



Dynamic relationship between young CEO and financial performance: a Malaysian perspective

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Abstract

The role of young chief executive officers (CEOs) in firms' financial performance is an interesting but controversial debate among scholars. This study investigates how young CEOs affect the financial performance of firms. Using panel data from 140 non-financial Malaysian firms listed on the Thomas Reuters Eikon database, we apply the generalized method of moments (GMM). The GMM results show a positive and significant relationship between young CEOs and financial performance in the studied samples. These findings have important implications for policymakers, who can enhance financial performance by developing and implementing policies that support young CEOs. This study validates the CEO–firm match theory in the Malaysian context, and these findings offer valuable insights for young CEOs on how to improve their financial performance by adopting good governance practices to address the firm's challenges. The findings also have practical implications for the recruitment and selection of young CEOs in Malaysian firms.

Keywords Corporate governance · Financial performance · Two-step GMM · Young CEO

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Introduction

Corporate governance has been gaining global attention for improving firms' economic standards and performance. This broad term describes a firm's processes, methods, and structure to manage and direct its operations and affairs. The presence of a leader in a firm is critical to its long-term viability. A firm's CEO is in charge of enhancing the firm's financial performance in both the short and long terms. The board's decision-making authority, particularly that of the CEO, has an impact on the corporation's performance because the CEO has complete control of the managerial decision-making process (Bandiera et al. 2020; Chiu et al. 2022; Liu and Jiang 2020; Wu et al. 2011).

The appointment of young CEOs has become a prevalent trend in the corporate world, driven by the belief that youth can bring innovative thinking and adaptability to an organization. However, this trend has also sparked debate regarding the potential risks of appointing leaders with limited experience (Altarawneh et al. 2020). As a vibrant economy with a growing number of non-financial firms, Malaysia offers an excellent setting to explore the impacts of young CEOs on FP (Alzeban 2022; Sim 2022).

Previous studies on the association between CEO age and firm performance have shown mixed results (Altarawneh et al. 2020; Belenzon et al. 2019). Some research suggests that younger CEOs tend to outperform their older counterparts due to their innovative thinking and energy (Oliver 2023). In contrast, others argue that older CEOs bring stability and experience to the corporation, positively impacting performance (Belenzon et al. 2019; Chijoke-Mgbame et al. 2023). Additionally, the effect of the chief executive officer's age on the performance of the firm may vary across industries and countries.

The Malaysian Code on Corporate Governance (MCCG) currently influences Malaysia's corporate governance, emphasizing transparency, accountability, board diversity, and risk management. Bumiputera ownership policies, which seek to increase the participation of ethnic Malays and indigenous groups, also have an impact on governance structures. Additionally, there is a growing focus on environmental, social, and governance (ESG) practices, which are consistent with worldwide sustainability trends. Malaysia's CEO demographics are modifying as younger executives, notably in technology and digital firms, take on more prominent roles. While CEOs have traditionally been older and have substantial industry expertise, the growth of younger leaders brings innovation and worldwide exposure. However, issues remain, notably in incorporating young CEO firms' objectives with legacy governance strategies. Gender diversity in leadership is improving, although the number of female CEOs remains low. These modifying governance dynamics and demographic trends are transforming corporate leadership in Malaysia, influencing governance practices and corporate performance (Mubeen et al. 2020).

In the context of Malaysia, limited empirical research has focused specifically on the link between CEO age and the performance of firms (Altarawneh et al. 2020; Suherman et al. 2023; Ting et al. 2015). However, Malaysia has seen a significant increase in young CEOs taking the helm of major firms, making it an interesting case study (Alzeban 2022; Lee and Foong 2023). Malaysia's unique cultural and business environment may also influence the dynamics of this relationship. According to the literature on CEO turnover, firm performance is regularly used to evaluate the efficacy of a CEO's initiatives. The CEO has a significant impact on the management team's general approach toward policymaking, which in turn impacts the company's daily operations (Choi 2021; Liu et al. 2023). Previous studies have revealed that a CEO's age significantly influences a firm's willingness to take risks on financial performance

(Han 2023; Li et al. 2017; Pham 2023; Serfling 2014; Yeoh and Hooy 2020). Despite extensive empirical investigations undertaken over several decades, conflicting and inconclusive evidence exists about the relationship between financial performance and CEO age.

Several studies contend that the impact of aging makes older CEOs less risk-averse and prefer a serene life as they age over time (Bertrand and Schoar 2003; Malm et al. 2021). Older CEO-led companies have decreased leverage ratios Serfling (2014) and reduced expenditures on research and development (Li et al. 2017; Yeoh and Hooy 2020). However, some researchers contend that older persons use more experiential tactics than analytical ones due to frontal lobe function (Frank and Seaman 2023; Weller et al. 2011; Yeoh and Hooy 2020). Therefore, older chief executive officers are prone to taking chances since their enhanced experience allows them to adopt bold techniques with the highest potential for success. (Simsek 2007). Sitkin and Pablo (1992) expertise with the probability domain also suggests that the more risk a decision maker has dealt with in the past, the less probable it is that such a person will perceive doubt regarding the consequence of participating in these hazards and the higher the level of risk assessment will seem to be. The earliest studies examining the connection between CEO age and performance of firm concentrate on a linear relationship because age changes linearly through time.

This potentially overlooked topic area in prior research constitutes the primary motivation behind this study: to investigate the effect of young CEOs on firm performance within a sample of non-financial firms in Malaysia. Many studies have examined the influence of CEO characteristics, including experience, education, and age, on firm outcomes. Still, these works have been mainly carried out in developed markets or concentrated on demography-level CEO traits. The limited empirical study that investigates the determinants of young CEO appointment exists predominantly within those same Anglo-Saxon developed markets, thus far ignoring young CEO-led emerging markets such as Malaysia, where socioeconomic-cultural and corporate governance structures may create different constraints for executive leaders to operate. Second, there is a lack of studies on the non-financial sector as most extant research focuses on financial institutions, and these face unique leadership challenges compared to financial firms. This study is confined to non-financial sector enterprises of Malaysia, and using a more sophisticated methodology such as GMM, which allows simultaneous resolve of endogeneity and dynamic effects, contributes new dimensions to understanding the effect on firm performances from young leadership in emerging markets.

Thus, this study is driven to carry out the appointment of young CEOs, which needs to be assessed from a variety of angles, which this study finds interesting to talk about. This research contributes to the body of literature review by expanding empirical results in related fields. Furthermore, to the best of my understanding, this is one of the innovative studies in Malaysia using Young CEO on financial performance. Therefore, the research question posed by this study is: Do young CEOs have any impact on financial performance? The research objective is to evaluate the influence of young CEOs on financial performance.

The study is split into five different parts. The second segment comprises reviewing existing literature and developing hypotheses. The study's methodology is subsequently detailed in Sect. "Study methodology". The study's findings are reported in Sect. "Results", whereas a summary of those results and recommendations for further studies are presented in the last section (segment 5).

Literature review and hypotheses development

This study documents the findings of a relevant literature review on the link between Young CEOs and financial performance. The following part discusses the impact of different theoretical frameworks that address the relationship between YCEO and FP.

Theoretical background

Implementing sound corporate governance can be challenging due to potential conflicts between shareholders and the board of directors. Agency and stewardship theories address this (Donaldson and Davis 1991; Kyere and Ausloos 2021).

Agency theory

The theory of agency describes the connection between managers (Weller et al. 2011) and shareholders (principals) (Donaldson and Davis 1991). This approach addresses conflicts between management and owners by delegating authority for making decisions to project managers. The theory of agency suggests that corporations can improve financial performance if costs are reduced. The agency cost can be considered a shareholder value loss due to conflicting interests between managers and owners (Meckling and Jensen 1976). Additionally, the cost of agencies is reflected in the stock marketplace, affecting the firm's share price. Managing agency costs can improve a firm's financial performance and increase share prices. Meckling and Jensen (1976) defined agency costs as the total monitoring, bonding, and the cost of residual.

In order to reduce agency costs, corporate governance should address the root reasons for conflicts, which requires understanding the agency theory. Managers should be encouraged to put the interests of the principal first through the implementation of effective corporate governance mechanisms (Kyere and Ausloos 2021).

Theory of stewardship

This theory proposes that directors can fulfill organizational goals for shareholders by prioritizing the maximization of overall utility rather than engaging in selfish behaviors. The theory is substantiated by empirical evidence (Donaldson and Davis 1991). According to this theory, giving managers discretion can lead to improved performance. Scholars agree that managers must exercise discretion to maximize shareholder value, in addition to financial incentives. According to the stewardship theory, managers prioritize, are driven by a focus on their reputation and career progression, and are inclined to behave in the best interests of shareholders, consequently reducing agency costs (Donaldson and Davis 1991). There is a psychological component to the argument that executives can give up their best when satisfied with their jobs. According to Clarke (2004), empowering managers to make decisions without relying on bureaucratic processes leads to higher job satisfaction and improved FP.

Young CEO

The chief executive officer serves as a corporation's strategic planner and leader. Any action taken by the CEO will influence the corporation's strategies, policies, and FP.

Young CEOs are considered one of the most essential corporate governance mechanisms for eliciting different corporate activities. These include financial concerns about knowledge and understanding, boosting moral and ethical commitment, adhering to legislation and rules, corporate reporting, corporate profitability, and long-term corporate growth. An increasing body of research has concentrated on the effect of executives' differences and how they influence executive decisions on firm financial performance. A few more studies look at how managers' personal and psychological traits change over time and how their age affects their choices.

For instance, Yim (2013) states that the declining rigidity of CEO compensation provides young CEOs with more significant financial incentives to boost their pay early in their careers. She consistently observes that young chief executives are more inclined to engage in acquisition and merger operations. Graham et al. (2013) show that young CEOs are more risk-tolerant, overconfident, and optimistic than their older counterparts, but they also have a greater aversion to certain losses. Similarly, Serfling (2014) demonstrates that younger CEOs tend to focus their corporations' operations on a single sector rather than diversifying them, and they also invest more in research and development.

Firms may prefer young chief executive officers because of their increased capacity for risk and advanced technical skills. Still, they may be influenced by their reputation cost and career concerns when it comes to allocating and investing internal capital. Accordingly, Sim (2022) discovers that the age of the CEO has a positive impact on the firm's ROAs.

Additionally, Ouimet and Zarutskie (2014) find that there is an optimistic connection between the age of the firm and the age of its employees. They also reported that young companies tend to hire a significantly higher number of young workers compared to older companies. When young firms hire, young people make up a sizable fraction of the applicants. It is suggested that young individuals possess characteristics that are valued by young corporations. Cronqvist et al. (2012) give proof that the behavior of a chief executive will have an impact on the decisions that they make regarding their firm. In particular, CEOs who possess higher leverage tend to procure greater benefits from their firms. On the other hand, Fee et al. (2013) investigated exogenous chief executive officer turnover, encompassing situations like death, health issues, and natural retirement. The results of their study did not reveal any indication that the managerial style of CEOs has an effect on the financial performance of the firm.

La Rocca et al. (2024) found that CEO duality and firm performance have a positive relationship, and using listed firms across 23 European countries from 2014 to 2020 suggests that when both top jobs are executed by women, they are more likely to deliver higher corporate performance. Women in governance thus highlight the "bright side" of women: Specific results show that female leadership in dual roles could augment benefits and mitigate costs usually associated with CEO duality. If women play dual leadership roles, they can perhaps put these resources to optimal use and improve the firm's performance.

Possible explanations for the contradictory results include the absence of firm-specific controls when investigating the impact of CEO traits. Although some traits have universal effects on all corporations, others might exert varying impacts on different categories of firms. Therefore, examining the relationship between the corporation and its young CEO will support firms in finding the most appropriate CEO. Because there is no clear conclusion on whether start-up corporations controlled by young CEOs have enhanced FP, this study includes a literature review by incorporating fresh knowledge of the Young CEOs in the financial performance area.

Hypotheses development

This study discusses and develops testable hypotheses regarding younger CEOs with financial performance in this section.

Young CEO and firm financial performance

Young CEOs are more risk-tolerant than older chief executive officers (Gardner and Steinberg 2005). Also, young chief executives with a tolerance for more risk who join start-ups are more likely to participate in research and development and in riskier projects, which may benefit the development and firm's survival.

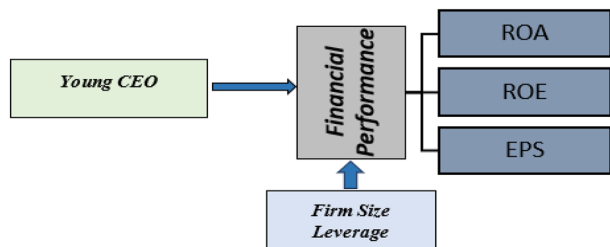
Moreover, younger CEOs are more inclined to have just completed their studies than their elder counterparts and have a deeper awareness of emerging technology and sophisticated skills. Young chief executive officers are prone to quickly acquire new expertise and stay current on technological breakthroughs (Salthouse 1996; Schaie 1996). As a result, firms guided by younger executives are inclined to participate in innovative techniques and experiment with different manufacturing techniques.

Ouimet and Zarutskie (2014) examine the fact that youthful CEOs make up more of the new generation companies' employees than mature firms. Because younger CEOs tend to be closer in age to young employees, fostering a shared common language and understanding; as such, younger CEOs are expected to communicate with them better and more efficiently than older CEOs, potentially increasing workforce productivity. In summary, young companies run by young CEOs are believed to have effective communication, a flowing transmission of soft knowledge, and the ability to translate these concepts into production.

Moreover, YCEOs have greater career concerns and, thus, higher reputation costs during their early occupation, therefore increasing the likelihood of retaining poor initiatives (Boot 1992; Graham et al. 2013). Furthermore, Young CEOs' professional concerns can also manipulate their own capital distribution decisions, causing them to prefer more visible activities (Yim 2013). Conversely, Liao et al. (2015) revealed an insignificant association between corporate sustainability initiatives and CEO duality. Because of these conflicting outcomes, there is a need to examine the young CEOs' roles thoroughly. Figure 1 delineates the conceptual framework for independent and dependent variables along with control variables (Fig. 2).

H1 *Young CEOs have a positive, significant connection with the financial performance of Malaysian firms.*

Fig. 1 Conceptual framework.
Source: Authors generated based on literature.



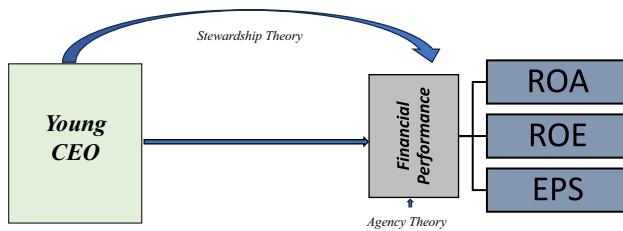


Fig. 2 Conceptual framework with the underpinning and supporting theories. Source: Authors generated based on literature.

Study methodology

Population and sample selection

A secondary data collection method was used to get information on the variables used in this study. The panel data utilized in this study were acquired from the firm's annual reports and DataStream, a database that is included in the Thomas Reuters Eikon. Furthermore, this research used the Thomson Reuters Eikon database data for its financial performance sample. The Thomson Reuters database is a leading global source of financial data and is widely used in the financial markets.

Besides, this study uses a balanced panel dataset with an annual data frequency from Malaysia. This study selected a research sample of 140 non-financial firms that spanned seven years from 2016 to 2022. Thus, to select a sample for this research, it would be possible to collect the availability of the data over this study period, and if an observation meets one of the following criteria, such as financial sector and missing or incomplete data, it is eliminated. This study selected non-financial firms because they better reveal CEO attributes than the specific dynamics related to the financial sector. It also spans multiple industries (hence sectoral diversity), different economic cycles, and CEO tenures, which enables us to gauge the effects of youth on firm performance in a more holistic manner than using snapshot data.

This study used the generalized method of moments (GMM) to resolve possible endogeneity problems that arise when young CEOs are associated with good firm performance or talent and the dynamic nature of financial performance using lagged dependent variables. GMM is reliable when heteroscedasticity and autocorrelation are taken into account, using internal instruments more efficiently; GMM is better for use than OLS or fixed effects models (Mubeen et al. 2020). Moreover, GMM works well in properly controlling for the unobservable firm-specific effect, which ensures robust and consistent estimation of the panel data analysis involving non-financial firms operating in Malaysia. Therefore, this study explores the relationship between young CEOs and financial performance in Malaysia.

Consequently, there are several potential limitations to the method used in this study. Although the inclusion of the fixed effect allays some of these fears, endogeneity is a concern precisely because any variable affecting both firm performance and selection might be an unobservable one. The generalized method of moments (GMM) is used to attenuate endogeneity with internal instruments, i.e., lagged variables. Also, overfitting can be a problem for GMMs due to instrument proliferation. The selection of a small number of valid instruments addresses this to avoid weak instrument bias. Third, if data were

incomplete, then firms that had closed between 2016 and 2022 could have changed the sample size to affect the results. A well-balanced panel of this type means that each and every firm has data for the complete period in question (employed in this study). It may have a low capacity for generalization in the financial sector, though this is negated slightly by the fact that firms in the financial sector were excluded, and CEOs were extracted from other industries.

Definitions of variables

Dependent variable

The present study's dependent variable is financial performance. FP can be estimated using accounting measures and market-based measures. Accounting-based measures ROA is calculated by dividing the firm's net profit by its total assets.

Independent variable

The research introduces IV, which represents the board of directors' significant attributes, in order to determine precisely the ambiguous and incomprehensible relationship between the young CEO and financial performance. A dummy variable was used to measure the presence of a young CEO. The variable was coded as one if the age of the CEO was less than or equal to 50, and it was coded as zero otherwise.

Control variables

The study models include a set of control variables that are theoretically related to financial performance in order to reduce the possibility of model misspecification. There was a control for firm size and leverage, in which the size of the firm was entered as a control variable. The natural logarithm of the firm's total assets as of the end of the fiscal year was analyzed to measure the firm's size (Kuncová et al. 2016). It is necessary to control for leverage (Weller et al. 2011). LEV is the firm's financial leverage, calculated as total liabilities divided by total assets.

A description of the variables used in this study is presented in Table 1.

Model specification

We conducted a comprehensive econometric evaluation of the study data over a seven-year period by employing a quantitative analysis with DataStream. This enabled us to provide solid results regarding the influence of young CEOs on FP. Therefore, we applied one and two steps of the DGMM, which control for reverse causality, problems of heterogeneity, and endogeneity. The study regression equation was mathematically represented as follows:

$$fp_{it} = \alpha_0 + \beta_1 fp_{it-1} + \beta_2 yceo_{it} + \beta_3 fsize_{it} + \beta_4 lev_{it} + \lambda_{it} + \eta_t + \varepsilon_{it} \dots \quad (1)$$

where FP is the financial performance for firm i , at time t , and the control variables denoted as FSIZE and LEV are included in the model. λ_{it} represents the country-specific effect, η_t accounts for the time effect, and ε represents the stochastic error term in the equation.

Table 1 Measurement of variables. Source: Author’s estimation based on collected data.

Name of variables		Measurement	Source of data
Panel A: DV	Financial performance	The measurement of financial performance involves using return on assets (ROA). $ROA = \frac{\text{Net income}}{\text{Total assets}}$	Thomson Reuter Eikon Database
Panel B: IV	Young CEO	Young CEO is a dummy variable with a value of one if the board’s CEO is 50 or younger and zero otherwise	Database and Annual reports
Panel C: CV	Firm size	The natural logarithm of total assets serves as a measure of firm size	Thomson Reuter Eikon Database
	Leverage	Leverage is defined as the percentage of long-term debt in relation to total liabilities, assets, and equity	Thomson Reuter Eikon Database

Results

Descriptive statistics

Descriptive analyses were applied to the dependent, independent, and control variables to provide a comprehensive picture of the data set used in this study. Table 2 and Fig. 3 display the observations, mean, standard deviation, and maximum and minimum values. FP had a mean of 0.030, a standard deviation of 0.035, and minimum and maximum values ranging from 0 to 0.20. Young CEOs had an average of 0.54 and a standard deviation of 0.49, with a range of 0 to 1.

Correlation matrix

Table 3 exhibits that correlation is one of the statistical tests used to determine the presence of multicollinearity among explanatory variables. The highest correlation was found between firm size and lev (0.3164), while the lowest was between fp and lev (−1.397). There are no significant multicollinearity concerns, as indicated by the correlation coefficient of less than 0.90 between the two explanatory variables in the correlation matrix.

Panel regression data analysis

Panel data analysis is the optimal approach for datasets that have both cross-sectional and time series components. Because the same cross-sectional unit is surveyed repeatedly, the results are aggregated across location and time. This study can determine both dependent and a few independent variables simultaneously. This research had a concurrent problem in this regard. In order to address this issue, the current study requires an econometric model that takes into account endogeneity as well as unobserved fixed effects that are unique to each firm. Pooled ordinary least squares (OLS) estimation could be used to solve this problem, but it produced biased and inconsistent estimators when the unobserved effect was linked with the explanatory factors. To avoid this econometric issue, de Andrés-Alonso et al. (2009) suggested using the first difference/fixed effect estimators when examining the relationship between YCEO and financial performance.

Ho and Williams (2003) highlighted that fixed effect estimators are biased in the unique instance of the board structure because they do not account for the impact of the company's performance on the existing board structure. In this study, the robustness check was conducted using the generalized method of moments to account for potential problems stemming from unobserved variables and endogeneity bias, which could lead to substantial sample bias due to severe correlation issues (Wooldridge 2010). In addition, in the

Table 2 Descriptive statistics. Source: Author's estimation based on collected data.

Variable	Observations	Mean	Std. Dev	Min	Max
Fp	140	0.0301405	0.0359529	0	0.2040384
yceo	140	0.5428571	0.4999486	0	1
fsize	140	28.75607	7.137121	23.75599	45.36009
lev	140	0.9953779	1.059642	0	6.364156

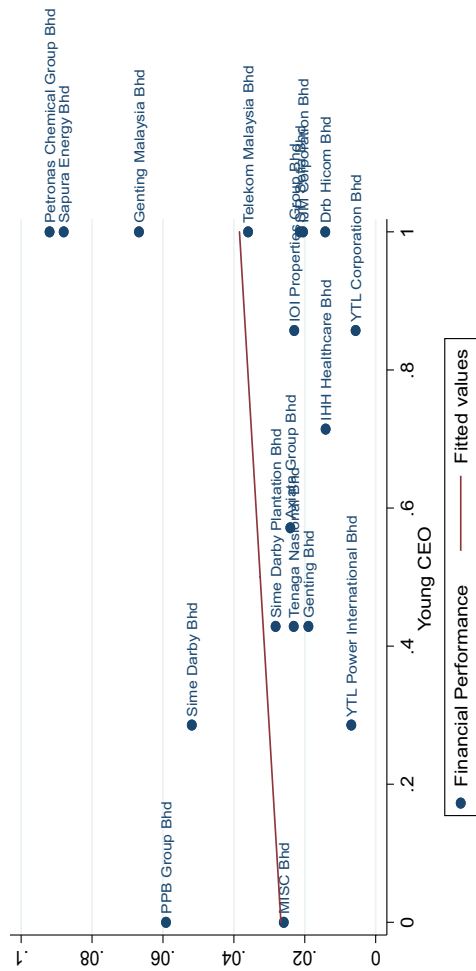


Fig. 3 Descriptive analysis. Source: Authors estimation based on collected data.

Table 3 Correlation matrix.
Source: Author's estimation
based on collected data.

Variable	FP	YCEO	FSIZE	LEV
fp	1.0000			
Yceo	−0.0712	1.0000		
Fsize	0.1564	−0.1144	1.0000	
lev	−0.1397	−0.0903	0.3164	1.0000

dynamic panel regression model, Arellano and Bond (1991) and Blundell and Bond (1998) introduced the variable lagged dependent on addressing correlation issues and endogeneity. The GMM estimates regression in terms of levels and differences using a collection of instrumental variables, yielding consistent estimates. The purpose of the study is to determine whether there is an endogeneity problem between the dependent variable and the specific unobserved effects of particular firms. Therefore, the one- and two-step difference was calculated using a dataset obtained from Malaysia in non-financial firms from 2016 to 2022. Hence, to ensure the robustness of the results, we first conducted a cross-sectional dependence test using Friedman's method. The test yielded a value of 1.778 with a p -value of 1.000, indicating no cross-sectional dependence, meaning the financial performance of one firm is independent of others in the sample. This strengthens the validity of the model's assumptions and the results.

Discussion

The difference in the generalized method of moments is shown in Table 4. In the initial analysis, 140 observations were utilized. The use of Cook's distance analysis for outliers revealed the presence of a cluster of outliers (Cook 1977). The "cutoff=one" instruction automatically removed outliers from the estimation procedure. Due to the lagging dependent variable, difference-deducted outliers were used to estimate the model with 100 observations. In dealing with estimation, DGMM occurs after first separating the data to eliminate fixed effects. DGMM estimates both differences and levels simultaneously, with the two equations being separately instrumented. In one and two steps of DGMM, the outcomes indicated that young CEOs were positively and significantly linked with FP at 1%, respectively.

The table displays SGMM models. In the initial analysis, 140 observations were utilized. During model estimation, the system automatically detects a set of outliers in order to use the Cook distance test for outliers (Cook 1977). In contrast, by utilizing the cutoff=one command, the list of outliers that were present during the estimation process was automatically eliminated. SGMM used 120 observations to estimate the model due to the difference-deducted outliers and variable of lagging dependent. This study exclusively examined SGMM for a more in-depth analysis of the regression outcomes because it is better at dealing with autocorrelation, heterogeneity, heteroskedasticity, and variables that are both endogenous and predetermined than DGMM models. The diagnostic check for the model yielded a mean of 1.08, with the VIF suggesting the absence of multicollinearity among the independent variables.

Furthermore, Cook's distance test was utilized to detect and remove outliers during model estimation, which resulted in 120 observations. AR1 had a significant p -value of 0.0064, which means it was, but AR2 had a p -value of 0.0989, which was not statistically

Table 4 DGMM regression Young CEO on FP. Source: Author's estimation based on collected data.

Variables	One-step DGMM	Two-step DGMM	Two-step DGMM with Robust SE
FP _{i,t-1}	0.573*** (0.00994)	0.718*** (0.00256)	0.718*** (0.00351)
Yceo	0.212*** (0.00205)	0.123*** (0.000589)	0.123*** (0.000802)
Fsize	-0.00289*** (0.0000545)	-0.00292*** (0.0000545)	-0.00292*** (3.48e-05)
Lev	0.0540*** (0.000848)	0.0508*** (0.000487)	0.0508*** (0.000667)
Sargan test	(93.862) 0.000	(6.473089) 0.011	
AR (1)	(-0.28509) 0.7756	(1.9128) 0.055	(1.9042) 0.0569
AR (2)	(1.0576) 0.2903	(1.7434) 0.0813	(1.7331) 0.0831
VIF	1.08		
Observations	100	100	100
Number of firms	20	20	20

P-values in parentheses **p* < 0.10, ***p* < 0.05, ****p* < 0.01

significant and demonstrated that there was no second-order serial correlation. The *p*-value for the Sargan test was 0.379, suggesting that the instrument used in the model was valid. In addition, the lagged dependent variable showed statistical significance at the 1% level with a positive coefficient of 0.288, demonstrating that the generalized method of moments is an appropriate model of the estimator. The outcomes indicated that young CEOs were positively and significantly associated with FP at 1%, respectively (Table 5).

Aside from the noteworthy coefficients observed for FP, this study applied Driscoll and Kraay (1998) standard error technique for handling issues like cross-sectional dependence, heteroscedasticity, and autocorrelation in panel data, providing robust results. The findings (Table 1) supported the SGMM results. They confirmed that the presence of a YCEO has a statistically significant and positive impact on financial performance (coefficient = 0.066, SE = 0.021, *p* < 0.01), suggesting that younger CEOs tend to improve firm performance.

Additionally, *f* size exhibits a significant negative relationship with financial performance (coefficient = -0.0139, SE = 0.0023, *p* < 0.01), indicating that larger firms may face inefficiencies that hinder performance. However, *Lev* shows a positive effect (coefficient = 0.012, SE = 0.003, *p* < 0.01), suggesting that firms with higher leverage can utilize debt effectively to improve performance. The overall model is statistically significant, with an *F*-statistic of 43.22 and a *p*-value of 0.0002, confirming the reliability of the results.

These results add to the body of knowledge on leadership and financial outcomes in Malaysia by offering significant insights into how young CEOs influence company performance while also taking firm size and leverage into account (Table 6).

Conclusion

Financial performance is an essential responsibility of firms or corporations to maintain their finance. Young CEOs' role in the corporation is a contentious issue, particularly in the aftermath of financial performance, where discussions on senior executive salaries have been at the core of academic and policy debates. Despite its critical relevance, there is surprisingly little concrete evidence of whether young CEOs (or, more broadly, top executives) contribute favorably to FP. This study looked at the connection between young CEOs

Table 5 SGMM regression
Young CEO on FP. Source:
Author's estimation based on
collected data.

Variables	One-step SGMM	Two-step SGMM
Constant	0.0110 (0.0147)	−0.0006031 (0.0000963)
FP _{it-1}	0.204** (0.0847)	0.2886*** (0.014836)
Yceo	−0.0338*** (0.0122)	0.000264* (0.00015)
Fsize	−0.00195*** (0.000517)	−0.00345 (0.000031)
Lev	0.0263* (0.0141)	0.0497*** (0.0008029)
No. of obs	120	120
Instruments	20	20
Vif (mean)	1.08	1.08
Wald chi2(5)	1040.47	154,932.17
Prob > chi2	0.000	0.000
AR (1)		1.8359
		0.0064
AR (2)		1.6503
		0.0989
Sargan test	(72.568) 0.0000	6.400708
		0.379

P-values in parentheses **p* < 0.10, ***p* < 0.05, ****p* < 0.01

Table 6 Robustness of Drisc/
Kraay Std. Error. Source:
Author's estimation based on
collected data.

Regressor FP	Coefficient/Standard error
Yceo	0.066*** (0.021)
Fsize	−0.0139*** (0.0023)
Lev	0.012*** (0.003)
Constant	0.012*** (0.006)
F-statistic	43.22
Prob > F	0.0002
Max: Lag	2
Observations	120
Number of groups	20

and FP of non-financial firms in Malaysia, and it served as a theoretical framework for understanding the financial performance determinants. Initial tests were carried out on data from the Thomson Reuters Eikon database and annual reports, which included descriptive statistics, correlation analyses, and an inflation factor for the variance test to detect the issues of multicollinearity. The estimation of the GMM was then applied to an analysis of 140 firms. The research discovered a significant association between young CEOs and FP.

Policymakers should encourage the rise of toddler CEOs through measures such as implementing tax benefits for firms hiring young CEOs, artificially creating mentoring systems, and granting leadership development support. Those actions would offer young CEOs real-world experience, financial assistance, and critical leadership skills in more volatile environments. Educational institutions should also offer courses on executive leadership that address the unique immediate needs of urban, younger leaders. These contributed efforts will help young CEOs attain the necessary skill sets that prepare them to be successful in the long run.

Furthermore, broadening policy recommendations requires additional mobilization of innovation and talent incentives. Financial assistance can be presented in combination with mentorship programs to foster a more conducive ecosystem for young CEOs. They must also set the example, promoting a younger cohort of staff to develop a culture of youth leadership, and incorporating succession planning alongside mentorship opportunities whereby firms commit to hearing what young leaders can add. To better prepare learners for future leadership roles, educational institutions need to change their curricula so that the focus is not just on acquiring knowledge but on developing critical thinking, creativity, and other leadership skills. They should partner with firms so they can provide hands-on learning experiences.

However, it is the realm of traditional corporate structures, resistance within those constructs, and limited access to leadership opportunities for diverse leadership that is essential to be addressed. Thus, it is crucial to create awareness on the advantages of young leadership and give them equal access to resources. Similarly, laying down a concrete framework to be responsible while assessing the impact of these policies will ensure that they are effective in the long run and are all-inclusive. These endeavors will form a conducive environment where cross-border and angel investors can engage with and help start-ups scale by successfully mentoring young CEOs.

Limitations and future research

Opportunities for future research, given how this study is the first of its kind, several areas remain open for further exploration. Turning in another direction, add financial firms (which have distinct regulatory frameworks) and study how young CEOs do outside their background area. Studying other CEO demographics, such as gender or education, provides a complete picture of what makes an effective leader. It is through cross-country comparisons, particularly with other emerging markets, that this study can establish whether the findings from Malaysia are unique. The long-term benefits/drawbacks of young CEOs might be analyzed if this analysis was extended beyond a short period of time. The assessments of the impact on new generation leaders (board composition, ownership concentration) and the research on succession planning and corporate governance structures may also show some insights. Finally, industry-level research would answer whether particular industries (e.g., technology vs. manufacturing) tend to be even better suited for younger leadership.

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Data availability The data can be provided upon request.

Declarations

Conflict of interest There is no conflict of interest associated with this study.

Ethical approval We have confirmed that this manuscript has not been submitted for publication or published elsewhere.

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