

DO CORRUPTION RISK AND CHARACTERISTICS OF THE TOP MANAGEMENT TEAM MATTER FOR COMPANY PERFORMANCE? EVIDENCE FROM MALAYSIA

Hafizah Marzuki¹, Suhaily Hasnan^{2*}, Khairul Ayuni Mohd Kharuddin², Mazurina Mohd Ali² and Norman Mohd Saleh³

¹*Internal Audit Division, Chancellory Building, Universiti Sains Islam Malaysia, Bandar Baru Nilai, 71800 Nilai, Negeri Sembilan, Malaysia*

²*Faculty of Accountancy, Universiti Teknologi MARA, Puncak Alam Campus, Level 1 & 2, FPN Building, 42300 Bandar Puncak Alam, Selangor, Malaysia*

³*Faculty of Economics and Management, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia*

*Corresponding author: suhailyhasnan@uitm.edu.my

Received: 4 July 2024 • Accepted: 1 August 2025 • Published: 15 December 2025

To cite this article: Marzuki, H., Hasnan, S., Kharuddin, K. A. M., Ali, M. M., & Saleh, N. M. (2025). Do corruption risk and characteristics of the top management team matter for company performance? Evidence from Malaysia. *Asian Academy of Management Journal of Accounting and Finance*, 21(2), 235–276. <https://doi.org/10.21315/aamjaf2025.21.2.8>

To link to this article: <https://doi.org/10.21315/aamjaf2025.21.2.8>

ABSTRACT

The purpose of this study is to empirically investigate the relationships between top management team (TMT) characteristics (including women representation, political connections, age and tenure) and company performance, moderated by corruption risk. The data analysis is conducted using financial information from publicly traded companies on the primary market of Bursa Malaysia for the period spanning from 2018 to 2022. The regression analysis reveals a significant association between the political connections and tenure of the TMT and company performance. In addition, the moderation analysis demonstrates that corruption risk has a significantly positive effect on the relationship between the representation of women in the TMT and political connections, as well as on company performance. From a theoretical aspect, this study adds to the governance literature on how corruption risk strengthens the relationship between TMT characteristics and company performance in Malaysia. From a practical aspect, the results of this study will aid Malaysian business leaders in understanding the importance of the role of women representation and political connections in TMT, while also helping them develop their corporate governance framework better in uncertain environments. Furthermore, this

study offers a unique contribution by advising company owners to enhance the influence of the TMT in improving company performance in conditions of significant corruption risk.

Keywords: Top management team, Corruption risk, Anti-corruption, Corruption, corporate governance

INTRODUCTION

Overtime, corruption becomes the cultural norm as people believe that they obtain certain services by offering bribes in exchange for those services. The United Nations Development Programme (UNDP) has formally defined corruption as “misuse of entrusted power for personal benefit” (UNDP, 2008). Corporate corruption is rampant in Malaysia and has reflected the country’s global position on the Corruption Perception Index (CPI) score (Transparency International Malaysia, 2022). The Malaysian CPI score fell for three years in a row from 53% in 2019 to 47% in 2022, following intense global scrutiny of the massive corruption scandal of 1 Malaysian Development Berhad (Anwar et al., 2023). Moreover, the Malaysian Anti-Corruption Commission reported that Malaysia experienced huge financial losses of billions of Malaysian Ringgit due to corrupt practices for six years from 2018 to 2023 (Tan Sri Lee Lam Thye, 2024). Such financial losses may affect company performance and country’s economic growth when the allocation of public resources has been misused through corruption and bribery (Jones, 2022). Corruption is a critical problem all over the world, irrespective of the corporate governance model (Habib et al., 2020). Corruption and governance are competing forces in which corruption breaks the rules to achieve the interest of an individual or a specific group of people, meanwhile, governance acts to attain the interests of all people in the society (Alshubiri et al., 2024).

Furthermore, the aggregate level of corruption could affect company performance in several ways. At the aggregate level, corruption is generally detrimental to business which tends to lower overall economic growth and company performance (Lopez-Claros & Lynch, 2024). For example, corruption can destroy investor confidence, resulting in decreased investment and lower stock prices. It is because investors may perceive the corrupt company as risky and unreliable, leading to financial losses. Hence, market players in highly corrupt settings often perform poorly compared to those where corruption is less prevalent (Rosli & Kamaluddin,

2021). Furthermore, in corrupt environments, companies may face unfair competition, as those engaging in corruption might gain undue advantages, which can distort market dynamics and lead to inefficiencies (Hanousek et al., 2019). For instance, several undue advantages, including access to public resources through corrupt dealings, modifying regulations in company's favour through lobbying or direct payments, and bypassing standard procedures to obtain licenses more quickly through bribery.

Whereas, corruption control plays an important role in adherence to the governance rules, such as accountability, transparency, and fair formulation of policies (Alshubiri et al., 2024). Hence, governance rules promote a strong framework for regulatory oversight that helps detect and address corrupt practices in the company. Moreover, strong governance rules can improve shareholders' trust, ensuring that they are more likely to invest in the company. Indeed, high corruption risk environment can trigger stronger governance mechanisms, which in turn, improve company's performance. When companies face high corruption risks, they often implement more stringent governance measures to help ensure that managerial decisions are made with greater accountability and integrity, which can lead to improved operational efficiency and better financial performance (Guluma, 2021).

From a theoretical perspective, stern regulatory scrutiny can indeed lead to stronger monitoring activities. The agency theory suggests that when there is an agent-principal relationship, such as between managers (agents) and shareholders (principals), there is a need for stronger monitoring to ensure that agents behave in the best interests of principals and the congruence of goals between agents and principals (Ahola et al., 2021). Increased regulatory scrutiny can enhance this monitoring by reducing information asymmetry, where regulators can increase disclosure requirements and enforce transparency in a way to reduce the information gap between principals and agents, which subsequently improves financial performance (Liu, 2024). Furthermore, monitoring activities may align with the various stakeholders' incentives, in which stricter regulations can support the incentives of agents with those of principals, ensuring that agents are more likely to behave in the principals' best interests, and gain the trust of investors as well as other market players (Rohmah et al., 2016; Zhang & Gong, 2023).

High corruption risk reflects weak corruption controls, while other governance mechanisms such as top management team characteristics (TMT) serve as their substitute to help improve company performance (La Rosa et al., 2022). The association between the characteristics of the top management team and the success of the company has been thoroughly examined in the field of corporate governance literature. The primary responsibilities of a company's TMT involve formulating strategic decisions and overseeing the day-to-day operations of the company (Samimi et al., 2022). The TMT comprises inherent qualities that can yield substantial managerial competencies and strategic assets for all organisations (Li, 2017). Although the features of the TMT and company performance have been extensively studied, the research findings on their influence varied. Previous research found that the characteristics of the TMT have a significant impact on company performance. Some studies have identified a positive influence (Hassan et al., 2023; Ismail et al., 2023; Qi, 2022; Sieweke et al., 2023; Triana et al., 2019), while others have observed a negative effect (Chandren et al., 2021; Niazi et al., 2023; Shakil & Wahab, 2023).

These conflicting outcomes suggest the competing roles of the TMT. The resource dependence hypothesis posits that the TMT plays a role in enhancing corporate performance by providing resources (Valenti & Horner, 2020). However, it also argues that the TMT might contribute to interpersonal conflicts, which in turn can negatively impact company performance (Niñerola et al., 2022; Hasnan et al., 2022). The lack of clarity in this context requires the consideration of additional variables that could impact the correlation between the characteristics of the TMT and the performance of the organisation. In addition, previous research has focused mostly on analysing the influence of TMT characteristics on company performance within developed markets (Agarwal et al., 2019; Belderbos et al., 2022; Wrede et al., 2020). Companies from emerging economies face challenges in competing with established competitors due to their late entry into the global market (Zhao & Zhou, 2022; Hemdan et al., 2021; Hussain et al., 2016). Therefore, the functions of the TMT in the organisational framework of enterprises in emerging countries are still at an early and underdeveloped stage (Li, 2017).

In the extant literature, the effectiveness of TMT can vary significantly between companies in developed and emerging countries due to several factors (Batra et al., 2022). For instance, certain institutions in developed

economies can offer companies better access to knowledge and financial resources, a more stable political environment, efficient economic policies and reliable market information (Degbey et al., 2021). Hence, companies in developed countries enjoy several facilities and infrastructures, which play an important role in the effective implementation of their global business models and the improvement of their global competitiveness (Joshi, 2021). Nevertheless, companies in emerging markets have been strongly influenced by the unique institutional settings, which are characterised by less efficient economies, inefficient resource allocation, political instability and a weak regulatory system (Alshubiri et al., 2024). Thus, the effectiveness of TMT in emerging markets is threatened by several risks and uncertainties in the business environment (Batra et al., 2022).

Based on the view of the agency theory, the effects of corruption risk on the characteristics of the TMT bring forward two notions: it exacerbates or mitigates the agency problem (Alshubiri et al., 2024). The former highlights the role of corruption risk as a factor that creates the agency conflicts between managers and company owners. Opportunistic managers may use the company's financial resources by accepting bribes in order to secure project awards, harming the interests of shareholders (Krishnamurti et al., 2021). The latter argument highlights that corporations could get advantages from the corruption risk environment. Corruption has been perceived by certain researchers as a catalyst for strengthening the duties of monitoring (Burns et al., 2021). Hence, companies operating in a higher corruption risk environment will ensure the monitoring roles of their TMT are effective, leading to enhanced performance of companies. Moreover, because companies operating in a highly risky corruption environment face more stern regulatory scrutiny (Karpacheva & Hock, 2023), these companies should employ stronger monitoring mechanisms than their less-risky counterparts (Marzuki et al., 2025).

Furthermore, while corruption risk typically undermines company performance, there are scenarios where it might paradoxically strengthen the positive impact of TMT characteristics. In environments with high corruption risk, TMTs with strong ethical standards, strategic acumen and robust networks can leverage their skills to navigate these challenges effectively. This can lead to enhanced company performance as they mitigate risks and exploit opportunities that less capable teams might miss. Studies have shown that the structure and dynamics of the TMT are crucial

determinants of an organisation's performance, especially in high-risk environments (Q. Li et al., 2024). For example, TMTs with high levels of trust and collective efficacy can better manage complex environments including the adverse effects of corruption risk and turn this potential threats into competitive advantages (Luo & Lin, 2022). Further, a TMT with a deep understanding of local regulations and strong ethical leadership can implement strategies that not only comply with laws but also build trust with stakeholders, thereby improving the firm's reputation and performance (Luo & Lin, 2022).

As both the TMT and corruption together and in isolation, play a crucial role in a company's value creation (Wang et al., 2019), this paper demonstrates the important role of the characteristics of the TMT and its relationship with company performance, with corruption risk as a moderating variable. Moreover, the present study is empirically designed to emphasise the interaction between corruption risk and specific characteristics of the TMT, including women's representation, political connections, age and tenure. This research is motivated by the agency theory, which focuses on the principal-agent relationship. The research sample comprises 577 publicly listed companies on Bursa Malaysia spanning a period of five years from 2018 to 2022. The primary results of the panel data regression model discern a significantly positive moderating effect of corruption risk on the relationship between women's representation in the TMT and TMT's political connections and company performance. For direct relationships, the results reveal that there are significant relationships between the TMT's political connections and tenure and company performance, thus supporting the resource dependence theory.

Previous studies have discussed many characteristics of TMT and its relationship with company performance. For example, past scholars have examined the influence of TMT's financial expertise (Zhou et al., 2023), TMT's international experience (Hsu & Chang, 2021), and TMT's educational background (Ismail et al., 2023) against company performance. However, in this study, the choices of women's representation, political connections, age, and tenure as specific characteristics of TMT mainly for several reasons. First, the selection of these characteristics is to associate with recent governance regulatory requirements in Malaysia. For example, the Corporate Governance Monitor 2022 strongly urges the public listed companies to consider several key issues about senior

management composition including women representation, tenure and age of senior management in a way to encourage efficient discussion and informed decision at the managerial levels, which in turn improves company performance (Securities Commission Malaysia, 2022). Second is to suit the Malaysian institutional setting. For instance, the reason for selecting TMT's political connections is that Malaysia is among the best model to study on political connections due to its unique political landscape. Notably, Malaysia is known for its political postures in the economic environment especially in the allocation of government subsidies (Abas Azmi & Zainudin, 2021).

This research adds to the existing body of literature on the connections between the characteristics of the TMT and the performance of companies, with corruption risk as a moderating factor. Specifically, focusing on publicly listed companies in Malaysia. The current body of literature on governance has extensively examined the direct connections between the characteristics of the TMT and the performance of the company, yielding inconclusive results. The uncertainty in this case is often caused by multiple situational circumstances, as identified by Wang et al. (2019). Hence, it is crucial to identify the situational aspects that impact the relationship between the characteristics of the TMT and the performance of the company. This study examines the influence of corruption risk on the relationship between the characteristics of the TMT and company performance, using the agency theory perspective. The presence of high corruption risk in a company leads to agency difficulties, which in turn affects the relationship between the characteristics of the TMT and company performance.

This research examines both streams of the literature and investigates whether corruption risk influences these connections. There is a limited amount of research that has examined how corruption risk affects the relationship between the features of the TMT and company success. This study provides valuable insights into how company performance can be influenced by achieving an ideal balance between the characteristics of the TMT and the risk of corruption within companies in the Malaysian context.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Theoretical Framework

In explaining the relationship between main variables, this study adopts two main theories namely the resource dependence theory and agency theory, which are commonly used theories in governance literature. Both theories are based on the company-level theory that aligns with the measurement of company-level corporate governance mechanisms (i.e., TMT characteristics), corruption risk and company performance. First, the resource dependence theory is used to describe the relationship between TMT characteristics and company performance. This theory was first developed by Pfeffer and Salancik in 1978 with four main principles (Wang et al., 2019):

1. Entities must determine ways to survive.
2. External resources are important for entities to survive.
3. Entities must be able to obtain resources in the external environment.
4. The survival of entities is dependent on their ability to gain access to resources in the external environment.

Hence, it is important for companies with limited resources to be engaged with their external environment, specifically through TMT.

According to Hillman et al. (2007), TMT must build strong connections with external organisations and acquire important resources needed from them in a way for a company to be successful. Moreover, members of TMT with a resource-dependent focus, posed by expertise, experience, skill and knowledge, may strengthen team performance (Valenti & Horner, 2020). For example, resources that are rising from knowledge could support the members of TMT with valuable information concerning company and industry specific facts, thereby letting them to manage the distribution of company's resources efficiently (W. Li et al., 2021). Arguably, Qi (2022) revealed that the older top managers are more likely to better allocate their company's resources because they have richer social experience and knowledge than their younger counterparts. Thus, this unique talent of the TMT may serve as a resource provider to enhance company performance.

Second, the agency theory is applied to describe how corruption risk can moderate the relationship between TMT and company performance. The agency theory was formally introduced by Jensen and Meckling in 1976, which further classified into two concepts, (1) Agency Theory Type I (Sakawa & Watanabel, 2020) and (2) Agency Theory Type II (Karim et al., 2022). Considering corruption risk, many studies have utilised the agency theory to link corruption phenomenon and governance structures in organizations (Mahmud et al., 2021; Tran, 2020; Zulkifli & Norziaton, 2020). Arguably, corruption is more likely to create more agency costs (Tran, 2020), and such agency costs tend to call for greater monitoring activities that will eventually influence company performance (Yadav & Srivastava, 2023).

Furthermore, this study also adopted a supporting theory of contingency perspective to provide sufficient theoretical explanation for the moderating role of corruption risk. Previous study has explored the role of the TMT and how contingency factor moderates their impact on company performance (Wu et al., 2022). Contingency theory posits that there is no one best way to manage an organisation, in which the optimal management approach depends on various internal and external factors (Handoyo et al., 2023). This theory emphasises the importance of aligning management practices with the specific context and environment in which the organisation operates. Hence, drawing on the agency theory together with contingency perspective, it is expected that the managerial talents of TMT may potentially improve company performance in a highly corruption risk environment.

Hypothesis Development

Numerous studies on the characteristics of the TMT have illustrated that the representation of women in the TMT has had a significant influence on company performance (Chebri & Bahoussa, 2020; Cheong, 2023; Jadiyahpa et al., 2019; Triana et al., 2019). For example, Triana et al. (2019) stated that women leaders may increase efficiency in the TMT as they are associated with more ideas and innovation. However, Chebri and Bahoussa (2020) revealed that the greater the percentage of women on the board of directors, the more negative the performance of the company will be. Moreover, past studies have failed to associate the role of women leaders with company performance, indicating that women are not important for organisational

change (Abbadi et al., 2021; Abu Qa'dan & Suwaidan, 2019). Despite the mixed results, the resource dependence theory outlines that women leaders in the TMT may contribute invaluable resources to enhance company performance (Sieweke et al., 2023), and thus, the following hypothesis is formulated:

H1: The representation of women in the TMT is positively and significantly related to company performance.

Political connections is another TMT characteristic in the corporate landscape. The role of political connections is important in contributing invaluable resources to help strengthen performance (Azmi et al., 2020; Hasnan et al., 2019). Further, TMT members with political connections have good networking with the government bureaucrats, leaving them with the opportunity to reap several benefits and privileges that could bring additional value to their company (Huang et al., 2021; Huang & Yuan, 2021). Correspondingly, prior empirical studies have evinced that companies with privileged access to government facilities are associated with better performance (Hassan et al., 2023). Nevertheless, studying listed companies in Pakistan, Niazi et al. (2023) found that political connections negatively impact company performance, indicating that a country with a weak legal system and unstable political system can negatively impact investors' rights, and further weaken company performance. In line with the resource dependence theory, this study asserts that the TMT's political connections may contribute numerous benefits to company performance. Given the above, the following hypothesis is proposed:

H2: The presence of political connections in the TMT is positively and significantly related to company performance.

In the governance literature, another important characteristic of the TMT is age of the managers. Many past empirical studies have documented a significant relationship between the TMT's age of managers and company performance (Ginesti, 2019; Lo et al., 2020; Qi, 2022; Shakil & Wahab, 2023; Tanikawa & Kim, 2017). In tandem with the resource dependence theory, senior top managers have more experiences in management and social-related tasks, thus strengthening overall company performance (Qi, 2022). Some researchers have postulated that senior members in the TMT may impose additional risks to the company, thus adversely

affecting company performance (Shakil & Wahab, 2023). In contrast, other prior works have found no association between age of TMT managers and company performance (Niñerola et al., 2022; Sutarti et al., 2021). Considering the inconclusive empirical findings of past studies, this study expects that senior members of the TMT do much better than their junior counterparts. Therefore, this study hypothesises that:

H3: The age of members in the TMT is positively and significantly related to company performance.

Based on the resource dependence theory, the tenure of the TMT may provide useful resources to the company in the form of knowledge (Tarus et al., 2023) and managerial competencies (Saleh et al., 2020). Accordingly, an empirical study (Saleh et al., 2020) has documented that the tenure of the chief executive officer (CEO) has a positive relationship with company performance in the Palestine Securities Exchange, implying that long-tenured CEOs are more knowledgeable and competent, which results in better company performance. However, Chandren et al. (2021) posited that the association between company performance and CEO's tenure is negatively significant in Malaysia, suggesting that short-tenured CEOs are more dynamic and responsible, thus improving company performance. More importantly, long-tenured CEOs may cause conflicts in the organisation (Hemdan et al., 2021; Munyede, 2021). Hence, this study expects the negative impacts of TMT's tenure to outperform any possible positive impacts, and the following hypothesis is presumed:

H4: The tenure of members in the TMT is negatively and significantly related to company performance.

Another important issue to be considered in explaining the relationship between TMT and company performance is the issue of corruption from the risk perspective. Corruption risk is described as “the likelihood of corruption emerging from the vulnerabilities prevalent in the system along with the reflection of its potential impact” (Sharma et al., 2019). According to Krishnamurti et al. (2021), common corruption risk factors can vary depending on the respective country's context such as the quality of institutional background in which countries with higher institutional quality tend to have lower corruption risk. Furthermore, countries with a

high quality of state capacity in the form of market access and oversight experience low corruption risk levels (Dávid-Barrett et al., 2020). From the company perspective, the most prevalent factor of corruption risk is likely reliant on the public tendering process especially in Brazil. Whereas in Malaysia, companies that are more susceptible to corrupt activities are likely involved with corporate hospitality (Abdul Raof et al., 2021), experienced lack of internal controls (Muhamad Hanapiyah et al., 2018), and faced low quality of human governance (Abdullah et al., 2020).

Moreover, past studies have documented that corruption has a significantly moderating role in the link between corporate governance and company performance (Hanousek et al., 2019; Haq et al., 2020). Additionally, another stream of research has postulated that corruption control moderates the relationship between institutional risk and company performance (Zoogah, 2018). Further, Bello et al. (2021) found that the moderating role of corruption control in the link between company characteristics and corporate sustainability disclosure compliance is significant, particularly in the Nigerian capital market.

For this study, corruption risk stands as a moderating variable for several reasons. First, prior empirical findings of relationship between TMT and company performance are inconclusive (Abbadi et al., 2021; Cheong, 2023; Hassan et al., 2023; Niazi et al., 2023), while prior works on the indirect relationships between them are limited (Aboramadan, 2020). Second, the effect of corruption risk is not always one-way, and it might strengthen or weaken the TMT-company performance relationship. Malaysian capital markets are presumably operating in a highly corruption risk environment because the current initiatives to combat corruption have proven to be inadequate (Jones, 2022; Muhamad & Gani, 2020), which subsequently could influence the relationship between the characteristics of the TMT and company performance. Numerous studies have found that corruption risk may influence company performance (Hosseini et al., 2020; Kim & Wagner, 2021; Krishnamurti et al., 2018; 2021; Marzouki et al., 2024). On the one hand, previous studies have revealed that corruption risk significantly and negatively influences organisational performance, in terms of environmental, social and governance (ESG) reporting, thus leading to agency problems (Marzouki et al., 2024).

On the other hand, researchers have found that corruption risk improves company performance in the form of stock price volatility, which suggests that corruption may be considered as a cost of doing business (Krishnamurti et al., 2021). In addition, some scholars claimed that corruption has been a boon to the company performance (Troisi et al., 2021; 2023) and country's economic growth as well (Sharma & Mishra, 2022). For example, (Troisi et al., 2023) claim that the complex nature of corruption may result in gain to the company and acts as "greasing the wheels" especially for companies operating in country with poor institutions. Further, they found that corruption seems to improve sustainable industrialisation and production-related indicators among a sample of Italian companies. In corroborating with the agency theory and contingency factor, the influence of the characteristics of the TMT on company performance might be dependent on the company's level of corruption risk environment. Further, effective management practices must be tailored to address the specific challenges posed by corruption risk to optimise company performance. Therefore, the following hypotheses are established:

- H5: Corruption risk has a moderating effect on the relationship between representation of women on the TMT and company performance.
- H6: Corruption risk has a moderating effect on the relationship between political connections of the TMT and company performance.
- H7: Corruption risk has a moderating effect on the relationship between the age of the TMT members and company performance.
- H8: Corruption risk has a moderating effect on the relationship between the tenure of the TMT and company performance.

METHODOLOGY

Data Sources and Research Sample

This study's sample comprises 753 public listed companies (PLCs) in Bursa Malaysia's database for a period of five years from 2018 to 2022. These companies belong to 11 sectors, while companies from the financial services and real estate investment trusts sectors were excluded due to their distinctive regulatory settings. Companies with incomplete information and outliers were also removed, resulting in a final sample of 577 companies as presented in Table 1. The sector classifications are shown in Table 2. Companies from the industrial products & services sector account for the highest observation at 32.24% of the total sample (186 companies), followed by consumer and trading services companies at 22.36% (129 companies). The lowest number of observations is from the healthcare, energy and utilities sectors. Information on the characteristics of the TMT and corruption risk variables were collected from the company's annual reports using manual content analysis, while data on company performance in the form of Tobin's Q (TBQ) were extracted from Eikon Datastream.

TABLE 1
Sample selection

Particular	No. of companies	No. of companies
No. of PLCs as at 31 December 2022		753
Less:		
Companies under PN17	18	
Companies under financial services	49	
Companies under IPO	17	
Companies with incomplete data	90	
Outliers	2	(176)
Final sample		577

TABLE 2
Sector classification

Sector	No. of companies	%
Construction	39	6.76
Consumer products and services	129	22.36
Energy	21	3.64
Healthcare	11	1.91
Industrial products and services	186	32.24
Plantations	36	6.24
Properties	80	13.86
Technology	28	4.85
Telecommunication and media	11	1,91
Transportation and logistics	25	4.33
Utilities	11	1.91
Total	577	100.00

Measurement of Variables

The dependent variable of this study is company performance in the form of TBQ. The value of TBQ is derived as the ratio of the total market value of equity and book value of debt divided by the book value of total assets (Khan et al., 2021). This market-based performance captures the future expectations of company performance (Bhatia & Kumari, 2024). Next variable is the TMT's characteristics which refer to the backgrounds of the members in the TMT of a company. Members of TMT are further defined as individuals in the job positions including board chairman, executive director and/or key senior management (Shakil & Wahab, 2023), all of them are documented in the company's annual report (Jukka, 2021). The characteristics of the TMT are comprised of women's representation, political connections, age and tenure. Women's representation (WOM) is measured as the ratio of number of women in the TMT (Mahmud et al., 2021). TMT's political connections (POLI) are calculated as the ratio of number of members with political connections in the team (Joni et al., 2020). Political connections refer to connections to a person who holds/has held a position as Member of Parliament, top government bureaucrat, member of royal family and member of the ruling party (Hasnan et al., 2019). Age of TMT's members (AGE) is the average age of members in the team (Jukka, 2021); while

TMT's tenure (TEN) is measured by the average tenure of members in the team (Niñerola et al., 2022).

According to Sharma et al. (2019), corruption risk is defined as the likelihood that corrupt practices may happen from the vulnerabilities widespread in the business operations. For this study, such vulnerabilities are comprised of four dimensions, which are nature of business, government-linked companies, anti-corruption practices and transparency. Corruption risk (CORR) is the moderating variable, which is expressed as an index score of number of points a company can attain for a year divided by the maximum points a company can attain for a year, which will provide a score point in a range between 0 to 1. Following the TRACE International Organisation, a point of 1 denotes the highest score and 0 the lowest score of corruption risk (Stanley et al., 2019). The CORR index score comprises four dimensions with 23 items as shown in the Appendix, for which all items carry the same weight. Based on the specified 23 indicators, the equation for the corruption risk index score was then constructed in Equation (1).

$$\frac{CORR_{it} = \sum_{n=1}^{23} Score_n}{MaxScore} \quad (1)$$

Where, the acronym of CORR indicates corruption risk. Next, the subscripts "i" and "t" signify company and year. The subscript of "n" denotes an individual indicator in the index. Score is the score a company can attain for a particular year. Lastly, MaxScore is the maximum score a company can achieve for a year (23 items × 1 point).

Control variables are represented by external audit investment (EA), return on assets (ROA), company size (SIZE), leverage (LEV) and size of the top management team (TMTS). EA is surrogated by the remuneration paid to external auditors (Martins & Júnior, 2020); ROA is calculated by the percentage of net income to total assets (Jakpar et al., 2019); SIZE is the natural log of the company's total assets (Azmi et al., 2021); LEV is the proportion of total liabilities divided by total assets (Azmi et al., 2021); and TMTS is measured as the number of members in the TMT (Al-Matari et al., 2023). Summary of the research variables is presented in Table 3.

TABLE 3*Summary of variables*

Variable	Acronym	Scale and measurement	Source of data	Reference
Dependant variable				
Company Performance – Tobin's Q	TBQ	Ratio scale – The total of the market value of common shares and the book value of total debt divided by the book value of total assets.	Eikon DataStream	(Khan et al., 2021)
Independent variables				
Women	WOM	Ratio scale – The percentage of women serving in the TMT.	Annual Report	(Wu et al., 2022)
Political Connections	POLI	Ratio scale – The percentage of members in team with political expertise/connection.	Annual Report	(Koprowski et al., 2021)
Age	AGE	Ratio scale – The average age of the top executives in the company.	Annual Report	(Jukka, 2021; Tanikawa & Kim, 2017)
Tenure	TEN	Ratio scale – The average score of total tenure of members in the TMT.	Annual Report	(Niñerola et al., 2022; Shakil & Wahab, 2023)
Moderating variable				
Corruption Risk	CORR	Ratio scale – The corruption risk index indicates a total score of corruption risk indicators (get 1 point for each item) and divided by the maximum score. The maximum score is the total number of indicators of which all indicators must obtain 1 point of score.	Annual Report	(Asare et al., 2021; Krishnamurti et al., 2018)

(Continued on next page)

TABLE 3 (Continued)

Variable	Acronym	Scale and measurement	Source of data	Reference
Control variables				
External Auditor	EA	Ratio scale – The amount of auditors' remuneration paid to external auditor divided by the total amount of company's assets.	Annual Report	(Kuan et al., 2020)
Return on Assets	ROA	Ratio scale – The proportion of the total income to the aggregate assets.	Annual Report	(Ali et al., 2020; Asare et al., 2021)
Size	SIZE	Ratio scale – Natural log of total assets.	Annual Report	(Sari et al., 2021)
Leverage	LEV	Ratio scale – The proportion of the aggregate liabilities to the aggregate assets.	Annual Report	(Al-ahdal & Hashim, 2022)
TMT Size	TMTS	The number of members in TMT.	Annual Report	(Al-Matari et al., 2023)

Model Specification

This study employed a balanced panel data for five years from 2018 to 2022. For hypotheses testing, this study used two-way fixed-effects model (FEM) that controls for both time invariant and cross-sectional effects arising from corporate governance and company culture (Khan et al., 2021). The selection of FEM over the two-way random-effects model was proven using the Hausman-Mundlak test. The result of the Hausman test show that the p -value is less than 0.05, indicating the estimate of the FEM is appropriate. Further, this study used robust standard errors to address the issue of autocorrelation and heteroskedasticity in the regression models (Shakil & Wahab, 2023). Next, two panel regression models were formulated. Model (1) was used to examine the direct relationships of the characteristics of the TMT and company performance. The general regression equation for Model (1) is specified in Equation (2) as follows:

$$TBQ_{it} = \beta_{0it} + \beta_1 WOM_{it} + \beta_2 POLI_{it} + \beta_3 AGE_{it} + \beta_4 TEN_{it} + \beta_5 EA_{it} + \beta_6 ROA_{it} + \beta_7 SIZE_{it} + \beta_8 LEV_{it} + \beta_9 TMTS_{it} + (\mu_i + \beta_t + \beta_{it}) \quad (2)$$

In Model (1), TBQ_{it} implies company performance proxied by TBQ, the subscripts i and t denote company and time in years. β_{0it} connotes constant. β represents the slope of independent and control variables. $(\mu_i + \gamma_t + \epsilon_{it})$ is a vector of two-way error terms; while Model (2) assessed the moderation effects of CORR on the characteristics of the TMT-company performance relationships via the following general regression Equation (3):

$$TBQ_{it} = \beta_{0it} + \beta_1 WOM_{it} + \beta_2 POLI_{it} + \beta_3 AGE_{it} + \beta_4 TEN_{it} + \beta_5 CORR_{it} + \beta_6 WOM_{it} * CORR_{it} + \beta_7 POLI_{it} * CORR_{it} + \beta_8 AGE_{it} * CORR_{it} + \beta_9 TEN_{it} * CORR_{it} + \beta_{10} EA_{it} + \beta_{11} ROA_{it} + \beta_{12} SIZE_{it} + \beta_{13} LEV_{it} + \beta_{14} TMTS_{it} + (\mu_i + \gamma_t + \epsilon_{it}) \quad (3)$$

RESULTS AND DISCUSSION

Descriptive Statistics and Correlation Matrix

It is important to obtain an in-depth understanding of the moderating effects of CORR on the relationship between the characteristics of the TMT and company performance. Table 4 presents the descriptive statistics of the research variables included in the models. For company performance, the mean score for Tobin's Q (TBQ) is 0.876, which indicates the percentage of the market value to the company's total assets. Furthermore, the mean values for TMT's women (WOM), TMT's political connections (POLI), TMT's age (AGE) and TMT's tenure (TEN) are 0.170, 0.050, 55 and 9, respectively. Moreover, CORR accounts for between 0.43 and 1, with a mean score of 0.709, while the results of the variables' inter-correlations in Table 5 show that all correlation values are less than 0.8, indicating no issue of multicollinearity (Hair et al., 2010). For main variables, the highest score of correlation coefficient was TEN against AGE at $r = 0.516$ and p -value at the 1% level, indicating that senior members of TMT are most probably to have a longer tenure in TMT. Next is the correlation between AGE and WOM with a negative and significant coefficient at $r = -0.187$ and p -value at the 1% level, suggesting that women representation in TMT are most likely among the younger talents.

TABLE 4

Descriptive results

Variable	Obs.	Mean	SD	Minimum	Maximum
TBQ_{it}	2,885	0.876	0.786	0.002	10.838
WOM_{it}	2,885	0.170	0.156	0.000	0.714
$POLI_{it}$	2,885	0.050	0.091	0.000	0.667
AGE_{it}	2,885	54.583	4.971	32.500	72.333
TEN_{it}	2,885	8.585	5.422	0.000	34.500
$CORR_{it}$	2,885	0.709	0.207	0.043	1.000
EA_{it}	2,885	0.001	0.001	0.000	0.009
ROA_{it}	2,885	0.623	0.543	-3.090	4.419
$SIZE_{it}$ (log)	2,885	13.422	1.565	9.481	19.141
LEV_{it}	2,885	0.380	0.219	0.003	2.664
$TMTS_{it}$	2,885	7.671	4.071	1	41

TABLE 5

Correlations

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) TBQ_{it}	1.000										
(2) WOM_{it}	0.053***	1.000									
(3) $POLI_{it}$	-0.046**	-0.083***	1.000								
(4) AGE_{it}	-0.082***	-0.187***	0.143***	1.000							
(5) TEN_{it}	-0.042**	-0.087***	-0.042**	0.516***	1.000						
(6) $CORR_{it}$	-0.105***	-0.032	0.103***	0.017	0.081***	1.000					
(7) EA_{it}	0.051***	-0.036*	-0.011	-0.063***	-0.017	0.167***	1.000				
(8) ROA_{it}	0.161***	0.017	-0.114***	-0.004	0.029	-0.054***	0.025	1.000			
(9) $SIZE_{it}$	-0.028	0.042**	-0.046**	0.064***	-0.089***	-0.369***	-0.601***	-0.081***	1.000		
(10) LEV_{it}	-0.063***	0.017	0.058***	-0.081***	-0.240***	-0.108***	-0.118***	0.121***	0.197***	1.000	
(11) $TMTS_{it}$	0.080***	0.139***	-0.132**	-0.148***	-0.193***	-0.217***	-0.213***	0.053***	0.263***	0.209***	1.000

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Static Panel Regression Results and Discussion

The results of the Woolridge and Breusch-Pagan tests reveal the existence of autocorrelation and constant variance problems. So, robust standard error (RSE) was used to rectify both problems in the regression models. As in Table 6, the results of the main variable relationships report that the relationship between WOM and TBQ is positive but not significant, thus hypothesis H1 is not supported. Interestingly, POLI has a positive and significant relationship with company performance. This result supports the notion that TMT members with political connections are likely to improve company performance, consistent with the empirical results of prior studies (Huang & Yuan, 2021; Sharma et al., 2020). Moreover, this result is in tandem with the resource dependence theory, indicating that top managers with political connections might stand as invaluable resource providers in terms of privileged access to financial resources and business information, which subsequently can improve company performance (Nguyen et al., 2020; Tihanyi et al., 2019). Therefore, hypothesis H2 is supported.

Further, this study fails to provide evidence on the significant relationship between AGE and TBQ, thereby hypothesis H3 is not supported. However, TEN has a negative and significant relationship with company performance, indicating that TMT members with a shorter tenure are more able to enhance company performance than their counterparts. In line with the resource dependence theory, a shorter tenure encourages TMT members to have fresh ideas and perform their corporate roles faster, eventually increasing company performance (Chandren et al., 2021). Thus, hypothesis H4 is supported. In addition, using the fixed-effects model with RSE, the R-squared value is 4.4, indicating that only 4.4% of the variation in company performance is explained by the explanatory variables (i.e., WOM, POLI, AGE and TEN). However, when adding interaction term to the regression model, the value of R-squared increases to 5.4%, albeit a small change. Model (2) in Table 6 was performed to examine four interaction terms of WOM*CORR, POLI*CORR, AGE*CORR and TEN*CORR.

The regression results of Model (2) in Table 6 present that there are positive and significant moderation effects of CORR on the relationship between WOM and POLI with TBQ, therefore leading to the acceptance of H5 and H6. The positive moderation effect of CORR implies that the roles of WOM and POLI in improving company performance are enhanced when the company is operating in a highly corruption risk environment.

Seemingly, corruption risk is less likely to impose a barrier to organisational performance (Das & Mahalik, 2020; Krishnamurti et al., 2021). These results corroborate the agency theory in a way that women's representation and political connections in the TMT may provide monitoring benefits and protect the company from the adverse impacts of corruption risk, which in turn, can reduce agency conflicts. Nevertheless, the interaction effect of AGE*CORR and TEN*CORR against company performance are not significant. This probably suggests that both demographic characteristics of TMT may not properly respond to the issue of corruption risk in the company, thereby make no contribution to company performance. Hence, hypotheses H7 and H8 are also not supported.

TABLE 6

Relationship between corruption risk, characteristics of the TMT, and company performance

Variable	<i>TBQ_{it}</i>		<i>TBQ_{it}</i>	
	(1)		(2)	
Model	Coef.	Std. Err.	Coef.	Std. Err.
Constant	0.508	1.534	0.831	1.534
<i>WOM_{it}</i>	0.086	0.155	-0.894	0.470
<i>POLI_{it}</i>	0.378*	0.216	-0.715	0.671
<i>AGE_{it}</i>	0.000	0.000	0.000	0.000
<i>TEN_{it}</i>	-0.015**	0.007	-0.005	0.017
<i>CORR_{it}</i>			-0.299	0.562
<i>WOM_{it} * CORR_{it}</i>			1.374**	0.592
<i>POLI_{it} * CORR_{it}</i>			1.529*	0.852
<i>AGE_{it} * CORR_{it}</i>			0.000	0.000
<i>TEN_{it} * CORR_{it}</i>			-0.014	0.020
<i>EA_{it}</i>	-0.094	0.054	-0.097	0.054
<i>ROA_{it}</i>	0.225	0.183	0.224	0.181
<i>SIZE_{it}</i>	-0.036	0.120	-0.048	0.118
<i>LEV_{it}</i>	-0.211	0.236	-0.195	0.231
<i>TMTS_{it}</i>	0.095	0.058	0.099	0.057
Company effect		Yes		Yes
Year effect		Yes		Yes
<i>R</i> ²		0.044		0.054
Observations		2,885		2,885

Note: *, ** and *** are significant at 10%, 5% and 1% levels.

In analysing moderation, it is important to illustrate the interaction slope and interaction effect size (Murphy & Aguinis, 2022). Despite significant results having been reported, comparing the relative behaviour of the moderating effects of WOM*CORR and POLI*CORR against TBQ is necessary to understand which is the more effective between the two significant interactions. Besides that, the interaction term of WOM*CORR captures the highest effect size at eta-squared 0.0004, albeit a small size. Eta-squared represents the proportion of the total variance that is attributed to an effect. This suggests that the positive effect is more pronounced for companies with more women members in the TMT. Increasing the participation of women in the TMT could support Guidance G5.10¹ of the Malaysian Code of Corporate Governance (MCCG) 2021 in a way that gender diversity could lead to more innovative solutions and well-informed decision-making, which in turn improves company performance, consistent with past study of Kabir et al. (2023).

Additional Analysis

This study further checked for robustness of primary regression results using the FEM model with robust standard error. For the moderation analysis, this study re-examined the same regression model using alternative measurements of POLI and CORR variables in the form of a dichotomous scale. As in Table 7, the new acronym of POLIDUM_{it} (the dummy is coded “1” when a company has political connection and “0” otherwise) represents POLI and CORD_{it} (the dummy is coded “1” when a company average corruption risk score equal or above the median level and “0” otherwise) indicates CORR. CORD provides an alternative measurement to corruption risk by splitting the dataset into two groups which are low corruption risk companies with a score below the median level and high corruption risk companies with a score equal and above the median level. For this study, the score of median level was 0.739 which is higher than the mean score of corruption risk.

Based on the regression results, the direct analysis shows a significant relationship between TEN and TBQ at 5% level, unlike the other independent variables (i.e., WOM_{it}, POLIDUM_{it} and AGE_{it}). For the moderation analysis, the interaction term of WOM_{it}*CORD_{it} and POLI_{it}*CORD_{it} against company performance reveals a significant and positive relationship at 5% and 10% levels, respectively. The alternative moderation results are consistent with the primary results in Model (2) of

Table 6. Moreover, the value of R-squared has experienced a slight reduction from 5.4% (primary finding) to 4.8% (alternative finding), suggesting that the measurement of the dichotomous scale for both variables has reduced the model fitness.

TABLE 7

Moderation effect of corruption risk using alternative measurement

Variable	<i>TBQ_{it}</i>		<i>TBQ_{it}</i>	
	(1)		(2)	
Model	Coef.	Std. Err.	Coef.	Std. Err.
Constant	0.459	1.531	0.682	1.545
<i>WOM_{it}</i>	0.089	0.155	-0.116	0.196
<i>POLIDUM_{it}</i>	0.055	0.039	0.016	0.370
<i>AGE_{it}</i>	0.000	0.000	0.000	0.000
<i>TEN_{it}</i>	-0.015**	0.007	-0.014	0.008
<i>CORD_{it}</i>			0.200	0.152
<i>WOM_{it} * CORD_{it}</i>			0.354**	0.174
<i>POLIDUM_{it} * CORD_{it}</i>			0.076*	0.043
<i>AGE_{it} * CORD_{it}</i>			0.000	0.000
<i>TEN_{it} * CORD_{it}</i>			0.002	0.005
<i>EA_{it}</i>	-0.093	0.054	-0.097	0.053
<i>ROA_{it}</i>	0.228	0.184	0.224	0.183
<i>SIZE_{it}</i>	-0.032	0.120	-0.043	0.118
<i>LEV_{it}</i>	-0.225	0.235	-0.218	0.231
<i>TMTS_{it}</i>	0.083	0.060	0.087	0.057
Company effect	Yes			Yes
Year effect	Yes			Yes
<i>R</i> ²	0.043			0.048
Observations	2,885			2,885

Note: *, ** and *** are significant at 10%, 5% and 1% levels.

Conceptually, the relationships between the firm performance and TMT's characteristics are likely to contain endogeneity, as financially stronger firms could recruit better talent into the TMT, showing higher professionalism in corporate governance. To address this potential endogeneity issue, the study reperforms the main analysis using a two-stage least-squares (2SLS) regression to obtain consistent and efficient estimators. According to Adkins and Hill (2008), the instrumental variable (IV) included in the 2SLS must fulfil the following conditions:

1. It should be outside the regression model.
2. It should be uncorrelated with the regression errors.
3. It should be strongly correlated with the endogenous variable.

Hence, following prior corporate governance literature (i.e., Larcker & Rusticus, 2010), a suitable IV for corporate governance variables would be their lagged values. Given that one of the main findings in Table 6 indicates a positive and significant relationship between POLI and company performance, we perform a 2SLS regression on POLI using the lagged values of POLI to mitigate the bias caused by endogeneity.

The results are presented in Table 8, where Model (1) represents the 2SLS regression results for the relationship between TMT characteristics and firm performance, whereas Model (2) represents the 2SLS regression results on the moderation effect of corruption risk on the relationship between TMT characteristics and firm performance. The sample size has dropped to 2,308 observations based on the lagged values available for POLI. Contrary to the main finding in Table 6, the results of the 2SLS regression shows that variable POLI is insignificant in both models. This suggests that the inference made regarding the TMTs characteristics reported in the main finding is not robust to the presence of endogeneity. However, identifying appropriate IV to be used in a 2SLS regression is difficult and findings from using incorrect instruments can lead to IV estimates that are more biased than simple ordinary least-squares (OLS) estimates (Larcker et al., 2007). Therefore, this endogeneity issue represents a limitation to this study findings, which should be investigated further, therefore becomes a recommended area for future research.

TABLE 8
Two-stage least-squares regression

Variable	TBQ_{it}		TBQ_{it}	
	(1)		(2)	
Model	Coef.	Std. Err.	Coef.	Std. Err.
Constant	1.138	0.095	1.719	0.293
WOM_{it}	0.058	0.042	-0.069	0.147
$POLI_{it}$	-0.058	0.082	-0.118	0.589
AGE_{it}	-0.005***	0.002	-0.013	0.006
TEN_{it}	-0.002	0.001	0.021	0.005

(Continued on next page)

TABLE 8 (Continued)

Variable	TBQ _{it}		TBQ _{it}	
	(1)		(2)	
Model	Coef.	Std. Err.	Coef.	Std. Err.
<i>CORR_{it}</i>			-0.698	0.396
<i>WOM_{it} * CORR_{it}</i>			0.198	0.203
<i>POLI_{it} * CORR_{it}</i>			0.094	0.775
<i>AGE_{it} * CORR_{it}</i>			0.013	0.008
<i>TEN_{it} * CORR_{it}</i>			-0.033***	0.006
<i>EA_{it}</i>	-0.003	0.011	-0.004	0.011
<i>ROA_{it}</i>	0.114	0.012	0.103	0.012
<i>SIZE_{it}</i>	-0.002	0.007	-0.018	0.008
<i>LEV_{it}</i>	-0.111	0.033	-0.093	0.033
<i>TMTS_{it}</i>	0.006	0.002	0.006	0.002
Company effect	Yes		Yes	
Year effect	Yes		Yes	
R ²	0.069		0.098	
Observations		2,308		2,308

Note: *, ** and *** are significant at 10%, 5% and 1% levels, respectively.

CONCLUSION

This study examines the relationship between the characteristics of the TMT and company performance in Malaysian public listed companies spanning five years from 2018 to 2022. Moreover, this study examines the interaction effects on corruption risk and characteristics of the TMT on company performance. The empirical results show that TMT's political connections and tenure are significantly related to company performance. For moderation analysis, the panel regression results report a positive and significant moderation effect of corruption risk on the relationship between women's representation and company performance. Furthermore, corruption risk moderates the relationship between political connections and company performance. Drawing from the agency theory, women's representation and politician connections in the TMT are more likely to give monitoring advantages for ensuring the companies are performing well even though they are operating in a highly risky corruption environment.

The results of this study provide important implications for companies and regulators in improving company performance in Malaysia. First, linking back to the report of the Corporate Governance Monitor 2022, listed companies should have proper appointment criteria for members in the TMT to develop a better corporate governance system, especially when these companies are located in the regions with high corruption risk intensity. For example, women top managers who comply better with laws may be motivated to protect their companies from the harmful effects of corruption risk. Also, TMT members with political connections are more concerned with their company's reputation and exhibit a stronger commitment to sustain performance when they are under enormous pressure to comply with anti-corruption laws. Therefore, in this situation, the representation of women and political connections in the TMT may encourage companies to improve their performance and be more responsible for ensuring anti-corruption.

Overall, the results suggest that corruption risk acts as an external pressure prompting shareholders to demand greater commitment from the TMT which give rise to a new theoretical perspective on how external risks influence corporate governance behaviour. In high-corruption environments, politically connected and women TMTs may feel a stronger need to enhance their monitoring roles to protect the company's interests and their reputations. This heightened vigilance can indirectly act as a governance mechanism by promoting better oversight and accountability. Such circumstances do not mean that TMT's characteristics are ineffective in low-corruption environments, but their impact is more pronounced where the risk is higher. Given the importance of the Corporate Governance Monitor 2022 in promoting specific governance practices, this study suggests that these guidelines need to be adaptable to different environmental contexts, including corruption risk, and highlight the need for companies to tailor their governance frameworks to their unique challenges. Notably, effective governance requires not only adherence to guidelines but also responsiveness to environmental risks, such as corruption. This alignment can strengthen the overall governance framework and enhance company performance.

This study has its limitations that provide a potential avenue for future research. First, the sample of the study which is drawn from public listed companies on Bursa Malaysia, limits the generalisability of the findings.

While this research context is a good introduction for studying the moderating effects of corruption risk on the link between the characteristics of the TMT and company performance, other points of view could be obtained by expanding the research area to other sizes of businesses, such as small and medium enterprises (SMEs), thus leading to more representative findings of the population. Moreover, this study does not explore the relationship between corporate governance mechanisms and company performance in different phases of economic conditions (i.e., before and after the COVID-19 pandemic). If there is no different role of corporate governance mechanisms associated with company performance in different economic conditions, all companies would likely be scrutinised. In addition, future studies may shed light on the trend of corruption risk among public listed companies for understanding the level of compliance with Subsection 5 of Section 17A of the MACC Act 2009. Such provision was to curtail corrupt practices by commercial organisations through the MACC Guidelines on Adequate Procedures (GAP) in which low level of compliance on the GAP may reflect high level of corruption risk in the companies. In addition, the findings of this study are not robust to the presence of endogeneity, which therefore becomes an area to be addressed in future research.

ACKNOWLEDGEMENTS

The authors would like to express their gratitude to the Ministry of Higher Education (MOHE) for funding this research project through the Fundamental Research Grant Scheme (FRGS/1/2022/SS01/UITM/02/34). Additionally, they extend their appreciation to the Research Management Centre, Universiti Teknologi MARA, for providing support through the Vice Chancellor Special Project (VCSP) (600-RMC/VCSP 5/3 (008/2024)). Their appreciation also goes to the Faculty of Accountancy, Universiti Teknologi MARA for facilitating this research project.

CONFLICT OF INTEREST

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

NOTE

1. The MCCG 2021 Guidance G5.10 – The participation of women in decision-making positions should not be focused on board positions alone but should be broadened to include members of senior management as the same benefits apply. Thus, the board should establish gender diversity policies to support the participation of women on the board as well as senior management.

REFERENCES

- Abas Azmi, K. S., & Zainudin, R. (2021). Money in politics: A recipe for corruption in Malaysia. *Journal of Financial Crime*, 28(2), 593–606. <https://doi.org/10.1108/JFC-07-2020-0147>
- Abbadi, S., Abuaddous, M., & Alwashah, A. (2021). Impact of board gender diversity on the financial performance of the manufacturing and service companies listed on the Amman Stock Exchange. *Corporate Governance and Organizational Behavior Review*, 5(2), 8–16. <https://doi.org/10.22495/cgobrv5i2p1>
- Abdul Raof, N., Abdul Aziz, N., Alias, F., & Abu Bakar, N. (2021). Corruption or corporate hospitality in commercial organisations: Challenges and conundrum. *Environment-Behaviour Proceedings Journal*, 6(SI6), 127–132. <https://doi.org/10.21834/ebpj.v6iSI6.3051>
- Abdullah, W. M. T. W., Daud, S., & Hanapiyah, Z. M. (2020). Human governance and corruption risk in Malaysia public sector. *Global Business and Management Research: An International Journal*, 12(4), 721–731.
- Aboramadan, M. (2020). Top management teams characteristics and firms performance: Literature review and avenues for future research. *International Journal of Organizational Analysis*, 29(3), 603–628. <https://doi.org/10.1108/IJOA-02-2020-2046>
- Abu Qa'dan, M. B., & Suwaidan, M. S. (2019). Board composition, ownership structure and corporate social responsibility disclosure: The case of Jordan. *Social Responsibility Journal*, 15(1), 28–46. <https://doi.org/10.1108/SRJ-11-2017-0225>
- Adkins, L. C., & Hill, R. C. (2008). *Using stata for principles of econometrics* (3rd ed.). New York: John Wiley & Sons Inc.
- Agarwal, R., Braguinsky, S., & Ohyama, A. (2019). *Centers of gravity: The effect of stable shared leadership in top management teams on firm growth and industry evolution*. John Wiley & Sons Ltd.
- Ahola, T., Stähle, M., & Martinsuo, M. (2021). Agency relationships of project-based firms. *International Journal of Project Management*, 39(7), 713–725. <https://doi.org/10.1016/j.ijproman.2021.06.005>

- Al-ahdal, W. M., & Hashim, H. A. (2022). Impact of audit committee characteristics and external audit quality on firm performance: Evidence from India. *Corporate Governance (Bingley)*, 22(2), 424–445. <https://doi.org/10.1108/CG-09-2020-0420>
- Al-Matari, E. M., Mgammal, M. H., Alruwaili, T. F., Kamardin, H., & Senan, N. A. M. (2023). Top management characteristics and performance of financial companies: The role of women in the top management. *Corporate Governance and Organizational Behavior Review*, 7(3), 8–18. <https://doi.org/10.22495/cgobrv7i3p1>
- Ali, M. M., Haron, N. H., Othman, N. A., & Hasnan, S. (2020). Creative accounting and financial performance of public listed companies in Malaysia. *Humanities and Social Sciences Letters*, 8(1), 12–22. <https://doi.org/10.18488/journal.73.2020.81.12.22>
- Alshubiri, F., Jamil, S. A., & Fekir, S. (2024). Corruption control, government effectiveness and banking stability: Does corruption grease or sand the wheels? *Journal of the Knowledge Economy*, 15(1), 2656–2681. <https://doi.org/10.1007/s13132-023-01277-x>
- Anwar, S., Rani, A., Ali, H. M., Zamre, M., & Zahir, M. (2023). The adoption of T.R.U.S.T principles by Prudential BSN Takaful Berhad. *IJUM Law Journal*, 31(S1), 1–30. <https://doi.org/10.31436/iiumlj.v31iS1.875>
- Asare, E. T., Duho, K. C. T., Agyenim-Boateng, C., Onumah, J. M., & Simpson, S. N. Y. (2021). Anti-corruption disclosure as a necessary evil: Impact on profitability and stability of extractive firms in Africa. *Journal of Financial Crime*, 28(2), 531–547. <https://doi.org/10.1108/JFC-09-2020-0173>
- Azmi, N. A., Abd Sata, F. H., Abdullah, N., Ab Aziz, N. H., & Ismail, I. S. (2021). Institutional investors ownership and firm value: Evidence from Malaysia. *Asia-Pacific Management Accounting Journal*, 16(1), 1–20. <https://doi.org/10.24191/APMAJ.V16i1-01>
- Azmi, N. A., Zakaria, N. B., Sata, F. H. A., & Sanusi, Z. M. (2020). Political connection and firm's performance among Malaysian firms. *International Journal of Financial Research*, 11(3), 146–154. <https://doi.org/10.5430/ijfr.v11n3p146>
- Batra, I., Preethi, P., & Dhir, S. (2022). Organizational ambidexterity from the emerging market perspective: A review and research agenda. *Thunderbird International Business Review*, 64(5), 559–573. <https://doi.org/10.1002/tie.22271>
- Belderbos, R., Lokshin, B., Boone, C., & Jacob, J. (2022). Top management team international diversity and the performance of international R&D. *Global Strategy Journal*, 12(1), 108–133. <https://doi.org/10.1002/gsj.1395>
- Bello, M. S., Said, R. M., Johari, J., & Kamarudin, F. (2021). Moderating role of corruption control on firm level determinants of corporate sustainability disclosure compliance in Nigeria. *Estudios de Economia Aplicada*, 39(4), 1–14. <https://doi.org/10.25115/eea.v39i4.4428>

- Bhatia, A., & Kumari, P. (2024). The moderating effect of corporate governance factors on capital structure and performance: Evidence from Indian companies. *Corporate Governance: The International Journal of Business in Society*, 24(5), 1083–1102. <https://doi.org/10.1108/CG-06-2023-0239>
- Burns, N., Kapalczynski, A., & Wald, J. K. (2021). Independent director compensation, corruption, and monitoring. *Financial Review*, 56(1), 5–28. <https://doi.org/10.1111/fire.12232>
- Chandren, S., Qaderi, S. A., & Ghaleb, B. A. A. (2021). The influence of the chairman and CEO effectiveness on operating performance: Evidence from Malaysia. *Cogent Business and Management*, 8(1), 1–23. <https://doi.org/10.1080/23311975.2021.1935189>
- Chebri, M., & Bahoussa, A. (2020). Impact of gender and nationality diversity on financial performance: A study of listed banks in Morocco. *Corporate Ownership & Control*, 18(1), 56–68. <https://doi.org/10.22495/cocv18i1art5>
- Cheong, C. W. H. (2023). Political regimes and its influence on the diversity-performance relationship in Malaysia. *Asia-Pacific Journal of Business Administration*, 15(5), 746–771. <https://doi.org/10.1108/APJBA-07-2021-0321>
- Das, K. C., & Mahalik, M. K. (2020). International subsidiary performance of Indian multinationals in the extractive sector: The role of institutional quality, corruption and investment regime. *Resources Policy*, 67(August), 1–9. <https://doi.org/10.1016/j.resourpol.2020.101664>
- Dávid-Barrett, E., Fazekas, M., Hellmann, O., Márk, L., & McCorley, C. (2020). Controlling corruption in development aid: New evidence from contract-level data. *Studies in Comparative International Development*, 55(4), 481–515. <https://doi.org/10.1007/s12116-020-09315-4>
- Degbey, W. Y., Eriksson, T., Rodgers, P., & Oguji, N. (2021). Understanding cross-border mergers and acquisitions of African firms: The role of dynamic capabilities in enabling competitiveness amidst contextual constraints. *Thunderbird International Business Review*, 63(1), 77–93. <https://doi.org/10.1002/tie.22138>
- Ginesti, G. (2019). Top management characteristics and intellectual capital performance in small Italian companies. *Corporate Governance (Bingley)*, 19(6), 1153–1166. <https://doi.org/10.1108/CG-10-2018-0305>
- Guluma, T. F. (2021). The impact of corporate governance measures on firm performance: The influences of managerial overconfidence. *Future Business Journal*, 7(1), 1–18. <https://doi.org/10.1186/s43093-021-00093-6>
- Habib, S., Abdelmonem, S., & Khaled, M. (2020). The effect of corruption on the environmental quality in African Countries: A panel quantile regression analysis. *Journal of the Knowledge Economy*, 11(2), 788–804. <https://doi.org/10.1007/s13132-018-0571-8>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson Prentice Hall.

- Handoyo, S., Suharman, H., Ghani, E. K., & Soedarsono, S. (2023). A business strategy, operational efficiency, ownership structure, and manufacturing performance: The moderating role of market uncertainty and competition intensity and its implication on open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(2), 1–14. <https://doi.org/10.1016/j.joitmc.2023.100039>
- Hanousek, J., Shamshur, A., & Tresl, J. (2019). Firm efficiency, foreign ownership and CEO gender in corrupt environments. *Journal of Corporate Finance*, 59(15), 344–360. <https://doi.org/10.1016/j.jcorpfin.2017.06.008>
- Haq, A. ul, Bilal, M., & Qureshi, S. A. (2020). Moderating effect of corruption in relationship of cash holding and corporate governance with firm's performance: Evidence from Pakistan. *Journal of Managerial Sciences*, 14(3), 14–26.
- Hasnan, S., Kamaruzaman, I. S., Mohd Sanusi, Z., & Ali, M. M. (2019). Political connections, family ownership and firms' performance in Malaysia. *International Journal of Innovation, Creativity and Change*, 7(6), 114–136.
- Hasnan, S., Rahman, N. A. A., Hussain, A. R. M., & and Ali, M. M. (2022). Corporate governance and ownership structure on illegal insider trading activities in Malaysian public listed companies. *Management & Accounting Review*, 21(1), 95–117.
- Hassan, M. K., Lahyani, F. E., & Elgharbawy, A. (2023). Political connections, media coverage and firm performance: Evidence from an emerging market. *Meditari Accountancy Research*, 31(6), 1634–1653. <https://doi.org/10.1108/MEDAR-09-2021-1439>
- Hemdan, D. A. M., Hasnan, S., & Saif-Ur-Rehman, S. U. R. (2021). CEO power dynamics and firms' reported earnings quality in Egypt: Moderating role of corporate governance. *Pakistan Journal of Commerce and Social Sciences*, 15(1), 1–30.
- Hillman, A. J., Shropshire, C., & Cannella, A. A. (2007). Organizational predictors of women on corporate boards. *Academy of Management Journal*, 50(4), 941–952. <https://doi.org/10.5465/amj.2007.26279222>
- Hosseini, M. R., Martek, I., Banihashemi, S., Chan, A. P. C., Darko, A., & Tahmasebi, M. (2020). Distinguishing characteristics of corruption risks in Iranian construction projects: A weighted correlation network analysis. *Science and Engineering Ethics*, 26(1), 205–231. <https://doi.org/10.1007/s11948-019-00089-0>
- Hsu, Y. T., & Chang, K. C. (2021). A study on top managers from a resource-based perspective. *Measuring Business Excellence*, 25(1), 58–77. <https://doi.org/10.1108/MBE-02-2020-0038>
- Huang, M., Li, M., & Liao, Z. (2021). Do politically connected CEOs promote Chinese listed industrial firms' green innovation? The mediating role of external governance environments. *Journal of Cleaner Production*, 278, 1–11. <https://doi.org/10.1016/j.jclepro.2020.123634>

- Huang, Q., & Yuan, T. (2021). Does political corruption impede firm innovation? Evidence from the United States. *Journal of Financial and Quantitative Analysis*, 56(1), 213–248. <https://doi.org/10.1017/S0022109019000966>
- Hussain, A. R. M., Sanusi, Z. M., Mahenthiran, S., & Hasnan, S. (2016). Management motives and firm financial misstatements in Malaysia. *International Journal of Economics and Financial Issues*, 6(S4), 18–25.
- Ismail, M., Mohamad, N., & Ahamat, A. (2023). Managerial capabilities, learning orientation and performance of international halal industry using upper Echelon theory. *International Journal of Business and Society*, 24(1), 119–140. <https://doi.org/10.33736/ijbs.5608.2023>
- Jadiyappa, N., Jyothi, P., Sireesha, B., & Hickman, L. E. (2019). CEO gender, firm performance and agency costs: Evidence from India. *Journal of Economic Studies*, 46(2), 482–495. <https://doi.org/10.1108/JES-08-2017-0238>
- Jakpar, S., Tinggi, M., Hui, T. K., Johari, A., & Myint, K. T. (2019). Analysis of corporate governance and firm performance: Evidence from Malaysian listed companies. *International Journal of Business and Social Science*, 10(1), 118–133.
- Jones, D. S. (2022). Challenges in combating corruption in Malaysia: Issues of leadership, culture and money politics. *Public Administration and Policy*, 25(2), 136–149. <https://doi.org/10.1108/PAP-01-2022-0002>
- Joni, J., Ahmed, K., & Hamilton, J. (2020). Politically connected boards, family and business group affiliations, and cost of capital: Evidence from Indonesia. *The British Accounting Review*, 52(3), 1–21. <https://doi.org/10.1016/j.bar.2019.100878>
- Joshi, J. (2021). Competitiveness, manufacturing and infrastructure: The Asian paradigm. *Journal of Development Policy and Practice*, 6(1), 78–107. <https://doi.org/10.1177/2455133321994210>
- Jukka, T. (2021). Top management team demography and firm operating performance: A path analysis. *Journal of Strategy and Management*, 14(1), 19–34. <https://doi.org/10.1108/JSMA-12-2019-0224>
- Kabir, A., Ikra, S. S., Saona, P., & Azad, M. A. K. (2023). Board gender diversity and firm performance: New evidence from cultural diversity in the boardroom. *LBS Journal of Management & Research*, 21(1), 1–12. <https://doi.org/10.1108/LBSJMR-06-2022-0022>
- Karim, S., Naem, M. A., & Ismail, R. B. (2022). Re-configuring ownership structure, board characteristics and firm value nexus in Malaysia: The role of board gender and ethnic diversity. *International Journal of Emerging Markets*, 18(12), 5727–5754. <https://doi.org/10.1108/IJOEM-01-2021-0004>
- Karpacheva, E., & Hock, B. (2023). Foreign whistleblowing: The impact of US extraterritorial enforcement on anti-corruption laws in Europe. *Journal of Financial Crime*, 31(1), 1–13. <https://doi.org/10.1108/JFC-11-2022-0283>

- Khan, M. T., Al-Jabri, Q. M., & Saif, N. (2021). Dynamic relationship between corporate board structure and firm performance: Evidence from Malaysia. *International Journal of Finance and Economics*, 26(1), 644–661. <https://doi.org/10.1002/ijfe.1808>
- Kim, S., & Wagner, S. M. (2021). Examining the stock price effect of corruption risk in the supply chain. *Decision Sciences*, 52(4), 833–865. <https://doi.org/10.1111/dec.12487>
- Koprowski, S., Krein, V., Mazzioni, S., & Magro, C. B. D. (2021). Corporate governance and political connections in anti-corruption practices. *RAE Revista de Administracao de Empresas*, 61(2), 1–14. <https://doi.org/10.1590/s0034-759020210202>
- Krishnamurti, C., Pensiero, D., & Velayutham, E. (2021). Corruption risk and stock market effects: Evidence from the defence industry. *Pacific Basin Finance Journal*, 70(November), 1–19. <https://doi.org/10.1016/j.pacfin.2021.101681>
- Krishnamurti, C., Shams, S., & Velayutham, E. (2018). Corporate social responsibility and corruption risk: A global perspective. *Journal of Contemporary Accounting and Economics*, 14(1), 1–21. <https://doi.org/10.1016/j.jcae.2018.02.002>
- Kuan, P. S. J., Pitchay, A. A., Ganesan, Y., Haron, H., & Hendayani, R. (2020). The effect of audit committee characteristics on audit quality: The moderating role of internal audit function. *Journal of Governance and Integrity*, 3(2), 44–56. <https://doi.org/10.15282/5309>
- Larcker, D. F., Richardson, S. A., & Tuna, I. R. (2007). Corporate governance, accounting outcomes, and organizational performance. *The Accounting Review*, 82(4), 963–1008. <https://doi.org/10.2308/accr.2007.82.4.963>
- Larcker, D. F., & Rusticus, T. O. (2010). On the use of instrumental variables in accounting research. *Journal of Accounting and Economics*, 49(3), 186–205. <https://doi.org/10.1016/j.jacceco.2009.11.004>
- La Rosa, F., Bernini, F., & Terzani, S. (2022). Does corporate and country corruption risk affect CEO performance? A study of the best-performing CEOs worldwide. *European Management Journal*, 40(2), 234–246. <https://doi.org/10.1016/j.emj.2021.05.002>
- Li, Q., Zhang, Y., & Yan, J. (2024). Exploring the role of top management team diversity and absorptive capacity in the relationship between corporate environmental, social, and governance performance and firm value. *Systems*, 12(448), 1–18. <https://doi.org/10.3390/systems12110448>
- Li, W., Lo, L., Lu, Y., Tan, Y., & Lu, Z. (2021). Intellectual migration: Considering China. *Journal of Ethnic and Migration Studies*, 47(12), 2833–2853. <https://doi.org/10.1080/1369183X.2020.1739393>
- Li, P. Y. (2018). Top management team characteristics and firm internationalization: The moderating role of the size of middle managers. *International Business Review*, 27(1), 125–138. <https://doi.org/10.1016/j.ibusrev.2017.05.011>

- Liu, L. (2024). Analyst monitoring and information asymmetry reduction: U.S. evidence on environmental investment. *Innovation and Green Development*, 3(1), 100098. <https://doi.org/10.1016/j.igd.2023.100098>
- Lo, F., Wang, Y., & Zhan, W. (2020). Does TMT cultural diversity contribute to firm performance and do socialisation and tenure matter? A test of two competing perspectives. *Personnel Review*, 49(1), 324–348. <https://doi.org/10.1108/PR-11-2018-0468>
- Lopez-Claros, A., & Lynch, I. J. (2024). Combatting corruption to advance good governance: Exploring options for an international anti-corruption court. In R. Falk, & A. Lopez-Claros (Eds.), *Global governance and international cooperation* (pp. 428–443). Routledge. <https://doi.org/10.4324/9781032699028-29>
- Luo, S., & Lin, H. C. (2022). How do TMT shared cognitions shape firm performance? The roles of collective efficacy, trust, and competitive aggressiveness. *Asia Pacific Journal of Management*, 39(1), 295–318. <https://doi.org/10.1007/s10490-020-09710-4>
- Mahmud, N. M., Mohamed, I. S., Arshad, R., & Reskino. (2021). Board characteristics and disclosure of corporate anti-corruption policies. *Management and Accounting Review*, 20(2), 209–229. <https://doi.org/10.24191/MAR.V20i02-09>
- Martins, O. S., & Júnior, R. V. (2020). The influence of corporate governance on the mitigation of fraudulent financial reporting. *Review of Business Management*, 22(1), 65–84. <https://doi.org/10.7819/rbgn.v22i1.4039>
- Marzouki, A., Chouaibi, J., & Amara, T. (2024). Do business ethics moderate corporate corruption risk-ESG reporting relationship? Evidence from European ESG firms. *International Journal of Ethics and Systems*, 40(4), 734–758. <https://doi.org/10.1108/IJOES-07-2023-0166>
- Marzuki, H., Hasnan, S., & Ali, M. M. (2025). Ownership structure and firm performance in Malaysia: The moderating effect of corruption risk. *Management and Accounting Review*, 24(2), 361–392. <https://doi.org/10.24191/MAR.V24i02-14>
- Muhamad Hanapiyah, Z., Daud, S., Taufik Wan Abdullah, W. M., & Mohd Sanusi, Z. (2018). Effect of training and development, recruitment and selection, and internal control policy on corruption risk. *The Journal of Social Sciences Research, Special Issue 5*, 995–1006. <https://doi.org/10.32861/jssr.spi5.995.1006>
- Muhamad, N., & Gani, N. (2020). A decade of corruption studies in Malaysia. *Journal of Financial Crime*, 27(2), 423–436. <https://doi.org/10.1108/JFC-07-2019-0099>
- Munyede, P. (2021). Capping the tenure of CEOs as a good corporate governance strategy: Prospects and challenges. *Journal of Contemporary Governance and Public Policy*, 2(1), 67–78. <https://doi.org/10.46507/jcgpp.v2i1.29>

- Murphy, K. R., & Aguinis, H. (2022). Reporting interaction effects: Visualization, effect size, and interpretation. *Journal of Management*, 48(8), 2159–2166. <https://doi.org/10.1177/01492063221088516>
- Nguyen, S. K., Vo, X. V., & Vo, T. M. T. (2020). Innovative strategies and corporate profitability: The positive resources dependence from political network. *Heliyon*, 6(4), 1–10. <https://doi.org/10.1016/j.heliyon.2020.e03788>
- Niazi, M. M., Othman, Z., & Chandren, S. (2023). Political connections and financial performance: The moderating role of director efficacy. *Corporate Governance (Bingley)*, 23(5), 1145–1174. <https://doi.org/10.1108/CG-08-2020-0366>
- Niñerola, A., Hernández-Lara, A.-B., & Sánchez-Rebull, M.-V. (2022). Top management team diversity and international expansion: Spanish companies in China. *SAGE Open*, 12(1), 1–14. <https://doi.org/10.1177/21582440211068493>
- Qi, R. (2022). Top management team characteristics, overconfidence, and financial asset allocation. *Amfiteatru Economic*, 24(61), 759–781. <https://doi.org/10.24818/EA/2022/61/759>
- Rohmah, A., Hussain, M., Sanusi, Z. M., Mahenthiran, S., & Hasnan, S. (2016). Management motives and firm financial misstatements in Malaysia. *International Journal of Economics and Financial Issues*, 6(S4), 18–25.
- Rosli, S., & Kamaluddin, A. (2021). Control of corruption, political stability, foreign investors, government expenditure and economic growth trends in the Southeast Asian Region. *IPN Journal of Research and Practice in Public Sector Accounting and Management*, 11(01), 127–155. <https://doi.org/10.58458/ipnj.v11.01.07.0073>
- Sakawa, H., & Watanabel, N. (2020). Institutional ownership and firm performance under stakeholder-oriented corporate governance. *Sustainability*, 12(3), 1–21. <https://doi.org/10.3390/su12031021>
- Saleh, M. W. A., Shurafa, R., Shukeri, S. N., Nour, A. I., & Maigosh, Z. S. (2020). The effect of board multiple directorships and CEO characteristics on firm performance: Evidence from Palestine. *Journal of Accounting in Emerging Economies*, 10(4), 637–654. <https://doi.org/10.1108/JAEE-12-2019-0231>
- Samimi, M., Cortes, A. F., Anderson, M. H., & Herrmann, P. (2022). What is strategic leadership? Developing a framework for future research. *Leadership Quarterly*, 33(3), 1–22. <https://doi.org/10.1016/j.leaqua.2019.101353>
- Sari, T. K., Cahaya, F. R., & Joseph, C. (2021). Coercive pressures and anti-corruption reporting: The case of ASEAN countries. *Journal of Business Ethics*, 171(3), 495–511. <https://doi.org/10.1007/s10551-020-04452-1>
- Securities Commission Malaysia (2022). *Corporate Governance Monitor 2022*. Securities Commission Malaysia. <https://www.sc.com.my/api/documentms/download.aspx?id=b22f271c-1355-4d4d-bc85-e9e06f81c1fb>

- Shakil, M. H., & Wahab, N. S. A. (2023). Top management team heterogeneity, corporate social responsibility and firm risk: An emerging country perspective. *Journal of Financial Reporting and Accounting*, 21(2), 434–463. <https://doi.org/10.1108/JFRA-02-2021-0036>
- Sharma, C., & Mishra, R. K. (2022). On the good and bad of natural resource, corruption, and economic growth Nexus. *Environmental and Resource Economics*, 82(4), 889–992. <https://doi.org/10.1007/s10640-022-00694-x>
- Sharma, P., Cheng, L. T. W., & Leung, T. Y. (2020). Impact of political connections on Chinese export firms' performance: Lessons for other emerging markets. *Journal of Business Research*, 106(January), 24–34. <https://doi.org/10.1016/j.jbusres.2019.08.037>
- Sharma, S. K., Sengupta, A., & Panja, S. C. (2019). Mapping corruption risks in public procurement: Uncovering improvement opportunities and strengthening controls. *Public Performance and Management Review*, 42(4), 947–975. <https://doi.org/10.1080/15309576.2018.1535984>
- Sieweke, J., Bostandzic, D., & Smolinski, S. M. (2023). The influence of top management team gender diversity on firm performance during stable periods and economic crises: An instrumental variable analysis. *Leadership Quarterly*, 34(5), 1–20. <https://doi.org/10.1016/j.leaqua.2023.101703>
- Stanley, K., Loreda, E., Burger, N., Miles, J., & Saloga, C. (2019). *Business bribery risk assessment*. RAND Corporation. <https://doi.org/10.7249/RR839-1>
- Sutarti, Syakhroza, A., Diyanty, V., & Dewo, S. A. (2021). Top management team (TMT) age diversity and firm performance: The moderating role of the effectiveness of TMT meetings. *Team Performance Management: An International Journal*, 27(5/6), 486–503. <https://doi.org/10.1108/TPM-01-2021-0006>
- Tan Sri Lee Lam Thye. (2024, June 20). Nurture anti-corruption culture throughout society. Malaysian Anti-Corruption Commission website. https://www.sprm.gov.my/index.php?page_id=103&contentid=3280&cat=BKH&language=en
- Tanikawa, T., & Kim, S. (2017). Top management team diversity and firm performance: Exploring a function of age. *Team Performance Management*, 23(3/4), 156–170. <https://doi.org/10.1108/TPM-06-2016-0027>
- Tarus, D. K., Tuwey, J. K., & Yego, J. K. (2023). Does board chairperson experience matter? Examining the relationship between board attributes and human rights reporting in Kenya. *Corporate Governance (Bingley)*, 23(2), 323–346. <https://doi.org/10.1108/CG-11-2021-0396>
- Transparency International Malaysia (2022). Corruption Perception Index 2022. Retrieved from <https://www.transparency.org.my/pages/what-we-do/indexes/corruption-perceptions-index-2022>

- Tihanyi, L., Aguilera, R. V., Heugens, P., van Essen, M., Sauerwald, S., Duran, P., & Turturea, R. (2019). State ownership and political connections. *Journal of Management*, 45(6), 2293–2321. <https://doi.org/10.1177/0149206318822113>
- Tran, Q. T. (2020). Corruption, agency costs and dividend policy: International evidence. *Quarterly Review of Economics and Finance*, 76, 325–334. <https://doi.org/10.1016/j.qref.2019.09.010>
- Triana, M. del C., Richard, O. C., & Su, W. (2019). Gender diversity in senior management, strategic change, and firm performance: Examining the mediating nature of strategic change in high tech firms. *Research Policy*, 48(7), 1681–1693. <https://doi.org/10.1016/j.respol.2019.03.013>
- Troisi, R., Nauta, P. Di, & Piciocchi, P. (2021). Private corruption: An integrated organizational model. *European Management Review*, 19(3), 476–486. <https://doi.org/10.1111/emre.12489>
- Troisi, R., Nese, A., Blanco-Gregory, R., & Giovannello, M. A. (2023). The effects of corruption and innovation on sustainability: A firm-level analysis. *Sustainability (Switzerland)*, 15(3), 1848–1885. <https://doi.org/10.3390/su15031848>
- UNDP. (2008). *Primer on corruption and development*. United Nations Development Programme. <https://www.undp.org/governance>
- Valenti, A., & Horner, S. (2020). The human capital of boards of directors and innovation: An empirical examination of the pharmaceutical industry. *International Journal of Innovation Management*, 24(6), 1–32. <https://doi.org/10.1142/S1363919620500565>
- Wang, H., Wu, J., Yang, Y., Li, R., & Liu, Y. (2019). Ownership concentration, identity and firm performance: Evidence from China's listed firms. *Emerging Markets Finance and Trade*, 55(15), 3653–3666. <https://doi.org/10.1080/1540496X.2019.1672042>
- Wrede, M., Velamuri, V. K., & Dauth, T. (2020). Top managers in the digital age: Exploring the role and practices of top managers in firms' digital transformation. *Managerial and Decision Economics*, 41, 1549–1567. <https://doi.org/10.1002/mde.320>
- Wu, J., Richard, O. C., Triana, M. del C., & Zhang, X. (2022). The performance impact of gender diversity in the top management team and board of directors: A multiteam systems approach. *Human Resource Management*, 61(2), 157–180. <https://doi.org/10.1002/hrm.22086>
- Yadav, S., & Srivastava, J. (2023). CSR, monitoring cost and firm performance during COVID-19: Balancing organizational legitimacy and agency cost. *Accounting Research Journal*, 36(2–3), 183–200. <https://doi.org/10.1108/ARJ-07-2021-0191>
- Zhang, Y., & Gong, S. (2023). A recent regulatory storm in China: Theoretical interpretation and applicability. *Asian Review of Political Economy*, 2(1), 1–18. <https://doi.org/10.1007/s44216-023-00011-3>

- Zhao, Z., & Zhou, B. (2022). Latecomers' isomorphic R&D strategy and the relationship with performance: A study on Chinese pharmaceutical firms. *SAGE Open*, 12(2), 1–18. <https://doi.org/10.1177/21582440221096115>
- Zhou, L., Huang, H., Chen, X., & Tian, F. (2023). Functional diversity of top management teams and firm performance in SMEs: A social network perspective. *Review of Managerial Science*, 17(1), 259–286. <https://doi.org/10.1007/s11846-022-00524-w>
- Zoogah, D. B. (2018). Institutional risk and firm performance in Africa: The moderating role of corruption control. *Africa Journal of Management*, 4(4), 401–425. <https://doi.org/10.1080/23322373.2018.1522172>
- Zulkifli, N., & Norziaton, I. (2020). Board characteristics and anti-corruption disclosures for politically connected firms in Malaysia. *International Journal of Accounting & Business Management*, 8(1), 64–82.

APPENDIX

23 items of corruption risk

Theme	Corruption risk items
A) Nature of Business	1. The company is in the sector that is more prone to corruption.
B) Government-Linked Companies (GLCs)	2. The company is listed under GLCs.
C) Anti-Corruption Practices	3. The company is not disclosed a publicly stated commitment to fight against corruption (e.g., zero tolerance of corruption).
	4. The company has no partnership/membership/collaboration with non-governmental organisations (NGOs) and other organisations with anti-corruption initiatives.
	5. The company has not established a written declaration – employees, and business partners should comply with firm's rules and regulations by signing a written declaration.
	6. No assessment on corruption risk or the assessment of corruption risk is not incorporated into the general risk register of the company.

Theme	Corruption risk items
D) Transparency	7. The company has not conducted due diligence on any relevant personnel or parties prior to entering any formalised relationship.
	8. The company has no systematic monitoring programme based on local or/and global standards (e.g., Anti Bribery Management System)
	9. The company has no competent person or function to review/monitor anti-corruption measures.
	10. The company has not conducted continual evaluations and improvements on anti-corruption policies and procedures.
	11. The company has not adopted various strategies and approaches to communicate its anti-corruption policy, procedures, and programme (including training).
	12. The company has not disclosed top management remuneration
	13. No report on the figures (i.e., total number and percentage) of operations evaluated for risks connected to corruption.
	14. No report on the substantial risks associated to corruption recognised over the risk assessment.
	15. No report on the figures (i.e., total number and percentage) of corporate governance members that the company's anti-corruption policies, procedures, and rules have been communicated to.
	16. No report on the figures of employees that the company's anti-corruption policies, procedures, and rules have been communicated to.
	17. No report on the figures of business partners that the company's anti-corruption policies, procedures, and rules have been communicated to.

Theme	Corruption risk items
	<ol style="list-style-type: none"> <li data-bbox="442 242 1030 342">18. No report on the figures of governance body members that have received training on anti-corruption. <li data-bbox="442 360 1065 424">19. No report on the figures of employees that have received training on anti-corruption. <li data-bbox="442 442 1099 505">20. No report on the figures of confirmed incidents of corruption. <li data-bbox="442 524 1094 624">21. No report on the figures of confirmed incidents in which employees were disciplined or terminated for corruption. <li data-bbox="442 642 1065 760">22. No report on the figures of confirmed incidents in which business partners were not renewed or dismissed due to violations connected to corruption. <li data-bbox="442 778 1099 879">23. No report on the legal cases and the results of such cases concerning corruption that carried against the company or its employees.