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# SPEED OF ADJUSTMENT TO TARGET LEVERAGE AMONG AIRLINES IN DEVELOPING COUNTRIES: THE ROLE OF ACCRUAL QUALITY

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**ABSTRACT**

This study investigates the factors influencing the speed of adjustment (SOA) to target leverage in the airline industry of developing countries, with a particular focus on the moderating role of accrual quality. The objective is to examine how firm-specific and macroeconomic variables affect capital structure adjustment and whether accrual quality alters these relationships. A panel dataset comprising 149 airlines from 59 developing countries over the period 2012 to 2020 was analyzed using the System Generalized Method of Moments (System GMM) to address potential endogeneity issues and dynamic relationships. The findings reveal that financial strength, inflation, collateralized asset value, energy intensity, profitability, and non-debt tax shields significantly influence the SOA toward target leverage. Importantly, accrual quality is found to moderate these effects in varying ways. High accrual quality reduces the negative influence of financial strength and non-debt tax shields on the SOA, while simultaneously enhancing the positive impacts of profitability and collateralized asset value. These results suggest that better financial reporting quality, as reflected by higher accrual quality, facilitates more efficient capital structure adjustments. The study offers meaningful insights for policymakers, investors, and airline industry managers in developing countries by highlighting the importance of financial reporting quality in capital structure dynamics. Its novelty lies in its exclusive focus on the airline industry in developing economies and the inclusion of accrual quality as a moderating variable which is still underexplored in existing literature.

**Keywords:** Airlines, accrual quality, speed of adjustment, system generalized method of moments.

## 1. INTRODUCTION

The airline industry is vital to global economic growth, enabling connectivity, trade, and tourism. However, airlines in underdeveloped countries face unique challenges in managing capital structure due to limited access to financing, higher costs, and economic instability (El Kalak et al., 2024). Capital structure decisions are crucial to a firm's risk, value and cost of capital. The dynamic trade-off theory suggests firms adjust toward an optimal leverage by balancing debt benefits and costs (Drobetz et al., 2015). The pecking order theory emphasizes a preference for internal funds, while agency theory explores conflicts between managers and shareholders (Neves et al., 2020).

Airlines must carefully manage leverage because of their capital-intensive nature and exposure to macroeconomic factors. Moreover, factors such as financial strength, inflation, collateral value of aircraft, profitability, fuel costs, and non-debt tax shields influence capital structure decisions (Morrell, 2021). This study also examines how the reliability of financial reporting moderates these relationships. High-quality accruals can reduce information asymmetry and improve financing decisions (Chen et al., 2016).

## 2. LITERATURE REVIEW

Although the airline industry plays a critical role in economic development, studies investigating the speed of adjustment (SOA) to target leverage within this sector are still scarce.

### 2.1. Determinants of Capital Structure Adjustment

Research shows that firm-specific factors, macroeconomic conditions, and institutional settings significantly influence the speed of adjustment (SOA) to target leverage. Drobetz et al. (2015) and Memon et al. (2021) examined SOA across various regions, highlighting different adjustment behaviors. In Europe, Castro et al. (2016) found profitability and asset tangibility to be persistent capital structure determinants. In addition, Dufour et al. (2020) linked higher accrual quality to faster SOA, while Huang et al. (2021) noted that social trust boosts adjustment among over-levered firms. Cumming et al. (2024) found that low-cost borrowers respond quickly to carbon-related risks post-Paris Agreement.

### 2.2. Corporate Governance

He and Kyaw (2023) showed better-governed firms in China adjust more rapidly, and Nguyen et al. (2020) highlighted the role of state ownership in Vietnam. Macroeconomic changes affect SOA as well, with Kaloudis and Tsolis (2019) reporting adjustment variation during and after crises in the U.S. Bratlie and Jøtne (2012) showed market factors account for one-third of leverage variation. Kiracı and Aydin (2018) found that low-cost carriers adopt different financing strategies in the short and long term.

## 3. METHOD

This quantitative study uses panel data from 149 airline companies in 59 developing countries, covering the years 2012 to 2020. Data were collected from Thomson Reuters DataStream and Eikon. Initial data checks were done using E-Views, while the main analysis was conducted in STATA. The study applied the System Generalized Method of Moments (SGMM), a method well-suited for dynamic panel data and effective in addressing endogeneity issues (Chua et al. 2022). The following equations were used to arrive at the results:

$$Lev_{i,t} = (1-\lambda)Lev_{i,t-1} + \lambda\alpha_i + \lambda\beta X_{it-1} + \varepsilon_{i,t} \quad \text{..........(1).}$$

$$Lev_{i,t} - Lev_{i,t-1} = (1-\lambda)\left(Lev_{i,t-1} - Lev_{i,t-2}\right) + \lambda\beta\left(X_{i,t-1} - X_{i,t-2}\right) + (\varepsilon_{i,t} - \varepsilon_{i,t-1}) \quad \text{……….(2).}$$

$$Lev^{*}_{i,t} = \beta X_{i,t} \quad \text{………. (3)}$$

$$Lev^{*}_{i,t} = \alpha_{i,t} + \beta_1 FS_{i,t} + \beta_2 INF_{i,t} + \beta_3 CVA_{i,t} + \beta_4 JETFUEL_{i,t} + \beta_5 PROF_{i,t} + \beta_6 NDTS_{i,t} + \varepsilon_{i,t} \quad \text{……. (4)}$$

$$Lev_{i,t} - Lev_{i,t-1} = \delta\left(Lev^{*}_{i,t} - Lev_{i,t-1}\right) + \varepsilon_{i,t} \quad \text{………. (5)}$$

### 3.1. Research Hypotheses

The results of this study are based on the tests made on the following hypotheses:

$H_{1a}$: There is a negative significant effect of financial strength on SOA to target leverage.
$H_{1b}$: There is a negative significant effect of inflation on SOA to target leverage.
$H_{1c}$: There is a positive significant effect of collateralized value of assets on SOA to target leverage.
$H_{1d}$: There is a positive significant effect of energy intensity on SOA to target leverage.
$H_{1e}$: There is a positive significant effect of profitability on SOA to target leverage.
$H_{1f}$: There is a negative significant effect of non-debt tax shield on SOA to target leverage.

This study also tests the moderating effect of accounting accrual quality on those hypotheses.

## 4. RESULTS AND DISCUSSION

### 4.1. Determinants of Speed of adjustment to target leverage

As presented in **Table 1**, all the predicted determinants of SOA to target leverage emerge as significant. Similarly, the subsequent test reported in **Table 2** supports financial reporting quality (via accrual quality) as having moderating effect on the earlier relationships.

**Table 1.** Regression Results

| | Model 1 | Model 2 |
|---|---|---|
| IVs | TBL | TML |
| SOA | 0.340*** (0.002) | 0.608*** (0.000) |
| $Lev_{i,t-1}$ | 0.660 | 0.392 |
| $Years$ | 1.515 | 2.551 |
| $Lev_{i,t-1}$ ×$FS_{it}$ | -0.090*** (0.000) | -0.082*** (0.000) |
| $Lev_{i,t-1}$ ×$INF_{it}$ | 0.126** (0.028) | 0.402*** (0.000) |
| $Lev_{i,t-1}$ ×$CVA_{it}$ | 0.077*** (0.002) | 0.112*** (0.000) |
| $Lev_{i,t-1}$ ×$JETFUEL_{it}$ | 0.142** (0.023) | 0.896*** (0.000) |
| $Lev_{i,t-1}$ × $PROF_{it}$ | 0.007*** (0.000) | 0.003*** (0.000) |
| $Lev_{i,t-1}$ ×$NDTS_{it}$ | -0.066*** (0.001) | -0.058*** (0.000) |
| AR (1) | -3.00 (0.003) | -6.07 (0.000) |
| AR (2) | -0.58 (0.560) | -1.88 (0.360) |
| Sargant Test | 122.48 (0.518) | 70.75 (0.604) |
| Hansen Test | 55.35 (0.181) | 64.44 (0.415) |
| Instruments | 49 | 49 |

*Note: This table presents the findings of average speed of adjustment (SOA) and the determinants of the target leverage by controlling endogeneity using two step system GMM. Model 1, 2 are developed using dependent variable proxy TBL target book leverage and TML target market leverage, respectively. AR (1): first-order autocorrelation, AR (2): second-order autocorrelation. Hansen p-value statistics to test whether the model was overidentified. 〖LEV〗_(i,t-1)= Lagged dependent variable; SOA-1-γ; γ=coefficient 〖of LEV〗_(i,t-1); Year = 1/SOA; Year and industry fixed effects are included in all models. Significance at the 10%, 5% and 1% level is indicated by *, **, and ***, respectively.*

**Table 2.** The Moderating Effect of Accrual Quality

| | Model 1 | Model 2 |
|---|---|---|
| | TBL | TML |
| $SOA$ | 0.078*** (0.000) | 0.224*** (0.000) |
| $Lev_{i,t-1}$ | 0.922 | 0.776 |
| $Years$ | 1.08 | 1.28 |
| $AQ_{it} \times Lev_{i,t-1} \times FS_{it}$ | -0.011*** (0.000) | -0.021*** (0.000) |
| $AQ_{it} \times Lev_{i,t-1} \times INL_{it}$ | -0.021** (0.025) | -0.301*** (0.000) |
| $AQ_{it} \times Lev_{i,t-1} \times CVA_{it}$ | 0.047*** (0.000) | 0.095*** (0.000) |
| $AQ_{it} \times Lev_{i,t-1} \times JET_{it}$ | 0.368** (0.016) | 0.752*** (0.000) |
| $AQ_{it} \times Lev_{i,t-1} \times PROF_{it}$ | 0.048*** (0.000) | 0.001*** (0.000) |
| $AQ_{it} \times Lev_{i,t-1} \times NDTS_{it}$ | -0.029*** (0.000) | -0.094*** (0.000) |
| AR (1) | -2.99 (0.003) | -6.17 (0.000) |
| AR (2) | 0.12 (0.908) | -2.21 (0.127) |
| Sargant Test | 197.02 (0.801) | 117.31 (0.310) |
| Hansen Test | 88.50 (0.347) | 99.71 (0.116) |
| Wald Test | . | . |
| Instruments | 98 | 98 |

*Note: This table presents the findings of average speed of adjustment (SOA) and the determinants of the target leverage by controlling endogeneity using two step system GMM. Model 1, 2 are developed using dependent variable proxy TBL target book leverage and TML target market leverage, respectively. AR(1): first-order autocorrelation, AR(2): second-order autocorrelation. Hansen p-value statistics to test whether the model was overidentified. 〖LEV〗_(i,t-1)= Lagged dependent variable; SOA-1-γ; γ=coefficient 〖of LEV〗_(i,t-1); Year = 1/SOA; Year and industry fixed effects are included in all models. Significance at the 10%, 5% and 1% level is indicated by *, **, and ***, respectively.*

In summary, all examined determinants significantly influence the speed of adjustment (SOA) toward target leverage, though the effects vary across factors. For instance, financially stronger firms tend to adjust more slowly, whereas more profitable firms demonstrate a slightly faster adjustment. Additionally, accrual quality plays a moderating role in all these relationships. Notably, higher-quality financial reporting enhances firms' ability to manage fuel price risks and improve performance.

## 5. CONCLUSION

Our study of airline companies in developing countries reveals insights into capital structure dynamics and adjustment speeds. Airlines adjust book leverage faster than market leverage, indicating target capital structures and partial adjustment over time. Market leverage interacts more strongly with macroeconomic and industry-specific factors, while book leverage associates more with firm-specific factors. Accrual quality significantly moderates capital structure decisions, with higher quality amplifying positive impacts on adjustment speed and mitigating negative effects. This suggests that superior financial reporting quality may lead to more efficient capital structure adjustments.

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# BEYOND NUMBER CRUNCHING: THE STRATEGIC ROLE OF ACCOUNTANTS IN ENHANCING SDGS IMPLEMENTATION

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**ABSTRACT**

**Keywords:** sustainable development goals; environmental, social, governance, sustainability reporting; accountants

## 1. INTRODUCTION

The evolving role of accountants as catalysts for sustainable development emphasizes their transition from traditional financial data custodians to pivotal drivers of sustainability. Accountants are increasingly integrating Environmental, Social, and Governance (ESG) metrics into financial reports to align with Sustainable Development Goals (SDGs). However, challenges abound, including integrating ESG into traditional accounting, managing qualitative data, navigating regulatory complexities, and addressing skills gaps.

## 2. LITERATURE REVIEW

The systematic literature review explores the challenges identified and scrutinizes the critical role of accountants in achieving SDGs, guided by three objectives: to explore accounting practices enhancing SDGs implementation; to identify challenges faced by accountants in their pursuit to implement SDGs and consequently suggest real-world solutions and; to recommend a framework for use by accountants in implementing SDGs at firm level.

## 3. METHOD

The study adopts stakeholder theory to underscore the accountant's role as a liaison between management and stakeholders. A systematic literature review spanning 2020–2024 forms the study's methodological foundation, analyzing peer-reviewed articles to uncover prevailing practices, challenges, and solutions.

## 4. RESULTS AND DISCUSSION

The results and discussion discuss the first two objectives of the study, assimilating the proposed framework to integrate a practical resolution to the challenges identified**.**

## 5. CONCLUSION

The proposed Framework offers a structured approach for embedding sustainability within organizational reporting and decision-making. By bridging the gap between sustainability goals and operational practices, accountants play an indispensable role in advancing the global sustainability agenda, ensuring long-term societal and environmental well-being alongside economic growth.

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# DIRECTORS' DUTIES IN MANAGING AI AND ESG UNDER MALAYSIAN LAW: A DOCTRINAL ANALYSIS

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**ABSTRACT**

The emergence of Artificial Intelligence (AI) technologies and Environmental, Social, and Governance (ESG) integration with corporate governance have redefined the company's director's responsibility. This scenario has changed the important legal questions on the extent the directors in Malaysia are obliged to oversee and govern emerging risks and opportunities related to AI and ESG. This article examines the directors' duties under the Companies Act 2016 using the doctrinal legal research methodology to determine whether there are provisions in relation to AI and ESG governance. To answer the question, a systematic analysis of the statute, case law and other regulatory framework are explored to clarify the emergence legal duties of directors. The positions from the United Kingdom, Australia and Canada are referred to highlight international trends and best practices as a basis of comparison. The article asserts that directors are increasingly required to be actively involved with ESG and AI- related governance risks including ethical considerations, transparency and sustainability reporting. It emphasised the need for legal reform, board competency enhancement, and clear regulatory frameworks to ensure that the boards are well-positioned to address the growing challenges of AI and ESG. In essence, the article suggests that directors musty adopt **a** strategic and principled approach to governance that aligns with both statutory obligations and stakeholder expectations in the digital and sustainability-driven business landscape.

**Keywords:** Director's duty; Artificial Intelligence; Environment Social and Governance (ESG); Corporate Governance

## 1. INTRODUCTION

Directors' decision making face new challenges with the rise of Artificial Intelligence (AI) in corporate operations and must adapt to their responsibilities to meet this new challenges (Sasaki, Kozuka & Izumi, 2025). Giles & Spiess (2019) discovered that directors are increasingly required to understand and oversee the usage of AI tools on planning, customer profiling and compliance monitoring. In the decision making process, legal and ethical concerns are raised in the areas of algorithmic bias, data privacy, and transparency. Failure of a director's to adequately assess the risks associated with the use of AI could be considered as a breach of duty, especially if it causes harm and non-compliance (Brand, 2024). Likewise, directors' obligation are being shaped by the Environmental, Social, and Governance (ESG) factors.

This paper aims to examine the development of company's directors' duty in the age of AI and ESG in Malaysia. The fundamental issue on this area of law is the absence of clear legal standard how directors should address digital transformation and sustainability demand. The study adopts a doctrinal legal research method, an analysis of statutes, judicial interpretation on case law and regulations and guidelines to determine the scope of directors' duties. It ends with, the recommendations and legal reforms to enhance corporate governance in the area of directors' duties.

## 2. LITERATURE REVIEW

### 2.1 Development of Directors' Duties

One of the central themes in corporate law jurisprudence is the shifting nature of directors' duty in response to the changes in in legal frameworks, economic conditions and societal expectations. The shareholder primacy theory is the foundation of directors' duty which must be exercised in the best interests of the company. This theory, has long been established, advocates to maximise shareholder value As such, case law has affirmed that in discharging their duties, directors must ensure that it is aligned with increasing profits, enhancing share value, and delivering returns to investors (Hansmann & Kraakman, 1993).The shift from shareholder maximisation to stakeholder is prompted by global financial crisis and corporate s8candal such as Enron and Lehman Brothers which revealed the implications of narrow interpretation of fiduciary. Malaysia also face similar high-profile financial scandals like 1Malaysia Development Berhad (1MDB) in 2015 and Transmile Group Berhad scandal in 2007 exposed weaknesses in governance and highlighted the importance of adopting a stakeholder-inclusive approach to directors' duties.

### 2.2 The Importance of Artificial Intelligence in Corporate Governance and Its Implications

The incorporation of Artificial Intelligence (AI) in board decision signals a transformation of the board's operation in assessing risks and ensuring compliance. The use of AI in decision making promote efficiency, transparency and accountability of corporate governance such as in financial reporting, internal audits, fraud detection, customer behaviour analytics, regulatory compliance, and even boardroom decision support systems. The implementation of AI driven tools have been found to strengthen the board's oversight functions, especially in identifying early signs of financial mismanagement or breaches of compliance (Ogunmokun, Bologun & Ogunsola, 2025).

### 2.3 Lack of Legal Clarity in Directors' Duties on AI and ESG

In the light of the emergence of AI technologies and the growing emphasis of ESG, the field of directors' duty are undergoing significant transformation. The current position on director's duty is largely based on the shareholders' wealth maximisation theory which equates the company interests as shareholders' interest. Therefore, there is a critical gap in clarity regarding how the law on directors' duty should adapt to the current development (Gaske, 2025).

## 3. METHOD

The paper poses the question of whether the existing law on directors' duty is aligned with the advancement of AI technology and the growing importance of ESG and to answer the question, a doctrinal legal research is employed. The method involves the analysis of statutes, cases law and regulatory guidelines for the purpose of finding the development of directors' duties concerning AI and ESG. In addition, the legal position in the UK, Australia and Canada are analysed to highlight the best practice in directors' accountability for AI and ESG considerations.

## 4. RESULTS AND DISCUSSION

The positions of the law in different jurisdiction are summarise in Table 1

**Table 1. Comparative aspects of the law**

| Jurisdiction | Statutory Provision | Model | AI/ESG Integration |
|---|---|---|---|
| Malaysia | Sections 213 & 214, Companies Act 2016 | Shareholder Primacy | No specific provision. ESG disclosure via Bursa Guidelines. AI/ESG under general duty of care |
| UK | Section 172, Companies Act 2006 | Enlightened Shareholder Value | Environmental/social factors listed. Directors must consider AI/ESG if material. |
| Australia | Section 181, Corporations Act 2001 | Shareholder Primacy | No statutory duty. ESG/AI unless affecting profits or regulations. |
| Canada | Section 122(1), CBCA | Inclusive Stakeholders | ESG considerations required if aligned with corporate benefit. No direct AI duty but emerging recognition. |

The comparative aspects on the criticisms of the law in Malaysia, UK, Australia and Canada are shown in Table 2.

**Table 2. Criticism of the law**

| Jurisdiction | Criticisms |
|---|---|
| Malaysia | No specific AI/ESG provisions; shareholder primacy prevails; Bursa guidelines lack enforcement; courts reluctant to extend duties |
| UK | Ambiguous language ("have regard to"); lack of enforcement; limited stakeholder rights; unclear conflict resolution. |
| Australia | ESG/AI duties reactive; no explicit ESG requirements; reliance on judicial interpretation. |
| Canada | Unclear alignment of stakeholder and corporate interests; evolving but uncertain standards for AI/ESG liability. |

## 5. CONCLUSION

The Companies Act 2016 does not adequately address the AI decision making and ESG considerations in corporate governance. The existing law rely on the courts to determine the scope of directors' fiduciary duty to act in the best interests of the company. The absence of statutory obligation leaves uncertainty to directors the extent they should address the growing risks related with technological disruptions and sustainability obligations. It puts Malaysian company to potential regulatory gaps, risks of reputation and affected investors' confidence.

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# FIRM-SPECIFIC DETERMINANTS OF PROFITABILITY IN NON-LIFE INSURANCE: A STUDY OF THE PRE, DURING, AND POST-PANDEMIC PERIODS IN INDONESIA

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**ABSTRACT**

The profitability of insurance companies is a key indicator in assessing their financial performance. However, in recent years, the sector has faced significant challenges due to the global crisis, particularly the COVID-19 pandemic. This research aims to uncover the impact of specific factors on the profitability of non-life insurance companies in Indonesia. The factors analyzed include insurance company size, premium growth, reinsurance, solvency, leverage, liquidity, and underwriting risk, with ROA as the primary indicator of profitability. This study uses financial data from 56 non-life insurance companies in Indonesia across three distinct economic periods: pre-pandemic (2018-2019), during the pandemic (2020-2021), and post-pandemic (2022-2023). The study employs regression analysis to assess the factors influencing profitability. This study found that solvency consistently has a significant impact on ROA, both during the pre-pandemic, during pandemic, and post-pandemic periods. This study offers an in-depth understanding of how firm-specific factors shape the profitability of non-life insurance companies in Indonesia across different phases of the pandemic. The findings provide both theoretical insights and practical recommendations for industry stakeholders and contribute to the ongoing development of the field by expanding the knowledge of insurance company resilience in the face of a global crisis.

**Keywords:** Profitability, Non-life Insurance, COVID-19 Pandemic

## 1. INTRODUCTION

Insurance is a crucial component in the globalized financial and economic systems, and industry plays various essential roles in the economic structure (Apergis & Poufinas, 2020). A financially stable insurance industry can protect properties and businesses by assuming various financial risks, which in turn effectively reduces the anxiety and pressure they face (Fytros, 2021). Financial institutions' profitability benefits customers, shareholders, staff, regulators, management, and the economy (Kidwell et al., 2016). Profitability is essential for the sustainability of any industry and stands as one of the key objectives of financial management (Alam & Islam, 2022). As Mazviona et al. (2017) aptly noted, ROA is a key indicator of profitability for insurance companies.

The COVID-19 pandemic has impacted several sectors of economic activity in Indonesia, including the insurance industry (Padmo & Joesoef, 2020). According to Babuna et al. (2020), the COVID-19 pandemic brought about a dramatic disruption in the insurance industry. This study offers an in-depth understanding of how firm-specific factors shape the profitability of non-life insurance companies in

Indonesia across different phases of the pandemic. This study is crucial because the direct impact of the COVID-19 pandemic on the profitability of non-life insurance companies in Indonesia has not been extensively discussed. This gap can be filled by conducting a comprehensive analysis of the firm-specific determinants of profitability in non-life insurance companies before, during, and after the COVID-19 pandemic. Filling this gap is essential for both academic understanding and practical policy development in the insurance industry.

## 2. LITERATURE REVIEW

Several researchers have examined the specific and macroeconomic factors affecting profitability before, during, and after global crises. Cheong & Hoang (2021) investigated how macroeconomic variables and firm-specific factors influence corporate profitability in Singapore and Hong Kong, particularly across three distinct economic periods: pre-crisis (1998–2006), crisis (2007–2009), and post-crisis (2010–2018). Their findings indicate that firm size, leverage, and past profitability are significant predictors of firm performance. Dekar et al. (2024) studied the impact of COVID-19, financial variables, and macroeconomic factors on the profitability of financial institutions in Bhutan. The empirical results show that Bhutanese financial institutions are resilient and not significantly affected by COVID-19.

The existing literature primarily covers general corporate performance across various sectors, with studies such as those by Cheong & Hoang (2021) and Dekar et al. (2024) providing insights into profitability during global crises. However, there is a significant gap when it comes to an understanding of the specific determinants of profitability for non-life insurance companies, particularly in Indonesia, pre-, during, and post-COVID-19 pandemic. The insurance sector is unique, with firm-specific factors such as underwriting risk, premium growth, solvency, and leverage playing crucial roles. Additionally, the impact of macroeconomic factors like GDP growth and inflation on the profitability of non-life insurance companies in Indonesia has not been extensively studied.

## 3. METHOD

This study used purposive sampling from the total population of 72 non-life insurance companies in Indonesia, with a sample of 56 based on the 2023 Financial Services Authority (OJK) data. This approach focuses on companies relevant to the research question, particularly those operating during the pre-, during, and post-pandemic periods of 2018-2023. Financial statements from these companies act as the primary data source for the analysis. The study investigates the correlation between various specific factors and profitability. Seven specific factors were used as independent variables, including insurance company size, premium growth, reinsurance, solvency, leverage, liquidity, and underwriting risk. The dependent variable representing profitability was ROA.

The theoretical framework that employs profitability analysis using seven indicators on non-life insurance companies based on ROA metrics is as follows:

$$ROA = \alpha + \beta_1 IS + \beta_2 PG + \beta_3 Rei + \beta_4 Sol + \beta_5 Lev + \beta_6 Liq + \beta_7 UR + \varepsilon$$

The measurements and expected results of these variables, as reported by the relevant literature, are provided in Table 1.

**Table 1.** Measurements and Expected Results of Variable

| Variable | Abbreviation | Measurement |
|---|---|---|
| Return on asset | ROA | Net income/Total asset |
| Insurance size | IS | The natural logarithm of total assets |
| Premium growth | PG | $GWT_t - GWT_{t-1}/GWT_{t-1}$ |

| | | |
|---|---|---|
| Reinsurance | Rei | A ceded reinsurance premium/ Total premium |
| Solvency | Sol | Net income/Total liability |
| Leverage | Lev | Total debt/Total equity |
| Liquidity | Liq | Current assets/Current liabilities |
| Underwriting risk | UR | Total claim/Premium |

# 4. RESULTS AND DISCUSSION

## 4.1. Pre-Pandemic

The results of the regression analysis conducted during the pre-pandemic period are summarized in Figure 1.

**Coefficients**

| Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | -.017 | .012 | | -1.376 | .172 |
| | Insurance Size | .002 | .001 | .064 | 1.715 | .089 |
| | Premium Growth | -.010 | .005 | -.073 | -1.874 | .064 |
| | Reinsurance | -.006 | .006 | -.040 | -1.023 | .308 |
| | Solvency | .554 | .022 | .990 | 24.753 | .000 |
| | Leverage | .004 | .001 | .155 | 3.915 | .000 |
| | Liquidity | -.004 | .001 | -.188 | -4.910 | .000 |
| | Underwriting Risk | -.001 | .006 | -.007 | -.184 | .855 |

Dependent Variable: Return on Asset

**Figure 1.** Regression Analysis for Pre-Pandemic

The regression coefficient test reveals that out of the seven independent variables, Solvency, Leverage, and Liquidity have a Sig. Value < 0.05, indicating their significant impact on ROA at a 95% confidence level. The other four variables show no significant effect. Solvency and leverage positively affect ROA, while liquidity has an adverse impact.

## 4.2. During pandemic

The results of the regression analysis conducted during the pandemic period are summarized in Figure 2.

**Coefficients**

| Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | .008 | .010 | | .803 | .424 |
| | Insurance Size | .000 | .001 | .009 | .515 | .607 |
| | Premium Growth | -.002 | .003 | -.012 | -.693 | .490 |
| | Reinsurance | -.005 | .004 | -.023 | -1.181 | .240 |
| | Solvency | .517 | .010 | .967 | 53.784 | .000 |
| | Leverage | .001 | .001 | .034 | 1.796 | .075 |
| | Liquidity | -.002 | .001 | -.033 | -1.902 | .060 |
| | Underwriting Risk | -.014 | .004 | -.069 | -3.460 | .001 |

Dependent Variable: Return on Asset

**Figure 2.** Regression Analysis During Pandemic

The regression coefficient test shows that Solvency and Underwriting Risk, with a Sig. Value < 0.05 significantly impacts ROA at a 95% confidence level. The other five variables have no significant effect. Solvency positively affects ROA, while Underwriting Risk negatively affects ROA.

### 4.3. Post-Pandemic

The results of the regression analysis conducted for the post-pandemic period are summarized in Figure 3.

**Coefficients**

| Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | -.005 | .010 | | -.520 | .604 |
| | Insurance Size | .001 | .001 | .019 | 1.163 | .248 |
| | Premium Growth | -.003 | .002 | -.103 | -1.765 | .080 |
| | Reinsurance | .005 | .003 | .025 | 1.488 | .140 |
| | Solvency | .545 | .012 | 1.034 | 47.004 | .000 |
| | Leverage | .001 | .001 | .025 | 1.373 | .173 |
| | Liquidity | -.004 | .001 | -.066 | -3.702 | .000 |
| | Underwriting Risk | -.003 | .002 | -.063 | -1.108 | .270 |

Dependent Variable: Return on Asset

**Figure 3.** Regression Analysis for Post-Pandemic

The regression coefficient test shows that Solvency and Liquidity, with a Sig. Value < 0.05 significantly impacts ROA at a 95% confidence level. The other five variables have no significant effect. Solvency positively affects ROA, while liquidity has an adverse effect.

## 5. CONCLUSION

The study finds that the Solvency variable consistently has a significant impact on ROA across the Pre-Pandemic, pandemic, and post-pandemic periods. The Liquidity variable significantly affects ROA during both the Pre-Pandemic and Post-Pandemic periods. Leverage shows a significant impact on ROA only during the Pre-Pandemic period, while Underwriting Risk significantly influences ROA solely during the Pandemic period. Future research should examine the long-term effects of firm-specific factors on insurance company profitability, particularly during economic crises, and explore the role of additional factors such as market competition and regulatory changes. Expanding the study to include other regions or countries would also provide valuable insights into the global impact of the pandemic on the non-life insurance sector.

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# DOES INDIRECT GOVERNMENT OWNERSHIP MATTER? POLITICAL LINKAGES AND ESG PERFORMANCE AMONG MALAYSIAN PUBLIC FIRMS

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**ABSTRACT**

This study examines the relationship between political linkages and ESG performance among Malaysian publicly listed companies. Political linkage is proxied by the percentage of equity ownership held by the government, either directly or indirectly. ESG performance data will be sourced from the Refinitiv Eikon database for the year 2024, excluding financial institutions. Multiple linear regression analysis will be employed to investigate whether firms with political linkages demonstrate higher ESG performance, controlling for firm size, profitability, leverage, and sector. The research is grounded in Legitimacy Theory and Resource Dependency Theory, which suggest that politically connected firms may seek to enhance their ESG performance to maintain legitimacy and secure access to critical resources through favourable relationships with the state. The study is expected to find a positive association between political linkages and ESG performance. The findings aim to advance the understanding of how ownership structures influence sustainability outcomes, providing relevant insights for policymakers, institutional investors, and corporate governance stakeholders in emerging markets.

**Keywords:** ESG performance; political linkage, government ownership

## 1. INTRODUCTION

The Malaysian government has played a significant role in the development of Malaysia's capital market, whether through direct ownership, government-linked companies (GLCs), or special purpose vehicles (SPVs). This substantial economic presence gives the government considerable influence over corporate direction and national policy outcomes.

Concurrently, environmental, social, and governance (ESG) performance has gained increasing traction both globally and locally. Internationally, frameworks such as the United Nations Sustainable Development Goals (SDGs) and the Principles for Responsible Investment (PRI) have raised expectations for firms to embed sustainability in their core strategies. Locally, initiatives such as the Malaysian Code on Corporate Governance (MCCG) and Bursa Malaysia's sustainability reporting guidelines have further reinforced ESG as a strategic imperative.

It is common for government representatives to hold positions in state-owned enterprises (SOEs), GLCs, or firms with indirect government ownership via SPVs. This means the government's influence over corporate decisions may occur not only through direct equity holdings, but also via board-level representation. Since ESG oversight typically falls under board-level governance, the ownership structure and board composition, particularly the presence of politically linked entities, can critically shape ESG-related strategies and outcomes.

While prior studies have established that corporate governance characteristics significantly influence ESG performance, most literature focuses on variables such as board independence (Alkurdi et al., 2024; Al-Sarraf et al., 2025; Menicucci & Paolucci, 2024), gender diversity (Alkurdi et al., 2024; Menicucci & Paolucci, 2024), and board size (Menicucci & Paolucci, 2023). These factors, though important, offer a narrow view of governance, especially in institutional contexts where political and government-linked ownership is prevalent. The role of political or institutional ownership in shaping ESG performance has been largely overlooked, with limited evidence emerging from recent studies (e.g., Guedes et al., 2025; Heubeck & Ahrens, 2025).

Government representation on the boards of public companies, particularly through GLCs, GLICs, and SPVs, is a prevalent feature of Malaysia's corporate governance landscape. The government can exert a more embedded form of control via equity stakes and strategic board appointments. This complex and layered structure is characteristic of emerging markets and raises important questions about how such political linkages shape firm-level ESG outcomes.

Despite the strategic importance of ESG and the pervasive presence of government-linked entities in Malaysia's corporate sector, empirical evidence on the impact of political linkages on ESG performance remains scarce. Existing studies often fail to disaggregate the effects of government, institutional, and private ownership, leaving the influence of political connections underexplored.

This study seeks to address this gap by examining how political and institutional linkages influence ESG performance among publicly listed companies on Bursa Malaysia. By mapping ownership structures and analysing ESG data, the research aims to provide novel insights into the governance dynamics underpinning ESG outcomes. The findings will offer valuable implications for policymakers, institutional investors, and regulators striving to enhance transparency, accountability, and sustainability in markets with high levels of government involvement.

## 2. LITERATURE REVIEW

### 2.1. Theoretical Underpinnings

This study is guided by two interrelated theories: Institutional Theory and Resource Dependency Theory (RDT). Institutional Theory posits that organizations, especially those embedded in highly structured environments, often conform to prevailing norms, rules, and expectations to gain legitimacy (DiMaggio & Powell, 1983). In the context of government-linked companies (GLCs) and government-linked investment companies (GLICs), institutional pressures may emerge through regulatory mandates, public expectations, and normative influences from professional and political networks. These pressures can significantly shape ESG-related decisions, particularly when such disclosures are used to signal legitimacy.

Conversely, RDT views firms as entities dependent on external resources, and they adapt their strategies, including board composition and disclosure practices, to secure these resources and reduce uncertainty (Pfeffer & Salancik, 1978). In the Malaysian context, many firms cultivate or maintain political connections on the board or among executives to gain favourable access to capital, regulatory approvals, or policy signals. As such, political linkages can serve both as a resource and a constraint, depending on the institutional and ownership structure. By combining both theories, this study captures the dual forces of legitimacy-seeking behaviour and strategic dependency in explaining how political and institutional linkages influence ESG performance.

### 2.2. Role of Political Linkages on ESG Performance

While prior research has laid a solid foundation by linking government and political ownership to CSR disclosure in Malaysia, these studies have largely remained focused on reporting behaviour rather than actual sustainability practices or outcomes. With the shift from CSR to ESG performance, the stakes are higher. Firms must now demonstrate measurable actions across environmental, social, and governance dimensions to secure positive ESG ratings. Yet, empirical evidence examining how state ownership and political board linkages influence this broader conception of ESG remains scarce, especially within the context of Malaysia’s heavily state-influenced capital market.

Moreover, while scholars such as Lim (2021) have conceptually argued that the dual role of the government as controller and regulator may either enable or constrain corporate governance outcomes, this remains underexplored in empirical literature. There is a lack of quantitative studies assessing whether political and institutional linkages in Malaysian GLCs/GLICs serve as facilitators or barriers to meaningful ESG performance.

This study addresses that gap by empirically investigating the impact of GLIC ownership and board-level political connections on ESG performance among Malaysian publicly listed firms. In doing so, it contributes to the evolving discourse on state capitalism and sustainability, offering evidence on how political and institutional forces interact to shape corporate behaviour in emerging markets.

## 2.3. The Malaysian Context

Early studies in the Malaysian context have predominantly focused on corporate social responsibility (CSR) disclosure as a proxy for firms’ sustainability commitments. Notably, Haniffa and Cooke (2005) provided seminal work examining the influence of ownership and board characteristics on CSR reporting, highlighting the role of culture and governance structures in shaping disclosure practices. Subsequent studies such as Mohd Ghazali (2007), Amran and Devi (2008), and Zainal et al. (2013) further established that political and government-linked ownerships tend to correlate with higher CSR disclosure, driven largely by institutional pressures and legitimacy concerns.

However, over time, the language and expectations surrounding sustainability have evolved. The focus has shifted beyond mere disclosure to the integration of sustainability into core business strategy and operations — commonly referred to today as Environmental, Social and Governance (ESG) performance. Unlike CSR reporting, which may be narrative-driven, ESG performance is quantified and benchmarked through external ratings and ESG scores, such as those by Refinitiv or Bloomberg. To achieve favourable ESG scores, companies must demonstrate concrete practices and performance outcomes — not merely publish reports. This evolution necessitates a deeper examination of how institutional and political linkages shape not only what firms say, but also what they do in terms of sustainability.

## 2.4. Research Gap and Contributions of this Study

While prior research has laid a solid foundation by linking government and political ownership to CSR disclosure in Malaysia, these studies have largely remained focused on reporting behaviour rather than actual sustainability practices or outcomes. With the shift from CSR to ESG performance, the stakes are higher. Firms must now demonstrate measurable actions across environmental, social, and governance dimensions to secure positive ESG ratings. Yet, empirical evidence examining how state ownership and political board linkages influence this broader conception of ESG remains scarce, especially within the context of Malaysia’s heavily state-influenced capital market.

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## 3. METHOD

This study employs a quantitative research design using secondary data extracted from the Refinitiv Eikon database. The sample comprises publicly listed companies in Malaysia for the year 2024, with financial institutions excluded due to their distinct regulatory environment, capital structures, and ESG disclosure requirements, which may distort comparability with non-financial firms.

### 3.1. Data

While prior research has laid a solid foundation by linking government and political ownership to CSR disclosure in Malaysia, these studies have largely remained focused on reporting behaviour rather than actual sustainability practices or outcomes. With the shift from CSR to ESG performance, the stakes are higher. Firms must now demonstrate measurable actions across environmental, social, and governance dimensions to secure positive ESG ratings. Yet, empirical evidence examining how state ownership and political board linkages influence this broader conception of ESG remains scarce, especially within the context of Malaysia's heavily state-influenced capital market.

The data for ESG performance will be obtained from Refinitiv's ESG score, which offers a comprehensive and standardised measure across environmental, social, and governance pillars. Ownership data, including the percentage shareholding by the government, whether directly, through government-linked companies (GLCs), or ministry-owned special purpose vehicles (SPVs), will also be extracted from Refinitiv.

### 3.2. Variable Definition

The dependent variable is the ESG performance score for the year 2024 for firms listed on Bursa Malaysia. The main independent variable, *political linkage*, is proxied by the percentage of ownership held by the government, either directly or through GLCs and ministry-owned SPVs.

Several **firm-level control variables**, drawn from existing literature, will be included namely: (1) ***Firm size***, measured as the natural logarithm of total assets; (2) ***Leverage***, defined as the ratio of total debt to total assets; (3) ***Profitability***, measured by return on assets (ROA); (3) ***Market-to-book ratio***, indicating valuation differences; (4) ***Industry classification***, captured through sectoral dummy variables.

In addition, **corporate governance-related variables** will be included to improve model fit and account for governance structures previously shown to influence ESG performance: (1) ***Board size***, representing the total number of directors on the board; (2) ***Board independence***, measured as the proportion of independent directors; and (3) ***CEO duality***, a binary variable indicating whether the CEO also serves as the board chair. These variables are commonly cited in the literature as significant determinants of ESG performance.

### 3.3. Data Analysis

This study seeks to examine the following mathematical model:

$$\mathbf{ESGi = \beta_0 + \beta_1 POLITICi + \beta_2 SIZEi + \beta_3 ROAi + \beta_4 LEVERAGEi + \beta_5 SECTORi + \epsilon i}$$

Where:

**ESG** = ESG score of firm *i* (dependent variable);
**POLITIC** = Political linkages, proxied by the percentage of equity ownership held by GLCs or GLICs in firm i;
**SIZE** = Firm size, measured as the natural logarithm of total assets;

**ROA** = Return on Assets, measuring firm *i*'s profitability;
**LEVERAGE** = Ratio of total debt to total assets, indicating firm *i*'s capital structure;
**SECTOR** = Industry sector dummy variable to control for sectoral differences;
$\boldsymbol{\beta_0}$ = Intercept term;
$\boldsymbol{\beta_1}$ **to** $\boldsymbol{\beta_5}$ = Coefficients of explanatory variables; and
$\boldsymbol{\epsilon i}$ = Error term

The study will apply multiple linear regression (OLS) to determine the relationship between political linkage and ESG performance, controlling for relevant firm characteristics. Prior to regression analysis, descriptive statistics and diagnostic tests (e.g., multicollinearity, heteroscedasticity, normality of residuals) will be conducted to examine whether the dataset meets OLS assumptions. If violations are detected, appropriate remedial measures or alternative estimation techniques (e.g., robust standard errors or GLS) will be applied accordingly. The statistical analysis will be conducted using the SPSS statistical software (Version 29.0).

## 4. RESULTS AND DISCUSSION

This study is currently in progress, and data collection is underway using Refinitiv Eikon. As such, no empirical results are reported at this stage. However, based on prior literature, it is anticipated that firms with political linkages will demonstrate higher ESG performance.

For example, Haniffa and Cooke (2005) suggest that Malaysian firms with state influence are more likely to engage in CSR disclosure due to public accountability. Similarly, recent studies (e.g., Alkurdi et al., 2024; Jan et al., 2023) highlight that ownership structures with institutional or political connections tend to foster stronger ESG commitments, likely due to stakeholder pressure and reputational considerations.

Accordingly, this study expects a positive association between political linkages and ESG scores among Malaysian publicly listed companies. Data collection, analysis, and findings are estimated to be completed by the first week of May 2025.

## 5. CONCLUSION

This study explores the relationship between political linkages, proxied the percentage of direct and indirect government ownership, and ESG performance among Malaysian publicly listed companies. As ESG considerations become increasingly integral to corporate accountability and sustainable growth, understanding the influence of institutional and political ownership structures becomes crucial.

Grounded in the literature, this study hypothesizes that politically linked firms are more likely to demonstrate stronger ESG performance due to heightened stakeholder scrutiny, public expectations, and institutional pressure. The analysis will be conducted using multiple linear regression once data collection is complete.

This work-in-progress contributes to the growing body of research on ESG performance by incorporating ownership dynamics that are particularly relevant in the Malaysian context. The findings are expected to offer insights for policymakers, investors, and corporate stakeholders in promoting more responsible governance practices.

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# THE ROLE OF PRACTICAL EXPERIENCE IN IDENTIFYING OPERATIONAL RISK IN MAURITIAN BANKING

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**ABSTRACT**

Operational risk remains a significant challenge for the banking sector, particularly in developing economies where institutional resilience is still evolving. While much of the academic and regulatory discourse has focused on frameworks and systems, the role of human capital, specifically practical banking experience, in identifying operational risks remains underexplored. This study investigates the correlation between practical banking experience and the identification of operational risks in the Mauritian banking sector. Data were collected from 150 banking professionals across various institutions in Mauritius. Statistical analyses, including Pearson correlation and chi-square testing, revealed a positive and significant relationship between the level of practical banking experience and the ability to recognise key risk exposures. These findings suggest that banking experience enhances operational risk sensitivity and underscores the need to integrate staff experience into risk governance frameworks. The study contributes to the literature on risk management and offers practical insights for improving governance, training, and regulatory practices within emerging financial markets.

**Keywords:** Operational risk; banking experience; risk identification; Mauritius; financial sector

## 1. INTRODUCTION

Operational risk (OR), originating from deficiencies in internal processes, human capital, technological infrastructure, or external disruptive events, constitutes a ubiquitous and multifaceted challenge for banking institutions worldwide (Ames et al., 2015). Defined by the Bank for International Settlements (BIS) as 'the risk of losses resulting from inadequate or failed internal processes, people and system or from external events' (Ramdani et al., 2024), this risk category's potential for substantial financial and reputational damage is a serious concern for Mauritian banks. This is particularly evident given the difficulties in quantifying OR compared to credit or market risks, and historical incidents such as the alleged 2003 fraud at Mauritius Commercial Bank (MCB), which highlighted failures in internal control systems (Ramdani et al., 2024). The imperative for robust operational risk management (ORM) within the Mauritian banking sector is further underscored by substantial financial scandals and their repercussions on market participants, emphasizing the critical need for vigilance and proactive risk mitigation strategies (Mouatassim & Ibenrissoul, 2015).

While extensive academic and regulatory discussions have concentrated on developing sophisticated frameworks and systems for ORM, the pivotal role of human capital, specifically practical banking experience, in effectively identifying and mitigating these risks remains largely underexplored (Ramdani et al., 2024). The Mauritian banking sector, characterized by a unique confluence of local banking traditions and international financial practices, provides a particularly fertile ground for examining the subtle interplay between hands-on experience and the nuanced identification of operational risks (Ramdani et al., 2024).

The primary research problem addresses the limited understanding and integration of practical banking experience into OR identification processes in Mauritian banks, where OR is often overlooked as a 'wildcard'. This investigation aims to determine any correlation between Practical Banking Experience and Identification of risk. The findings offer insights for senior bank managers, bank personnel, and regulators in Mauritius, providing a basis for improved risk control, more informed decision-making, and the development of effective guidelines. Academics and consultants can also utilize this empirical basis for further research and OR quantification tools.

## 2. LITERATURE REVIEW

The landscape of operational risk management (ORM) has undergone a significant transformation. This evolution, particularly since the mid-1990s, has been driven by increasing reliance on technology, intensified competition, globalization, and a series of high-profile financial scandals that have underscored the profound impact of operational failures.

### 2.1. Theoretical Perspectives on Risk Management

Various theoretical constructs have been developed to elucidate operational risk management within the financial sector. The Efficiency Models, for instance, offer a conceptual foundation for understanding how human factors contribute to organizational efficiency and effective risk management. Leibenstein's (1966) X-efficiency theory, for example, posits that superior management practices lead to better cost control and increased profitability by effectively aligning technology and human resources. Similarly, the Efficiency Wage Theory (Leibenstein, 1957) suggests a direct link between real wages and workers' physiological capacity and actual work output, implying that human motivation and capability are critical inputs that influence organizational performance and, by extension, risk outcomes. These theories highlight that the human element is not merely a passive component but an active determinant of efficiency and risk exposure. In terms of Approaches in Risk Management, banks have historically adopted top-down methods, often calculating operational risk capital as a percentage of non-interest expenses. However, such approaches have been criticized for failing to accurately reflect a bank's true risk profile, leading to a gradual shift towards more complex bottom-up methodologies. These bottom-up approaches assess risks from the perspective of individual business units, implicitly acknowledging the granular, human-driven nature of many operational risks and the need for more detailed, ground-level identification.

### 2.2. Empirical Evidence on Operational Risk and the Human Element

Empirical studies have provided valuable insights into the practical application and challenges of ORM. A survey by the Boston Consulting Group (Pourquery and Mulder, 2009) revealed that ORM has not been universally accepted as a core business component, with senior managers often viewing expenditures on it as a cost rather than a value-adding investment. The prevailing emphasis on quantifiable frameworks, while important, may have inadvertently de-emphasized the qualitative, experience-driven aspects of risk identification, creating a gap in understanding how human expertise contributes to resilience.
Crucially, the literature strongly implicates the human factor as a primary cause of operational risk events. Supporting this, Macha's (2010) study on financial sectors in Tanzania noted that "lack of integrity of staff" contributed to banks being more susceptible to risks and potential failure. While technological advancements, such as electronic banking, have been shown to reduce some operational risks by minimizing human intervention (Tanase and Serbu, 2010), the human element remains central, particularly in areas susceptible to fraud, negligence, or error. This signifies that practical experience functions as an informal, intuitive control mechanism.

Despite the acknowledgment of people as a primary OR factor, the specific influence of practical banking experience on risk identification remains underexplored. This research itself notes "numerous knowledge gaps" in ORM. This study aims to bridge this gap by providing empirical evidence on the value of practical experience in enhancing OR sensitivity and identification precision

## 3. METHOD

This study adopted a descriptive, quantitative design to examine how practical banking experience influences operational-risk identification in Mauritian banks. A random sample of 150 banking professionals completed a self-administered questionnaire covering demographics, risk recognition and risk-management practices, with items presented in dichotomous, Likert-scale and multiple-choice formats; the instrument showed acceptable reliability (Cronbach's $\alpha \geq 0.70$). Data were analysed in SPSS 23 using descriptive statistics for respondent profiles, Pearson correlations to test relationships between years of experience and continuous risk variables, and Chi-square tests to assess associations between experience and categorical factors such as system exposure, risk measurement and implementation processes.

## 4. RESULTS AND DISCUSSION

This section presents the empirical findings derived from the statistical analyses, focusing on the central relationship between practical banking experience and operational risk identification and its broader implications.

The survey yielded 104 valid responses, primarily from SBM (38.5%) and MCB (34.6%). Experience levels varied: 0-5 years (38.5%), 6-15 years (25%), 16-29 years (22.1%), and over 30 years (14.4%). Respondents consistently viewed various risks (credit, market, liquidity, operational, etc.) as primary concerns. "People" were highly identified as a primary OR factor, alongside processes, systems, and external events. Specific human-related exposures like "Fraudulent/criminal activities by employees," "Incompetence," "Negligence," and "Human error" were widely acknowledged. Organizations also recognized the importance of formal risk management processes and specific OR definitions.

### 4.1. Correlation and Hypothesis Testing

The core objective of this study was to investigate the relationship between practical banking experience and operational risk identification and related processes. A Pearson correlation coefficient test was conducted to assess the strength and direction of the linear relationship between practical banking experience and various operational risk variables. The results, summarized in Table 1, indicate several significant positive relationships.

**Table 1: Pearson Correlation Coefficients for Practical Banking Experience with Key Operational Risk Variables**

| Variable | Correlation (r) | p-value | Significance |
|---|---|---|---|
| Type of Risk | 0.223 | 0.023 | Significant |
| Primary Factor of Operational Risk | 0.417 | 0.000 | Significant |
| People Exposure to Operational Risk | 0.295 | 0.002 | Significant |
| Knowledge of System Exposure | 0.406 | 0.000 | Significant |
| System Exposure | 0.327 | 0.001 | Significant |
| External System Exposure | 0.447 | 0.000 | Significant |
| Element of Operational Risk | 0.209 | 0.034 | Significant |
| Measurement of Operational Risk | 0.235 | 0.016 | Significant |
| Management Committee Role | - 0.024 | 0.807 | Not Significant |
| Implementation Process | 0.205 | 0.037 | Significant |

Pearson correlation analysis (Table 1) showed practical banking experience had a positive and significant relationship ($p < 0.05$) with: Type of Risk (r=0.223), Primary factor of Operational Risk (r=0.417), People Exposure to Operational Risk (r=0.295), System Exposure (r=0.327), External System Exposure (r=0.447), Element of Operational Risk (r=0.209), Measurement of Operational Risk (r=0.235), and Implementation Process (r=0.205). This validates that experience enhances recognition of key risk exposures, especially human-related ones. No significant relationship was found with the Management Committee (r=-0.024, p=0.807).

To further investigate the relationships, three specific hypotheses were tested using the Chi-Square test, with results summarized in Table 2.

**Table 2. Chi-Square Test Results for Practical Banking Experience Hypotheses**

| Hypothesis | Null Hypothesis (H0) | p-value | Decision |
|---|---|---|---|
| **H1** | There is no relationship between practical banking experience and Knowledge of system exposure. | 0.000 | Reject H0 |
| **H2** | There is no relationship between practical banking experience and Measurement of Operational Risk. | 0.000 | Reject H0 |
| **H3** | There is no relationship between practical banking experience and Implementation Process. | 0.000 | Reject H0 |

Chi-Square tests (Table 2) rejected all three null hypotheses ($p = 0.000 < 0.05$), indicating significant relationships between practical banking experience and: Knowledge of System Exposure, Measurement of Operational Risk, and the Operational Risk Management Implementation Process. The rejection of Hypothesis 3 is particularly impactful, establishing that banking experience can severely impact the implementation process, suggesting experienced individuals should handle it for success.

**4.2. Regression Analysis**

A regression analysis was performed to identify the factors that significantly impact the implementation process for operational risk within Mauritian banks. The model's fit was strong, with an R-squared value of 0.729, indicating that approximately 72.9% of the variability in the implementation process can be explained by the independent variables included in the model. The overall regression model was statistically significant (F-value $p=0.000 < 0.05$), confirming its utility in identifying influential factors.

**Table 3. Significant Regression Coefficients for Implementation Process**

| **Predictor** | **Unstandardized Coefficients (B)** | **Sig. (p-value)** |
|---|---|---|
| Type of Risk | 0.191 | 0.034 |
| People Exposure to Operational Risk | 0.202 | 0.027 |
| Element of Operational Risk | 0.329 | 0.000 |
| Measurement of Operational Risk | -0.270 | 0.002 |
| Management Committee | 0.175 | 0.045 |

Four factors exert a positive and statistically significant influence: recognising the core elements of operational risk ($\beta = 0.329$; $p < 0.001$) has the greatest effect, followed by diligent management of people-related exposures such as fraud and error ($\beta = 0.202$; $p = 0.027$), a clear differentiation among risk types ($\beta = 0.191$; $p = 0.034$), and active oversight by the bank's management committee ($\beta = 0.175$; $p = 0.045$). By contrast, elaborate or poorly designed measurement practices impede progress ($\beta = – 0.270$; $p = 0.002$), suggesting that more data do little good unless translated into actionable steps. Notably, awareness of system exposures, whether internal or external, does not improve implementation once these governance and process variables are controlled for, indicating that knowledge alone is insufficient without the structures to act on it. Overall, the findings highlight the need to balance human insight and clear governance with streamlined, practical metrics when rolling out operational-risk management.

## 5. CONCLUSION

Practical banking experience significantly enhances OR identification and supports effective implementation in Mauritian banks. Boards should formalise experience-weighted governance, for example, pairing veterans with juniors in incident reviews and streamline measurement dashboards to ensure insights trigger timely action. Future research could integrate macroeconomic variables or explore methods for capturing tacit knowledge within ORM frameworks.

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# ADAPTIVE GENERATIVE AI FOR ENTERPRISE RISK

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**ABSTRACT**

This study introduces an adaptive generative-AI pipeline that uncovers material enterprise risks obscured when Thai listed companies split disclosure between the statutory Risk Management Report and the narrative Management Discussion & Analysis (MD&A). Its objectives were to build an large-language model (LLM) + retrieval-augmented-generation (RAG) toolkit that automatically detects, classifies and links risk sentences; to quantify information that does not transition from Risk Management Report to MD&A; and to experiment on whether AI-powered concordance can strengthen regulatory oversight and investor comprehension. Zero-shot classification and transformer embeddings extracted 4,217 risk statements from 49 food-and beverage issuers' One Reports for the fiscal years 2019-2023. The statements were each linked to seven COSO-aligned categories and loaded into a graph database for concordance analysis, longitudinal trend visualization, and validation via semi-structured interviews with Securities and Exchange Commission supervisors. External generalizability and productivity gains were tested on a 2024 IPO sample and a simulated analyst review workflow. Findings show that only 39% of risks reported in Risk Management Report are in MD&A text, confirming selective replication rather than full integration. Market- and industry-specific threats dominate in both parts, but high year-on-year volatility in Environmental & Social and Macroeconomic categories indicates reactive disclosure tendencies. IPO prospectuses reproduce only 40 % of peer risk content, replicating the same deficiency. The prototype reduced analyst time in uncovering undisclosed but material exposures by around 69%. The findings demonstrate that a generative-AI concordance check based on COSO/ISO risk frameworks and Thailand's CG Code can transform narrative risk reporting from a compliance exercise to a decision useful instrument for boards, investors and regulators.

**Keywords:** Risk disclosure; Narrative reporting; graph database; Investor insight.

## 1. INTRODUCTION

Generative AI is now a force multiplier in business, delivering capacity to process data, understand human-like nuance, and produce high-quality material efficiently (KPMG, 2023). It could power digital change, innovation, and competitive relevance. Effective and responsible scaling of generative AI requires robust risk management structures commensurate with evolving regulatory requirements (Oliver Bevan, 2024). Increased reliance on digital technology poses risks such as model prejudice, data quality issues, and ethics. Classic risk management strategies are inadequate to track and react in real time. The blend of AI driven tools coupled with human expertise is needed, including investment in model explainability, data quality, and collaboration (Yanqing Wang, 2023). Generative AI has the potential to disrupt risk management by speeding up decision-making and operational efficiency.

# 2. LITERATURE REVIEW

## 2.1. Artificial Intelligence

Artificial Intelligence (AI) is a theory in which machines mimic human intelligence (J. Matthew Helm, 2020). AI performs tasks like reasoning, problem-solving, and understanding natural language (European Commission, 2020). AI systems have levels, from the simulation of human thought (Joost N. Kok, 2002; Leonardo Banh, 2023) to machine learning. Machine learning learns from data, such as supervised (Padraig Cunningham, 2008), unsupervised, and reinforcement learning (Leslie Pack Kaelbling, 1996). Deep learning, a method of neural networks, learns by imitating the nervous system (Ian Goodfellow, 2016). Generative AI creates new information (Inter-American Development Bank ("IDB"), 2023; UNITED ARAB EMIRATES MINISTER OF STATE ARTIFICIAL INTELLIGENCE, 2023; Jibu Elias, 2023; Alphabet Inc., 2024b). It uses algorithms to create content like audio, code, simulations, and animations (Jibu Elias, 2023). Generative AI trains existing technologies like Large Language Models (LLMs) to learn from data and create new content (Alphabet Inc., 2024b).

Generative AI is used in business use cases like customer service, employee access, computer language generation, data analysis, threat prevention, and creative applications (Alphabet Inc., 2024a). IBM recommends use cases like language generation, product development, customer behavior analysis, and task planning (IBM, 2024). Customer experience optimization, dialogue analysis, and report generation automation are provided in Amazon's documentation (Amazon Web Services, 2024g; 2024e; 2024a; 2024b; 2024c).

Natural Language Processing (NLP) facilitates processing text to computer language (Benjamin Eisenstein, 2018). Natural Language Understanding (NLU) enables computers to grasp human language (University of Sheffield, 2024a; 2024b; Matt Ellis, 2022a; 2022b; Paradis, 2012; Richard Nordquist, 2019; 2024). Natural Language Generation (NLG) produces purpose-built text (Diksha Khurana, 2022), but is subject to limitations like data needs and efficiency in processing (Zongben Xu, 2018).

## 2.2. Unstructured Data

Unstructured data lacks predefined formatting, comprising most company data (Ku-Mahamud, 2019). Human-generated examples include texts from social media and websites, while machine-generated examples include sensor outputs and satellite images. Structured data has defined formats, and semi structured data has tags but lacks relational database rigidity (Ionela Halcu, 2013). Unstructured data is valuable for decision-making, pattern recognition, and customer insight. AI solutions analyze it in real time for faster decision-making (Adanma Cecilia Eberendu, 2016). Real-time monitoring utilizes unstructured data to identify risks by using APIs and sentiment analysis. It helps to detect patterns, monitor trends, and merge various sources of data (Oliver Müller, 2016).

## 2.3. Enterprise Risk Management

Risk is an event influencing business operations (Shenkir, 2011; John Fraser, 2010). Organizational risk management coordinates risk methods (Stephen P. D'Arcy, 2001; Brian W. Nocco, 2006). COSO and ISO provide standards like communication, risk assessment, risk impact analysis, risk treatment, and monitoring/evaluation (International Organization for Standardization, 2018; Committee of Sponsoring Organizations of the Treadway Commission, 2020; E. Zio, 2017; D. van der Waal, 2017; Terje Aven, 2015).

Policy of the Thai SEC is centered around transparency, accountability, and integrity of corporate governance (The Securities and Exchange Commission, 2017). There are eight main CG Code principles that address leadership of the board, sustainability goals, board composition and effectiveness, people management, innovation, risk management, financial integrity, and shareholder relationships.
CG Code 2017 is focused on sustainability and responsibility, mapping to COSO ERM Framework via long-term value creation. They both call out risk management and internal controls. Where CG Code is focused

on governance, COSO is focused on risk management (Committee of Sponsoring Organizations of the Treadway Commission (COSO), 2018). ESG reporting maps to COSO ERM Framework, covering governance, culture, strategy, performance, review, and communication.

## 3. METHOD

This research examines SET-listed food and agricultural firms' disclosures on risk management between 2019 and 2024 to identify missing risks. Industry was selected due to statistical capital market activity. Two forms of data were applied, i.e., public data: (1) Management Data set reports, i.e., reports on data volume, (2) Formalised for requirements, Financial Risk, with restrictions.

Data in content was pushed across with relative action that includes, extraction, patterns identification and risks as categories 4 that include the risk of each category. Zero-shot was implementation action with utilization of analysis. Then data to use relationship model to analysis using structure relational knowledge and trend. To support processing those process generative action methods those knowledge to for classification (Hugging Face, 2024).

Tool evaluate, extraction based on benchmark assessment the extraction process is performed through tools in different types, it assists action for tool action or areas and in future work. The test had a fixed action assessment from team, risk process and analyst insight

## 4. RESULTS AND DISCUSSION

### 4.1. Overview

One Review of Reports of financial years 2019-2023 (4,217 risk items) reflected intense concern for risk management, as 2,593 items were reflected in Risk Management Reports and 1,624 in Management Discussion and Analysis (MD&A) reports. Overlap reflects the combined approach towards risk governance.

### 4.2. Focus Risk in Risk Management Report and the Management Discussion and Analysis (MD&A)

Major risk areas constantly highlighted in both reports are Market & Industry-Specific Risks, Operational Risks, Strategic Risks, Macroeconomic & Geopolitical Risks, Regulatory & Legal Risks, Environmental & Social Risks, and Financial Risks. Sub-group analysis under Regulatory & Legal Risks in Fiscal Year 2020, e.g. Changes in Laws & Regulations, Compliance with Laws & Regulations, Trade Regulations & Policies, Litigation & Legal Disputes. Changes in Laws & Regulations are referred to in Risk Management Report 50 times, and in MD&A 12 times. Overall, Market & Industry-Specific Risks were mentioned most frequently (141 times), followed by Operational Risks (81 times). Environmental & Social Risks and Financial Risks were mentioned least (33 and 16 times respectively). The mention of the company is 39, 32, 30, 29, 19, 19, 12 respectively.

### 4.3 Key Observations by Topic

Focus Risk as a percentage starts at 0.98% in 2019, drops in 2020 goes up to 1.94% in 2022, and then finally settles at 1.19% in 2023. Financial Risks range from roughly 0.87% up to 1.74% throughout the series of years and come out at 7.50% combined. Focus risk percentage rises tremendously in 2022 (22.4%), and then further reduces in 2023 (30.61% down to 8.16% through the span of the data). Focus Risk percentage increases, from 1.08% in 2019 to 3.44% in 2022. Percentage changes annually, peaking at 1.79% in 2022 and rising to 5.18% after five years. From 1.10% in 2019 to 0.97% in 2021, Focus Risk % decreased before increasing to 1.38% in 2022 and 0.69% in 2023 percentage is 1.0% to 1.6%, or 4.46%.

### 4.4 IPO Company Comparison

Whereas the comparison of matched operations was enhanced from 11 in 2019 to 19 in 2023, or from

32.35% to 40.43%, across the whole period covering five years, the IPO reports best match listed companies in Financial Risks, Market & Industry-Specific Risks, Operational Risks, and Strategic Risks.

That is, IPO companies best sensitize with respect to finance and strategy concerns but are non sensitive to the environment social, and macroeconomic uncertainties to a high extent. The performance of business by the IPO company and listed firms were unstable and low for the period of consideration, while the non-comparable activities demonstrated a general increasing trend, reflecting an ever-widening gap between comparability of business operations over time.

### 4.5 Interview: The Securities and Exchange Commission (SEC)

SEC officials reiterated that Management Discussion and Analysis (MD&A) section far from necessarily having to be the most material threats to the firm. Interview participants expressed that several Thai companies borrow boilerplate risk language and report likelihood of occurrence. Severity, as a risk management function, is a composite function of impact and likelihood.

## 5. CONCLUSION

This study looked at 4,217 Thai listed company One Report risk references between 2019 and 2023 and found that only 39% of the risk indicated failures in the Risk Management Report were replicated in the MD&A. This shows that MD&As are rather backward-looking performance reports, and not complete risk registers (The Stock Exchange of Thailand, 2025). SEC interviews also evidenced the same, citing boilerplate rhetoric and lack of probability measurement as the pitfalls."

Thai MD&As selectively replicate risks at the expense of comparability. A retrieval-augmented generation 3 (RAG) procedure would encourage preparers to disclose high-materiality risks (Eisenstein, 2018; KPMG, 2023). Benchmarking IPO filings verifies similar gaps, suggesting pre-listing "risk concordance" tests (European Commission, 2020). A prototype system correctly remapped risks (Ian Goodfellow, 2016; Diksha Khurana, 2022), saving analyst review time (Kaouthar Lajili, 2005; Yanqing Wang, 2023). AI-supported checks promote risk culture and public accountability.

The examination is limited by its foundation in public disclosures alone, excluding undisclosed or latent threats. The incorporation of boilerplate language and a lack of probability estimates further circumscribes the study.

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# GOVERNANCE STRUCTURE OF PUBLIC-PRIVATE PARTNERSHIP (PPP) IN MALAYSIA: A BIBLIOMETRIC ANALYSIS

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**ABSTRACT**

Public-Private Partnership (PPP) has become a broadly adopted method for delivering public services in developed and developing countries. Regardless of Malaysia's commitment to PPP driven economic growth, as emphasized in the Malaysia Madani Budget 2023 and the PPP 3.0 Model, challenges persist in ensuring transparency, accountability, and regulatory compliance in PPP projects. Numerous previously mentioned failed PPP projects demonstrate these problems, which highlight the need for stronger and more transparent governance structures. These issues include limited public disclosure, weak enforcement of regulations, and unclear decision-making. This study employs bibliometric analysis to map the literature on the governance of PPP within the broader field of governance. The analysis includes a citation review, and a co-occurrence analysis based on all identified keywords. The analysis and visualization were conducted using the VOSviewer application. This bibliometric analysis provides an understanding for policymakers as a practical tool and benchmark current governance of PPP in order to guide the nation to support Shared Prosperity Vision 2030 and Malaysia Madani agenda.

**Keywords:** Governance, accountability, PPP, public-private partnership, Malaysia

## 1. INTRODUCTION

Public-Private Partnership (PPP) can be defined as cooperation and agreement between the public sector and private sector (Hodge & Greve, 2007). PPP has become an important model in project implementation around the world as PPP offers various benefits for both parties (Warsen et al., 2018). The PPP model needs a huge investment which is become a financial burden to the government (Zhang et al., 2016). The private sectors recieve huge responsibilities to build or maintain the asset through a long-term period. PPP project offers the private sectors with the design, construction, finance, operation and maintenance of the facilities. According to Batjargal & Zhang (2021), there are several governance issues in PPP such as poor institutional environment and support, weak political and legal frameworks, inadequate procedures for selection of PPP partners, inconsistency between resource inputs and quality, inadequate monitoring and evaluation of PPP processes, lack of transparency, and inherent nature of PPP. the absence of performance indicators (KPIs), stakeholder management, a lack of comprehensive government support, e lack of government guidelines and procedures, lengthy PPP project negotiation processes, the absence of risk allocation and mitigation management and lack of transparency

## 2. LITERATURE REVIEW

Various of PPP model successes in the United Kingdom, Australia, Singapore, Hong Kong and other countries (Ismail, 2013) including Malaysia. In Malaysia, adoption of PPP began 1980. PPP emerged as a key outcome of public sector reform in Malaysia, with privatization being one of agendas. This approach was expanded with the PFI under the 9th Malaysia Plan. Both privatization and PFI fall under the broader umbrella of PPP. The Malaysia government has continued to promote this agenda through subsequent national development plans, including the most recent 12th Malaysia Plan. Privatization, joint venture and leasing are PPP modes in Malaysia. PPP modes in Malaysia can be divided into two categories. The first category is new projects including build, operates, transfer (BOT), which is the most common option; build, operates, own (BOO); build, lease, transfer (BLT); build, lease, maintain, transfer (BLMT); and land swap. Second category is the existing projects include privatization, outside sale, lease of assets (LOA), and management contract (Ismail & Abd. Razak, 2023). The Kuala Lumpur International Airport (KLIA), the Light Rail Transit (LRT), and the North-South Expressway (PLUS) are example of successful PPP projects in Malaysia (Unit Kerjasama Awam Swasta, 2011). Governance plays a vital role in PPP because the success or failure of PPP is significantly dependent on governance. Definition of governance is the regulation of organizational processes, encompassing structure, practices and functions including guide, restrain and control the direction, activities, policies and procedures (Wysocki & McGary, 2003).

## 3. METHOD

This study uses bibliometric analysis to examine the governance framework for PPP in Malaysia. This research collected 327 articles related to the governance of PPP between 1998 and 2024 as the sample. However, 25 of articles are inaccessible and the final dataset is 302 articles related to governance of PPP. All the articles are in English. The data were collected from a wide coverage of journals across disciplines from Scopus database. All the datasets were transferred to CSV format and were organized by authors, title, year, source, issue, DOI, abstract, ISSN, and keywords.

## 4. RESULTS AND DISCUSSION

### 4.1. Citation Review

To view the impact of the research publications, the citation review is important as citation review provides the insight of the result. Citation reviews examine numbers of citations each publication has published and determine the journals that are the primary source of these citations (Luthfi & Naufal, 2023). This study analysis highlights the relevance and significance of the prior research among the academicians. Table 1 indicate the top 5 articles with highest number of articles. The high number of citations is a reflect of the quality and relevance contribution to the field. In this study, the article by Abednego et al. is the article with the highest number of citations.

**Table 1.** Top Five Total Citations

| Authors | Title (Year) | Journal | Citations |
|---|---|---|---|
| Abednego M.P., Ogunlana S.O. | Good Project Governance for Proper Risk Allocation in Public-Private Partnerships in Indonesia (2006) | International Journal of Project Management, 24(7), 622-634. | 621 |
| Casady C.B., Eriksson K., Levitt R.E., Scott W.R. | (Re)Defining Public-Private Partnerships (PPs) in the New Public Governance (NPG) Paradigm: An Institutional Maturity Perspective (2020) | Public Management Review, 22(2), 161-183. | 236 |

| | | | |
|---|---|---|---|
| Ke Y., Wang S., Chan A.P.C., Cheung E. | Research Trend of Public-Private Partnership in Construction Journals (2009) | Journal of Construction Engineering, 135(10), 1076-1086. | 478 |
| Hodge G., Greve C. | Public-Private Partnerships: Governance Scheme or Language Game? (2010) | Australian Journal of Public administration, 69, S8-S22. | 339 |
| Reeves E. | The Practice of Contracting in Public Private Partnerships: Transaction Costs and Relational Contracting in the Irish Schools Sector (2008) | Public Administration, 86(4), 969-986. | 208 |

*Source: Scopus Database (2025)*

### 4.1. Co-Occurrence Analysis

Co-occurrence is an analysis that count paired data with a collection unit (10). The purpose of Co Occurrence analysis is to conduct a better understanding of the relationship of keywords that appear in the articles (9). In this study, the author uses VOSviewer for co-occurrence analysis. According to the results, a total of 1687 keywords or terms were identified. However, only 105 keywords met the criteria of 5 occurrences. In addition, only 19 items were included in the final analysis due to the duplicate keywords. Therefore, only the keywords with the highest occurrences were retained, while the remaining duplicate keywords were excluded. The Vosviewer analysis shows seven clusters of the keywords. Figure 1 shows the size of the labels, the bigger the label, the greater the occurrence of the keywords.

**Table 2.** Clusters of Keywords

| Cluster | Keyword | Qty. |
|---|---|---|
| 1 (Red) | Infrastructural development, procurement, project performance, risk allocation, risk assessment, risk perception | 6 |
| 2 (Green) | PPP, governance, policy implementation, policy making, value for money | 5 |
| 3 (Blue) | Decision making, infrastructure, management practice | 3 |
| 4 (Yellow) | Infrastructure project, sustainability, sustainable development | 3 |
| 5 (Soft Purple) | Accountability, transparency | 2 |
| 6 (Soft Blue) | Economic development | 1 |

*Source: Author's compilation using Vosviewer 1.6.15 (2025)*

**Figure 1.** Co-Occurance of Keywords


*Source: Author's compilation using VOSviewer 1.6.20 (2025)*

The first cluster is colored red focusing on development of PPP, procurement processes, project performance and risk management. The second cluster in green color concentrates on the higher level of governance of PPP in policy making and implementation to secure value for money. Next cluster which in blue colored shows decision-making and management practices that appear in PPPP. Cluster Four focuses on infrastructure and sustainable development. Cluster 5 in soft purple colored identifies accountability and transparency as a separate theme to highlight the importance of this theme in governance of PPP. Lastly, cluster 6 in soft blue colored highlighted economic development as a driver of growth in the PPP field.

## 5. CONCLUSION

This study is using bibliometric analysis and aims to employ a mapping of the governance of PPP literature in the field of governance. A few issues were identified in governance of PPP in Malaysia. These issues include limited public disclosure, weak enforcement of regulations, and unclear decision-making. By identifying these challenges alongside global trends, the study offers a clear understanding of priorities PPP reform through transparency of reporting, strengthening compliance mechanisms, refining roles and responsibilities in PPP projects.

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# SIX-YEAR (2018-2024) RETROSPECTIVE ANALYSIS OF INTERNAL QUALITY AUDIT FINDINGS IN THE UNIVERSITY OF SAN AGUSTIN BASED ON ISO 9001:2015

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**ABSTRACT**

The University of San Agustin, having been certified with the ISO 9001:2015 Quality Management Systems requirements since 2018 to the present, upholds its commitment to quality enhancements and adherence to international standards in providing excellent services in quality education. This study on the retrospective analysis of the university's non-conformance and observation findings over the past six years aims to provide insights into the quality management system for its continual improvement. The results show Clause 8 (Operation) with 41% of the total non-conformances and Clause 7 (Support) with 41% of the total observations have the highest findings among the auditable clauses of ISO 9001:2015 QMS. Support and operation are the areas within the Do process that implement what was planned in the Plan-Do-Check-Act cycle. A successful PDCA cycle adheres to the processes of planning to establish objectives, implementing what was planned, checking, monitoring, and measuring processes and products, and taking actions for continual improvement. Furthermore, the Covid-19 pandemic has reduced the number of NCs because of changes in auditing practices shifting to remote instead of face-to-face office processes. The trend in the increasing number of findings in the recent face-to-face audit indicates a return to a more strict auditing processes. Thus, how the auditing processes are conducted results in the increase or decrease of the audit findings for continual improvement of the university to provide quality education, academic excellence, and services.

**Keywords:** ISO 9001:2015, Quality management system, Non-conformance, Observation, PDCA cycle, continual improvement

## 1. INTRODUCTION

The University of San Agustin is the first university in Western Visayas, Philippines, after it was conferred a university status in 1953. Committed to delivering quality education, the university has maintained its adherence to quality by complying with international quality standards such as the International Organization for Standardization (ISO). Furthermore, in support of its commitment, the university has upheld its ISO 9001:2015 certification since 2018 up to the present through surveillance audits examining the university's academic and support units, ensuring the institution's commitment to excellence at all levels, and fulfilling its promise to deliver top-notch educational opportunities to students and other stakeholders. This study aims to provide insights about the quality management system by analyzing the audit findings of the university for its continual improvement.

## 2. LITERATURE REVIEW

Understanding the importance of continuous quality improvement is crucial to enhancing the existing system (Bernik et al., 2017). ISO 9001 is an internationally recognized quality management system (QMS) standard that outlines fundamental management and quality assurance practices applicable to any organization. These requirements serve as an excellent foundation for planning, control, and improvement across various enterprises. Adhering to ISO 9001:2015 QMS, the University of San Agustin adopts the Plan-Do-Check-Act (PDCA) cycle and is briefly described as follows:

**Plan:** establish the objectives of the system and its processes and the resources needed to deliver results in accordance with learners' and other beneficiaries' requirements and the organization's policies and identify and address risks and opportunities.
**Do:** implement what was planned.
**Check:** monitor and (where applicable) measure processes and the resulting products and services against policies, objectives, requirements, and planned activities, and report the results.
**Act:** take actions to improve performance, as necessary. (USA, Quality Manual).

Moreover, ISO 9001 certification benefits educational institutions by enhancing operations, improving work systems, and increasing customer satisfaction. The ISO 9001:2015 Quality Management Systems adopted by these institutions aim to facilitate retrospective archiving and provide a more regular and clear understanding of their operations. The ISO 9001:2015 Quality Management System contains quality system clauses that can help educational institutions operate more efficiently and effectively (As'yari, 2015 on Armawati et al., 2018).

According to the study by Parso et al. (2021), the implementation of ISO 9001:2015 has a significant positive impact on the performance of higher education institutions from various perspectives, including customer, financial, internal business, and learning and growth. It is also indicated in the results of the study of Istriani and Rhardja (2019) that the implementation of a quality management system has had a positive impact in the form of improving school performance, student accomplishment, and teacher effectiveness. It is also effective in improving school quality, as can be seen from school achievement through evaluating student learning, which is increasing. Additionally, the ISO 9001:2015 standard provides the added value of risk management, which is highly significant for higher education institutions as they deal with information, innovation, and quality (Othman et al., 2017).

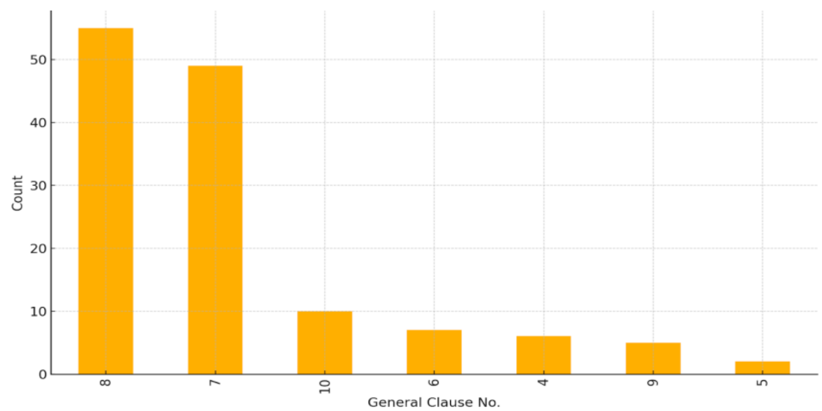
## 3. METHOD

This retrospective analysis of the University of San Agustin's two cycles of ISO 9001:2015 certification internal audit findings over the past six academic years, from AY 2018-2019 up to AY 2023-2024, aims to provide valuable insights into the university's quality management system, including its strengths and areas for improvement. Observations and non-conformance findings were recorded in each cycle of the audit every academic year. By examining the audit results, this study sheds light on the university's progress, challenges, and strategies in maintaining its ISO 9001:2015 certification. The study also aims to identify trends in the yearly distribution of audit findings and the factors contributing to recurring issues.

## 4. RESULTS AND DISCUSSION

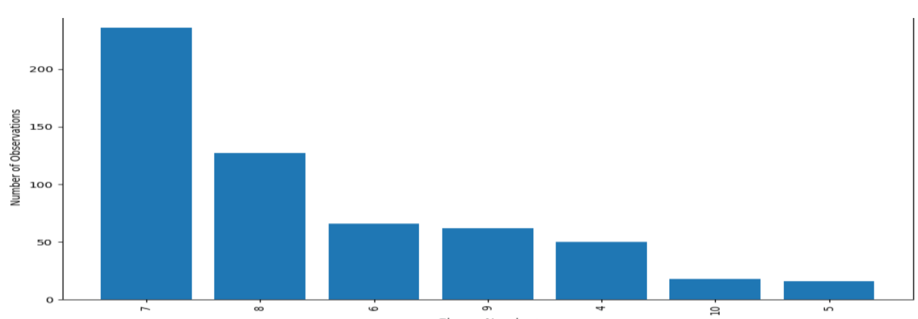
As defined in the Quality Procedure of the University of San Agustin ( USA-QP-04), a non-conformance (NC) finding is a non-fulfillment of or a failure to meet a specified requirement, while an observation finding is an inconsistency or deficiency but cannot be registered as an NC because it does not contravene the words of the standard or the documented procedure, although there is obviously something wrong; or, is a situation that exists but does not justify raising an NC but will likely deteriorate, leading to NC, if no attention is given to preempt this from happening.

The general overview of the collected data on the internal audit findings in the past six (6) academic years, from AY 2018-2019 to AY 2023-2024, is provided in Graphs 1 and 2. During this period, 134 non-conformances were identified across seven auditable clauses in the ISO 9001:2015 Quality Management System standard, with Clause 8 (Operation) having the highest number of non-conformances identified with 55 NCs, which equates to 41% as shown in Graph 1. Furthermore, it was followed by Clause 7 (Support) and has 49 non-conformances, which equates to 37% of the overall NCs determined in the internal audits in the past 6 academic years. Support and operation are the requirements and processes in the quality management system where the plans are implemented applying the Do of the Plan-Do-Check-Act cycle. Successful applications of the PDCA cycle entail planning to establish objectives, implementing what was planned, checking monitoring, and measuring processes and products, and taking actions for continual improvement. In this study, support and operation are areas with the most finding of non-fulfillment or failure to meet the standards. Moreover, Clause 10 (improvement) has been identified with 10 NCs and Clause 6 (Planning) with 7 NCs. This distribution is followed by Clause 4: Context of the Organization; Clause 9: Performance Evaluation; and Clause 5: Leadership, which received 6, 5, and 2 non-compliances, respectively.




**Graph 1:** Distribution of NC Findings based on General ISO 9001:2015 Auditable Clause

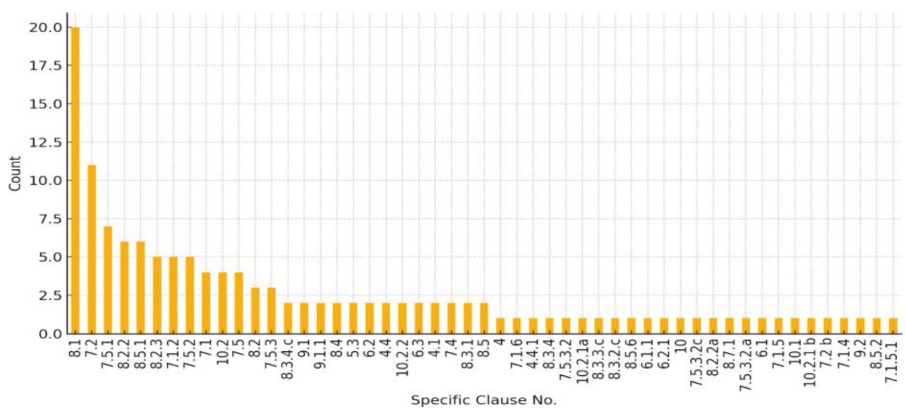
As shown in Graph 2, 575 observations were identified, with Clause 7 (Support) having the most number with 236 (41%); Clause 8 (Operation) with 127; Clause 6 (Planning) with 66; Clause 9 (Performance Evaluation) with 62; Clause 4 (Context of the organization) having 50; Clause 10 (Improvement) with 18; and Clause 5 (Leadership) with 16 identified observations.



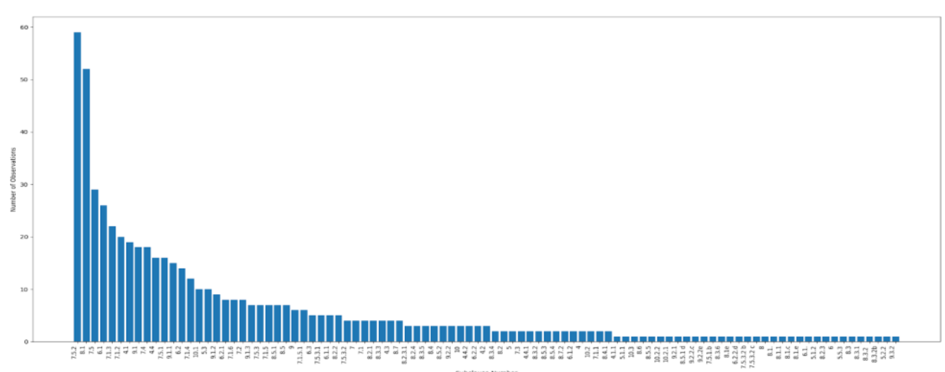

**Graph 2:** Distribution of Observation Findings based on General ISO 9001:2015 Auditable Clause

The data in Graphs 3 and 4, respectively, provide a detailed distribution of NC and observation findings based on the specific ISO 9001:2015 auditable clause, with Sub Clause 8.1 (Operational Planning and Control), Sub Clause 7.2 (Competence), and Sub Clause 7.5.1 (Documented Information—General) showing the highest numbers of non-conformances, having 20, 11, and 7 NCs, respectively. While Sub Clauses 7.5.2 (Creating and updating), 8.1 (Operational Planning and control), 7.5 (Documented information), and 6.1 (Actions to address risks and opportunities) have shown the highest numbers of observation findings having 59, 52, 29, and 26 observations, respectively. The implication of these findings, specifically on Clause 8.1 and 7.5.1, align with the results of the study of Santos et al. (2021), identifying operational planning and management for documents as some of the difficulties encountered during the implementation process of the standard. In the competence dimension, the results are consistent with the work of Bibi and Aurangzeb (2021) and Balahadia et al. (2022), who found similar results in their study on awareness and challenges for implementing ISO 9001:2015 in higher education, both in public and private sector universities, identifying inadequate competency training for staff as one of the challenges in implementing the standards.

In the leadership dimension, it can be observed in the data that Clause 5: Leadership has the fewest reported non-conformances and observations. These repeated findings highlight the University's top management commitment in implementing and understanding the full benefits of ISO 9001:2015. These results support the insights gained from Studies by Celik and Ölcer (2018) and Dominguez et al. (2019) who emphasize the importance of top management commitment in promoting quality initiatives and continuous improvement inside organizations.

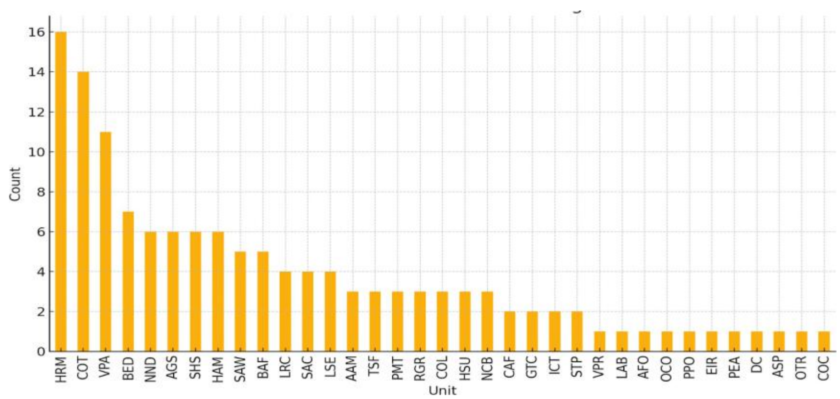



**Graph 3:** Distribution of NC Findings based on Specific ISO 9001:2015 Auditable Clause

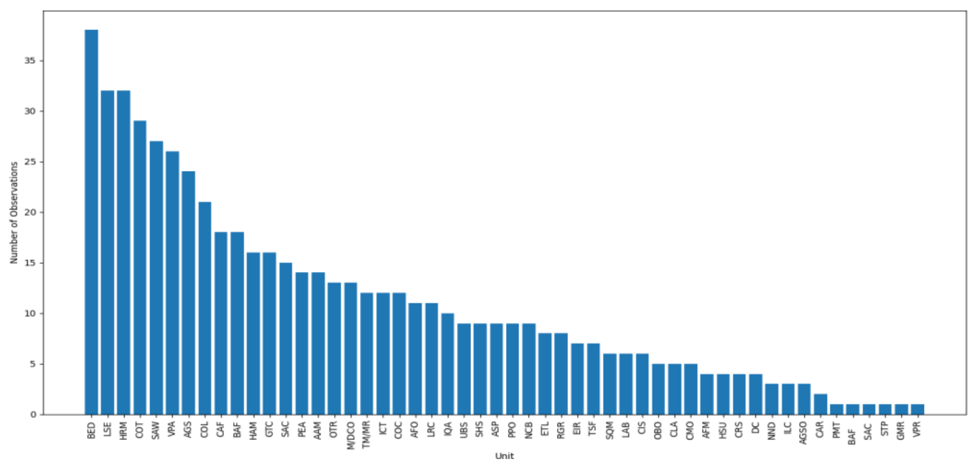


**Graph 4:** Distribution of Observation Findings based on Specific ISO 9001:2015 Auditable Clause

Graphs 5 and 6 show the distribution of NC and Observation findings based on specific audit units. It is indicated in Figure 5 that most NCs were determined in the units Human Resource Management (HRM), College of Technology (COT), and Vice President for Academic Affairs (VPA), having 16, 14, and 11 non-conformances, respectively, and in Figure 6, most observation findings were determined in the units Basic Education Department (BED) (38), College of Liberal, Arts, and Sciences (LSE) (32), and Human Resource Management (32), when non-conformance and observation findings were distributed based on specific units. The units demonstrate that they have missed the standard requirements of their processes. These units are entrusted with the commitment of the University to offer quality education and service that conforms with the standard requirements.

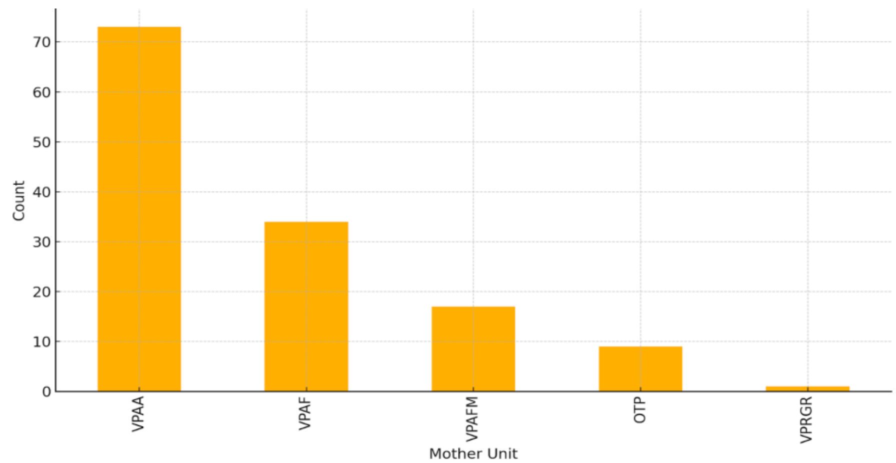



**Graph 5:** Distribution of NC Findings based on Specific Audit Units

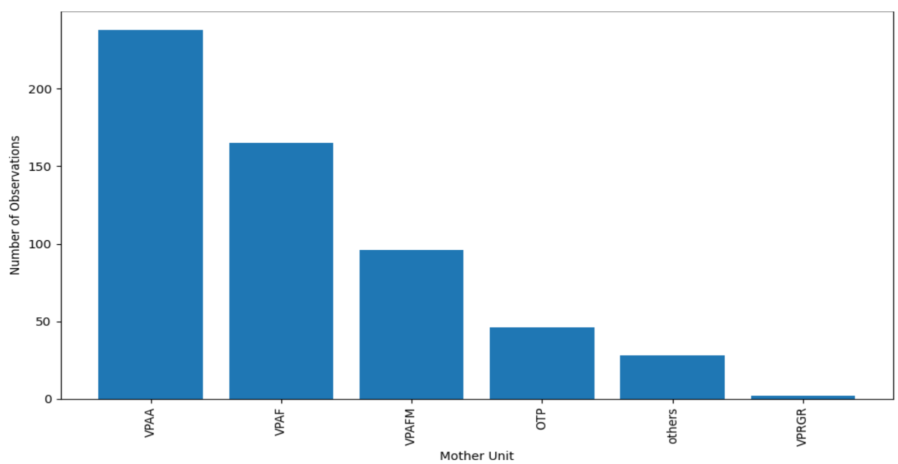



**Graph 6:**Distribution of Observation Findings based on Specific Audit Units

As observed in the distribution of non-conformance and observation findings in Graphs 7 and 8, the Office of the Vice President for Academic Affairs (VPAA), the Office of the Vice President for Administration and Finance (VPAF), and the Office of the Vice President for Augustinian Formation and Mission (VPAFM) have the highest number of both findings when the distribution was based on mother units. VPAA has 73 counted non-conformances, while VPAF has 34 and 17 for VPAFM. In the observation findings, these three mother units have 238, 165, and 96 observations, respectively. The data in Graphs 5 and 6 are consistent with Graph 7 and 8 because the audit sub-units, like HRM and COT, which have the most number of NCs and Observations belong to the mother units with high findings. VPAA is a mother unit that is entrusted with all academic affairs and VPAF is with finance and services, both of which have a direct bearing on implementing quality education in the University. VPRGR is a new mother unit entrusted with concerns related to research that has been included in auditing processes only lately, so its audit findings are the smallest in number among the units. However, when units are excluded from auditing processes or have been rarely audited, no valid monitoring happens regarding their fulfillment of standard requirements based on ISO 9001:2015 QMS.



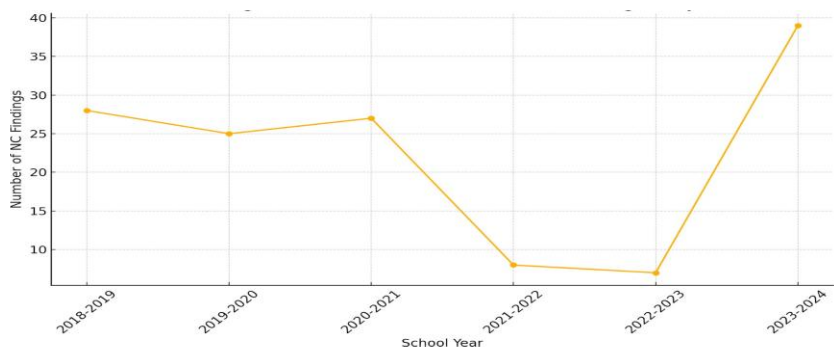

**Graph 7:** Distribution of NC Findings based on Mother Units



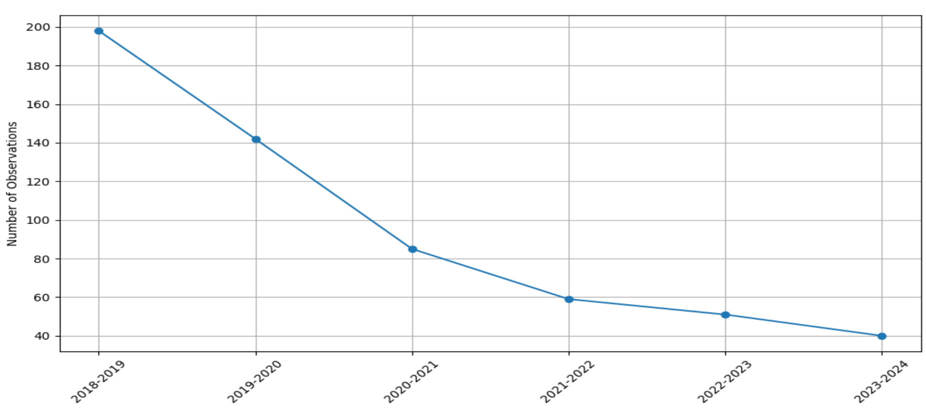

**Graph 8:** Distribution of Observation Findings based on Mother Units

**Trend Analysis by Academic Year**

The trend analysis indicates notable fluctuations in observations and a sharp increase in NC findings over the years as shown in Graph 9. The noted shifts in observations shown in Graph 10, as well as the significant increase in nonconformity (NC) findings, highlight the critical nature of the university's continuous quality improvement (CQI) activities. These findings not only illustrate the effectiveness of existing quality management practices but also emphasize the importance of continuous assessment and adaptation in response to evolving standards and external factors. These findings support Celik and Ölcer's (2018), Armawati et al.'s (2018), and Parso et al.'s (2021) recommendations for implementing ISO 9001 into organizations to encourage continuous improvement. From the data provided in Graphs 9 and 10, the NC findings from the academic years 2018-2019 through 2023-2024 show a notable decline in AY 2021-2022 and AY 2022-2023, with only a few NCs recorded, namely Clause 7 (Support) and Clause 8 (Operation) in AY 2021-2022 and Clauses 7, 8, and 9 (Performance Evaluation) in AY 2022-2023. As noted in the observation findings, a constant decrease has been seen in the past six academic years. This reduction of NCs was likely influenced by external factors such as the COVID-19 pandemic, which altered auditing practices and reduced face-to-face office operations since a shift to remote operations was implemented, thereby rendering many inapplicable provisions to a work-from-home environment. This is in contrast to the sharp increase in NCs during the academic year 2023-2024, totaling 39, and the constant decreasing of the observations during the internal audits. This suggests a potential return to more strict auditing processes as a response to the preparation of the university's transition from ISO 9001:2015 Quality Management System (QMS) to ISO 21001:2018 Educational Organizations Management Systems (EOMS) certification, where auditors used a generic checklist as a reference when checking the respective units' documented pieces of evidence, specifically containing requirements that are crucial when transitioning to a new certification resulting in determining NCs with Clause 8 (operation) and Clause 7 (support) having the most number with 10 and 6 NCs, respectively. This preparation of the university's transition to certification is made specifically through conducting gap analysis, training, and awareness to align with the new certification requirements.




**Graph 9:** NC findings trends from AY 2018-2019 to AY 2023-2024




**Graph 10:** Observation findings trends from AY 2018-2019 to AY 2023-2024

## 5. CONCLUSION

Clause 8 (Operation) on planning, implementing, and controlling the processes needed to meet the requirements has the result with highest number of non-conformances. Thus, Operation is an area, which is the focus of concern and an issue that needs to be addressed to fulfill the requirements of ISO 9001:2015 QMS to achieve continual improvement.

Clause 7 (Support) on determining and providing the resources having the most number of observations found. Following the ISO 9001:2015 QMS, the support area is missing its target standard requirement, resulting in the inconsistency or deficiency in determining and providing the resources needed for the continual improvement of the Quality Management System.

In the PDCA cycle, Clauses 7, which provides the foundation, and 8, which focuses on the operation, belong to the Do cycle of the Quality Management System, which shows weakness in the implementation of what was planned. Successful application of the PDCA cycle entails following the standards under Clauses 7 and 8 connecting planning and implementing in the processes, checking, monitoring, and measuring processes and products, and taking actions for continual improvement.

Mother unit (VPAA) and sub-units (HRM & COT) with direct responsibility for academic affairs and services have the most number of NC findings. Thus, the standard requirements of ISO 9001:2015 are not fulfilled by all units in the University, indicating that some units, including those excluded from auditing processes, are missing these specific requirements.

Covid 19 pandemic has changed auditing practices and reduced face-to-face office operations. The trend shows an increase in the number of NCs and a decrease in the number of Observations in AY 2023-2024, indicating a return to more strict auditing processes of ISO 9001:2015 QMS. How the auditing processes are conducted results in the increase or decrease of the findings for the University's continual improvement.

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# ACCOUNTANTS AS THE PREPARERS OF SUSTAINABILITY ACCOUNTING AND REPORTING: A QUALITATIVE FOCUS

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**ABSTRACT**

Sustainability accounting and reporting (SAR) has become increasingly vital for organizations due to rising demands from stakeholders for greater corporate accountability in social, economic, and environmental performance. This study seeks to examine and gain insights into accountants' roles and perspectives on SAR, as well as its implementation in the Malaysian context. A qualitative approach was employed, focusing on roles, perceptions, and influencing factors related to sustainability practices. The central aim aligns with the broader goal of sustainability: conserving resources for future generations while delivering positive outcomes to stakeholders. Seven professional accountants and SAR preparers from various industries were interviewed, and thematic analysis was applied. The findings reveal that three managerial roles are associated with sustainability implementation, with the informational role emerging as the most prominent, followed by decisional and interpersonal roles. Key factors identified are sustainability-related knowledge and awareness, government initiatives, and communication and networking need to enhance in SAR implementation. This study contributes to the practitioners of their responsibilities to sustainability disclosure standards. To policy makers with insights to develop frameworks that enhance accountants' involvement in sustainability. Future research could further explore the strategic dimensions of accountants’ roles in advancing sustainability initiatives.

**Keywords**: Sustainability accounting and reporting, informational, interpersonal, decisional

## 1. INTRODUCTION

Sustainability encompasses three core dimensions; namely, economic, social and environmental. In ensuring company’s long-term viability, it must cultivate a strong connection with its environment by integrating these dimensions into its operational strategies, including product development and facility management. economic growth, resource efficiency, social equity, and financial resilience, often reflected in procurement practices and contributions to community development.

Nevertheless, it is rather worrying that sustainability-related issues around the world are of an increasing trend. Generally, companies are still facing significant problems on sustainability that influence the achievement of goals related to physical health and psychological well-being. Zheng et. al (2021) highlights that in relation to the SAR-economic dimension, there are a mixed of circumstances whereby some companies and nations succeed in economic prosperity while others fail to achieve it. In the context of Malaysia, according to PwC data from June 2024[1], as of May 2024, 38% of the top 100 companies listed on Bursa Malaysia had their latest sustainability reports or

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[1] chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.pwc.com/my/en/assets/publications/2024/pwc-malaysia-gaps sustainability-report.pdf

statements independently assured. However, these companies face common challenges, including a lack of clear roles and responsibilities in preparing sustainability-related reports.

According to Microsoft's *Closing the Sustainability Skills Gap Report* (2022)[2], nearly 60% of sustainability managers and professionals lack academic qualifications in sustainability-related fields. The report also highlighted that the current sustainability training model is insufficient to address the skills gap necessary for industry growth. Regarding leadership within organisations, the report found that 68% of sustainability leaders were internally promoted, while over 40% of sustainability professionals had no more than three years of prior experience in the field. The report noted that many companies rely on skilled internal candidates with core transformational and functional expertise to adapt to sustainability roles, despite their lack of formal training in the discipline.

Hence, sustainability challenges grow more complex and urgent, many organizations struggle with inadequate systems, unclear responsibilities, and a lack of expertise in managing environmental and social impacts. Therefore, accountants are uniquely positioned to bridge the gap and accountants are no longer confined to traditional financial reporting roles but now they are key players in shaping sustainable and transparent business practices. Therefore, **t**his study explore the extent of accountants can play a managerial role in advancing sustainability within modern organizations. Next, the following section discuss on the accountant's roles, followed by the research methodology of the study covering the data collection and analysis method. Then, results and discussion and finally, a conclusion of this study and contribution for potential further research.

## 2. LITERATURE REVIEW

According to Kurki et. al (2024), opines that management accountants' personal perceptions of their professional roles may impede the advancement of sustainability initiatives. However, their analysis indicates that this situation is not stable and can be improved by recognizing the factors that encourage the development to corporate sustainability.

According to Judijanto et. al (2024), accountants plays significant role in strategic planning by delivering data and analysis that supports the development of a company's sustainability strategy. This also agreed by Dewi, Y. (2025), the role of accounting today is increase and no longer limited to financial record keeping and regulatory compliance but now they become strategic tool to drive sustainable development. Ramadhan et al (2023, management accountants in various organizations and various positions play role in enhancing the quality of a company's environmental and social information.

## 3. METHOD

This study a qualitative research approach to gather the data. This study focuses on the accountants and preparers of SAR their understanding of theroles and the factors to enhance implementation of SAR. e data was collected via personal and semi-structured interviews with seven key personnel who have extensive knowledge and qualifications relating to the implementation of sustainability accounting and reporting, as follows:

2 https://www.financialexpress.com/jobs-career/education-microsoft-unesco-sustainability-skill-skill-gap-education-climate-communication industry-business-growth-report-training-employment-2797694/

| Interviewees | Experiences |
|---|---|
| Chief sustainability Officer (CSO) | He has working experience in ESG, Corporate Sustainability. He is from banking industry. |
| Chief Operating Officer (COO) | He has more than 14 years' working experience and consultant for ESG practicing industrial product industry |
| Accountant 1 | She is an accountant and involve in sustainability and has working experience more than 15 years. She is from telecommunications industry |
| Accountant 2 | He has experience more that 20 years' experience in various industries. Currently he works in Plantations industry |
| Accountant 3 | He has experience almost 10 years. He is from oil and gas industry |
| Accountant 4 | She has experience as accountant more than 5 years. She is from technology industry |
| Accountant 5 | He has working experience more than 30 year in accounting profession. Currently, have involve in connectivity, ESG, Sustainability and Corporate Reporting. |

The interviewees were selected based on their organizations having received sustainability awards in 2023 and 2024. They also possess practical experience in sustainability implementation. A diverse range of industries was chosen to reflect different sectoral perspectives. Each interview session lasted approximately 30 minutes to 1 hour and was conducted online. All sessions were recorded for analysis. A thematic analysis approach was employed in this study, focusing on the following themes: contributing factors, interpersonal roles, informational roles, decisional roles, and sustainability practices. Data collection was carried out through semi-structured interviews.

## 4. RESULTS AND DISCUSSION

This chapter presents the data from the interviews. Generally, this study has found three important roles that accountants to perform in the effectiveness and success of sustainability accounting and reporting (SAR) in Malaysia. The three roles are informational, interpersonal and decisional roles. terpersonal roles involve interacting with others and are essential for building relationships, leading teams, and representing the organization. Informational role collect, process, and disseminate information, making them a critical node in communication networks. The decisional role is mak important decisions that affect their teams, projects, and the organization's strategic direction. Based on the interview, many interviewees belief that the informational role is important in the context of the implementation of sustainability accounting and reporting is higher compared to interpersonal and decisional role.

### 4.1 Accountant's Roles towards the implementation of sustainability accounting and reporting

Based on the findings, most interviewees opines the importance of accountant's involvement in SAR. One of the interviewee finds that from accounting go to reporting, *on the reporting you can do analysis so that's how the where, where the accountant play their role in term how in term in how the ESG can be return in the financial statement, means they accountant should play the roles in ESG and it provides sime retun in financial statement (Accountant 1). :I agree with you — we are one of the contributors to this sustainability effort (Accountant 3). Overall, accountants and similar professionals work in collaboration and have a relationship with this project and its sustainability goals (Accountant 5)*

According to the three managerial roles, the most interviewees agreed that informational role is important since they are primarily focus on managerial accounting, which is internal and operational, they can contribute to corporate strategy by providing financial analysis, forecasting, and risk management advice, accountants pay great attention to measuring and reporting sustainability impacts. highlightedin the implementation of SAR in their organization as:

> *" accountant take part to determine the how much we support the sustainability information in our company" (Accountant 3)*
>
> *accountant is needed to give some information in narrative statement*
>
> *" the accountants are needed because first they will identifying the cost, they will identify the budget and and financial risk" (Accountant 5)*

the most important role is the informational role, followed by decisional roles and interpersonal roles. Among them opines that they provide and disseminate the information to the high-level management to decide the sustainability practices in their organization. Meaning that, they providing the information and presenting to the upperlevel management level to make decision. The interviewees mentioned that "*they need to understand the ESG compliance so there are one department that a manage the compliance and provide the reports to higher level of directors to review. The second pillar is reporting and disclosure, where internal and external communication that we need to report to the board on our progress, the challenges, the mitigation plan and also updates to the regulators and shareholders (CSO).*

## 5. CONCLUSION

The purpose of the study is to examine the roles of accountants as the preparers of sustainability accounting and reporting. Based on the results from interviewees, shows that they perform in operational level and not the strategic level to make decision for the whole organization regarding the sustainability. This is because we can see their roles more on the dissemination information and providing the value. The findings shows that the accountants has limited role as they need to provide the information to the upper level in the organization for decision making. Sustainability-related knowledge and awareness, government initiatives, and communication and networking need to enhance in SAR implementation. This study contributes to the practitioners of their responsibilities to sustainability disclosure standards. To policy makers with insights to develop frameworks that enhance accountants' involvement in sustainability. Future research could further explore the strategic dimensions of accountants' roles in advancing sustainability initiatives.

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# UNDERSTANDING THE ROOT CAUSES OF NON-COMPLIANCE BEHAVIOUR AMONG PUBLIC PROCUREMENT PERSONNEL IN MALAYSIA: A CONCEPTUAL PAPER

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**ABSTRACT**

This conceptual paper explores the root causes of non-compliance behaviour among public procurement personnel in Malaysia, focusing on the organisational and behavioural dimensions that influence procedural adherence. Specifically, it examines how internal factors such as training and development, leadership quality, and information systems shape compliance outcomes in the public sector. Despite the existence of robust legal frameworks and digital infrastructures, persistent non-compliance continues to affect procurement outcomes, as reflected in recurring audit findings and regulatory breaches. Drawing on secondary literature, this study synthesises insights into how these organisational factors shape individual behaviour, institutional integrity, and procedural adherence. It argues that compliance is not solely driven by rules, but also by human behaviour shaped by competencies, leadership influence, and technological support. The paper concludes that fostering a compliance-oriented culture requires more than regulatory enforcement; it necessitates continuous investment in capacity building, ethical leadership, and accessible information systems. While offering conceptual and theoretical insights, the study is limited by its non-empirical nature. Future research should empirically test the proposed relationships to support evidence-based strategies that enhance procurement governance and public sector accountability in Malaysia.

**Keywords:** Public Procurement Compliance; Procurement Personnel Behaviour; Training and Development; Leadership Quality; Information Systems.

## 1. INTRODUCTION

Public procurement plays a vital role in delivering public services and supporting socio-economic development, accounting for a significant portion of national expenditure (Mansor, 2018; OECD, 2019). In Malaysia, however, persistent non-compliance with procurement rules and procedures remains a critical issue, despite the presence of comprehensive legal frameworks and digital systems (Azmi & Ismail, 2023). Recurring audit findings point to a systemic challenge where regulatory breaches and unethical practices continue to surface.

Procurement also aligns with Sustainable Development Goals (SDGs) 12 and 16, which emphasise responsible resource use, transparent governance, and institutional integrity principles that position procurement as a strategic tool for sustainability and good governance (Mansor, 2018; UN, n.d.).

While regulations and technology are in place, these alone have not succeeded in ensuring consistent compliance. This suggests that the issue lies deeper, in the behaviour of procurement personnel. Organisational elements such as inadequate training, ineffective leadership, and poorly supported information systems may contribute to weak compliance behaviour, which in turn results in non-compliance.

This study argues that to address non-compliance effectively, it is essential to first understand the factors that influence compliance behaviour. By analysing key organisational determinants training and development, leadership quality, and information systems this study seeks to identify the root behavioural causes that lead to non-compliance.

## 2. LITERATURE REVIEW

### 2.1. Public Procurement in Malaysia

Malaysia's public procurement system is a key mechanism for achieving development goals and ensuring the effective use of public funds. Governed by legal instruments such as the Financial Procedure Act 1957 and Treasury Instructions, it operates across three interrelated tiers: governance, procedures, and processes. These are supported by digital platforms like *ePerolehan* and *MyGPIS*, which aim to improve transparency and efficiency.

Over the past two decades, procurement practices have evolved from manual, paper-based processes to include digital systems, particularly for supply and service contracts. However, manual methods remain common for complex projects, resulting in a hybrid model. While digitalisation has enhanced accountability and processing speed, challenges persist, including uneven ICT access, limited digital skills, and system usability issues. Understanding how personnel navigate both manual and electronic platforms is essential to evaluating compliance behaviour in Malaysia's evolving procurement environment.

### 2.2. Procurement compliance behaviour

Procurement compliance behaviour refers to the extent to which public officials follow procurement rules, procedures, and ethical standards, ensuring transparency and proper use of public funds (Armstrong, 2005; Jaafar et al., 2016). While often seen as a legal obligation, compliance also reflects behavioural responses shaped by ethical norms, organisational expectations, and external pressures (Kelman, 1958; Yukl, 1989). This paper adopts the definition by Jaafar et al. (2016), viewing compliance as the consistent actions of procurement personnel in line with regulatory frameworks, including reviewing guidelines, avoiding shortcuts, and maintaining documentation. By examining what influences such compliance, this paper aims to understand why non-compliance persists in practice.

### 2.3 Determinants of Compliance Behaviour Among Malaysian Public Procurement Personnel

This paper highlights three key organisational factors including training and development, leadership quality, and information systems, that shape compliance behaviour and, by extension, help explain the root causes of non-compliance in Malaysia's public procurement context. Training equips staff with the knowledge and ethical grounding needed to navigate complex procurement rules, and its impact is stronger when it is relevant and continuous (Azmi & Ismail, 2023; Salas et al., 2012). Leadership plays a pivotal role by modelling ethical behaviour, reinforcing accountability, and fostering a culture of procedural adherence (Lawrence et al., 2023; Sebola et al., 2016). Meanwhile, digital platforms such as ePerolehan enhance compliance by standardising processes, reducing manual errors, and enabling real time oversight provided users are adequately trained and systems are user-friendly (Chen et al., 2021; Nawi et al., 2017).

## 3. METHOD

This study employs a library research approach, synthesising existing literature, audit reports, and policy documents to examine the organisational factors influencing compliance behaviour in Malaysia's public procurement. By identifying the behavioural drivers of compliance, the paper aims to explain the underlying causes of persistent non-compliance and lay the groundwork for future empirical investigation.

## 4. RELATIONSHIP BETWEEN TRAINING AND DEVELOPMENT, LEADERSHIP QUALITY AND INFORMATION SYSTEM AND PROCUREMENT COMPLIANCE BEHAVIOUR

Building on the identified behavioural determinants, this study further investigates how factors such as training and development, leadership quality, and information systems shape the compliance behaviour of public procurement personnel in Malaysia. These factors influence not only individual competencies but also the broader organisational environment in which procurement decisions are made.

Effective training enhances technical proficiency and ethical awareness, enabling personnel to navigate complex regulations confidently (Iqbal et al., 2024; Salas et al., 2012). Strong leadership provides direction, reinforces accountability, and establishes behavioural norms that promote rule adherence (Chikazhe et al., 2023; Farahnak et al., 2020). Meanwhile, robust information systems facilitate procedural consistency, minimise manual errors, and support real-time oversight provided they are user friendly and adequately supported (Adebayo et al., 2024; Nawi et al., 2017).

Conversely, deficiencies in these areas such as inadequate training, weak leadership, or poorly implemented systems can create confusion, reduce accountability, and increase the likelihood of rule violations. These organisational weaknesses are often the root causes of persistent non-compliance behaviour among procurement personnel.

## 5. CONCLUSION

This conceptual paper has examined how internal organisational factors such as training and development, leadership quality, and information systems, shape procurement compliance behaviour in Malaysia's public sector. Although regulatory frameworks are in place, the persistence of non-compliance behaviour among procurement personnel indicates that the problem lies not in the absence of rules, but in the behavioural and organisational weaknesses within public institutions.

The discussion suggests that deficiencies in these key areas can lead to confusion, weakened accountability, and procedural neglect, all of which foster non-compliant practices. Therefore, understanding and strengthening the factors that support compliance behaviour is crucial to addressing the root causes of non-compliance behaviour.

As this study is conceptual in scope, future research should apply empirical methods to validate these proposed relationships and generate practical insights for improving procurement governance and public sector accountability in Malaysia.

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# A COMPARATIVE CASE STUDY OF SMALL LOCAL FOOD MANUFACTURERS IN MALAYSIA AND INDONESIA: INSIGHTS FROM INTERNATIONAL SERVICE-LEARNING PROGRAMS

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**ABSTRACT**

Small local food manufacturers (SLFMs) play a key role in driving economic growth in emerging economies like Malaysia and Indonesia by generating employment and supporting national development. However, they face persistent challenges that hinder growth, competitiveness, and long-term sustainability. This paper presents findings from a collaborative research project involving accounting students from Universiti Teknologi MARA (UiTM), Universitas Singaperbangsa Karawang (UNSIKA), and Universitas Padjadjaran (UNPAD), conducted through international service-learning engagements in both countries. Data were collected through interviews, online platform analysis, and business advisory reports covering three food-related enterprises in each country. The study found that while SLFMs in both nations show strong owner commitment, product quality, and customer focus, they struggle with internal issues such as limited scalability, manual processes, lack of SOPs, high staff turnover, and weak financial and HR systems. Externally, they face rising input costs, supply chain disruptions, shifts toward digital consumer behavior, reputational risks, and regulatory compliance challenges. Malaysian SLFMs show more structured operations and stronger engagement with government support, yet core challenges remain similar. This research adds to the limited comparative literature on micro and small food enterprises in developing countries and offers insights for policymakers to support resilience, digital adoption, and sustainable growth in the sector.

**Keywords:** Small local food manufacturers, Developing countries, Challenges, Comparative Analysis, Service-Learning

## 1. INTRODUCTION

Micro and small-sized enterprises (MSEs), including Small Local Food Manufacturers (SLFMs), are vital to economic resilience in Malaysia and Indonesia. In 2023, MSEs contributed RM613.1 billion (39.1%) to Malaysia's GDP and around 61% to Indonesia's (Department of Statistics Malaysia, 2024; Antara News, 2024). They also accounted for 48% and 97% of the workforce in Malaysia and Indonesia, respectively (EY, 2023; Antara News, 2024), comprising 97.4% of registered businesses in Malaysia and 66 million, or 99%, in Indonesia (Department of Statistics Malaysia, 2024; KADIN Indonesia, 2023). While Malaysia's MSEs contributed RM152.2 billion (12.2%) to exports, their main focus remains domestic markets. Similarly, Indonesian SLFMs, though lacking detailed export data, play a major role in regional trade (KADIN Indonesia, 2023). Both governments acknowledge their importance, Malaysia through the MADANI model and Indonesia via regional development policies. Despite this, MSEs remain financially vulnerable. In Malaysia, many 2025 bankruptcy cases involved MSEs (CEIC Data, 2025), while 29% of Indonesian firms report financing as a key obstacle (IMF, 2024;

OECD & ERIA, 2024; World Bank, 2024). The G20 GPFI highlights a 19% GDP credit gap for MSMEs in emerging economies (G20 GPFI, 2024). SLFMs are particularly at risk: 50–60% of Malaysian SMEs fail within five years, and 30% in Indonesia fail within two, often due to funding and competition (SME Corp Malaysia, 2020; Ministry of Cooperatives and SMEs Indonesia, 2021). The COVID-19 pandemic further intensified these issues. This study explores SLFM challenges through a comparative case study involving students from Universiti Teknologi MARA (UiTM), Universitas Singaperbangsa Karawang (UNSIKA), and Universitas Padjadjaran (UNPAD), using an International Service-Learning (SULAM) approach to offer context-rich insights.

## 2. LITERATURE REVIEW

MSEs face persistent issues such as limited access to finance, tech adoption, regulatory burdens, and skill shortages. Studies by Berisha et al. (2023) and Zeqiri & Ismajli (2023) emphasized reliance on internal funding due to restrictive lending conditions. Chowdhury & Alam (2024) and Lopez & Navarro (2024) identified poor innovation and delayed tech adoption. While Mendoza & Ortega (2024) found digitalisation hindered by skill gaps, Gutiérrez et al. (2025) and Montoya & Garcia (2023) linked tech-readiness to resilience. COVID-19 highlighted the need for adaptability (Rahim & Latif, 2024; Hendrawan et al., 2024). Sustainability challenges remain, with barriers including finance and infrastructure (Mishra et al., 2025). Meanwhile, Patel & Mehta (2024), and Hossain & Rahman (2024) stressed policy support for green practices. Other issues include regulatory complexity (Tu et al., 2024), financial innovation (Gao et al., 2023), and mixed outcomes from digitalisation (Rosyidiana & Narsa, 2024). Human capital also drives outcomes (Tan & Lee, 2024; Mohammed & Idris, 2025). Sector-specific studies (e.g., Abebe & Tesfaye, 2024) show how local contexts shape performance. Global competitiveness remains a challenge, especially due to funding gaps (Kumar & Bansal, 2024). Innovation ecosystems can help (Fernandez & Silva, 2024), but weak leadership and low absorptive capacity persist (Nikolic & Vukovic, 2025). Additional concerns include e-commerce, cybersecurity, and financial literacy (Sharma & Gupta, 2024; Rombaldo Jr. et al., 2023). Despite vast research, gaps remain, particularly a lack of longitudinal or comparative qualitative studies. This study addresses those gaps through cross-country case analysis.

## 3. METHOD

A qualitative multiple-case study was used to examine SLFMs in Malaysia and Indonesia. Conducted under an international service-learning program, the study involved UiTM, UNSIKA, and UNPAD. Six businesses (three per country), including snack producers, a restaurant, and a café, were purposively selected. Each employed 3–15 staff and fit the SLFM category. Data collection included fieldwork, interviews, and analysis of digital presence via social media. Analytical tools included Value Chain, PESTEL, and Porter's Five Forces, culminating in SWOT profiles for each business. Comparative interpretation revealed common patterns such as manual processes, HR informality, and limited digital capacity, as well as country-specific issues like regulatory access and supply chain gaps. This triangulated approach enabled robust, policy-relevant insights into the structural and strategic challenges facing SLFMs across both nations.

## 4. RESULTS AND DISCUSSION

The study investigated six Small Local Food Manufacturers (SLFMs)three each from Malaysia and Indonesia, revealing shared strengths, weaknesses, opportunities, and threats. Among common strengths, strong owner commitment was key, with owners involved in daily operations, ensuring product quality and responsiveness. All enterprises emphasized authentic, traditional recipes and maintained affordable pricing to cater to B40 and M40 income groups. A strong customer-centric culture and strategic use of digital platforms (Instagram, Facebook, TikTok) were evident, enabling low-cost customer engagement and market outreach.

However, common weaknesses were found. Most relied on manual systems for bookkeeping, inventory, and orders, limiting scalability and efficiency. The absence of standard operating procedures (SOPs) created inconsistencies in production and service. Financial management was informal, with poor recordkeeping and mixing of personal and business finances. HR practices were unstructured, with reliance on family members or seasonal staff, often without contracts or training. Branding efforts lacked consistency, with weak packaging and minimal strategic marketing. Opportunities included digitalisation, as national initiatives like Malaysia's Go eCommerce and Indonesia's UMKM Go Digital offer support for adopting POS systems, accounting tools, and inventory apps. Marketing enhancements via social media, influencers, or loyalty programs were also feasible. Many businesses had growth potential through product diversification (e.g., catering, merchandise) and expanded delivery. Government support grants, certifications (MESTI, Halal), and training offered further potential, though uptake was more visible in Malaysia than Indonesia. Threats included rising competition from informal food vendors, supply chain volatility (e.g., price swings in key ingredients), and dependence on social media algorithms, which could reduce visibility. Staff burnout, high turnover, and online reputational risks from negative reviews were also common. Despite different national contexts, both countries showed similar operational gaps: informal finance and HR, low digital maturity, and reliance on owner-led customer engagement. However, Malaysian SLFMs showed more structured operations, semi-industrial production, and better regulatory awareness. Indonesian counterparts were more artisanal, home-based, and had less exposure to formal support programs, digital tools, or food certifications.

## 5. CONCLUSION

This study contributes empirical insight into SLFMs' realities in Southeast Asia and illustrates how international service-learning can foster experiential learning and community engagement. Limitations include small sample size, qualitative scope, and limited focus on regulatory and sustainability dimensions. Future research should broaden the sample, include quantitative data, and explore regional policies, food innovation, and long-term resilience. To move forward, entrepreneurs should adopt affordable digital tools, strengthen branding, and upskill in finance and HR. Policymakers must improve SME outreach, simplify access to support programs, and expand digital and certification incentives. Academia should continue integrating service-learning to drive research impact and capacity building across borders.

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# BRIDGING THE GAP: A CONCEPTUAL FRAMEWORK ON DIVERGENT PERCEPTIONS OF TAX COMPLIANCE STRATEGIES AMONG MALAYSIAN TAXPAYERS AND ACCOUNTING STUDENTS

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**ABSTRACT**

Despite increased attention to tax compliance strategies, the academic literature has yet to extensively explore the perception divergence between key societal stakeholders i.e., individual taxpayers and potential future practitioners, i.e., accounting students. Grounded in Deterrence Theory, Responsive Regulation Theory and The Slippery Slope Framework, this conceptual paper investigates the potential differing views on "carrot" (reward-based) and "stick" (penalty-based) approaches to tax compliance. In recent years, tax authorities globally have adopted hybrid strategies that combine both penalty and reward approaches. However, it is argued that limited studies have examined how these strategies are perceived by distinct groups with varying levels of tax literacy, exposure, and educational background. This paper posits that students, trained in technical tax compliance, may favour legalistic and penalty-based strategies, while the taxpayers may prefer relational trust, service-oriented enforcement, and rewards. This study may propose the framework that may potentially refine the future approach for better tax compliance. These may assist both future accounting curricular enhancement as well as enhancing tax compliance by revisiting the current tax compliance policies. Future research directions are proposed to empirically validate proposed framework that highlights how exposure, education, and real experience influencing support for different compliance strategies.

**Keywords** Tax compliance strategies; deterrence theory; responsive regulation; taxpayer perceptions; accounting education; sustainability; Malaysia

## 1. INTRODUCTION

Tax compliance is a key determinant of the fiscal health, especially in developing economies. In Malaysia, where tax revenue, especially, direct tax establishes as main of the government's revenue, it is always a priority for policymakers to ensure high and effective voluntary compliance. Despite robust enforcement mechanisms, including audits and penalties, persistent non-compliance has prompted the Inland Revenue Board (IRB) to incorporate reward-based mechanisms such as voluntary disclosure programmes (Hassan et al., 2022). However, the effectiveness of these hybrid strategies may depend not only on their economic judgement but also on how different societal groups perceive them.

This conceptual paper addresses a critical but understudied gap, i.e, the difference perceptions of tax compliance strategies between accounting students and taxpayers. Accounting students, who are also future tax professionals, are commonly trained in the legal-technical aspects of taxation, while taxpayers experience enforcement, incentives, and administrative processes firsthand. These divergent exposures likely result in different attitudes toward the effectiveness, fairness, and legitimacy of tax strategies. Thus, this study develops a conceptual framework to explain how knowledge, trust, enforcement experience, and educational orientation shape attitudes toward "carrot-and-stick" tax strategies. The contribution is twofold, i.e. (i) it extends behavioural compliance literature to include perception gaps between difference groups, and (ii) proposes a model that can empirical tested in the future study as well as embedded in future curriculum development.

## 2. LITERATURE REVIEW

In recent years many governments worldwide employ a combination of of penalty and reward-based tax compliance strategies that is commonly described as “stick” and “carrot” approaches. Stick strategies rely on enforcement tools like audits, penalties, and public shaming (Allingham & Sandmo, 1972; Sapiei & Abdullah, 2008; Coita et al., 2024;; Baihaki et al., 2024), as aligned with Deterrence Theory. Conversely, carrot approaches use the incentives like lower fines, better public service, or public recognition to encourage taxpayers (Alshira'h, 2024; Salleh et al., 2024). For instance, Malaysia's Special Voluntary Disclosure Programme (SVDP) aims to increase tax compliance by offering lower penalties for self-reported tax irregularities (Salleh et al., 2024), especially the SMEs (Hashim, 2024) whilst other evidences suggest that the magnitude, framing, and perceived fairness of these strategies strongly influence taxpayer response (Alshira'h, 2024; Bayissa, 2024).

Scholars and policymakers are concerned that if the policy is poorly designed and still relies too much on deterrence, it could undermine trust and lower intrinsic motivation to comply (Baihaki, 2024; Abdulrasaq & Babatunde, 2024). In other words, it is crucial to identify effective combination of "carrot' and "stick" in designing overall tax compliance-related policies (Putri et al.,2024). The role of sanctions and incentives in improving tax enforcement: A comparative study of developing countries. Reward mechanisms range from cash incentives and lotteries (Abdulrasaq & Babatunde, 2024; Satterthwaite, 2023) to public good provision (Carrillo et al., 2017), while stick components include traditional audits, shame lists and penalties (Manwaring & Regan, 2024).

Prior studies suggest that positive reinforcement promotes more sustainable compliance behaviors by “crowding in” tax morale especially in developing countries (Mebratu, 2024). Nonetheless there also potential disadvantages such as unfairness in rewards distribution and its costly program may reduce the tax revenue collection by the country (Tonetto, et al., 2024). Similarly, Fochmann & Kroll (2016) provide evidence that rewards have a negative overall effect on tax compliance. Thus, a correct balance of the carrot-stick paradigm is becoming more and more recognized in Malaysia as essential to sustainable tax governance. Nevertheless, putting this idea into practice still requires constant work. As a result, it is argued that the success of the "carrot" and "stick" combination also greatly depends on how different stakeholder groups view various components.

It is argued that the individual characteristics like knowledge orientation, trust in tax authorities, and tax morale play a crucial role in influencing compliance behavior (Idrus, 2024; Mebratu, 2024). Both theoretical and experiential knowledge orientation may directly affects how people understand and react to tax laws and enforcement procedures (Mebratu, 2024). For instance, accounting students who learn more theoretically, may perceive that a more legalistic or technical perspective, emphasizing rules, auditing practices, and statutory requirements, is preferred or most effective in tax compliance. Kirchler (2007) on the other hand, found that taxpayers, usually rely on real experience, which includes their experience encounters with the tax authority and the real-world repercussions of compliance or non-compliance. This discrepancy could help to explain why taxpayers may favour "carrot” approaches while students may view "stick" strategies as more important.

Further, trust in tax authorities is another important factor. Trust and voluntary compliance are fostered by high levels of perceived fairness, transparency, and legitimacy in tax enforcement (Kirchler et al., 2008; Gangl et al., 2015). According to Hassan et al, (2022), higher levels of trust are directly related with perceived tax officials' integrity and clear tax communications. Hassan et al., (2022) provide evidence that both perceived tax officials' integrity and clear tax communications. of lower the likelihood of tax evasion. On the other hand, an over-reliance on punitive measures without commensurate measures to foster trust can encourage resistance, fear, and calculated avoidance.

Lastly, one of the most reliable indicators of long-term voluntary compliance is tax morale, which is the intrinsic driver to pay taxes (Torgler, 2011; Feld & Frey, 2007). Sociocultural norms, the perceived fairness of the tax burden, and the perceived use of tax revenue all influence tax morale. Students and other younger or less experienced people are argued to frequently have lower tax morale. Perhaps it is due to their still lacking in a sense of civic duty or a lack of exposure to the effects of public underfunding (Alm & Torgler, 2006). Therefore, these moral and psychological foundations aid in the explanation of why different stakeholders react differently to the same tax laws

Thus, it can be concluded that it is crucial to identify not just the approaches that can be employed, but also how they are perceived and handled. It is argued that taxpayers place more value on fairness, trust, and cooperative compliance, whereas accounting students, who are frequently trained in technical frameworks, choose enforcement-heavy approaches Taxpayers are perceived to value elements such as fairness and incentives including amnesties (Yücedoğru & Sarisoy, 2020). In addition, prior studies found that in a low-enforcement environment, students also show a greater tolerance for tax evasion and lower tax morale (Kirchler et al., 2008; Torgler, 2011). This divergence suggests an education-practice gap. While tax curricula focus on legal compliance, they often understate behavioral dimensions. The gap has implications for sustaining an effective tax system as its success depends on both administrative capacity and citizen engagement. Tax policies may be enacted based on erroneous assumptions if these conflicting perceptions are not addressed, which could diminish their efficacy. Thus, investigating these perception gaps can help develop a more stakeholder-aligned and context-sensitive mix of carrot-and-stick components, as an effort to assist policymakers as well as refine accounting curricula in the future.

## 3. THEORETICAL FOUNDATIONS IN TAX COMPLIANCE BEHAVIOR

**Deterrence Theory:** Deterrence Theory is commonly used as a fundamental theory used in the existing literature of tax compliance. This theory originates from economic models of crime (Becker, 1968; Allingham & Sandmo, 1972). This theory is developed based on the assumption that taxpayers are utility-maximizing agents who balance the advantages of evasion against the possibility of punishment. Nonetheless, the critics argue that Deterrence Theory oversimplifies human behavior by ignoring psychological, moral, and social factors, despite the fact that multiple studies have confirmed a positive relationship between audit probability and compliance (Slemrod, 1992; Okafor & Farrar, 2021).

**Theory of Responsive Regulation:** This theory is based on the dynamic and hierarchical enforcement model introduced by Ayres & Braithwaite (1992). According to Responsive Regulation Theory, tax authorities start with persuasion and only increase sanctions when required. In nations like Australia and Malaysia, this model serves as the foundation for contemporary compliance strategies (Braithwaite, 2003).

**The Framework of the Slippery Slope:** The Slippery Slope Framework (SSF) was created by Kirchler et al., (2008) to combine trust and deterrence. Both the perceived legitimacy of the tax authority (trust) and the fear of punishment (power) contribute to compliance. This dual-path model is supported by empirical validation by Gangl et al. (2015). It has been demonstrated that fairness and trust have a positive impact on compliance in Malaysia (Hassan et al., 2023).

## 4. THE CONCEPTUAL FRAMEWORK.

This conceptual framework explains how different stakeholder groups, specifically taxpayers and accounting students, form their preferences toward tax compliance strategies. These two groups differ in how they gain knowledge, their level of trust in tax authorities, and their tax morale, which is their internal motivation to comply. It is argued that accounting students tend to rely on theoretical and technical knowledge gained through formal education whilst in contrast, taxpayers have real-life experience with tax systems, including direct interactions with enforcement and rewards. These different forms of exposure influence how each group views the fairness and effectiveness of various tax compliance strategies in addition to that, trust in tax authorities plays a central role. Therefore, it is expected that when individuals believe tax enforcement is fair, transparent, and legitimate, they are more likely to support voluntary or cooperative approaches. Tax morale on the other hand shaped by civic values and perceived government accountability, further affects willingness to comply.

Based on these factors, stakeholders may evaluate the effectiveness of two main types of compliance strategies i.e., reward-based strategies (such as tax amnesties, cash rewards, and recognition) and penalty-based strategies (such as audits, fines, and legal sanctions) as main factors to encourage compliance. Their perceived effectiveness of these approaches influences whether they prefer a "carrot," "stick," or hybrid strategy in their tax compliance behaviour.  In summary, the framework highlights how knowledge, trust, and moral values interact with stakeholder identity to shape attitudes toward tax compliance. This understanding can help improve both policy design and accounting education by aligning strategies with stakeholder perspectives.

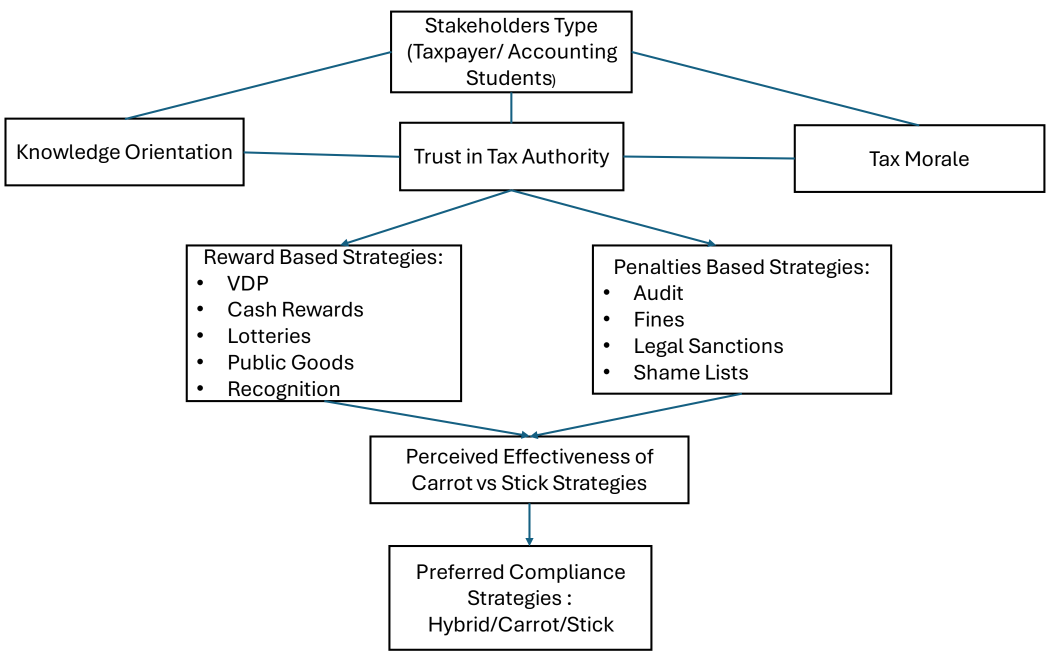


**Figure 1.** The Conceptual Framework

## 5. CONCLUSION

This study investigates how different stakeholder groups, i.e., taxpayers and accounting students perceive tax compliance strategies within Malaysia's evolving use of both penalty ("stick") and rewards-based ("carrot") mechanisms. Aligned with in Deterrence Theory, Responsive Regulation Theory, and the Slippery Slope Framework, this study highlights how variations in knowledge, trust, and tax morale influence stakeholder responses to specific components of enhancing tax compliance strategies such as audits, amnesties, lotteries, and shame lists. These gap in the two groups ' perception carry important implications for designing an effectiveness, fair, and sustainable of compliance strategies.

This study offers four main contributions. Theoretically, it advances the integration of behavioural and regulatory theories by incorporating stakeholder identity and psychological mediators into the existing framework. Practically, it provides tax authorities such as LHDN with insight into how different groups may respond differently to the same strategies, thus enabling more adaptive and targeted enforcement of tax compliance enforcement design. Educationally, this study may also highlight the need to bridge the gap between technical knowledge and ethical reasoning through curriculum design that include behavioural taxation, tax ethics, and civic responsibility. Lastly, the proposed conceptual framework serves as a groundwork for future empirical testing to validate stakeholder-specific responses and optimize tax policy design.

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# DETERMINANTS AND CONSEQUENCES OF ESG SCORES: THE ROLE OF GOVERNANCE AND FINANCIAL CHARACTERISTICS IN MALAYSIAN FIRMS

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**ABSTRACT**

This study investigates the development of Environmental, Social, and Governance (ESG) practices in the Malaysian capital market, with a focus on how governance mechanisms and firm characteristics influence ESG scores, and whether these scores are associated with market-based firm performance. Despite growing regulatory attention, including the recent introduction of the Bursa Malaysia ESG Rating Platform (BERP), ESG adoption remains inconsistent. Drawing on Institutional Theory, this study investigates how internal governance structures and external regulatory pressures influence ESG adoption, and whether ESG performance contributes to firm-level financial outcomes. Using fixed-effects panel regressions, the analysis finds that the presence of a sustainability committee, board gender diversity, and regulatory developments, particularly the implementation of the Bursa ESG Reporting Platform (BERP), are positively associated with ESG scores. Board attendance is also positively associated with ESG performance in the full sample of firms. However, ESG scores do not show a statistically significant relationship with firm performance indicators such as market value, Tobin's Q, or return on assets (ROA). These findings suggest that ESG initiatives in Malaysia are primarily driven by institutional alignment and compliance with evolving regulatory expectations, rather than by direct financial motivations. The findings lend support to the use of Institutional Theory in understanding ESG engagement in emerging markets, where regulatory compliance, legitimacy considerations, and governance structures may play a more prominent role than immediate performance outcomes

**Keywords**: ESG score; corporate governance; Malaysia; firm performance; sustainability

## 1. INTRODUCTION

Environmental, Social, and Governance (ESG) practices have gained significant traction in Malaysia's capital market, driven by global investor interest in sustainability and strengthened domestic regulation. Regulatory bodies such as the Securities Commission Malaysia and Bursa Malaysia have introduced ESG disclosure requirements to promote greater transparency and accountability (Securities Commission Malaysia, 2021). Initiatives like the FTSE4Good Bursa Malaysia Index have further incentivised listed firms to align with international ESG standards (Bursa Malaysia, 2023). ESG performance is now increasingly viewed as a signal of corporate resilience, long-term value creation, and risk mitigation (Adeneye et al., 2023; Yu et al., 2024)

Despite regulatory momentum, empirical research on ESG in Malaysia remains limited, particularly in identifying the internal firm-level drivers of ESG outcomes. Most existing studies focus on cross-country comparisons, leaving a gap in understanding how firm governance and financial characteristics influence ESG scores within the Malaysian context (Alam et al., 2022).

This study addresses that gap by examining whether governance attributes—such as board size, gender diversity, CEO duality, board meeting attendance, and the presence of a sustainability committee—play a more significant role in shaping ESG performance than traditional financial indicators. The study also considers whether recent corporate governance reforms, including the Malaysian Code on Corporate Governance (MCCG) 2021, are translating into improved ESG integration and firm outcomes (Le, 2024).

## 2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### 2.1 Theoretical Framework

This study draws on Institutional Theory to examine how regulatory and normative pressures shape ESG adoption in Malaysian firms. Institutional Theory offers a useful perspective for understanding how organizations adopt certain practices, such as ESG reporting, in order to gain legitimacy and ensure their long-term survival within a given institutional environment (DiMaggio & Powell, 2010; Glover et al., 2014). In Malaysia, coercive pressures arise from regulatory interventions by bodies such as the Securities Commission Malaysia and Bursa Malaysia. Notably, the 2015 Sustainability Reporting Framework to strengthen ESG disclosures and promote transparency (Elaigwu et al., 2022). These instruments compel listed firms, particularly those on the FTSE Bursa Malaysia Index, to align with international ESG reporting standards.

Mimetic pressures further influence ESG adoption, as firms replicate the successful ESG strategies of industry peers to enhance competitiveness and attract international investors (Paridhi et al., 2024). Normative pressures, shaped by evolving business norms and professional expectations, are reinforced through frameworks such as the Malaysian Code on Corporate Governance (MCCG) 2021, which encourages board-level oversight of ESG practices (Del Gesso & Lodhi, 2024; Galbreath, 2012). Collectively, these institutional forces shape ESG integration in Malaysian firms, making Institutional Theory highly relevant for examining how governance characteristics affect ESG performance

## 3. METHOD

This study employs panel data comprising firms listed on the Bursa Malaysia from 2018 to 2024. Data were collected from Refinitiv ESG and financial databases. Unlike many prior studies, no industry sector was excluded, allowing for a more comprehensive and representative analysis across Malaysian public-listed firms.

A panel data regression model with firm fixed effects is applied to control for time-invariant firm-level heterogeneity. In the first stage, a fixed effects panel regression is employed to analyse the internal drivers of ESG performance. The dependent variable is the ESG Score, while the independent variables include Board Size (BS), Sustainability Committee presence (SusCom), Board Attendance (BA), Board Gender Diversity (BGD), and a BERP dummy indicating regulatory alignment. Firm-level controls include firm size (Size), leverage (Lev), and growth (rev_growth). Monetary variables were log-transformed to address skewness. The model is specified as:

$$ESGScore = \beta_0 + \beta_1(BS) + \beta_2(SusCom) + \beta_3(BAttAv\_dec) + \beta_4(BGD\_dec) + \beta_5(BERP) + \beta_6(Size) + \beta_7(TDTA) + \beta_8(Rev\_Growth) + \epsilon$$

In the second stage, three firm performance measures are used as dependent variables: Market

Value (MV), Tobin's Q, and Return on Assets (ROA). The key explanatory variable is the ESG Score, along with controls for Size, growth, leverage, and a Covid-19 dummy to account for pandemic-related effects. The aim is to assess whether ESG performance contributes to market-based or accounting-based firm value. The performance model is estimated separately for each dependent variable using panel regressions with fixed effects and clustered robust standard errors.

All estimations are conducted using Stata 14.

## 4. RESULTS AND DISCUSSION

The findings reveal that not all governance characteristics significantly influence ESG scores. Board Size was not a significant determinant in either the ESG 50 or full sample. However, the presence of a Sustainability Committee showed a consistently strong and statistically significant positive effect on ESG scores across both models, highlighting its critical role in ESG integration. Board Gender Diversity was also positively associated with ESG scores, significant at the 10% level in the ESG 50 sample and strengthening to 1% in the full sample. Board Attendance showed a significant effect only in the full sample, suggesting possible variations in governance commitment over time. The BERP dummy, representing regulatory influence, demonstrated a robust and highly significant positive effect in both models, underscoring the strong coercive pressure of ESG-related regulatory developments in Malaysia.

In examining the consequences of ESG scores on firm performance, results indicate no statistically significant relationship between ESG scores and Market Value, Tobin's Q, or ROA. This suggests that, within the Malaysian context, enhanced ESG performance may currently serve more as a tool for institutional legitimacy than as a direct driver of financial outcomes. Despite some variation in the effects of size and leverage across models, the lack of a significant link between ESG scores and firm performance supports the view that ESG practices in emerging markets may be adopted more to satisfy institutional pressures than to drive financial outcomes.

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# BRIDGING THE SKILLS GAP: BIG DATA ANALYTICS, DIGITAL TRANSFORMATION IN TAXATION, AND THE EVOLUTION OF THE ACCOUNTING PROFESSION

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**ABSTRACT**

This study investigates the skills gap between accounting education and industry expectations in the context of digital taxation. Employing a mixed-methods approach, the study integrates a critical literature review, expert interviews, and pilot surveys among educators and professionals. Findings indicate a significant mismatch in competencies, particularly in data visualization, predictive analytics, and the use of digital tax systems. This research contributes to the discourse on accounting education reform and offers actionable recommendations for aligning academic curricula with technological advancements, including the integration of BDA and digital tax modules into accounting programs and professional training.

**Keywords:** Big data analytics, digital transformation, taxation, accounting profession, skills gap

## 1. INTRODUCTION

The accounting profession is facing a paradigm shift due to the proliferation of big data analytics (BDA) and the digital transformation of tax systems. These trends require accountants to possess not only traditional financial skills but also proficiency in data analysis, digital tools, and technological adaptability. Reshaping the accounting profession is at a pivotal juncture, by the accelerating convergence of Big Data Analytics (BDA), digital transformation in taxation, and evolving global regulatory expectations. In Malaysia, the Inland Revenue Board (IRBM) is spearheading a nationwide rollout of mandatory e-Invoicing by 2024–2025, aligning with the MyDigital Blueprint and OECD tax digitization frameworks (LHDNM, 2025; Ministry of Finance Malaysia, 2021; World Bank, 2020). This rapid shift toward real-time reporting and API-driven tax platforms underscores the urgent need for accounting professionals to acquire data-centric competencies.

However, a substantial skills gap exists. Many graduates and mid-career accountants lack the digital literacy, data visualization expertise, and technological fluency demanded in today's tax landscape (Askary & Askarany, 2024; Fogarty & Campbell, 2024). Despite BDA's potential to enhance fraud detection, tax compliance, and strategic decision-making (Appelbaum et al., 2017), its integration into accounting education remains limited (Imjai et al., 2024).

This study aims to bridge this critical divide by examining (1) how BDA and digital tax tools are transforming the accountant's role, (2) the specific skill gaps hindering professional readiness, and (3) actionable strategies to align accounting education and continuous professional development with these evolving demands. Through a combination of literature review, expert interviews, and pilot surveys, this research contributes to future-proofing the accounting workforce in the digital era.

## 2. LITERATURE REVIEW

### 2.1 Digital Transformation in Taxation

Digital transformation in taxation refers to the use of automated platforms and data-driven technologies to improve compliance, transparency, and tax governance (Moll & Yigitbasioglu, 2019). Countries such as Italy, Chile, and Malaysia have implemented real-time e-invoicing systems to reduce tax fraud and improve administrative efficiency (World Bank, 2020).

### 2.2 Big Data Analytics and the Accounting Profession

BDA enables accountants to move beyond descriptive reporting to predictive and prescriptive analysis, offering real-time insights for decision-making (Appelbaum et al., 2017). However, accounting curricula have been slow to adapt. Studies highlight the need for integrating data science, machine learning, and visual analytics into professional training (Warren et al., 2015).

### 2.3 Skills Gap in Accounting Education

The literature reveals a persistent gap between academic offerings and the technical competencies needed in practice (Pan & Seow, 2016). Employers are increasingly seeking "hybrid accountants" proficient in digital platforms, tax analytics, and programming languages such as Python or R (Yoon et al., 2015). However, most academic institutions lag in updating their curricula accordingly.

## 3. METHODOLOGY

This study employed a critical literature review methodology supported by pilot surveys and expert interviews. Sources were drawn from peer-reviewed journals, professional reports, and policy briefs published between 2015 and 2025. Surveys targeted accounting educators and final-year students across five Malaysian universities, while interviews engaged professionals from public and private sectors.

## 4. FINDINGS

The findings of this study highlight a persistent and critical skills gap in the accounting profession, particularly concerning data analytics and digital tax competencies. Accounting graduates often lack practical skills in data visualization, predictive analytics, and the use of emerging digital tax technologies (Askary & Askarany, 2024; Imjai et al., 2024). Educators are aware of this deficiency but frequently cite systemic barriers such as rigid accreditation structures and insufficient faculty training as major hurdles to curriculum reform (Fogarty & Campbell, 2024). Meanwhile, employers increasingly emphasize the demand for hybrid professionals who possess both financial acumen and digital proficiency, including familiarity with tools like Power BI, Python, and e-Invoicing systems (Abdullah & Almaqtari, 2024). Despite the growing importance of these skills, Continuous Professional Development (CPD) programs remain underutilized, and few initiatives exist to support lifelong learning or upskilling in digital competencies within the profession (World Bank, 2020).

## 5. DISCUSSION

The accounting profession must evolve by embracing technological competencies and reforming traditional education. Integrating BDA and digital taxation modules into core accounting programs is critical. Cross-disciplinary collaborations with IT faculties, incorporation of real-world datasets, and accreditation flexibility are vital enablers. Professional bodies must also mandate digital literacy as a core competency in licensing exams.

## 6. CONCLUSION

BDA and digital taxation are redefining the skill set required of accounting professionals. Bridging this skills gap necessitates systemic educational reform, stronger industry-academia linkages, and strategic investments in upskilling. The future of accounting hinges not on resisting technological change, but on adapting to it through proactive, data-informed, and ethically grounded practices.

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# DRIVERS OF MSME BUSINESS GROWTH AFTER RECEIVING PRODUCTIVE ZAKAT: A CONCEPTUAL PAPER

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**ABSTRACT**

The paper is aimed to unveil the factors driving the business growth of zakat productive assisted Micro, Small, and Medium Enterprises (MSME). Despite productive zakat which focused on sustainable entrepreneurship, MSMEs are still facing problem in developing their business and their sustainable. This conceptual paper is developed based on literature reviews from journal articles, theses, books, and reports related to zakat distribution, MSME development, and empowerment practices. The paper identifies six key factors that are commonly discussed in the literature, which include business support, mentoring, marketing, product innovation, reporting, and communication channels. These factors are found to be closely linked with the capability of MSMEs to utilise zakat funds effectively. Business support must be aligned with the operational needs of the entrepreneurs, while structured training programs help strengthen business confidence. Marketing and product innovation are important to enhance market presence and customer engagement. Reporting and communication serve as tools for transparency and professionalism. Most of the reviewed literature agrees that the integration of these factors with zakat assistance can lead to more meaningful and sustainable outcomes for MSMEs. However, current zakat models still tend to prioritise short-term financial aid rather than long-term empowerment. Further research is necessary to validate the effectiveness of these drivers and to propose improved frameworks for zakat-based entrepreneurship support. This paper is limited to MSMEs receiving assistance in the productive zakat program and cannot be generalised to other beneficiaries of social welfare.

**Keywords:** MSME development, Productive zakat, Business growth, Empowerment.

## 1. INTRODUCTION

MSMEs serve as a critical foundation for Malaysia's economic development and social well-being. In response to their importance, productive zakat has been introduced to support eligible MSMEs, especially those led by asnaf entrepreneurs. However, despite receiving such assistance, many MSMEs continue to face challenges related to business stagnation, limited market access, and weak capacity to sustain operations. These circumstances raise concerns about whether current zakat-based support mechanisms are sufficient to promote long-term business resilience.

## 2. LITERATURE REVIEW

Previous studies on zakat in Malaysia have primarily focused on areas such as theoretical perspectives (Tarimin, 1995), legal compliance (Idris et al., 2003; Ahmad, 2004), accounting issues (Rahman, 2003), management practices (Nik Mustapha, 2013), and public awareness or payment behaviour (Nor et al., 2004; Ahmad and Wahid, 2005). However, relatively few studies have investigated the business performance of asnaf recipients or evaluated the impact of zakat institutions in supporting MSME development.

Zakat agencies, particularly the State Zakat Boards, are primarily tasked with the collection and distribution of zakat funds to eligible recipients. While some agencies provide interest-free financing, entrepreneurship training, and business support initiatives, the scope and continuity of such efforts are often limited. Recent findings by Riyansyah, Jusoh and Ulyana (2023) indicate that zakat-based microfinance contributes positively to business growth, household income, and self-reliance through capacity building. Similarly, Al-Salih (2021) emphasised that zakat plays a pivotal role in redistributing wealth and contributing to social welfare and economic sustainability. Fadli (2011) demonstrated that Muslim entrepreneurs play a significant role in economic growth, but highlighted that effective zakat management depends on institutional integration, fairness, and accountability. A common limitation across these studies is that existing zakat programs tend to focus heavily on providing capital or equipment, while other essential components such as mentoring, performance monitoring, and marketing support are frequently overlooked.

## 3. METHOD

This paper adopts a conceptual approach based on a comprehensive review of existing literature, including journal articles, policy documents, and institutional reports. Empowerment Theory is used as the underlying theoretical foundation, with a focus on how resource access and agency development contribute to the sustainability of MSMEs. The study does not involve empirical data collection and is intended to serve as a basis for future research and policy exploration.

## 4. SIGNIFICANCE OF THE STUDY

This study proposes a shift in the role of productive zakat from a basic financial aid mechanism to a structured empowerment tool. It suggests that zakat programs should integrate both financial and non-financial components, including coaching, capacity building, market exposure, and performance tracking. Such an approach aligns with the national direction of the Ekonomi MADANI framework and supports the goals of inclusive and sustainable economic growth outlined in the Sustainable Development Goals. The discussion contributes to academic understanding, while offering potential guidance for policymakers and zakat administrators working with MSME development in the context of Islamic social finance.

## 5. CONCLUSION

Productive zakat has the potential to act as a catalyst for MSME growth, but its impact is limited when support is provided in isolation. Guided by Empowerment Theory, this paper argues that the effectiveness of zakat depends not only on the value of the assistance provided, but on how well recipients are equipped to act independently and sustain their business operations. Further empirical research is recommended to validate the identified gaps and assess how integrated support systems can strengthen the long-term outcomes of zakat programs.

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# FINANCIAL PERFORMANCE AND DIRECT EMISSIONS DISCLOSURE OF QUOTED FINANCIAL FIRMS IN NIGERIA


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## ABSTRACT

This study investigates the financial performance implications of direct (Scope 1) carbon emission disclosure among quoted Nigerian financial firms. Specifically, it assesses whether Return on Sales ROS) and Return on Equity (ROE) differ between firms that disclose their Scope 1 emissions and those that do not. Utilizing secondary data from 38 Nigerian financial firms between 2015 and 2020, a two-sample t-test was employed for analysis. The findings indicate no statistically significant difference in ROS and ROE between disclosing and non-disclosing firms. This suggests a complex interplay between financial performance and direct emission disclosure within the Nigerian financial sector, potentially aligning with legitimacy theory, where disclosure might serve more as a reputation management tool rather than directly impacting short-term financial metrics.



**Keywords:** Financial performance, Direct Emissions, Scope 1, Return on Sales, Return on Equity.


## 1. INTRODUCTION

Climate change and global warming have spurred international protocols like the Kyoto Protocol and the Paris Agreement, aiming for a net-zero emission target (Wang, 2023; Jiang et al., 2023). Carbon emissions, predominantly from human activities and fossil fuel consumption, are a primary driver of this environmental challenge (IPCC, 2022; Ganda & Milondzo, 2018). Consequently, stakeholders, including investors, customers, and governments, are increasingly pressuring companies to track, manage, and report their carbon footprints, leading businesses to develop diverse emission reduction strategies (Rohani & Abdel-Kader, 2021).

Carbon accounting commonly categorizes emissions into three scopes: Scope 1, Scope 2, and Scope 3 (Emmanuel et al., 2023). Direct emissions, or Scope 1 emissions, originate from sources owned or controlled by an organization, such as the combustion of fossil fuels in company-owned vehicles or on-site machinery and heating (Ganda & Milondzo, 2018; Emmanuel et al., 2023). These direct emissions represent a significant portion of a firm's carbon footprint and are crucial for understanding and managing environmental impact.

A common perception among managers is that engaging in environmentally focused practices incurs substantial costs that negatively affect profitability. However, if profit maximization and environmental initiatives can align, addressing environmental issues becomes less contentious (Rohani & Abdel-Kader, 2021). Previous research has explored the broader relationship between carbon emissions and financial performance. Nevertheless, there's a limited understanding of whether a direct financial difference exists specifically between organizations that disclose their Scope 1 emissions and those that do not. This study aims to fill this gap by focusing on quoted Nigerian financial firms, a sector with unique operational characteristics regarding direct emissions compared to manufacturing or industrial entities.

## 2. LITERATURE REVIEW

Direct emissions, also known as Scope 1 emissions, are greenhouse gas emissions that occur from sources that an organization owns or controls. These emissions are directly linked to the firm's operations and include activities such as the combustion of fossil fuels for heating, powering machinery, and running company-owned vehicles (Ganda & Milondzo, 2018; Emmanuel et al., 2023). Companies report these emissions as direct greenhouse gas emissions resulting from their internal operations. Firms with high direct emissions may face stricter environmental regulations and are often expected to provide more information about their carbon management compared to firms with lower emissions. Understanding and managing Scope 1 emissions is essential for assessing a firm's environmental impact and its overall carbon footprint.

According to Jiang et al. (2023) and Milne et al. (2009), companies with weaker environmental records are generally more likely to disclose information. This aligns with legitimacy theory, which posits an anticipated negative relationship between the level of environmental disclosure and actual carbon performance. From this viewpoint, organizations with subpar environmental performance are more inclined to seek legitimacy through increased transparency (Patten, 2015; Qian & Schaltegger, 2017). When companies are driven by the need to reveal their decarbonization efforts, a process referred to as carbon disclosure, they utilize carbon accounting as a means to promote sustainable practices while aiming to gain legitimacy from their stakeholders (Di Vaio et al., 2024). Based on the reviewed literature, this study posits two major hypotheses as stated:

**H01** – There is no significant difference between the mean of return on equity (ROE) of quoted Nigerian financial companies that disclose their direct emissions (scope 1) vis- a- vis those that do not disclose.

**H02** -There is no significant difference between the mean of return on sales (ROS) of quoted Nigerian financial companies that disclose their direct emission (scope 1) vis- a -vis those that do not disclose.

## 3. METHODOLOGY

This study utilized secondary data sourced from the Nigerian Exchange Group (NGX), focusing on listed financial firms in Nigeria. The dataset was limited to 38 firms that had complete financial and disclosure information for the entire study period of 2015 to 2020. The financial performance proxies are Return on Sales (ROS), measured as net income divided by total revenue, and Return on Equity (ROE), measured as net profit divided by total equity.

Direct emission (Scope 1) disclosure was measured as a binary variable. Quoted Nigerian financial firms that explicitly disclosed their direct (Scope 1) carbon emissions were coded as 1, while those that did not disclose were coded as 0. It is important to clarify that Scope 1 emissions inherently refer to combustion-based operations such as fossil fuel consumption from sources owned or controlled by the firm. The binary variable captures the act of disclosing these emissions, not the emissions themselves.

A two-sample t-test was employed as the estimation technique to assess the differences in the means of ROS and ROE between the two groups (disclosing vs. non-disclosing firms). The analysis for this study was conducted at a 5% level of significance. This methodology does not control for other factors that might influence financial performance, such as firm size, age, or specific sub-sector within the financial industry, which represents a limitation of the study.

## 4. RESULTS AND DISCUSSION

### 4.1 Hypothesis One - Direct Emission Disclosure (T test of ROS)

Table 1 shows the T-test of return on sales of quoted Nigerian financial firms that disclose vis-a-vis those that did not disclose direct emission. The Return on Sales (ROS) for quoted Nigerian financial service firms that did not disclose direct carbon emissions was 1.966 (approximately 197%), whereas those that disclosed such emissions recorded an ROS of 0.188 (around 19%). The difference in financial performance between firms that did not disclose and those that disclosed direct emissions is 1.778, equivalent to approximately 178%. This implies that the firm's efficiency in attaining maximum sales while minimizing expenditure is 178% higher than the financial performance of those that disclose direct emissions. The 2-tail T-test shows no significance as 0.5492 is in the acceptance region of the data distribution and is less than the critical value of 0.5834. This indicates no significant difference between the return on sales of quoted Nigerian financial firms that disclose on direct emission vis-à-vis those that did not disclose @ a 5% significance level. Since, T. statistics is less than the critical value of t, the null hypothesis is accepted, that is there is no significant difference between the mean of return on sales of quoted Nigerian financial service firms that disclose direct emissions (scope 1) vis-a-vis those that do not disclose.

**TABLE 1.** Two sample t- test of ROS

| Group | Obs | Mean | Std. Err. | Std. Dev. | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| No disclosure | 143.000 | 1.966 | 2.493 | 29.816 | -2.963 | 6.895 |
| Disclosed Direct carbon emission | 85.000 | 0.188 | 0.051 | 0.472 | 0.086 | 0.290 |
| Combined | 228.000 | 1.303 | 1.563 | 23.599 | -1.776 | 4.383 |
| Diff | | 1.778 | 3.237 | | -4.601 | 8.157 |
| diff = mean (no disclosure of direct emission) – mean (disclosed direct emission) | | | | | | |
| t = 0.5492 degrees of freedom = 226 | | | | | | |
| Ho: diff = 0 | | | | | | |
| Ha: diff < 0 Ha: diff! = 0 Ha: diff > 0 | | | | | | |
| Pr (T < t) = 0.7083 Pr(\|T\| > \|t\|) = 0.5834 Pr(T > t) = 0.2917 | | | | | | |

*Source: Authors own contribution*

### 4.2 Hypothesis Two - Direct Emission Disclosure (T test of ROE)

Table 2 shows the T-test of financial performance using the Return on Equity of quoted Nigerian financial firms that disclose direct emission vis-a-vis those that did not. The Return on Equity (ROE) for quoted Nigerian financial service firms that did not disclose direct carbon emissions was 0.122 (approximately 12%), whereas those that disclosed such emissions recorded an ROE of 0.085 (around 9%).The difference between the financial performance of those that did not disclose vis-a-vis those that disclose direct emission is 0.037, which is 4%. In other words, the financial performance of those that did not disclose direct emissions is 4% higher than those that disclosed direct emissions. The 2-tail T-test shows no significance as 0.2041 is in the acceptance region of the data distribution and is less than the critical value of 0.8384. This implies no significant difference exists between the ROE of quoted Nigerian financial firms that disclose on direct emission vis-à-vis those that did not disclose @ a 5% significance level. Since, T. statistics is less than the critical value of t, the null hypothesis is accepted, that is there is no significant difference between the mean of return on equity of quoted Nigerian financial service firms that disclose direct emissions (scope 1) vis-a-vis those that do not disclose.

**TABLE 2.** Two-sample T test of ROE

| Group | Obs | Mean | Std. Err. | Std. Dev. | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| No disclosure | 143.000 | 0.122 | 0.137 | 1.635 | -0.148 | 0.392 |
| Disclosed Direct carbon emission | 85.000 | 0.085 | 0.019 | 0.178 | 0.047 | 0.124 |
| Combined | 228.000 | 0.108 | 0.086 | 1.298 | -0.061 | 0.278 |
| Diff | | 0.036 | 0.178 | | -0.315 | 0.387 |
| diff = mean (no disclosure) – mean (Disclosed Direct carbon emission) | | | | | | |
| t = 0.2041 degrees of freedom = 226 | | | | | | |
| Ho: diff = 0 | | | | | | |
| Ha: diff < 0 Ha: diff! = 0 Ha: diff > 0 | | | | | | |
| Pr(T < t) = 0.5808 Pr(\|T\| > \|t\|) = 0.8384 Pr(T > t) = 0.4192 | | | | | | |

*Source: Authors own contribution*

## 5. CONCLUSION

This study examined whether there is a financial difference between quoted Nigerian financial firms that disclose direct emission of carbon emissions (scope 1) vis-à-vis those that do not disclose. The result concludes that there is no significant difference between the ROE of quoted Nigerian financial firms that disclose on direct emission (scope 1) vis-à-vis those that did not disclose; there is no significant difference between the ROS of quoted Nigerian financial firms that disclose on direct emission (scope 1) vis-à-vis those that did not disclose. The results support legitimacy theory and indicate that carbon disclosure is employed as a tool for legitimization, helping companies to mend their image or cultivate a favorable green reputation. Companies often choose specific carbon information to disclose when utilizing carbon disclosure as a legitimizing tool.

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# MALAYSIA'S TERTIARY STUDENT'S TO THE TENDENCIES INTEREST OF INTEGRITY AND THE THREAT OF CORRUPTION

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**ABSTRACT**

Corruption remains a significant threat to governance, social equity, and sustainable development, particularly in developing countries. In Malaysia, efforts to promote integrity and combat corruption have been central to public policy, yet the attitudes and perceptions of the younger generation—especially tertiary students—remain under explored. Under the National Anti-Corruption Plan (NACP) 2019–2023, the Malaysian government has mandated that higher education institutions introduce and implement integrity and anti-corruption courses beginning in 2023. The primary objective is to cultivate a strong sense of ethical responsibility among students, ensuring they recognize their role in upholding integrity and contributing to national efforts to combat corruption. This study investigates the relationship between the tendency toward integrity (IT) and the perceived threat of corruption (CT) among tertiary-level students in Malaysia. A total of 219 participants, primarily from higher education institutions in Malaysia, were surveyed to explore how awareness and perception of corruption influence personal integrity values. The research employed descriptive statistics, correlational analysis, and linear regression to examine the interplay between the two constructs. The findings revealed a strong and statistically significant positive correlation between perceived corruption threat and integrity tendency. Specifically, the perceived corruption threat was found to explain 62.4% of the variance in integrity tendency, suggesting that as students become more aware of corruption and its consequences, they are more likely to develop and exhibit a stronger inclination toward ethical behavior and personal integrity. These results highlight the importance of reinforcing anti-corruption education and awareness campaigns within academic settings. Cultivating integrity among students may serve as a key strategy for long-term cultural and institutional reform. The study contributes to the growing body of literature on youth integrity development and underscores the role of perceived societal threats in shaping ethical values.

**Keywords:** Integrity Tendency, Corruption Threat, ethical behaviour, perception, value.

## 1. INTRODUCTION

As the chairman of ASEAN, Malaysia recognizes corruption as a critical issue requiring urgent and effective action across all societies, as it is a severe crime and systemic disease hindering progress (Kapeli & Mohamed, 2015). While Malaysia ranks as the second least corrupt nation in Southeast Asia per

Transparency International's Corruption Perception Index, its anti-corruption efforts remain "unsatisfactory" (Kapeli & Mohamed, 2019), with its CPI ranking dropping from 51st in 2019 to 57th in 2020 (Mallow, 2021). Despite ongoing measures, corruption has become so entrenched that Malaysia has been labeled a kleptocracy, with past anti-corruption strategies criticized for being narrowly focused and neglecting key political-economic factors like business-political ties, patronage networks, and money politics—core drivers of grand corruption (Siddiquee & Zafarullah, 2022). Eliminating corruption is now a national priority, particularly in education, as Malaysia strives toward high-income developed status (Yusoff et al., 2023). Discussions on integrity often highlight workplace weaknesses, with Ishar et al. (2021) defining integrity through values like honesty, trustworthiness, and diligence, though institutional flaws and external pressures can undermine these ideals. While many integrity issues involve minor personal lapses, they still require correction, emphasizing the need for adherence to ethics, public interest, and thorough work (Ishar et al., 2021). Though Malaysia's government actively combats corruption, its anti-corruption outcomes have fallen short of targets, a conclusion echoed by other researchers (Kapeli & Mohamed, 2019). Historical analysis, CPI trends, and policy evaluations inform the current study, but further research is needed to deepen the analysis, particularly on integrity's role in curbing corrupt behavior.

## 2. LITERATURE REVIEW

Despite numerous initiatives, Malaysia continues to grapple with systemic corruption due to insufficient data on the effectiveness of anti-corruption measures. Immediate attention is needed to address why these strategies fall short, as failure risks squandering government resources that could otherwise benefit the public (Kapeli, N. S., & Mohamed, N., 2015). The Malaysian Corruption Perception Index has declined since 2000, reflecting the nation's worsening reputation as corruption infiltrates both governmental and professional spheres (Mohammed, N. F., Lokman, et. al, 2023). Legislative tools like whistle-blower protections and freedom of information laws are necessary but insufficient without a cultural shift. Root causes such as money politics, patronage networks, and blurred institutional roles perpetuate corruption, undermining integrity management. Siddiquee (2010) emphasizes that transforming future leaders' attitudes is critical, as high corruption levels demand coordinated, systemic interventions. Disturbing insights emerge from studies on Malaysian students' attitudes toward corruption. The Integrity Institute of Malaysia (IIM) found that 35.7% of participants in 2017 did not consider gift-giving in exchange for services corrupt, while 37.3% saw no issue with fraudulent claims for sponsored work (Anis & Zarina, 2017). MACC's 2017 report revealed 16% of university students were willing to accept bribes if given the opportunity—a sharp rise from 10.7% in 2015 (Mallow, 2021). Equally troubling, 18.2% admitted they would pay bribes to avoid consequences, and only 66.3% were willing to report corruption, down from 74.1% in 2015 (Bernama, 2017). These trends threaten the efficacy of anti-corruption campaigns, highlighting the urgent need for ethical recalibration among younger generations.

Anti-corruption education aims to instill integrity through school-based programs, curricula, and habituation, equipping youth to reject fraudulent practices (Heliany et al., 2023). While Malaysia and Indonesia integrate anti-corruption values into school subjects and university courses, Singapore's focused character education curriculum has secured its position as the third-least corrupt nation globally. Quantitative studies suggest that integrity education can transform corrupt cultures, yet the impact of Malaysia's current programs remains unclear (Mohammed et al., 2023). Cultivating resilience against corruption requires a smooth, lifelong anti-corruption education system that spans from elementary to university levels. Early exposure develops correct information and critical thinking, preparing young people to maintain social integrity. Singapore's achievements demonstrate how education and strict enforcement work together (Heliany et al., 2023).

This study focuses at how anti-corruption and integrity education might lessen the likelihood of future offenses. Through school-based programs and experience learning, this form of education, which concentrates on character development, enables people to oppose corrupt activities (Heliany et al., 2023). Although anti-corruption courses have been established in Malaysia, their efficacy depends on their uniform application at all educational levels. The comparative effectiveness of Singapore's all-encompassing strategy shows that institutional dedication and education may greatly lower corruption. Malaysia must give priority to longitudinal research in order to assess the effects of curriculum and fill up the gaps in students' moral application and cognition.

## 3. METHOD

Integrity and anti-corruption education are seen to be essential in reducing corrupt practices. Thus, a cross-sectional survey was carried out between February and April 2025 among 219 tertiary students from the following five institutions which were Politeknik Tuanku Syed Sirajuddin (PTSS), Universiti Islam Antarabangsa Tuanku Syed Sirajuddin (UniSIRAJ), Universiti Malaysia Sarawak (UniMAS), Universiti Utara Malaysia (UUM), German Malaysia Institute (GMI), and Universiti Islam Antarabangsa Tuanku Syed Sirajuddin (UniSIRAJ). All of these students had finished the Integrity and Anti-Corruption course, which is a standardized curriculum across certificate, diploma, and degree levels in accordance with higher education department guidelines. In order to ascertain how such schooling affects future behavior and cultural attitudes against corruption, the study used questionnaires in both Malay and English to evaluate respondents' demographic backgrounds, propensity to value integrity, and perceptions of corruption dangers.Given that the used of odd-numbered scales allow for balanced evaluation of unobservant individual decisions, a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) was used to capture nuanced answers, including a neutral option for impartial input (Bhandari & Nikolopoulou, 2020). The results show whether integrity and anti-corruption awareness have been strengthened by the course and previous school-level curriculum, which may additionally provide insight into the course's possible long-term effects on preventing corrupt activities.

## 4. RESULTS AND DISCUSSION

The data contains comprehensive statistics that reveal the characteristics of the respondents as well as the relationships between variables such as integrity propensity and corruption danger. The data will be methodically analyzed, the findings will be assessed, and the data will be arranged in relation to previously published studies. We'll talk about correlation and regression results, using relevant academic sources.

### 4.1 Correlation and Regression Analysis

Two fundamental statistical techniques used in both academic and professional fields to examine the relationships between variables, predict results, and verify theoretical hypotheses are correlation and regression analysis. Numerous domains, including as the social sciences, medicinal research, economic modeling, and engineering systems, make substantial use of these analytical methods. The current conversation looks at the theoretical underpinnings and empirical support for the conceptual framework and practical importance of these methods. The Pearson correlation coefficient (r), which ranges from -1 (perfect inverse relationship) to +1 (perfect direct relationship), is a standardized metric used in correlation analysis to objectively evaluate the linear association between variables. By (1) detecting possible correlations between the variables being evaluated, (2) providing initial support for further multivariate analysis, and (3) assisting in the development of hypotheses for more intricate studies, this analytical method plays crucial roles in research. The subsequent analysis yields the following findings:

**Table 1: Correlations Analysis**

| | | CT | IT |
|---|---|---|---|
| Corruption Threat (CT) | Pearson Correlation | 1 | .790** |
| | Sig. (2-tailed) | | .000 |
| | N | 219 | 219 |
| Integrity Tendency (IT) | Pearson Correlation | .790** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 219 | 219 |

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation matrix (Table 1) reveals a statistically significant and substantively strong positive relationship between corruption threat (CT) and integrity tendency (IT), as evidenced by Pearson's $r = 0.790$ ($p < 0.01$). This robust correlation coefficient, exceeding the conventional threshold of 0.5 for large effect sizes (Cohen, 1988), indicates that approximately 62.4% of the variance in integrity tendency ($R^2 = 0.624$) can be explained by perceptions of corruption threat. The observed relationship demonstrates not merely statistical significance ($p < 0.05$) but also practical significance, suggesting that heightened awareness of corruption serves as a potent catalyst for ethical orientation. Methodologically, the correlation analysis satisfies key assumptions for valid interpretation. The inter-item correlations remain below the critical threshold of 0.70 (Mueller, 1996; Pallant, 2007), effectively ruling out multicollinearity concerns that could otherwise compromise the integrity of subsequent regression analyses. This psychometric rigor ensures that each construct maintains sufficient discriminant validity while demonstrating meaningful covariance. Theoretical implications of these findings are particularly noteworthy. The strong positive correlation empirically supports Gächter and Schulz's (2016) "ethical reinforcement" hypothesis, which contends that exposure to unethical behavior can paradoxically strengthen moral resolve through reactive ethical sensitization.

**Table 2: Regression Analysis**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | .790a | .624 | .622 | .27569 | .624 | 359.765 | 1 | 217 | .000 | 1.932 |

a. Predictors: (Constant), Corupption Threat
b. Dependent Variable: Integrity Tendency

The regression analysis (Table 2) provides compelling evidence supporting the observed correlation, with the model explaining a substantial proportion of variance in integrity tendency (IT). The corrected $R^2$ of 0.622 validates the model's resilience against possible overfitting, while the $R^2$ value of 0.624 shows that corruption threat (CT) accounts for 62.4% of the variance in IT. A highly significant Pearson correlation value between CT and IT ($r = 0.790$, $p < 0.01$), which shows a strong positive association, supports this finding. With $R = 0.790$ and $R^2 = 0.624$, the regression coefficients demonstrate CT's strong explanatory power and show that it explains 62.4% of the variation in IT. Such a high $R^2$ value indicates outstanding variable fit efficiency, as demonstrated by Bramante et al. (2015). Furthermore, according to Morck et al.

(2000) and Durnev et al. (2003), this high explanatory power most likely results from the incorporation of ethics-specific data as well as other pertinent elements that significantly affect the variance of the model. The F-value of 359.765 ($p < 0.0001$), which indicates an excellent overall model fit, validates the statistical significance of the model. The Durbin-Watson statistic further validates the trustworthiness of the model by confirming that there is no significant autocorrelation. These outcomes are consistent with Audi's (2012) research showing that ethical behavior can be stimulated by perceived corruption through proactive reactions.

### 4.3 Discussion

The study found a statistically significant positive correlation between perceived corruption threat (CT) and integrity tendency (IT), suggesting that people are more likely to act ethically when they are more aware of corruption and vice versa. CT is a powerful predictor of IT, as evidenced by the strong linear connection (R2 = 0.624) that shows changes in perceptions of the corruption threat account for 62.4% of the variance in integrity inclinations. High CT scores indicated respondents' awareness of corruption as a societal or environmental risk, while respondents' self-reported high IT scores reflected their own ethical standards. This dynamic may be influenced by both genuine ethical awareness and social desirability bias, in which participants may exaggerate their moral position to appear favorable. The results paradoxically aligned with a "moral reactance" effect, which goes against the stereotype that corruption normalizes unethical behavior (e.g., "If everyone is corrupt, why should I be honest?"). This is because increased awareness of corruption seemed to motivate principled conduct, possibly as a defensive response to perceived threats to personal or societal values. This pattern may be partially explained by Malaysia's obligatory Integrity and Anti-Corruption university course, which systematically teaches students about the risks of corruption and ethical behavior, leading to a cohort that is more inclined to identify CT with improved IT. Thus, the findings challenge traditional corruption tolerance theories, proposing instead that targeted anti-corruption education can convert threat perceptions into ethical motivation.

## 5. CONCLUSION

Anti-corruption education must extend beyond formal academic institutions to encompass all members of society, requiring sustained efforts through mass media (radio, television) and digital platforms to raise awareness about corruption's severity and the importance of integrity in governance (Post Borneo, 2016). As the leading anti-corruption body, the Malaysian Anti-Corruption Commission (MACC) should spearhead public education campaigns, while innovative initiatives like the Malaysian Youth Council's "Youth Bribe Busters" (April 2021) engage younger generations (Malay Mail, 2021). Legislative reforms are equally critical: the government must address Transparency International's findings, strengthen enforcement mechanisms, and ensure media freedom to investigate corruption allegations (Malaysiakini, 2021). Additionally, all claims undermining institutional integrity warrant prompt, thorough scrutiny (Mallow & Syed Abdul Rahman, 2021), alongside systemic reforms to administrative structures to combat corruption effectively.

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# *AMIL* HIGHER LEARNING INSTITUTIONS (HLI) WEB BASED DISCLOSURE REPORTING

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**ABSTRACT**

The role of Higher Learning Institutions (HLIs) as appointed amil zakat entities in Malaysia presents a unique opportunity to enhance educational funding through Islamic charitable contributions. However, despite their potential, the level of accountability and transparency in Zakat Fund Management remains insufficient, particularly in online disclosure practices. This study investigates the extent of web-based disclosure among HLIs appointed by Lembaga Zakat Selangor (LZS), using a disclosure index encompassing financial, performance, and political accountability. Data was collected from the official websites and social media platforms (Facebook and Instagram) of 17 HLIs. The results reveal a generally low level of disclosure, especially in financial and political dimensions, which undermines stakeholder trust and institutional credibility. These findings highlight the urgent need for HLIs to enhance their online reporting mechanisms, aligning with Islamic accountability principles to strengthen donor confidence and uphold the trust bestowed upon them as amil zakat. Improved transparency could reinforce their role in sustainable educational development and compliance with the maqasid al-shariah.

**Keywords:** amil,zakat, higher leaning institution (HLI), accountability, web-based disclosure.

## 1. INTRODUCTION

The funding of educational institutions has emerged as a critical issue globally. Many education systems continue to grapple with budget constraints, which have resulted in inadequate resources to support quality learning outcomes. In response, various financing mechanisms have been introduced to diversify income streams and enhance institutional sustainability.

In the Malaysian context, one such mechanism is the appointment of Higher Learning Institutions (HLIs) as *amil zakat*—authorized agents entrusted with the collection and distribution of zakat. This initiative provides HLIs with an opportunity not only to support their operational and developmental needs but also to assist deserving student populations, thereby aligning financial practices with social justice principles embedded in Islamic teachings.

Despite this potential, concerns have emerged regarding the accountability and transparency of zakat fund management within HLIs. Instances of misappropriation or inefficient use of zakat funds have drawn scrutiny, calling into question the adequacy of internal governance structures and reporting mechanisms. Online disclosure practices—an increasingly vital tool for public communication and stakeholder trust—remain underdeveloped among appointed HLIs.

Given the growing expectation for transparency and good governance, it is essential to examine the extent to which HLIs fulfill their responsibilities as *amil zakat*, especially through digital platforms. This study aims to assess the level of web-based disclosure among HLIs appointed by Lembaga Zakat Selangor (LZS), focusing on financial, performance, and political accountability. The findings contribute to a better understanding of how Islamic accountability principles are operationalized in practice and highlight areas for improvement in ensuring the integrity and sustainability of zakat-based educational financing.

## 2. LITERATURE REVIEW

### 2.1 Educational institutions fund

Research indicates that public funding is the most effective model of financing education institutions (Karimov, 2021). This is because it provides stable and predictable funding for institutions, allowing them to plan and execute long-term educational programs.

Among the sources of public funds that can be given the attention by educational institutions is through the appointment of *amil zakat* by zakat authority bodies. In Malaysia, the appointment of educational institutions as *amil zakat* has been implemented since 1998. *Amil zakat* is refers to entities or organizations that being appointed by state zakat authority bodies in collecting and distributing zakat, which is a form of charity that is obligatory in Islam. The appointment of *amil zakat* from educational institutions consist of higher education institutions, colleges and schools. This appointment allows educational institutions to collect zakat from payers and distribute it to their residents, especially students (Md Ismail M.N and Ali N.A, 2022). In addition, the income received as an *amil zakat* can be used for the purpose of managing the institution.

### 2.2 Higher Learning Institutions (HLI) a Amil Zakat

*Wakalah* concept is the concept where Zakat Institution appoints individual or institutions to collect zakat on their behalf. The collection of zakat then can be used by the institutions for the conduct of their organisations. Amil at IPT is appointed because it is said to be closer to local payers and the asnaf group and knows about the shortcomings that are more important to be helped, especially among the poor, needy, fisabilillah asnaf among the IPT citizens themselves. Thus, there are responsible to report the usability of the zakat fund as much as other NGO.

In Islam, Amil Zakat is allowed to receive a reasonable amount of compensation for their services in collecting and distributing Zakat. This compensation is known as *Ujrat-e-Amil* or wages of the collector. The payment of *Ujrat-e-Amil* is considered a legitimate expense of Zakat collection and distribution. The amount of *Ujrat-e-Amil* is not fixed by Islamic law and can vary depending on the circumstances and the amount of Zakat collected. However, it is important to note that the compensation should be reasonable and should not exceed what is necessary to cover the costs of collecting and distributing Zakat.

The increasing numbers of *amil zakat* might cause to some competition among different zakat collection organizations. This competition can arise due to a number of factors, such as differences in the quality of services provided, level of trust among potential donors, level of understanding about zakat, attitude on zakat and the perception of effectiveness in distributing zakat funds to eligible recipients (Mohd et al., 2017). If the zakat is being collected and distributed in accordance with Islamic principles and in a transparent manner, competition among different organizations should not be a concern. Ultimately, the primary focus is to ensure that the zakat is collected and distributed in the most effective and efficient manner possible. In fact, competition can give a positive effect on the efficiency and effectiveness of the collection and distribution of zakat funds, as entities may strive to provide better services and to be more transparent and accountable in their operations.

### 2.3 Accountability

Islamic accountability theory serves as the primary theoretical foundation for web disclosure reporting in HEIs. This theory is rooted in the Islamic principle of *amanah* (trust), which mandates that individuals and institutions are accountable to Allah and society for their financial and governance practices (Haniffa & Hudaib, 2007). According to Islamic accountability theory, zakat institutions and HEIs acting as amil zakat must ensure that financial disclosures are transparent, truthful, and accessible to stakeholders, including zakat payers and recipients. This theory emphasizes the moral and ethical obligations of institutions to disclose their financial activities comprehensively, aligning with the broader goals of *maqasid al-shariah* (objectives of Islamic law).

### 2.4 HLI Web based disclosure

Disclosure of information is an important aspect in gaining trust from zakat payers. More attention should be paid to web disclosure information because majority of zakat payers choose to pay zakat online. Web disclosure involves the voluntary dissemination of information to the public, and this includes performance disclosures which provide stakeholders with an understanding of how an organization is performing in terms of meeting their goals and impacting their target beneficiaries (Lee & Blouin, 2019). Web disclosure is important for promoting transparency, accountability, compliance, accessibility, and communication. By providing information on its website, an organization can build trust with stakeholders and demonstrate its commitment to ethical and legal standards.

M. S. Adamu et al. (2016) found that the intention of a *muzaki* (zakat payers) paying his zakat to a zakat organization is influenced by the level of *muzaki*'s trust in the zakat organization measured by *muzaki* perceptions of the board capital of zakat institutions, muzaki perceptions on zakat disclosure practices, and *muzaki* perceptions on stakeholder management models. The finding was supported by (Mohd et al., 2017) who found that the decision to pay zakat not only affected by payer's attitude but also their trust toward institution to handle the zakat fund collected properly and also their degree of understanding about zakat. Whereby the findings of research by (Ramli & Kamaruddin, 2017) suggest that there is a need for zakat institutions in Malaysia to enhance its accountability disclosure especially via websites. By increasing the disclosure of necessary information through websites, it is expected that the level of public trust can be improved (Rizka Nurfadhilah & Sasongko, 2019). Besides that, those which had websites generally appeared to provide opportunities for dialogic communication with stakeholders and the wider community (Nair et al., 2022). A comprehensive review of relevant literature should be conducted to identify research gaps and position the current study within prior research.

## 3. METHOD

### 3.1 Sampling

The total population for this study is all appointed Amil by Lembaga Zakat Selangor (LZS). The list of the HLI was obtained from LZS website. The website disclosure covered the website, facebook (FB) and Instagram (IG) pages.

| No. | University | Website | FB | IG |
|---|---|---|---|---|
| 1. | Universiti Islam Antarabangsa Malaysia (UiAM) | https://division.iium.edu.my/ief/financial-assistance/# | / | / |
| 2. | Universiti Kebangsaan Malaysia (UKM) | https://www.ukm.my/zakat | / | / |
| 3. | Universiti Putra Malaysia (UPM) | https://wazan.upm.edu.my/ | / | / |
| 4. | Universiti Teknologi Mara (UiTM) | https://zawaf.uitm.edu.my/ | / | / |
| 5. | Universiti Islam Antarabangsa Selangor (UiS) | https://www.uis.edu.my/pzk<br>https://www.yayasankuis.com/en/zakat/ | / | / |

| | | | | |
|---|---|---|---|---|
| 6. | Msu Holdings Sdn Bhd | https://www.msu.edu.my/news/May2018-islamic-finance-banking-economics-MSU-iftar-with-industry-zakat-for-orphans-2018 | X | X |
| 7. | Unitar Capital Sdn Bhd | Not available | X | X |
| 8. | Univerisiti Insfrastructure Kuala Lumpur (IUKL) | https://zakat.iukl.edu.my/ | X | X |
| 9. | University Of Cyberjaya | Not available | / | / |
| 10. | Universiti Selangor (Unisel) | Not available | / | / |
| 11. | Univerisiti Teknikal Mara Sdn Bhd (Unikl) | https://zakatunikl.com/ | X | X |
| 12. | Universiti Telekom Sdn Bhd (MMU) Yayasan Univerisiti Multimedia (YUM) | https://yum.mmu.edu.my/donate/zakat/ | / | / |
| 13. | Universiti Tenaga Nasional Sdn Bhd (Uniten) | https://amanahuniten.my | / | / |
| 14. | Saito University College | https://saito.edu.my/study/2024/09/18/berita-baik-untuk-asnaf-selangor/ | / | X |
| 15. | University Malaysia of Computer Science & Engineering (Unimy) | https://www.unimy.edu.my/unimy/centre-for-student-experience/# | X | / |
| 16. | City University | Not available | / | / |
| 17. | ASIA Elearning Sdn Bhd (Asia E-University) | https://www.apu.edu.my/study-apu/malaysian-students/lembaga-zakat-selangor-mais | / | / |

To examine the level of information disclosed Higher Learning Institutions, a web disclosure index accountability is used. The index is adopted from Dainelli et al (2013). This study used three platforms to measure the level of disclosure, which are the HLI website, facebook and Instagram. These three platforms were reviewed based on the 18 items in the disclosure index. There are three groups of reporting index: financial, performance and political accountability. There are 4 items for financial, 9 items for performance and 5 items for political accountability.

| Dimension | Definition | Items |
|---|---|---|
| Financial | Financial accountability focuses on tracking and reporting on allocation and utilisation of financial resources, using the tools of management control and auditing. | 1.Financial statement<br>2. Account notes<br>3. Management commentary<br>4. Auditor report |
| Performance | Demonstrating and reporting performance of organisation based on agreed-upon performance targets (missions) and focuses on inputs, outputs, outcomes and impacts. | 1. Vision/mission statement<br>2. Governance structure<br>3. Human resource organisation<br>4. Strategic plan<br>5. Results of research activities<br>6. Key performance indicators<br>7. Risk report<br>8. Result of educational activities<br>9. Visitor survey |
| Political | Focus on procedures and mechanism which ensures to fulfil the public trust, engages and involves stakeholders, acts in accordance with agreed upon standards of probity, ethics, integrity and professional responsibility. | 1. President/director statement (Fb, IG)<br>2. Management of collections and distribution<br>3. Voluntary work report<br>4. Management remuneration<br>5. Report on donations and benefactors |

In the study conducted by Dainelli et al (2013), binomial logic was used to measure the IPTA disclosure reporting level. In case the IPTA disclose the reporting index, 1 will be assigned while if there is no reporting being done, 0 will be assigned. The total score for each group on the reporting index will be sum up to identify the percentage for each group of reporting.

### 3.2 Web based accountability Index Inter-Rater Reliability Test

The conten analysis technique in this study is to emasure the inter-rate reliability and to ensure the reliability of the content analyses. In order to ensure the reliability of the content analysis (Saman 2015), two raters with accounting knowledge independently coded five randmnly. The scores rate by the two raters to see any disagreement. Most of the disagreement were due to misrepresentations and discussion were made to resolved the issue. From the 5 website, total 0f 18 index x 2 raters X 5 websites = 180 checklist were obtain. Overall the inter-rate agreement is 150/180 which is 83%. Once pretested were done, the three platforms then analysed using content analysis procedure to quantify the total extend of disclosures.

## 4. RESULTS AND DISCUSSION

| Accountability disclosure | Total no. of disclosed information | % | Total no. of undisclosed information | % | Total items |
|---|---|---|---|---|---|
| Financial Accountability | 3 | 4% | 72 | 96% | 75 |
| Performance Accountability | 17 | 13% | 118 | 87% | 135 |
| Political Accountability | 25 | 33% | 50 | 67% | 75 |
| Total | 45 | | 240 | | 285 |

### 4.1 Analysis of Financial Accountability

Only 3 items out of 75 items are being reported. Thus, it is 4% of disclosure under performance accountability. The 3 items are from UKM, UPM and UiTM in which the disclosure is on the management commentary.

### 4.2 Analysis of Performance Accountability

Only 17 items out of 135 items are being reported. Thus, it is 13% of disclosure under performance accountability. Among the 17 items, UPM, UiTM, UIA and UKM disclose most of their performance accountability with about 3 to 5 disclosures on the individual performance accountability.

### 4.3 Analysis of Political Accountability

About 25 items out of 75 items are being reported. Thus, it is 33% of disclosure under political accountability. Among the 75 items, UPM, UiTM, UIA, UKM and MMU disclose most of their performance accountability with about 3 to 4 disclosures on the individual performance accountability.

### 4.4 Analysis according to the HLI

| | |
|---|---|
| UiA | No access to the Annual Report. However, there is announcement made in 2024 regarding scholarship. |
| UKM | Bantuan perumahan unit zakat ukm 2024 - (perumahan rumah Bukit Puteri UKM), Facebook is more updated on zakat distribution and infographic. |
| UPM | Total zakat collected and distributed were put into infographic by quarters (website). Not much info about financial performance |
| UiTM | Real-time dashboard showing the total amount of zakat collected and distributed (website), UiTM is the chairman among zakat IPT. |
| UiS | Some Parts of the Website cannot be assessed |
| MSU | No many Details on Zakat Department. Only Reports on The Programmes Conducted |
| Unitar | The website discloses nothing on zakat. Just mention that UNITAR provide zakat to their students as "bantuan" |

| | |
|---|---|
| IUKL | The website contains information about paying zakat but no infographics about the zakat they have distributed |
| University Of Cyberjaya | The facebook contains zakat nisab of zakat on various wealth and programmes conducted by the department |
| UNISEL | The infographic is only about Bantuan Dermasiswa Lembaga Zakat Negeri Selangor. Their website caters for application for zakat only |
| Unikl | Their website is only for zakat online payment |
| MMU | Website is quite comprehensive since it is under foundation (Yayasan) but not much info about those managing zakat and zakat distributed. |
| Uniten | Website is non-accessible. Facebook has info about opening zakat application for students and picture of those paying zakat |
| Saito University College | The facebook posting is A calling for those who want to study in the university can apply zakat as one source of scholarship. |
| UNIMY | Only stating zakat as one financial aid. No other information in the website. |
| City University | The last post on facebook is in 2023. Some pictures of zakat distributed to recipient. |
| ASIA E-UNIVERSITY | Only a photo of the university appointed as an amil. The website has a link to lebaga zakat selangor for the students to apply directly from LZS |

## 5. CONCLUSION

This study underscores the critical need for enhanced accountability and transparency among Higher Learning Institutions (HLIs) appointed as amil zakat by Lembaga Zakat Selangor (LZS). Despite the growing importance of web-based platforms in fostering trust and engaging stakeholders, the findings reveal a generally low level of disclosure across financial, performance, and political dimensions. Only a few HLIs most notably UPM, UiTM, and MMU have taken meaningful steps towards transparent reporting, with UPM WAZAN emerging as the most exemplary case in terms of disclosure practices.

The limited availability of financial data, strategic goals, and stakeholder engagement mechanisms across the majority of HLIs raises concerns regarding the effective fulfilment of their amānah (trust) responsibilities in managing zakat funds. As institutions tasked with both educational and religious duties, HLIs must recognise the importance of aligning their operations with Islamic accountability principles, particularly in the digital era where donors increasingly rely on online information to make informed decisions.

Therefore, it is imperative for HLIs to institutionalise robust web-based disclosure frameworks that reflect their commitment to good governance, ethical conduct, and the maqasid al-shariah. By doing so, they can reinforce donor confidence, safeguard public trust, and ultimately strengthen their role in advancing sustainable and socially responsible educational development

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