RELATIONSHIP BETWEEN INTERNAL AUDIT FUNCTION AND FINANCIAL PERFORMANCE: INSIGHTS FROM MALAYSIA

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Relationship Between Internal Audit Function And Financial Performance: Insights From Malaysia

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Relationship Between Internal Audit Function And Financial Performance: Insights From Malaysia

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DECLARATION

I hereby declare that:

(1) This Research Project is the end result of my own work, and that due acknowledgement has been given in the references to all sources of information be they printed, electronic, or personal.

(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) The word count of this research report is 18744.

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DEDICATION

This dissertation is dedicated to:

My supervisor,
Dr Abdullah Sallehhuddin Bin Abdullah Salim
Who guided me with his abundance of knowledge and patience throughout the whole process of this final year project.

Tertiary education institution, Universiti Tunku Abdul Rahman
For providing me the opportunity to study and complete this final year project.

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LIST OF ABBREVIATION

ATIF	Type Of Internal Audit Function
ATIAC	Average Total Internal Audit Cost
ATIAC / ATAE	Average Total Internal Audit Cost Against Average Total Administrative Expenses
APBT	Average Profit Before Tax

PREFACE

This research study is undertaken as a critical component in the Master of Business Administration (Corporate Governance) program. It reflects the dedication to contributing to the growing body of knowledge on the role of internal auditing in fostering sustainable corporate performance.

In today's dynamic and increasingly complex corporate environment, the internal audit function has emerged as a cornerstone of effective corporate governance and a driver of improved organisational performance. Recognizing its strategic importance, this study delves into the intricate relationships between the internal audit function (type: in-house, outsourced and co-sourced), internal audit costs, the ratio of internal audit costs to total administrative expenses and company's financial performance, measured by profit before tax, within the selected Malaysian corporate sector.

The research explores these relationships across four key variables, seeking to uncover the ways in which internal audit investments and resource allocation contribute to financial success. By analyzing the relationships and patterns among these variables, the study sheds light on the potential of internal audits not only as a compliance measure but also as a value-adding process that enhances risk management, operational efficiency, informed decision-making and corporate governance.

ABSTRACT

This study investigates the relationship between internal audit function, internal audit costs, the ratio of internal audit costs to administrative expenses and profit before tax in the selected Malaysian corporate sector. This study examines quantitative data derived from the annual reports of Malaysian retailing companies, which are members of the Malaysian Retail Chain Association, covering the period from 2021 to 2023. The analysis was performed using SPSS, employing frequency analysis, descriptive statistics, Pearson's correlation coefficient, and regression techniques to explore these relationships. The findings contribute to the body of knowledge on internal auditing and financial performance by highlighting both the impact of specific internal audit components and the broader implications for corporate governance. The findings indicate that, although the ratio of internal audit costs to administrative expenses does not demonstrate statistically significant relationships with financial performance (measured by profit before tax), both the internal audit function and internal audit costs exhibit a strong and significant positive relationship with profit before tax. This highlights the strategic importance of investing in internal audit processes as greater audit expenditure correlates with improved financial outcomes. These results also contribute to the body of knowledge by demonstrating that internal audit costs play a pivotal role in profitability, offering actionable insights for corporate governance. Despite a mixed result, this research provides a foundation for future studies to explore the broader implications of internal audit functions on financial performance. It calls for further investigation into audit quality, scope, industry-specific dynamics and to explore additional dimensions, including ESG considerations, with the potential to refine internal audit strategies and enhance organisational resilience and sustainability. Thereby paving the way for deeper understanding of internal audit’s role in enhancing organisational performance and driving stronger corporate governance practices.

Keywords: internal audit function, in-house internal audit, outsourced internal audit, internal audit cost, financial performance, corporate governance

Subject Area: HJ9701-9940 Auditing

CHAPTER 1: INTRODUCTION

1.0 Introduction

This chapter provides an overview of the research which consists six (6) sections. It introduces the background of the research, followed by highlighting the problem statement of the research and next illustrating the research questions and also depicting the research objectives. This is followed by addressing the significance of the research and lastly, summarising the whole chapter.

1.1 Research Background

1.1.1 Internal Audit Function

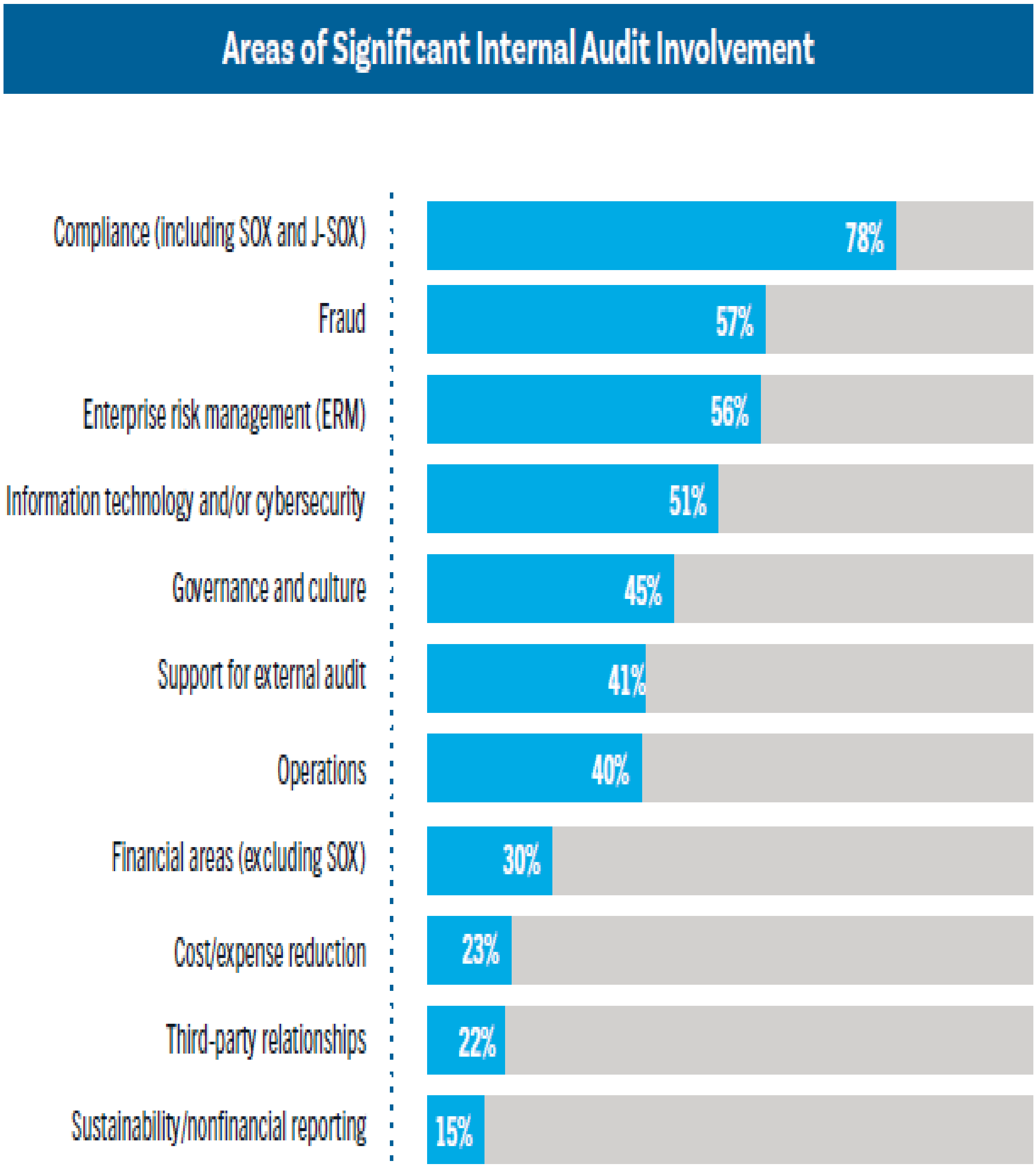
Chapter 15 of Bursa Malaysia's Listing Requirements mandates listed companies to establish an independent internal audit function reporting to the Audit Committee (AC). This function can be performed in-house, outsourced or co-sourced.

In-house internal audits offer greater control and alignment with organisational goals, adhering to ethical standards. Outsourcing provides access to specialized expertise but requires careful oversight by the AC to ensure compliance with governance standards, including disclosures mandated by the Malaysian Code on Corporate Governance (MCCG) 2021. Co-sourcing combines internal and external resources, balancing control with expertise.

Those performing internal audit must conform with ethical and independence standards as stated in the International Professional Practices Framework (IPPF) [2017 Edition] issued by The Institute of Internal Auditors (IIA). Moving forward, with effect from 9 January 2025, the internal audit fraternity need to adopt the IIA Global's Global Internal Audit Standards (GIAS). Through a collaborative effort of the internal audit community, this new GIAS will elevate the profession and support practitioners in performing audit, anywhere, according to the one-and-only IIA Standards.

The Internal Audit Foundation has done a survey namely Assessing Internal Audit Practices Globally from 27 July to 16 September 2021 (hereinafter "survey"). The results of the survey show that compliance emerged as the leading area of involvement among a wide range of organisations, with 78% of survey respondents highlighting its significance globally. This encompasses general compliance as well as frameworks such as the U.S. Sarbanes-Oxley Act of 2002 (SOX) and Japan's Financial Instruments and Exchange Law (J-SOX). Traditionally, compliance has been a primary focus for internal audit functions. However, the expansive scope of internal audit ensures their engagement in diverse areas, including fraud (57%) and enterprise risk management (ERM) (56%). Below are the details in Figure 1: Areas Of Significant Internal Audit Involvement (Page 3):

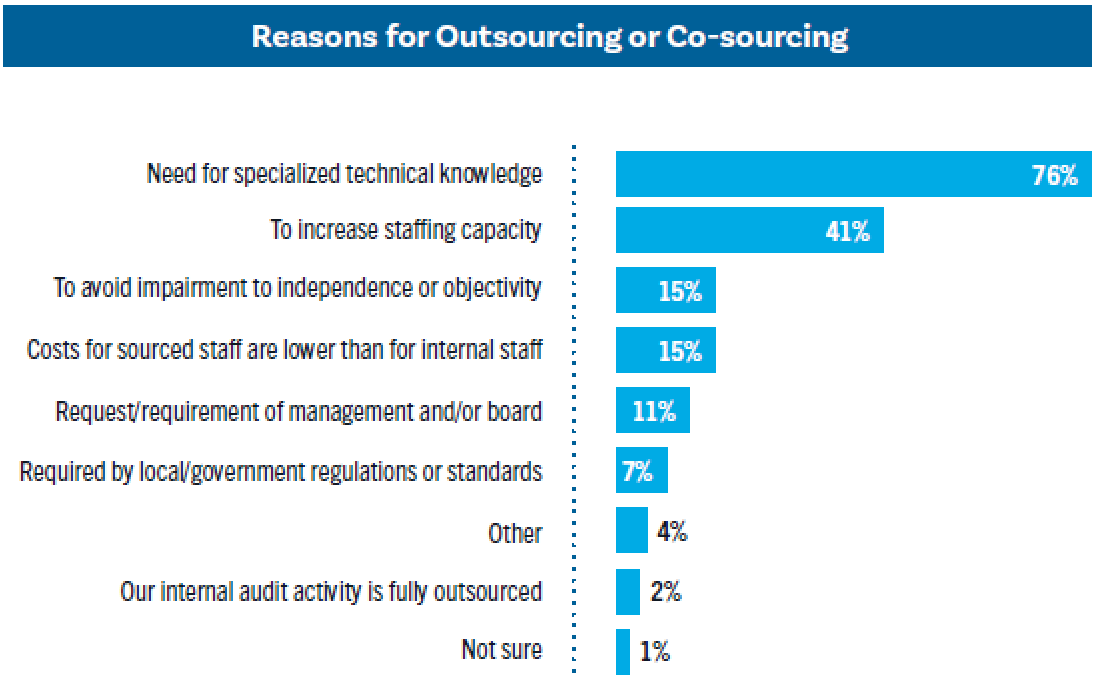
Figure 1: Areas of Significant Internal Audit Involvement



Note: Adapted from Internal Audit Foundation (2022). Premier Global Research- Internal Audit: A Global View. https://www.theiia.org>foundation>global view

Based on the same global survey, the below depicted the reasons for outsourcing or co-sourcing:

Figure 2: Reasons For Outsourcing Or Co-sourcing



Note: Adapted from Internal Audit Foundation (2022). Premier Global Research- Internal Audit: A Global View. https://www.theiia.org>foundation>global view

1.1.2 Internal Audit Cost Incurred

The internal audit cost varies depending on the audit structure whether in-house, outsourced or co-sourced. In-house audit costs include salaries, benefits, training, auditing tools and travel expenses. Outsourced audit costs involve fees to external firms for specialized audits, while co-sourced audit costs reflect shared expenses between internal auditors and external experts.

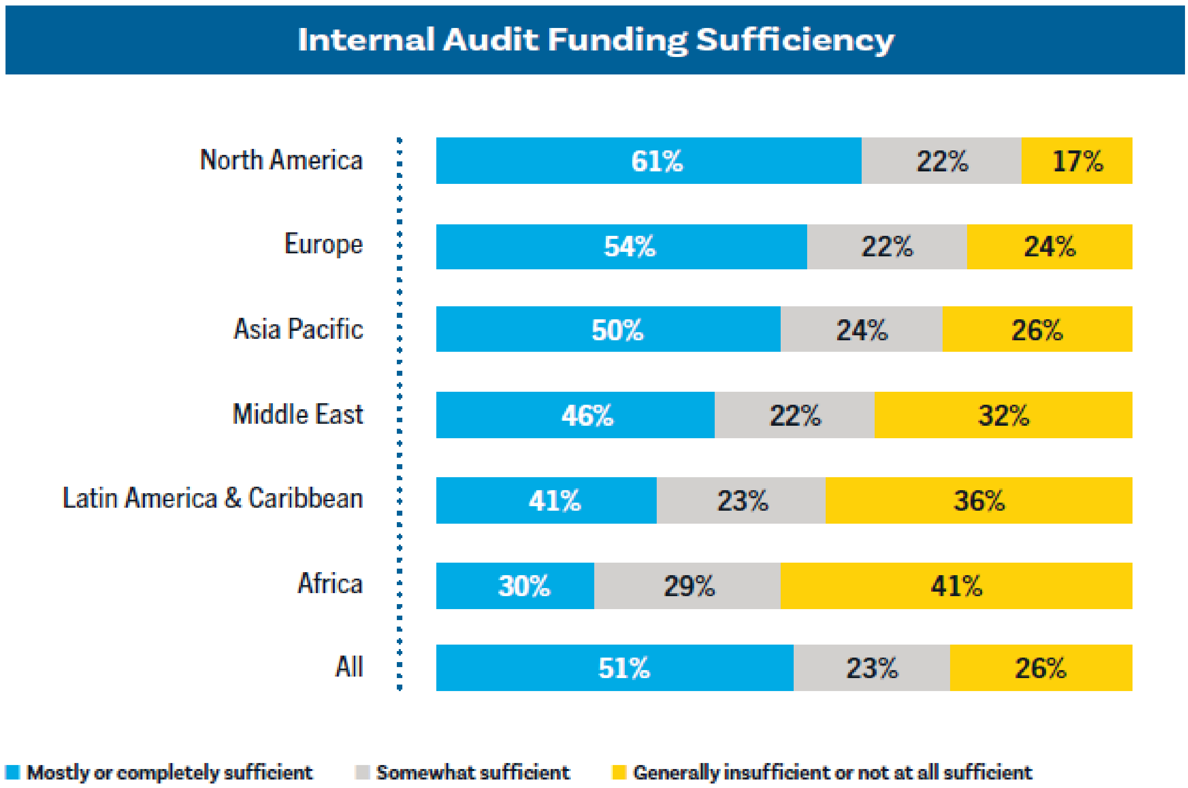
The internal audit cost is critical for governance, as it underscores the organisation's commitment to robust internal controls and accountability. It also aids operational efficiency by assessing cost-effectiveness, provides financial insights on profitability and supports strategic decisions regarding the most suitable internal audit model.

Bursa Malaysia's Listing Requirements Chapter 9 (Appendix 9C) mandates listed companies to disclose whether their internal audit function is in-house, outsourced or co-sourced, along with the related costs, in their annual reports. This ensures transparency and facilitates industry benchmarking.

This study investigates both, i.e. the model of internal audit functions and their cost structures, whether any impact on profit before tax to enhance organisational performance and accountability.

Based on the same global survey as mentioned above, approximately half of the respondents indicated that their functions had access to largely or fully adequate funding to perform their responsibilities. Funding adequacy was reported to be highest in North America (61%) and lowest in Africa (30%). The details as below:

Figure 3: Internal Audit Funding Sufficiency

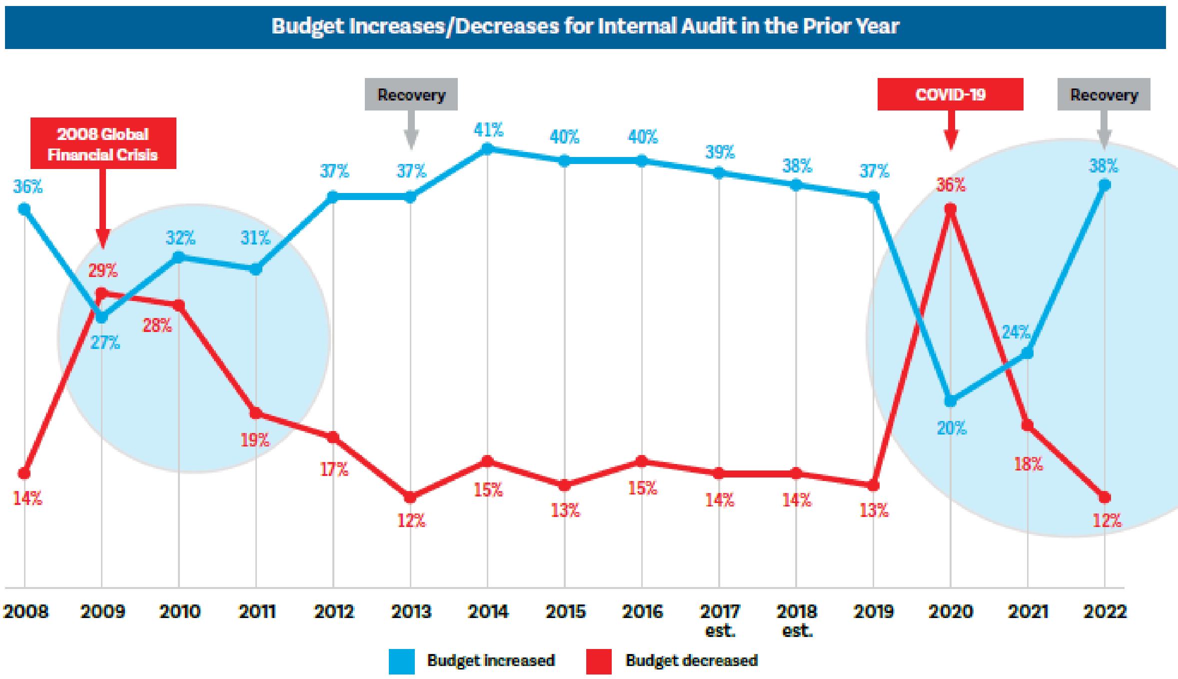


Note: Adapted from Internal Audit Foundation (2022). Premier Global Research- Internal Audit: A Global View. https://www.theiia.org>foundation>global view

Additionally, there is an online survey for the 2023 North American Pulse of Internal Audit report conducted between 20 October and 2 December 2022. A majority of respondents were from organisations based in the United States (83%) and Canada (11%), while the remaining 6% were from outside North America.

According to The IIA's North American Pulse of Internal Audit Survey (in multiple years), internal audit budgets have largely reverted to pre-COVID levels, reflecting variations in increases and decreases. Following the 2008 Global Financial Crisis, it took four years for budget increases and decreases to return to pre-crisis levels. In contrast, after the COVID-19 crisis, recovery to prior levels occurred within just two years. With this statistic, it can aid in developing balanced internal audit budgets, enabling organisations to derive optimal value from their investment in internal controls. The below Figure 4 depict the internal audit budget increase/decrease over 15 years:

Figure 4: Budget Increase/Decrease For Internal Audit In The Prior Year



Note: Data for 2017 and 2018 were estimated because the question about budget was not included in the survey during those years. Adapted from The Institute Of Internal Auditors (2023). North American Pulse of Internal Audit-Benchmarks for Internal Audit Leaders. https://www.theiia.org>2023--iia-pulse-report

1.1.3 Internal Audit Cost Against Total Administrative Expenses

Total administrative expenses encompass all indirect costs related to running an organisation, including internal audit expenses, office supplies and staff costs. Internal audit cost is a component of total administrative expenses.

This ratio of internal audit cost to total administrative expenses evaluates how efficiently resources are allocated to internal audit relative to overall administrative spending. A higher ratio may indicate a strong focus on governance, risk management and compliance, while a lower ratio could suggest reduced emphasis on auditing, potentially increasing risk exposure.

The ratio also enables organisations to benchmark internal audit spending against industry peers and assess cost-effectiveness. Analysing it alongside financial outcomes, such as profit before tax, helps evaluate the impact of internal audit spending. A high internal audit cost over total administrative expenses ratio may indicate necessary investment for high-compliance industries or inefficiencies, while a low ratio could reflect resource efficiency or insufficient investment in critical controls.

1.1.4 Financial Performance - Profit Before Tax

Profit before tax is a key metric for assessing the impact of internal audit costs on financial performance. It represents an organisation's earnings after all operating expenses, including administrative expenses, but before taxes are applied.

Profit before tax offers a clear view of operational efficiency and cost control, unaffected by tax policies. Since administrative expenses include internal audit costs, any changes in these costs directly affect PBT. Higher internal audit costs could reduce PBT unless they lead to proportional financial benefits. However, significant investment in internal audits may reflect a commitment to risk management, financial stability and business sustainability.

Analysing trends in internal audit cost, internal audit cost to total administrative expense and profit before tax over a three-year period may reveal correlations and help determine whether internal audit spending contributes to financial performance, operational efficiency and risk mitigation, thus justifying the investment. For example, consistent or increasing profit before tax alongside rising internal audit costs may indicate a positive impact of the internal audit function on profitability.

1.2 Problem Statement

The internal audit function serves as a cornerstone for ensuring organisational compliance, operational efficiency, and risk mitigation. However, its impact on financial performance remains unclear, particularly in the Malaysian context, where the retail sector operates in an environment marked by intense competition and evolving consumer behaviour. While organisations continue to allocate substantial resources to internal audits, justifying these expenditures against tangible financial outcomes remains a significant challenge.

Although a growing body of literature highlights the operational benefits of internal audits such as enhanced governance frameworks, fraud prevention, and improved regulatory compliance, there is limited empirical evidence linking the internal audit function directly to measurable financial performance metrics. This research gap is particularly pronounced in the Malaysian retail industry, where profit margins are often razor-thin and resource allocation decisions are critically scrutinized.

Retailers face unique challenges, including rising operational costs, complex inventory management systems, and shifting consumer demands, all of which necessitate robust internal control mechanisms. The gold and jewellery ecosystem within this sector, comprising high-value inventory businesses, adds further complexity, demanding stricter risk management and compliance measures. However, the alignment of internal audit costs with profitability remains an area of ambiguity and concern.

The increasing emphasis on cost management in the retail sector has led organisations to adopt diverse internal audit models, including in-house, outsourced and co-sourced arrangements. These variations complicate efforts to evaluate the financial impact of the internal audit function. Retailers often question whether higher spending on internal audits drives profitability or merely inflates operational costs without yielding significant returns. The lack of clear benchmarks or metrics to assess the value added by internal audits creates hesitation among decision-makers in committing resources to this internal audit function.

An additional dimension of this issue lies in the ratio of internal audit costs to total administrative expenses, which remains an underexplored factor in the discourse on financial performance. This ratio can offer critical insights into whether internal audits contribute to profitability or are perceived as operational overhead. Retailers, particularly those in specialized segments like gold and jewellery, must balance the need for comprehensive audits with the imperative to optimize resources in a volatile and competitive market.

To address these gaps, this study investigates the relationship between the internal audit function (in-house, outsourced and co-sourced), internal audit costs, their proportion relative to total administrative expenses, and financial performance measured by profit before tax within Malaysia's retail sector. The study draws on a sample of twenty-two (22) retailing companies, including five (5) which are part of the gold and jewellery ecosystem, i.e., reflecting the interconnectedness of the retail supply chain. By analyzing financial data over three consecutive years, the study aims to identify trends and provide actionable insights for strategic decision-making.

The findings will clarify whether increased internal audit expenditures correlate with stable or improved profitability and provide evidence-based guidance for optimizing internal audit strategies. For instance, a consistent or rising profit before tax in parallel with increased internal audit costs would suggest that such investments mitigate risks and enhance operational efficiency, thereby justifying the value of the internal audit function.

Ultimately, this study seeks to bridge the knowledge gap in the Malaysian retail sector by offering empirical evidence on the financial implications of internal audits. Beyond its relevance to retailers, the insights generated will also benefit other business segments seeking to leverage the internal audit function as a strategic tool for sustainable financial performance.

1.3 Research Question

1. Does type of internal audit function (in-house, outsourced and co-sourced) affect the profit before tax?

2. Does average total internal audit cost (in-house, outsourced and co-sourced) affect the profit before tax?
3. Does the ratio of internal audit cost (in-house, outsourced and co-sourced) to total administrative expenses affect the profit before tax?

1.4 Research Objective

1. To examine the relationship of internal audit function (in-house, outsourced and co-sourced) and profit before tax.
2. To examine the relationship of total internal audit cost (in-house, outsourced and co-sourced) and profit before tax.
3. To examine the relationship of the ratio of total internal audit cost (in-house, outsourced and co-sourced) against total administrative expenses and profit before tax.

1.5 Significance Of Research

This research holds considerable significance as it addresses key gaps in understanding the relationship between internal audit functions (in-house, outsourced and co-sourced) and the financial performance of selected Malaysian retailers, measured by profit before tax. In an era where organisational accountability and efficiency are paramount, this study provides critical insights into the role of internal audit structures in shaping profitability and sustainability. By investigating the influence of different internal audit models and the cost implications of these approaches, the study delivers actionable knowledge that can enhance decision-making in both strategic and operational contexts.

From a theoretical perspective, this research makes valuable contributions to organisational theories such as agency theory, resource-based view (RBV), resource dependency theory (RDT) and stewardship theory. Agency theory underscores the importance of internal audit functions in mitigating agency conflicts and ensuring alignment between management and shareholder interests. This study advances the theory by examining how different audit models influence financial outcomes in the retail sector. The resource-based view theory identifies the internal audit function as a critical organisational resource and this research highlights how its strategic utilisation can contribute to competitive advantage and financial performance. Resource dependency theory provides a lens through which to understand the rationale behind outsourcing or co-sourcing internal audits, offering insights into how organisations manage external dependencies to achieve operational efficiency. Meanwhile, stewardship theory frames the internal audit function as a mechanism that reinforces accountability and trust, thereby supporting sustainable financial performance.

One of the primary contributions of this study lies in its ability to evaluate the various internal audit models in driving financial performance. Specifically, it examines whether in-house, outsourced or co-sourced internal audit functions contribute differently to profitability. This focus is particularly pertinent to the retail sector, where operational efficiency, stringent cost control and financial transparency are essential for maintaining a competitive edge in an increasingly dynamic market environment. Insights into the financial outcomes of internal audit structures empower retail organisations to tailor their governance strategies for optimal results, addressing the dual imperatives of compliance and financial sustainability.

The findings of this research are expected to guide decision-makers, including board members and senior management, in understanding the strategic value of internal audits. By shedding light on how internal audit expenditures influence profitability, the study equips organisations with the knowledge needed to optimize the allocation of internal audit resources. Decision-makers can better assess whether the internal audit function should remain in-house or be outsourced to third-party providers, based on empirical evidence of cost-effectiveness and impact on financial outcomes. Furthermore, the study's insights can support the development of balanced internal audit budgets, ensuring that organisations achieve maximum value from their investment in internal controls.

Beyond organisational decision-making, this study has practical implications for corporate strategy and governance frameworks, particularly in the Malaysian retail sector. By clarifying the relationship between internal audit cost and financial performance, it supports the formulation of strategies that enhance governance and compliance while maintaining cost efficiency. These insights can also inform regulatory bodies in Malaysia and beyond, providing a basis for establishing or refining guidelines that promote robust internal audit practices as a mechanism for safeguarding financial integrity and heightening corporate governance. This alignment with regulatory standards further ensures that organisations can achieve compliance while simultaneously driving financial performance.

Lastly, this research offers significant value to multiple stakeholders, including regulatory bodies, investors, and the academic community. Regulatory bodies may leverage the findings to establish more precise guidelines on internal audit structures, enhancing corporate governance practices across industries. Investors can gain insights into how internal audit spending correlates with financial performance, helping them assess organisational resilience and accountability. For academics, the study opens new avenues for exploring the optimization of internal audit practices to balance financial and sustainability goals, encouraging interdisciplinary research that unites corporate governance, finance and sustainability domains. By integrating theoretical perspectives such as agency theory, RBV, RDT, and stewardship theory, this research further enriches the academic discourse on the interplay between governance mechanisms and financial outcomes.

In summary, this study is positioned to make a substantial contribution to the fields of corporate governance, audit practices and strategic decision-making. By elucidating the financial and governance implications of internal audit structures and expenditures, it provides a comprehensive resource for organisations striving to enhance profitability. The implications extend far beyond the Malaysian retail sector, offering a blueprint for best practices applicable across industries and regions.

1.6 Chapter Structure

Research report presentation arrangement is crucial in providing clarity and to ease understanding. Hence, this research comprised the following five (5) chapters:

Chapter 1: Introduction

This chapter begins with an overview of the research background, setting the context for the study. It then presents the problem statement, defining the specific issues the research aims to address. Next, the chapter outlines the research objectives and questions, providing a clear framework for the study’s purpose and direction. The chapter concludes with a discussion of the study's significance, emphasizing its contributions and a summary of the overall layout for the research report.

Chapter 2: Literature Review

This chapter provides a review of the foundational theories and existing literature relevant to the study. It then introduces the hypotheses and the conceptual framework, establishing the theoretical basis for the research.

Chapter 3: Research Method

This chapter outlines the approach taken to conduct the research. It covers the research design, data collection methods, sampling techniques, definitions of dependent variable , independent variable and the statistical analysis methods employed.

Chapter 4: Research Results

This chapter presents the findings from the descriptive analysis conducted using SPSS. The results form the basis for interpreting the study's outcomes.

Chapter 5: Discussion And Conclusion

The final chapter discusses the study’s findings and their implications. It includes a review of the hypothesis testing, highlights the study’s limitations, offers recommendations for future research, and provides an overall conclusion.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter provides a review of the existing literature related to the study. It begins by discussing the key theories which support this research. This review then explores empirical studies and insights from previous research on internal audit function (in-house, outsourced and co-sourced) and their impact on organisational outcomes. The objective is also to identify gaps in the current literature; highlight areas of alignment and contrast; and establish a basis for developing the study's hypotheses as well as the structure of conceptual framework.

2.1 Theoretical Framework

2.1.1 Agency Theory

Jensen and Meckling (1976) introduced agency theory, a key concept in economics and management that examines the relationship between an organisation's principals (shareholders or owners) and agents (managers or executives). The theory addresses potential conflicts of interest that may arise between these two (2) groups due to the separation of ownership and control, differing risk preferences, information asymmetry, and moral hazards (Panda and Leepsa, 2017). Its primary aim is to understand how to align the interests of agents and principals to promote effective and efficient corporate governance.

Since managers may not always act in the best interests of shareholders and may prioritize their own interests, agency issues can also arise. Conflicts between management and shareholders may appear in various forms, such as labour shirking, excessive perk consumption and investment disagreements (Allam, 2018). These conflicts can lead agents to influence information flows, especially when managers have minimal equity in the company (Zainuldin, Lui and Yii, 2018). Managers with low ownership stakes are less inclined to maximize shareholder value and may be motivated to consume perks instead (Alabdullah, 2018). This misalignment between managerial and shareholder objectives resulted in agency costs, which can increase significantly when the company underperforms (Bhatt and Bhatt, 2017).

However, with improved governance, it can reduce agency conflicts between management and stakeholders (Elmarzouky, Albitar and Hussainey, 2021). Agency theory suggests that aligning the goals of principals and agents by means of dividing decision-making responsibilities and limiting managerial discretion (Naciti, 2019). A board with a higher proportion of independent directors can enhance oversight of managers, aligning actions with stakeholder interests, thereby strengthening corporate governance and improving corporate performance (Pankaj, 2017). This diversity not only enhances monitoring functions but also aids in acquiring essential resources that boost organisational investment efficiency, thus reducing agency issues (Ullah, Pinglu, Ullah, Zaman and Xia, 2020).

This theory suggests that internal auditing helps resolve conflicts of interest between shareholders (principals) and managers (agents). Internal audit function functionally reports to the Audit Committee which is a sub-set of the board, therefore it also serves as monitoring mechanisms to ensure managers act in the best interest of the shareholders, which can potentially enhance financial performance through better governance.

Azzali and Mazza (2018) explore internal audit effectiveness from the perspective of agency theory, suggesting that internal audits support organisations in achieving their goals, including improving financial performance. This theory continues to hold importance in corporate governance research.

Recent research, such as the study by Lenz and Jeppesen (2022), highlights that adherence to auditing standards and enhanced risk management contribute to reducing agency costs and strengthening corporate governance. According to Adams (1994), the agency theory helps to clarify and anticipate not only the presence of internal audit but also the roles and responsibilities that the organisation assigns to internal auditors. Additionally, agency theory forecasts how the internal audit function may be influenced by organisational changes. Hence, agency theory supports this study aptly.

2.1.2 Resource-Based View Theory And Resource Dependency Theory

Resource-Based View Theory (RBV) and Resource Dependency Theory (RDT) are distinct, though both deal with how organisations manage resources.

The RBV focuses on the internal resources and capabilities of an organisation as the key to achieving sustainable competitive advantage. It argues that if a firm has valuable, rare, inimitable, and non-substitutable resources, it can outperform competitors. This theory is internal-facing, emphasizing how organisations leverage their internal strengths to achieve better financial performance. Internal auditors serve as a crucial internal resource for organisations, contributing to their ability to achieve a competitive advantage (Jaber, Shah, Mustapha, Johari and Gebrehans, 2024). Furthermore, the RBV theory emphasizes organisational resources and their effective utilization. An organisation's resources, such as information technology and internal auditors, are regarded as vital pillars for organisational success, encompassing both tangible and intangible assets (Alkebsi and Aziz, 2017). Intangible resources encompass technology and reputation, while human resources include elements such as organisational culture, employee training, expertise, commitment and loyalty (Ahmad, 2015). As such, establishing an internal audit function requires adequate resources.

In contrast, RDT focuses on an organisation’s external environment and the reliance on resources controlled by outside entities, such as suppliers, governments and competitors. It proposes that organisations adopt strategies like forming alliances, lobbying, or pursuing mergers to manage and minimize their dependence on these external resources. This theory emphasizes how organisations navigate power dynamics and dependencies to secure essential resources in their environment. According to RDT, independent internal auditors, a well-resourced internal audit function, skilled internal auditors, and frequent audit committee meetings can introduce diverse perspectives, qualifications, skills, ideas and knowledge to the boardroom, enabling municipalities to make effective decisions that promote financial sustainability (Agyemang and Modisane, 2023). The principle of the theory is that organisations, whether firms or profit-oriented entities, must interact and engage with other actors and organisations in their environment to acquire necessary resources (Bakri, Ayub and Gazali, 2024). Some organisations may choose to outsource their internal audit function to external service providers or consultants, necessitating a thorough and careful selection process.

In summary, RBV looks inward at internal resources can become a source of competitive advantage. Organisations with effective internal audits can leverage this resource to improve risk management, governance and ultimately financial performance to create long-term financial advantages. It is also about building and utilizing core strengths within the firm. On the flip side, the RDT looks outward at external dependencies and how organisations manage them while remain focus on minimizing vulnerabilities and dependence on others for critical resources.

Therefore, integrating both theories in this study could provide a richer understanding of how audit functions impact financial outcomes. They can explain why companies strategically use internal or outsourced audit functions to manage dependencies and external pressures (e.g., regulatory compliance or stakeholder expectations). By relying on internal audit function, organisation can reduce uncertainties in their governance processes which may affect financial performance.

2.1.3 Stewardship Theory

This theory argues that executives act as stewards for the owners of the company. Internal audits serve to verify that executives are managing resources in a way that maximizes financial performance, as intended by the shareholders.

Contrary to agency theory, stewardship theory assumes that managers are motivated by the desire to serve the organisation and its shareholders, rather than by self-interest and emphasizing on trust and commitment. Internal audit functions, in this case, support stewardship behaviour by enhancing corporate governance through trust and accountability and improving financial outcomes. Internal auditors with a steward mindset prioritize achieving organisational objectives over personal gains, demonstrating loyalty and alignment with the organisation's goals (Badara, 2017). According to Khikmah, Rohman and Januarti (2023), internal auditors as employees expected to maintain independence and effective decision-making is achieved by delivering optimal service to meet organisational objectives.

2.2 Internal Audit Settings

2.2.1 Internal Audit Function

In alignment with Chapter 15 (Corporate Governance) of Bursa Malaysia's Listing Requirements, listed companies must establish an independent internal audit function that directly reports to the Audit Committee (AC). This requirement underscores the critical role of internal audits in ensuring robust governance, risk management and internal control processes.

The definition of internal auditing as per the International Professional Practices Framework (IPPF) issued by The Institute of Internal Auditors (IIA), is "Internal auditing is an independent, objective assurance and consulting function designed to add value and improve an organisation's operations. It helps an organisation accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of governance, risk management, and internal control processes." The internal audit function aims to protect and enhance organisational value by delivering objective, risk-focused assurance, guidance and insights.

According to Guidance 11.1 of the Malaysian Code on Corporate Governance (MCCG) 2021, an internal audit function supports a company in achieving its objectives by applying an objective, disciplined approach to assess and improve the effectiveness of risk management, internal control, anti-corruption, whistle-blowing, and governance processes. This function provides valuable advice to the Audit Committee and the Board, identifying weaknesses or gaps in internal processes and enabling the organisation to implement appropriate corrective actions. Additionally, the scope of internal audit includes evaluating and strengthening anti-corruption and whistle-blowing mechanisms as part of its role. Internal audit is a key element of corporate governance.

The finding by Alzeban (2020) contributes to the existing literature by offering new insights into the role of internal audit within corporate governance and its relationship with firm performance. Additionally, the study provides further evidence of how internal audit influences firm performance, with this effect being mediated by audit committee independence and expertise. This is consistent with the research focus on the relationship between internal audit functions and financial performance, highlighting how internal audit, as a critical component of corporate governance, can influence organisational outcomes through mechanisms such as audit committee independence and expertise.

Some of the key activities of an internal audit function as stated in the Bursa Malaysia Corporate Governance (CG) Guide –Pull-out II (2021) and Guidance for an Effective Internal Audit Function 2.0 (2022) are listed below:

- Conduct evaluations of the organization's governance, risk management, and control environments.
- Assess the implementation of established authoritative practices and the accountability of the governance structures responsible for them.
- Perform systematic analyses of business processes to identify and evaluate associated controls.
- Provide feedback on compliance with codes of conduct and ethical standards.
- Evaluate processes for reporting fraud and irregularities.
- Monitor the progress and effectiveness of post-audit management action plans.
- Carry out ad-hoc reviews of financial reporting, strategic transactions, and contractual obligations.
- Offer value-added recommendations to enhance the efficiency and effectiveness of resource utilization.

The CG Guide – Pull-out II (2021) by Bursa Malaysia emphasizes several key traits commonly found in effective internal audit functions:

- Internal auditors are impartial and operate without undue influence.
- The internal audit function has sufficient resources.
- It is strategically positioned and has unrestricted access to necessary information, records, physical assets, and personnel.
- Its audit scope is aligned with the organisation’s strategic objectives and risk profile.

To implement and operationalizing the above, MCCG (2021) by Securities Commission recommends that Audit Committee ensure:

- The head of internal audit has the relevant experience, authority, and independence to perform effectively.
- The internal audit function is well-resourced and can access information necessary for fulfilling its responsibilities.
- Internal audit personnel have the required competencies, experience, and resources to perform their duties effectively.

The Institute of Internal Auditors' (IIA) Three Lines Model highlights the crucial role of internal audit in corporate governance as below:

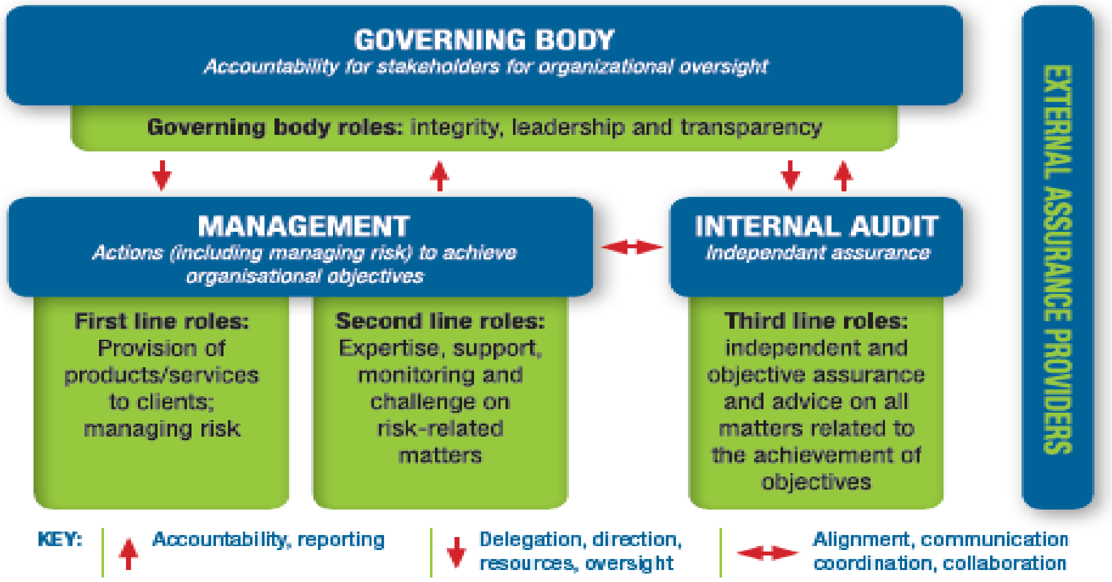


Figure 5: The IIA's Three Lines Model

This model aligns the *Governing Body* (comprising the Board and Audit Committee) with the internal audit function, to which it is accountable and reports. The *First Line* represents operational and functional level process owners, while the *Second Line* includes compliance and risk management functions. The *Third Line*, or internal audit, is responsible for assessing and reporting on the effectiveness of the First and Second Lines to the Board and Audit Committee, ensuring robust oversight and control mechanisms.

An internal audit function is regarded as effective in supporting and safeguarding organisational value when it successfully aligns with the Core Principles of Professional Practice outlined in the IPPF. These principles are further detailed in the Practice Guide on

Demonstrating the Core Principles for the Professional Practice of Internal Auditing, which provides expanded guidance on achieving these standards. On the "Principle 5: Appropriately Positioned and Adequately Resourced", the Audit Committee should ensure the internal audit function is well-resourced by:

- Providing sufficient staffing and infrastructure such as audit tools, knowledge repositories and databases to efficiently cover key risk areas within a reasonable timeframe.
- Considering co-sourcing arrangements to augment the internal audit team with additional manpower or specialized skills as needed.
- Ensuring internal auditors possess the appropriate qualifications, skills, and experience to perform their duties effectively.

It can be concluded that the internal audit function plays a critical role in corporate governance. A high-quality internal audit function not only enhances the effectiveness and efficiency of external audits but also influences the determination of fees for external auditors (Saputra and Yusuf, 2019). This supports the idea that a well-functioning internal audit contributes to both the operational success and cost structure of a company's overall audit processes as an efficient internal audit system can lead to better financial outcomes. Furthermore, the quality of the internal audit function can impact audit-related costs and external auditor fees in which the external auditors can place reliance on the work of the internal audit function as stated in ISA 610 (revised 2013) - Using the Work of Internal Auditors. In a recent study by Barr-Pulliam, Eulerich and Ratzinger-Sakel (2024), among chief audit executive participants, an internal audit function with a balanced or predominantly assurance-focused purpose, compared to a primarily advisory-focused purpose, is linked to higher perceived reliance by external auditors. Similar perceptions regarding the degree of reliance are observed among the external auditors participants.

Internal audit is a key tool for internal governance and control, is recognized as a mechanism for detecting weaknesses in internal controls within Microfinance Institution (MFI) processes, procedures, and policies (Okello, Kirori and Ndiao, 2019). It is also argued that internal audit enhances management oversight, ensures the effectiveness of internal controls and helps prevent fraud and mismanagement in MFIs (Raiborn, Butler, Martin and Pizzini, 2017). Recently, major money-laundering cases, driven by procedural weaknesses and ineffective internal controls, have spurred new regulatory requirements (Yeoh, 2020). The internal audit function significantly strengthens internal controls and consistently delivers high-quality work (Trotman and Duncan, 2018). The collective insights from participants highlight the qualitative importance of internal audit in fostering transparency, strengthening accountability and guiding informed decision-making within the organisational context (Orencia, 2023).

As a key component of internal control, the internal audit function is increasingly sought after by organisations to provide this essential support, in enhancing governance structures and fostering transparency. An effective internal audit function promotes collaborative problem-solving, fosters acceptance of its recommendations and ultimately enhances internal control quality, adding significant value to the organisation (Christensen, 2022).

The internal audit function can be conducted in-house, whereby a dedicated department is set up within the organisation. This structure offers the organisation greater control over the audit process and ensures that internal auditors focus exclusively on audit-related activities. The in-house internal auditors do not engage in any other functions and are independent from the organisation’s operations. Both statutory requirements and accepted local practice/standards support this precise role delineation. This is further supported by adherence to ethical and independence standards outlined in the IPPF as issued by The Institute of Internal Auditors (IIA). Starting 9 January 2025, internal auditors will be required to adopt the IIA Global’s Global Internal Audit Standards (GIAS), which aim to elevate the profession's practices through consistent and globally recognized standards.

For organisations without an in-house internal audit function, the Audit Committee may engage external service providers to fulfill this role. Outsourced internal audits are commonly undertaken by professional firms specializing in governance, risk management, and control assurance (The Institute of Internal Auditors Malaysia, 2022) and also referred to as internal audit externalization. Outsourcing is often driven by cost-benefit considerations, resource limitations, or the need for specialized expertise unavailable in-house. In certain cases, organisations may opt for a co-sourcing model, which combines the benefits of in-house auditors with external expertise to address specific audit needs.

The CG Guide – Pull-out II by Bursa Malaysia (2021) permits outsourcing or co-sourcing (partial outsourcing) of the internal audit function after evaluating the function's quality, expertise, and alignment with the organisation's business needs. Regardless of outsourcing arrangements, the Audit Committee retains responsibility for ensuring that critical criteria such as independence, qualifications, skills, experience, resources, and fair remuneration are met to support effective internal audit execution.

When outsourcing, the Audit Committee must ensure the engagement meets governance and regulatory expectations, including proper disclosure as outlined in the MCCG (2021). These disclosures enhance transparency and accountability, reinforcing stakeholders' confidence in the audit process as stated in Practice No. 11.2 of MCCG (2021), and as stated in Corporate Governance Guide – Pull-Out I of Bursa Malaysia (2021):

- Identifying the outsourced service provider or external firm and to disclose the name of the service provider;
- Detailing the qualifications of the lead individual overseeing the engagement (from the outsourced provider or external firm).
- Specifying the resources allocated by the outsourced provider or external firm for the engagement.

The Audit Committee need to take into consideration the following in outsourcing internal audit function, as published in the Corporate Governance Guide – Pull-Out I of Bursa Malaysia (2021):

- Evaluate the risks associated with outsourcing, including aspects such as contractual agreements, confidentiality provisions, and any sub-contracting arrangements.
- Define the scope of the internal audit work that will be outsourced.
- Establish a comprehensive selection process for the service provider, ensuring they possess the necessary independence, qualifications, skills, expertise and knowledge.
- Assess whether the resources allocated by the service provider, including their remuneration, are adequate.
- Examine the internal audit framework utilized by the outsourced service provider.
- Clarify the roles and responsibilities assigned to the outsourced service provider.
- Ensure access to relevant information, records, physical assets, personnel, and the reporting workflow for the outsourced service provider.

- Evaluate the effectiveness of the internal audit services delivered by the outsourced provider.
- Plan for the continuity of the service for potential future outsourcing arrangements.

While outsourcing provides access to expertise, the decision to rely on an in-house internal audit function is often associated with enhanced objectivity and competency. In-house auditors are well-positioned to align audit activities with the organisation's culture and strategic objectives. Moreover, a dedicated internal audit function can systematically evaluate and improve internal control policies and procedures by monitoring and reducing the probability of different risks occurring in a timely manner while ensuring prompt mitigation measures.

A study by the Malaysian Institute of Accountants and IIA Malaysia (2017) highlights that many organisations successfully utilize co-sourcing or outsourcing arrangements with external service providers. Such is to fulfill internal audit functions that support management’s control objectives. However, according to IPPF’s 2017 Edition, the Board must implement safeguards to ensure that the internal audit function operates both efficiently and effectively.

According to Ding (2023), outsourcing internal audit can limit its proactive role, as external auditors focus mainly on contract-based tasks and risk avoidance rather than identifying and addressing internal control weaknesses. Additionally, without an in-house internal audit department, organisations miss out on using this function as a training platform for future management talent, as seen in organisations like Pepsi and IBM.

In-house internal auditors bring a deep familiarity with the organisation’s culture, structure and daily operations (Abbott, Barr-Pulliam, Buslepp and Parker, 2022). Their frequent interactions with employees enable them to identify issues and uncover critical details (Glover, Prawitt and Wood, 2008). However, outsourcing internal audit can provide firms with specialized expertise and enhance auditor independence, reducing the risk of bias under management pressure (Desai, Gerard and Tripathy, 2011). This independence is especially valuable in relationship-driven economies like Malaysia, where objective insights are critical.

Internal auditing as a whole is conducted in a wide range of legal and cultural contexts for organisations with diverse purposes, sizes, complexities, and structures. It may be carried out by personnel within the organisation or by external providers. Although these variations can influence how internal auditing is applied in different settings, adherence to the IPPF established by The Institute of Internal Auditors (IIA) remains crucial for fulfilling the responsibilities of both internal auditors and the overall internal audit function. Adherence to professional standards by internal auditors positively contributes to enhancing and standardizing organisational performance (Mihret, James and Mula, 2010).

According to Hazaea, Tabash, Khatib, Zhu and Al-Kuhali (2020), the independence of internal audits and adherence to IA standards positively influence the financial performance of commercial banks. These findings align with Mihret et al. (2010), who reported a positive relationship between auditor independence and financial outcomes, as well as between financial performance and compliance with international standards.

In the research of Rodgers and Al Fayi (2019), there are three (3) ethical pathways, i.e. preference, rule, and principle, offer a framework to address corporate governance in accounting and auditing. Organisational conditions and individual perceptions influence reporting decisions. This framework serves as a basis for exploring how internal audit reporting structures impact organisational well-being. Additionally, the authors in their study find that the competence of the internal audit function enhances firm operational efficiency, while the impact of internal audit function independence on operational efficiency is negligible. Furthermore, the authors highlight that the quality of internal audit function significantly improves operational efficiency only when supported by effective corporate governance at the firm level and robust institutional frameworks at the provincial level (Chen, Lin, Lu and Zhou, 2020).

According to Lajmi and Yab (2022), the authors found that corporate governance attributes, particularly audit committee diligence and expertise, significantly and positively affect audit report lag. This research highlights the importance of governance mechanisms in reducing audit report delays, providing valuable insights for investors and stakeholders, especially in emerging markets, thereby emphasizing the crucial role of an internal audit function in improving governance, ensuring timely audit reporting, and potentially enhancing financial performance. The findings in the study by Mahyoro and Kasoga (2021) indicate that audit quality, organizational context, and auditee characteristics significantly and positively impact the effectiveness of internal audit services in Tanzania's Local Government Authorities. Institutions with larger enrollments and endowments, public funding, and an audit committee are more likely to maintain an internal audit function. There is a positive and significant relationship between having an internal audit function and the amount of federal grants received, which is even stronger for internal audit functions that conduct grant-specific procedures (DeSimone and Rich (2020).

However, a study by Roussy and Perron (2018) highlights research gap in clarifying the actual roles of internal audit, as prior literature often describes it as the "jack of all trades" of governance, without providing a clear understanding of its specific functions. The gaps identified in their review may offer insights into how different roles and the quality of internal audit influence financial outcomes and risk management, which are key elements in understanding the relationship between internal audit and firm performance.

Therefore, the internal audit function whether in-house, outsourced, or co-sourced is critical for evaluating and improving governance, risk management and control processes. This study explores these dynamics, focusing on the implications of the internal audit function, i.e. in-house, outsourced or co-sourced on organisational performance, particularly in the context of financial performance, i.e. profit before tax.

2.2.2 Internal Audit Cost

The components of internal audit cost may include several elements depending on the organisation’s audit structure (e.g., in-house, outsourced or co-sourced). The in-house internal audit cost comprises salaries and benefits of internal auditors, training and development costs for audit staff, software, tools, and technology required for auditing and travel and logistical expenses for audits across multiple locations.

The outsourced internal audit costs are fees paid to external audit firms or consultants and specialized audits for compliance with regulations such as ISO certifications or ESG reporting. The co-sourced internal audit costs are shared costs when the organisation uses both internal auditors and external experts.

The internal audit cost is important for governance focus in which it reflects the organisation’s commitment to strong internal controls and accountability. It is also for the purpose of operational efficiency as it helps assess whether the audit function is cost-effective or overly expensive compared to the value it delivers. The internal audit cost can provide financial insights by understanding the impact of internal audit spending on profitability (e.g., profit before tax) or operational budgets and useful for benchmarking against peers in the same industry. Additionally, it aids in strategic decision-making whether in-house, outsourced or co-sourced audit models are more effective based on cost-performance analyses.

According to Chapter 9 (Appendix 9C) of the Bursa Malaysia’s Listing Requirements, a statement regarding the internal audit function of the listed issuer, specifying whether it is conducted in-house or outsourced, along with the costs incurred for the internal audit function for the financial year. Under normal circumstances, such information is recorded in the annual report of the companies listed in Bursa Malaysia.

Internal audit plays a critical role in addressing corporate agency issues and enhancing the quality of financial information. Therefore, organisations should prioritize developing a robust internal audit management system, fostering innovation in audit operations and practices, and creating a supportive environment to ensure the effective functioning of the internal audit process (Liu, Wang, Sun, Guo and Zhao, 2024). The relative size of the internal audit function's budget is significant because a well-funded internal audit function is better positioned to effectively oversee and monitor an organisation's transactions (Abbott et al.,2022). Agency theory posits that firms with strong governance can reduce agency conflicts of interest and enhance the quality of financial reporting. Consequently, strong governance may influence the relationship between reported key audit matters and audit costs (Elmarzouky, Hussainey and Abdelfattah, 2023).

In a dynamic business environment, high-performing internal audit functions are essential for managing critical risks and aligning with organisational strategies. Leading corporations integrate internal audit into decision-making and strategy development, leveraging its access to key data. To maximize its impact, internal audit must be well-funded, staffed and continuously trained (Abdieva, 2016). Hence, the internal audit function budget is positively associated with hiring industry-specialist auditors and audit fees.

However, the positive relationship is less supported in family-owned companies compared to non-family companies. A complementary relationship between cost of internal audit function and audit fees exists for both family and non-family firms. Additionally, a negative association between family ownership and the ratio of internal audit function costs to audit fees indicates that family-owned companies tend to rely more on external audits than internal audits (Al-.Qadasi et al., 2019). From another perspective, the research by Al-Qadasi (2024) indicates that companies with greater levels of institutional ownership allocate more resources to the internal audit function. This implies that institutional investors are well-positioned to monitor managerial activities effectively due to their substantial holdings. Additionally, both transient and dedicated institutional investors demonstrate a higher likelihood of investing in the internal audit function.

2.3Ratio of Internal Audit Cost Against Total Administrative Expenses

Total administrative expenses encompass all indirect costs related to running an organisation, including internal audit expenses, office supplies and staff costs. Internal audit cost is a component of total administrative expenses, and the ratio of internal audit cost to total administrative expenses reflects the organisation's commitment to risk management, regulatory compliance and asset protection.

This ratio evaluates how efficiently resources are allocated to internal audit relative to overall administrative spending. A higher ratio may indicate a strong focus on governance, risk management, and compliance, while a lower ratio could suggest reduced emphasis on auditing, potentially increasing risk exposure.

The ratio allows organisations to benchmark internal audit spending, assess cost-effectiveness, and evaluate its impact on financial outcomes like profit before tax. A high ratio may indicate necessary investment in high-compliance industries or inefficiencies, while a low ratio may suggest resource efficiency or underinvestment in critical controls.

According to Flostoiu (2023), expenses are a fundamental component in determining the financial results of a fiscal year and offer vital insights for evaluating and managing an entity's financial performance. Efficient expense management plays a crucial role in driving an organisation's profitability and overall financial success. Expenses also play a crucial role in evaluating an organisation's financial performance and have various purposes and implications, such as serving as an indicator of how effectively the organisation manages its financial resources, with the reduction of unnecessary expenses contributing to increased profitability and making informed management decisions on resource allocation and business strategies.

According to Al-Qadasi, Abidin and Al-Jaifi (2019), their study contributes by providing empirical evidence on the trade-off between internal audit function investments, industry-specialist auditors, and audit fees, with a focus on the moderating role of family ownership. The findings offer valuable insights for policymakers and practitioners, emphasizing the importance of investing in internal audit function to engage industry-specialist auditors and effectively manage audit service pricing.

2.4 Financial Performance - Profit before tax

Profit before tax is a useful measure to examine the impact of internal audit costs on financial performance because it reflects an organisation's earnings after operating expenses (including administrative expenses) but before taxes are applied. Therefore, profit before tax (PBT) represents the profit an organisation generates from its operations after all expenses, except taxes, have been deducted. It's calculated as:

$$\text{PBT} = \text{Total Revenue} - \text{Total Operating Expenses (including total administrative expenses)}$$

Profit before tax allows one to see the profitability of the organisation without the influence of tax policies, giving a clearer view of operational efficiency and cost control. Since administrative expenses (which include internal audit costs) are subtracted in reaching profit before tax, any changes in these costs directly impact profit before tax. Higher internal audit costs could reduce profit before tax if they do not lead to offsetting financial benefits. It also helps gauge how much of the profit before tax is allocated to the internal audit function. A high percentage could mean the internal audit function is costly, but it could also indicate that the organisation invests more in ensuring financial stability and risk management as well as sustainability of the business.

By comparing the internal audit cost, the ratio of internal audit cost to total administrative expenses and profit before tax figures over multiple periods of 3 consecutive years (using average), changes in internal audit spending correlate with profit before tax fluctuations can be analysed. A consistent or increasing profit before tax alongside increased internal audit costs might indicate a positive impact.

By measuring internal audit costs and the said ratio against profit before tax help to evaluate if spending on the internal audit function contributes to stable or improved pre-tax profitability by mitigating risks and enhancing operational efficiency. This analysis can provide insights into whether the internal audit function strengthens financial performance and justifies its costs. According to Cruz (2022), it demonstrates that internal audit has a significant impact on firm performance. The finding from Cruz (2022) also indicates that internal audit positively influences firm performance.

K. Johl, Kaur Johl, Subramaniam and Cooper (2013) examine the impact of internal audit quality on financial reporting quality in Malaysian firms, using abnormal accruals as an indicator. The study underscores the role of board quality in enhancing this relationship, showing how independent audits help curb earnings management and boost financial transparency. It also explores external factors such as audit outsourcing and political ties that may influence the effectiveness of internal audits.

The internal audit function can be conducted in-house or outsourced to third-party providers, with associated costs recorded annually. This study, grounded in agency theory, finding that both internal audit function sourcing arrangements and costs significantly impact financial report timeliness (Turetken, Jethefer and Ozkan, 2020).

The total cost of the internal audit function includes expenditures on personnel, training, travel, and outsourced services. Abbott et al. (2022) argued that a high-quality internal audit function enhances financial reporting effectiveness, while Prawitt, Smith and Wood (2009) found that industry spending on internal audits, as part of internal audit function quality, reduces earnings management. Thus, greater investment in internal audit function leads to skilled personnel with strong oversight capabilities, reinforcing controls over financial reporting.

Performance evaluation is essential for effective earnings management, providing key insights into a firm's perceptual, organisational, and control capacities (Taouab and Issor, 2019). Financial indicators have traditionally assessed corporate performance due to their role in boosting profitability, enhancing employee returns, improving manufacturing capabilities, and delivering higher-quality products to customers (Taouab and Issor, 2019).

Kolsi and Al-Hiyari (2024) reveals that having an in-house internal audit function positively influences corporate performance compared to outsourcing. This finding suggests that internal audit structure may contribute to stronger overall financial performance. Hence, there is a shift from viewing internal audits as a compliance tool to a function that adds strategic value.

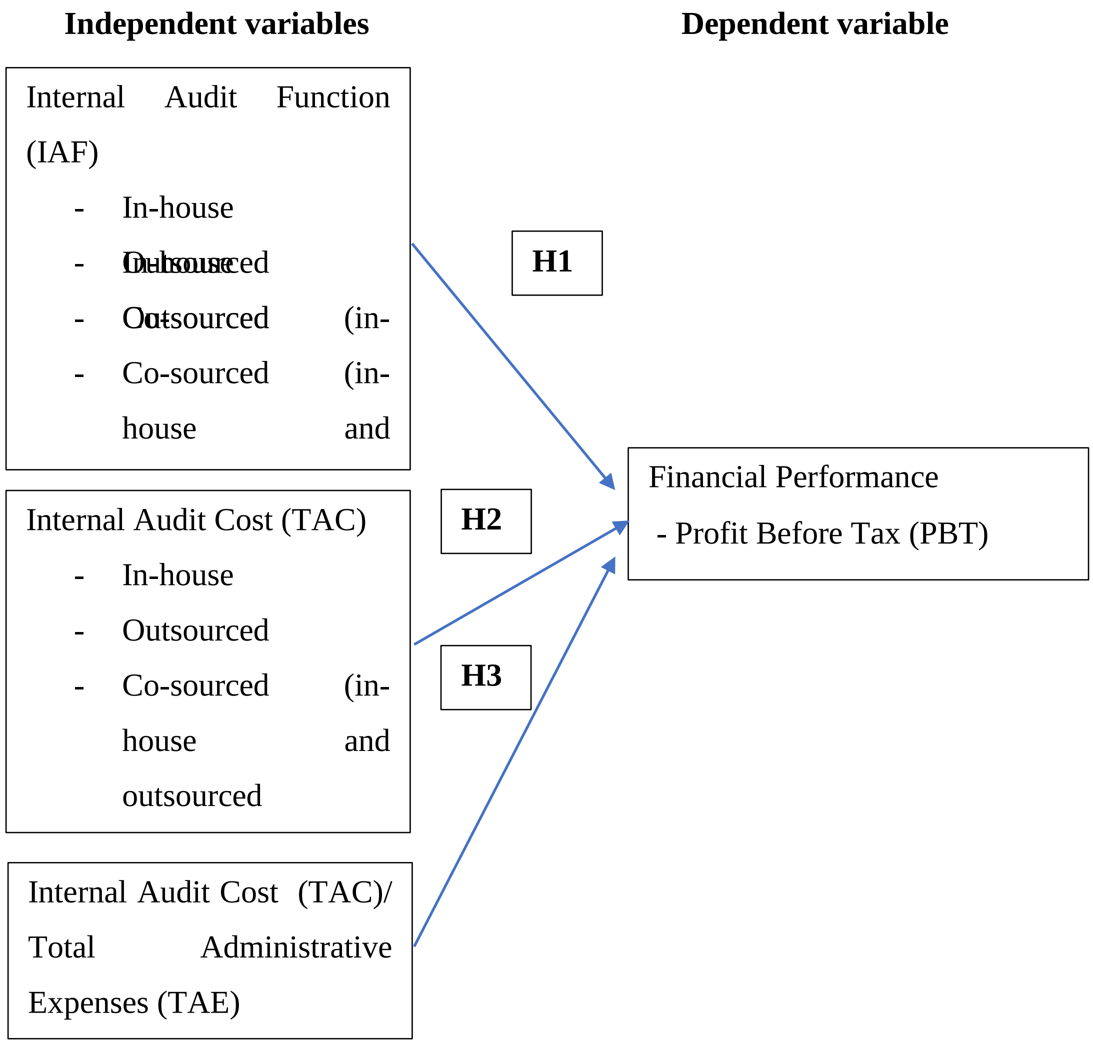
Financial metrics were once the sole success measure, but today, sustainable and ethical practices are recognized as essential for long-term value. This shift reflects a deeper understanding that true value creation relies on more than just financial performance - it must include responsible and sustainable actions (The Edge Malaysia on 24 September 2024).

The internal audit function quality is important in enhancing internal control systems for both operations and compliance. Similarly, in the context of financial performance, a stronger internal audit function, characterised by factors such as team size, auditor competence, and experience, may positively influence financial outcomes (Chang, Chen, Cheng and Chi, 2019). This aligns with the study on how internal audit function contributes to an organisation's overall performance, including its financial success.

2.5 Conceptual Framework

The conceptual framework serves as a visual representation of the theoretical relationships examined in this study, aligning the research objectives with the hypotheses developed. It provides a structured outline that illustrates the interplay between the key variables, namely the internal audit function (in-house, outsourced and co-sourced), internal audit costs, ratio of internal audit cost to total administrative expenses and financial performance measured by profit before tax. This framework integrates insights from the literature to present the relationships explored, guiding the empirical analysis to address the research questions effectively as follows:

Figure 6: Conceptual Framework



Note: Developed for the research

The summary of the related sources in supporting the hypotheses are as follows:

Table 2.1: Sources For Hypotheses

Hypothesis	Sources
H1: There is a positive relationship between the internal audit function (in-house, outsourced and co-sourced) and the profit before tax.	Adekola et al. (2018); Alsurayyi and Alsughayer (2021); Ibrahim, Diibuzie and Abubakari (2017); Al-Sorihi, and Al-Salafi (2019), etc.
H2: There is a positive relationship between the internal audit cost (in-house, outsourced and co-sourced) and the profit before tax.	Pirzada and Rehman (2013); Lawal, Lawal and Oluganna (2020); Sukma, Bernawati, Rizki and Priyambodo (2022); Annet and Shamirah (2023); Egiyi and Okafor (2022), etc.
H3: There is a positive relationship between the internal audit cost (in-house, outsourced and co-sourced) against total administrative expenses and the profit before tax.	Al Matari and Mgammal (2019); Flostoiu (2023); Al-Qadasi et al. (2019), etc.

2.6 Hypothesis Development

2.6.1Relationship Between Internal Audit Function And Profit Before Tax

The effectiveness of controls in detecting and preventing fraudulent activities carried out by an organisation’s internal audit function, whether in a public or private entity contributes to both its financial and non-financial performance (Adekola, Isaac and Feyisayo, 2018).

According to Alsurayyi and Alsughayer (2021), effective corporate governance can be achieved through a strong internal audit function. The study concludes that sound corporate governance positively influences firm performance, with efficient internal audit practices strengthening governance and ultimately improving performance.

Furthermore, another study showed the importance of maintaining an effective internal control system in organisation has been consistently highlighted due to its positive impact on financial performance. A well-functioning internal control system helps prevent and detect fraudulent activities within the organisation. Hence, there was a positive relationship between internal controls and financial performance (Ibrahim et al., 2017).

Besides, a study indicated a strong positive impact of internal audit effectiveness and efficiency on enhancing financial performance in banks. Additionally, the findings revealed that the effectiveness of internal audit had a greater impact on financial performance than its efficiency (Al-Sorihi and Al-Salafi, 2019).

At the corporate level, outcome measures can evaluate the internal audit's contribution to organisational performance, including factors such as profitability, growth, share price, or its role in preventing corporate failures (Arena and Azzone, 2013). Internal auditing demands firm-specific knowledge and becomes closely integrated with a firm's management and operations, organisations are more inclined to internalize their audit function. Additionally, larger firms and those with higher internal audit needs tend to favour an in-house internal audit function, while smaller, less audit-intensive firms are more likely to opt for external providers (Spekle, Elten and Kruis, 2007).

According to Roussy, Barbe and Raimbault (2020), the study urges internal auditors to focus on the broader goal of organisational significance, rather than solely on internal audit effectiveness, in order to avoid stakeholder disappointment. The data suggest that internal audit attains and strengthens its organisational importance by simultaneously activating the "building blocks" of IA effectiveness (Lenz and Hahn, 2014), fostering organisational learning and driving positive change. This aligns with the premise of this study which explores how the internal audit function not only impacts financial performance but also contributes to broader organisational development and long-term success.

According to Popescu-Gradisteanu. and Mocuta (2023), key themes in internal audit research focus on corporate governance, audit quality, impact, risk management, and internal audit effectiveness. The findings highlight sub-areas of interest within internal audit studies, showing a shift over time from technical and quality-related issues to strategic and performance-focused topics. Geographical trends reveal global attention to internal audit effectiveness, with notable interest in regions like the United States, China, England, Austria, and Malaysia. This aligns with H1, which examines the relationship between the internal audit function and firm performance and underscores the relevance of internal audit in supporting corporate governance and strategic objectives.

Consequently, additional research on the relationship is required, leading to the formulation of the following hypothesis:

H1: There is a positive relationship between internal audit function (in-house, outsourced and co-sourced) and the profit before tax.

2.6.2 Relationship Between Internal Audit Cost And Profit Before Tax

Outsourcing is more cost-effective than in-house internal audit (Pirzada and Rehman, 2013). This means that higher profit before tax in view that outsourcing is more cost effective. Other than that, research also showed that outsourcing internal audit functions enhances efficiency, reduces costs, and improves the reliability of internal audit services (Lawal et al., 2020).

Companies utilising outsourced internal audit can minimize costs while achieving equal or greater benefits from their internal audit activities. This advantage is particularly notable for small and medium-sized enterprises with limited budgets for corporate oversight. However, to fully optimize these benefits, companies must carefully consider factors such as the internal auditors' knowledge of the business and the safeguarding of sensitive company information (Sukma et al., 2022).

Some companies outsource their internal audit function to public accountants, with each group claiming to offer more cost-effective services and superior expertise. Caplan and Kirschenheiter (2020) use agency theory to explore the outsourcing debate, avoiding claims of differential expertise. It finds that public accountants, with their greater financial resources, are incentivized to take on outsourcing, but their higher opportunity costs create a disincentive. The study concludes that public accountants typically provide higher levels of testing, though potentially at a higher fee, supporting both the internal auditor’s claim of lower cost and the public accountant’s claim of higher quality. Additionally, the likelihood of outsourcing increases with the risk of control weaknesses and the potential loss from undetected issues.

Apparently, audit efficiency significantly improves when the internal audit function provider is from a Big4 audit firm, whereas using a non-Big4 audit firm for internal audit function is linked to reduced audit efficiency. Additionally, there is significant interaction between the external auditor and internal audit function in terms of audit efficiency when the outsourced internal audit function provider is from a Big4 audit firm. This suggests that Big4 firms, as outsourced internal audit function providers, are more strongly associated with improved audit efficiency than other types of providers (Baatwah, Al-Ebel and Mamrah, 2019). Any audit efficiency may directly influence the overall financial outcomes.

The internal audit cost offers valuable financial insights by evaluating how audit spending affects profitability (e.g., profit before tax) and operational budgets. It also serves as a useful tool for benchmarking against industry peers. Moreover, it supports strategic decision-making by helping organisations determine whether in-house, outsourced or co-sourced audit models deliver better cost-performance outcomes. Establishing an effective internal audit department to ensure that organisational performance consistently remains strong (Annet and Shamirah, 2023). This suggests that internal audit has a substantial impact on the financial performance. Furthermore, by establishing effective internal audit functions is likely to improve company performance and should be promoted (Egiyi and Okafor, 2022).

In addition, the rapid growth of the big data era and advancements in information technology (IT) present both opportunities and challenges for internal audit functions. As a critical mechanism for enhancing enterprise value and operational efficiency, internal audit must evolve to meet the increasingly complex needs of modern enterprises. Traditional methods are insufficient, making the integration of IT and the adoption of intelligent technologies, such as machine learning (ML), a necessary progression. ML, with its advanced data processing and pattern recognition capabilities, offers immense potential to transform internal audit processes and enhance its role in supporting enterprise growth (Zhang, 2024). This discussion links to **H1**, emphasizing how the evolution of internal audit methods and the integration of ML technologies can influence corporate governance and firm performance. It may also tie into **H2**, as the adoption of advanced technologies may affect internal audit costs and their relationship with financial outcomes.

According to Zhang (2024), internal audit must adapt to the evolving digital landscape by incorporating advanced information technologies, such as machine learning (ML) and intelligent optimization algorithms, to modernize audit methods and techniques. This shift enhances the efficiency and effectiveness of internal audit functions. The proposed internal audit system, leveraging hybrid intelligent optimization algorithms, highlights the potential for intelligent and efficient solutions by integrating ML technology with various optimization approaches. This relates to **H2** by suggesting that investments in advanced internal audit technologies may also impact costs and financial outcomes.

Therefore, additional research on the relationship is required, leading to the formulation of the following hypothesis:

H2: There is a positive relationship between the internal audit cost (in-house, outsourced and co-sourced) and the profit before tax.

2.6.3Relationship Between Internal Audit Cost Against Total Administrative Expenses And Profit Before Tax

The rationale behind this research lies in understanding how an organisation's investment in internal audit relative to its broader administrative expenses impacts financial performance.

The ratio of internal audit cost and total administrative expenses is often seen as an indicator of the organisation's prioritization of internal audit functions. A higher ratio may reflect a strong focus on governance, risk management, and compliance, while a lower ratio could indicate less emphasis on these areas. This study aims to investigate whether this focus influences financial outcomes, particularly pre-tax profitability. Organisational performance metrics assess the internal audit's influence on profitability and the prevention of corporate failures.

Since total administrative expenses, including internal audit costs, directly reduce profit before tax, the ratio could serve as a proxy for assessing how efficiently internal audit resources are utilized. If the investment in internal audit enhances governance and mitigates risks effectively, it could positively correlate with profitability. Conversely, inefficient spending might have a negative or neutral effect on profit before tax.

According to Al Matari and Mgammal (2019), the study finds a significant positive relationship between non-executive boards, audit committee size, audit committee independence, internal audit profession, and corporate performance. It also highlights the moderating role of internal audit size in the relationship between board size and corporate performance. These results align with **H1** and **H3** in this research, suggesting that internal audit functions, including their size and structure, significantly influence financial outcomes, reinforcing the organisation’s spending in internal audit.

Expenses are critical in assessing an entity's financial performance, as they reflect resource management efficiency, impact to profitability and strategic decisions (Flostoiu, 2023). Effective expense management enhances profitability by reducing unnecessary costs. Additionally, Al-Qadasi et al. (2019) highlight the trade-off between internal audit investments, industry-specialist auditors, and audit fees, emphasising the moderating role of family ownership and the importance of investing in internal audit function to optimize audit pricing and services. Furthermore, the external auditors may rely on the work of the internal auditors as stated in the previous chapter regarding ISA 610 (revised 2013) - Using the Work of Internal Auditors when performing statutory audit.

Previous research highlights the importance of resource allocation in internal audit functions and its potential impact on financial performance. **H3** builds on this by incorporating the ratio to explore whether allocating a higher proportion of administrative expenses to internal auditing translates into better financial performance.

Given the lack of extensive prior studies specifically examining the ratio and its impact on profit before tax, **H3** was formulated to address this gap, providing a basis for empirical investigation and contributing to the understanding of resource allocation in internal audit function as follows:

H3: There is a positive relationship between the internal audit cost (in-house, outsourced and co-sourced) against total administrative expenses and the profit before tax.

2.7 Conclusion

To summarize, Chapter 2 provided an extensive literature review, drawing on prior research studies. It began by identifying the key theories underpinning this research, i.e. agency theory, resource-based view, resource dependency theory and stewardship theory. Additionally, this chapter examined relevant studies exploring the relationship between the internal audit function, its associated costs, ratio of internal audit cost over total administrative expenses and the profit before tax of companies. Based on the literature reviewed, a conceptual framework and hypotheses were developed, focusing on three (3) independent variables (the internal audit function and its incurred costs and ratio of internal audit cost over total administrative expenses) and one (1) dependent variable (financial performance, i.e. profit before tax). This framework will guide the examination of these relationships in the next chapter, Research Method.

Chapter 3: RESEARCH METHOD

3.0 Introduction

Chapter 3 outlines the research methodology employed in this study, detailing the research setting, data collection, and sampling methods. Additionally, this chapter defines the constructs of the dependent and independent variables and concludes with a summary of the statistical tests employed.

3.1 Research Setting

This study considers quantitative research design. The study aims to explore the association between the internal audit function, its costs and internal audit cost over total administrative expenses and profit before tax of selected publicly traded Malaysian companies. Information on the types of internal audit function and costs, along with total administrative expenses and profit before tax, will be extracted from company annual reports published in the Bursa Malaysia website. Consequently, this study involving quantitative data analysis require this knowledge to explore their data and determine appropriate descriptive statistics to summarize it whether using IBM® SPSS® Statistics namely Statistical Package for the Social Sciences (SPSS) or another software program, the principles remain the same. For smaller datasets, Microsoft Excel can also be utilised to input data and generate statistics and charts (Collis and Hussey, 2014).

Business research can be classified into exploratory, descriptive, analytical and predictive categories. This study adopts a descriptive approach to gather insights on the types of internal audit functions in place and the related financial information needed for data analysis. The research focuses on addressing the questions of what, when, who and how it will be conducted.

3.2 Data sampling

The sample for this study involved twenty-two (22) publicly listed companies in Malaysia. Out of the total twenty-two (22) companies, five (5) categorised under gold and jewellery ecosystem and the remaining seventeen (17) companies represent non-gold retailers, thereby offering diversity in the sample. Furthermore, eleven (11) of the selected companies are members of the Malaysian Retail Chain Association (MRCA), reflecting their significant standing in the retail industry and adherence to recognized best practices. The inclusion of MRCA members further supports the research by incorporating well-established and industry-recognized companies.

The choice of this sample aligns closely with the study's research objectives, which aim to explore the relationship between the internal audit function and financial performance within the retail sector. The inclusion of gold-related entities is particularly pertinent, as this sector faces unique operational and financial challenges, including high inventory value, volatile market dynamics and distinct regulatory considerations. By incorporating both gold and non-gold retailers, the study seeks to identify whether internal audit practices vary across different retail segments and how these practices impact overall financial performance.

Additionally, the focus on companies listed on the Main Board of Bursa Malaysia in the retailer sub-sector and were chosen due to criterion for its dual advantages of ensuring the availability of reliable and audited financial data through annual reports. Such is a requirement for publicly listed companies and focusing on a sector known for its retail activities. The decision to focus on listed companies ensures the study's alignment with corporate governance practices, as these companies are subject to stricter regulatory frameworks, including internal audit functions and disclosures. Besides, the availability of high-quality and reliable data is essential for achieving the study's objectives.

3.3 Data Collection

Data collection in this study involves secondary sources. The type of internal audit function, its associated costs, total administrative expenses and profit before tax indicators are gathered as secondary data from annual reports available on Main Board of Bursa Malaysia.

A sample of twenty-two (22) companies will be analyzed, with data collected over three consecutive years (2021–2023) on internal audit cost, total administrative expenses and profit before tax. Averages will then be calculated in value or percentages. The listing of the twenty-two (22) companies, the type of internal audit function implemented and the retailing categories are tabled as below:

Table 3.1: Summary Of Retailers And Type Of Internal Audit Function

No.	Company	Category
1	Kamdar Group (M) Berhad	Non-gold
2	Bahvest Resources Berhad	Gold
3	Niche Capital Emas Holdings Berhad	Gold
4	Bonia Corporation Berhad	Non-gold
5	Khind Holdings Berhad	Non-gold
6	Padini Holdings Berhad	Non-gold
7	Mynews Holdings Berhad	Non-gold
8	7-eleven Malaysia Holdings Berhad	Non-gold
9	Panasonic Manufacturing Malysia Berhad	Non-gold
10	Amway (Malaysia) Holdings Berhad	Non-gold
11	Sen Heng New Retail Berhad	Non-gold
12	Zhulian Corporation Berhad	Gold
13	Beshom Holdings Berhad	Non-gold
14	Atlan Holdings Berhad	Non-gold
15	Focus Point Holdings Berhad	Non-gold
16	Parkson Holdings Berhad	Non-gold
17	Tomei Consolidated Berhad	Gold
18	Mr D.I.Y. Group (M) Berhad	Non-gold
19	AEON Co. (M) Berhad	Non-gold
20	Poh Kong Holdings Berhad	Gold
21	Tan Chong Motor Holdings Berhad	Non-gold
22	Petronas Dagangan Berhad	Non-gold

In-house & Outsourced
In-house
Outsourced

Note: Developed for the research

3.4Dependent Variables

Profit before tax are used as proxies for the selected companies. This metric was chosen because internal audit costs contribute to total administrative expenses and are part of the equation for profit before tax.

In this study, profit before tax is chosen as a dependent variable as it represents the earnings of an organisation after deducting all operating expenses, including administrative expenses, but before taxes. This makes it an ideal measure of operational performance, as it isolates the impact of internal audit costs and other expenses from the influence of tax policies, which vary by jurisdiction. Hence, profit before tax is a direct reflection of operational efficiency.

The internal audit costs are part of the total administrative expenses which directly impact profit before tax. Using profit before tax allows for an examination of whether investments in internal audits lead to improved profitability through enhanced governance, risk management, and operational efficiencies. Other financial metrics, such as net profit, include tax impacts and may not provide a clear link between internal audit spending and financial performance. Therefore, profit before tax has a connection to internal audit cost and total administrative expenses.

The use of profit before tax is particularly relevant in the governance context, as it highlights how well an organisation manages its operational expenses to generate earnings. This ties directly to the role of internal audits in strengthening internal controls and identifying cost-saving opportunities, which are intended to improve operational outcomes. Profit before tax is widely used for benchmarking performance across companies and industries because it is a standardised measure unaffected by variations in tax rates or other non-operational factors. This makes it easier to assess whether internal audit spending aligns with industry practices and delivers financial benefits, i.e. comparability.

In conclusion, profit before tax is chosen because it directly aligns with the study's objective to assess how internal audit costs influence operational profitability, offering a clear and focused measure of financial performance.

3.5 Independent Variables

This study identifies three types of internal audit functions, i.e. in-house, outsourced and co-sourced (a mix of in-house and outsourced). Additionally, internal audit costs are defined as expenses associated with internal audit activities, including staffing, equipment, and other expenditures related to audit assignments. Payments to external service providers for performing the outsourced internal audit function are also recorded as internal audit costs.

The ratio of internal cost incurred against total administrative expenses is an independent variable in this study as it is an allocation of resources to the internal audit function. Hence, it is measured as a proportion of its total administrative expenses within the organisation's overall expenditure and to reflect its prioritisation of governance and operational oversight.

3.6 Variable Definition and Measurement

The variables and their corresponding measurements are central to the research framework, as they operationalize the theoretical constructs into measurable components. This section defines the key variables examined in the study, their respective measurement methods, and the sources supporting the operationalization of each variable. By establishing a clear linkage between theoretical concepts and empirical data, this section ensures that the variables are appropriately aligned with the research objectives and hypotheses. The selected variables reflect both the internal audit function's structural and cost dimensions and their relationship to financial performance, measured through profit before tax. The table below provides a comprehensive summary of these variables, their definitions, measurement approaches and supporting references.

Table 3.2: Variable Definition and Measurement

Variable	Definition	Measurement	Source
Internal Audit Function (TIAF)	The structure of the internal audit function within a company (e.g., in-house, outsourced or co-sourced)	Categorised as in-house, outsourced or co-sourced.	Ding (2023) Christensen (2022) Alsurayyi and Alsughayer (2021)
Internal Audit Costs (ATIAC)	The total cost incurred by an internal audit function	Total annual cost of internal audit activities (in MYR) using average	Elmarzouky et al. (2023) Abbott et al. (2022) Lawal et al. (2020)
Internal Audit Cost Against Admin Expenses Ratio (ATIAC/ATAE)	The proportion of internal audit costs to the total administrative expenses of the company	Internal Audit Costs / Total Administrative Expenses (in %) using average	Flostoiu (2023)

Variable	Definition	Measurement	Source
Profit Before Tax (APBT)	The total profit before taxes is deducted. It is an indicator of financial performance or profitability.	Profit before tax figure as reported in annual financial statements (in MYR) using average	Kolsi and Al-Hiyari (2024) Annet and Shamirah (2023) Egiyi and Okafor (2022)

Note: Developed for research

3.7 Data Analysis

3.7.1Proposed Data Analysis Tool

SPSS is widely used by researchers for data analysis (Masuadi, Mohamud, Almutairi, Alsunaidi, Alswayed and Aldhafeeri, 2021). Its popularity stems from its capability to handle large datasets with multiple variables, suitability for various statistical analyses and ability to perform all major tests required for quantitative data analysis. Alongside SPSS, Excel is also employed for graphing data, providing an accessible platform for initial data visualization before conducting more advanced statistical processing in SPSS (Rahman and Muktadir, 2021).

3.7.2 Frequency Analysis

Frequency refers to the number of times a particular value or category appears in a dataset. Frequency analysis lays the groundwork for more advanced statistical analyses by providing foundational insights into the data.

3.7.3 Descriptive Analysis

Kaur, Stoltzfus and Yellapu (2018) suggest that descriptive statistics are used to systematically organise and summarise relationships between variables. Descriptive statistics include variable types such as nominal, ordinal, interval, and ratio, as well as measures of frequency, central tendency, dispersion/variation, and position. They are commonly employed to convey the characteristics of a dataset and are suitable for a wide range of measurement types (Turner and Houle, 2019).

3.7.4 Pearson's Correlation Coefficient Test

This study employs Pearson's Correlation Coefficient to assess the correlation between variables. This test evaluates the strength of the linear relationship between two variables, with the correlation coefficient (ρ) ranging from -1 to +1. A value closer to -1 indicates a stronger negative linear relationship, while a value closer to +1 indicates a stronger positive relationship. Values near 0 suggest a weaker linear relationship. This study aims to examine the correlation between one (1) dependent variable and three (3) independent variables. According to Schober, Boer and Schwarte (2018), Pearson's correlation coefficient is commonly used with jointly normally distributed data to assess covariance and correlation between variables.

Table 3.3: Pearson's Correlation Coefficient: Rules of Thumb

Pearson's Correlation Coefficient range	**Association Strength**
±0.90 to ±1.00	Very Strong
±0.70 to ±0.89	Strong
±0.40 to ±0.69	Moderate
±0.10 to ±0.39	Weak
±0.00 to ±0.09	Negligible

Note. Adapted from Schober et al. (2018).

3.7.5 Multiple Regression Analysis

Multiple Linear Regression model involves one dependent variable and multiple independent variables, allowing for analysis of the effects between them (Theofani and Sediyono, 2022). Ali and Younas (2021) further explain that regression analysis can examine and clarify relationships between variables. Factors influencing multiple regression analysis include sample size, missing data, and the nature of the sample. According to Isa, Shyti and Spassov (2020), multiple regression analysis is effective for correlation and relationships between variables but requires a sufficient amount of data to ensure confidence in results. Oke and Akinkunmi (2022) note that multicollinearity (a strong correlation between independent variables) can impact estimation and interpretation. Anesthesiol (2019) suggests that diagnostic tools like tolerance and the Variance Inflation Factor (VIF) can detect multicollinearity; tolerance values below 0.1 to 0.2 and VIF values above 5 to 10 indicate its presence.

3.7.6 Validity and Reliability

Ismail and Chandler (2005) note that Malaysian investors find annual reports more valuable than quarterly reports because the latter are unaudited and therefore less reliable. Similarly, the research by Ballou, Heitger and Landes (2006) and Hodge (2000) support the view that investors prefer information that has undergone external verification or assurance.

In conclusion, the financial statements in the annual reports verified by third parties are considered more trustworthy and investors tend to rely more on such verified information.

3.8 Conclusion

Chapter 3 provided an overview of the research methodology employed to investigate the relationships among the internal audit function, its associated cost, the ratio of internal audit cost to total administrative expenses and company profit before tax. A deductive approach underpins this quantitative and descriptive research. This study uses secondary data collection, drawing information on independent and dependent variables from Bursa Malaysia, Google Scholar, and other academic sources. Data sampling is applied to the selected twenty-two (22) publicly listed companies from the gold and jewellery retailing and other non-gold retailing as well as some are members in the Malaysian Retail Chain Association. This chapter also outlined the research instruments used, defining the dependent and independent variables selected for analysis, and concluded with a summary of the statistical tests employed.

Chapter 4: RESEARCH RESULTS

4.0 Introduction

This chapter presents the research results from data collected from annual reports using the Statistical Package for the Social Sciences (SPSS). The results are displayed through text, charts, tables, and figures to facilitate discussion. Additionally, the chapter includes data analysis results covering frequency analysis, descriptive analysis, Pearson's correlation analysis, and multiple regression analysis. Further explanation and discussion on the findings will be scrutinized by referring to the previous literatures that related to the variables in this research.

4.1Data Analysis

4.1.1 Frequency Analysis

The frequency distribution for the type of internal audit function (TIAF) categorises the internal audit practices among the 22 companies into three types: In-house, Outsourced and Co-sourced. The results are as follows:

Table 4.1: Frequency For Type Of Internal Audit Function

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	In-house	10	45.5	45.5	45.5
	Outsourced	9	40.9	40.9	86.4
	Co-sourced	3	13.6	13.6	100.0
	Total	22	100.0	100.0	

Note: Developed for research

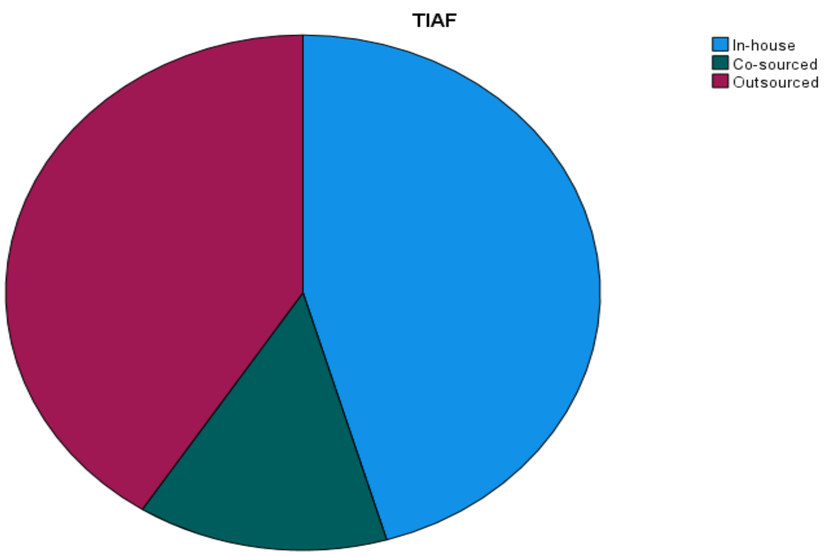
The results demonstrate that in-house internal audit functions are the most prevalent among the sampled companies, representing 45.5% of the total. This preference may be attributed to the desire for greater control over audit processes and better alignment with organisational goals, or cost-effectiveness in comparison to outsourced option. This result is consistent with previous studies by Abbott et al., 2022 and Glover et al., 2008 on the benefits of in-house internal audit function.

Outsourced internal audit functions are the second most common, accounting for 40.9% of the companies. This finding suggests that a significant number of companies prefer the expertise and objectivity offered by external audit firms, which can enhance the quality of audit outcomes and reduce the burden on internal resources. This result is also consistent with previous studies by Ding, 2023, Desai et al.,2011 and Sukma et al.,2022 in supporting outsourced internal audit function.

Co-sourced internal audit functions are the least implemented, with only 13.6% of companies opting for this hybrid approach. This low adoption rate may reflect the complexity of managing a co-sourced model or the perception that it requires higher coordination efforts compared to fully in-house or outsourced functions.

The Pie Chart for the type of internal audit function is depicted below:

Figure 7: Pie Chart For Type Of Internal Audit Function



Note: Developed for research

The pie chart visually represents the distribution of the type of internal audit function across the 22 companies. The blue section nearly half of the sampled companies prefer conducting internal audits using their own resources, the green section represents co-sourced internal audit function which is the smallest proportion and followed by the substantial portion of the pie chart, i.e. the maroon section is attributed to outsourced internal audit function.

4.1.2 Descriptive Analysis

The dataset comprises 22 observations, with the descriptive statistics providing insights into the distribution and central tendencies of four key variables: Type of Internal Audit Function (TIAF), Average Total Internal Audit Cost (ATIAC), Average Internal Audit Cost as a Percentage of Total Administrative Expenses (ATIAC/ATAE) and Average Profit Before Tax (APBT). The below are the details:

Table 4.2: Descriptive Analysis

	N	Range	Min	Max	Sum	Mean	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
TIAF	22	2.00	1.00	3.00	43.00	1.965	.203
ATIAC (RM)	22	4.93 million	0.02 million	4.95 million	11.94 million	0.54 million	0.23 million
ATIAC / ATAE (%)	22	1.88	.02	1.90	9.86	.448	.105
APBT (RM)	22	1,108 million	-38.72 million	1,069 million	2.67 million	121.36 million	54.54 million
Valid N (listwise)	22						

Note: Developed for research

TIAF (Type of Internal Audit Function):

The variable ranges from 1 (minimum) to 3 (maximum), with a mean of 1.965. These statistics indicate that the sample companies employ a mix of internal audit functions with predominantly in-house and outsourced internal audit arrangements.

The TIAF data suggests that companies exhibit some variation in their choice of internal audit function, with a slight preference for one type. This may reflect differing organisational priorities or resource constraints when selecting in-house, outsourced, or co-sourced audit functions. The establishment of an internal audit function is consistent those prescribed in the Institute of Internal Auditors, 2022, CG Guide – Pull-out II by Bursa Malaysia (2021 and MCCG (2021) and is a critical function as studied by Christensen (2022) and Alsurayyi and Alsughayer (2021).

ATIAC (Average Total Internal Audit Cost):

This variable exhibits a range from 0.02 million (minimum) to 4.95 million (maximum), with a mean value of 0.54 million. The wide range indicates substantial disparities in internal audit spending across the sample, likely influenced by company size, operational complexity, or industry-specific requirements or audit requirements of the companies. Furthermore, the mean value of 0.54 million suggests that, while some companies invest significantly in internal audit, others allocate relatively minimal resources. The study by Elmarzouky et al. (2023) supported agency theory that firms with robust governance can reduce conflicts of interest and improve financial reporting quality. Well-funded internal audit function is better positioned to effectively oversee and monitor transactions (Abbott et al., 2022).

ATIAC/ATAE (Average Internal Audit Cost to Average Total Administrative Expenses):

The range spans from 0.02 (minimum) to 1.90 (maximum), with a mean of 0.448. The mean indicates that, on average, internal audit costs constitute approximately 44.8% of total administrative expenses. The ATIAC/ATAE variable provides further insight into resource allocation, showing that, on average, nearly 45% of total administrative expenses are directed toward internal audits. This proportion underscores the importance of internal audit functions in organisational governance and risk management. However, it also suggests differing levels of emphasis on internal audits within administrative expenses as efficient expenses management plays a vital role in companies' performance (Flostoiu 2023).

APBT (Average Profit Before Tax):

The variable ranges from -38.72 million (indicating a loss) to 1,069 million (maximum), with a mean of 121.36 million. The financial performance among the sampled companies highlights a wide range of financial performance, with some companies incurring losses while others report substantial profits. The high mean underscores the heterogeneous nature of the sample, which likely includes companies at varying stages of growth and profitability.

4.1.3 Pearson's Correlation Coefficient Test

The Pearson correlation coefficient measures the strength and direction of the linear relationship between two variables. The details are as follows:

Table 4.3: Pearson's Correlation Between Variables

Variables	TIAF	ATIAC	ATIAC / ATAE	APBT
TIAF	1			
ATIAC	-0.456*	1		
ATIAC/ATAE	-0.570**	0.067	1	
APBT	-0.308	0.832**	-0.019	1
Sig. (2-tailed)	0.163	0.000	0.935	
N	22	22	22	22

*. Correlation is significant at the 0.05 level (2-tailed). Note: Developed for research

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

The correlation values range from -1 to 1, i.e. closer to 1 indicates a strong positive correlation, closer to -1 indicates a strong negative correlation and lastly value near 0 suggests no significant linear relationship.

Based on the above table, there is a weak negative correlation between the internal audit function (TIAF) and profit before tax (APBT) at $r = -0.308$, suggesting that as the internal audit function increases, profit before tax slightly decreases. Since the p-value = 0.163, this result is not statistically significant at the 5% significance level ($p > 0.05$), meaning there is not enough evidence to claim a meaningful relationship. The weak correlation might reflect that the internal audit function (in-house, co-sourced or outsourced) has little direct influence on profit before tax, or that other variables not included in this analysis are more critical drivers of APBT.

As for ATIAC and APBT ($r = 0.832$, $p = 0.000$), there is a strong positive correlation between internal audit cost (ATIAC) and profit before tax (APBT). This suggests that as internal audit costs increase, profit before tax tends to increase significantly as well. Since, p-value = 0.000, this result is highly significant at the 1% level ($p < 0.01$), indicating a very strong and reliable relationship. The strength and direction of the correlation suggest that higher investments in internal audits may be associated with enhanced financial performance, potentially due to improved risk management, compliance, and operational efficiencies driven by the internal audit function (Okello et al., 2019, Raiborn et al., 2017, Trotman and Duncan, 2018, Christensen, 2022). Some detailed reasoning, while contextual, provide a broader understanding of why the relationship between ATIAC and APBT is strong and significant, beyond just the numbers.

Higher internal audit costs may reflect a more robust audit framework, leading to better risk identification and mitigation. This proactive approach can prevent financial losses, enhance decision-making, and contribute to profitability. A higher investment in internal audits might result in detailed assessments of processes and controls. Identifying inefficiencies and streamlining operations can lead to cost savings and, consequently, an increase in profit margins. Companies with higher internal audit costs may focus on regulatory compliance and strong governance practices, reducing the risk of penalties, reputational damage or legal costs. This improved compliance environment can foster investor confidence, translating into better financial outcomes.

Internal audits may not only focus on identifying issues but also provide strategic insights for improvement, shifting from viewing internal audits from compliance tool to a function that adds strategic value (Kolsi and Al-Hayari (2024). A higher cost might indicate in-depth reviews or specialized audits, offering valuable recommendations that directly or indirectly boost financial performance. Larger organisations with more complex operations often incur higher internal audit costs. These entities may also generate higher profits due to their scale, which can contribute to the observed positive correlation as well.

Companies willing to invest significantly in internal audits might also allocate resources efficiently in other areas, reflecting a well-managed and strategically focused organisation, which correlates with higher profitability. The cost might reflect the quality of the audit function, such as employing highly skilled auditors, using advanced technology, or implementing comprehensive audit programs. A high-quality audit function can enhance financial performance through better oversight. Higher internal audit expenditures might signal to stakeholders that the company prioritizes accountability and transparency. This perception can increase investor trust and drive financial growth.

Lastly, ATIAC/ATAE and APBT ($r = -0.019$, $p = 0.935$), there is very weak correlation between the ratio of internal audit cost to administrative expenses (ATIAC/ATAE) and profit before tax (APBT). Since p-value = 0.935, this result is not statistically significant ($p > 0.05$), suggesting there is no meaningful relationship between these two variables.

The lack of relationship in the ratio of ATIAC/ATAE may not vary enough to exert a noticeable influence on the profit before tax. For example, internal audit costs might be a relatively small proportion of total administrative expenses, diminishing their overall impact on profitability. Other factors influencing APBT (e.g., market conditions, operational efficiencies, or broader cost structures) may overshadow any potential impact of ATIAC/ATAE. Companies might allocate internal audit costs in a way that does not directly reflect on profit before tax. For example, the audit may focus more on risk mitigation and compliance rather than immediate cost reductions or profit enhancement. Furthermore, if administrative expenses (the denominator in ATIAC/ATAE) fluctuate widely among the firms in the sample, it could dilute any potential association with APBT.

This lack of relationship suggests that focusing solely on managing the ratio of internal audit costs to administrative expenses is unlikely to yield improvements in profitability. Organisations should consider a more holistic approach to financial performance, potentially integrating insights from broader operational and strategic metrics. These explanations incorporate both statistical and practical perspectives, providing context for the observed lack of correlation.

In summary, Pearson's correlation gives us an understanding of how strongly two variables are related, both in terms of strength (how close the r value is to 1 or -1) and direction (positive or negative). The statistical significance (based on the p-value) tells us whether the observed relationship is likely to be real or due to random chance. In analysing, there is strong positive correlation was found between ATIAC and APBT while also tying it to potential real-world implications.

4.1.4 Multiple Regression Analysis

The key statistics for a multiple regression analysis where the dependent variable (DV) is APBT (Profit Before Tax), and the independent variables (IVs) are TIAF, ATIAC and ATIAC/ATAE are detailed in the Table 4.4 to 4.7 below.

In the regression model, the R Square (Coefficient of Determination) tells how well the model explains the variance in the dependent variable (APBT). The details are as follows:

Table 4.4: Regression Model

			Std. Error	Change Statistics				
Model R	R Square	Adjusted R Square	of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
.836[a]	.699	.649	151479658.66757	.699	13.967	3	18	.000

a. Predictors: (Constant), ATIAC/ATAE, ATIAC, TIAF

b. Dependent Variable: APBT

Note: Developed for the research

The $R^2 = 0.699$ means that 69.9% of the variance in APBT is explained by the independent variables (TIAF, ATIAC and ATIAC/ATAE). This is a relatively high value, indicating a strong model fit, but 30.1% of the variance is still unexplained by the model.

As for ANOVA (Analysis of Variance), it is use to test the overall significance of the regression model, i.e., whether the predictors (TIAF, TIAC and ATIAC/ATAE) are significantly related to the dependent variable (APBT). The details as follows:

Table 4.5: Anova

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	961443922782466430.000	3	320481307594155460.000	13.967	.000[b]
	Residual	413029565820756100.000	18	22946086990042004.000		
	Total	1374473488603222530.000	21			

a. Dependent Variable: APBT

b. Predictors: (Constant), ATIAC/ATAE, ATIAC, TIAF

Note: Developed for the research

The F-Statistic measures the overall significance of the regression model. It is calculated as the ratio of the Mean Square for Regression to the Mean Square for Residuals. The higher the F-statistic, it is more likely that the relationship between the predictors and the dependent variable is statistically significant. As above, the F-statistic = 13.967, which is quite high.

As of the significance (Sig.) p-value, it tells whether the regression model as a whole is statistically significant. If Sig. < 0.05, it indicates that the predictors have a statistically significant relationship with the dependent variable (APBT). In this case, the Sig. = 0.000, which is < 0.05, indicating that the regression model is statistically significant. This means the predictors (internal audit function, internal audit cost, and the audit cost to total expenses ratio) significantly explain the variation in APBT.

The Coefficients table below provides information about the relationship between each predictor variable and the dependent variable (APBT), in terms of standardized coefficients. It helps to understand how much the dependent variable (APBT) is expected to change when one of the predictors changes, while holding other predictors constant.

Table 4.6: Standardized Coeficients

Model		Standardized Coefficients Beta	T	Sig.
1	(Constant)		-.116	.909
	TIAF	.062	.337	.740
	ATIAC	.863	5.734	.000
	ATIAC/ATAE	-.042	-.255	.801

Note: Developed for the research

Standardized Coefficients (Beta) allows for comparison of the relative importance of each predictor variable, as they standardize the coefficients by accounting for differences in the scales of the variables. ATIAC has the highest Beta = 0.863, suggesting it has the strongest relationship with APBT. This indicates that changes in ATIAC have a greater impact on profitability compared to the other variables, emphasizing the importance of how internal audit costs are managed and allocated. The high Beta for ATIAC underscores its critical role in influencing APBT. Companies should prioritize optimizing internal audit budgets to enhance their impact on financial performance and overall success (Chang et. al., 2019).

The Beta of TIAF = 0.062 suggests a positive relationship. The finding from Cruz (2022) indicates that internal audit positively influences firm performance, with a coefficient of Beta = 0.139 ($p = 0.012$). When compared to this study with Beta = 0.062, the magnitude is considered small. The company performance is likely to improve by approximately 0.062 for each unit increase in the level of internal audit.

Additionally, the beta for ATIAC/ATAE = -0.042 shows a negative relationship with APBT. This aligns with earlier findings, indicating that higher proportions of internal audit costs relative to administrative expenses might slightly hinder profitability. The minimal influence of TIAF and the negative Beta for ATIAC/ATAE highlight the importance of strategic resource allocation. While audits are vital, excessive spending relative to administrative budgets could detract from profitability (Flostoiu, 2023). Hence, understanding these relative impacts helps prioritize actions, such as refining audit processes (related to ATIAC) while ensuring their costs remain proportionate to overall administrative expenses. These explanations provide a comprehensive understanding of how Beta coefficients reveal the relative importance of predictors and tie these insights to actionable business strategies.

The significant p-value tests whether the coefficient is significantly different from zero. If Sig. < 0.05, it means the variable significantly affects APBT. The ATIAC has p = 0.000, which is significant, indicating it strongly influences APBT. This aligns with its high Beta and t-value, emphasising ATIAC as a critical driver of profit before tax and significantly influence it. The significant p-value for ATIAC confirms its strong and reliable impact on APBT, underlining the importance of managing internal audit costs effectively to enhance financial performance. But the TIAF (p = 0.740) and ATIAC/ATAE (p = 0.801) are both > 0.05, meaning they are not significant predictors of APBT. This suggests that while the type of internal audit function is operationally relevant, it does not directly impact financial performance. This also confirms that ATIAC/ATAE ratio have no meaningful relationship with profitability in this context and aligns with the findings from t-values and Beta coefficients, further strengthening the conclusion. These explanations tie together the statistical significance and the implications of the results effectively.

According to the Collinearity Statistics, Variance Inflation Factor (VIF) measure multicollinearity. It measures the extent to which the variance of a regression coefficient is inflated due to multicollinearity. VIF values greater than 10 are often considered problematic, as they suggest the presence of multicollinearity. However, Hair, J. F., Risher, J. J., Sarstedt, M. and Ringle, C. M. (2019) proposed a more nuanced interpretation: VIF values greater than or equal to 5 suggest potential collinearity, values between 3 and 5 are considered ideal, and values below 3 are deemed safe. Hence, high values of VIF (> 10) or low Tolerance (< 0.1) suggest multicollinearity issues. The below table details the collinearity statistics:

Table 4.7: Collinearity Statistics

Model		VIF
1	(Constant)	
	TIAF	1.999
	ATIAC	1.356
	ATIAC/ATAE	1.590

Note: Developed for the research

All variables have acceptable VIF values (< 10), indicating no significant multicollinearity problems. Based on the statistics, all variables in the above table analysis have VIF values well below 10, which indicates that there are no significant multicollinearity issues present. This means that each independent variable contributes uniquely to the model without being overly redundant with others. Since multicollinearity is not an issue in the study, the regression coefficients for TIAF, ATIAC, and ATIAC/ATAE can be trusted to reflect their true, independent relationships with APBT. This means that each predictor variable's effect on the dependent variable (APBT) is accurately estimated, and the significance tests for the coefficients are reliable. Without multicollinearity problems, means the findings are valid and robust and can confidently interpret the individual contributions of each independent variables to the dependent variable.

4.2 Conclusion

This study investigates the relationships between internal audit function (TIAF), internal audit costs (ATIAC), the ratio of internal audit costs to total administrative expenses (ATIAC/ATAE) and profit before tax (APBT). The results yielded significant insights but also highlighted the complexity of these variables in influencing profit before tax.

TIAF demonstrated positive relationship with APBT though of a smaller magnitude, suggesting that the type of internal audit function (in-house, outsourced, or co-sourced) does not directly influence profitability. This finding indicates that the financial benefits of internal audits may not be tied to the type of audit but rather their effectiveness in addressing strategic risks and ensuring operational compliance.

ATIAC showed a strong positive correlation with APBT, indicating that higher investment in internal audit functions is associated with improved profitability. Furthermore, ATIAC has the highest Beta = 0.863, suggesting it has the strongest relationship with APBT compared to TIAF Beta = 0.062 and the beta for ATIAC/ATAE = -0.042. The high Beta for ATIAC underscores its critical role in influencing APBT. This suggests that companies prioritizing internal audit activities may reap benefits through enhanced governance, risk management, and operational improvements.

The ratio of Internal Audit Cost to Administrative Expenses (ATIAC/ATAE) showed no significant relationship. This suggests that internal audit costs, as a proportion of administrative expenses, do not necessarily reflect profitability. The variability of administrative expenses across organisations could dilute the impact of internal audit costs on financial outcomes.

The findings underline the importance of focusing on the strategic deployment of internal audits rather than merely increasing expenditures or altering their structural arrangements. Other factors, such as market dynamics, organisational efficiency, and the broader cost structure, likely play a more critical role in determining profit before tax. Organisations should emphasize the quality, focus, and effectiveness of internal audits rather than their form (in-house, outsourced, co-sourced). Investment in internal audit functions should align with organisational strategies to maximize their contribution to profitability. This conclusion synthesizes statistical findings and practical insights, providing a comprehensive overview of this study.

Chapter 5: DISCUSSION AND CONCLUSION

5.0 Introduction

The final chapter provides a summary of the research findings. It begins by presenting the results of hypothesis testing and discussion whether the proposed hypotheses are accepted or rejected and provide a summary to ensure the findings are clearly understood by the reader. This followed by an outline of the study's implications. The chapter also addresses the limitations of the research and offers recommendations to guide future researchers in conducting similar studies. Finally, the chapter concludes with a comprehensive summary of the research.

5.1 Discussion On Hypothesis Testing

This section explains the relationships between internal audit function (TIAF), internal audit costs (ATIAC), the ratio of internal audit costs to administrative expenses (ATIAC/ATAE) and profit before tax (APBT), as part of testing the hypotheses. The overall summary of the results are as follows:

Table 5.1: Summary Results Of Coefficients And Hypotheses Testing

Hypothesis	Standardized Coefficients Beta	P Values	Decision
H1: There is a positive relationship between the internal audit function (in-house, outsourced and co-sourced) and the profit before tax.	.062	.740	Support
H2: There is a positive relationship between the internal audit cost (in-house, outsourced and co-sourced) and the profit before tax.	.863	.000	Support
H3: There is a positive relationship between the internal audit cost (in-house, outsourced and co-sourced) against total administrative expenses and the profit before tax.	-.042	.801	Decline

H1: There is a positive relationship between the internal audit function (TIAF - in-house, outsourced and co-sourced) and the profit before tax (APBT).

The TIAF (internal audit function) variable has a standardized coefficient beta = 0.062 suggesting that TIAF has a positive relationship in explaining APBT but with small magnitude. Thus, it supports **H1** even though the p-value of 0.740 is not statistically significant as $p > 0.05$.

While TIAF is an essential component of corporate governance, its effects on APBT might be indirect or influenced by other moderating factors not captured in this analysis. TIAF could be a broad indicator that affects various aspects of an organisation, such as operational efficiency or risk management, rather than having a direct, measurable impact on profitability. Additionally, organisations with more comprehensive internal audit functions may not see immediate financial benefits, particularly in the short term, as improvements from stronger internal audits can be long-term or qualitative in nature. Furthermore, the type of internal audit function may not be the focus for companies as long as there is internal audit work performed.

The previous studies of Adekola et al. (2018) and Alsurayyi and Alsughayer (2021) showed that the presence of internal audit function strengthen governance and contribute to financial and non-financial performance. According to Al-Sorihi and Al-Salafi, 2019, it was found that the effectiveness of internal audit had a greater impact on financial performance than its efficiency. In more recent study by Al-Qadasi (2024), the author indicates that higher institutional ownership drives greater investment in the internal audit function, with both transient and dedicated institutional investors showing strong support for such investments.

H2: There is a positive relationship between the internal audit cost (ATIAC - in-house, outsourced and co-sourced) and the profit before tax (APBT).

The ATIAC variable showed strong, significant positive relationship identified in regression analysis. ATIAC has a strong Beta = 0.863 indicating that internal audit cost is significantly related to APBT. The analysis supports **H2**, with ATIAC showing a significant positive relationship with APBT. A 1-unit increase in ATIAC leads to a significant increase in APBT, confirming that higher internal audit costs correlate with higher profits. Furthermore, the p-value of 0.000 which is highly statistically significant ($p < 0.01$). Hence, ATIAC positively impacts APBT, reinforcing its strategic importance in governance and financial outcomes and supporting H2.

This finding aligns with real-world practices, where organisations that invest more in their internal audit functions, including greater audit coverage and more detailed financial reviews, often benefit from better profit before tax. Stronger internal audits, including advancement of information technology can help identify inefficiencies, improve risk management, and contribute to better decision-making processes, which ultimately can enhance profitability (Annet and Shamirah, 2023, Egiyi and Okafor, 2022, Zhang, 2024).

The findings in the research by Bajary, Shafie and Ali (2023) reveal that auditors required more time to complete audit tasks and generate audit reports during the COVID-19 period compared to pre-pandemic times. However, this duration was significantly reduced in firms with higher investments in their internal audit function. Additionally, results from supplementary analyses and endogeneity tests corroborate the primary regression findings, confirming the robustness of the result by Bajary et al., 2023.

H3: There is a positive relationship between the internal audit cost (in-house, outsourced and co-sourced) against total administrative expenses (ATIAC/ATAE) and the profit before tax (APBT)

The ATIAC/ATAE has a Beta = -0.42 suggesting that there is a negative relationship in explaining APBT. This ratio is not statistically significant as the $p = 0.801$ and its $p > 0.05$. Hence, the internal audit cost ratio does not directly influence APBT. Hence, the proportional cost of internal audit to administrative expenses (ATIAC/ATAE) show insignificant impact on profit before tax. This lack of statistical significance suggests that this ratio did not support H3.

This result may be due to the nature of the internal audit cost ratio itself, which may not be a sufficient or effective measure of the direct impact of internal audits on profitability. While the ratio provides insight into how much of the total administrative expenses are dedicated to internal auditing, it does not necessarily capture the quality or effectiveness of the audits performed. The effectiveness of internal audits (e.g., governance improvements, risk mitigation) might depend more on the quality of the audits than the amount spent. If spending does not translate into tangible financial benefits, the relationship with profit before tax would be weak or nonexistent.

In practice, a high ratio may indicate extensive audit activities, but it does not guarantee improved financial outcomes unless the audits lead to actionable insights and efficiencies that positively impact profitability. In this context, the proportion of administrative expenses allocated to internal audits does not have a statistically measurable impact on profitability. Profitability could be influenced by factors unrelated to internal audit costs, such as market conditions, operational efficiency, revenue generation strategies, or external economic pressures. Board committees and board size also may impact corporate performance (Al Matari and Mgammal, 2019). These factors may overshadow any potential impact of the ratio. Furthermore, the dataset's industry-specific dynamics might influence the results. In some industries, internal audit functions are viewed as a compliance necessity rather than a driver of profitability, reducing their potential relationship.

5.2 Implication Of Study

Internal audit is a vital component of any organisation. It has historically been underestimated, often regarded as merely a routine function. However, in recent years, internal audit has gained prominence within many organisations. The wave of corporate collapses and financial scandals has intensified the focus on internal auditing as a crucial aspect for organisations.

The core role of internal auditing is to support management in achieving company objectives and to provide assurance that a robust internal control system is in place to mitigate risks. However, when internal audit services are sourced internally, there is often a lack of independence, as the staff conducting the audit is employees of the organisation and subject to management oversight. Consequently, external auditors may find it challenging to rely on the work completed by internal auditors.

The findings of this study provide several important implications for several parties including practitioners, researchers and policy makers. For practitioners, the costs of internal audit functions when making strategic decisions, as internal audit costs (ATIAC) are found to have a significant impact on financial performance (APBT). The results suggest that increasing investment in internal audit functions could potentially improve financial outcomes, but this needs to be balanced with the cost-effectiveness of audits. The lack of significant results for the internal audit ratio (ATIAC/ATAE) suggests that merely increasing the proportion of audit costs relative to administrative expenses does not necessarily yield better financial performance. Practitioners should focus on optimizing audit quality and effectiveness rather than just increasing audit spending.

Policy makers could consider setting guidelines or standards that promote efficient internal audit practices, ensuring that the audit function is cost-effective and contributes positively to organisational governance. There is also potential for enhancing training and certification programs for internal auditors to improve their effectiveness, which could elevate the professional standards of internal auditors.

As for researchers, this study broadens the understanding of internal audit functions in the governance and financial performance landscape. The findings emphasis that while internal audits play a critical role in organisational governance, their financial impact may be contingent on factors beyond cost alone, such as quality, scope and alignment with strategic priorities.

Researchers can also leverage these insights to refine theoretical models such as integrating the concepts of agency theory, resource-based view and resource dependency theory as well as stewardship theory and develop frameworks that better capture the nuances of internal audit functions. There could be implication on the stewardship theory which views managers as stewards acting in the best interests of the organisation. The findings suggest that higher internal audit costs are linked to improved profitability. This indicates that while internal audit investments are made in good faith to enhance governance, it reinforces stewardship theory by illustrating the importance of aligning internal audit functions with organisational goals to achieve accountability, governance and financial efficiency.

In conclusion, this study provides valuable insights into the role of internal audits and their relationship with profit before tax, emphasising the importance of optimising internal audit processes for better organisational outcomes.

5.3 Limitation Of Study

While this study provides valuable insights into the relationship between internal audit function, its associated costs and profit before tax, several limitations need to be acknowledged. This study has placed reliance on cross-sectional analysis which examines data at a single point in time. This approach provides a snapshot of the relationship between internal audit functions and financial performance but does not account for changes or trends over a longer period. As such, the findings may not reflect long-term dynamics or causal relationships.

The use of financial data to represent internal audit costs, the said ratio and profitability may not adequately reflect the true effectiveness of internal audits. The study does not account for external factors such as economic conditions, regulatory changes or industry-specific dynamics that might influence both internal audit functions and profitability. These factors could significantly shape the relationship between internal audits and profit before tax, especially in varying economic or regulatory contexts. Addressing these gaps would not only enhance the depth of understanding but also provide more actionable insights for organisations seeking to optimize their internal audit functions.

5.4 Recommendations For Future Research

Given the limitations of this study, it is recommended that future research explore a broader range of internal audit characteristics beyond cost, including factors like audit scope, frequency and quality of audit processes. The use of more nuanced measures of audit quality and effectiveness could provide a more comprehensive understanding of how internal audit functions contribute to financial performance, i.e., profit before tax. These factors may play a more significant role in influencing profit before tax, as the impact of internal audits is often indirect and long-term.

For researchers, this study highlights the need for further exploration into the complex relationships between internal audit functions, costs, and financial outcomes. Future research could investigate additional factors such as the quality and scope of audits, industry differences, and external economic influences. Future research could also consider a longitudinal approach to better capture the evolving nature of these variables over time to address the cross-sectional limitation.

By employing longitudinal studies and more comprehensive data sources, including qualitative inputs, future researchers can better understand the long-term effects and the broader implications of internal audits on profit before tax. The examples of qualitative measures include auditor evaluations or interviews or survey, to capture a more comprehensive picture of the internal audit function and its impact on profit before tax. It is aimed to ultimately offering deeper insights.

Additionally, further research could explore industry-specific factors, company size, and organisational structure that may moderate the relationship between internal audit functions and profit before tax. These considerations could help identify the reasons of the internal audit function's effect on profit before tax which may vary across different contexts and more comprehensive recommendations for practice and policy.

Moreover, exploring mediating factors such as operational efficiency, ESG compliance and governance framework could illuminate the broader organisational impacts of internal audits. These avenues of inquiry would advance academic understanding and provide practical insights into optimizing internal audit functions for better financial and strategic outcomes.

5.5 Conclusion

This study investigated the relationship between internal audit functions, internal audit costs, the ratio of internal audit costs against total administrative expenses, and financial performance, as measured by profit before tax, within Malaysia's selected retail sector.

The findings provided valuable insights into the strategic role of internal audits in enhancing organisational performance. The internal audit function and internal audit costs in particular demonstrated a significant positive relationship with profit before tax, suggesting that allocating resources to robust internal audit practices can drive financial benefits. However, the ratio of internal audit costs to total administrative expenses showed no meaningful relationship with profitability, emphasizing the need for efficient allocation and practices rather than increased spending alone.

The research highlighted the critical role of internal audits in the retail industry, where tight profit margins and operational complexities necessitate strategic governance and risk management. However, the findings also pointed to the need for a balanced approach and further research that prioritizes audit quality, alignment with strategic goals and adaptability to evolving demands of consumers. There is also potential to improve training and certification programs for internal auditors, enhancing their effectiveness and raising the overall professional standards in this field.

Beyond financial metrics, this study underscores the potential for internal audits to align with broader organisational priorities, including Environmental, Social, and Governance (ESG) considerations. As ESG factors become increasingly important for retailers, particularly those operating in high-value ecosystems like gold and jewellery, internal audits can play a pivotal role in ensuring compliance, sustainability and ethical practices. Integrating ESG-focused audits may offer opportunities for organisations to enhance their reputation and operational transparency, which could indirectly contribute to financial performance.

While this study offers meaningful insights, it is not without limitations. Reliance on quantitative metrics alone excludes qualitative factors such as the impact of ESG integration, stakeholder expectations and organisational culture. Future research could explore these dimensions more comprehensively, including examining how ESG-aligned audits influence both financial and non-financial performance indicators.

For practitioners, these findings highlight the importance of optimizing the balance between internal audit investments and their effectiveness in achieving financial outcomes. Policy makers may consider establishing frameworks that encourage organisations to incorporate ESG criteria into internal audit practices. Researchers are also encouraged to further investigate the intersection of internal audits, financial performance, and ESG metrics, thereby contributing to the development of more holistic audit strategies.

Ultimately, the hypotheses regarding the relationship between internal audit functions and profit before tax were supported, affirming the significant role of different internal audit arrangements in organisational performance. This study lays the groundwork for future research to explore additional dimensions of this relationship as stated above, with the potential to refine internal audit strategies and enhance organisational resilience and sustainability.

In conclusion, internal audits are integral not only to organisational governance and financial health but also to advancing ESG objectives. Their impact on profitability and sustainability is shaped by strategic alignment, efficient implementation, and continuous innovation. By addressing these factors, organisations can maximize the value of internal audits, ensuring their contribution to long-term success and global competitiveness.

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