

Revenue-Expense Matching, Political Connections and Firm Investment Efficiency: Evidence from Malaysia

KANG WAN TAN^{1*}
MEI FOONG WONG¹

Received: 12 July 2025 / Revised: 30 September 2025 / Accepted: 24 November 2025
© 2026 Faculty of Business and Economics, Universiti Malaya. All rights reserved.

Abstract

Research aim: This study examines the interplay between revenue-expense matching, political connections, and firm investment efficiency within the Malaysian context.

Design/ Methodology/ Approach: Drawing on the revenue-expense matching framework proposed by Dichev and Tang (2008), we construct a measure of matching quality and employ ordinary least squares (OLS) regression on a sample of 570 Malaysian publicly listed firms over the period 2000-2017 to investigate two key issues: (1) the extent to which matching quality influences investment efficiency, and (2) whether political connections moderate this relationship.

Research finding: The empirical evidence indicates that stronger revenue-expense matching is positively associated with improved investment efficiency. However, this beneficial effect is significantly weakened in the presence of political ties. Further analyses suggest that this moderating influence is particularly pronounced among government-linked companies. Additionally, high-quality matching appears to reduce both overinvestment and underinvestment, although these advantages are markedly less evident in politically connected firms.

Practitioner/Policy implication: While previous research has explored the intersection of financial reporting quality, political affiliations, and corporate investment, this study is among the first to empirically link revenue-expense matching with investment efficiency in the context of political embeddedness. The findings not only enhance understanding of how accounting quality and institutional structures interact to shape investment decisions in emerging markets, but also offer policy insights by highlighting the need for governance mechanisms that curb political influence and foster more efficient capital allocation.

Research limitation: This study acknowledges limitations, including potential measurement issues, limited generalizability beyond Malaysia, and endogeneity concerns that future research could address using causal inference methods.

¹ Faculty of Accountancy, Finance and Business, Tunku Abdul Rahman University of Management and Technology. Email address: First Author (kangwan93tan@gmail.com) Second Author (wongmf@tarc.edu.my)

* Corresponding Author: Kang Wan Tan (kangwan93tan@gmail.com)

Keywords: Revenue-expense Matching, Political Connections, Investment Efficiency, Malaysia

Type of article: Research paper

JEL Classification: G38, M41, O16

1. Introduction

Malaysia, once tipped as the fifth Asian Tiger, held a significant position in the global economy during the 1990s.¹ However, the rise of crony capitalism and widespread political corruption has led to a dramatic increase in accounting and financial scandals over recent decades (Tee et al., 2021; Tee & Rasiah, 2020). The deterioration in accounting information quality and its negative consequences for firms' ability to make optimal investment decisions have garnered considerable interest from scholars, practitioners, and regulatory bodies (Bae et al., 2017; Gomariz & Ballesta, 2014). In this study, we pursue two interrelated lines of inquiry: first, whether the quality of revenue-expense matching enhances firm investment efficiency; and second, whether political connections attenuate this relationship by weakening the informational role of accounting.

The first research question examines whether revenue-expense matching is systematically related to firm investment efficiency. While previous studies have highlighted the impact of financial reporting quality on corporate investment decisions (Hou et al., 2016; Houcine, 2017; Li & Wang, 2010; Tahat et al., 2022; Verdi, 2006), empirical evidence on the specific role of revenue-expense matching in this context remains limited. To address this gap, we examine the extent to which cross-sectional differences in revenue-expense matching are associated with variations in firm investment efficiency. Matching refers to the accounting practice of contemporaneously recognising revenues and their corresponding expenses, resulting in a performance measure that more accurately reflects firms' economic activities (Sivakumar & Waymire, 2003). Prior studies suggest that a high degree of revenue-expense matching can mitigate information asymmetries and reduce agency conflicts (Kim, 2018; Sunwoo et al., 2023). Consistent with information asymmetry theory, stronger matching reduces the informational gap between managers and external stakeholders, which in turn improves the credibility of reported performance and enhances firms' capacity to channel resources into value-maximising projects (García Lara et al., 2016). Furthermore, the revenue-expense relationship has been shown to explain both cross-sectional and temporal variation in earnings quality and persistence, which are critical factors influencing firms' investment decisions (Dichev & Tang, 2009; Kim & Kim, 2021). These insights collectively underscore the relevance of revenue-expense matching as a determinant of investment efficiency. Building on this literature, we hypothesise that higher matching quality enhances investment efficiency.

The second research question explores whether political connections undermine the capacity of revenue-expense matching to enhance investment efficiency. Firms operating in markets characterised by institutional fragility, such as Malaysia, often depend on political affiliations to alleviate information asymmetries and obtain preferential access to financial and regulatory resources (Peranginangin et al., 2021; Tee, 2018; Wang et al., 2017). However, political connections may also introduce governance frictions. Managers in politically connected firms (PCFs) often face weaker external monitoring and may exploit these ties to pursue rent-seeking behaviours, including related-party transactions and self-dealing, thereby prioritising personal or political agendas over the interests of minority shareholders (Tee et al., 2021). Shielded from market discipline and bolstered by regulatory protections, PCFs often operate with reduced transparency and are more inclined to adopt opportunistic reporting practices to obscure earnings volatility (Bliss & Gul, 2012; Tee, 2020). Grounded in institutional theory, political connections can be viewed as deeply embedded structures within the business environment that shape organisational behaviour, sometimes in ways that conflict with efficiency-enhancing practices such as robust contemporaneous revenue-expense matching (DiMaggio & Powell, 1983; Phan et al., 2020). For instance, managers may accelerate revenue recognition or delay expense recognition to meet specific earnings targets. Accordingly, we posit that the positive effect of revenue-expense matching on investment efficiency is weakened in the presence of political connections.

We select Malaysia as the empirical context of this study for three key reasons. First, political connections are deeply entrenched in Malaysian business practices and play a central role in shaping corporate outcomes (Gomez & Jomo, 1999). As discussed, these connections frequently substitute for transparency, resulting in lower earnings quality. Second, Malaysia ranks third globally on the most recent Crony Capitalism Index (The Economist, 2023), reflecting the prominence and pervasiveness of PCFs within its economy. Third, the creation of government-linked companies (GLCs) under the New Economic Policy in 1969, which was initially intended to eradicate poverty, has inadvertently facilitated the development of political patronage networks and opportunities for cronyism (Gomez et al., 2017). Malaysian business leaders are often incentivised to maintain close ties with powerful politicians to secure favourable access to public resources (Wong & Hooy, 2018). Taken together, these features make Malaysia a compelling institutional setting to test our hypotheses, particularly given the richness of firm-level data on political connections.

Drawing on Malaysian firm-level data, our analysis provides consistent evidence that stronger revenue-expense matching is positively linked to higher investment efficiency, suggesting that improved matching quality promotes more optimal investment decisions. However, this positive

association is substantially weakened among PCFs. The findings suggest that political affiliations impair the effectiveness of revenue-expense matching in promoting investment efficiency. When the sample is partitioned into GLCs and non-GLCs, the attenuation effect is evident only among GLCs, indicating that the moderating influence of political connections operates specifically within GLCs and is not observed among non-GLCs. This suggests that revenue-expense matching has a relatively limited influence on investment efficiency in non-GLCs. Additionally, when we replace investment efficiency with proxies for overinvestment and underinvestment, we observe that strong matching quality helps mitigate both types of inefficiency; however, these effects are weaker among PCFs. Finally, our findings are consistent across a range of robustness checks, including analyses that control for potential self-selection bias related to the endogeneity of political connections, as well as tests that consider the statistical properties of the matching variable.

This study offers three key contributions to the literature at the nexus of accounting quality, political connections, and corporate investment. First, it advances the financial reporting literature by highlighting revenue-expense matching as a foundational yet relatively overlooked dimension of earnings quality. We position matching quality as a distinct informational mechanism with direct implications for firms' investment behaviour. While prior research has primarily examined broader constructs such as overall financial reporting quality (Gomariz & Ballesta, 2014; Houcine, 2017; Verdi, 2006), accounting conservatism (García Lara et al., 2016), and composite measures of earnings quality (Tahat et al., 2022), our analysis isolates the firm-specific contemporaneity of revenues and expenses as a critical attribute of reporting precision and decision usefulness. Whereas earlier studies have largely focused on aggregate matching trends in developed economies using time-series analyses (Hyun & Cho, 2018; Jin et al., 2015; Srivastava, 2014), we shift the lens to firm-level variation in an emerging market context. In doing so, we complement recent Asian studies that have examined related aspects of earnings quality and investment efficiency, such as Li and Wang (2010), Chen et al. (2011), Hou et al. (2016), and Tahat et al. (2022), thus positioning Malaysia within a broader regional discourse on how accounting fundamentals support capital allocation.

Second, we integrate this focus on revenue-expense matching with the literature on political connections, an institutional feature that is particularly salient in emerging markets. Although considerable work has examined how political ties affect firm performance, governance, and disclosure practices, few studies have investigated how such connections may influence the functionality of core accounting mechanisms. Our study situates revenue-expense matching within this broader institutional context, offering a deeper understanding of how political embeddedness interacts with firm-level financial reporting behaviour.

Third, by embedding our analysis within the Malaysian institutional landscape, this study advances the expanding stream of scholarly work that explores how the distinctive characteristics of emerging markets shape corporate financial behaviour. Malaysia offers a compelling empirical context, characterised by deeply entrenched political-business networks and a significant government presence in corporate ownership structures. By grounding our investigation in this environment, we address longstanding calls in the literature to move beyond the developed-market focus that dominates much of accounting and finance research, and to explore how foundational accounting constructs function within settings marked by institutional complexity and political entrenchment.

The remainder of the paper is structured as follows. Section 2 reviews the pertinent literature and sets out the study's hypotheses. Section 3 details the research design and data sources. Section 4 presents the empirical results, and Section 5 concludes.

2. Literature Review

2.1 *Revenue-expense matching and firm investment efficiency*

Within the neoclassical framework, firm investment decisions are guided exclusively by marginal Tobin's Q, which serves as the primary determinant of capital allocation (Abel, 1983; Hayashi, 1982; Yoshikawa, 1980). Nevertheless, the relationship between corporate investments and cash flows is commonly attributed to capital market frictions, such as financing constraints. Prior research indicates that stock prices are influenced not just by fundamental corporate information but also by market trends and arbitrage fads (Fazzari et al., 1988). These external noises can diminish the ability of stock prices to guide optimal investment decisions. In fact, taxes, transaction costs, and other factors make the market imperfect in the real world. Although firms often experience either underinvestment or overinvestment, both of which affect investment efficiency, moral hazard and adverse selection remain the most critical underlying drivers of investment inefficiency (Stein, 2003). Grounded in information asymmetry theory, such inefficiencies emerge because unequal access to information enables managers either to engage in opportunistic projects that undermine shareholder interests (moral hazard) or to capitalise on private knowledge unavailable to outside investors (adverse selection), thereby distorting the allocation of capital.

Previous studies indicate that higher earnings quality serves as a crucial mechanism for enhancing investment efficiency (Chen et al., 2011; Gomariz & Ballesta, 2014; Tahat et al., 2022). In a recent paper, Kim and Kim (2021) argue that a key mechanism through which earnings quality influences

corporate investment decisions lies in the extent to which revenues and expenses are appropriately matched. The matching of revenues with their corresponding costs is a foundational accounting principle that underpins the accurate measurement of income and enhances the informativeness of financial reports (Dechow, 1994). This income statement perspective conceptualises periodic earnings as revenues minus the expenses appropriately matched to generate them. When revenues and expenses are well aligned, reported earnings gain credibility, and information asymmetry is reduced. Consequently, accrual-based information more faithfully captures firms' underlying economic performance and provides a more reliable basis for assessing stock returns than cash flows, as it effectively addresses the timing concerns inherent in cash-based accounting (Sivakumar & Waymire, 2003).

Revenue-expense matching influences corporate investment decisions through two primary mechanisms. First, high-quality matching helps alleviate information asymmetry among investors. Since investors typically gauge corporate value through projections of future cash flows, the alignment of revenues with their corresponding expenses reinforces the credibility and predictive utility of accounting earnings. This improved informational quality reduces uncertainty surrounding future outcomes and, in turn, lowers the risk associated with investment valuation (Kim, 2018). In mitigating adverse selection, precise matching discourages external capital providers from undervaluing securities, while in constraining moral hazard, it limits managerial discretion to divert resources into projects that privilege private benefits over shareholder value (Li & Wang, 2010). High-quality matching also diminishes the likelihood that investors will view issuing firms as low quality. Strengthening confidence in reported earnings enables more accurate assessments of firm value, reduces financing costs, and enhances capital allocation efficiency. More broadly, the heightened precision of financial signals associated with strong matching practices fosters market discipline and supports investment decisions that are both more rational and value-maximising (Dichev & Tang, 2008, 2009).

Second, high matching quality can mitigate the agency conflict between managers and shareholders by reducing the informational advantages managers might otherwise exploit. The contemporaneous recognition of revenues and expenses functions as a monitoring mechanism, constraining opportunistic reporting practices and narrowing the scope for earnings manipulation (Dichev et al., 2013). For instance, Stubben (2010) finds that managers in firms with strong revenue-expense matching are less inclined to manipulate earnings by accelerating revenue recognition or deferring expenses to meet short-term performance targets. By reducing the room for earnings manipulation, revenue-expense matching supports the integrity of financial statements and orients managerial behaviour toward sustainable firm value growth. In doing so, it reduces informational frictions between

insiders and external capital providers, enhances the credibility of reported earnings, and complements governance mechanisms to strengthen the overall financial reporting system.

While direct empirical research on the link between revenue-expense matching and investment efficiency remains relatively scarce, related lines of inquiry provide preliminary evidence that high-quality accounting information functions as a critical mechanism for enhancing the efficiency of resource allocation in corporate investment (Hou et al., 2016; Verdi, 2006). This finding supports the expectation that high matching quality should enhance firm investment efficiency. Following this logic, Elaoud and Jarboui (2017) discovered that specialist auditors can improve a firm's credibility by communicating forward-looking information about cash flows, thereby mitigating information asymmetries and agency costs. Houcine (2017) confirms that enhancing qualitative characteristics of accounting information improves firm investment decisions. Finally, Bilinski and Eames (2019) find that accurate revenue forecasts reduce the likelihood of opportunistic revenue manipulation, supporting the broader link between reporting quality and investment behaviour.

Drawing on the preceding discussion and grounded in theoretical reasoning, we propose the following hypothesis:

H₁: High revenue-expense matching improves firm investment efficiency.

2.2 Do political connections matter?

Within the institutional context of Malaysia's relationship-driven economy, where political ties often shape firm behaviour, the observed link between high-quality revenue-expense matching and investment efficiency raises an important question: To what extent does the impact of matching quality on investment efficiency differ between PCFs and those without such affiliations?

The answer likely lies in the institutional context that shapes financial reporting incentives. As financial reporting in different countries serves different economic functions, the quality of accounting information may vary substantially due to different market demands. For example, United Kingdom-based firms are more inclined to address the information asymmetry through an "insider access" model that facilitates closer engagement with key stakeholders, while Japanese and South Korean firms address it through the *keiretsu* and *chaebol* systems, respectively (Ball & Shivakumar, 2008; Wang et al., 2017). Contrastingly, Malaysian firms often rely on political connections to address information asymmetries, resulting in lower reporting quality (Tee, 2018; Tee et al., 2017). Phrased differently, the incentive to produce high-quality accounting information diminishes as

political affiliation intensifies, given that stronger political affiliations are often associated with increased engagement in earnings smoothing practices (Tee, 2020). Therefore, matching quality has a lesser impact on resolving information asymmetries in general and improving investment efficiency, particularly for PCFs, than for non-PCFs.

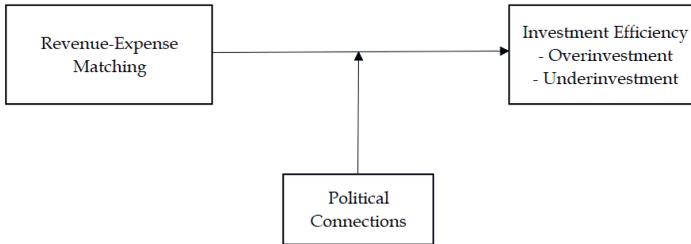
This dynamic is entrenched within the broader system of crony capitalism and political patronage, where firms derive substantial benefits from close ties to the government, often outweighing any associated costs (Shefter, 1977; Shleifer & Vishny, 1993, 1994). A key advantage for PCFs is regulatory protection by ruling elites, which insulates them from legal consequences and enforcement actions. Empirical evidence indicates that PCFs, across both advanced and emerging economies, often benefit from a reduced likelihood of legal prosecution and diminished regulatory oversight (Yu et al., 2015). Within Malaysia's institutional setting, such political shelter enables PCFs to limit financial transparency and monitoring, which exacerbates moral hazard issues and undermines minority shareholders' ability to seek legal redress (Tee, 2019). Faced with these conditions, PCFs have stronger incentives to maintain opaque financial reporting to suppress competition and evade social sanctions. This environment encourages managers to pursue rent-seeking through opportunistic financial reporting, further compromising accounting quality (Aney & Banerji, 2022).

Institutional theory offers a compelling framework for analysing these phenomena, asserting that organisational behaviour, such as financial reporting practices, is shaped by the broader institutional environment comprising both formal structures and informal social norms (DiMaggio & Powell, 1983; Scott, 1987). For PCFs, entrenched patronage networks and regulatory leniency create institutional pressures that prioritise political conformity over transparency and market discipline (Nguyen et al., 2023; Phan et al., 2020). This results in weakened enforcement of disclosure standards and a tolerance for opportunistic managerial behaviours, such as earnings management and manipulation of revenue and expenses. Consequently, the institutional environment fosters information asymmetry and agency problems, as managers in PCFs face incentives aligned more closely with political objectives than with shareholder wealth maximisation.

As highlighted earlier, when managers engage in opportunistic manipulation of revenues and expenses, both information asymmetries and agency conflicts are exacerbated. These issues are further compounded by institutional factors such as weak regulatory enforcement, entrenched political patronage, and limited protection for minority shareholders. In such environments, the lack of effective monitoring mechanisms and accountability diminishes the quality of revenue-expense matching. Guided by this theoretical reasoning, we advance our second hypothesis as follows:

H₂: Political connections weaken the positive effect of revenue-expense matching on firm investment efficiency.

Figure 1: Conceptual Framework



3. Methodology

3.1 Sample selection

Financial statement data were obtained from the Refinitiv Eikon database, while information on political connections was manually extracted from firms' annual reports available through the Bursa Malaysia database. The sample spans the period from 2000 to 2017.² To compute the firm-level revenue-expense matching measure using a rolling-window estimation procedure, we require each firm to have at least seven consecutive years of historical financial data (Kim & Kim, 2021; Kim, 2018). For example, to estimate matching for firm-year 2007 (year t), data from 2000 to 2006 (years $t-7$ to $t-1$) are utilised.

In keeping with established research (Bae et al., 2017; Ghazali et al., 2022; Ismail & Abdul Wahab, 2024), this study excludes firms in financial services and other highly regulated industries, along with observations containing missing data. Applying these selection criteria yields a final sample of 4,317 firm-year observations spanning 570 publicly listed companies. To mitigate the influence of extreme outliers, all continuous variables are winsorised at the first and ninety-ninth percentiles.

3.2 Measure of firm-level matching

To construct the firm-level measure of revenue-expense matching, we adopt the foundational model developed by Dichev and Tang (2008) and implement a rolling window estimation procedure as follows:

$$REV_{i,t} = \beta_0 + \beta_1 EXP_{i,t-1} + \beta_2 EXP_{i,t} + \beta_3 EXP_{i,t+1} + \varepsilon_{i,t} \quad (1)$$

REV denotes net revenue scaled by lagged total assets, while *EXP* refers to total expenses, calculated as the difference between net revenue and earnings before extraordinary items, also scaled by lagged total assets. According to Dichev and Tang (2008), firms that achieve a high degree of revenue-expense matching should exhibit a strong contemporaneous correlation between revenues and expenses, ideally reflected in a coefficient of one on contemporaneous expenses. In contrast, expenses from prior and subsequent periods (that is, non-contemporaneous expenses) should not contribute additional explanatory power to the regression. In practice, unmatched expenses tend to behave like noise and often exhibit negative autocorrelation at the first lag. Thus, the regression captures the extent of expense alignment within the same reporting period, where significant coefficients on lagged or leading expenses indicate deviations from ideal matching.

Following the common practice (Kim & Kim, 2021; Kim, 2018), we compute the firm-level matching (*MATCHING*) using data from years $t-7$ to $t-1$. Specifically, we estimate Equation (1) using a seven-year rolling window in three steps. First, we estimate an unrestricted version of Equation (1), allowing all coefficients to vary freely. Second, we estimate a restricted model by constraining the coefficients on both lagged and future expenses to zero. Third, we calculate the matching proxy as one minus the ratio of the R^2 from the restricted model to the R^2 from the unrestricted model (that is, $1 - \frac{R^2_{restricted}}{R^2_{unrestricted}}$). We then multiply the resulting value by -1 to ensure that higher values correspond to better contemporaneous matching performance. This approach enables a systematic and firm-specific assessment of matching quality across time.

3.3 Measure of investment efficiency

We estimate our firm investment efficiency measure using the accounting-based residual model introduced by Richardson (2006), specified as follows:

$$\begin{aligned}
 INV_{i,t} = & \alpha + \beta_1 SIZE_{i,t-1} + \beta_2 AGE_{i,t-1} + \beta_3 Q_{i,t-1} + \beta_4 CFO_{i,t-1} \\
 & + \beta_5 LEVERAGE_{i,t-1} + \beta_6 ROA_{i,t-1} + \beta_7 INV_{i,t-1} + Year\ FE \\
 & + Industry\ FE + \varepsilon_{i,t}
 \end{aligned} \tag{2}$$

where $INV_{i,t}$ represents firm investment, defined as the annual change in the value of fixed assets, long-term investments, and intangible assets, scaled by total assets. The residual term $\varepsilon_{i,t}$ captures the extent to which actual investment deviates from its predicted level. Following Chen et al. (2018), Ghazali et al. (2022), and Khaw et al. (2023), we use the absolute value of the residual to construct our investment efficiency proxy (*INVEFF*). Specifically, we multiply $|\varepsilon_{i,t}|$ by -1 to obtain *INVEFF*, such that higher values indicate

greater efficiency. This transformation reflects the notion that smaller deviations from expected investment levels imply more efficient capital allocation (Cao et al., 2020; Gomariz & Ballesta, 2014).

3.4 *Measure of political connections*

The identification of PCFs in this study draws on well-established frameworks from the political economy and corporate governance literature, with particular emphasis on firm-level affiliations with political elites or ruling parties. Consistent with the seminal definition by Faccio (2006), a firm is considered politically connected if at least one controlling shareholder or senior executive, such as the chief executive officer, executive director, or board chair, maintains a direct or indirect relationship with political office holders, including cabinet members and elected officials. In the Malaysian context, where informal networks often exert influence comparable to formal roles, this definition is extended to encompass connections via immediate family members of politicians, or close personal relationships with political leaders.

This broader conceptualisation reflects the deeply embedded nature of patronage in Malaysia's corporate landscape, a phenomenon comprehensively documented by Gomez and Jomo (1999). Their pioneering analysis illustrated how elite political-business networks shaped corporate access to public resources and regulatory advantages during the 1990s. Subsequent studies have expanded upon their work by constructing updated datasets of PCFs, with coverage extending through 2017, such as Fung et al. (2015), Tee et al. (2017), Wong and Hooy (2018), Peranginangin et al. (2021), and Tee et al. (2021b).

We incorporate updated lists of PCFs in Malaysia for our empirical analysis and employ a rigorous multi-source verification process to ensure classification reliability. Specifically, we cross-reference firm-level disclosures from annual reports, focusing on sections detailing substantial shareholders, board composition, and profiles of key senior management, with coverage from reputable local business media. Based on this approach, we construct a binary variable, *PCF*, coded as one if a firm is politically connected and zero otherwise.

3.5 *Regression models*

To empirically test our hypotheses, we employ ordinary least squares (OLS) regression analysis. Following established research on investment efficiency and revenue-expense matching (Bae et al., 2017; Biddle et al., 2009; Cheng et al., 2013; Cho & Choi, 2023; Ghazali et al., 2022; Khaw et al., 2023; Kim & Kim, 2021; Kim, 2018; Mortal et al., 2020), we control for a comprehensive

set of firm-specific characteristics known to influence investment behaviour. These controls include firm size, proxied by the natural logarithm of total assets (*SIZE*); firm age, measured as the natural logarithm of the number of years listed on the stock exchange (*AGE*); Tobin's Q, approximated as the market value of equity scaled by total assets (*Q*); leverage, defined as the ratio of total liabilities to total assets (*LEVERAGE*); cash flow from operations scaled by total assets (*CFO*); firm performance, measured as return on assets (*ROA*); asset tangibility, proxied by the ratio of fixed assets to total assets (*TANGIBILITY*); the length of the operating cycle, measured as the natural logarithm of the firm's operating cycle (*OPER_CYCLE*); the standard deviation of operating cash flows (σ *CFO*); the proportion of years with negative earnings over the rolling window from year *t*-7 to *t*-1 (*LOSS%*); and audit quality, defined as an indicator variable equal to one if the firm was audited by a Big Four auditor (*BIG4*).

To account for unobserved heterogeneity across industries and over time, industry and year fixed effects are included in all specifications. Following Petersen (2009), standard errors are clustered at the firm level to address potential serial correlation in the residuals. Hypotheses 1 and 2 are formally tested using the regression models specified in Equations (3) and (4), respectively.

$$\begin{aligned}
 INVEFF_{i,t} &= \beta_0 + \beta_1 MATCHING_{i,t} + \beta_k \sum_k Control\ variables_{i,t}^k \\
 INVEFF_{i,t} &= \beta_0 + \beta_1 MATCHING_{i,t} + \beta_2 PCF_{i,t} + \beta_3 (MATCHING_{i,t} \times PCF_{i,t}) \\
 &\quad + \beta_k \sum_k Control\ variables_{i,t}^k + Industry\ FE + Year\ FE + \gamma_{i,t} \\
 &\quad + \gamma_{i,t}
 \end{aligned} \tag{3}$$

$$\begin{aligned}
 INVEFF_{i,t} &= \beta_0 + \beta_1 MATCHING_{i,t} + \beta_2 PCF_{i,t} + \beta_3 (MATCHING_{i,t} \times PCF_{i,t}) \\
 &\quad + \beta_k \sum_k Control\ variables_{i,t}^k + Industry\ FE + Year\ FE \\
 &\quad + \gamma_{i,t}
 \end{aligned} \tag{4}$$

4. Empirical Analysis

4.1 Descriptive statistics

Table 1 presents the descriptive statistics for the full sample. The mean value of investment efficiency (*INVEFF*) is -0.081, which is substantially lower than the benchmark observed in developed economies such as the United States, where the corresponding figure has been reported as approximately zero (Verdi, 2006). This outcome supports earlier research, suggesting that emerging markets, including Malaysia, are more susceptible to investment inefficiencies relative to their developed counterparts (Ismail & Abdul

Wahab, 2024). The average value of *MATCHING* is -0.260, implying that roughly 26% of the explanatory power in the unrestricted model specified in Equation (1) is driven by non-contemporaneous expense components. The mean value of *PCF* is 0.423, indicating that 42.3% of firm-year observations are classified as politically connected. This proportion exceeds the 10% to 12% typically reported in earlier studies, likely reflecting a broader and deepening involvement of the Malaysian government in corporate equity markets over the past decade (Bliss & Gul, 2012; Johnson & Mitton, 2003).

Table 1: Descriptive Statistics

Variables	Mean	S.D.	5%	25%	Median	75%	95%
<i>INVEFF</i>	-0.081	0.099	-0.290	-0.096	-0.050	-0.023	-0.004
<i>MATCHING</i>	-0.260	0.396	-0.412	-0.101	-0.026	-0.001	-0.001
<i>PCF</i>	0.423	0.500	0.000	0.000	0.000	1.000	1.000
<i>SIZE</i>	5.673	0.603	4.805	5.231	5.615	6.052	6.841
<i>AGE</i>	1.366	0.236	0.954	1.204	1.362	1.556	1.708
<i>Q</i>	0.579	0.722	0.113	0.246	0.497	0.707	0.864
<i>CFO</i>	0.048	0.834	-0.072	0.002	0.041	0.090	0.185
<i>LEVERAGE</i>	0.413	0.195	0.129	0.275	0.401	0.531	0.738
<i>ROA</i>	0.053	0.086	-0.068	0.020	0.050	0.089	0.165
<i>TANGIBILITY</i>	0.370	0.212	0.036	0.211	0.356	0.519	0.739
<i>OPER_CYCLE</i>	2.038	0.302	1.606	1.848	1.992	2.186	2.635
σ <i>CFO</i>	0.059	0.036	0.017	0.034	0.052	0.075	0.130
<i>LOSS%</i>	0.565	3.536	-2.135	0.212	0.748	1.151	3.493
<i>BIG4</i>	0.420	0.493	0.000	0.000	0.000	1.000	1.000

Note: This table presents the descriptive statistics of all variables. The sample includes firm-year observations from fiscal years 2001 to 2017, where all control variables have non-missing values.

4.2 Correlation

In Table 2, we observe that *INVEFF* is positively and significantly correlated with *MATCHING*, providing preliminary evidence that stronger revenue-expense matching is associated with higher investment efficiency. *INVEFF* is also negatively and significantly correlated with *PCF*, suggesting that political connections are linked to lower investment efficiency. Collinearity diagnostics reveal that all variance inflation factors fall well below the conventional threshold of 10, indicating that multicollinearity is not a major concern for this analysis. Overall, the results suggest no material multicollinearity among the explanatory variables.

Table 2: Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) INVEFF	1.000													
(2) MATCHING	0.073 ^a	1.000												
(3) PCF	-0.004 ^a	0.025 ^a	1.000											
(4) SIZE	-0.008	0.020	0.360 ^a	1.000										
(5) AGE	0.090 ^a	-0.046 ^a	0.107 ^a	0.191 ^a	1.000									
(6) Q	-0.029 ^c	0.007	0.033 ^b	0.092 ^a	0.017	1.000								
(7) CFO	-0.009	0.056 ^a	0.049 ^a	0.104 ^a	-0.009	0.410 ^a	1.000							
(8) LEVERAGE	-0.057 ^a	0.062 ^a	0.043 ^a	0.185 ^a	-0.071 ^a	-0.095 ^a	-0.134 ^a	1.000						
(9) ROA	0.071 ^a	0.056 ^a	0.037 ^a	0.192 ^a	0.038 ^b	0.424 ^a	0.441 ^a	-0.138 ^a	1.000					
(10) TANGIBILITY	-0.122 ^a	-0.011	0.003	0.010	-0.137 ^a	-0.039 ^a	0.127 ^a	0.014	-0.085 ^a	1.000				
(11) OPER_CYCLE	-0.002	-0.195 ^a	0.064 ^a	-0.029 ^c	0.004	-0.025 ^a	-0.279 ^a	0.092 ^a	-0.202 ^a	-0.224 ^a	1.000			
(12) σ CFO	-0.038 ^b	0.077 ^a	-0.081 ^a	-0.152 ^a	-0.008 ^a	0.100 ^a	-0.010	0.078 ^a	-0.055 ^a	-0.181 ^a	-0.046 ^a	1.000		
(13) LOSS%	0.015	0.014	0.002	0.032 ^a	-0.013	0.026 ^c	0.021	-0.007	0.013	0.017	-0.030 ^c	0.002	1.000	
(14) BIC4	-0.027 ^c	-0.036 ^b	0.024 ^a	0.454 ^a	0.018	0.179 ^a	0.193 ^a	0.012	0.178 ^a	0.009	-0.129 ^a	0.000	0.051	1.000

Note: The superscripts a, b, and c denote significance at the confidence levels of 99%, 95%, and 90%, respectively.

4.3 Main results

4.3.1 Effect of Revenue-Expense Matching on Firm Investment Efficiency

Model (1) of Table 3 presents our main findings for H1. The coefficient for *MATCHING* is positive and statistically significant at the 1% level, indicating that firms with stronger revenue-expense matching exhibit higher investment efficiency. This result supports H1. To assess the economic significance of this effect, we estimate the impact of a one-unit increase in *MATCHING* on the likelihood of improved firm investment efficiency. Specifically, a one-standard-deviation increase in *MATCHING* is associated with a 35.64 basis point increase in *INVEFF* ($=0.009 \times 0.396$). Given the sample average of *INVEFF* at -0.081, this corresponds to an approximate 4.40% improvement in firm investment efficiency.

Regarding the control variables, the estimated coefficients largely align with patterns reported in previous studies (Ghazali et al., 2022; Ismail & Abdul Wahab, 2024; Khaw et al., 2023). Model (1) shows that the coefficient for *AGE* is significantly positive, revealing that older firms tend to exhibit greater investment efficiency, likely due to their accumulated investment experience and more stable access to internal funding (Benlemlih & Bitar, 2018). In contrast, the coefficients for *SIZE*, *Q*, *LEVERAGE*, *ROA*, *TANGIBILITY* and *σCFO* are all significantly negative. Larger and more profitable firms may be prone to overinvestment as a result of greater diversification opportunities and excess retained earnings (Khaw et al., 2023). Meanwhile, high growth opportunities, leverage, asset tangibility, and cash flow volatility may constrain investment efficiency due to increased agency conflicts (for instance, between shareholders and debtholders) and heightened risk of financial distress (Chen et al., 2011; Myers, 1977).

4.3.2 Mitigating Effect of Political Connections

Model (2) of Table 3 reports the results for H2. As expected, the coefficient for *MATCHING* remains positive and significant. Notably, the coefficient for *PCF* is negative and significant at the 5% level, suggesting that political connections impair firm investment efficiency. From an institutional standpoint, the findings indicate that PCFs operate within formal and informal frameworks, which influence managerial behaviour and frequently limit their ability to attain efficient investment outcomes. More importantly, the coefficient on the interaction term *MATCHING* × *PCF* is negative and significant at the 5% level, indicating that the positive effect of revenue-expense matching on investment efficiency is weaker for PCFs than for non-PCFs. These findings imply that institutional pressures and embedded norms associated with political connections can constrain the effectiveness

Table 3: Revenue-expense matching, Political Connections and Corporate Investment Efficiency

	<u>Model (1)</u>	<u>Model (2)</u>	<u>Model (3)</u>	<u>Model (4)</u>	<u>Model (3) vs. Model (4)</u>
	Full sample	Full sample	Sample with political connections	Sample without political connections	Diff. in coef.
<i>MATCHING</i>	0.009**** (0.002)	0.009**** (0.003)	0.005 (0.003)	0.009**** (0.002)	-0.001 [0.002]
<i>PCF</i>		-0.002*** (0.004)			
<i>MATCHING × PCF</i>		-0.011** (0.007)			
<i>SIZE</i>	-0.001* (0.004)	-0.002 (0.004)	-0.002* (0.004)	-0.003 (0.005)	0.001 [0.639]
<i>AGE</i>	0.020** (0.008)	0.019** (0.008)	0.030*** (0.010)	0.010 (0.010)	0.020 [0.006]
<i>Q</i>	-0.73* (0.042)	-0.073* (0.042)	-0.043* (0.038)	-0.105*** (0.035)	0.063 [0.023]
<i>CFO</i>	0.028 (0.032)	0.028 (0.032)	0.041 (0.033)	0.015 (0.029)	-0.056 [0.455]
<i>LEVERAGE</i>	-0.017* (0.011)	-0.017 (0.011)	-0.012* (0.012)	-0.021* (0.012)	0.010 [0.342]
<i>ROA</i>	-0.107* (0.056)	-0.100 (0.057)	-0.080 (0.031)	-0.130* (0.029)	-0.050 [0.163]
<i>TANGIBILITY</i>	-0.049*** (0.011)	-0.049*** (0.011)	-0.032*** (0.012)	-0.062*** (0.011)	-0.094 [0.008]
<i>OPER_CYCLE</i>	-0.002 (0.007)	-0.002 (0.007)	-0.004 (0.009)	-0.000 (0.009)	-0.004 [0.657]
<i>σCFO</i>	-0.145*** (0.053)	-0.144*** (0.053)	-0.154** (0.065)	-0.138** (0.062)	-0.017 [0.045]
<i>LOSS%</i>	0.000 (0.000)	0.000 (0.000)	0.001 (0.001)	0.000 (0.001)	0.001 [0.262]
<i>BIG4</i>	-0.002 (0.005)	-0.003 (0.005)	-0.007 (0.005)	0.003 (0.005)	-0.010 [0.943]
<i>Constant</i>	-0.060* (0.030)	-0.056* (0.031)	-0.054 (0.037)	-0.035 (0.019)	-0.019 [0.587]
<i>Year FE</i>	✓	✓	✓	✓	✓
<i>Industry FE</i>	✓	✓	✓	✓	✓
Observations	4,317	4,317	2,066	2,251	4,317
Adjusted R ²	0.064	0.064	0.061	0.080	0.062

Note: Robust standard errors are reported in parentheses, while p-values are reported in square brackets. The superscripts *, **, and *** denote significance at the confidence levels of 90%, 95%, and 99%, respectively.

of revenue-expense matching in guiding optimal investment decisions, consistent with the expectations derived from institutional theory (Phan et al., 2020). Thus, these results provide robust support for H2.

To further explore H2, we divide the sample based on the presence of political connections and re-estimate Equation (3) for each subsample. By splitting the sample instead of relying on interaction terms, we allow the coefficients of all control variables to differ across the two groups (Armstrong et al., 2010). The results are reported in Models (3) and (4) of Table 3. In Model (3), the coefficient for *MATCHING* is positive but statistically insignificant, suggesting that revenue-expense matching does not significantly affect investment efficiency among PCFs. In contrast, Model (4) demonstrates a positive and highly significant coefficient on *MATCHING* at the 1% level for non-PCFs, indicating that better revenue-expense matching strongly enhances investment efficiency in this group.

The final column of Table 3 presents the differences in coefficients for each variable in Equation (3) between PCFs and non-PCFs. Consistent with H2, the difference in the *MATCHING* coefficient is significant at the 5% level, reinforcing the conclusion that the relationship between revenue-expense matching and investment efficiency is primarily driven by non-PCFs.

Collectively, the findings in Table 3 demonstrate that firms exhibiting stronger revenue-expense matching generally achieve higher levels of investment efficiency. However, this beneficial effect is substantially weaker among PCFs. The evidence suggests that the capacity of revenue-expense matching to improve investment efficiency is diminished in the presence of political connections.

4.4 Further analysis

4.4.1 Effects of GLCs and Non-GLCs on the Effectiveness of Revenue-Expense Matching

Malaysia's GLCs, much like state-owned enterprises (SOEs) in China, are often structured to advance the political objectives of ruling elites and are frequently tasked with broader policy responsibilities (Gomez et al., 2017). Given the centralisation of both financial resources and regulatory authority within the government, GLCs often enjoy preferential access to government-distributed capital and benefits. At the same time, they are frequently insulated from competitive market pressures due to regulatory protections that diminish the disciplining effects of market forces. In contrast, connections between non-GLCs and political actors are generally more tenuous and less effective, given the limited political influence of their affiliated individuals (Wong & Hooy, 2018). These structural advantages create incentives for GLCs to engage in opportunistic behaviours such as aggressive tax planning, opaque financial disclosure, and reduced accounting

information quality, which can distort revenue-expense alignment and impair the informativeness of analyst forecasts (Tee et al., 2017). Recent studies (Ghazali et al., 2022; Phan et al., 2020) further demonstrate that GLCs are more likely to prioritise non-shareholder objectives, such as supporting socio-economic policy goals, which in turn can undermine investment efficiency. Based on this theoretical and empirical foundation, we expect the adverse influence of political connections on the relationship between revenue-expense matching and firm investment efficiency to be more pronounced in GLCs than in non-GLCs. Specifically, we hypothesise that the observed detrimental effects of political connections are primarily driven by GLCs.

To empirically examine this prediction, we partition the sample into GLCs and non-GLCs. Table 4 reports the results. Models (1)-(3) and (4)-(6) present the findings for GLCs and non-GLCs, respectively. Consistent with the earlier analysis in Table 3, the coefficient for *MATCHING* is positive and statistically significant across all model specifications, reaffirming the positive association between revenue-expense matching and investment efficiency. Crucially, Model (3) reveals that the interaction term *MATCHING* × *PCF* is negative and significant for GLCs, whereas Model (6) shows that the corresponding coefficient is insignificant for non-GLCs. These results suggest that the dampening effect of political connections on the efficiency benefits of revenue-expense matching are primarily attributable to GLCs. The findings imply that GLC managers may be more inclined to obscure the diversion or misallocation of resources through income-smoothing strategies embedded in less transparent reporting practices. Consequently, poor matching quality among GLCs exerts a stronger influence in undermining investment efficiency relative to their non-GLC counterparts.

4.4.2 Over vs. Underinvestment

H1 posits that high matching quality is positively associated with greater firm investment efficiency. Extending this logic, we further contend that strong revenue-expense matching can mitigate value-distorting behaviours related to both overinvestment and underinvestment. To explore this issue, we categorise firms based on the residual values from Equation (2): positive residuals indicate overinvestment (*OVERINV*), while negative residuals indicate underinvestment (*UNDERINV*). Using these subsamples, we re-estimate Equations (3) and (4), replacing *INEFF* with *OVERINV* and *UNDERINV*, respectively.

Table 5 reports the findings. Panel A reports results for overinvestment, and Panel B for underinvestment. In Panel A, Model (1) shows that the coefficient for *MATCHING* is negative and significant, suggesting that higher matching quality helps reduce overinvestment. Model (3) reveals a significant negative relationship between revenue-expense matching and

Table 4: The Effect of GLCs and Non-GLCs

	<u>GLCs</u>			<u>Non-GLCs</u>		
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
MATCHING		0.009*** (0.002)	0.009*** (0.002)		0.008*** (0.002)	0.009*** (0.003)
PCF	-0.013*** (0.011)	-0.009*** (0.011)	-0.002*** (0.012)	-0.003*** (0.004)	-0.002*** (0.004)	-0.002* (0.004)
MATCHING × PCF			-0.118** (0.053)			-0.001 (0.004)
SIZE	-0.005** (0.007)	-0.004* (0.007)	-0.002 (0.007)	-0.002** (0.004)	-0.002* (0.004)	-0.002 (0.004)
AGE	0.006* (0.013)	0.007* (0.013)	0.008 (0.013)	0.020** (0.009)	0.022*** (0.009)	0.022** (0.009)
Q	-0.125** (0.059)	-0.120** (0.057)	-0.117** (0.057)	-0.067 (0.043)	-0.061 (0.042)	-0.061 (0.042)
CFO	0.013 (0.035)	0.015 (0.035)	0.016 (0.034)	0.026 (0.033)	0.031 (0.033)	0.030 (0.033)
LEVERAGE	-0.015* (0.015)	-0.020 (0.015)	-0.018 (0.015)	-0.013* (0.011)	-0.016 (0.011)	-0.016 (0.011)
ROA	-0.157** (0.064)	-0.154** (0.064)	-0.151*** (0.065)	-0.104* (0.057)	-0.101* (0.057)	-0.101* (0.057)
TANGIBILITY	-0.066*** (0.015)	-0.063*** (0.015)	-0.063*** (0.015)	-0.051*** (0.011)	-0.047*** (0.011)	-0.047*** (0.011)
OPER_CYCLE	-0.005 (0.012)	0.002 (0.012)	0.001 (0.012)	-0.011 (0.008)	-0.004 (0.008)	-0.004 (0.008)
σCFO	-0.105 (0.072)	-0.121* (0.070)	-0.112 (0.070)	-0.143*** (0.054)	-0.157*** (0.054)	-0.157*** (0.054)
LOSS%	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.001 (0.000)	0.001 (0.000)	0.001 (0.000)
BIG4	0.003 (0.007)	0.004 (0.006)	0.004 (0.006)	-0.005 (0.005)	-0.004 (0.005)	-0.004 (0.005)
Constant	-0.062 (0.040)	-0.055 (0.042)	-0.063 (0.043)	-0.073* (0.030)	-0.071* (0.030)	-0.073* (0.031)
Year FE	✓	✓	✓	✓	✓	✓
Industry FE	✓	✓	✓	✓	✓	✓
Observations	2,377	2,377	2,377	4,191	4,191	4,191
Adjusted R ²	0.076	0.084	0.085	0.060	0.065	0.065

Note: Robust standard errors are reported in parentheses. The superscripts *, **, and *** denote significance at the confidence levels of 90%, 95%, and 99%, respectively.

Table 5: Over- vs. Underinvestment

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
	Full sample	Subsample with political connections	Subsample without political connections	Full sample	GLCs	Non-GLCs
<i>Panel A: Overinvestment</i>						
MATCHING	-0.003*** (0.001)	-0.001 (0.000)	-0.002*** (0.001)	-0.004*** (0.001)	-0.002*** (0.001)	-0.004*** (0.001)
PCF				0.004* (0.006)	0.021*** (0.019)	0.003 (0.006)
MATCHING×PCF				0.001 (0.001)	0.127* (0.083)	-0.001 (0.001)
Constant	-0.024 (0.050)	-0.034 (0.074)	0.002 (0.017)	-0.029 (0.050)	-0.020 (0.069)	-0.028 (0.051)
Control variables	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Industry FE	✓	✓	✓	✓	✓	✓
Observations	1,856	882	974	1,856	1,034	1,796
Adjusted R ²	0.144	0.154	0.157	0.145	0.157	0.147
<i>Panel B: Underinvestment</i>						
MATCHING	0.003*** (0.001)	0.001 (0.000)	0.003*** (0.003)	0.001 (0.001)	0.003 (0.003)	0.001 (0.001)
PCF				0.003* (0.004)	0.018* (0.011)	0.001 (0.004)
MATCHING × PCF				0.003 (0.002)	-0.064 (0.082)	0.002 (0.002)
Constant	-0.106*** (0.033)	-0.072*** (0.036)	-0.132*** (0.062)	-0.102*** (0.034)	-0.113* (0.059)	-0.102*** (0.035)
Control variables	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Industry FE	✓	✓	✓	✓	✓	✓
Observations	2,461	1,184	1,277	2,461	1,343	2,395
Adjusted R ²	0.077	0.085	0.126	0.078	0.123	0.079

Note: Robust standard errors are reported in parentheses. The superscripts *, **, and *** denote significance at the confidence levels of 90%, 95%, and 99%, respectively.

overinvestment for non-PCFs, while Model (2) shows no such relationship for PCFs. Consistent with this pattern, Model (4) confirms that the mitigating effect of revenue-expense matching on overinvestment is significantly weaker for PCFs. In Panel B, we obtain similar direct effects of *MATCHING* on underinvestment, in which revenue-expense matching mitigates underinvestment, but no evidence for PCFs.

To further investigate whether these patterns vary by ownership structure, we split the sample into GLCs and non-GLCs and re-estimate Equation (4) using *OVERINV* and *UNDERINV* as dependent variables. In Panel A, Models (5) and (6) show that the interaction term *MATCHING* × *PCF* is significantly positive for GLCs and statistically insignificant for non-GLCs. By contrast, Panel B reports no significant interaction effects for underinvestment in either subgroup.

The results from the interaction analyses can be synthesised into three key observations. First, the weakening effect of political connections on the association between revenue-expense matching and overinvestment is predominantly concentrated among GLCs, with little evidence of a similar pattern in non-GLCs. Second, GLCs appear to intensify overinvestment tendencies, suggesting that the adverse influence of political ties on the matching–investment efficiency nexus is primarily driven by distortions in overinvestment behaviour. Third, political connections do not materially affect the association between revenue-expense matching and underinvestment, indicating an asymmetrical moderating effect.

4.5 Robustness checks

4.5.1 Political Connections and Endogeneity

To empirically address potential self-selection bias, we adopt the propensity score matching (PSM) approach introduced by Rosenbaum and Rubin (1983), employing the nearest-neighbour matching technique to pair PCFs in the treatment group with comparable non-PCFs in the control group. According to Bliss and Gul (2012), Boubakri et al. (2012), Tee (2019) and Tee et al. (2022), propensity scores are estimated based on firm-specific characteristics associated with the

likelihood of political affiliation, including *SIZE*, *LEVERAGE*, *ROA*, and *BIG4*. Table 6, Panel A reports the mean differences of the covariates across 992 matched pairs. The absence of statistically significant differences between the treatment and control groups suggests that the covariates are well balanced post-matching. Using the matched sample, we then re-estimate the specifications outlined in Equations (3) and (4). As reported in Panel B of Table 6, the main findings remain robust and statistically significant, further supporting the validity of our results.

Table 6: Propensity-score Matching

	<i>SIZE</i>	<i>LEVERAGE</i>	<i>ROA</i>	<i>BIG4</i>
<i>Panel A: Descriptive statistics of 992 pairs of PCFs and non-PCFs</i>				
PCFs	5.701	0.424	0.061	0.466
Non-PCFs	5.664	0.408	0.048	0.375
Diff.	0.037	0.016	0.013	0.091
<i>p</i> -value	0.237	0.992	0.533	0.204
	<u>Model (1)</u>	<u>Model (2)</u>	<u>Model (3)</u>	<u>Model (4)</u>
	Full sample	Full sample	Subsample with political connections	Subsample without political connections
<i>Panel B: The impact of revenue-expense matching and political connections on firm investment efficiency</i>				
<i>MATCHING</i>	0.002*** (0.001)	0.001*** (0.002)	0.001 (0.000)	0.001*** (0.001)
<i>PCF</i>		-0.002*** (0.005)		
<i>MATCHING</i> × <i>PCF</i>		-0.007** (0.008)		
Constant	-0.031 (0.039)	-0.031 (0.039)	-0.086 (0.045)	0.026* (0.064)
Control variables	✓	✓	✓	✓
<i>Year FE</i>	✓	✓	✓	✓
<i>Industry FE</i>	✓	✓	✓	✓
Observations	1,984	1,984	992	992
Adjusted R ²	0.074	0.074	0.088	0.097

Note: Robust standard errors are reported in parentheses. The superscripts *, **, and *** denote significance at the confidence levels of 90%, 95%, and 99%, respectively.

4.5.2 Alternative Proxy for Firm-Level Matching

As our continuous variable for the matching proxy remains highly skewed even after winsorisation (see Table 1), we follow Sunwoo et al. (2023) by employing the coefficient on current-period expense (β_2) in Equation (1) as an alternative proxy for firm-level matching (*MATCHING2*). We repeat the tests from Table 3 and find that the results reported in Table 7 are qualitatively similar.

Table 7: Alternative Proxy for Matching

	<u>Model (1)</u> Full sample	<u>Model (2)</u> Full sample	<u>Model (3)</u> Subsample with political connections	<u>Model (4)</u> Subsample without political connections
<i>MATCHING2</i>	0.047*** (0.041)	0.043*** (0.40)	0.006 (0.001)	0.050*** (0.047)
<i>PCF</i>		-0.064** (0.052)		
<i>MATCHING2</i> × <i>PCF</i>		-0.132* (0.145)		
Constant	-0.083* (0.060)	-0.078* (0.061)	-0.35 (0.037)	-0.063 (0.052)
Control variables	✓	✓	✓	✓
<i>Year FE</i>	✓	✓	✓	✓
<i>Industry FE</i>	✓	✓	✓	✓
Observations	4,317	4,317	2,066	2,251
Adjusted R ²	0.063	0.063	0.064	0.076

Note: Robust standard errors are reported in parentheses. The superscripts *, **, and *** denote significance at the confidence levels of 90%, 95%, and 99%, respectively.

5. Conclusion

This study examines the interrelationship between revenue-expense matching, political connections, and firm investment efficiency within the institutional setting of Malaysia, a relationship-based economy characterised by persistent political entanglement in corporate affairs. Our empirical evidence indicates that firms with stronger revenue-expense matching tend to achieve higher investment efficiency, lending support to the notion that rigorous accounting practices improve resource allocation. Importantly, the positive impact of matching quality is significantly stronger among firms without political ties, suggesting that political connections dampen the informational benefits of revenue-expense alignment. Further analysis indicates that this heterogeneity is largely driven by GLCs, where political considerations appear to distort internal capital allocation. In addition, we find that strong revenue-expense matching curbs both underinvestment and overinvestment behaviours, though these benefits are substantially diminished in the presence of political affiliations.

These results offer several important practical implications. First, investors may view revenue-expense matching quality as a credible signal of financial discipline and operational transparency. Nonetheless, they should exercise additional diligence when interpreting financial information from PCFs, as political affiliations may influence managerial decisions and shape the economic interpretation of reported figures, even when financial statements are independently audited. Investors are also advised to integrate governance assessments into their analysis of GLCs to ensure

robust oversight and accountability. Second, regulators should prioritise strengthening disclosure requirements and market governance mechanisms for PCFs to curtail opportunistic behaviour and reinforce investor confidence. A combined approach of tightening disclosure rules and reducing political interference may help diminish firms' incentives to cultivate politically motivated alliances. Lastly, for policymakers, reforming the governance architecture of GLCs through merit-based board appointments, as practised in jurisdictions such as Singapore, could enhance managerial accountability and reduce politically motivated capital misallocation (Gomez et al., 2017).

Notwithstanding its contributions, this study acknowledges several inherent limitations. First, consistent with previous studies, our proxies for revenue-expense matching and investment efficiency are inherently imperfect and may not capture all relevant dimensions with the same level of granularity observed in United States-based datasets. Second, while Malaysia offers a rich institutional setting for studying political connections, the generalisability of our results to other emerging or developed economies may be limited by differences in legal enforcement, investor protection, and governance norms. Third, the political context in Malaysia during our study period (2000–2017) was relatively stable, which may have amplified the observed effects of political connections. The 2018 regime change, marking a historic shift in political power, underscores that such institutional stability is not permanent. Consequently, the applicability of our findings to periods of political volatility remains uncertain. Fourth, and more critically, we acknowledge potential endogeneity concerns. For instance, the degree of revenue-expense alignment and the existence of political connections may be simultaneously shaped by unobserved firm-level characteristics, such as managerial competence or political lobbying capacity, which may also exert a direct influence on investment efficiency. Although our research design attempts to mitigate such concerns through robustness checks and fixed effects, future studies may consider using quasi-experimental methods or instrumental variable approaches to better isolate causal effects.

Taken together, these findings advance the growing body of research at the nexus of revenue-expense matching quality, political economy, and corporate investment behaviour. By illustrating how institutional structures influence the effectiveness of internal information systems, this study provides a more nuanced perspective on the mechanisms through which political affiliations can erode financial transparency and compromise investment efficiency. Future research could investigate the impact of political regime changes to evaluate how power shifts affect the moderating role of political connections. Additionally, cross-country comparisons or investigations of firm-level governance reforms may offer further insights and deepen our understanding of these dynamics across diverse institutional settings.

Notes

- ¹ Malaysia is widely regarded as one of Southeast Asia's emerging "Tiger Cub" economies, a term denoting its ambition to replicate the export-led industrialisation and technological advancement strategies successfully executed by the original Asian Tigers. These aspirations reflect a broader national development agenda centred on global integration, manufacturing dynamism, and innovation-driven growth (Hale, 2023).
- ² The year 2017 was selected as the terminal point for our analysis due to a significant structural shift in Malaysia's political landscape following the 14th General Election. The unprecedented regime change introduced institutional and constitutional uncertainties that likely disrupted pre-existing political-business alliances. Many previously connected firms may have experienced a severance of ties with political elites, while newly empowered actors forged alternative networks of influence under the new administration. Given these complexities, extending the sample beyond 2017 could compromise the internal validity of our political connection classification and introduce noise into the empirical analysis.

References

- Abel, A. B. (1983). Optimal investment under uncertainty. *The American Economic Review*, 73(1), 228–233.
- Aney, M. S., & Banerji, S. (2022). Political connections, informational asymmetry, and the efficient resolution of financial distress. *Economic Modelling*, 114(May), 105901. <https://doi.org/10.1016/j.econmod.2022.105901>
- Armstrong, C. S., Jagolinzer, A. D., & Larcker, D. F. (2010). Chief Executive Officer Equity Incentives and Accounting Irregularities. *Journal of Accounting Research*, 48(2), 225–271. <https://doi.org/10.1111/j.1475-679X.2009.00361.x>
- Bae, G. S., Choi, S. U., Dhaliwal, D. S., & Lamoreaux, P. T. (2017). Auditors and client investment efficiency. *Accounting Review*, 92(2), 19–40. <https://doi.org/10.2308/accr-51530>
- Ball, R., & Shivakumar, L. (2008). Earnings quality at initial public offerings. *Journal of Accounting and Economics*, 45(2–3), 324–349. <https://doi.org/10.1016/j.jacceco.2007.12.001>
- Benlemlih, M., & Bitar, M. (2018). Corporate social responsibility and investment efficiency. *Journal of Business Ethics*, 148(3), 647–671. <https://doi.org/10.1007/s10551-016-3020-2>
- Biddle, G. C., Hilary, G., & Verdi, R. S. (2009). How does financial reporting quality relate to investment efficiency? *Journal of Accounting and Economics*, 48(2–3), 112–131. <https://doi.org/10.1016/j.jacceco.2009.09.001>

- Bilinski, P., & Eames, M. (2019). Analyst revenue forecast reporting and the quality of revenues and expenses. *Journal of Business Finance and Accounting*, 46(1–2), 136–158. <https://doi.org/10.1111/jbfa.12355>
- Bliss, M. A., & Gul, F. A. (2012). Political connection and cost of debt: Some Malaysian evidence. *Journal of Banking and Finance*, 36(5), 1520–1527. <https://doi.org/10.1016/j.jbankfin.2011.12.011>
- Boubakri, N., Guedhami, O., Mishra, D., & Saffar, W. (2012). Political connections and the cost of equity capital. *Journal of Corporate Finance*, 18(3), 541–559. <https://doi.org/10.1016/j.jcorpfin.2012.02.005>
- Cao, Y., Dong, Y., Lu, Y., & Ma, D. (2020). Does institutional ownership improve firm investment efficiency? *Emerging Markets Finance and Trade*, 56(12), 2772–2792. <https://doi.org/10.1080/1540496X.2018.1486705>
- Chen, F., Hope, O. K., Li, Q., & Wang, X. (2011). Financial reporting quality and investment efficiency of private firms in emerging markets. *Accounting Review*, 86(4), 1255–1288. <https://doi.org/10.2308/accr-10040>
- Chen, J., Dong, W., Tong, J. Y., & Zhang, F. F. (2018). Corporate philanthropy and investment efficiency: Empirical evidence from China. *Pacific Basin Finance Journal*, 51, 392–409. <https://doi.org/10.1016/j.pacfin.2018.08.008>
- Cheng, M., Dhaliwal, D., & Zhang, Y. (2013). Does investment efficiency improve after the disclosure of material weaknesses in internal control over financial reporting? *Journal of Accounting and Economics*, 56(1), 1–18. <https://doi.org/10.1016/j.jacceco.2013.03.001>
- Cho, H., & Choi, G. Y. (2023). Managerial ability and revenue-expense matching: accrual estimation versus real business decision. *Asia-Pacific Journal of Accounting and Economics*, 30(4), 1120–1135. <https://doi.org/10.1080/16081625.2021.1977663>
- Dechow, P. M. (1994). Accounting earnings and cash flows as measures of firm performance: The role of accounting accruals. *Journal of Accounting and Economics*, 18(1), 3–42. [https://doi.org/10.1016/0165-4101\(94\)90016-7](https://doi.org/10.1016/0165-4101(94)90016-7)
- Dichev, I. D., Graham, J. R., Harvey, C. R., & Rajgopal, S. (2013). Earnings quality: Evidence from the field. *Journal of Accounting and Economics*, 56(2–3), 1–33. <https://doi.org/10.1016/j.jacceco.2013.05.004>
- Dichev, I. D., & Tang, V. W. (2008). Matching and the changing properties of accounting earnings over the last 40 years. *Accounting Review*, 83(6), 1425–1460. <https://doi.org/10.2308/accr.2008.83.6.1425>
- Dichev, I. D., & Tang, V. W. (2009). Earnings volatility and earnings predictability. *Journal of Accounting and Economics*, 47(1–2), 160–181. <https://doi.org/10.1016/j.jacceco.2008.09.005>
- DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited Institutional Isomorphism and Collective Rationality. In *Economics Meets Sociology in Strategic Management (Advances in Strategic Management)* (Vol. 47, Issue 2, pp. 143–166). Emerald Group Publishing Limited.
- Elaoud, A., & Jarbouli, A. (2017). Auditor specialization, accounting information

- quality and investment efficiency. *Research in International Business and Finance*, 42(June), 616–629. <https://doi.org/10.1016/j.ribaf.2017.07.006>
- Faccio, M. (2006). Politically connected firms. *American Economic Review*, 96(1), 369–386. <https://doi.org/10.1257/000282806776157704>
- Fazzari, S. M., Hubbard, R. G., Petersen, B. C., Blinder, A. S., & Poterba, J. M. (1988). Financing constraints and corporate investment. *Brookings Papers on Economic Activity*, 1(1), 141–206. <https://doi.org/10.1064/j.696757-6756-7867>
- Fung, S. Y. K., Gul, F. A., & Radhakrishnan, S. (2015). Corporate political connections and the 2008 Malaysian election. *Accounting, Organizations and Society*, 43(1), 67–86. <https://doi.org/10.1016/j.aos.2015.04.001>
- García Lara, J. M., García Osmá, B., & Penalva, F. (2016). Accounting conservatism and firm investment efficiency. *Journal of Accounting and Economics*, 61(1), 221–238. <https://doi.org/10.1016/j.jacceco.2015.07.003>
- Ghazali, A., Khaw, K. L. H., & Zainir, F. Bin. (2022). Development vs. political views of government ownership: How does it affect investment efficiency? *Finance Research Letters*, 48(September 2021), 103034. <https://doi.org/10.1016/j.frl.2022.103034>
- Gomariz, M. F. C., & Ballesta, J. P. S. (2014). Financial reporting quality, debt maturity and investment efficiency. *Journal of Banking and Finance*, 40(1), 494–506. <https://doi.org/10.1016/j.jbankfin.2013.07.013>
- Gomez, E. T., & Jomo, K. S. (1999). Malaysia's political economy: Politics, patronage and profits. Cambridge University Press.
- Gomez, E. T., Padmanabhan, T., Kamaruddin, N., & Faisal, S. B. F. (2017). *Minister of Finance Incorporated: Ownership and control of corporate Malaysia*. Springer Nature.
- Hale, C. (2023). *A Brief History of Singapore and Malaysia: Multiculturalism and Prosperity: The Shared History of Two Southeast Asian Tigers*. Tuttle Publishing.
- Hayashi, F. (1982). Tobin's marginal q and average q: A neoclassical interpretation. *Econometrica*, 50(1), 213–224. <https://doi.org/10.2307/1912538>
- Hou, Q., Jin, Q., Wang, L., & Zhang, G. (2016). Mandatory IFRS adoption, accounting quality, and investment efficiency: Evidence from China. *China Journal of Accounting Studies*, 4(3), 236–262. <https://doi.org/10.1080/21697213.2016.1218632>
- Houcine, A. (2017). The effect of financial reporting quality on corporate investment efficiency: Evidence from the Tunisian stock market. *Research in International Business and Finance*, 42, 321–337. <https://doi.org/10.1016/j.ribaf.2017.07.066>
- Hyun, J. H., & Cho, H. (2018). Deleveraging and decline in revenue-expense matching over time. *Journal of Business Finance and Accounting*, 45(9–10), 1031–1050. <https://doi.org/10.1111/jbfa.12343>
- Ismail, I., & Abdul Wahab, E. A. (2024). Do female chief financial officers and female directors cooperate? Evidence from investment efficiency. *Meditari Accountancy Research*, 32(4), 1229–1257. <https://doi.org/10.1108/MEDAR-01-2023-1884>

- Jin, K., Shan, Y., & Taylor, S. (2015). Matching between revenues and expenses and the adoption of International Financial Reporting Standards. *Pacific Basin Finance Journal*, 35, 90–107. <https://doi.org/10.1016/j.pacfin.2014.10.008>
- Johnson, S., & Mitton, T. (2003). Cronyism and capital controls: Evidence from Malaysia. *Journal of Financial Economics*, 67(2), 351–382. [https://doi.org/10.1016/S0304-405X\(02\)00255-6](https://doi.org/10.1016/S0304-405X(02)00255-6)
- Khaw, K. L.-H., Chen, J., Gulzar, M. A., & Tajuddin, A. H. (2023). Equity Pledge, Pledgor Type and Investment Efficiency. *Applied Finance Letters*, 12(1), 22–32. <https://doi.org/10.24135/afl.v12i1.616>
- Kim, R., & Kim, S. (2021). Does revenue-expense matching play a differential role in analysts' earnings and revenue forecasts? *British Accounting Review*, 53(5), 101033. <https://doi.org/10.1016/j.bar.2021.101033>
- Kim, S. (2018). Cross-sectional variation in revenue-expense relation and cost of equity. *Managerial Finance*, 44(11), 1311–1329. <https://doi.org/10.1108/MF-06-2016-0171>
- Li, Q., & Wang, T. (2010). Financial reporting quality and corporate investment efficiency: Chinese experience. *Nankai Business Review International*, 1(2), 197–213. <https://doi.org/10.1108/20408741011052591>
- Mortal, S., Nanda, V., & Reisel, N. (2020). Why do private firms hold less cash than public firms? International evidence on cash holdings and borrowing costs. *Journal of Banking and Finance*, 113, 105722. <https://doi.org/10.1016/j.jbankfin.2019.105722>
- Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, 5(2), 147–175. [https://doi.org/10.1016/0304-405X\(77\)90015-0](https://doi.org/10.1016/0304-405X(77)90015-0)
- Nguyen, T. X., Hoang, K., Nguyen, C. C., & Bach, T. N. (2023). Do different political connections affect firms' distress risk differently? *International Journal of Emerging Markets*, 18(2), 376–398. <https://doi.org/10.1108/IJOEM-08-2020-0874>
- Peranginangin, Y., Lee, M. Y., & Tee, C. M. (2021). Does corporate governance matter for politically connected firms? – Evidence from the regime change in Malaysia. *China Accounting and Finance Review*, 23(2), 22–55.
- Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *The Review of Financial Studies*, 22(1), 435–480. <https://doi.org/10.1093/rfs/hhn053>
- Phan, D. H. B., Tee, C. M., & Tran, V. T. (2020). Do different types of political connections affect corporate investments? Evidence from Malaysia. *Emerging Markets Review*, 42(1), 1–34. <https://doi.org/10.1016/j.ememar.2019.100667>
- Richardson, S. (2006). Over-investment of free cash flow. *Review of Accounting Studies*, 11(2–3), 159–189. <https://doi.org/10.1007/s11142-006-9012-1>
- Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1), 41–45. <https://doi.org/10.1017/CBO9780511810725.016>

- Scott, W. R. (1987). The adolescence of theory institutional. *Administrative Science Quarterly*, 32(4), 493–511.
- Shefter, M. (1977). Party and patronage: Germany, England, and Italy. *Politics & Society*, 7(4), 403–451. <https://doi.org/10073-880032-3292>
- Shleifer, A., & Vishny, R. W. (1993). Corruption. *The Quarterly Journal of Economics*, 108(3), 599–617. <https://doi.org/10.14311/j.1423-536.1993.tb03480.x>
- Shleifer, A., & Vishny, R. W. (1994). Politicians and firms. *The Quarterly Journal of Economics*, 109(4), 995–1025. <https://doi.org/10.1211/j.9035-6331.1994.tb0351.x>
- Sivakumar, K., & Waymire, G. (2003). Enforceable accounting rules and income measurement by early 20th century railroads. *Journal of Accounting Research*, 41(2), 397–432. <https://doi.org/10.1111/1475-679X.00110>
- Srivastava, A. (2014). Why have measures of earnings quality changed over time? *Journal of Accounting and Economics*, 57(2–3), 196–217. <https://doi.org/10.1016/j.jacceco.2014.04.001>
- Stein, J. C. (2003). Agency, information and corporate investment. In *Handbook of the Economics of Finance* (Vol. 1, pp. 111–165). Elsevier Masson SAS. [https://doi.org/10.1016/S1574-0102\(03\)01006-9](https://doi.org/10.1016/S1574-0102(03)01006-9)
- Stubben, S. R. (2010). Discretionary revenues as a measure of earnings management. *Accounting Review*, 85(2), 695–717. <https://doi.org/10.2308/accr.2010.85.2.695>
- Sunwoo, H.-Y., Hyun, J.-H., Oh, S., & Han, S.-Y. (2023). National culture and the revenue-expense matching. *Journal of International Financial Management & Accounting*, 34(3), 414–444. <https://doi.org/10.1111/jifm.12187>
- Tahat, Y. A., Ahmed, A. H., & Power, D. (2022). Earnings quality and investment efficiency: the role of the institutional settings. *Review of Quantitative Finance and Accounting*, 58, 1277–1306. <https://doi.org/10.1007/s11156-021-01024-w>
- Tee, C. M. (2018). Family firms, political connections and audit fees: Evidence from Malaysian firms. *Managerial Auditing Journal*, 33(6–7), 613–632. <https://doi.org/10.1108/MAJ-06-2017-1585>
- Tee, C. M. (2019). Political connections and stock price crash risk: Evidence of institutional investors' heterogeneous monitoring. *Spanish Journal of Finance and Accounting*, 48(1), 50–67. <https://doi.org/10.1080/02102412.2018.1461461>
- Tee, C. M. (2020). Political connections and income smoothing: Evidence of institutional investors' monitoring in Malaysia. *Journal of Multinational Financial Management*, 55(1), 1–18. <https://doi.org/10.1016/j.mulfin.2020.100626>
- Tee, C. M., Gul, F. A., Foo, Y. B., & Teh, C. G. (2017). Institutional monitoring, political connections and audit fees: Evidence from Malaysian firms. *International Journal of Auditing*, 21(2), 164–176. <https://doi.org/10.1111/ijau.12086>

- Tee, C. M., Lee, M. Y., & Majid, A. (2021a). Heterogeneous political connections and stock price crash risk: Evidence from Malaysia. *Journal of Behavioral and Experimental Finance*, 31(1), 1–13. <https://doi.org/10.1016/j.jbef.2021.100552>
- Tee, C. M., Pak, M. Sen, Lee, M. Y., & Majid, A. (2021b). CEO generational differences, risk taking and political connections: Evidence from Malaysian firms. *Journal of Behavioral and Experimental Finance*, 31(1), 100518. <https://doi.org/10.1016/j.jbef.2021.100518>
- Tee, C. M., Teoh, T. T. M., & Hooy, C. W. (2022). Political connection types and corporate tax avoidance: Evidence from Malaysia. *Malaysian Journal of Economic Studies*, 59(2), 199–220. <https://doi.org/10.22452/MJES.vol59no2.2>
- Tee, C. M., & Rasiah, P. (2020). Earnings persistence, institutional investors monitoring and types of political connections. *Asian Review of Accounting*, 28(3), 309–327. <https://doi.org/10.1108/ARA-05-2019-0112>
- The Economist. (2023). *The 2023 crony-capitalism index*. <https://www.economist.com/international/2023/05/02/the-2023-crony-capitalism-index>
- Verdi, R. S. (2006). Financial Reporting Quality and Investment Efficiency. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.930922>
- Wang, Z., Chen, M. H., Chin, C. L., & Zheng, Q. (2017). Managerial ability, political connections, and fraudulent financial reporting in China. *Journal of Accounting and Public Policy*, 36(2), 141–162. <https://doi.org/10.1016/j.jaccpubpol.2017.02.004>
- Wong, W. Y., & Hooy, C. W. (2018). Do types of political connection affect firm performance differently? *Pacific Basin Finance Journal*, 51(1), 297–317. <https://doi.org/10.1016/j.pacfin.2018.08.009>
- Yoshikawa, H. (1980). On the “q” theory of investment. *The American Economic Review*, 70(4), 739–743.
- Yu, X., Zhang, P., & Zheng, Y. (2015). Corporate governance, political connections, and intra-industry effects: Evidence from corporate scandals in China. *Financial Management*, 44(1), 49–80. <https://doi.org/10.1111/fima.12064>