020) is used as follows:

$$FP = \beta_0 + \beta_1 INDX_{it} + \beta_2 INDX{*}GO_{it} + \beta_3 GO_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 RD_{it} + \beta_7 AGE_{it} + \beta_8 MTO_{it} + \varepsilon_{it}$$

The primary outcome measure in this research is FP, assessed through two metrics: Economic Value-Added Rate (EVAR) and Tobin's *Q* (*Q*). EVAR represents an adaptation of the Economic Value Added (EVA) framework, initially developed by Stewart (1991). The EVA model was conceived to resolve scenarios where corporate revenue growth fails to translate into shareholder value enhancement and has been extensively utilized in subsequent studies (He and Chen, 2021a, b), calculated as follows:

$$EVA = NOPAT - (TC * WACC)$$

where NOPAT is net operating profit after tax, TC is the total capital, and WACC is the weighted cost of capital.

EVAR represents an advancement of the EVA framework by integrating total capital expenditures, facilitating precise cross-sector performance assessments. Unlike EVA, EVAR's valuation remains unaffected by a firm's capital structure or equity size, offering a normalized benchmark for relative performance evaluation. By encompassing all capital expenditures, EVAR reflects a firm's ability to convert deployed capital into net value creation beyond capital costs. The calculation aligns with Wu *et al.* (2023):

$$EVAR = EVA/TC$$

Concurrently, Tobin's *Q* is a widely used market-based firm valuation measurement reflecting investor expectations on governance and asset efficiency (Alodat *et al.*, 2021; Ozdemir, 2020). It quantifies corporate value by comparing market valuation to asset replacement costs, operationalized as follows (Mishra and Kapil, 2018):

$$Q = (MVE + BVD)/TA$$

Where MVE = Market Value of Equity, *BVD* = Book Value of Debt, *TA* = Total Assets.

Five control variables are included in the regression analysis. Firm size (SIZE) is measured by the natural log of the firm's total assets, and is a widely used control variable as it captures economies of scale, access to resources and organizational complexity, all of which may influence both board structure and FP (Lin *et al.*, 2019). Leverage is measured by the total debt divided by total assets, which reflects a firm's capital structure and financial risk. Highly leveraged firms may face stricter monitoring from creditors and exhibit different performance dynamics due to financing constraints or agency issues (Claassen *et al.*, 2023). R&D is

measured by the ratio of R&D investment to total assets, is included to control for the firm's strategic orientation toward innovation and long-term growth (Lome *et al.*, 2016). Firm age (AGE) is measured by the natural log of the time of firm establishment, accounts for the firm's experience, legitimacy and potential life cycle effects. Older firms may have more stable governance systems and well-established routines, which can influence how board characteristics translate into performance outcomes (Estrin *et al.*, 2024). Frequent management change (MTO) is a dummy variable, 1 for the chairman or the general manager turnover, 0 if otherwise. Leadership instability may disrupt strategic continuity and signal underlying governance issues, thus affecting FP. Including this variable helps isolate the effects of board structure from broader managerial dynamics (Chulkov and Barron, 2023; Salvi *et al.*, 2024).

4. Results and discussion

4.1 Descriptive statistics

Table 1 shows the descriptive statistics for all the variables. The dependent variable, EVAR, has a mean of 0.008 with a standard deviation of 0.073, ranging from −0.202 to 0.195. Similarly, the alternative measure of FP, *Q*, exhibits a mean of 1.405 and a standard deviation of 1.249, with values spanning from 0.141 to 5.598. Regarding the key independent variable, the BEI has an average value of 3.753 with a standard deviation of 0.958. The minimum and maximum values range from 2 to 6. GO has a mean of 0.233 and a standard deviation of 0.256, with values ranging from 0 to 0.757.

Additionally, the variance inflation factor (VIF) values for all independent variables remain below 5, with the highest being 1.565 for SIZE, indicating that multicollinearity is not a significant concern in the regression analysis (Alabdullah, 2018). These descriptive statistics provide an overview of the sample distribution and support the subsequent empirical analysis.

4.2 Correlation analysis

Table 2 presents the correlation matrix among the study variables. All correlation coefficients remain below the commonly accepted threshold of 0.8 (Wu *et al.*, 2023), suggesting that multicollinearity is not a major concern in the regression analysis. Notably, the BEI exhibits a weak but significant negative correlation with EVAR (−0.032) and *Q* (−0.097). In addition, GO shows a stronger negative correlation with EVAR (−0.095) and *Q* (−0.283). It is important to emphasize that these findings offer a preliminary indication of associations among variables; the nuanced interdependencies necessitate further empirical validation.

Table 1. Descriptive statistics

Variable	Obs	Mean	Std. Dev	Min	Max	VIF
EVAR	6,130	0.008	0.073	−0.202	0.195	
Q	6,130	1.405	1.249	0.141	5.598	
BEI	6,130	3.753	0.958	2	6	1.069
GO	6,130	0.233	0.256	0	0.757	1.279
SIZE	6,130	9.902	0.631	8.813	11.499	1.565
LEV	6,130	0.458	0.195	0.095	0.859	1.347
RD	6,130	0.017	0.017	0	0.073	1.105
AGE	6,130	1.333	0.12	1	1.544	1.028
MTO	6,130	0.529	0.499	0	1	1.03

Source(s): Authors' own work

Table 2. Correlations matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) EVAR	1.000								
(2) Q	0.303*	1.000							
(3) BEI	−0.032*	−0.097*	1.000						
(4) GO	−0.095*	−0.283*	0.143*	1.000					
(5) SIZE	0.059*	−0.471*	0.215*	0.421*	1.000				
(6) LEV	−0.235*	−0.451*	0.168*	0.209*	0.493*	1.000			
(7) RD	0.198*	0.275*	−0.123*	−0.262*	−0.175*	−0.163*	1.000		
(8) AGE	−0.125*	−0.099*	0.032*	0.088*	0.098*	0.112*	−0.126*	1.000	
(9) MTO	−0.056*	−0.089*	0.108*	0.104*	0.130*	0.111*	−0.068*	0.016	1.000

Note(s): *$p < 0.05$

Source(s): Authors' own work

4.3 Regression results and analysis

To mitigate endogeneity biases arising from the interplay among BEI, GO and FP, as well as the time-dependent persistence of FP, this research adopts the Generalized Method of Moments (GMM) framework for panel data analysis. The GMM is uniquely equipped to resolve endogeneity concerns through instrumental variable techniques, while the system GMM extension further corrects for heteroscedasticity and autocorrelation in dynamic panel settings (Wu *et al.*, 2024). Given these methodological advantages, system GMM is employed as the primary statistical methodology in this study.

4.3.1 Basic regression result. Table 3 presents the regression results from the system GMM model. As required, diagnostic tests were performed to validate the use of GMM. The results show that the AR (2) test values are 0.591 and 0.133, both exceeding the 0.05 threshold, indicating no presence of second-order serial correlation in the model. Furthermore, the Hansen test results are 0.526 and 0.654, also above 0.05, confirming that the instrumental variables used are valid, thereby indicating that the empirical model constructed in this study is both reasonable and effective. The coefficient for L.EVAR is 0.2234, significant at the 1% level, indicating a substantial influence of prior EVAR on the current one. This suggests that ongoing improvements in resource allocation and operational efficiency contribute to higher EVAR, reflecting the firm's long-term profitability and management effectiveness. Similarly, the coefficient for L.Q is 0.6261, significant at the 1% level, demonstrating a strong positive correlation between past market performance and current *Q*.

The results indicate a significant positive relationship between the BEI and EVAR at the 5% significance level, suggesting that firms with more efficient boards tend to generate higher FP. Additionally, the BEI is significantly positive on *Q* at the 1% significance level. This implies that investors perceive firms with strong board governance as more valuable, likely due to improved transparency and strategic decision-making. These findings support H1 that emphasizes the role of board structures in enhancing FP through improved oversight, decision-making and strategic guidance. An efficient board may contribute to FP by ensuring better resource allocation, reducing agency costs and strengthening managerial accountability. This result supports the core propositions of contingency theory, which states that board effectiveness depends on a well-aligned configuration of governance attributes, rather than isolated board factors.

Conversely, GO exhibits a significant negative impact on EVAR at the 1% significance level, implying that firms with higher GO tend to have lower economic value creation. Meanwhile, GO negatively impacts *Q* at the 1% significance level, indicating that GO reduces market valuation. This rejects H2 that firms with higher GO may face operational inefficiencies due to government intervention, policy-driven objectives and weaker profit

Table 3. Direct relationship regression result

	Column 1 EVAR	Column 2 Q
L.EVAR	0.2234***	
	(6.2189)	
L.Q		0.5886***
		(23.2107)
BEI	0.0247**	0.4623***
	(2.0590)	(2.6156)
GO	−0.0251***	−0.1536**
	(−4.0959)	(−1.9766)
SIZE	0.0220***	−0.3981***
	(2.7730)	(−6.9346)
LEV	−0.1115**	−0.9970***
	(−2.5724)	(−7.8904)
RD	0.5800***	6.5390***
	(5.6612)	(5.2550)
AGE	−0.0836***	−0.1773
	(−4.9745)	(−1.0092)
MTO	−0.0068***	−0.0464
	(−3.1028)	(−1.6403)
_cons	−0.1258**	3.5722***
	(−2.2653)	(9.0424)
N	6,130	6,130
AR(1)	0.000	0.000
AR(2)	0.591	0.133
Hansen test	0.526	0.654

Note(s): *t* statistics in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$
Source(s) Authors' own work

incentives. This finding supports resource dependence theory, which explains that government shareholders provide external resources but may also introduce administrative constraints (Hillman *et al.*, 2009). These constraints can increase non-market objectives and reduce market-driven value creation, particularly when state goals conflict with profit incentives. For the control variables, RD and SIZE positively influence EVAR. However, LEV, AGE and MTO negatively impact EVAR. Additionally, SIZE and LEV have a significantly negative relationship with Q. Conversely, RD positively influences *Q*.

4.3.2 Moderating regression result. Table 4 presents the results of the moderated regression analysis for the testing of H3. In Column 3, the coefficient of BEI is positive and significant at 1% level, confirming that board efficiency enhances economic value creation. However, the significant negative coefficient of BEI*GO suggests that as GO increases, the positive impact of board efficiency on EVAR declines. Meanwhile, in Column 4, the results for *Q* reveal a stronger moderating effect of GO on the relationship between board efficiency and market valuation. The interaction term BEI*GO is significantly negative at 1% level, demonstrating that in firms with high GO, the positive impact of board efficiency on market valuation is substantially reduced. This finding aligns with the argument that firms with high GO, despite benefiting from political and financial support, often experience inefficiencies due to bureaucratic constraints and weaker incentives for profit maximization. This result accepts H3 and supports contingency theory. While BEI is conventionally theorized to enhance FP through improved monitoring and strategic oversight, GO often reconfigures these dynamics by embedding socio-political objectives into corporate decision-making.

Table 4. Moderating regression result

	Column 3 EVAR	Column 4 Q
L.EVAR	0.2257***	
	(6.0412)	
L.Q		0.5933***
		(21.5684)
BEI	0.0359***	0.7535***
	(2.7682)	(3.9031)
BEI*GO	−0.0712***	−1.4042***
	(−2.8911)	(−3.8975)
GO	0.2447***	5.1358***
	(2.6618)	(3.8794)
SIZE	0.0207**	−0.3764***
	(2.4192)	(−8.6494)
LEV	−0.0919*	−0.9671***
	(−1.8545)	(−7.7271)
RD	0.5968***	7.1363***
	(5.6602)	(4.9334)
AGE	−0.0919***	−0.3644*
	(−5.1839)	(−1.9586)
MTO	−0.0063***	−0.0405
	(−3.0504)	(−1.6160)
_cons	−0.1495**	2.5181***
	(−2.3479)	(4.1896)
N	6,130	6,130
AR(1)	0.000	0.000
AR(2)	0.513	0.115
Hansen test	0.357	0.122

Note(s): *t* statistics in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

Source(s) Authors' own work

5. Robustness and further analysis

5.1 Robustness check

Table 5 is the robustness test. Traditional measures of FP often include Return on Assets (ROA) and Return on Equity (ROE), which many scholars use to measure a company's FP (Kyere and Ausloos, 2021). From column 5 and column 6, the relationship between BEI, ROA and ROE is both positive. Meanwhile, BEI*GO has a significantly negative effect on ROA and ROE, which are consistent with the main regression. Additionally, the robustness test uses a different model. Columns 7 and 8 are using the fixed effect model; the results are the same as the main regression. Additionally, another robustness test is an alternative measure of FP. In conclusion, the use of fixed effects regression and the application of ROA and ROE as alternative indicators do not significantly alter the results compared to the primary regression analysis. This suggests that generally, variations in the model's variables, regression methods and/or the measurement of control variables do not lead to significant discrepancies in the results.

5.2 Further analysis

For further analysis in Table 6, it distinguishes between industrial and non-industrial firms to explore the heterogeneity in the relationship between BEI, GO and FP. The results indicate significant differences in the impact of governance structures across these two sectors.

BEI is positively associated with FP, suggesting that a more efficient board structure enhances economic value creation in both sectors. However, the coefficient is larger in non-

Table 5. Robustness test

	Column 5 ROE	Column 6 ROA	Column 7 EVAR (FE)	Column 8 Q (FE)
L.ROE	0.0905**			
	(2.3627)			
L.ROA		0.2170***		
		(4.8073)		
BEI	0.0489**	0.0280***	0.0047***	0.0624***
	(2.4256)	(3.0160)	(3.3660)	(4.0680)
BEI*GO	−0.0954**	−0.0547***	−0.0114***	−0.0826*
	(−2.4989)	(−3.1039)	(−2.8962)	(−1.9274)
GO	0.3178**	0.1892***	0.0214	0.2414
	(2.2234)	(2.8720)	(1.1188)	(1.1608)
SIZE	0.0413***	0.0174***	0.0959***	−0.9074***
	(2.9638)	(2.6716)	(12.9410)	(−11.1982)
LEV	−0.1307	−0.1107***	−0.1983***	−1.2187***
	(−1.6082)	(−2.7992)	(−18.9842)	(−10.7223)
RD	0.5475***	0.3399***	1.2024***	4.6814***
	(3.2239)	(4.6195)	(8.6481)	(3.0794)
AGE	−0.1641***	−0.0671***	−0.4229***	0.1278
	(−5.4164)	(−5.3828)	(−16.9141)	(0.1698)
MTO	−0.0103***	−0.0044***	−0.0026*	−0.0074
	(−3.0470)	(−2.9532)	(−1.8289)	(−0.4816)
_cons	−0.2091**	−0.0887*	−0.3191***	10.4855***
	(−2.0095)	(−1.9594)	(−5.1643)	(8.5888)
N	6,130	6,130	6,130	6,130
Adj. R^2			0.1280	0.2275
AR(1)	0.000	0.000		
AR(2)	0.598	0.653		
Hansen test	0.507	0.509		

Note(s): *t* statistics in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

Source(s) Authors' own work

Table 6. Further analysis

	Column 9 EVAR (non- industrial)	Column 10 EVAR (industrial)	Column 11 Q (non- industrial)	Column 12 Q (industrial)
BEI	0.0071***	0.0038**	0.0911***	0.0491**
	(3.0001)	(2.1537)	(4.1931)	(2.3869)
BEI*GO	−0.0118**	−0.0154**	−0.1406***	−0.0556
	(−2.1261)	(−2.5721)	(−2.7896)	(−0.8009)
GO	0.0263	0.0325	0.4807*	0.2131
	(0.9751)	(1.1568)	(1.9604)	(0.6552)
SIZE	0.0820***	0.1050***	−1.0627***	−0.8246***
	(7.7259)	(10.1722)	(−10.9958)	(−6.8058)
LEV	−0.1765***	−0.2129***	−1.1279***	−1.3131***
	(−11.3131)	(−15.0549)	(−7.9428)	(−7.9710)
RD	0.9481***	1.2200***	9.4004***	2.2788
	(3.3336)	(7.4360)	(3.6298)	(1.1858)
AGE	−0.4237***	−0.4216***	−1.1110	0.4553
	(−11.7557)	(−12.2192)	(−1.2814)	(0.3935)
MTO	−0.0013	−0.0033*	0.0049	−0.0083
	(−0.6010)	(−1.7129)	(0.2502)	(−0.3763)
_cons	−0.2011**	−0.3968***	13.4630***	9.4029***
	(−2.1583)	(−4.7902)	(9.5425)	(4.9958)
N	2,500	3,630	2,500	3,630
adj. R^2	0.1287	0.1863	0.2667	0.2288

Note(s): *t* statistics in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

Source(s) Authors' own work

industrial firms, implying that governance efficiency plays a more pronounced role in value generation outside the manufacturing sector. The interaction term BEI*GO is significantly negative in both cases, indicating that GO weakens the positive effect of BEI on FP. This effect is slightly stronger for industrial firms, suggesting that state intervention may impose additional constraints on value creation in capital-intensive industries.

6. Conclusion

This study examines how BEI affects firm FP and how GO reshapes this relationship in China's emerging market. The analysis uses a balanced panel of 1,226 firms listed on the Shanghai Stock Exchange across 2018–2022. Results estimated via the system GMM model show that the BEI has a positive and statistically significant effect on FP, indicating that systemically coherent and resource-capable boards are more effective in improving FP (Wu *et al.*, 2024). These findings are consistent with the core premise of contingency theory, which argues that governance effectiveness depends on structural alignment with organizational context (Belkacemi *et al.*, 2025; Donaldson, 2001). Unlike prior studies that treat board attributes in isolation, BEI reflects interactive governance characteristics and captures the board's collective capacity to conduct monitoring, reduce agency costs and support high-value decision-making. The results validate this view by showing that firms with more efficient boards achieve stronger performance outcomes and obtain higher investor valuation.

Furthermore, results reveal that GO significantly weakens FP. Drawing on the propositions of resource dependence theory (Hillman *et al.*, 2009), GO can provide firms with policy legitimacy and financing advantages. However, these resource benefits are offset by administrative objectives, bureaucratic constraints and reduced FP (Iwasaki *et al.*, 2022; Liljeblom *et al.*, 2019). GO weakens the relationship between BEI and FP. From the perspective of contingency theory, governance effectiveness is not universally guaranteed but depends on contextual alignment. Consequently, even highly efficient boards exhibit weaker FP in firms with concentrated government shareholding. Political involvement introduces administrative constraints, which weaken the performance impact of board efficiency. While BEI is conventionally theorized to enhance FP through improved monitoring and strategic oversight (Wu *et al.*, 2024), GO often reconfigures these dynamics by embedding socio-political objectives into corporate decision-making (Liao *et al.*, 2022; Wang *et al.*, 2019).

These findings carry several important implications for practice. For corporate leaders, firms that invest in enhancing board efficiency through maintaining an appropriate size, ensuring independence and embedding financial expertise to improve their financial resilience and credibility in the eyes of investors. For investors, the findings indicate that BEI should be interpreted alongside ownership composition rather than as a stand-alone governance signal. High government shareholding reduces the reliability of BEI as a financial quality indicator.

For corporate decision-makers, optimizing board structure is beneficial but insufficient without parallel reductions in administrative interference. Firms are advised to protect board autonomy and align governance incentives with market logic. For regulators and policymakers, limiting political intervention is essential. Strengthening director independence, increasing governance transparency and improving accountability safeguards may enhance FP credibility and market confidence.

Overall, the evidence shows that board efficiency is a powerful governance mechanism, but its effectiveness is conditional on external ownership structures. By combining contingency and resource dependence perspectives, this study clarifies the limits of internal governance under concentrated state equity, offering novel insights for emerging-market governance research.

7. Limitation

This study is subject to several limitations that offer opportunities for future research. First, the analysis may not fully capture the heterogeneity of ownership structures across firms. Firms with different types of ownership may exhibit varying behaviors in response to the variables studied, like institutional ownership, managerial ownership and foreign ownership. Future research could examine how these ownership structures moderate the observed relationships, potentially uncovering mechanisms unique to certain governance models. For example, Kyere and Ausloos (2021) analyzed managerial ownership and FP using panel data from 252 firms listed on the London Stock Exchange in 2014. Second, the generalizability of our findings is constrained by the country-specific context of the data. Institutional environments, regulatory frameworks and cultural norms differ significantly across countries, which may influence corporate behavior and FP. Future cross-country extensions can draw on emerging-market governance interaction models in Eastern European EU member states, Russia and China, as examined by Iwasaki *et al.* (2022). Another important limitation of this study lies in the relatively narrow scope of board-related variables included in the analysis. While the BEI captures key structural and procedural aspects of board governance, it does not fully account for board diversity factors such as gender composition, average director age, or educational background. These factors may have indirect or context-specific effects on performance rather than direct implications for operational board effectiveness. For instance, Alshdaifat *et al.* (2024) reported that board indices enriched with gender diversity and cross-border director experience offer deeper insights into governance effectiveness. Future research could expand the index by integrating these demographic and cognitive diversity indicators to provide a more comprehensive understanding of board effectiveness across different organizational and institutional settings.

References

Agha, M. and Pramathevan, S. (2023), "Executive gender, age, and corporate financial decisions and performance: the role of overconfidence", *Journal of Behavioral and Experimental Finance*, Vol. 38, 100794, doi: 10.1016/j.jbef.2023.100794.

Aguilera, R., Duran, P., Heugens, P.P.M.A.R., Sauerwald, S., Turturea, R. and VanEssen, M. (2021), "State ownership, political ideology, and firm performance around the world", *Journal of World Business*, Vol. 56 No. 1, 101113, doi: 10.1016/j.jwb.2020.101113.

Ahmed, F. and Hussainey, K. (2023), "A bibliometric analysis of political connections literature", *Review of Accounting and Finance*, Vol. 22 No. 2, pp. 206-226, doi: 10.1108/RAF-11-2022-0306.

Al-Matari, E.M., Mgammal, M.H., Alosaimi, M.H., Alruwaili, T.F. and Al-Bogami, S. (2022), "Fintech, board of directors and corporate performance in Saudi Arabia financial sector: empirical study", *Sustainability*, Vol. 14 No. 17, 10750, doi: 10.3390/su141710750.

Alabdullah, T.T.Y. (2018), "The relationship between ownership structure and firm financial performance: evidence from Jordan", *Benchmarking: An International Journal*, Vol. 25 No. 1, pp. 319-333, doi: 10.1108/BIJ-04-2016-0051.

Alodat, A.Y., Salleh, Z., Hashim, H.A. and Sulong, F. (2021), "Corporate governance and firm performance: empirical evidence from Jordan", *Journal of Financial Reporting and Accounting*, Vol. 20 No. 5, pp. 866-896, doi: 10.1108/JFRA-12-2020-0361.

Alrwabdah, F. and Lok, C.-L. (2024), "The impact of ownership structure on firm performance in Jordan", *International Journal of Academic Research in Accounting, Finance and Management Sciences*, Vol. 14 No. 3, pp. 77-89, doi: 10.6007/ijarafms/v14-i3/22190.

Alshdaifat, S.M., Abdul, H.M.A., Ab, A.N.H., Saidin, S.F. and Alhasnawi, M.Y. (2024), "Corporate governance effectiveness and firm performance in global crisis: evidence from GCC countries", *Corporate Governance: International Journal of Business in Society*, Vol. 25 No. 3, pp. 455-470, doi: 10.1108/CG-12-2023-0518.

Aluchna, M. and Kaminski, B. (2017), "Ownership structure and company performance: a panel study from Poland", *Baltic Journal of Management*, Vol. 12 No. 4, pp. 485-502, doi: 10.1108/BJM-01-2017-0025.

Alves, S. (2021), "CEO duality, earnings quality and board independence", *Journal of Financial Reporting and Accounting*, Vol. 21 No. 2, pp. 217-231, doi: 10.1108/JFRA-07-2020-0191.

Anyigbah, E., Kong, Y., Edziah, B.K., Ahoto, A.T. and Ahiaku, W.S. (2023), "Board characteristics and corporate sustainability reporting: evidence from Chinese listed companies", *Sustainability*, Vol. 15 No. 4, p. 3553, doi: 10.3390/su15043553.

Arora, A. and Bodhanwala, S. (2018), "Relationship between corporate governance index and firm performance: Indian evidence", *Global Business Review*, Vol. 19 No. 3, pp. 675-689, doi: 10.1177/0972150917713812.

Bagh, T., Khan, M.A., Meyer, N. and Riaz, H. (2023), "Impact of boardroom diversity on corporate financial performance", *Humanities and Social Sciences Communications*, Vol. 10 No. 1, pp. 1-13, doi: 10.1057/s41599-023-01700-3.

Belkacemi, R., Veilleux, S. and Roy, M.-J. (2025), "Board of directors and innovation: a state-of-the-art review from a contingency perspective", *Canadian Journal of Administrative Sciences – Revue Canadienne des Sciences de l Administration*, Vol. 42 No. 1, pp. 25-55, doi: 10.1002/cjas.1761.

Benamraoui, A., Jory, S.R., Mazouz, K., Shah, N. and Gough, O. (2019), "The effect of block ownership on future firm value and performance", *The North American Journal of Economics and Finance*, Vol. 50, 100982, doi: 10.1016/j.najef.2019.04.025.

Boshnak, H.A. (2023), "Ownership structure and firm performance: evidence from Saudi Arabia", *Journal of Financial Reporting and Accounting*, Vol. 23 No. 4, pp. 1656-1676, doi: 10.1108/JFRA-11-2022-0422.

Chang, Y. and Lin, L.Y.-H. (2022), "Do state-owned enterprises have worse corporate governance? An empirical study of corporate practices in China", *European Business Organization Law Review*, Vol. 23 No. 3, pp. 711-734, doi: 10.1007/s40804-021-00223-1.

Chen, Z. and Keefe, M.O. (2020), "Rookie directors and firm performance: evidence from China", *Journal of Corporate Finance*, Vol. 60, 101511, doi: 10.1016/j.jcorpfin.2019.101511.

Chen, G., Firth, M. and Xu, L. (2009), "Does the type of ownership control matter? Evidence from China's listed companies", *Journal of Banking and Finance*, Vol. 33 No. 1, pp. 171-181, doi: 10.1016/j.jbankfin.2007.12.023.

Chou, T.-K. (2015), "Insider ownership and firm performance: a resource dependence perspective", *Journal of Applied Business Research*, Vol. 31 No. 3, pp. 861-870, doi: 10.19030/jabr.v31i3.9223.

Chulkov, D.V. and Barron, J.M. (2023), "Incentive pay sensitivity to firm performance prior to anticipated CEO turnover", *Heliyon*, Vol. 9 No. 11, e22163, doi: 10.1016/j.heliyon.2023.e22163.

Claassen, B., Dam, L. and Heijnen, P. (2023), "Corporate financing policies, financial leverage, and stock returns", *The North American Journal of Economics and Finance*, Vol. 68, 101992, doi: 10.1016/j.najef.2023.101992.

Dicko, S. (2020), "Does ownership structure influence the relationship between firms' political connections and financial performance", *International Journal of Corporate Governance*, Vol. 11 No. 1, pp. 47-75, doi: 10.1504/IJCG.2020.107405.

Din, S.U., Arshad Khan, M., Khan, M.J. and Khan, M.Y. (2021), "Ownership structure and corporate financial performance in an emerging market: a dynamic panel data analysis", *International Journal of Emerging Markets*, Vol. 17 No. 8, pp. 1973-1997, doi: 10.1108/IJOEM-03-2019-0220.

Donaldson, L. (2001), *The Contingency Theory of Organizations*, SAGE Publications, New York, doi: 10.4135/9781452229249.

Ducassy, I. and Guyot, A. (2017), "Complex ownership structures, corporate governance and firm performance: the French context", *Research in International Business and Finance*, Vol. 39, pp. 291-306, doi: 10.1016/j.ribaf.2016.07.019.

Estrin, S., Hanousek, J. and Shamshur, A. (2024), "Does it matter who owns firms? Evidence on the impact of supermajority control on private firms in Europe", *International Review of Financial Analysis*, Vol. 95, 103427, doi: 10.1016/j.irfa.2024.103427.

Fiedler, F.E. (1964), "A contingency model of leadership effectiveness", in Berkowitz, L. (Ed.), *Advances in Experimental Social Psychology*, Academic Press, New York, NY, Vol. 1, pp. 149-190, doi: 10.1016/S0065-2601(08)60051-9.

García-Ramos, R. and Díaz, B.D. (2021), "Board of directors structure and firm financial performance: a qualitative comparative analysis", *Long Range Planning*, Vol. 54 No. 6, 102017, doi: 10.1016/j.lrp.2020.102017.

Hamid, N. and Purbawangsa, I.B.A. (2022), "Impact of the board of directors on financial performance and company capital: risk management as an intervening variable", *Journal of Co-Operative Organization and Management*, Vol. 10 No. 2, 100164, doi: 10.1016/j.jcom.2021.100164.

He, X. and Chen, A. (2021a), "Impact of Chinese firms' political connections on EVA performance: the moderating roles of connection heterogeneity and product diversification", *Chinese Management Studies*, Vol. 16 No. 1, pp. 211-230, doi: 10.1108/CMS-09-2020-0377.

He, X. and Chen, A. (2021b), "Impact of Chinese firms' political connections on EVA performance: the moderating roles of connection heterogeneity and product diversification", *Chinese Management Studies*, Vol. 16 No. 1, pp. 211-230, doi: 10.1108/CMS-09-2020-0377.

Hillman, A., Withers, M. and Collins, B. (2009), "Resource dependence theory: a review", *Journal of Management*, Vol. 35 No. 6, pp. 1404-1427, doi: 10.1177/0149206309343469.

Hsu, J., Yang, T.-H. and Sung, P.-S. (2016), "SEO firms' lottery-like characteristics, institutional ownership, and long-run performance", *Journal of Business Research*, Vol. 69 No. 6, pp. 2160-2166, doi: 10.1016/j.jbusres.2015.12.024.

Iwasaki, I., Ma, X. and Mizobata, S. (2022), "Ownership structure and firm performance in emerging markets: a comparative meta-analysis of East European EU member states, Russia and China", *Economic Systems*, Vol. 46 No. 2, 100945, doi: 10.1016/j.ecosys.2022.100945.

Jensen, M.C. and Meckling, W.H. (1976), "Theory of the firm: managerial behavior, agency costs and ownership structure", *Journal of Financial Economics*, Vol. 3 No. 4, pp. 305-360, doi: 10.1016/0304-405X(76)90026-X.

Kao, M.-F., Hodgkinson, L. and Jaafar, A. (2018), "Ownership structure, board of directors and firm performance: evidence from Taiwan", *Corporate Governance: International Journal of Business in Society*, Vol. 19 No. 1, pp. 189-216, doi: 10.1108/CG-04-2018-0144.

Ke, B. and Wang, L. (2021), "Mixed ownership and firm performance: evidence from the Chinese venture capital industry", *Emerging Markets Review*, Vol. 49, 100759, doi: 10.1016/j.ememar.2020.100759.

Kyere, M. and Ausloos, M. (2021), "Corporate governance and firms financial performance in the United Kingdom", *International Journal of Finance and Economics*, Vol. 26 No. 2, pp. 1871-1885, doi: 10.1002/ijfe.1883.

Lee, C.-Y., Wen, C.-R. and Thi-Thanh-Nguyen, B. (2024), "Board expertise background and firm performance", *International Journal of Financial Studies*, Vol. 12 No. 1, p. 17, doi: 10.3390/ijfs12010017.

Liao, H., Li, M., Van, A.A., Zheng, J. and Yang, L. (2022), "Building world-class enterprises though mixed-ownership reform: explaining performance differences in minority and majority state-owned enterprises", *Chinese Management Studies*, Vol. 16 No. 4, pp. 741-764, doi: 10.1108/CMS-03-2021-0084.

Liljeblom, E., Maury, B. and Hörhammer, A. (2019), "Complex state ownership, competition, and firm performance – Russian evidence", *International Journal of Emerging Markets*, Vol. 15 No. 2, pp. 189-221, doi: 10.1108/IJOEM-08-2017-0287.

Lin, T.-J., Tsai, H.-F., Imamah, N. and Hung, J.-H. (2016), "Does the identity of multiple large shareholders affect the value of excess cash? Evidence from China", *Pacific-Basin Finance Journal*, Vol. 40, pp. 173-190, doi: 10.1016/j.pacfin.2016.10.007.

Lin, W.-L., Cheah, J.-H., Azali, M., Ho, J.A. and Yip, N. (2019), "Does firm size matter? Evidence on the impact of the green innovation strategy on corporate financial performance in the automotive sector", *Journal of Cleaner Production*, Vol. 229, pp. 974-988, doi: 10.1016/j.jclepro.2019.04.214.

Liu, Z., Saidin, S.F. and Osman, M.N.H. (2024), "The effect of internal control on earnings response coefficient", *Asian Journal of Accounting Research*, Vol. 10 No. 4, pp. 334-352, doi: 10.1108/AJAR-12-2023-0403.

Lome, O., Heggeseth, A.G. and Moen, Ø. (2016), "The effect of R&D on performance: do R&D-intensive firms handle a financial crisis better?", *The Journal of High Technology Management Research*, Vol. 27 No. 1, pp. 65-77, doi: 10.1016/j.hitech.2016.04.006.

Mishra, R.K. and Kapil, S. (2018), "Board characteristics and firm value for Indian companies", *Journal of Indian Business Research*, Vol. 10 No. 1, pp. 2-32, doi: 10.1108/JIBR-07-2016-0074.

Ozdemir, O. (2020), "Board diversity and firm performance in the U.S. tourism sector: the effect of institutional ownership", *International Journal of Hospitality Management*, Vol. 91, 102693, doi: 10.1016/j.ijhm.2020.102693.

Pereira, V.M.M. and Filipe, J.A.C.B. (2022), "Board members' educational background and financial performance: evidence from Eurozone banks", *Journal of Central Banking Theory and Practice*, Vol. 11 No. 3, pp. 203-227, doi: 10.2478/jcbtp-2022-0030.

Pfeffer, J. and Salancik, G.R. (1978), "The external control of organizations: a resource dependence perspective", SSRN Scholarly Paper, Rochester, NY.

Pucheta-Martínez, M.C. and Gallego-Álvarez, I. (2020), "Do board characteristics drive firm performance? An international perspective", *Review of Managerial Science*, Vol. 14 No. 6, pp. 1251-1297, doi: 10.1007/s11846-019-00330-x.

Saeed, A., Belghitar, Y. and Clark, E. (2016), "Do political connections affect firm performance? Evidence from a developing country", *Emerging Markets Finance and Trade*, Vol. 52 No. 8, pp. 1876-1891, doi: 10.1080/1540496X.2015.1041845.

Salvi, A., Tron, A. and Colantoni, F. (2024), "The impact of CEO turnover on firm performance and insolvency risk – a global analysis", *Finance Research Letters*, Vol. 62, 105093, doi: 10.1016/j.frl.2024.105093.

Shan, C.M., Razak, N.H.A. and Ali, A.B.I. (2018), "The impact of board of directors' characteristics and remuneration on companies' performance in Malaysia", *Indian Journal of Public Health Research and Development*, Vol. 9 No. 11, p. 1220, doi: 10.5958/0976-5506.2018.01625.X.

Stewart, G.B. (1991), *The Quest for Value*, HarperCollins, New York.

Tihanyi, L., Aguilera, R.V., Heugens, P., Van Essen, M., Sauerwald, S., Duran, P. and Turturea, R. (2019), "State ownership and political connections", *Journal of Management*, Vol. 45 No. 6, pp. 2293-2321, doi: 10.1177/0149206318822113.

Ting, I.W.K. and Lean, H.H. (2015), "Does government ownership matter? Comparative study between GLCS and NGLCS in Malaysia", *Singapore Economic Review*, Vol. 60 No. 02, 1550019, doi: 10.1142/S0217590815500198.

Wang, J., Chen, M.-H., Fang, C.-Y. and Tian, L. (2018), "Does board size matter for Taiwanese hotel performance? Agency theory or resource dependence theory", *Cornell Hospitality Quarterly*, Vol. 59 No. 4, pp. 317-324, doi: 10.1177/1938965517735906.

Wang, Y., Yao, C. and Kang, D. (2019), "Political connections and firm performance: evidence from government officials' site visits", *Pacific-Basin Finance Journal*, Vol. 57, 101021, doi: 10.1016/j.pacfin.2018.05.003.

Wati, L.N., Hj, I.P., Pirzada, K. and Sudarsono, R. (2019), "Political connection, blockholder ownership and performance", *Entrepreneurship and Sustainability Issues*, Vol. 7 No. 1, pp. 52-68, doi: 10.9770/jesi.2019.7.1(5).

Wattanatorn, W. and Padungsaksawasdi, C. (2021), "The board effectiveness index and stock price crash risk", *Managerial Finance*, Vol. 48 No. 1, pp. 126-135, doi: 10.1108/MF-04-2021-0150.

Wong, W.-Y. and Hooy, C.-W. (2018), "Do types of political connection affect firm performance differently?", *Pacific-Basin Finance Journal*, Vol. 51, pp. 297-317, doi: 10.1016/j.pacfin.2018.08.009.

Wu, X., Dluhošová, D. and Zmeškal, Z. (2023), "The moderating role of a corporate life cycle with the impact of economic value-added on corporate social responsibility: evidence from China's listed companies", *Emerging Markets Review*, Vol. 55, 101021, doi: 10.1016/j.ememar.2023.101021.

Wu, S., Saidin, S.F., Osman, M.N.H. and Teruki, N. (2024), "A dynamic estimation of board efficiency index and financial performance: evidence from China", *International Journal of Academic Research in Accounting, Finance and Management Sciences*, Vol. 14 No. 3, pp. 319-338, doi: 10.6007/IJARAFMS/v14-i3/22266.

Yatim, N. and Yusoff, H. (2014), "Governance structure and practice in Malaysia: board of directors' role and responsibilities", in Idowu, S.O. and Çaliyurt, K.T. (Eds), *Corporate Governance: An International Perspective*, Springer, Berlin, Heidelberg, pp. 199-228, doi: 10.1007/978-3-642-45167-6_11.

Yu, M. (2013), "State ownership and firm performance: empirical evidence from Chinese listed companies", *China Journal of Accounting Research*, Vol. 6 No. 2, pp. 75-87, doi: 10.1016/j.cjar.2013.03.003.

Zhang, D., Zhang, Z., Ji, Q., Lucey, B. and Liu, J. (2021), "Board characteristics, external governance and the use of renewable energy: international evidence", *Journal of International Financial Markets, Institutions and Money*, Vol. 72, 101317, doi: 10.1016/j.intfin.2021.101317.

Zhou, M., Li, K. and Chen, Z. (2021), "Corporate governance quality and financial leverage: evidence from China", *International Review of Financial Analysis*, Vol. 73, 101652, doi: 10.1016/j.irfa.2020.101652.

Corresponding author
Saidatunur Fauzi Saidin can be contacted at: saidatunur@upm.edu.my