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Strategic Competency Framework for Public Sector Accountants: Integrating International and National Insights

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Abstract

Purpose: This paper seeks to propose a competency framework for Malaysian public sector accountants, aligning their capability with the dynamic public sector environment.

Methods: A comparative documentary approach was undertaken based on the analysis of three (3) competency frameworks: the International Federation of Accountants (IFAC), the Chartered Institute of Public Finance and Accountancy (CIPFA), and the Malaysian Institute of Accountants (MIA), all of which are internationally recognised professional bodies in accounting and public finance. International best practices were synthesised with the Malaysian context through a structured comparison of these frameworks.

Findings: While all three (3) frameworks prioritise technological, technical, and behavioural competencies, CIPFA additionally emphasises public value orientation and a stronger understanding of the public sector context. Accordingly, this study proposes a competency model comprising seven domains: technical proficiency; public sector context and value creation; digital and technological capability; sustainability and environmental, social and governance (ESG) integration; risk analysis and management; communication and influencing skills; and ethics and integrity. Grounded in ethical values, the proposed competencies extend beyond technical and technological knowledge to encompass behavioural and interpersonal capabilities.

This article is part of a research on *Fungsi/ Perkhidmatan Jabatan Akauntan Negara Malaysia (JANM) dan Keperluan Modal Insan Pada Masa Hadapan dengan Perbandingan Amalan Terbaik Luar Negara* through *Geran Penyelidikan Perakaunan dan Kewangan Sektor Awam Tahun 2025* (JANM.600-21/1/7 Jld. 2 (36)).

Limitations: As the proposed framework is developed solely from analyses of national and international professional bodies, further research should incorporate benchmarking with other countries to refine and contextualise the model prior to implementation.

Originality: This paper critically integrates international (IFAC and CIPFA) and national (MIA) competency frameworks to formulate a context-specific model for Malaysian public sector accountants.

Keywords: Accountant competency, public sector accountant, IFAC Framework, CIPFA Model, MIA Framework, Malaysian public sector

1.0 Introduction

Complex political and economic challenges, rapid technological advancements, and increasing stakeholders demands have placed significant pressure on public institutions (IFAC, 2020). Specifically, the policy gaps exposed across multiple sectors during the COVID-19 pandemic have led to calls for fiscal resilience and adaptive strategies (Farhana & Siti-Nabiha, 2024; Anessi-Pessina et al., 2020; Chukwudi & Victor, 2022). These challenges are exacerbated in Malaysia, which lacks robust institutional frameworks for elevating the nation into a high-income, developed status (World Bank, 2019a,b, 2021). In this context, public managers (accountants) skills and competency are crucial for providing robust institutional responses to navigate these complexities (World Bank, 2021).

The public sector accountants training programmes in Malaysia are currently structured based on the Public Service Department (JPA)-approved Competency Dictionary together with the MIA Competency Framework. Nonetheless, the public sector's rapid growth necessitates continual updates to competency frameworks. The integration of emerging governance standards and innovations in public financial management can better prepare accountants to adapt to their changing roles (Budding et al., 2022). Given the urgent need to develop public sector accountants competencies, this paper seeks to propose a competency framework for Malaysian public sector accountants based on MIA, IFAC, and CIPFA to determine their key competency areas.

This paper is structured as follows: Section 2 reviews the relevant literature, followed by a description of the methodology in Section 3; Section 4 details the three (3) frameworks underpinning this study; Section 5 compares the three (3) frameworks and discusses the proposed competency areas for the Malaysian public sector; and Section 6 concludes the paper.

2.0 Literature Review

Accountants' role, skills, and competency have been significantly transformed by rapidly evolving public sector contexts and new technologies (Kroon et al., 2021). In financial

management, the continual public sector reform demands more refined skills from public officers, including public sector accountants. Studies have highlighted the pivotal role of public sector accountants in public sector reforms (Gill & Sharma, 2023). For example, the transition to accrual-based accounting has redefined accountant roles and professional identities (Becker et al., 2014; Rozaidy & Siti-Nabiha, 2023). This calls for ongoing professional development via technological advancements [particularly automation and artificial intelligence (AI)] for public sector accountants to be at par with the evolving global practices in public financial management. Regardless, the lack of university courses focusing on public sector accounting has created a gap between public sector accounting education and the actual requirements of the field (Pericolo et al., 2023). This issue holds more relevance in Malaysia, where public sector accounting is offered as an elective rather than a core subject in the new accounting curriculum in higher education.

A tailored competency framework is needed to address this competency gap and meet the specific needs of public sector accountants, which differ from their counterparts in the private sector (IFAC, 2020). In highlighting the competency gap among public sector accountants, Budding et al. (2022) revealed that public sector accounting education has traditionally emphasised technical skills. This does not include interpersonal skills, which are currently recognised as core competencies that public sector accountants should have. Budding et al. (2022) also highlighted a gap between the perceived importance of interpersonal skills and actual proficiency. Despite conceding to the importance of these skills, younger and older accountants applied this competency at varying levels.

The development of public sector accountants, particularly among less-experienced officers, must include interpersonal skills to allow them to fulfil their roles. A more holistic approach for capacity building and developing a competency framework aligned with global best practices is required to ensure that public sector accountants and accounting departments can effectively address current and future challenges.

Rapid technology advancements such as AI and big data have led to significant shifts in public sector accountants' tasks and competencies. Kroon et al. (2021), who examined the impact of emerging technologies on accountants' roles and skills, discovered that these technologies have significantly transformed accountants' functions and responsibilities. Such technologies allow accountants to focus more on applying professional judgement in their decision-making by automating many routine tasks.

Such automation has shifted the accountant's role from the operational function of managing financial transactions to a higher degree of professional judgement, such as serving as a strategic advisor. Public sector accountants are now expected to assess information reliability, interpret data, identify trends, and transform complex datasets into insights that enhance financial forecasting, fraud detection, and decision-making. This capability also enables accountants to provide stakeholders with data-driven insights. Hence, data analytics improves financial forecasting and fraud detection by allowing accountants to process complex structured and unstructured data from both internal and external sources. Both teamwork and collaboration

skills are essential for integrating finance and accounting functions with technological solutions such as big data. Accountants can now work alongside IT specialists, compliance teams, and data scientists. In summary, these emerging technologies can effectively leverage accounting practices (Kroon et al., 2021).

3.0 Method

Three (3) competency frameworks of CIPFA, IFAC, and MIA, which represent prominent, internationally-recognised bodies in accounting and public finance professions, lay the foundation for this analysis. As a UK-based international accountancy membership and standard-setting body, CIPFA focuses on public financial management and finance professionals working in public sector (<https://www.cipfa.org>). This body has developed several competency frameworks such as the CIPFA Financial Management Model (2010), which posited the transformation of the finance function, and the CIPFA Knowledge and Skills Framework for Local Government Pension Scheme (LGPS) committee members and LGPS officers (2021), which identifies the competencies for the senior officers involved in the administration of LGPS funds (www.cipfa.org).

The Competencies for Public Sector Finance Professionals issued in 2020 (hereafter CIPFA, 2020) was used in this study given its emphasis on the requisite skills and knowledge for public finance professionals to address the changes resulting from technological, regulatory, and political environments (CIPFA, 2020). This framework, which was developed in response to public finance transformation and the evolving role of public finance professionals, rendered it suitable for this study.

The IFAC, a global organisation for the accountancy profession, developed a framework for strengthening the global accountancy profession via the development, adoption, and use of high-quality global standards (www.ifac.org). Through the International Accounting Education Standards Board (IAESB), IFAC created a standard called the International Education Standard (IES). This board establishes guidelines for the technical competencies (IES 2) and professional skills (IES 3) required for accounting professionals. The IAESB defines professional competence as “the ability to perform a role to a specified standard” (IAESB, 2019, p. 204). In essence, professional competence “goes beyond knowledge of principles, standards, concepts, facts, and procedures; it is the integration and application of technical competence, professional skills, professional values, ethics, and attitudes” (IAESB, 2019, p. 10). The IFAC published the syllabus and competency matrix for a three-level qualification for professional accountants in 2021. In this study, the IFAC 2021 Competencies Matrix for professional qualification served as another basis of analysis.

The MIA Competency Framework was selected to cater for the Malaysian context, although this framework was also based on IES of IFAC. Moreover, MIA and the Malaysian Institute of Certified Public Accountants (MICPA) are both members of the IFAC. The MIA adheres to IFAC standards to fulfil its responsibilities. The MIA framework employs a structured approach for defining and standardising the competencies required for public sector accountants

in Malaysia. It was developed under the purview of the MIA Education Board and aligned with international standards such as IFAC's IES. This framework also aligns with key legal and regulatory requirements, including the Accountants Act 1967 and International Financial Reporting Standards (IFRS), reinforcing its significance in national and regional contexts.

This study identified the existing gaps and potential opportunities for enhancement by developing a framework based on the content analysis of IFAC, as well as CIPFA and MIA standards. Notably, the proposed framework could ensure that Malaysian public sector accountants remain competitive and capable of addressing the changes and challenges in the public sector environment and stakeholder requirements.

4.0 The International Competency Frameworks

The current findings are segmented into three (3) parts: discussion of the CIPFA (2020), MIA, and IFAC frameworks.

4.1 CIPFA 2020 Competency Framework

Despite the establishment of CIPFA 2020, the listed competencies may not be standardised or necessary for all public sector accountant functions or roles in Malaysia given the differences in expectations and requirements (CIPFA, 2020). Public finance professionals' diverse career paths require the tailoring of professional development, skills, and expertise to align with individual roles, functions, and career goals. The CIPFA 2020 framework encompasses competencies in four (4) broad areas that require lifelong learning: technical skills, increasing public value, understanding of public sector context and needs, and the ability to lead and influence.

Table 1 presents the CIPFA (2020) competencies for finance professionals, which require the understanding and application of various accounting skills and knowledge, as well as the development of behavioural traits such as communication and interpersonal skills. Public sector accountants, who have transitioned into more strategic and advisory roles, must also remain aware of and understand ongoing changes in emerging technologies, the dynamic regulatory environment, and evolving stakeholder requirements:

- i. **Technical Skills:** An accountant is required to have knowledge, awareness and ability in various accounting areas. Hence, public sector accountants should possess knowledge and expertise in financial and management accounting, auditing, counter-fraud measures, anti-bribery laws, and procurement. They should be capable of applying accounting standards, generating accurate reports, and performing assessments.

Accountants should be capable of assessing the implications of changes in the regulatory environment alongside skills in specific accounting knowledge. They should also have a sound understanding of technological developments and the opportunities derived from improving public financial management.

- ii. **Increasing Public Value:** This competency relates to the public accountant’s ability to manage stakeholders, evaluate spending and investments, plan and implement strategic projects, and develop commercial partnerships. Commercial opportunities and alternative service delivery frameworks must also be thoroughly comprehended.
- iii. **Leading and Influencing:** Behavioural competencies, particularly those related to leadership and influencing skills, have gained much prominence with public sector accountants’ transition of role towards policy advisory and strategic functions. These competencies require effective communication skills to build trust, provide direction, and promote a culture of change, innovation, and good governance. Collaboration with internal and external stakeholders and teams is also a key catalyst for effective leadership and influencing capabilities.
- iv. **Public Sector Context and Needs:** Public finance officers must have a deep understanding of the public sector environment, its unique needs, political environment, and influence on decision-making processes. Hence, these individuals should exercise transparency and accountability while engaging the public in decision-making for value-for - money expenditure and positive social outcomes. The officers must also effectively internalise the fundamentals of resource allocation processes, financial management, and public interest. In addition, public finance officers must demonstrate a sound knowledge of public sector governance by balancing resource allocation objectives with local needs to promote assurance, control, and effective risk management.

Table 1: Details of CIFPA 2020 Competency Framework

Competency	Sub-areas	Details
1. Technical Skills: Knowledge, Awareness, and Ability		
Financial Accounting	Accounting Standards	<ul style="list-style-type: none"> • Apply regional accounting standards (IFRS, IPSAS).
	Treasury Management	<ul style="list-style-type: none"> • Understand economic environment and interest rates and implement treasury management strategies.
	Pension Management	<ul style="list-style-type: none"> • Comply with pension scheme regulations. • Manage pension fund liability risks. • Responsible investment strategies.
	IR Reporting	<ul style="list-style-type: none"> • Adhere to changes in regulatory, legal, and ethical frameworks. Understand benefit of integrated reporting.
Management Accounting	Monthly Reports	<ul style="list-style-type: none"> • Produce monthly performance reports.
	Costing Techniques	<ul style="list-style-type: none"> • Utilise various costing techniques.
	Technology & Data in Finance	<ul style="list-style-type: none"> • Awareness of technological developments, opportunities, and challenges in public finance.
	Finance Business Partnering	<ul style="list-style-type: none"> • Influencing and challenging non-finance colleagues. • Understanding organisational operations and challenges.
	Property and Asset Management	<ul style="list-style-type: none"> • Understand regulations. • Assess capital expenditure demands. • Compliance with property and asset regulations and accurate capital assets valuations.

Table 1: Details of CIFPA 2020 Competency Framework (continued)

Competency	Sub-areas	Details
Audit	Internal & External Audit	<ul style="list-style-type: none"> Understand audit regulations and standards. Conduct internal audits for governance and risk assurance.
	Assurance Mechanisms & Anti-bribery Corruption	<ul style="list-style-type: none"> Understand mechanisms for assurance and scrutiny; the law/ best practice for anti-bribery, corruption controls and the fraud risks.
Counter-fraud & Anti-bribery	Anti-Bribery & Corruption	<ul style="list-style-type: none"> Knowledge of anti-bribery, corruption controls, and fraud risks. Implement anti-bribery laws/best practices.
	Counter-fraud	<ul style="list-style-type: none"> Understand, identify and analyse fraud risks. Fraud risk assessments/ investigations &,response
Procurement	Legal & Governance	<ul style="list-style-type: none"> Understand law/ governance/ best practice for corruption control, and legal and governance context for procurement and contracts.
	Contract Planning & Management	<ul style="list-style-type: none"> Understand procurement cycle and contract management. Plan KPIs and deliverables. Value for money negotiation.
	Business Cases	<ul style="list-style-type: none"> Understand the purpose of compiling and reviewing business cases. Advocate for standardised processes and reporting mechanisms.
	Technology in Procurement	<ul style="list-style-type: none"> Aware of technological developments in procurement.
2. Leading & Influencing		
Communication & Impact	Influences, engages, & inspires	<ul style="list-style-type: none"> Articulate and earn trust. Provide clarity and direction in times of uncertainty. Represent organisational view.
	Reporting Information Financial	<ul style="list-style-type: none"> Clearly communicate financial data to non-finance leaders.
	Make Decision	<ul style="list-style-type: none"> Communicate, implement decisions based on evidence and varied viewpoints.
	Effective Feedback	<ul style="list-style-type: none"> Challenge and give/ receive constructive feedback. Negotiate to balance outcomes and best public value.
Innovation & Change	Culture & Opportunities	<ul style="list-style-type: none"> Drive a culture of change, efficiency, and innovation. Articulates the need for change with data and inspires action.
	Set Clear Vision & Direction	<ul style="list-style-type: none"> Set a clear vision with drive, pace, and strategic connections.
Strategy & Governance	Culture & Policies	<ul style="list-style-type: none"> Promote a creative, flexible culture respecting national/local policies, procedures, and legislation.
	Governance & Risk	<ul style="list-style-type: none"> Champion governance and risk management. Determine policy objectives and clear organisational purpose.
	CFO Role	<ul style="list-style-type: none"> Recognise the CFO's importance on the board.
Collaboration	Internal & External Networks	<ul style="list-style-type: none"> Work with board members and stakeholders. Build networks/joint initiatives with public/ private, NGOs.
	Conflict Resolution	<ul style="list-style-type: none"> Understand effective conflict resolution strategies.

Table 1: Details of CIFPA 2020 Competency Framework (continued)

Competency	Sub-areas	Details
High-performing Teams	Team Development	<ul style="list-style-type: none"> Focus on team growth. Recognise talent and implements performance management.
	Motivation and Monitoring	<ul style="list-style-type: none"> Motivate and empower staff. Monitor and manage team and organisational performance.
Business Partnering	Innovation and Value	<ul style="list-style-type: none"> Innovate and add value. Effectively influences and challenges non-finance colleagues
	Understand Operations	<ul style="list-style-type: none"> Understand operations, challenges, of other departments. Accountability of organisational goals.
3. Public Value		
Stakeholder Management	Stakeholder Understanding	<ul style="list-style-type: none"> Understand stakeholders and their requirements.
Investment/ Spending Appraisal	Investment Techniques	<ul style="list-style-type: none"> Assess investments viability/ attractiveness.
Plan Implement Strategic Projects	Project, Planning, and Execution	<ul style="list-style-type: none"> Create impact through business case development. Define and communicate outcomes to stakeholders. Data-driven decisions.
	Project Management Tools	<ul style="list-style-type: none"> Understand project initiation and management tools/ techniques.
Service Delivery Models	Service Delivery Models, Options, and Implications	<ul style="list-style-type: none"> Understand the pros/ cons of alternative service delivery models. Recognise when external input is needed and facilitates skills sharing.
	Commercial Partnerships	<ul style="list-style-type: none"> Maintain commercial partnerships with stakeholders and service providers.
Commercial Understanding	Public Sector Commercial Skills	<ul style="list-style-type: none"> Understand SOEs enterprises/ roles/ accounting practices. Evaluate the financial resilience of commercial suppliers. Effectively handle private sector accounts.
	Negotiation Skills	<ul style="list-style-type: none"> Negotiation skills for productive competitive dialogue.
Benchmarking	Performance Comparison	<ul style="list-style-type: none"> Benchmark organisational performance against others. Knowledge of innovative practices.
Mergers & Reorganisation	Legal and Cultural Management	<ul style="list-style-type: none"> Understand legal implications of mergers and re-organisations. Manage people/ performance/ cultural impacts during transitions.
Value for Money	Public Spending Assessment	<ul style="list-style-type: none"> Drive economy, efficiency, and effectiveness in public spending.

Table 1: Details of CIFPA 2020 Competency Framework (continued)

Competency	Sub-areas	Details
4. Public Sector Context & Needs		
Political & Sector Awareness	Political Understanding	<ul style="list-style-type: none"> Understand impact of political environment impact on decision-making. Interpret funding announcements, policy changes, and opportunities for partnerships. Plan for changes in the wider political/ economic environment.
Value for Money & Social Value	Public Value	<ul style="list-style-type: none"> Focus on efficient use of public resources. Understand societal outcomes as strategy drivers. Ensure outputs and value for money over profit.
Public Service Financial Reporting	Financial Accounting Requirement	<ul style="list-style-type: none"> Comprehend public sector financial reporting requirements in the public sector and global trends. Understand differences in public and private sector reporting.
Decision-making	Information for Decision-making	<ul style="list-style-type: none"> Maintain transparency and citizen engagement in decision-making. Provide information for better decision-making
Accountability & Transparency	Public Interest Focus	<ul style="list-style-type: none"> Understand public sector audits and their role. Understand budget processes and financial management. Act in public interest with accountability and integrity. Balance funding objectives with local priorities.
Governance	Accountability & Governance Practice	<ul style="list-style-type: none"> Understand public sector context/ governance. Promote assurance and control. Advocate robust assurance and control arrangements. Promote transparency and good practices in reporting and audits. Effectively implement governance processes.
Risk Management	Risk management	<ul style="list-style-type: none"> Understand and promotes positive risk management culture, and controls and mitigates risks.
Commercial Understanding	Public Value Accounting practices of SOEs	<ul style="list-style-type: none"> Evaluate state-owned enterprises and suppliers. Understand income generation and commercial risks. Skilled in negotiation and contract management.
Sector-specific Contexts	Financial Management for specific sector	<ul style="list-style-type: none"> Understand/ knowledge of strategies and operation context of various sectors. Adapt financial management to specific sectors.
Counter-fraud, Anti-bribery, & Corruption	Fraud & Risk Management	<ul style="list-style-type: none"> Implement fraud and corruption controls. Conduct entity-wide fraud risk assessments and response planning. Promote integrity and fraud risk management practices.

Source: CIPFA Key Competencies for Public Sector Finance Professionals (2020), pg. 4-11.

The CIPFA framework focuses on the competencies and skills required for finance professional at the officer and senior levels. Based on this analysis, public sector accountants must expand their roles beyond traditional bookkeeping to include advisory functions, develop technological

proficiency, and enhance strategic thinking, contributing to policy reform, risk management, and financial governance. Regardless, the CIPFA 2020 competency framework does not explicitly address the skills and competencies for finance people at lower hierarchical levels (assistant accountant and assistant accountant officer), who primarily focus on supporting financial operations.

Nevertheless, competencies and skills begin with an understanding of relevant laws and practices and accounting standards, the public sector context, and the specific operational environment of a ministry or agency. The CIPFA 2020 framework also highlights the need to understand sector-specific accounting practices, various stakeholder roles in governance processes, as well as financial reporting practices and their impact. Assistant accountants and assistant accounting officers' roles are also expected to evolve to higher-level responsibilities with the rapid digitalisation and automation of traditional bookkeeping functions. In other words, their empowerment largely hinges on the skills and competencies mastered. This progression can only occur with a deeper understanding of the specific regulatory environment, public sector accounting practices, and the broader financial implications of their work. These skills allow assistant accountants to more effectively contribute to the public sector financial management.

4.2 IFAC 2021 Competency Framework

The IFAC 2021 published the syllabus and competencies matrix for a three-level qualification (foundation, intermediate, and advanced) for professional accountants. The development of competencies is expressed for each level in the professional qualification. Notably, the inherent complexity of the subject matter and the prerequisites for achieving professional competency are reflected in the qualification levels. Table 2 presents the competencies for modern accountancy developed through the qualification level, with a focus on (i) understanding the problem, (ii) providing a solution, and (iii) advising and reporting.

Table 2: Extract of IFAC 2021 Competencies Matrix

Competency Area	Foundation	Intermediate	Advanced
1. Understanding the Problem			
Subject Matter & Issue Identification	Understand basic scenarios; identify clear issues.	Interpret incomplete or technically-complex scenarios.	Analyse and diagnose complex, ambiguous issues.
Information Management	Summarise and organise available information.	Identify gaps in incomplete data.	Evaluate the impact of missing or complex data.
Technical Expertise	Apply basic technical skills to solve problems.	Use a range of technical skills for moderate challenges.	Apply advanced expertise; consult specialists where needed.

Table 2: Extract of IFAC 2021 Competencies Matrix (continued)

Competency Area	Foundation	Intermediate	Advanced
2. Providing a Solution			
Use of Analytical Tools	Employ prescribed tools for straightforward tasks.	Select appropriate tools for technical problems.	Apply tools in highly complex, strategic contexts.
Problem Analysis & Evaluation	Assess outcomes and limitations using standard methods, considering ethics.	Analyse using suitable tools, integrating ethical dimensions.	Evaluate under conflicting demands and ethical complexities.
Information Quality Assessment	Recognise the role of data quality.	Evaluate information quality in challenging scenarios.	Critically assess quality across diverse data sources.
3. Advising and Reporting			
Drawing Conclusions & Making Recommendations	Provide conclusions and basic advice.	Formulate advice under uncertainty.	Deliver strategic recommendations, considering multiple stakeholders.
Communication & Reporting	Produce standard, structured documents.	Develop audience-specific reports.	Craft comprehensive reports tailored to complex contexts.

Source: IFAC (2021)

The framework and detailed syllabus aim to support auditors' certification and the development of competent professional accountants who can better understand and contribute to business management. This professional qualification (PQ) is intended to develop the values that enable those who qualify to act in the public interest and to demonstrate the competence, knowledge and evaluation skills expected of a professional accountant. Table 3 presents the outline content for subjects based on competency-based framework for the PQ.

Table 3: Competency-based Framework for Accounting Subjects

Subject	Outline Content	Progression
Foundation Level		
Business Management & Technology	Introduces basic organisational structures and business processes.	No specific progression; underpins the qualification.
Financial Accounting	Covers double-entry techniques, records transactions, adjusts financial records, prepares simple financial statements. Covers double-entry techniques, records transactions, adjusts financial records, prepares simple financial statements. Introduces regulatory frameworks and qualitative characteristics of financial information.	Progress to financial reporting.

Table 3: Competency-based Framework for Accounting Subjects (continued)

Subject	Outline Content	Progression
Foundation Level		
Management Accounting	Develops accounting techniques to aid planning, controlling, and monitoring business performance. Covers costing, budgeting, standard costing, variance analysis, and organisational performance measurement.	Progress to business performance management.
Law	Introduces legal systems and frameworks relevant to professional accountants. Covers company law, corporate governance, dissolution, insolvency, contract law, torts, ethics, and anti-corruption laws.	No direct progression.
Intermediate Level		
Financial Reporting	Advances understanding of IFRS application, preparation of financial statements for single entities, and critical evaluation of financial statements' contributions and limitations.	Progress to financial reporting and evaluation.
Business Performance Management	Applies budgeting, costing, and contemporary management accounting techniques for planning, control, and decision-making. Focuses on data selection, public sector concepts, and performance reporting.	Progress to business strategy, governance, and risk management.
Financial Management	Covers capital financing options, financial risk management, and investment appraisal techniques necessary for finance managers in decision-making.	Progress to business strategy, governance and risk management.
Taxation	Introduces local tax systems. Covers personal, corporate, VAT, property, and import/export duties. Focuses on tax calculations and ethical taxation practices.	No direct progression.
Audit and Assurance Practice	Introduces risk-based audit methods, audit and assurance concepts under the International Standards on Auditing (ISAs), and prepares students for audit engagements.	Progress to advanced audit and practice.

Table 3: Competency-based Framework for Accounting Subjects (continued)

Subject	Outline Content	Progression
Advanced Level		
Financial Reporting & Evaluation	Develops judgement in preparing and interpreting financial statements for complex entities, including business combinations. Involves communicating developments in corporate reporting.	Continuation of financial reporting.
Business Strategy, Governance & Risk Management	Applies strategic analysis, choice, and implementation tools. Measures strategic performance, reviews governance practices, and assesses complex scenarios involving financial and stakeholder analysis.	Continuation from business performance management and financial management.
Advanced Audit & Practice	Focuses on engagement planning, execution, and reporting for complex audits. Covers engagement management, ethical decision-making, and advisory across various audit and assurance assignments.	Continuation from audit and assurance practice.

Source: IFAC (2021)

The syllabus and competencies matrix in Table 3 have been updated in June 2020 in adherence to IES for professional accountants as of January 2021. These tasks are expressed in terms of competencies achievement under a competency-based framework. The underlying competencies are achieved and demonstrated via assessments that align with IES 6 (Assessment of Professional Competence) based on three (3) qualifications equivalent to a (i) technician accountant function, involving the completion of the foundation level; (ii) general accountant function, entailing the completion of the intermediate level; and (iii) a professional accountant function, encompassing the completion of the advanced level.

The IFAC-driven IES outlines the key principles underlying professional accountancy organisations to develop a national accountancy profession that meets the complex needs of modern economies and societies. These authoritative standards assist IFAC member organisations in establishing the education requirements for current and aspiring professional accountants. Table 4 details the eight (8) IESs.

4.3 MIA: Competency Framework for Public Sector Accountants

The MIA Competency Framework (CFM) is a structured guide for developing and maintaining professional competencies among accounting professionals in Malaysia. This structured pathway for professional development, which was developed by the MIA Education Board, outlines the requirements for current and future accountants in Malaysia. The framework development aligns with global accounting education standards (International Federation of Accountants), as well as incorporates Malaysia-specific regulations and market needs,

ensuring that accounting professionals in Malaysia are equipped with accounting technical skills and ethical values. These two (2) key domains of professional proficiency are vital for accountants to excel in Malaysia.

4.3.1 Proficiency Levels of the MIA Competency Framework

The MIA framework is structured into three (3) proficiency levels of accounting technician (AT-M), associate accountant (A-M), and chartered accountant (CA-M) in close alignment with that of IFAC. These proficiency levels are built on the technical skills and ethical values required for expertise across different career stages. In this vein, accountants can effectively manage complex financial reporting, auditing, and strategic financial functions.

The MIA competency framework categorises competency requirements into three (3) levels:

- i. **Foundation Level:** Focuses on fundamental knowledge and skills for entry-level accountants (accounting technicians).
- ii. **Intermediate Level:** Emphasises knowledge and skills related to handling professional responsibilities and exercising decision-making authority.
- iii. **Advanced Level:** Involves advanced knowledge and skills, focusing on leadership capabilities and the ability to manage complex issues in accounting and financial management.

These three (3) proficiency levels aim to ensure that individuals possess sufficient competencies before becoming eligible for full membership in the profession. As a member body of IFAC, MIA has adopted IES as benchmarks for its qualification and membership requirements. Eight (8) IES standards have been incorporated into the MIA Competency Framework (see Table 4).

Table 4: The MIA’s IES 1–8

IES Standard	Key Focus	Description
IES 1	Entry Requirements	<ul style="list-style-type: none"> • Meets fair and transparent educational entry criteria before joining a professional accounting education programme. • Emphasises knowledge assessment over formal degree requirements.
IES 2	Technical Competence	<ul style="list-style-type: none"> • Core technical skills required in areas such as financial accounting, taxation, audit, governance, risk management, business law, and digital finance. • Ensures accountants can handle complex financial reporting and regulatory compliance.
IES 3	Professional Skills	<ul style="list-style-type: none"> • Focuses on critical thinking, analytical problem-solving, effective communication, teamwork, and leadership. • Accountants must be able to interpret financial data, advise stakeholders, and contribute to business decisions.

Table 4: The MIA's IES 1–8 (continued)

IES Standard	Key Focus	Description
IES 4	Professional Values, Ethics, and Attitudes	<ul style="list-style-type: none"> Ensures accountants uphold integrity, objectivity, professional competence, confidentiality, and ethical behaviour. Emphasises professional scepticism, fraud detection, and compliance with ethical standards.
IES 5	Practical Experience	<ul style="list-style-type: none"> Gain supervised workplace experience. Apply technical knowledge in practice, exercise professional judgment, and navigate ethical dilemmas.
IES 6	Assessment of Professional Competence	<ul style="list-style-type: none"> Establishes evaluation methods and workplace assessments for the required standards before entering the profession.
IES 7	Continuing Professional Development (CPD)	<ul style="list-style-type: none"> Mandates lifelong learning for accountants to maintain and enhance skills and stay updated with financial, regulatory, and technological changes.
IES 8	Competence for Engagement Partners (Audits)	<ul style="list-style-type: none"> Advanced skills required for auditors leading financial statement audits. Expertise in International Standards on Auditing (ISA), risk assessment, regulatory compliance, and ethical leadership. Specialised CPD for audit professionals.

Source: Malaysian Institute of Accountants. (2020)

Standards for accountants to acquire and maintain at an appropriate level in Malaysia (technical knowledge, professional skills, and ethical values) are presented in this table. The IES 1, which outlines entry requirements for professional accounting education programmes, ensures that candidates demonstrate the necessary educational background and foundational knowledge before applying for MIA membership. The focus lies in assessing whether candidates have the requisite skills and knowledge to enter a professional accounting education programme. The IES 2 defines the technical competence skills and knowledge that professional accountants must demonstrate by the end of their initial professional development (IPD). Members must have sufficient accounting technical knowledge involving financial reporting, management accounting, taxation, audit and assurance, governance, risk management, business laws, and digital competencies. This standard ensures that accountants can better handle complex financial issues and regulatory requirements in different industries.

Meanwhile, IES 3 highlights the importance of critical thinking, analytical problem-solving, effective communication, teamwork, and leadership for professional accountants. The emphasis is on the accountants' ability to interpret financial data, interact with stakeholders, and provide strategic insights that contribute to business decision-making. Regarding IES 4, this standard focuses on key principles related to professional values such as integrity, objectivity, professional competence, confidentiality, and ethical behaviours. It requires accountants to undergo specific training that focuses on professional scepticism, fraud detection, and ethical dilemmas to safeguard public trust.

The IES 5 mandates the accountants to acquire relevant workplace experience under the supervision of qualified accountants, ensuring that accountants apply technical knowledge in real business problems and exercise professional judgment to address ethical workplace challenges. Furthermore, IES 6 provides rigorous professional competence assessments in competently and ethically performing professional duties. The IES 7 outlines the crucial role of ongoing or continuous learning capability, which accountants must comply with to ensure that accountants can maintain their skills based on the development of current and emerging business, regulatory, and technological issues. Disciplinary actions or the suspension of professional membership could result from the failure to meet CPD requirements.

Lastly, IES 8 specifies the need for professional accountants to have advanced technical knowledge, risk assessment expertise, regulatory compliance awareness, and strong ethical judgment. Professional accountants with the highest level of competency can apply professional scepticism when evaluating, identifying, and ensuring financial statements are prepared and audited in line with accounting and auditing standards. They must hone their skills through continuous CPD training that focus on standards of quality, integrity, and accountability in financial reporting to reach this advanced level. The formulation of both the MIA competency framework and IES 1–8 form the basis for accountants' education, training, assessment, and lifelong development in Malaysia. These eight (8) standards ensure that Malaysian professional accountants are equipped with the requisite technical expertise while portraying strong ethical values, critical thinking abilities, and commitment to continuous improvement.

5.0 The Proposed Framework

The previous section, which discussed the MIA, IFAC and CIPFA competency frameworks, depicted a strong MIA-IFAC alignment. As the MIA model is based on the IES issued by IFAC through the International Accounting Education Standards Board, this outcome was anticipated. Both MIA and IFAC articulated competency benchmarks across three progressive levels:

- i. Technician accountants, who support core accounting functions (foundation level);
- ii. Associate or general accountants (intermediate level); and
- iii. Professional or chartered accountants (advanced level), reflecting a structured competency-based progression.

The differences between the CIPFA and MIA/ IFAC frameworks as the foundation for proposing competencies for Malaysian public sector accountants was highlighted in this comparative analysis (see Table 5). Three (3) key distinctions between the frameworks are presented as follows:

- i. CIPFA targets public finance professionals more broadly (not exclusively accountants), while IFAC/ MIA frameworks are specifically designed for the accounting profession across public and private sectors.
- ii. CIPFA's framework emphasises career development for senior public finance officers, whereas the MIA/ IFAC model provides a structured pathway from accounting technicians to chartered accountants. In this vein, progression occurs with demonstrated competencies and formal qualifications.
- iii. While the frameworks support lifelong learning, the MIA/ IFAC model explicitly mandates CPD structured learning to sustain professional competence. Conversely, CIPFA adopts a more flexible, practitioner-driven approach to continuing education by focusing on professional responsibility and integrity.

Regarding competency content, the MIA/ IFAC and CIPFA frameworks highlight the importance of technical expertise alongside interpersonal and communication skills. Nevertheless, variations exist in scope and emphasis (see Table 5).

Table 5: Comparative Analysis of CIPFA and IFAC/ MIA and Proposed Competency Areas

Dimension	CIPFA (2020)	IFAC (2021) / MIA (2020)	Proposed Competency Areas for Malaysia
Technical Focus Areas	Financial reporting, audit, counter-fraud, procurement, digital finance. All areas in accounting.	Appropriate technical competencies over a range of technical difficulty.	Technical skills in accounting, emphasis on management accounting.
Public Value Orientation	High: stakeholder engagement, service delivery models, value for money.	Integrated into ethical and governance standards.	Focus on public-value creation, policy advisory, and service delivery optimisation.
Leadership & Influence	Strong: Communication, collaboration, culture of innovation and influencing.	Strong: Critical thinking, leadership, problem-solving.	Leadership development, collaboration skills, communication excellence.
Sector-specific Focus	Explicit focus on public sector context/ specific sectors.	General application across sectors.	General applications across public sectors.
Technology & Digital Competency	Awareness and use of technology in finance and procurement.	Digital competencies in data analytics, AI, business management.	Digital competencies, data analytics, AI applications, cybersecurity awareness.
Ethics & Professionalism	Embedded in fraud control, transparency, governance.	Integrity, objectivity, confidentiality.	Ethics, integrity, and accountability.
Risk Management	Strongly emphasised on risk culture and resilience.	Strongly emphasised in all accounting areas.	Public sector risk governance, resilience/ crisis planning.
Sustainability	Part of technical competencies.	Embedded integrated reporting.	Sustainability and ESG reporting.

6.0 Proposed Core Competencies for Public Sector Accountants

Public sector accountants have encountered specific challenges due to the dynamic public sector landscape and the broader external environment. Together with rapid technological advancements, the ambiguities existing in the global political and economic context have affected accounting roles and functions. These developments indicate the need for re-assessing public sector accountants' professional competencies.

The lack of public trust, increased scrutiny of public spending, and the demands for transparency, efficiency, and public value creation have driven the shift in public sector accountants' roles in Malaysia. These professionals are required to adapt their roles, as well as acquire new skills and competencies, due to the national and international shifts toward sustainability. In response, the current work proposed a competency framework for public sector accountants in Malaysia, focusing on skills, knowledge, attitudes, and values (OECD, 2019). The following competency requirements reflect a holistic approach that covers technical abilities, knowledge, and behavioural traits across seven key domains.

6.1 Technical Competency

The transition from cash-based to accrual accounting systems in Malaysia requires its public sector accountants to possess strong technical capabilities. It is important for professionals in this field to move beyond basic reporting roles and serve as strategic partners involved in providing decision-relevant information. Technical competency includes a strong understanding and the application of national and international accounting standards, the ability to interpret changing financial regulations and standards, and a sound professional judgment in determining their implications for public sector reporting and decision-making. Management accounting, a less-emphasised area in the Malaysian public sector accounting, is essential for equipping accountants with a strong foundation to manage resource effectively and provide relevant financial insights. While a commercial mindset is beneficial for evaluating service delivery models and ensuring its cost-effectiveness, it must be balanced with a strong orientation toward public value to ensure that decisions are made in favour of public interest.

6.2 Public Value Orientation and Understanding of Public Sector Context

All public officers (particularly accountants working in the public sector) must possess a holistic understanding of Malaysia's public sector, specifically its political, socio-economic, and regulatory environment, as well as the distinct nature of its stakeholders. This understanding is vital for determining key information requirements and appreciating the unique characteristics of public sector stakeholders. The educational training received by accountants, which has traditionally focused on profit-oriented organisations, must be contextualised to public sector needs and complexities. As public sector accountants operate within the governmental mandate to serve public needs, it is crucial for them to align financial decisions with national policy and developmental goals.

A public value orientation and a strong understanding of the public sector would facilitate resource management and equitable service delivery. In addition to developing ethical behaviour, this orientation promotes transparency and builds public trust. Such competency is crucial for equipping public sector accountants with capacity for effectively functioning as strategic advisors to the government by navigating the shifts in regulatory frameworks, political dynamics, and stakeholder expectations.

6.3 Technological and Digital

Accountants must ascend the value chain by strategically focusing on interpreting and communicating information (rather than merely reporting it), as technological advancements have automated a major portion of accounting tasks and responsibilities. New technologies such as big data analytics and blockchain can also enhance transparency in financial transactions. Consequently, accountants must remain informed about emerging technologies, remain open to their potential and implications, and leverage these tools to perform their role. Specifically, public sector accountants should be capable of adapting to new technologies and proficient in using data analytics and AI for reporting and decision-making. Those who do not actively engage in upskilling their technological competencies risk becoming obsolete while reducing the efficiency and relevance of the accounting function in their organisations.

6.4 Sustainability and ESG Reporting and Decision Making

Stakeholder expectations and sustainability issues will continue to remain central at national and international levels. Hence, public sector accountants should possess the competencies, knowledge, and skills to integrate sustainability and ESG principles into financial reporting and decision-making. This includes comprehending climate-related financial risks, sustainable budgeting, reporting frameworks such as the global reporting initiative (GRI) and integrated reporting (IR), and being aware of the evolvments in social and environmental reporting. Thus, public sector accountants should be able to report on environmental and social data. Efforts to enhance competencies in sustainability and ESG reporting and decision-making could closely align public sector financial management with Malaysia's sustainable development goals (SDGs) and conform to international best practices.

6.5 Public Sector Risk Assessment, Analysis and Management

Persisting global and local uncertainties in the external environment and resource constraints have rendered it crucial for public finance officers to competently perform risk assessment, analysis, and management (ACCA, 2023). Traditional financial analysis alone is insufficient to address these challenges (Siti-Nabiha et al., 2023). From the perspective of senior public officers in Malaysia, risk management is key to increasing efficiency, reducing fraud, and improving budget execution (Said et al., 2020). Public sector accountants should develop knowledge and skills in scenario analysis, fiscal risk assessment, and contingency planning to fulfil their roles and strengthen Malaysia's financial resilience. Strengthening these competencies will

improve the nation's capacity to manage uncertainty, as well as provide greater transparency, accountability, and integrity in public financial management.

6.6 Communication and Influencing

Public sector accountants must go beyond the traditional role of preparing financial reports to take more strategic and policy-oriented responsibilities, including ESG reporting and risk assessment. In this context, public sector accountants must fulfil their role as strategic advisors by collaborating with others, which requires strong behavioural and interpersonal skills (Budding et al., 2022). First, public sector accountants should have the ability and skills to clearly communicate complex financial and non-financial information, as well as their implications, to stakeholders who may lack technical or commercial understanding. They should also possess strong financial acumen, commercial orientation with public value orientation, and in-depth understanding of the public sector context and stakeholder needs to make informed decisions. Leadership skills that enable cross-department collaboration, stakeholder engagement, and advocacy for institutional improvements (including ESG integration, digital transformation, and risk management) could complement these capabilities. The ability to present financial data in a persuasive and accessible manner is important when advising non-financial decision-makers, enhancing the accountant's strategic impact and positioning them as integral partners in public sector governance. Thus, communication and influencing skills must be inculcated for public sector accountants to contribute to ethical, forward-looking financial management that aligns with public value creation.

6.7 Ethics and Integrity

Optimal public sector governance, which is driven by ethics and integrity, are critical for enhancing public trust in the accuracy of financial and non-financial reports, as well ensure confidence in governmental spending and resource allocation. As they are directly involved in financial reporting, budget analysis, and examining public expenditures (including procurement processes), public sector accountants are required to practise ethical values such as integrity, objectivity, professional competence, confidentiality, and professional behaviour (IESBA, 2023). These values are essential for combating financial fraud, enhancing fiscal responsibility, and upholding institutional integrity. Hence, public sector accountants who adhere to these principles would fulfil their duty, enhance public trust, and ensure that government finances are managed in the best interests of society.

It is important for public sector accountants in Malaysia to be equipped with key technical, technological, behavioural, and interpersonal skills related to the seven competency areas, which support greater transparency, efficiency, and integrity in public financial administration. Thus, accountants can effectively respond to current demands and future challenges, as well as act as strategic advisors in an evolving public sector landscape.

7.0 Conclusion

This paper proposed a competency framework for public sector accountants in Malaysia, grounded in the analysis of both international and national standards. The seven (7) core competencies that public sector accountants should possess were drawn from the MIA/ IFAC and CIPFA models. These competencies allow accountants to play their strategic roles and remain capable of responding to emerging challenges on national and global scales. Technical competency is fundamental for accountants to conduct sound financial analysis, and provide informed and reliable decisions. A strong public value orientation, which ensures alignment between the nation's fiscal strategies and its developmental priorities, is equally important. Furthermore, competencies in sustainability and risk management will equip accountants with the skills and capabilities needed to address local and global uncertainties. In addition, public sector accountants should be able to leverage technology advancements. Public sector accountants should be proficient in utilising new technologies to support data-driven decision-making processes, which enhance transparency and efficiency. Effective communication and influencing skills, which enable accountants to meaningfully engage with stakeholders and contribute to policy formulation, are additional competencies that must be seriously considered. These competencies must also be ethically driven to uphold integrity and maintain stakeholder confidence. Overall, the current competency framework ensures that accountants remain relevant, resilient, and capable of functioning in a complex, modernised environment such as public sector accounting in Malaysia.

This study is not without its limitations despite the benefits gained. As the proposed framework was solely built on analyses of national and international professional bodies, further works should obtain insights through benchmarking practices from other countries before its adoption or implementation. Such comparative analyses would allow for refining and contextualising the framework in Malaysia's institutional and governance context. Future scholars could consider examining international experiences in developing and implementing the competency framework. The identification of relevant areas, challenges, and strategies can guide the framework's adoption and institutionalisation for public sector accountants in Malaysia.

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References

- Association of Chartered Certified Accountants. (2023). *Calculated risk: An introduction to finance professionals' role in understanding risk and building resilience in the public sector*. https://www.accaglobal.com/content/dam/ACCA_Global/professional-insights/calculated-risk/PI-CALCULATED-RISK-PS%20v4.pdf
- Anessi-Pessina, E., Barbera, C., Langella, C., Manes-Rossi, F., Sancino, A., Sicilia, M., & Steccolini, I. (2020). Reconsidering public budgeting after the COVID-19 outbreak: Key lessons and future challenges. *Journal of Public Budgeting, Accounting & Financial Management*, 32(5), 957–965. <https://doi.org/10.1108/JPBAFM-07-2020-0115>
- Becker, S. D., Jagalla, T., & Skærbæk, P. (2014). The translation of accrual accounting and budgeting and the reconfiguration of public sector accountants' identities. *Critical Perspectives on Accounting*, 25(4–5), 324–338. <https://doi.org/10.1016/j.cpa.2013.05.001>
- Budding, T., De Jong, G., & Smit, M. (2022). New development: Bridging the gap - Analysis of required competencies for management accountants in the public sector. *Public Money & Management*, 42(7), 565–568. <https://doi.org/10.1080/09540962.2022.2068862>
- Chartered Institute of Public Finance and Accountancy (CIPFA). (2010). *The CIPFA FM Model: Assessment of financial management in public service organisations statements of good practice*. <https://www.cipfa.org/services/cipfa-supports/advisory-and-consultancy/financial-management-model>
- Chartered Institute of Public Finance and Accountancy (CIPFA). (2020). *Key competencies for public sector finance professionals*. CIPFA. <https://www.cipfa.org/training/key-competencies-for-public-sector-finance-professionals>
- Chartered Institute of Public Finance and Accountancy (CIPFA). (2021). *Knowledge and skills framework for LGPS committee members and LGPS officers*. CIPFA. <https://www.cipfa.org/policy-and-guidance/publications/p/pensions-knowledge-and-skills-framework>
- Chukwudi, A. S., & Victor, O. (2022). Budgetary allocations and government response to COVID-19 pandemic in South Africa and Nigeria. *Journal of Risk and Financial Management*, 15(6), 252. <https://doi.org/10.3390/jrfm15060252>
- Farhana, I., & Siti-Nabiha, A. K. (2024). Government budgetary responses to the COVID-19 crisis: Insights and future directions for crisis budgeting research. *International Journal of Social Economics*, 51(9), 1136–1150. <https://doi.org/10.1108/IJSE-01-2023-0057>

- Gill, J., & Sharma, U. (2023). Public sector financial management in New Zealand central government: The role of public sector accountants. *Journal of Public Budgeting, Accounting & Financial Management*, 35(1), 65–72. <https://doi.org/10.1108/JPBAFM-06-2022-0098>
- IESBA. (2023, July 12). *IESBA Emphasizes the Critical Importance of Ethical Behavior for All Professional Accountants*. International Ethics Standards Board for Accountants (IESBA). <https://www.ethicsboard.org/news-events/2023-07/iesba-emphasizes-critical-importance-ethical-behavior-all-professional-accountants>
- International Federation of Accountants (IFAC). (2020). *Greater transparency accountability in and the public sector*. <https://www.ifac.org/what-we-do/speak-out-global-voice/points-view/greater-transparency-and-accountability-public-sector>
- International Federation of Accountants (IFAC). (2021). *Syllabus and competencies matrix for a three-level qualification for professional accountants*. IFAC. https://www.ifac.org/_flysystem/azure-private/publications/files/IFAC-Syllabus-Skills-Matrix.pdf
- International Accounting Education Standards Board (IAESB). (2019). *2019 Handbook of International Education Standards* published by the International Federation of Accountants (IFAC).
- Kroon, N., do Céu Alves, M., & Martins, I. (2021). The impacts of emerging technologies on accountants' role and skills: Connecting to open innovation—A systematic literature review. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(3), 163. <https://doi.org/10.3390/joitmc7030163>
- Malaysian Institute of Accountants (MIA). (2020). *MIA competency framework*. https://mia.org.my/storage/2022/05/MIA_Competency_Framework.pdf
- Organisation for Economic Co-operation and Development (OECD). (2019). *OECD learning compass 2030: Concept note*. OECD Publishing. https://www.oecd.org/content/dam/oecd/en/about/projects/edu/education-2040/concept-notes/OECD_Learning_Compass_2030_concept_note.pdf
- Pericolo, E., Fedele, P., Iacuzzi, S., Pauluzzo, R., & Garlatti, A. (2023). Public sector accounting education: International trends and Italian curricula. *Public Money & Management*, 43(7), 731–740. <https://doi.org/10.1080/09540962.2023.2249247>
- Rozaidy, M., & Siti-Nabiha, A. K. (2023). Reconstructing identity and logic through the implementation of accrual accounting in Malaysia: An intra-organisational analysis. *Journal of Management & Governance*, 27(1), 331–370. <https://doi.org/10.1007/s10997-021-09615-4>

- Said, J., Alam, M. M. & Johari, R. J. (2020). Assessment of risk management practices in the public sector of Malaysia. *International Journal of Business & Emerging Markets*, 12(3), 377–390. <https://doi.org/10.1504/IJBEM.2020.111737>
- Siti-Nabiha, A. K., Noriza, M. J., & Rozaidy, M. (2023). Management accounting in the Malaysian public sector: Analysing the adoption of financial and risk analysis. *IPN Journal of Research and Practice in Public Sector Accounting and Management*, 13(2), 129–142. <https://doi.org/10.58458/ipnj.v13.02.07.0098>
- World Bank. (2019a). *Malaysian experience with national planning*. Kuala Lumpur: World Bank. <https://documents1.worldbank.org/curated/en/099614005262236266/pdf/IDU0030be45b01bfc042740a2d20a9bc41bf1730.pdf>
- World Bank. (2019b). *Malaysia economic monitor: Re-energizing the public service*. World Bank. <https://www.worldbank.org/en/country/malaysia/publication/malaysia-economic-monitor-june-2019-re-energizing-the-public-service>
- World Bank. (2021). *Aiming high: Navigating the next stage of Malaysia's development*. World Bank <https://www.worldbank.org/en/country/malaysia/publication/aiminghighmalaysia>

Determinants of Readiness for Consolidated Financial Reporting Among Controlled Entities under the Federal Government of Malaysia

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Abstract

Purpose: Organisational changes in the public sector have led public services to experience greater decentralisation. Nonetheless, the formal separation of governmental annual accounts and service providers via legally independent, government-owned entities have frequently undermined the accountability and decision-making capabilities of public sector accounts. This study aims to examine the key factors influencing government-controlled entities' readiness for implementing consolidated financial reporting (CFR) in Malaysia and their level of readiness.

Design/ Methodology/ Approach: A quantitative approach was employed, and data collection involved a questionnaire survey, which was distributed via email and postal mail to 70 entities controlled by the Federal Government of Malaysia. The descriptive and correlation tests were employed to facilitate data analysis.

Findings: Based on the elicited outcomes, the respondents demonstrated positive feedback on equity and consolidation methods. Their responses indicate their general acceptance and applicability in financial reporting.

This article is part of a research on Consolidation Method for Reporting Investments in Controlled Entity in the *Menteri Kewangan Diperbadankan: Issues and Challenges* supported by the Accountant General's Department of Malaysia through *Geran Penyelidikan Perakaunan dan Kewangan Sektor Awam Tahun 2024* (JANM.100-12/2/1 (17)).

While IT support and facilities, staff adequacy and skills, top management commitment, and strategic considerations significantly and positively influenced CFR implementation readiness, reporting complexity negatively and significantly impacted CFR. Rules and regulations were not significantly associated with CFR readiness.

Practical Implication: The study offers insights for public sector accountants and relevant policy makers on key considerations for implementing the consolidation method. This includes aligning accounting policies, training staff, synchronising closing periods, establishing clear reporting procedures, assessing and integrating finance systems, monitoring currency exchange, and ensuring subsidiaries use a chart of accounts aligned with the parent company.

Originality/ Value: This study offers a crucial perspective on how consolidated financial reporting functions as a strategic governance tool to enhance transparency and accountability within the context of government-controlled entities, while critically examining the organisational factors that influence readiness for its adoption.

Keywords: Consolidated financial reporting, public sector accounting, public financial management, government-controlled entities, Malaysia

1.0 Introduction

The new public management (NPM) philosophy has driven many countries to initiate financial reporting reforms in the public sector (Santis et al., 2018) to increase public sector governance, as well as financial and political accountability. It demands a more holistic accounting system such as the consolidated financial statements (CFS) for public financial reporting transparency and accountability (Carini & Teodori, 2019). Furthermore, the emergence of various decentralised entities associated with government organisations has limited the representation of government activities and financial status in conventional annual reports (Argento et al., 2012). The complex governance structures and financial interdependencies characterising these organisations could not be effectively captured in the conventional annual reporting framework, which lacks integrative capacity (Cordery & Hay, 2024; Oulasvirta & Rönkkö, 2023).

Carini et al. (2018) added that the shift in public sector boundaries have highlighted the individual annual report's limitations in reflecting the controlled entities' economic and financial characteristics. The failure to include the financial impact of subsidiaries, joint ventures, and associates in conventional annual reports exacerbates the issue (Manes-Rossi et al. 2019; Oulasvirta, 2022). This obscures the true financial picture, in addition to posing transparency and accountability challenges, particularly in assessing governmental financial commitments and performance (Boex et al., 2021). Inter-company transactions, balances, and unrealised gains or losses, which are not eliminated without consolidation, inflates figures and reduces

transparency. This lack of clarity weakens stakeholder confidence and renders it challenging to assess the company's overall financial interactions and performance. Furthermore, consolidation for entities that control other counterparts is required when the lack of CFR leads to non-compliance with standards. Reporting transparency and accountability must be improved in government-controlled entities due to substantial government fund investments and its impact on public interest.

The public-sector CFR is crucial for facilitating decision-making processes, as well as ensuring public accountability and transparency (Elharon & Hassan, 2025). In this vein, the financial performance and position of the single government and decentralised government entities are clearly depicted (Grossi & Pepe, 2009; Wise, 2010). It fulfils the goal of combining all government resources and liabilities to gauge the government's financial status and the overall functioning of the interrelated group (Bisogno et al., 2019). In line with Tran et al. (2020), accrual accounting lays the foundation for establishing a consolidated reporting system in the public sector. International Public Sector Accounting Standards (IPSAS) 35 outlines the CFS guideline, with Malaysia basing it on the Malaysian Public Sector Accounting Standard (MPSAS) 35 released in March 2016.

Notwithstanding, the challenges in implementing this approach warrant further investigation (Christiaens & Van Hulle, 2015; Manes-Rossi et al., 2016). The international regulatory body (IPSASB) and governments (Cîrstea et al., 2017) have extensively debated on resource insufficiency, complexities, and other strategic issues in adopting CFS. As per Aceituno et al. (2006), the diverse accounting standards in CFSs may adversely affect the comparability of the CFSs released by companies due to the potential misinterpretation of income and equity measurements. This renders the elicited information irrelevant for users in their decision-making process. Financialised forms of economic management and mechanisms for implementing state industrial and development policies is a key feature of modern state-led capitalist development (Mertens & Thiemann, 2018). The consolidation of government-controlled entities is under greater demand, albeit with technical intricacies (World Bank, 2024; MIA, 2025). In Malaysia, structural tensions between centralised oversight and local autonomy continue to deter decentralisation reforms (Lee & Samuel, 2024; Sulaiman et al., 2025).

The key determinants of CFR readiness remain less-examined in the context of government-controlled entities within Malaysia. Past works have primarily investigated the implementation challenges and technical complexities associated with consolidation methods, with little emphasis on the drivers of organisational readiness for CFR adoption. Multidimensional determinants such as information technology infrastructure, staff competency, management commitment, and strategic alignment that underpin successful CFR implementation in the public sector are largely overlooked due to the focus on the transition toward accrual-based accounting and compliance with financial reporting standards. A contextual gap in understanding the unique administrative, structural, and governance dynamics of federal government-linked or controlled entities is created given the emphasis on consolidation practices in private-sector entities. In response to this limitation, the current work aimed to strengthen public sector financial reporting frameworks while promoting greater consistency, transparency, and

accountability in Malaysia's fiscal management practices by identifying and analysing the key determinants of CFR readiness.

2.0 Literature Review

2.1 Theoretical Perspectives

The commander theory, agency theory, stakeholder theory, contingency theory and institutional theory were empirically used to posit the importance of the consolidation method. Following Goldberg's (1965) commander theory, accounting procedures are conducted from the viewpoint of a commander rather than that of an owner or artificial entity. In the corporate context, activities are directed by a hierarchy of decision-makers or commanders who manage organisational resources and daily operations. Accounting should focus on how effectively the management utilises corporate resources, with key information provided to inform economic decisions. Based on Wise (2010), a commander theory approach complements the hierarchical system of control over resources existing in the public sector. This hierarchical power structure allows ministers and the heads of departments, agencies, and statutory authorities to command specific information production (Kim & James, 2021).

Jensen and Meckling (1976) pioneered the agency theory, which could result in conflicts when agents (government representatives) are not well-aligned with the principals' (the public) interests. The theory denotes the conflict of interests and potential power imbalances between the agent and principal. Financial information reporting's transparency and accountability may be undermined by information asymmetry between the parties involved. Tawiah (2023) claimed that the agency problem instigated by political influence and the appointment of government officials to manage public resources calls for robust accountability structures. The collective structures for promoting informed decision-making, transparency, and accountability between the principal (citizens, voters, and taxpayers) and agents (government officers and politicians) can be generally described as governance (Cuadrado-Ballesteros & Bisogno, 2021). Wise (2010) and Oulasvirta (2022) highlighted accountability and reporting obligations as sufficient measures for protecting key stakeholder interests. Multiple levels of principal-agent relationships may exist in consolidation, with the principal functioning as an upper agent and reporting to a higher principal or supervisor. Several layers of principal-agent relationships may be established, with one principal exerting control over several agents (Bergmann et al., 2015). Regarding government-linked investment companies, the governing body of these entities or their parent organisations act as both an agent (accountable to the public or shareholders) and a principal.

Freeman's (1984) stakeholder theory provides more in-depth insights into the significance of consolidation. The formal separation of government annual accounts and service providers via legally-independent, government-owned entities often reduces the level of accountability and effectiveness of decision-making in public sector accounts. In addition to reducing transparency, this separation can deter the ability to hold these entities accountable for their financial decisions (Brown & Jones, 2019; Smith, 2020). The government's annual financial report may provide a

limited representation of its economic and financial activities, as it may not include the financial outcomes of subsidiaries, joint ventures, and associates in traditional annual reports. Clarke (2004) defined the stakeholder theory as multilateral agreements between an enterprise and its stakeholders, with a focus on the need to consider and protect all stakeholder interests. The theory aligns with CFR, which improves transparency of the financial position and performance of the public sector entity and all its controlled entities. This allows relevant stakeholders to understand the management and use of public resources (Cîrstea et al., 2017), as well as foster greater organisational confidence and trust. The CFR allows for making more informed decisions on policy and resource allocation while ensuring that public funds are used in favour of the public (Santis et al., 2018). Furthermore, stakeholders who need to assess public sector operations' performance and efficiency require better comparability between different public sector entities over time (Grossi, 2009).

The contingency theory delineates the factors affecting accounting practices in different organisational types, and how accounting approach works best when aligned with organisational needs (Nájera Ruiz et al., 2021; Abu Afifa et al., 2022; and Dello Sbarba et al., 2024). A system's effectiveness hinges on various contextual factors, including internal elements such as technological infrastructure and leadership commitment, as well as external pressures (strategic fit and regulations), given the absence of a universal solution. In this study, the contingency theory was incorporated to ascertain the factors influencing CFR readiness.

2.2 Current Enforcement of CFR in Malaysia

The current enforcement and regulatory framework governing CFR must be outlined in the context of Malaysia to strengthen the contextual understanding of this study. Public-sector CFR implementation is currently guided by the MPSAS 35: Consolidated Financial Statements, largely adapted from the IPSAS 35. This standard mandates CFR for federal and state governments, as well as government-controlled entities, which exercise control over other entities. Consolidated financial positions and performance ensure both transparency and accountability. Nonetheless, the level of implementation remains uneven due to differences in technical capacity, data integration systems, and resource allocation. This explains why many ministries, departments, and statutory bodies remain in various stages of readiness. Recent reports by the Accountant General's Department of Malaysia (AGD) disclosed that full compliance with MPSAS 35 remains in progress, with selected pilot entities guiding the transition. Conversely, some entities may apply the equity method. This reporting approach is used when an investor has significant influence yet does not control an investee. There is recognition of the investee's net assets and profits in its financial statements, but this financial data is not fully consolidated. Meanwhile, CFR requires the full integration of all controlled entities' assets, liabilities, income, and expenses into a single report. Overall, the current findings on CFR readiness and implementation among Malaysia's controlled entities can be better interpreted by clarifying the regulatory status, scope of enforcement, and methodological distinctions between CFR and the equity method.

2.3 Readiness of CFR Adoption

Data consolidation is extensively used to ensure public accountability and deliver an economic entity's true financial statements (Smith, 2020; Sotti, 2018). Hence, the overall success of CFR implementation across different processes and levels can be ensured by assessing organisational readiness or willingness to embrace CFR in the public sector. The acceptance and readiness of accounting standards adoption have been empirically examined in diverse contexts. For example, Cheng et al. (2014) revealed that planning, effective resource allocation, and the establishment of key facilities largely influence a company's readiness to implement certain financial reporting systems. Phan et al. (2018), who examined the perceived benefits and challenges associated with the willingness to adopt International Financial Reporting Standards (IFRS), disclosed that the perceived disadvantages and challenges diminished the willingness to adopt IFRS. Le (2023) employed the theory of planned behaviour (TPB) to examine the factors influencing accountants' readiness to implement Vietnam's public sector accounting standards. Proposed by Ajzen (1991), this theory is vital for explaining an individual's intention to engage in a specific behaviour to yield a specific outcome. In line with Le (2023), attitude, perceived usefulness, and coercive pressure significantly affect the accountants' readiness.

2.4 CFR Readiness Determinants and Hypothesis Development

Tran et al. (2020), Bergmann et al. (2015), Walker (2011), Grossi and Pepe (2009), Wise (2010), and Bergmann and Bietenhader (2008) have enriched the existing literature on public-sector CFR. Following Sánchez-Serrano et al. (2020), CFS presents a single economic and financial position of a group of companies owned by a parent company. It also eliminates transactions between these companies, which allow third parties to access assets, liabilities, income, and expenses. The recently updated standard under IPSAS 35 provides more guidance on control assessments. An entity's ability to influence benefits through power over another entity is termed as control. The new definition could significantly affect previous control assessments and the potential consolidation of certain entities (IPSASB, 2015). The IPSAS 35 introduces "investment entities", which measure its investments in controlled entities at fair value through surplus or deficit. Due to reasons specific to the public sector, an entity that controls an investment entity should retain this accounting method for an investment entity's investments in its consolidated financial statements (regardless of whether it is an investment entity itself).

In Malaysia, the Accounting International Guidelines under IPSAS 35 and/ or MPSAS 35 establish control as the primary basis for determining the consolidation scope. Regardless, Bergmann et al. (2015) claimed that the control criterion does not guarantee full consolidation for all controlled entities. The equity method can be used in place of full consolidation in certain situations. Advocates for equity method argue that presenting shares as individual asset items enhances transparency, not unlike full consolidation. Nonetheless, this approach might not provide a clear depiction of the central government. In many countries, entities with a robust financial position and significant revenues from market activities (commercial banks and financial intermediaries) are consolidated via the equity method. Notwithstanding, this

approach does not clearly demarcate the liabilities and financial risk linked with controlled entities. Bergmann et al. (2015) contended that the complex structure of the public sector and its variety of decentralised entities has led to the consolidation of perspectives from budgetary, organisational, legal, statistical, and risk perspectives.

Grossi and Pepe (2009) outlined the emergence of consolidated reports in the public sector, as well as the similarities and differences in accounting principles and standards used to prepare CFR in six (6) developed countries. From a scholarly viewpoint, the dynamics of government financial reporting renders it challenging to establish a sense of stability. No consensus has been reached on the best way to determine the appropriate blend of private and public sector approaches despite the increased harmony, comparability, and uniformity derived from convergence. Regarding CFS practice in the Australian public sector, Walker's (2009) study involved the entire government and public administration. Walker (2011) also highlighted the issues arising in Australian practice over the past two (2) decades, starting from 1988. Potential solutions were proposed based on report users' routine decisions. Wise (2010) reviewed the existing literature on the antecedents of public sector accountability performance, with emphasis on financial report preparers' opinions on the usefulness of government-wide CFR. The aim was to determine whether consolidated financial information is useful for decision-making purposes and government resource allocation decisions.

Several studies have been conducted in the context of CFR, IPSAS/ MPSAS, and accrual to determine the factors affecting organisations' readiness to adopt new accounting reporting approaches. Nevertheless, studies examining the factors or issues associated with implementing new accounting standards or approaches (CFR, IPSAS, and accrual) remain lacking. As per Grossi (2009), the lack of local administrations and municipal enterprises' accounting homogeneity, lack of expertise and knowledge on consolidated reports, and lack of staff (no obligation to complete, difficulty in consistently obtaining the requisite data and documents, limited transparency of local government annual reports, and lack of appropriate software) are the most common issues in implementing consolidated financial statements. Bergmann and Bietenhader's (2008) survey on public-sector CFR in Switzerland highlighted differences in practice and views on whether to implement consolidation. Lack of interest or political pressure, high implementation costs, lack of legal obligations, and technical issues are the reasons cited for not presenting the cases.

Abu Hasan et al. (2022) revealed the inadequacy of resources (incompetent accounting staff, as well as IT facilities and support), accounting reporting issues (difficulties in recognition and valuation of assets, liabilities, revenue, and expenses), and poor top management commitment in ensuring successful change management programmes as inhibitors of IPSAS adoption across developing countries. The unpredictability of the implementation date, the need for recurrent training, and lack of qualified staff were also highlighted in the study. Saleh et al. (2021) identified three categories of challenges such as the lack of competent accounting and finance staff and inadequate information technology facilities; accounting and reporting issues related to difficulties in recognising and measuring assets, liabilities, income, and expenses; and the commitment of top management to ensure a successful change management programme,

all of which hinder IPSAS implementation in several developing countries. Manes-Rossi et al. (2016) identified the barriers to introducing accrual-based accounting standards, which include the high cost of implementation, variances in accounting systems, and the cost of educating public sector employees. Building on past findings, this study divided the key factors of CFR readiness into the following six (6) factors: IT support and facilities, staff knowledge and skills, complexity of reporting, rules and top management commitment, and strategic considerations. The following sub-sections elaborate on each factor.

2.4.1 IT Support and Facilities

Both IT support and facilities are crucial for preparing holistic financial reporting system. The adequacy and reliability of IT infrastructure for supporting the reporting process characterise this variable. Furthermore, Santis et al. (2018) highlighted the need for robust IT systems to manage complex financial data and support the consolidation process. Effective IT infrastructure allows for integrating various financial systems, reducing errors, and facilitating real-time data access (Kipilimba, 2024). Regarding IPSAS adoption, Abu Hasan et al. (2022) revealed that the adoption of accounting standards requires adequate IT support. It proves vital to enhance IT support and infrastructure before implementing CFR to ensure the accuracy and efficiency of financial data integration. Given the importance of IT systems in supporting data consolidation and standardised reporting, the following hypothesis was developed:

H1: There is a significant relationship between IT support and facilities and the organisation's readiness of CFR.

2.4.2 Staff Adequacy and Skills

Human resources, which include staff availability and proficiency in managing the reporting process and information consolidation tasks, play a pivotal role in adopting complex financial reporting methods. Competent staff are crucial for understanding and implementing accounting standards and systems (Tilahun 2019). In line with Bisogno and Cuadrado-Ballesteros (2019), well-trained staff is key to improving financial reporting effectiveness and sustainability. Accounting professionals are capable of generating accurate financial statements that reflect the company's financial condition when they have in-depth knowledge of accounting standards (Huynh et al., 2024). Following Grossi (2009), Saleh et al. (2021), and Abu Hasan et al. (2022), the implementation of appropriate accounting systems can be hindered by the absence of competent accounting staff. Manes-Rossi et al. (2016) claimed that the cost of educating employees can hamper the adoption of new accounting approaches. Substantial investment in training and development is required to ensure staff proficiency in the new systems. Employees who are well-versed with the current system may hesitate to embrace change, thus exacerbating the challenge (Khaw et al., 2023). As adequate and well-trained staff resources are crucial for successfully implementing comprehensive financial reporting, the following hypothesis was developed:

H2: There is a significant relationship between staff adequacy and skills and the organisation's readiness of CFR.

2.4.3 Complexity of Reporting

The intricate nature of the financial reporting process and associated challenges denote the complexity of reporting. The consolidation process can be further hampered by the need to comply with multiple regulatory requirements and the inherent challenges of business operations. Following Blankespoor et al. (2020), an organisation's complex structure and operation in diverse environments complicate the acquisition of essential information for investors or stakeholders. Information asymmetry between the firm and its external investors are further compounded by this complexity and financial reporting intricacies. Correspondingly, Baik et al. (2023) reported that managers' decision to optimise the disclosure of their complex operations and performance to external stakeholders could lead to financial reporting complexity. Empirically, complex organisations tend to enhance their financial reports via voluntary disclosures. The elimination of intercompany transactions, the harmonisation of differing accounting policies, foreign currency translations, the recognition of minority interests, complex ownership structures, and the management of variable interest entities (VIEs) are some of the factors contributing to the complexity of consolidated reports (Murphy & McCarthy, 2010; Aoki & Sawai, 2024). High costs may also be incurred through the use of specialised knowledge and systems to manage and report complex information (Santis et al., 2018; ACCA, 2023). Given the need for thorough adjustments to ensure precise, transparent financial reporting across multiple entities, the following hypothesis was developed:

H3: There is a significant relationship between the complexity of reporting and the organisation's readiness of CFR.

2.4.4 Rules and Regulations

The preparation of financial reporting is influenced by the need to comply with multiple regulatory requirements. Based on Bhattacharjee (2015), strict adherence to regulatory frameworks is key to maintaining investor confidence and ensuring compliance with legal standards. Organisations must ensure regulatory compliance in financial reporting with a sound understanding of rules and standards (Surganovich, 2024). Rules are important to protect investors, maintain fair and efficient markets, and promote transparency and accountability within organisations. For example, the IPSAS framework provides a holistic guideline for accrual-based financial reporting, enhancing the quality and comparability of financial information (Paulus et al., 2023). In Malaysia, companies must adhere to the Malaysian Financial Reporting Standards (MFRS) issued by Malaysian Accounting Standards Board (MASB, 2024). Additionally, regulatory bodies such as the Securities Commission Malaysia (SC) and the Companies Commission of Malaysia (SSM) impose strict reporting requirements to ensure compliance. Based on these arguments, the following hypothesis was developed:

H4: There is a significant relationship between rules and regulations and the organisation's readiness of CFR.

2.4.5 Top Management Commitment

The top management must be willing to commit to the necessary process, as well as enforce rules and financial reporting standards. In line with Christiaens and Van Hulle (2015) and Yusliza et al. (2019), strong management commitment is significantly correlated with the adoption of managerial practices in organisations (including the financial reporting system). The management approval is crucial for the application of accounting systems in enterprises. They hold the authority to organise, allocate personnel, and allocate other resources (Huynh et al., 2024). The implementation of new reporting standards can fail without strong leadership and clear guidelines (Bricker, 2018). Consequently, Zhang (2019) reported that the characteristics of top management significantly determine compliance with financial reporting standards and improve the overall quality of financial reporting. In this vein, the following hypothesis was developed:

H5: There is a significant relationship between top management commitment and the organisation's readiness of CFR.

2.4.6 Strategic Considerations

Organisations typically consider the strategic benefits of adopting new reporting methods, such as improved transparency and accountability or their alignment with the organisation's goals (Garcia-Sanchez et al., 2013). Kaplan and Norton (2008) argued that aligning financial reporting with strategic goals enhances decision-making, operational efficiency, and stakeholder communication, all of which potentially improve the overall organisational performance. Strategic considerations refer to the implications and effects of adopting the consolidation method on the organisation's overall goals and operations. While the implementation of IPSAS or IFRS has been associated with higher governance quality levels, including better accountability and government effectiveness (Cuadrado-Ballesteros & Bisogno, 2019), consolidated reporting might reveal sensitive, confidential company information (ACCA, 2023; Oulasvirta, 2022). Organisations may overlook any methods that diverge from their objectives and nature. As strategic factors can play a significant role in an organisation's readiness and willingness to adopt CFR, the following hypothesis was developed:

H6: There is a significant relationship between organisation strategic considerations and the organisation's acceptance of CFR.

3.0 Research Method

A quantitative approach was used in this study to achieve the research objectives. The following sub-sections detail the data collection methods, study population, and variable measurements.

3.1 Data Collection

Quantitative data were collected using online and postal surveys. The study primarily examined entities controlled by the federal government of Malaysian companies to determine the issues related to CFR implementation. As established legal structures, these entities serve to rectify the market deficiencies stemming from insufficient private sector participation due to challenging market penetration (Najid & Abdul Rahman, 2011). A total of 70 companies, encompassing both majority-owned companies and special purpose vehicles (SPVs) regularly published by the Ministry of Finance, Malaysia, were identified from the list of Minister of Finance (Incorporated). The selected companies were chosen for their significant operational and financial relevance to the government, as well as their potential inclusion in CFR.

The survey questionnaire forms were disseminated online (via email) and by post. Notably, the controlled entities listed under the Minister of Finance (incorporated) served as the unit of analysis in this study. To capture relevant insights, empirical data were collected from finance and accounting managers. These individuals were chosen as key informants owing to their direct involvement in preparing and reporting financial statements.

3.2 Measurement Scales

Six (6) key variables associated with CFR implementation readiness (IT support and facilities, staff skills and adequacy, rules and regulations, top management commitment, reporting complexity, and strategic considerations), consisting of 19 items, were included in this study. The following discussions elucidate on each variable alongside its corresponding source of references. The first variable, IT support and facilities, implies the adequacy and reliability of technological infrastructure and systems that enable accurate and timely financial reporting (Grossi, 2009; Abu Hasan et al., 2022). Second, staff adequacy and skills represent the competence, experience, and sufficiency of accounting personnel involved in financial reporting. This variable captures employees' knowledge, training, and support in implementing CFR (Grossi, 2009; Saleh et al., 2021; Abu Hasan et al., 2022). Third, complexity of reporting denotes the level of difficulty and technical challenges of data heterogeneity, multiple reporting layers, and procedural complications encountered during the preparation of consolidated financial reports (Grossi, 2009; Mnif & Gafsi, 2020). Fourth, rules and regulations reflect the influence of existing accounting standards, legal obligations, and regulatory frameworks on financial reporting practices (Grossi, 2009; Krishnan et al., 2021; Saleh et al., 2021). Fifth, top management commitment captures the degree of leadership support, resource allocation, and prioritisation given to the implementation of CFR initiatives (Grossi, 2009; Saleh et al., 2021; Abu Hasan et al., 2022). Lastly, strategic considerations characterise the alignment between CFR adoption and an organisation's broader strategic goals of enhancing decision-making, competitiveness, and financial transparency (Bui, 2023).

The dependent variable, comprising of three (3) items, captured the readiness of the CFR implementation. A 7-point scale ranging from 1 (highly disagree) to 7 (highly agree) was utilised to gauge the respondents' feedback on the key study variables. The questionnaire items were

adapted from Abu Hassan et al. (2022), Tran et al. (2020), Santis et al. (2018), and Saleh et al. (2021). A follow-up was performed via postal survey after the first distribution through email and postal mail to increase the number of responses. Thirty-eight valid replies were received at the end of the data collection, with a 54.3% response rate. A minimum sample of 30 proved adequate to draw a statistically sound conclusion about a population (Pannel, 2023).

Data reliability analysis was conducted to assess the internal consistency and the degree of association among a set of items. A measurement is deemed reliable and adequate for retaining all the instrument items if the Cronbach's alpha value is equal to or exceeds 0.7. In line with Hair et al. (2015), Cronbach's alpha coefficient approaches a value of 1.0 with an increase in the items' internal consistency. The reliability analysis indicates that five (5) out of six (6) key variables reflect a Cronbach's alpha value exceeding 0.7. As such, the items demonstrated a high level of reliability. The strategic considerations factor, which exhibited a Cronbach's alpha of 0.5, was removed to increase the Cronbach's alpha value. Specifically, the deletion of items 1 and 4 under this category improved Cronbach's alpha value to above 7.0. The following section presents the data analysis outcomes.

4.0 Results and Findings

4.1 Profiles of Respondents

Table 1 presents the respondents' demographic background. The results detail the survey participants, categorised by their business entities, sales ranges, and financial reporting system.

Table 1: Profile of Respondents

	N	%
1. Type of Business Entity		
Sdn Bhd	32	84.2
Bhd	6	15.8
Total	38	100.0
2. Sector		
Logistics	3	7.9
Computing/ multimedia services	2	5.3
Medical services	1	2.6
Construction	5	13.2
Hospitality	3	7.9
Rubber	1	2.6
Education/ research services	3	7.9
Venture capital	2	5.3
Sewerage management	1	2.6
Property management	1	2.6
Debt recovery management	1	2.6

Table 1: Profile of Respondents (continued)

	N	%
Finance services	6	15.8
Port services	3	7.9
Airport/ aircraft maintenance	2	5.3
Technology developer	3	7.9
Missing	1	2.6
Total	38	100.0
3. Sales		
RM 300 000 - RM 1 million	1	2.6
RM 3.1 million - RM 15 million	2	5.3
RM 15.1 million - RM 20 million	2	5.3
RM 20.1 million - RM 50 million	10	26.3
More than RM 50 million	23	60.5
Total	38	100.0
4. Age		
Below 10 years old	4	10.5
11 - 20 years old	9	23.7
21 - 30 years old	14	36.8
31 - 40 years old	8	21.1
More than 40 years old	3	7.9
Total	38	100.0
5. Unit/ Department		
Accounting	14	36.8
Finance	23	60.5
Missing	1	2.6
Total	38	100.0
6. Financial Reporting Method		
Equity	28	73.7
Consolidation	10	26.3
Total	38	100.0
7. Stage of CFR Implementation		
CFR currently is not being used in my organisation	28	73.7
CFR implementation is possible, but it has not been approved	1	2.6
Currently apply CFR for internal & external reporting purposes	9	23.7
Total	38	100.0

The sample businesses represent multiple sectors. Demonstrating the highest frequency, the finance services account for 15.8% to the respondents, followed by the construction sector (13.2%), and logistics, hospitality, education/research, port services, and technology developers (7.9% each). Regarding annual revenue, the respondents were distributed across

different annual sales ranges. Approximately 13.2% of the respondents reported sales at less than RM 20 million, while a notable 26.3% fell within the RM 20.1 million-RM 50 million range. The majority of them (60.5%) disclosed sales exceeding RM 50 million. This sample distribution highlights financial diversity.

Based on the results, 36.8% of the businesses have been operating for 21 to 30 years. Organisations in operation for 11 to 20 years and 31 to 40 years account for 23.7% and 26.3% of the total sample, respectively. Only 10.5% have been in business for under 10 years. A mix of both established and relatively new companies is highlighted in this range of business. Regarding the reporting system, most of the respondents (73.7%) employed the equity method as a financial reporting technique. Approximately 26.3% of the respondents used the consolidation method, possibly due to the sample distribution. It is heavily skewed towards smaller organisations, which are likely to prefer the equity method for financial reporting. Following 2.6% of the respondents, CFR implementation proved feasible but yet to be approved by their organisation. Although CFR is increasingly gaining ground, some barriers may prevent its adoption. Meanwhile, 23.7% of the respondents hailed from organisations currently using CFR for internal decision-making and external reporting purposes.

4.2 Preference of Reporting Methods and CFR Implementation Readiness

Table 2 presents the respondent's level of preference for the financial reporting method, scored on a scale ranging from 1 (highly disagree) to 7 (highly agree). The mean scores for equity and consolidation methods (4.237 and 4.605, respectively) implies the prioritisation of the consolidation method over the equity method. Hence, factors other than preference (the specific nature of the business, regulatory requirements, or strategic considerations) can impact the choice of reporting method. With a mean value of 5.018 and a standard deviation of 1.093, CFR readiness proves to be relatively high. From the respondents' perspective, their respective organisations are ready to use the reporting method that complies with standards (mean = 5.605). This reflects a positive view of the organisations to adopt and implement CFR systems. Following Cheng et al. (2014), readiness for implementation is a key catalyst for adopting new financial reporting standards. With a mean score of 4.789, CFR is also perceived more transparent and provides more accountability.

Overall, the respondents provided positive feedback on CFR and its implementation. Both consolidation and equity methods are adaptable to the unique structures and financial practices of government-controlled entities. The choice between consolidation and equity methods may reflect the organisations' strategic alignment with public policy goals and governance standards, as these business entities are often under greater public scrutiny.

Table 2: Reporting Method Preference and CFR Readiness

	Min	Max	Mean	Std. Dev
Method Preferences				
Equity	1	7	4.237	1.866
Consolidation	3	7	4.605	1.285
Readiness of CFR				
My organisation is ready to adopt the reporting method that complies with standard.	5	7	5.605	0.855
My organisation is willing to adopt CFR under specific conditions.	3	7	4.658	1.279
I agree that CFR promotes greater transparency and accountability.	3	7	4.789	1.339
Average mean CFR readiness	4	7	5.018	1.093

4.3 Descriptive Analysis of Factors Associated with CFR Readiness

The descriptive statistics of factors or challenges in relation to CFR implementation readiness is presented in Table 3. Six (6) main categories involving IT support and facilities, staff adequacy and skills, the complexity of reporting, rules, and regulations, top management commitment, as well as strategic considerations underpin these factors. A total of 17 items was employed to measure the respective factors or challenges.

Table 3: Descriptive Statistics of Factors/ Challenges

	Min	Max	Mean	Std. Dev
IT Support and Facilities				
The cost of developing accounting information systems is high.	4	7	5.342	0.669
Information systems need to connect data between units in the same field.	4	7	5.263	0.854
Our information system is well-supported for making general reports of units.	3	7	4.737	1.032
We have appropriate software & IT facilities to support the reporting preparation.	3	7	4.711	0.956
Staff Adequacy and Skills				
We have an adequate number of staff to assist with CFR implementation.	3	7	4.553	0.978
We have an adequate number of staff with knowledge/ experience in CFR adoption.	3	7	4.421	1.004
We have adequate support staff to help with CFR adoption.	3	7	4.447	0.978
It needs significant time and costs to educate the staff and to implement CFR.	4	6	5.132	0.578
Complexity of Reporting				
There are issues of different reporting/ lack of homogeneity of accounting criteria.	2	6	4.974	1.150
Difficulty in obtaining the necessary data/ documents from time to time.	2	6	4.842	1.346

Table 3: Descriptive statistics of factors/ challenges (continued)

	Min	Max	Mean	Std. Dev
There are potentially high risks & errors in the consolidation process.	1	7	4.342	1.279
Other technical reporting issues.	1	6	4.474	1.179
Rules and Regulations				
Current legal obligations influence the adoption of CFR in my organisation.	3	7	4.763	0.786
Current obligations/ standards influence CFR implementation in my organisation.	3	7	5.026	0.915
Top Management Commitment				
Top management commitment is high for CFR adoption.	3	7	4.842	1.001
Strategic Considerations				
CFR adoption helps simplify financial statements.	3	7	4.421	1.004
My organisation prefers reporting that has a strategic advantage.	4	7	5.342	0.878

The results highlight IT-related issues in CFR implementation. Notably, the high costs associated with developing accounting systems denoted the highest mean score of 5.342. The success of CFR adoption can be significantly influenced by cost factors. The respondents highlighted the need for information systems to connect data between units (mean = 5.263) for effective financial reporting. The risk of data discrepancies and reporting errors increases could increase without such integration. The CFR preparation requires robust systems that can integrate data from various units without discrepancies. Meanwhile, the respondents moderately agreed to the items “our information system is well-supported for making general reports of units” and “we have appropriate software and IT facilities to support the reporting preparation” with a mean score of 4.737 and 4.711, respectively.

Regarding staff adequacy and skills, concerns about the time and costs involved in educating staff and executing CFR proved to be high (mean = 5.135). The findings align with the issue underlying the IT support and facilities category, where the cost factor is also deemed substantial. The second-highest factor is the item “adequate number of staff to assist with CFR implementation” (mean = 4.553), followed by the adequacy of support and competent staff to aid in CFR adoption (mean = 4.447 and 4.4421, respectively). The respondents moderately agreed that their organisations encompass experienced staff to aid in CFR preparation. Regardless, the number of support staff may not sufficiently support CFR implementation. The current findings call for targeted initiatives related to resource allocation and training to facilitate effective CFR implementation.

The lack of homogeneity in accounting criteria is the most pressing issue in the reporting complexity category (mean = 4.974), followed by difficulties in obtaining necessary data or documents from time to time (mean = 4.842). Hence, discrepancies, confusion, and greater time and effort to reconcile data may occur due to the inconsistencies in accounting criteria across different departments or regions. Furthermore, inefficient data management systems,

the absence of standard procedures for data collection, and delays in communication are factors that can cause difficulties in obtaining necessary data. The mean score for “other technical reporting issues” (4.474) indicates a moderately high level of concern. The lowest mean score of 4.342 is indicated by the potential high risks and errors in the consolidation process. Stringent checks and balances are necessary given the inherent complexity and the potential for mistakes during the consolidation phase.

Under the rules and regulations category, the item “current obligations/ standards influence CFR implementation in my organisation” reflects a mean score of 5.026. From the respondents’ perspective, existing obligations or accounting standards significantly influence CFR implementation in their organisations. As non-compliance may result in legal repercussions or harm the organisation’s reputation, it is vital to comply with existing financial reporting standards. With a mean score of 4.763, the item “current legal obligation influences CFR adoption in my organisation” implies that legal responsibilities significantly contribute to accounting reporting practices in organisations. The moderately high top management commitment toward CFR adoption (mean = 4.842) suggests that the respondents received acceptable support from the upper management to implement the appropriate financial reporting system. Overall, top-level support is key to reinforcing the commitment to transparency and accountability in financial reporting.

Finally, the item “my organisation prefers reporting that has strategic advantage” under the strategic consideration category demonstrated a high mean score of 5.342. This result highlights respondents’ strong agreement to adopt reporting systems in line with the organisation’s strategic goals. Regardless, the item “CFR adoption simplifies financial statements” received a moderate level of agreement from the respondents with a mean score of 4.421. Respondents may have mixed views or experiences regarding CFR preparation given the complexities and additional effort, time, and resources required.

4.4 Descriptive Statistics of CFR Implementation Factors and Correlation Analysis

The descriptive statistics of CFR implementation factors is presented in Table 4, with a focus on the correlation analysis between the six (6) selected factors and CFR implementation readiness. Notably, IT support and facilities exhibited the highest average mean score of 5.031. The availability of IT-related resources is crucial for promoting the readiness to adopt CFR. Rules and regulations, top management commitment, and strategic considerations reflected mean scores exceeding 4.80, thus indicating a relatively high level of agreement. The average mean scores for reporting complexity, staff adequacy, and skills stood at 4.658 and 4.638, respectively. The average score for CFR implementation readiness (5.018) was deemed high.

Correlation analysis was conducted to determine which factors have a statistically significant relationship with CFR readiness to provide additional statistical evidence regarding the variable relationships. Normality tests were performed to determine the variable distribution. The normality was based on the Shapiro-Wilk value, as the sample size is below 50. Except for strategic considerations, rules, and commitment, all the variables denoted a significant value

lower than 0.05. Three (3) independent variables and the dependent variable did not follow a normal distribution. The study proceeded with the non-parametric test for correlation analysis via Spearman correlation.

The IT support and facilities, staff adequacy and skills, commitment from top management, and strategic considerations were significantly, positively related to CFR readiness, with correlation coefficients of 0.665, 0.457, 0.443, and 0.441, respectively, and p-values < 0.05 (see Table 10). Hypotheses 1, 2, 5 and 6 were supported, demonstrating the substantial influence of IT support and facilities, staff adequacy and skills, top management commitment, and strategic considerations on the organisation's readiness of CFR. Hypothesis 4 was not supported, indicating that regulatory pressure has no statistically significant relationship with CFR readiness. Based on the strong relationship between IT and CFR readiness, IT support and facilities incur high costs and require integrated systems, which then support greater preparedness for CFR implementation. Furthermore, organisations with adequate experienced staff and greater top management commitment are more capable of handling CFR preparation. Yusliza et al. (2019) affirmed that committed leadership is vital for effectively implementing any major organisational change, including financial reporting systems. The findings, which suggest a significant relationship between financial reporting and strategic goals or planning processes, coincide with Kaplan and Norton (2008) on the significance of aligning the financial reporting approach with strategic organisational objectives.

Conversely, reporting complexity revealed a negative, significant relationship with CFR implementation readiness, with a correlation coefficient of -0.456 and a p-value under 0.05. Hypothesis 3 was supported through this finding. Highly complex CFR processes are bound to lower the readiness for its adoption. According to Woods and Humphrey (2009), effective training programmes and robust information systems are vital for overcoming these challenges and enhancing CFR implementation preparedness. With a p-value exceeding 0.05, rules and regulations did not significantly influence CFR implementation readiness. As such, Hypothesis 4 was not supported. The current findings align with by Kipilimba (2024), Abu Hassan et al. (2022), Tran et al. (2020), Santis et al. (2018), and Saleh et al. (2021), who examined the influence of key factors on the adoption of accounting practices in private and governmental sectors.

Table 4: Descriptive Statistics and Correlation Analysis of Factors and Challenges

	IT	Staff	Complexity	Strategic	Rules	Commitment	CFR
IT	1	.778** 0.000	-0.261 0.114	.554** 0.000	-0.177 0.288	0.306 0.061	0.665** 0.000
Staff		1	-0.239	.601**	-0.280	0.290	.457**
Complexity			1	-0.170	0.259	-0.057	-.456**
Strategic				1	-0.036 0.830	0.289 0.079	0.443** 0.005
Rules					1	0.442** 0.005	-0.132 0.429

Table 4: Descriptive Statistics and Correlation Analysis of Factors and Challenges (continued)

	IT	Staff	Complexity	Strategic	Rules	Commitment	CFR
Commitment						1	0.441**
CFR							1
	Min	Max	Mean	Std. Deviation			
IT support & facilities	4	7	5.013	0.784			
Staff adequacy & skills	3	7	4.638	0.737			
Reporting complexity	2	6	4.658	1.111			
Rules	3	7	4.895	0.790			
Commitment	3	7	4.842	1.001			
Strategic considerations	4	7	4.882	0.834			
CFR readiness	4	7	5.018	1.093			

4.5 Additional Findings

The last section of the questionnaire contains optional, open-ended questions that encourage respondents to provide their own opinions on CFR preparation issues and suggestions. Table 5 presents some of the findings.

Table 5: Additional Issues and Suggestions for CFR Preparation

Issues	Suggestions for CFR preparation
Regulation, dissemination of instructions, reporting standard.	Re-arrangement on processes and procedures related to reporting of financial activities.
Internal accounting reporting process.	Planning of inter-departmental activities.
Need to have a proper plan and system integration.	Establish proper planning on accounting/ reporting activities.
Planning and delegation of instructions.	Comprehensive accounting and finance process and procedures.
Implementation process issues.	Delegation of authority and proper planning.
Planning and execution of the implementation.	Delegation of responsibilities and authority.
Need to stay updated with MFRS accounting standards.	Currently applying MFRS accounting standards.
Consolidating FS for operations outside Malaysia requires alignment and standardisation of standards and items. Different entities may have different timing/ data for reporting. As a holding company, we have to report to Bursa by March every year, but the subsidiary/ JB is only in June.	System integration with operations from all members. Alignment of the closing period for all entities.
Transparency and accountability issues. Technological and data system limitations.	Establish clear reporting policies and procedures. Upgrade or integrate the finance system.
To ensure COA and code of accounts are correct, including reporting structure.	To have a good financial system structure to generate the consolidated financial statement.

Table 5: Additional Issues and Suggestions for CFR Preparation (continued)

Issues	Suggestions for CFR preparation
Different financial reporting systems: difficulties in integrating financial data. Adjustments can be complex and time-consuming, leading to error.	Train the finance and accounts staff on the consolidation process. The chart of accounts used by subsidiaries must be aligned with the parent company for a smooth consolidation process.
If the parent company operates in a different currency, any foreign exchange loss will influence the financial result.	Alignment of accounting policies. Staff training and knowledge transfer are needed for the preparation of CFR.
To have the necessary data captured on time before each reporting closing period. Choose the correct financial systems that are specific to the company's business nature.	Ensure all data is gathered and captured before month-end closing. Ensure the movement of transactions and ensure all information is correct.

Based on the qualitative findings presented in Table 5, the issues and suggestions are refined several main points.

i. Application of Uniform Accounting Standards and Alignment of Accounting Policies Across Entities

The CFR is possible if all entities within the group apply the same accounting principles, such as MFRS/ MPSAS, methods, and policies to avoid discrepancies in financial reports. Standardised accounting policies across all entities ensure uniformity in financial reporting, reduce complexity, and accurately reflect the group's financial position and performance.

ii. Upgrade or Integrated Financial and Operational Systems

The CFR can be efficiently established with a good integrated system that promotes seamless and consistent data flow. The finance department should upgrade or integrate financial and operational data across all member entities by ensuring that the system can handle complex consolidations, automate data collection, and generate accurate consolidated financial statements. Furthermore, a financial system structure must support efficient consolidation via standardised charts of accounts, consistent accounting policies, and strong reporting tools.

iii. Alignment of Closing Period for All Entities

Synchronised financial reporting can be ensured by aligning the closing periods of all entities. This helps consolidate financial statements in the timely manner while reducing the risk of errors and omissions.

iv. Establish Clear Reporting Policies and Procedures

Develop and document clear reporting policies that outline the requirements for financial reporting, including timelines, formats, and responsibilities. These policies should be communicated to all relevant personnel. Additionally, standardised procedures must be

established for financial reports preparation, review, and approval by defining roles and responsibilities, setting deadlines, and implementing internal controls for improved accuracy and completeness.

v. A Chart of Accounts Used by Subsidiaries Must be Aligned with the Parent Company for a Smooth Consolidation Process

Ensure that all subsidiaries use a chart of accounts that aligns with the parent company. A simplified consolidation process ensures that financial data is comparable and easily aggregated. Moreover, firms can translate subsidiary accounts into the parent company's chart of accounts (where necessary) by developing a mapping system consolidate financial statements and maintain consistency.

vi. Staff Training and Knowledge Transfer are Needed for the Preparation of CFR

Provide targeted training programmes on the consolidation process, which include training on accounting standards, the consolidation software, and the specific CFR procedures and policies, for finance and accounts staff. Organisations should also organise regular knowledge transfer sessions to exchange insights, updates, and experiences related to CFR and encourage collaboration and communication among staff. Employees should be able to obtain guidance and clarification during the consolidation process through ongoing support via manuals, FAQs, and a helpdesk.

vii. Loss Due to Currency Exchange

Foreign exchange losses can impact the company's financial results, as is the case when a parent company operates in a different currency from its subsidiaries, or has assets and liabilities in foreign currencies.

5.0 Conclusion

This study elucidated on the readiness for CFR implementation, as well as its issues and challenges among the entities controlled by the Federal Government in Malaysia. The responding organisations indicated positive feedback on CFR implementation, which is key to enhancing transparency and accountability. In general, the Malaysian financial reporting system adheres to the established standards via an equity-based or CFR approach to reduce information asymmetry and ensure that managers act in favour of the owners and stakeholders. Moreover, government-linked/ business entities could tailor both reporting methods to their unique structures and financial practices. Given the frequent exposure to public scrutiny, these methods should also strategically align with public policy goals and governance norms to mitigate potential agency conflicts. Any changes in the financial reporting method require thorough consideration of the readiness and challenges associated with the processes.

Overall, IT support and facilities, staff adequacy and skills, top management commitment, and strategic considerations were significantly, positively related to CFR readiness. The strong relationship between IT and CFR readiness implied that IT supports and facilities require higher costs and integrated systems, which then support greater preparedness for CFR implementation. Organisations with sufficient experienced staff and greater top management commitment can better handle CFR preparation, which also indicate significant relationship between financial reporting and strategic goals or planning processes. Conversely, reporting complexity revealed a negative and significant relationship with CFR implementation readiness; a more complex CFR process lowers organisational readiness for adoption. No meaningful correlation was identified between CFR implementation readiness and rules and regulations.

The descriptive analysis of CFR readiness and its key determinants can be better understood through Malaysia's existing regulatory framework and institutional environment. While IT support, staff competence, top management commitment, and strategic alignment significantly contributed to CFR readiness, reporting complexity revealed a negative impact. The current state of CFR enforcement under MPSAS 35, which mandates consolidated financial statements for government-controlled entities but allows phased implementation, could explain these findings. Entities with stronger IT infrastructure and experienced personnel are better equipped to comply with these requirements, reflecting higher readiness levels. On another note, those with limited systems integration or technical expertise encounter delays and implementation challenges. Top management commitment aligns with government directives to improve public sector reporting, where entities with leadership buy-in tend to prioritise consolidation efforts. The negative effect of reporting complexity aligned with the procedural and technical demands imposed by the standard, including the need to consolidate multiple controlled entities, reconcile intra-group balances, and apply uniform accounting treatments. Although the regulations provided a legal framework, uneven resource distribution, different training levels, and limited oversight mechanisms across ministries and statutory bodies partially explained the differences observed in readiness levels. The descriptive findings extend beyond statistical observations to reflect the practical realities of policy implementation, resource availability, and institutional capacity in Malaysia's public sector, highlighting areas where targeted interventions could catalyse CFR adoption.

The present findings hold significant implications for policymakers and accounting standards practitioners in terms of policy formulation and strategy. For example, policymakers and regulatory bodies can design and implement policies that support CFR adoption. To ensure high CFR implementation readiness, organisations must allocate substantial resources to establish good IT facilities, support staff, enhance staff competencies, or hire experienced staff. Capacity building can include partnerships with academic institutions and professional bodies to offer relevant training and certifications. Inconsistencies in accounting criteria and challenges in obtaining necessary data or documents are reporting complexity issues that can significantly affect a report's accuracy and timeliness. Implementing more effective procedures can mitigate risks while avoiding errors and inaccuracies. Reducing reporting complexity is crucial for ensuring a smoother and more feasible transition to CFR. This study also highlighted the need to increase the leadership focus on CFR adoption. Strengthening top management

commitment may facilitate smoother CFR implementation. Furthermore, the legal requirements to adhere to MPSAS 35, or MFRS, for the presentation of consolidated financial statements are key to ensuring that relevant organisations consolidate the entities controlled, thus increasing trust and transparency in business financial activities.

While the MPSAS 35 (consolidated financial statements) establishes the formal framework for CFR implementation, its adoption across ministries, statutory bodies, and government-linked entities remains gradual and uneven. This highlights implementation gaps arising from varying levels of readiness, technical capacity, and resource allocation among controlled entities rather than a lack of regulation. Through the AGD and the National Audit Department (NAD), the government has taken significant steps to enforce MPSAS compliance by providing guidelines, training, and phased implementation plans. Due to the limited integration of financial management systems, inconsistent interpretation of control relationships, and inadequate technical expertise in consolidation reporting, existing measures may remain insufficient in ensuring uniform adoption. Therefore, the suggestion for policymakers to design and implement additional policies should be interpreted as a call for enhanced institutional support, enforcement mechanisms, and sustained capacity-building initiatives not as a criticism of existing regulations but as a strategy to improve implementation and accountability. Providing such clarification would ensure that the study implications accurately reflect the ongoing reform efforts while constructively identifying policy areas that require reinforcement to achieve robust CFR implementation nationwide.

In advancing the current body of knowledge on financial reporting, this study provided key theoretical, practical, and methodological implications for practitioners and policymakers to implement and evaluate policies. The preparation of Malaysian government-controlled entities for CFR implementation denotes how institutional and legal contexts shape financial reporting practices. The elicited data reflected the institutional idea that organisations adopt specific practices due to regulatory coercion, normative pressure from professional networks, and mimetic pressure from industry leaders. Such entities' CFR implementation preparedness implies that they are responding to institutional pressures to comply with national financial reporting standards. Under the resource-based view, organisations with skilled employees and supportive top management can better implement complex financial reporting systems. The readiness for CFR adoption implies that well-resourced organisations can effectively navigate regulatory compliance challenges.

The study findings can also be interpreted through the lenses of commander, agency, and stakeholder theories. Based on the commander theory, the Federal Government of Malaysia (central authority) demonstrated readiness and leadership in implementing CFR ensuring that controlled entities comply with national financial reporting standards. This reflects the government's strategic role in directing, coordinating, and maintaining accountability within public and government-linked entities. Following the agency theory, CFR implementation reduced information asymmetry between managers (agents) and owners or the government (principals), ensuring that managers act for the greater good of owners and stakeholders. The significance of IT support, staff competence, and top management commitment indicated that

strong internal governance and oversight reduce agency conflicts and promote transparent reporting. From the perspective of the stakeholder theory, CFR enhanced transparency, accountability, and trust among diverse stakeholders (including the public, regulators, and investors) by aligning reporting practices with societal expectations and governance norms. The emphasis on strategic alignment, capacity building, and reduction of reporting complexity ensures that financial information reinforces legitimacy and public confidence in financial governance by serving internal decision-makers and broader stakeholder interests.

Consolidation challenges must be addressed to maintain the overall integrity of the financial reporting process. To update or change the CFR requirements for government-controlled entities, a framework must be refined to appropriately represent their unique nature and operations. It should account for broader socio-economic goals and interests of diverse stakeholders, including the government, public, and private investors. Based on the study, organisations require uniform accounting standards and aligned policies to generate consistent and reliable financial reports; clear reporting policies and procedures to enhance regulatory adherence and governance; consistent accounting policies and charts of accounts to promote unity in the organisation; aligned closing periods to streamline processes and reduce errors; upgraded finance systems to enhance innovation and improve financial management; and ongoing training and knowledge transfer to ensure the CFR process remains efficient and relevant. These actions will lead to better financial management, compliance, and stakeholder trust. The elicited outcomes aid in fostering greater trust in government operations and enhancing strategies for government-controlled entities to balance the interests of principals, agents, and various stakeholders through an appropriate financial reporting system. Potential scholars could consider examining additional variables that impact financial reporting efficiency and broaden the range of organisations by increasing the sample size.

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References

- Abu Afifa, M. M., Saleh, M. I., & Almaqtari, F. A. (2022). Management accounting systems effectiveness, perceived usefulness and organisational outcomes: A contingency perspective. *International Journal of Organizational Analysis*, 30(5), 1204–1223. doi:10.1108/IJOA-07-2020-2288
- Abu Hasan, H., Saleh, Z., & Isa, C. R. (2022). Malaysian Public Sector Accounting Standards (MPSAS) implementation in state governments of Malaysia: Status and challenges. *IPN Journal of Research and Practice in Public Sector Accounting and Management*, 12(01), 33–55. <https://doi.org/10.58458/ipnj.v12.01.02.0075>
- Aceituno, F., Valeriano, J., Bolivar, R., & Pedro, M. (2006). The conceptual framework concept and the allocation of incomes in the consolidated entity: Its impact on financial ratios. *International Journal of Commerce and Management*, 16(2), 95–115. doi:10.1108/10569210680000210
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. doi:10.1016/0749-5978(91)90020-T
- Aoki, Y., & Sawai, K. (2024). An economic analysis of consolidation accounting: The property rights approach. *Journal of Theoretical Accounting Research*, 19(2), 48–69. <http://dx.doi.org/10.2139/ssrn.4757576>
- Association of Chartered Certified Accountants (ACCA). (2023). *Complexity in financial reporting*. ACCA Global. <https://www.accaglobal.com/gb/en/professional-insights/global-profession/complexity-in-financial-reporting.html>
- Argento, D., Grossi, G., & Vollenweider, P. (2012). Explaining the consolidation of financial statements in the Swiss Federal Government. *Swiss Yearbook of Administrative Sciences*, 3(1), 11–22. <https://doi.org/10.5334/ssas.36>.
- Baik, B., Johnson, M. F., Kim, K., & Yu, K. (2023, March 31). *Organization complexity, financial reporting complexity, and firms' information environment* [Working paper]. Social Science Research Network. <https://doi.org/10.2139/ssrn.4413814>
- Bergmann, A., & Bietenhader, D. (2008, August 31–September 2). *Practices and opinions on consolidated financial reporting in Swiss cities* [Conference paper]. Whole-of-Government Financial Reporting: International Trends Workshop, Siena, Italy.
- Bergmann, A., Grossi, G., Rauskala, I., & Fuchs, S. (2015). Consolidation in the public sector: Methods and approaches in Organisation for Economic Co-operation and Development countries. *International Review of Administrative Sciences*, 82(4), 763–783. <https://doi.org/10.1177/0020852315576713>

- Bhattacharjee, S. (2015). The impact of regulatory framework on financial reporting. *Journal of Accounting and Finance*, 55(2), 32–49.
- Bisogno, M., Cuadrado-Ballesteros, B., Citro, F., & Santis, S. (2019). Budgetary solvency of Italian local governments: An assessment. *International Journal of Public Sector Management*, 32(2), 122–141. <https://doi.org/10.1108/IJPSM-11-2017-0328>
- Blankespoor, E., DeHaan, E. & Marinovic, I. (2020). Disclosure processing costs, investors' information choice, and equity market outcomes: A review. *Journal of Accounting and Economics*, 70(2-3), 101344.
- Boex, J., Williamson, T., & Yilmaz, S. (2021). *Decentralisation, multilevel governance and intergovernmental fiscal relations: A primer*. World Bank. <https://documents1.worldbank.org/curated/en/099225502022316135/pdf/P1754490fe142c0db095050e3808607c8ff.pdf>
- Brown, A., & Jones, P. (2019). The impact of legal separation on public sector accountability. *Public Administration Review*, 79(4), 511–523. doi:10.1111/puar.1304
- Bricker, W. (2018, August). *The critical role of financial reporting*. The CPA journal. <https://www.cpajournal.com/2018/08/14/the-critical-role-of-financial-reporting/>
- Bui, B. (2023). Strategic management accounting and performance: A contingency perspective. *Accounting Forum*, 47(1), 47–62. doi:10.1080/01559982.2022.2135052
- Carini, C., Giacomini, D., & Teodori, C. (2018). Accounting reform in Italy and perceptions on the local government consolidated report. *International Journal of Public Administration*, 41(10), 792–804. <https://doi.org/10.1080/01900692.2017.1423500>
- Carini, C., & Teodori, C. (2019). Making financial sustainability measurement more relevant: An analysis of consolidated financial statements. In E. Borgonovi, E. Anessi-Pessina, & C. Bianchi (Eds.), *Financial sustainability of public sector entities*, 111–130. doi:10.1007/978-3-030-06037-4_6
- Cheng, M., Green, W., & Ko, J. (2014). The role of implementation readiness in the adoption of financial reporting standards. *Journal of Accounting Research*, 52(1), 95–119. doi:10.1111/1475-679X.12038
- Christiaens, K., & Van Hulle, S. (2015). The impact of IPSAS on public sector financial reporting: A review of the literature. *International Journal of Public Sector Management*, 28(5), 372–391. doi:10.1108/IJPSM-12-2014-0146

- Cîrstea, A., Nistor, C. S., & Tiron Tudor, A. (2017). Consolidated financial statements – A new challenge for the public sector administration. *Journal of Economic and Administrative Sciences*, 33(1), 46–65. <https://doi.org/10.1108/jeas-04-2016-0012>
- Clarke, T. (2004). *The stakeholder corporation: A business philosophy for the information age*. Routledge.
- Cordery, C. J., & Hay, D. (2024). Public sector audit: New public management influences and ecosystem-driven reforms. *Journal of Public Budgeting, Accounting & Financial Management*, 37(4), 595–618. <https://doi.org/10.1108/JPBAFM-07-2023-0124>
- Cuadrado-Ballesteros, B., & Bisogno, M. (2019). Efficiency and financial condition of local governments: The role of functional decentralization and managerial capacity. *Lex Localis, Journal of Local Self-Government*, 17(3), 505–528. [https://doi.org/10.4335/17.3.505-528\(2019\)](https://doi.org/10.4335/17.3.505-528(2019))
- Cuadrado-Ballesteros, B., & Bisogno, M. (2021). Public sector accounting reforms and the quality of governance. *Public Money & Management*, 41(2), 107–117. doi:10.1080/09540962.2020.1825230
- Dello Sbarba, A., Garlatti, A., & Manes Rossi, F. (2024). Strategic configurations and strategic management accounting: A longitudinal case study in the credit mediation industry. *Journal of Accounting & Organizational Change*, 20(1), 18–40. doi:10.1108/JAOC-04-2024-0118
- Elharon, E. O., & Hassan, N. A. (2025). The role of accounting in enhancing transparency and accountability in the public sector. *International Journal of Accounting and Management Studies*, 7(2), 88–102. doi:10.56830/IJAMS0720250
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Cambridge University Press.
- Garcia-Sanchez, I., Lasseron, D., & Manes Rossi, F. (2013). The impact of IPSAS on public sector financial reporting: A review of the literature. *International Journal of Public Sector Management*, 28(5), 372–39
- Goldberg, L. (1965). *An inquiry into the nature of accounting*. American Accounting Association, Monograph No.7. State University of Iowa
- Grossi, G. (2009). New development: Consolidated financial reporting as a stimulus for change in Italian local government. *Public Money and Management*, 29(4), 261–264. <https://doi.org/10.1080/09540960903035056>

- Grossi, G., & Pepe, F. (2009). Consolidation in the public sector: A cross-country comparison. *Public Money & Management*, 29(4), 251–256. <https://doi.org/10.1080/09540960903026250>
- Hair Jr, J. F., Celsi, M. W., Money, A. H., Samouel, P., & Page, M. J. (2015). *Essentials of business research methods* (3rd ed.). Routledge. <https://doi.org/10.4324/9781315716862>
- Huynh, L. N., Khanh, T. H. T. & Hoang. T. X. (2024). The factors influencing the intention to adopt International Financial Reporting Standards (IFRS) of SMEs in Ho Chi Minh City, Vietnam. *Journal of Finance and Accounting*, 12(1), 1–11. <https://doi.org/10.11648/j.jfa.20241201.11>
- International Public Sector Accounting Standards Board. (2015). IPSAS 35: Consolidated financial statements. In *International Public Sector Accounting Standards (2015 Handbook)*. New York, NY: IFAC.
- Jensen, Michael C., & William H. Meckling. (1976) Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. doi:10.1016/0304-405X(76)90026-X
- Kaplan, R. S., & Norton, D. P. (2008). Mastering the management system. *Harvard Business Review*, 86(1), 62–77. Full text available at: <https://hbr.org/2008/01/mastering-the-management-system>
- Khaw, K. W., Alnoor, A., Ganesan, Y., & Atshan, N. A. (2023). Reactions towards organizational change: A systematic literature review. *Current Psychology*, 42, 19137–19160. doi:10.1007/s12144-022-03070-6
- Kim, I., & James, P.C (2021). A review and critique of commander theory. *International Journal of Accounting & Finance Review* 6(2), 74–80. doi:10.46281/ijaf.v6i2.1270
- Kipilimba, T. F. (2024). Financial reporting revolution: How its integration drives efficiency and accuracy. *Current Research International*, 24(6), 534–557. doi:10.9734/acri/2024/v24i630395
- Krishnan, S., Hsu, S., & Hsu, C. (2021). Management commitment and compliance with financial reporting standards: Evidence from emerging economies. *Asian Review of Accounting*, 29(2), 205–224. doi:10.1108/ARA-09-2020-0157
- Le, V. (2023). Readiness of accountants in applying Vietnam public sector accounting standards: Study in Ho Chi Minh City. *International Journal of Professional Business Review*, 8(8), 1–18. <https://doi.org/10.26668/businessreview/2023.v8i8.3621>

- Lee, H. Y. & Samuel, M. (2024). Decentralised centralism: Insights from a Malaysian cluster school of excellence. *Journal of International and Comparative Education*, 9(1), 5–18. <https://doi.org/10.14425/jice.2024.9.1.23552>
- Malaysian Financial Reporting Standards (MASB). (2024). *Malaysian Financial Reporting Standards*. Malaysian Financial Reporting Standards-MASB
- Malaysian Institute of Accountants (MIA). (2025, January 16). *MFRS and MPERS: Common issues on consolidation*. Accountants Today. <https://www.at-mia.my/2025/01/16/mfrs-and-mpers-common-issues-on-consolidation/>
- Manes-Rossi, F., Citro, F., & Bisogno, M. (2016). Intellectual capital in action: Evidence from Italian local governments. *Journal of Intellectual Capital*, 17(4), 696–713. <https://doi.org/10.1108/JIC-12-2015-0115>
- Manes-Rossi, F., Tiron-Tudor, A., & Orelli, R. L. (2019). Reflections on new trends in public sector reporting: Integrated reporting. In R. Mussari, R. L. Orelli, & F. Manes-Rossi (Eds.), *Public sector accounting, auditing and control* (pp. 197–215). Springer. https://doi.org/10.1007/978-3-030-40056-9_10
- Mertens, D. & Thiemann, M. (2018). Market-based but state-led: The role of public development banks in shaping market-based finance in the European Union. *Competition and Change*, 22 (2), pp.184–204. <https://sciencespo.hal.science/hal-02184122v1>
- Mnif, Y., & Gafsi, Y. (2020). IFRS adoption and accounting quality: A comparative study. *Journal of Applied Accounting Research*, 21(1), 1–20. doi:10.1108/JAAR-08-2020-0155
- Murphy, E. A., & McCarthy, M. A. (2010). Teaching consolidations accounting: An approach to easing the challenge. *American Journal of Business Education*, 3(11), 62–71.
- Najid, N. A., & Abdul Rahman, R. (2011). Government ownership and performance of Malaysian government-linked companies. *International Research Journal of Finance and Economics*, 61, 1–15.
- Najera Ruiz T, Collazzo P. (2021). Determinants of the use of accounting systems in microenterprises: Evidence from Chile. *Journal of Accounting in Emerging Economies*, 11(4), 632–650. doi: <https://doi.org/10.1108/JAEE-07-2020-0173>
- Oulasvirta, L., & Rönkkö, J. (2023). Public financial management: Budgeting, accountability and auditing. In E. Pekkola, J.-E. Johanson, & M. Mykkänen (Eds.), *Finnish public administration: Nordic public space and agency* (pp. 111–126). Palgrave Macmillan. https://doi.org/10.1007/978-3-031-34862-4_7

- Oulasvirta, L. O. (2022). Consolidated financial statement information and group reporting in the central government: A user-oriented approach. *Journal of Public Budgeting Accounting & Financial Management*, 35(6), 28–51. <https://doi.org/10.1108/jpbafm-08-2022-0126>
- Pannell, R. (2023, April 5). *The importance of identifying the right sample size for business improvement*. LeanScape. <https://leanscape.io/the-importance-of-identifying-the-right-sample-size-for-business-improvement/>
- Paulus J. A., Awang, J., Ramlee, R., Girau, E., Ag Kee, D., & Ikhsan, M. I. (2023). Enhancing accounting adoption in the Malaysian public sector: Challenges and the key success factors. *Borneo Akademika*, 7(2), 47–58. <https://ir.uitm.edu.my/id/eprint/89626/>
- Phan D, Joshi M, & Mascitelli B (2018), What influences the willingness of Vietnamese accountants to adopt International Financial Reporting Standards (IFRS) by 2025?. *Asian Review of Accounting*, 26(2), 225–247, doi: <https://doi.org/10.1108/ARA-03-2017-0052>
- Saleh, Z., Isa, C. R., & Abu Hasan, H. (2021). Issues and challenges in implementing International Public Sector Accounting Standards (IPSAS). *IPN Journal of Research and Practice in Public Sector Accounting and Management*, 11(1), 1–14. <https://doi.org/10.58458/ipnj.v11.01.01.0067>
- Sánchez-Serrano, J. R., Alaminos, D., García-Lagos, F., & Callejón-Gil, A. M. (2020). Predicting audit opinion in consolidated financial statements with artificial neural networks. *Mathematics*, 8(8), 1–14. <https://doi.org/10.3390/MATH8081288>
- Santis, S., Grossi, G. & Bisogno, M. (2018). Public sector consolidated financial statements: A structured literature review. *Journal of Public Budgeting, Accounting & Financial Management*, 30(2), 230–251. <https://doi.org/10.1108/JPBAFM-02-2018-0017>
- Smith, J. (2020). Accounting separation and public sector accountability. *Journal of Public Administration*, 45(2), 123–145.
- Sotti, F. (2018). The value relevance of consolidated and separate financial statements: Are non-controlling interests relevant? *African Journal of Business Management*, 12(11), 329–337. <https://doi.org/10.5897/AJBM2017.8335>
- Sulaiman, K. F., Satriawan, I., & Musa, N. (2025). A comparison of decentralization policy in Indonesia and Malaysia. *Petita Jurnal Kajian Ilmu Hukum dan Syariah*, 10(1), 1–18. <https://doi.org/10.22373/petita.v10i1.677>
- Surganovich, J. (2024). *Navigating regulatory changes in financial reporting*. Reach Reporting. <https://reachreporting.com/blog/financial-reporting-regulatory-changes>

- Tawiah, V. (2023). The effect of IPSAS adoption on governance quality: Evidence from Developing and Developed Countries. *Public Organization Review*, 23(1), 305–324. <https://doi.org/10.1007/s11115-022-00625-w>
- Tilahun, M. (2019). A review on determinants of accounting information system adoption. *Science Journal of Business and Management*, 7(1), 13–19. <https://doi.org/10.11648/j.sjbm.20190701.13>
- Tran, Y. T., Tran, T. T. C., & Hoang, T. C. (2020). Determinants of the implementation of the public-sector consolidated financial statements in Vietnam. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 68(5), 903–913. doi: 10.11118/actaun202068050903
- Walker, R. (2009). Public sector consolidated statements – An assessment. *Abacus*, 45(2), 171–220. <https://doi.org/10.1111/j.1467-6281.2009.00282.x>
- Walker, R. G. (2011). Issues in the preparation of public sector consolidated statements. *Abacus*, 47(4), 477–500. <https://doi.org/10.1111/j.1467-6281.2011.00349.x>
- Wise, V. (2010). Theory and accountability: The case of government consolidated financial reporting. *International Review of Business Research Papers*, 6, 82–97.
- Woods, M., & Humphrey, C. (2009). Complexity and financial reporting: Challenges and solutions. *Accounting, Auditing & Accountability Journal*, 22(2), 282–306. <https://doi.org/10.1108/09513570910933940>
- World Bank (2024). *Consolidation of financial statements at different levels of government: Technical note*. <https://documents.worldbank.org/en/publicationdocuments-reports/documentdetail/099032824083468542>
- Yusliza, M. Y., Norazmi, N. A., Jabbour, C. J. C., Fernando, Y., Fawehinmi, O. & Seles, B. M. R. P. (2019). Top management commitment, corporate social responsibility and green human resource management: A Malaysian study. *Benchmarking: An International Journal*, 26(6), 2051–2078. <https://doi.org/10.1108/BIJ-09-2018-0283>
- Zhang, D. (2019). Top management team characteristics and financial reporting quality. *The Accounting Review*, 94(5), 349–375. <https://doi.org/10.2308/accr-52360>

A Review on Approaches for Valuing Government-Owned Heritage Assets

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Abstract

Purpose: The valuation and measurement of tangible heritage assets, such as historical buildings, demand distinct approaches compared to conventional assets. The Malaysian Public Sector Accounting Standards (MPSAS) provide broad guidelines on how these assets should be recognised and reported in public sector financial statements. This paper aimed to identify the valuation and measurement approaches applicable to tangible heritage assets in the public sector. The study particularly focuses on addressing methodological gaps and practical challenges in the national context.

Design/ Methodology/ Approach: A qualitative approach was adopted in this paper. By using a comparative literature review methodology, relevant academic articles, policy documents, and international standards were critically analysed to synthesise the most pertinent valuation approaches adopted globally. This review highlights gaps in current valuation practices in Malaysia and its surrounding regions. The review offers insights into how

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international experiences may improve the protection and recognition of these invaluable national assets.

Findings: Determining appropriate valuation methods remains challenging due to the unique characteristics of heritage assets, which complicate efforts to ensure valuation accuracy, reliability, and comparability. Inaccurate valuations risk misrepresenting the true value of the asset, leading to inappropriate impairment or depreciation.

Keywords: Valuation approach, heritage asset, tangible asset, comparison of valuation technique

1.0 Introduction

Government-owned heritage assets, encompassing historical buildings, monuments, and archaeological sites, represent invaluable cultural and historical capital that transcends mere economic utility. Compared to ordinary assets, the valuation of these tangible assets requires a different approach. Heritage assets comprise sites, structures, and landscapes that possess outstanding value from historical, cultural, architectural, archaeological, or natural perspectives. With the growing emphasis on conservation, the evaluation of heritage assets has become critical. The assessment of these assets must extend beyond their physical and historical attributes to include their economic, social, cultural, and symbolic values. These values contribute significantly to local identity, community pride, and sustainable development (Maria et al., 2024; Van der Zee et al., 2024). Jang and Mennis (2021) stated that proper valuation serves as an essential decision-making tool for local governments, urban planners, conservation authorities, and international bodies in determining policies related to the management, preservation, funding, and rehabilitation of heritage assets. These assets embody a nation's collective memory, identity, and architectural distinctiveness, making their preservation and appropriate valuation critical for future generations (Nur Aina lylia & Siti Norlizaiha, 2023). This paper seeks to uncover the deficiencies in the heritage asset valuation procedures utilised in Malaysia and to analyse best practices and challenges from other countries for benchmarking purposes.

2.0 Literature Review

An asset is a resource controlled by an entity as a result of past events, from which future economic benefits are expected to flow to the entity. Under Malaysia's National Heritage Act 2005 (Act 645), "heritage" has been defined in Section 2 as follows:

"Heritage" refers to any heritage site, heritage object, underwater cultural heritage, or national heritage, whether tangible or intangible, that possesses cultural heritage significance and includes the natural heritage.

Thus, valuing heritage assets is a complex and multi-dimensional process. Unlike conventional real estate or infrastructure, which can be valued based on market transactions, heritage assets embody non-market values, such as historical significance, aesthetic appeal, cultural identity, and symbolic meaning. These elements are inherently intangible and often difficult to quantify using traditional valuation approaches (Dragouni, 2022). Therefore, the valuation

process requires a holistic, interdisciplinary methodology that balances economic justification with cultural and social considerations (ICOMOS, 2011).

2.1 Heritage Management in Malaysia

The management of heritage properties in Malaysia involves the federal government, state government, and local authorities. Each has its own distinct tasks and methodologies for protecting and maintaining designated monuments and buildings. Table 1 lists the jurisdictions of agencies at the federal, state, and local governments pertaining to heritage management in Malaysia. According to Indera Syahrul and Yahaya (2015), various ministries and agencies at the federal, state, and local levels are engaged in the promotion, management, and conservation of heritage buildings and sites (Refer to Table 1). The Department of National Heritage, under the Ministry of Tourism and Culture at the federal level, operates in accordance with the National Heritage Act (2005). The act has been established to safeguard the nation's heritage (Malaysian Government, 2006). Other pertinent federal ministries include the Ministry of Housing and Local Government, the Ministry of Works, the Ministry of Education, and several non-governmental entities or organisations.

Table 1: Agencies at the Federal, State, and Local Levels Involved in the Management of Heritage in Malaysia

Level of Government	Ministry/ Department	Functions
Federal	Ministry of Tourism, Arts and Culture	Promotion and management of the cultural heritage (National Heritage Act 2005)
	<ul style="list-style-type: none"> Department of National Heritage (JWN) 	
	Ministry of Housing and Local Government	Coordinate town and country planning at the national level, and to protect the heritage buildings and conservation areas according to the Town and Country Planning Act 1976 (Act 172)
	<ul style="list-style-type: none"> Department of Town and Country Planning (PLAN Malaysia) 	
	Ministry of Works	Management and maintenance of government properties
	<ul style="list-style-type: none"> Department of Public Works 	
	Ministry of National Unity	This department is responsible for preserving, conserving, and disseminating knowledge on the country's historical, cultural, and natural heritage
	<ul style="list-style-type: none"> Department of Museums Malaysia (JMM) 	
Ministry of Education	Education and research in related areas pertaining to the preservation of natural and cultural heritage	
<ul style="list-style-type: none"> Universities and schools 		
Ministry of Finance	Responsible for public sector financial reporting and accounting standards, and for conducting valuations to determine the financial value of tangible heritage assets	
<ul style="list-style-type: none"> Accountant General's Department of Malaysia 		
<ul style="list-style-type: none"> Valuation and Property Services Department Public Asset Management Division (BPAA) 		BPAA is responsible for formulating, coordinating, and managing policies related to government-owned assets and public funds

Table 1: Agencies at the Federal, State, and Local Levels Involved in the Management of Heritage in Malaysia (continued)

Level of Government	Ministry/ Department	Functions
Federal	Non-government	Promotion of the preservation and conservation of Malaysia's built heritage by raising public awareness, demonstrating building conservation projects, and serving as a resource centre
	• Badan Warisan Malaysia	
	• International Council on Monuments and Sites (ICOMOS) Malaysia	Acts as a national and international link between public authorities, institutions, and individuals involved in the study and conservation of cultural heritage significance
	• Think City Sdn. Bhd.	Established in 2009 by Khazanah Nasional to spearhead community-based urban regeneration in George Town, Seberang Perai, Kuala Lumpur, and Johor Bahru
State	State Exco	Formulates state heritage conservation policy, allocates resources, and applies to federal government for project funding
	State Tourism Action Council	Promotion of tourism in the state
	State Town and Country Planning Department	Prepares the state's structure plan and special area plan
	George Town World Heritage Incorporated (GTWHI)	Responsible for the management, monitoring, and promotion of the World Heritage Site in George Town
	Melaka World Heritage Sdn. Bhd. (MWHBS)	Responsible for the protection, conservation, and promotion of the World Heritage Site in Melaka
	Melaka Museums Corporation (PERZIM) and other museums	Responsible for a consultation and public education centre in the preservation and dissemination of information about the history, culture, and nature of the local history
	Non-government	Promotion of conservation and preservation of the heritage of the state
	• Heritage Trust	
Local	City/ Municipal Council	Prepares draft of local plan, special area plan, planning and building control, and enforcement under the Town and Country Planning Act (1976) and Street, Building and Drainage Act (1974)
	Local Authorities	To create laws and rules, to grant licenses and permits for any trade in its area, as well as to plan and develop the area of jurisdiction

2.2 Heritage Asset Valuation

According to Junainah et al. (2021), heritage properties can generally be categorised into two (2) main uses, namely public and private properties. Similarly, interest in the valuation of

heritage properties has grown among researchers, particularly in identifying the most suitable methods for appraising such assets (Ouda, 2014; Dragouni, 2022; Iswari & Mediawati, 2024). Nonetheless, appraising heritage properties poses certain difficulties (Barton, 2000; Aversano & Caterina, 2012; Bakri et al., 2012). In contrast to conventional assets, heritage properties are rarely traded on the open market, complicating the application of standard valuation methodologies. Their distinctiveness further complicates the application of conventional approaches.

As identified in the extant literature, Junainah et al. (2021) elucidated numerous challenges in valuing heritage assets, with four (4) principal issues arising:

- i. The conceptual complexity of 'heritage' itself, including the need to understand both the classification and the multiple dimensions of heritage value.
- ii. The inadequacy of purely statistical methods in capturing heritage value, which also involves intangible and non-use elements, such as intrinsic or symbolic value.
- iii. Growing concerns over the effectiveness of current valuation methodologies and their outcomes, as inaccuracies in measurement can lead to inconclusive or misleading results.
- iv. Limited data availability hampers efforts to fully understand and quantify the value components of heritage properties.

Thus far, valuing heritage assets poses numerous substantial obstacles. Most of these obstacles stem from the complexities of defining and categorising heritage, given its multidimensional nature. Conventional valuation approaches often prove inadequate because they fail to consider intangible factors such as symbolic or cultural significance. Moreover, existing valuation methodologies may produce inconsistent outcomes. The absence of extensive data further hinders an accurate assessment of the full value of heritage assets. The historical cost method values an asset based on its original purchase price, overlooking appreciation, uniqueness, or non-material value associated with heritage properties. Similarly, market-based valuation depends on comparable market transactions, which are often irrelevant or unavailable for heritage assets, as they are irreplaceable and not traded in open markets. Consequently, these existing methodologies may produce inconsistent outcomes. The absence of extensive data further hinders an accurate assessment of the full value of heritage assets (Throsby, 2001; Mourato & Mazzanti, 2002; Ruijgrok, 2006).

2.3 Laws Related to Heritage Property in Malaysia

In Malaysia, the National Heritage Act 2005 (Act 645) provides the foundation for the protection and conservation of tangible heritage. Figure 1 illustrates the classification of tangible heritage as defined in the National Heritage Act 2005 (Act 645) and in accordance with international conventions such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Convention (1972). Tangible heritage is represented at the top of the hierarchy, encompassing all physical, visible, and touchable heritage elements. The figure demonstrates that tangible heritage integrates both cultural and natural heritage dimensions under the National Heritage Act 2005. These dimensions reflect Malaysia's diverse historical, environmental, and cultural legacy, emphasising the need for holistic heritage management and conservation.

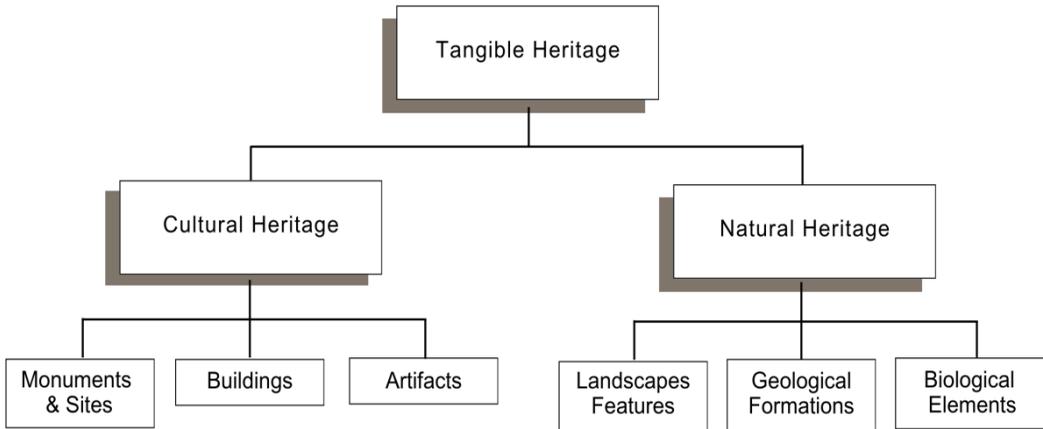


Figure 1: Classification of Tangible Heritage under the National Heritage Act 2005 (Act 645)

Junainah et al. (2021) noted that Malaysia lacks definitive laws and regulations for the valuation of heritage properties. Tables 2 and 3 provide a comparative overview of national and international laws and regulations related to heritage property valuation. Table 2 focuses on the Malaysian context, highlighting several key legislative and regulatory frameworks. The National Heritage Act 2005 (Act 645) serves as the cornerstone of heritage protection, emphasising conservation and providing only definitions and classifications of heritage properties. The Town and Country Planning Act 1976 (Act 172) outlines restrictions on development involving heritage properties, requiring local authority approval and the preservation of architectural facades. Subsequently, the Local Government Act 1976 (Act 171) grants local authorities the responsibility for maintenance-related matters concerning heritage buildings. The Malaysian Valuation Standards (MVS) 2019 (6th edition) provides general guidance on property valuation but lacks specific directives for heritage assets. Lastly, MPSAS (2025), specifically MPSAS 17, defines heritage properties and discusses how historical factors may influence their value.

Table 2: Review of the Related Laws and Regulations on Heritage Property Valuation in Malaysia

Laws Related	Review	References
National Heritage Act 2005 (Act 645)	<ul style="list-style-type: none"> Emphasises the conservation and preservation of heritage properties Outlines the definition and classification of heritage property 	Junainah et al. (2021)
Town and Country Planning Act 1976 (Act 172)	<ul style="list-style-type: none"> Limitation on heritage property Approval from the local government is required for each development and must adhere to the restrictions outlined in the Act Any alteration or reconstruction of a heritage building, the owner must ensure that the building façade is retained 	Azni (2018) Fatm Afiah et al. (2018)

Table 2: Review of the Related Laws and Regulations on Heritage Property Valuation in Malaysia (continued)

Laws Related	Review	References
Local Government Act 1976 (Act 171)	<ul style="list-style-type: none"> Describes powers given to the local authority about heritage matters pertaining to maintenance work 	Zolkafii et al. (2019)
Malaysian Valuation Standard 2019 (6th edition)	<ul style="list-style-type: none"> Provides general descriptions of property valuation No specific explanation is provided for the interest in performing an assessment of heritage property 	Fatin Afiqah et al. (2018) Junainah et al. (2015), Junainah and Suriatini (2019) Bakri et al. (2015)
Malaysian Public Sector Accounting Standards (MPSAS) 17: Property, Plant and Equipment	<ul style="list-style-type: none"> Provide the definition of heritage property and the historical factors that influence its value, either increasing or decreasing it. 	Nor Laili Hassan et al. (2016)

On the other hand, Table 3 presents international perspectives on the valuation of heritage properties. The table includes the Valuation of Specialised Public Service Assets, which contains a detailed Annexe on historic real property. The details offer a comprehensive framework covering definitions, influencing variables, valuation methods, and value types. The Standard of Generally Recognised Accounting Practice (GRAP) 103 issued by the Accounting Standards Board addresses the challenge of valuing heritage assets in thin markets by recommending the development of suitable and context-specific valuation approaches. Similarly, IPSAS 17 aligns with GRAP 103 in recognising the need for flexible valuation methods when market data is lacking. These tables underscore the disparity between existing frameworks in Malaysia and more advanced international standards. These tables underscore the disparity between existing frameworks in Malaysia and more advanced international standards. The study suggests that Malaysia should adopt more detailed, contextually adaptable valuation methodologies for heritage assets.

Table 3: Review of the Related Laws and Regulations on Heritage Property Valuation (International Context)

Laws Related	Review	References
Valuation of Specialised Public Service Assets	<ul style="list-style-type: none"> This provision establishes a section for heritage property designated as Annexe - Historic Real Property. It provides comprehensive information for executing heritage property valuation, encompassing the definition of heritage property, variables influencing value, valuation methodologies, procedures, and the many categories of value associated with heritage property. 	Owen (1999), Andrew & Pitt (2000), and Junainah et al. (2021)

Table 3: Review of the Related Laws and Regulations on Heritage Property Valuation (International Context) (continued)

Laws Related	Review	References
Accounting Standards Board-Heritage Assets (GRAP 103)	<ul style="list-style-type: none"> The regulation indicates that, in the absence of market evidence, no definitive strategy exists, necessitating the design of a suitable approach that addresses the challenges of a thin market. 	Biondi et al. (2021), De Wolf et al. (2021), GRAP 103 (2022), Iswari and Mediawati (2024)
IPSAS 17-Property, Plant and Equipment	<ul style="list-style-type: none"> Similar to GRAP 103. 	

2.4 Practical Issues in Heritage Valuation

As a measure to better understand the valuation of heritage properties, Junainah et al. (2015) classified valuation methods into conventional and advanced methods. The traditional methods comprise the sales comparison approach, cost approach, and investment approach. The advanced methods include stated preferences (SP), revealed preferences (RP), and hedonic pricing methods (Treasury, 2011).

Globally, the lack of a unified international guideline for heritage valuation has led to inconsistencies in the methods and principles applied across countries (Riganti & Throsby, 2021). The authors highlighted the persistent gap between valuation theory and its application in policy, arguing that heritage assets should be viewed as forms of cultural capital that generate both economic and cultural value. While economic valuation techniques such as contingent valuation, hedonic pricing, and benefit transfer offer structured ways to quantify heritage value, they often fail to capture intangible cultural and social dimensions. Riganti and Throsby (2021) emphasised the need for integrated and participatory valuation frameworks that combine economic, cultural, and social perspectives, aligning heritage conservation with sustainability and well-being goals. They also stressed the importance of coherent policy tools and innovative financing mechanisms (such as impact investment) to ensure that valuation practices inform real-world decision-making.

Moreover, many rely on context-specific frameworks shaped by national policy, financial capability, and public appreciation of heritage value (Fredheim & Khalaf, 2016). Fredheim and Khalaf critically examined the limitations of existing heritage value typologies. The authors argued that many frameworks used in conservation and management are conceptually incomplete and often fail to capture the full complexity of heritage significance. They highlighted how typologies often overlook intangible, relational, and evolving aspects of heritage, leading to implicit value judgments that shape decisions without adequate transparency. The authors proposed a holistic, three-stage framework, identifying features of significance, aspects of value, and qualifiers of value to better access and communicate heritage significance. This approach aims to overcome rigid dichotomies (such as tangible vs intangible) and accommodate diverse stakeholder perspectives, especially in complex urban and object-based heritage contexts. However, the absence of standardised methods makes cross-border comparisons and benchmarking difficult, which further highlights the need for a more comprehensive and adaptable heritage valuation framework (Azzopardi et al., 2023).

In the Malaysian context, several practical challenges hinder the effective valuation of heritage assets. These challenges include the absence of standardised heritage valuation frameworks, difficulties in estimating market value due to the uniqueness and irreplaceability of such assets, limited availability of historical data and records, shortages in skilled valuation professionals, and incomplete integration of conservation costs into valuation models (Junainah et al., 2021; Norida et al., 2021). Moreover, Biondi and Lapsley (2014) stated that the use of advanced digital tools and technologies for asset documentation and assessment often incurs high costs, further constraining their implementation.

These challenges are also evident in the public sector. For example, the Accountant General's Department of Malaysia (JANM) encounters significant constraints in the process of recognising and valuing heritage assets under governmental ownership, particularly when determining both heritage value and accounting value for movable and immovable assets (Junainah et al., 2021). Therefore, the valuation of heritage assets in Malaysia requires collaboration among multiple agencies with relevant expertise, including the Valuation and Property Services Department (JPPH), the Department of National Heritage, the Department of Museums Malaysia, local authorities (PBTs), and other related agencies.

This challenge is particularly evident in the Malaysian public sector, where current accounting practices for heritage assets often deviate from established national and international guidelines (Adam et al., 2011). Specifically, the adoption of accrual accounting and Malaysian Public Sector Accounting Standards (MPSAS) in federal statutory bodies has faced hurdles, impacting the true and fair financial reporting of such unique assets (Hanafi et al., 2024). This discrepancy underscores the critical need for an improved valuation framework that addresses the specific characteristics of heritage assets, moving beyond conventional accounting treatments. This approach includes considering non-monetary values and developing methodologies reflecting their cultural and historical significance, which are often overlooked in traditional financial assessments. The International Public Sector Accounting Standards (IPSAS) acknowledge the unique nature of heritage assets and the complexities they introduce for financial reporting, necessitating specific guidance for their recognition and valuation (Pontoppidan, 2019; Argento & van Helden, 2023).

This imperative is further amplified by the global shift towards accrual accounting in the public sector. The shift necessitates the comprehensive recognition and measurement of all assets, including heritage assets, on financial statements (Arshad et al., 2013; Nur Shawalliza & Hartini, 2018). For instance, Malaysia has embarked on a strategic reform to fully adopt accrual accounting in public-sector financial reporting, which aligns with global accounting standards and necessitates re-evaluating asset management practices, including those for heritage assets (Sharifah Sabrina et al., 2019). This transition requires a concerted effort to develop and implement appropriate valuation methodologies that capture the unique characteristics and multifaceted value of these assets.

2.5 The Importance of Heritage Asset Valuation to Economic Growth

The importance of heritage asset valuation for economic growth is underscored by multiple aspects identified in recent research. Empirical research demonstrates that cultural heritage assets substantially improve economic growth, as evidenced in Greece, where a favourable influence of cultural heritage endowment on regional economic growth was observed from 2000

to 2019 (Kostakis & Lolos, 2024). This relationship is not only unique to Greece. Countries, such as Italy, Spain, the UK, New Zealand, and the US, have also leveraged their heritage assets to stimulate local economies, foster entrepreneurship, and promote social inclusion (Valentina et al., 2015; Oppio et al., 2024).

Economic valuation methods, including willingness-to-pay and discrete-choice experiments, enable policymakers to quantify the tangible and intangible benefits of heritage, facilitating more informed investment and conservation choices (Halkos et al., 2024). Porter (2004) highlighted the significance of recognising the value of heritage assets for several reasons: (1) to acknowledge and respect the full worth of environmental heritage assets, (2) to recognise the need for their maintenance and protection, and (3) to support efforts to meet increasing demands for accountability regarding the sustained use of these assets. According to Timothy (2011), the overarching concern for heritage conservation has spilled into the cultural arena. He identified seven (7) reasons for the importance of conserving the heritage asset, which are enumerated in Table 4.

Table 4: Reason for the Conservation Importance

1. Scientific and educational value	Heritage places are important resources for both formal and informal education.
2. Environmental diversity	Conservation of the built environment helps to end the cruel destruction of the historic environment.
3. Artistic merit	Many historic buildings and ancient monuments are renowned as products of enormous creative genius and have become the most popular tourist attractions.
4. Revenue generation	Heritage conservation leads to potential financial benefits and generates revenue for the country.
5. Nostalgia	Protecting heritage places will enhance a sense of 'collective nostalgia' as a way of getting back to their original roots.
6. Nationalism	Protecting heritage is a way of nurturing national solidarity with a homeland and building sentiments of patriotism and loyalty among citizens.
7. Functional use of heritage resources	Conserving the functional utility of historic buildings is more cost-effective than rebuilding new one.

Source: Timothy (2011)

The table above illustrates the multifaceted importance of heritage conservation, not only for cultural and historical preservation but also for sustainable development, education, national identity, and economic vitality.

2.6 Comparative Review on the Measurement of Heritage Valuation

This section critically examines various valuation approaches and assesses their suitability for tangible heritage assets, particularly given the challenges of assigning monetary value to their unique cultural and historical significance. This comparative review across multiple nations highlights best practices and identifies areas where Malaysia can adapt international models to enhance its own heritage valuation frameworks. The analysis is crucial for developing robust, contextually relevant guidelines for heritage asset valuation that transcend purely economic considerations and effectively integrate social and cultural dimensions (Steenberg & Cirklová,

2024). Valuing government-owned heritage assets requires a tailored approach that reflects their unique characteristics and public significance. Unlike conventional assets, heritage properties often lack active markets and income-generating potential, making traditional valuation methods less applicable. Instead, valuation approaches must focus on capturing the asset's service potential, cultural importance, and preservation needs.

2.6.1 Malaysia

Currently, Malaysia lacks a comprehensive and standardised framework for valuing its diverse heritage assets. The country often relies on ad-hoc or market-driven appraisals that may overlook important non-monetary values. This gap is particularly evident in the absence of a dedicated assessment framework for heritage buildings, which would guide best practices for refurbishment and ensure the preservation of historical significance during modernisation efforts (Wong, 2019; Juliza et al., 2023). As a result, these assets are often undervalued, leading to insufficient allocation of resources for their maintenance and preservation (Kamarudin et al., 2014). The current valuation practices in Malaysia, which predominantly focus on market value, fail to capture the holistic value of heritage assets, including their cultural, social, and environmental contribution (Olesen, 2024). This limitation highlights the critical need for an integrated valuation framework that considers the multifaceted contributions of heritage assets to national identity and public welfare (Steenberg & Círklová, 2024).

Moreover, an absence of consistent guidelines for maintaining heritage buildings further exacerbates this issue. The absence leads to suboptimal preservation outcomes and a devaluation of these significant cultural properties (Zolkafli et al., 2019). Consequently, there is an urgent need to develop a standardised, holistic valuation framework for heritage assets in Malaysia that integrates cultural, historical, and economic dimensions, which aligns with international best practices. The framework would not only improve financial accountability but also foster better strategic planning for the conservation and sustainable management of Malaysia's rich cultural legacy. This outcome would concurrently enable more effective resource allocation and strategic planning for the conservation and sustainable management of these irreplaceable assets.

2.6.2 Singapore

The nation has made significant strides in heritage conservation, particularly through its Our SG Heritage Plan, which emphasises the integration of heritage into urban planning and sustainable development strategies (National Heritage Board, 2025). Its approach involves a nuanced recognition of the social value generated by heritage sites, moving beyond purely financial metrics to incorporate community engagement and cultural significance in valuation processes (Tan & Ti, 2020). This integrative perspective is further supported by initiatives such as the "heritage butterfly" model, which quantifies both expert and public opinions to ensure a balanced valuation that reflects academic and community appreciation for heritage architecture (Widodo et al., 2017). This approach underscores Singapore's commitment to preserving its national identity by ensuring that heritage valuations reflect a broad spectrum of cultural, social, and economic benefits rather than only market value.

Furthermore, Singapore has applied contingent valuation methods to quantify the economic potential of the social value derived from its built heritage. These methods allow for measuring

individuals' willingness to pay for preservation and identifying the attributes that influence such payments. For instance, the People's Park Complex serves as a notable case study where a survey-based approach, rooted in the contingent valuation method, was applied to assess the economic potential of its social value (Junjie Qin & Nikhil Joshi, 2023). This methodology helps bridge economic considerations with preservation narratives, enabling a more comprehensive understanding of heritage assets beyond their architectural significance. This approach recognises that social value, including a sense of belonging and identity, often goes unmeasured in profit-driven development projects, placing historically significant sites at risk. Consequently, Singapore's framework provides a compelling model for Malaysia, demonstrating how social and cultural values can be incorporated into valuation methodologies to protect heritage assets from unsympathetic redevelopment.

2.6.3 Indonesia

On the other hand, Indonesia presents a more complex landscape for heritage asset valuation due to its vast and diverse cultural heritage, often relying on a blend of traditional conservation laws and emerging economic valuation techniques. This complexity often leads to varied approaches across different regions and heritage sites, reflecting the dynamic interplay between local customs, national policies, and international conservation standards. Indonesia's heritage asset management is governed by national laws such as the Law on Cultural Conservation (2010) and the Cultural Advancement Law (2017), which set criteria for heritage value and promote documentation and utilisation (Saputra, 2024). For the valuation model, Indonesia primarily uses historical cost and fair value models for operational heritage assets, while non-operational assets often lack standardised valuation due to methodological and resource constraints (Fitri et al., 2015).

Thus, sites such as Borobudur Temple, a UNESCO World Heritage Site, demand valuation approaches that extend beyond mere structural assessment to encompass their profound spiritual and cultural significance to local and global communities (Olesen, 2024). Valuation frameworks for such heritage assets need to account for intangible cultural values, often employing multi-criteria analysis or qualitative assessments rather than relying solely on quantitative financial metrics. Moreover, the distributed nature of heritage governance in Indonesia, with significant roles played by regional governments and local communities, further complicates the standardisation of valuation practices, necessitating a flexible yet rigorous framework. Such a framework often requires a participatory approach, engaging stakeholders from local communities to national heritage bodies, to ensure that valuation methods are culturally sensitive while remaining economically relevant. Nevertheless, the discourse around heritage conservation in Asia, including Indonesia, is often framed by a dichotomy between Western approaches that focus on material authenticity and Eastern perspectives that emphasise intangible social and cultural significance (Aditya Bagas, 2023).

2.6.4 United Kingdom

The approach undertaken by the UK to heritage asset valuation has undergone a significant transformation, moving beyond traditional market-based appraisals to embrace a more comprehensive understanding of value. According to Azzopardi et al. (2022), this evolution recognises that heritage assets possess multifaceted significance, encompassing historical, aesthetic, architectural, and communal aspects. Rather than focusing solely on financial

metrics, the UK now incorporates a “heritage value” concept that systematically identifies and communicates the diverse values associated with heritage properties. The UK employs a range of innovative methodologies to capture these complex values. Non-market valuation techniques, such as contingent valuation and discrete choice modelling, are increasingly used to quantify the public’s willingness to pay for heritage preservation. These methods allow for the inclusion of both use and non-use values, reflecting the broader societal benefits of heritage conservation (Fredheim & Khalaf, 2016). Additionally, participatory and people-centred approaches have gained prominence. By integrating public participation and stakeholder perspectives, using tools such as topic modelling and grounded theory, heritage management strategies are becoming more inclusive and reflective of community-held values.

Furthermore, multicriteria decision tools, such as the Analytic Hierarchy Process (AHP), are adapted to balance heritage value with potential new uses. These tools help ensure that conservation actions do not undermine the cultural significance of heritage assets, supporting sustainable urban development and adaptive reuse (Claver et al., 2020). Overall, the UK’s evolving framework for heritage asset valuation ensures that management decisions are informed by a broad spectrum of economic, cultural, and communal considerations. This approach contributes to safeguarding the relevance and integrity of heritage assets for current and future generations.

2.6.5 Australia

Australia’s approach to heritage asset valuation has evolved to address the unique challenges posed by cultural, historical, and environmental assets that often lack active markets or clear financial benchmarks. Traditional valuation methods, such as cost-based or market-based approaches, have proven inadequate for capturing the full value of heritage assets, as these methods typically require identifiable costs or active markets, conditions rarely applicable to assets of heritage significance (Porter, 2004). Consequently, Australia has increasingly adopted non-market valuation techniques such as contingent valuation, travel cost methods, and discrete choice experiments to estimate both use and non-use values, including public willingness to pay for preservation and protection (Rolfe & Windle, 2003; Choi et al., 2010; Czajkowski et al., 2025).

Recent studies have applied these methods to a variety of heritage contexts, from iconic sites such as Old Parliament House in Canberra to aboriginal cultural heritage sites in Queensland and Chinese heritage precincts in regional cities. These methods reveal that the public assigns significant value to attributes such as accessibility, condition, and protection measures. They also revealed that both experiential and intrinsic values are important in shaping policy and management decisions (Rolfe & Windle, 2003; Laing et al., 2014; Ferri et al., 2021). For example, discrete choice experiments in Victoria have highlighted the importance of incorporating community preferences into heritage policy development. Additionally, contingent valuation has been used to assess the trade-offs between cultural heritage and nature conservation in the Australian Alps (Lockwood, 1996). Overall, Australia’s heritage asset valuation landscape is characterised by a shift towards holistic, community-aligned, and methodologically diverse approaches that better reflect the multifaceted value of heritage assets for current and future generations.

2.6.6 New Zealand

New Zealand's approach to heritage asset valuation reflects ongoing challenges and tensions between economic accounting standards and the unique cultural, aesthetic, and social values of heritage collections. The country's museums and public entities have historically been cautious of the imposition of strict financial valuation, emphasising the importance of curatorship and community identity over purely economic measures (Hooper et al., 2005). This resistance is rooted in the recognition that heritage assets often function as public goods, lacking active markets and requiring stewardship rather than commodification (Barton, 2005).

According to Passey and Burns (2023), New Zealand's approach to heritage asset valuation is notably holistic, emphasising not only economic factors but also cultural, historical, and community significance. This perspective is reflected in frameworks that deliberately integrate both tangible (physical sites, landscapes, and buildings) and intangible (spiritual, relational, and traditional) aspects of heritage, ensuring a more comprehensive understanding of what constitutes heritage value. A key development in New Zealand is moving away from rigid, universal value typologies towards more context-sensitive models. For example, Stephenson's Cultural Values Model divides heritage into "forms" (physical features), "relationships" (meanings, identity, spirituality), and "practices" (traditions, activities), capturing how both experts and communities perceive heritage significance (Fredheim & Khalaf, 2016). This model is particularly relevant for Māori heritage, where ancestral lands and sites are considered taonga (treasures), with profound spiritual and communal meaning that transcend conventional economic valuation (Mika et al., 2022). Māori frameworks emphasise concepts such as mana (authority, dignity), hau (vitality), and kaitiakitanga (guardianship), which guide stewardship and decision-making for both land and cultural practices (Puriri & McIntosh, 2019). New Zealand's heritage asset valuation is distinguished by its holistic, bicultural approach, which integrates economic, cultural, spiritual, and community values, especially those central to Māori heritage. By adopting such an approach, both tangible and intangible aspects of heritage are respected and preserved for future generations.

2.6.7 Japan

Japan's approach to heritage asset valuation is shaped by a recognition of the complex, multifaceted nature of heritage, integrating tangible and intangible values. Rather than relying solely on universal or market-based typologies, Japanese heritage management increasingly emphasises frameworks that account for cultural, historical, social, and spiritual significance, as well as the lived experiences and practices associated with heritage sites (Iida & Fukushige, 2025). Japan's framework for valuing heritage assets similarly acknowledges the inherent difficulties in assigning market values to culturally significant properties, particularly historical buildings that are rarely traded and possess significant non-use values. As a result, non-market valuation techniques and cost-benefit analyses are relied upon more heavily to guide preservation policies and financial allocations (Oberholzer-Gee & Bruno, 1998). Since many heritage assets lack active markets, Japan employs non-market valuation methods such as contingent valuation and cost-benefit analysis to estimate their broader social and cultural value. These approaches help capture both use and non-use values, including the public's willingness to pay for preservation. Such approaches are increasingly used to inform policy and resource allocation for heritage conservation (Tuan & Navrud, 2008).

Japan also utilises the hedonic pricing method to analyse how heritage attributes influence economic value, particularly through their effects on land and property prices. The hedonic approach allows researchers to isolate the impact of proximity to historical sites or the presence of heritage features on real estate values, thereby quantifying the neighbourhood effects of heritage site renovation and conservation (Monson, 2009). Specifically, methods such as the hedonic approach are employed to analyse factors influencing economic value through changes in land prices and to assess the neighbourhood effects of historical site renovation (Iida & Fukushige, 2025). This method is especially valuable in contexts where direct market transactions are limited or absent, enabling the estimation of the implicit value of heritage characteristics. Japan's heritage asset valuation framework is characterised by a pragmatic reliance on non-market valuation and hedonic pricing methods, reflecting the unique challenges of valuing properties with significant cultural and non-use values. These approaches support more informed, evidence-based preservation policies and financial planning.

2.6.8 South Korea

Similar to Japan, South Korea faces challenges in valuing historic buildings due to their unique cultural and historical significance, often leading to controversies in preservation policies stemming from unclear selection processes (Kim & Lee, 2020). Consequently, valuation methodologies in South Korea often incorporate multi-criteria analysis and social impact assessments to account for the broader cultural and societal benefits of heritage, which are not easily quantifiable through traditional economic metrics. The government frequently employs these multifaceted approaches to guide conservation efforts and inform decisions on property development, aiming to balance economic growth with cultural preservation (Throsby, 2016).

Contingent valuation (CV) is also widely used to estimate the economic value of heritage sites and cultural practices by measuring the public's willingness to pay (WTP) for preservation or restoration. Studies have applied CV to World Heritage sites such as Changdeok Palace, estimating aggregate use values in the millions of dollars, and to restoration projects such as Hwangnyongsa Temple, where the social benefits of restoration were found to outweigh the costs, justifying public investment (Kim et al., 2007; Kim et al., 2018). Besides, CV has also been used to value intangible heritage, such as the Jeju Haenyeo (women divers) culture, and to assess the benefits of cultural heritage events and sites across regions (Park et al., 2020). South Korea's heritage asset valuation is characterised by robust application of non-market valuation methods, a growing emphasis on intangible and community values, and evolving policy frameworks that support sustainable and inclusive heritage management.

2.6.9 India

India's approach to heritage asset valuation is deeply holistic, reflecting the country's rich diversity of living traditions, religious practices, and historical sites. Heritage in India is not limited to monuments but encompasses living traditions, crafts, and community practices, making valuation a complex, multi-dimensional process (Balakrishnan & Narayana, 2024). Indian frameworks emphasise a comprehensive value assessment, considering not only the physical (tangible) aspects of heritage but also intangible elements such as rituals, beliefs, and community identity. Such an approach is particularly important for "living heritage", where religious, historical, and sociocultural values are dynamic and interwoven, and the significance

of sites often arises from ongoing practices and the transmission of sacrality within religious precincts.

Given that heritage is a non-marketed good, India increasingly uses economic valuation models adapted from environmental economics. Methods such as contingent valuation (estimating willingness to pay) and consumer surplus calculations are applied to sites such as Bishnupur, helping to quantify both use and non-use values and inform sustainable funding and preservation strategies (Basu & De, 2021). These approaches support the view of heritage as “cultural capital” and help justify investments in conservation (Dutta et al., 2007). Religious and sociocultural values are especially dominant in Indian heritage valuation, with many sites serving as active centres of worship and community gathering. The identity and significance of these places are shaped by both their historical context and their ongoing role in community life, making their value dynamic and context-dependent (Balakrishnan & Narayana, 2024). India’s heritage asset valuation is characterised by a holistic, value-based approach that integrates tangible, intangible, economic, religious, and community dimensions. By adopting this approach, preservation efforts reflect the true significance of heritage for both present and future generations.

2.7 Challenges in Valuing Heritage Assets

Valuing government-owned heritage assets requires a tailored approach that reflects their unique characteristics and public significance. Unlike conventional assets, heritage properties often lack active markets and income-generating potential, making traditional valuation methods less applicable. Instead, valuation approaches must focus on capturing the asset’s service potential, cultural importance, and preservation needs. In the Malaysian context, the cost approach is most popular, as it provides a practical framework for estimating the value based on replacement or reproduction cost, adjusted for depreciation. This approach aligns with the public sector’s emphasis on transparency, accountability, and stewardship of national heritage, ensuring that these irreplaceable assets are properly recognised in financial reporting and policy planning.

Valuing heritage assets is inherently complex due to their unique characteristics and cultural significance. These assets, such as historical buildings, monuments, and traditional sites, are often irreplaceable and lack active markets or generate income, making conventional valuation methods difficult to apply. Estimating their value involves challenges such as determining the cost of reproduction using original materials and techniques, which may no longer be available (Iswari & Mediawati, 2024). Additionally, standard depreciation models may not be suitable for heritage assets, as they can appreciate over time due to their historical importance. Their intangible cultural, emotional, and symbolic value also adds complexity, as it cannot be easily quantified. Accurate valuation often requires input from various experts, including historians, architects, and conservation specialists, to ensure that both tangible and intangible aspects are properly considered.

Table 5: Challenges in Valuing Heritage Assets

Lack of Market Comparable	No active market or similar transactions to benchmark value.
No Income Generation	Assets do not produce revenue, making income-based valuation unsuitable.
Estimating Replacement Cost	Difficult to reproduce due to unique materials, craftsmanship, or irreplaceability.
Depreciation Complexity	Standard depreciation models may not apply. Value may increase over time.
Intangible Cultural Value	Emotional, historical, and cultural significance is hard to quantify.
Compliance with Standards	No active market or similar transactions to benchmark value.
Need for Multidisciplinary Input	Requires expertise from historians, architects, and conservationists.

Source: Adapted from Salerno (2020); Adamus (2023); Augustiniok et al. (2022); Lucie Brožová et al. (2022); Biondi & Lapsley (2014); Aversano & Caterina (2012) and Scannell & Tawiah (2024)

2.7.1 Lack of Market Comparables

Heritage assets are typically not traded in open markets, indicating that there are no recent sales or similar assets to compare against. As a result, applying the market approach, which relies on comparable transactions to estimate value, becomes challenging. Without a market benchmark, valuers must rely on alternative methods that may be less precise. The scarcity of comparable market transactions for heritage assets significantly hinders traditional valuation methodologies, forcing reliance on more subjective and intricate assessment models (Salerno, 2020). This limitation necessitates the development of sophisticated methodologies that can account for the unique attributes and non-market values associated with these properties (Li et al., 2021). Consequently, valuers must often employ specialised techniques that take into account an asset's historical significance.

2.7.2 No Income Generation

Many heritage assets, particularly those in the public domain, do not generate direct income, which poses a significant challenge for valuation methods reliant on financial returns or discounted cash flows (Adamus, 2023). Unlike commercial properties or investments, heritage assets usually do not generate income. Museums, historical buildings, and monuments are maintained for public benefit rather than profit, making it impossible to apply the income approach, which values assets based on their ability to generate future cash flows. Consequently, alternative valuation approaches are required to quantify non-monetary benefits and societal contributions, including cultural enrichment, educational value, and community identity (Ribera et al., 2020).

2.7.3 Estimating Replacement Cost

The cost approach requires estimating how much it would cost to replace or reproduce the asset. For heritage assets, this approach is particularly challenging, as they often involve rare materials, traditional craftsmanship, or architectural styles no longer in use. In some cases, the asset may be irreplaceable, making cost estimation speculative and complex. Moreover, the unique architectural features and historical significance embedded in these structures further complicate the accurate assessment of replacement costs, as their intrinsic cultural value cannot be easily quantified using conventional construction metrics (Augustiniok et al., 2022). This challenge is exacerbated by the need to account for intangible cultural values

and historical authenticity, which are integral to the heritage status of the asset and cannot be fully captured by merely assessing material and labour expenses. Furthermore, while the cost approach considers the alternative of acquiring an equivalent, modern asset, it often falls short in capturing the unique, non-replicable value embedded in historic structures (Albu, 2021).

2.7.4 Depreciation Complexity

Depreciation is used to account for the loss of value over time due to wear and tear or obsolescence. Nevertheless, heritage assets may not follow typical depreciation patterns. Some may even appreciate in value due to their historical significance. Applying standard depreciation models can lead to inaccurate valuations, requiring expert judgment and tailored approaches. The heritage buildings, particularly those undergoing adaptive reuse, often require significant and specialised construction work to integrate modern amenities while preserving historical integrity, further complicating cost estimations and depreciation schedules (Lucie Brožová et al., 2022). This complexity is compounded by the necessity to upgrade older structures to meet current safety and accessibility codes, which often entails substantial architectural and engineering services to document existing conditions and scope rehabilitation work.

2.7.5 Intangible Cultural Value

Heritage assets often carry intangible value, such as emotional, historical, or cultural significance, that is difficult to quantify. This value is subjective and varies across communities and generations. Capturing this aspect in a financial valuation is difficult, and traditional accounting methods may not fully reflect the asset's true worth. Consequently, standard accounting frameworks struggle to incorporate these non-monetary attributes, often resulting in the undervaluation of heritage assets in financial statements (Biondi & Lapsley, 2014). Furthermore, the interdisciplinary nature of cultural heritage and the varied interpretations of its value, depending on individual or group perspectives, pose substantial challenges for defining explicit, unambiguous valuation terms (El Faouri & Sibley, 2024). As a result, developing a universally accepted framework for assessing intangible cultural values is particularly difficult, and often requires a combination of expert judgement, community engagement, and cultural impact assessments to complement traditional financial models.

2.7.6 Compliance with Standards

While MPSAS and MVS provide general guidance for asset valuation, they may lack specific provisions for heritage assets, potentially leading to inconsistencies in how different entities value similar assets. Valuers must interpret existing standards and apply professional judgment, which can introduce variability and uncertainty. The absence of clear, consistent directives underscores the need for more tailored guidelines to ensure uniform, reliable valuations of heritage assets across the public sector (Ferri et al., 2021). This deficiency often leads to reliance on broad interpretations of existing frameworks, which allow the assignment of monetary values to heritage assets when reliably determinable but do not prescribe a uniform methodology for making such determinations (Pontoppidan, 2019). This lack of specific guidance often results in governmental organisations engaging in extensive debates about recognition, measurement, and disclosure criteria for heritage assets in financial reporting (Aversano & Caterina, 2012).

2.7.7 Need for Multidisciplinary Input

Valuing heritage assets often requires collaboration among various experts, including historians, architects, conservationists, and cultural institutions. This multidisciplinary approach ensures a more accurate and respectful valuation but adds complexity, time, and cost to the process. The involvement of diverse specialists, each bringing unique perspectives on the significance of an asset, makes consensus on a single monetary value particularly challenging, especially given the inherent subjectivity of cultural and historical assessments (Dias, 2023). Moreover, the cost of engaging such a diverse team of experts can be substantial, often exceeding the resources available to many public sector entities for routine asset valuation. This issue further contributes to the underreporting or misvaluation of these assets (Pires et al., 2022). This complex interplay of financial and non-financial considerations necessitates a comprehensive framework that integrates diverse valuation methodologies and multidisciplinary insights to accurately reflect the multifaceted value of heritage assets (Scannell & Tawiah, 2024).

2.8 Valuation of Heritage Assets for Public Accounting in Malaysia

The MPSAS, which align with the IPSAS, require government entities to prepare accrual-based financial statements that accurately reflect the value of public assets such as land, buildings, infrastructure, and heritage properties. In this context, the valuation approaches under Malaysian Valuation Standards 7 (MVS 7), namely the market, income, and cost approaches, play a critical role in supporting asset recognition, measurement, and disclosure (Malaysian Valuation Standard, 2025). Based on Table 6:

- The market approach aligns with fair value requirements under standards such as MPSAS 17 and MPSAS 16, particularly for properties with active-market comparables.
- The income approach is relevant for investment or income-generating public assets, such as leased properties or concession-based facilities, supporting standards such as MPSAS 16, MPSAS 13 (Leases), and MPSAS 21 (Impairment of Non-Cash-Generating Assets).
- The cost approach is widely applied in the public sector to value specialised and non-cash-generating assets, such as schools, hospitals, roads, and government infrastructure, where market or income data are unavailable, thereby ensuring compliance with MPSAS 17, MPSAS 31, and MPSAS 32. These approaches ensure that asset valuations in the public sector are reliable, transparent, and consistent with financial reporting obligations under MPSAS.

Table 6: Valuation Approach and Its Application in Public Accounting

Valuation Approach	MPSAS Standards Applied	Typical Use in Public Sector
Market/ Comparison	MPSAS 17, MPSAS 16	Land, buildings with active market sales
Income	MPSAS 16, MPSAS 13, MPSAS 21	Investment properties, leased assets, revenue-generating assets
Cost	MPSAS 17, MPSAS 31, MPSAS 32	Infrastructure, specialised assets, non-cash-generating assets

2.8.1 Market Approach

The market/ comparison approach, as outlined in MVS, is a valuation method that derives the value of a property by comparing it with recent sales of identical or comparable properties that have transacted in the open market under fair and arm's-length conditions. This approach is based on the principle of substitution, which holds that a prudent buyer would not pay more for a property than the cost of acquiring a similar one under comparable conditions. In practice, the valuer identifies suitable comparable properties and subsequently makes adjustments to account for differences in location, size, condition, tenure, and other attributes to arrive at the estimated value of the subject property. The market approach is preferred when reliable, verifiable, and recent market data exists, as it reflects actual market behaviour and provides strong support for fair value determination.

In the context of MPSAS, which govern the accounting practices of government entities and are based on IPSAS, the market/ comparison approach is crucial for determining fair value under various standards. The accounting practices are most directly applicable to MPSAS 17 (Property, Plant, and Equipment), where entities have the option to use the revaluation model to measure property, plant, and equipment. Under this model, assets are revalued periodically to ensure their carrying amounts reflect current fair value rather than historical costs. The market approach is the most appropriate method for determining fair value for land and buildings in this context, particularly for government-owned office buildings, residential quarters, or commercial premises located in active markets.

Furthermore, the market approach supports valuation under MPSAS 16 (Investment Property), which allows or requires investment properties to be measured at fair value if it can be reliably determined. For example, a government agency that owns a retail property leased to private businesses must report the fair value of this property annually. If the property is located in an area with frequent real estate transactions and transparent pricing, the market approach provides a defensible, robust basis for valuation.

As a measure to ensure compliance with MPSAS, the application of the market approach must be evidence-based and transparent. Valuers must source and document relevant data, such as actual sale and purchase agreements, title, and land office records, recent transactions registered with the JPPH, Bursa Malaysia disclosures, or even public auction results, as long as they meet the conditions of an arm's-length transaction. All comparable properties must be recent, reliable, and adjusted appropriately to reflect the subject property's attributes (Junainah & Suriatini, 2019). This information must be disclosed in the valuation report and used as audit evidence to support the value reported in the government's financial statements.

In summary, the market/ comparison approach ensures that public assets are recorded at values that reflect real market conditions, enhancing the transparency, reliability, and accountability of public sector financial reports. Its application under MPSAS allows stakeholders, including auditors, regulators, and the public, to trust that government-owned properties are being properly valued and managed in accordance with international public sector financial reporting standards.

2.8.2 Income Approach

The income approach, as defined in the Malaysian Valuation Standards (MVS 7), is a valuation method that estimates the present value of future economic benefits derived from a property, typically in the form of rental income, profits, or cash flows. This approach is commonly used for income-generating assets, where the property's value is tied directly to its ability to generate revenue. The valuer will analyse projected income (such as rental or business earnings), deduct operating expenses, and then capitalise or discount the resulting net income using a market-derived capitalisation rate or discount rate.

In the public sector, governed by MPSAS, the income approach is less commonly applied than in the private sector, primarily because most government-owned assets (such as schools, hospitals, and roads) do not generate cash flows and exist primarily to deliver public services. However, the income approach becomes highly relevant in specific circumstances, particularly when public entities hold or manage revenue-generating assets. Examples include government-leased office buildings, rental housing schemes, sports complexes, markets, or public venues operated under Public-Private Partnerships (PPPs) or concessions. These assets can generate regular income, making them suitable for valuation using the income approach.

Under MPSAS 16 (Investment Property), if the government owns property held to earn rental income or for capital appreciation (rather than for direct service use), the income approach can be used to estimate fair value. Similarly, MPSAS 13 (Leases) requires the measurement of leased assets and liabilities, especially for finance leases, where income projections may be used to determine right-of-use asset values. One subset of the income approach, the Discounted Cash Flow (DCF) method, is also applicable under MPSAS 21 (Impairment of Non-Cash-Generating Assets), where the asset's value is based on its ability to provide future service potential, even if not directly profitable.

For example, consider a municipal public market owned by a city council. The city generates monthly rental income from stall operators. The valuer can estimate its net annual income by projecting gross rent, deducting maintenance and operating costs, and applying a market-based capitalisation rate to determine its current value. This approach ensures that the valuation reflects the asset's income-producing capability, which is essential for financial reporting, impairment assessment, or asset transfer planning.

In conclusion, while the income approach is less commonly applied in the public sector than the cost or market approaches, it is a powerful and relevant method for valuing government assets that generate economic returns. When used, it ensures compliance with MPSAS standards and provides a realistic, evidence-based valuation that reflects the future economic or service benefits expected from the asset.

2.8.3 Cost Approach

In terms of valuing heritage properties for public accounting purposes, the cost method is widely regarded as the most appropriate approach due to its focus on transparency, consistency, and accountability. Market-based or income-based methods are influenced by fluctuating external factors or subjective assumptions. In contrast, the cost method offers a more objective valuation by estimating the reproduction or replacement cost of the asset, adjusted for depreciation

(Junainah et al., 2015). This approach is particularly relevant for non-income-generating public heritage assets such as the Stadthuys in Melaka, Sultan Abdul Samad Building, or Muzium Negara, where market comparisons are either limited or entirely inapplicable.

By focusing on the actual investment needed to restore or replace an asset, the cost method aligns closely with government financial reporting standards, ensuring that heritage properties are accurately recorded and maintained in public accounts. It also facilitates long-term budgeting and resource planning for conservation and maintenance, making it a practical and defensible choice for public sector valuation. The cost approach is a valuation method that estimates an asset's value by the cost to replace or reproduce it, less depreciation. According to Malaysian Valuation Standards (MVS 7), this approach is particularly useful when market or income data is unavailable, which is often the case for public sector assets.

In the context of the MPSAS, the cost approach is particularly relevant. Many public assets, such as schools, hospitals, roads, bridges, and heritage sites, do not operate in active markets or generate income. These assets are typically unique and serve essential public functions, which makes it difficult to apply market or income-based valuation methods. As a result, the cost method emerges as the most practical, consistent, and widely adopted valuation technique within the Malaysian public sector. This approach is supported by several key MPSAS standards:

- MPSAS 17 for Property, Plant, and Equipment
- MPSAS 31 for Intangible Assets
- MPSAS 32 for Service Concession Arrangements, which involve infrastructure maintained by private concessionaires

The cost approach is important because it provides a reliable proxy for value by considering the asset's current replacement cost and adjusting for depreciation. Depreciation reflects the asset's physical wear and tear, functional obsolescence (such as outdated design or technology), and economic obsolescence (such as reduced demand or utility). These depreciation factors must be calculated in line with MPSAS guidelines, particularly regarding the asset's useful life and residual value. The cost approach is a cornerstone of public sector asset valuation under MPSAS, offering a structured and dependable method for valuing assets that are essential to public service but lack market comparables or income-generating potential.

2.9 Considerations in Valuing the Public Heritage Asset

According to the MVS (2025) and practices aligned with MPSAS, the cost approach is generally considered the most reliable method for valuing heritage assets in the public sector. The reason is primarily because:

- i. Heritage assets are unique and irreplaceable, often lacking active markets or comparable sales data, which makes the market approach impractical.
- ii. They also typically do not generate income, which limits the applicability of the income approach.
- iii. On the other hand, the cost approach estimates the value based on the current cost to reproduce or replace the asset, adjusted for depreciation due to physical deterioration, functional obsolescence, and economic factors.

This method is widely accepted under MPSAS 17 (Property, Plant, and Equipment) and is particularly relevant for public sector entities managing assets such as museums, historical buildings, and monuments. The method provides a structured and objective way to reflect the asset's service potential rather than its market value. Nevertheless, it is important to note that although the cost approach is the most commonly used and reliable in practice, Malaysia does not yet have a dedicated standard specifically for heritage asset valuation (Junainah, 2018). This limitation shows that valuers often rely on general principles from MVS and MPSAS, supplemented by professional judgment and international best practices (Mohamad Hafiz & Amrizah, 2024).

The purpose of valuation for heritage assets in the context of public accounting is to support accrual-based financial reporting, which the Malaysian government has adopted since 2018 under the Public Sector Transformation Policy. This shift aims to enhance transparency, accountability, and fiscal management (Oppio et al., 2024). Valuing heritage assets enables government agencies to recognise and report them in their financial statements, ensuring that the public sector's resources are accurately reflected. It also helps in budgeting, asset management, and policymaking by providing a clearer picture of the government's holdings and their condition (Mohamad Hafiz & Amrizah, 2024).

Valuing government-owned heritage buildings in Malaysia requires a nuanced approach that extends beyond conventional property valuation. These buildings are not only physical structures but also cultural symbols that embody the nation's history, identity, and architectural legacy. Given their unique characteristics and public significance, valuers must consider a range of factors that reflect both the tangible and intangible aspects of value (Fatin Afiqah, 2018). In the Malaysian context, elements such as traditional design, rare building specifications, aesthetic and symbolic significance, structural integrity, and ongoing maintenance play a critical role in determining the worth of these assets (Junainah & Suriatini, 2019). According to Duval et al. (2019), a thoughtful and multidisciplinary assessment ensures that heritage buildings are valued in a way that respects their historical significance while supporting transparent and accountable public sector reporting.

2.9.1 Design

In Malaysia, heritage buildings often reflect a blend of Malay, colonial, Chinese, and Islamic architectural styles. The design is a critical factor in valuation as it represents the building's historical and cultural identity (Chun et al., 2005). For example, pre-war shophouses in Penang or colonial administrative buildings in Kuala Lumpur are valued not only for their structure but for their architectural uniqueness. Valuers must assess how the design contributes to the building's heritage significance and the effect of the design on restoration or reproduction costs.

2.9.2 Building Specification

Building specification includes the materials, construction techniques, and finishes used in the original structure. Many heritage buildings in Malaysia use materials such as chengal wood, lime plaster, or terracotta tiles, which are now rare or expensive. Valuers must consider the availability and cost of these materials when estimating replacement or restoration costs. Specifications also influence the building's durability and the complexity of conservation work (Sandeford, 2005).

2.9.3 Aesthetic Value

Chin et al. (2021) highlighted that aesthetic value refers to the visual and artistic appeal of the building, including decorative elements, symmetry, and craftsmanship. In Malaysia, buildings such as the Sultan Abdul Samad Building or Cheong Fatt Tze Mansion are admired for their intricate details and visual harmony. This value contributes to public appreciation and tourism potential, which, while not directly income-generating, enhances the building's perceived worth.

2.9.4 Building Size

The size of the building affects its functional use and valuation. Larger buildings may have higher replacement costs and require more extensive maintenance (Jamal et al., 2022). In Malaysia, some heritage buildings, such as old train stations or colonial government complexes, are expansive. Valuers must consider how the size impacts restoration logistics, cost, and potential adaptive reuse.

2.9.5 National Value

Many heritage buildings in Malaysia symbolise national identity, historical events, or cultural heritage (Hasif Rafidee, 2015). For instance, Merdeka Stadium holds immense symbolic value as the site of Malaysia's independence declaration. This intangible value is crucial in public sector valuation, as it reflects the building's role in collective memory and national pride, even if it cannot be quantified in monetary terms.

2.9.6 Structural Intactness

The physical condition of a heritage building is essential in determining its current value and the cost of restoration (Sesana et al., 2021). In Malaysia's tropical climate, heritage buildings are vulnerable to humidity, termite infestations, and monsoon damage. Valuers must assess the integrity of foundations, walls, and roofs to estimate the extent of conservation required and the building's remaining useful life.

2.9.7 Quality Maintenance

According to Esraa and Meervat (2023), the ongoing and historical maintenance practices significantly affect a building's value. In Malaysia, some heritage buildings are well maintained by agencies such as the Jabatan Warisan Negara, local authorities, or building owners. Valuers must consider the cost of routine upkeep, the availability of skilled conservators, and the long-term sustainability of preservation efforts.

3.0 Methodology

This study adopts a qualitative comparative review methodology to analyse and evaluate diverse methods used in the valuation of tangible heritage assets in various countries. A comprehensive literature review was conducted by combining academic publications, valuation standards, and case studies to ascertain recognised methodologies and contextual modifications. Countries with diverse heritage valuation practices, including Malaysia, Singapore, Indonesia, the United

Kingdom, Australia, New Zealand, Japan, South Korea, and India, were purposely selected for comparison.

The literature review examined existing valuation standards, guidelines, and case studies relevant to the assessment of cultural heritage assets. At the international level, key references included the International Valuation Standards, as well as the GRAP 103: Heritage Assets. At the national level, references were made to Malaysia's National Heritage Act 2005 (Act 645) and key policy documents, including the MVS and MPSAS. These sources collectively provide the regulatory, institutional, and policy context for evaluating heritage valuation practices in Malaysia and the region.

The thematic synthesis involved systematically reviewing the selected literature to identify recurring concepts, themes, and methodological approaches related to heritage valuation. Sources were first coded based on key thematic categories, including valuation frameworks, methodological challenges, economic versus cultural value dimensions, and policy implications. Each study was then mapped according to its geographical focus (international, regional, or national) to identify convergences and gaps in practice. A thematic synthesis was subsequently conducted to highlight best practices, common challenges, and potential gaps. The valuation methods identified were grouped under major categories, including the cost approach, market approach, income approach, and hybrid or contextual methods. Each approach was analysed based on its purpose, legal framework, applicability, and the extent to which it accommodates the unique characteristics of heritage assets, including historical significance and limited market comparability.

The comparative analysis was conducted by examining international valuation models and guidelines (for example, IVS, MVS, and GRAP 103) with Malaysian valuation approaches, such as those applied by the JPPH and heritage assessment practices guided by the JWN. This analytical process enabled a structured comparison of valuation methodologies, data requirements, and institutional contexts, revealing critical gaps in Malaysia's heritage valuation practices and potential lessons from international experiences. This comparative analysis provides a foundation for developing more context-sensitive and robust valuation frameworks for heritage assets, particularly in regions where standard guidelines are still evolving.

4.0 Discussion

This review has systematically analysed and synthesised the existing studies on approaches to the valuation and measurement of tangible heritage assets, with a particular focus on addressing methodological gaps and practical challenges in the national context. This paper first addresses the challenges faced in valuing heritage assets, which remain complex and evolving across developed and developing countries. In Malaysia, valuation issues that hinder the accurate recognition and disclosure of heritage assets include conceptual ambiguity, inadequate accounting standards, and institutional constraints (Junainah et al., 2021; Mohamad Hafiz & Amrizah, 2024). These issues are compounded by the absence of a standardised heritage valuation framework, difficulties in estimating market value due to the irreplaceable nature of heritage assets, and the limited availability of historical data and archival records (Norida et al., 2012). Additionally, the shortage of skilled valuation professionals and the lack of integration of conservation costs into valuation models further exacerbate the problem.

These challenges are not unique to Malaysia but reflect broader international trends. Halkos et al. (2024), through a meta-analysis of global valuation studies, demonstrated that intangible dimensions such as symbolic meaning, emotional attachment, and cultural identity are frequently underrepresented within standardised frameworks. Similarly, Rosdi (2021) critiqued conventional valuation techniques and argued for the use of alternative non-market methods, such as Stated Preference and Revealed Preference approaches, to better capture the full value of cultural heritage. Nevertheless, these methods face issues of reliability, stakeholder bias, methodological inconsistency, and limited public engagement. Additionally, Biondi and Lapsley (2014) noted that implementing advanced digital tools for documentation and valuation requires substantial financial investment, which creates barriers in resource-constrained settings.

Even developed countries with advanced accounting infrastructures, such as the United Kingdom and Australia, continue to grapple with the limitations of standards such as IPSAS 17 and IPSAS 31. As highlighted by Mohamad Hafiz et al. (2019), these frameworks tend to prioritise quantifiable financial attributes while neglecting sociocultural dimensions vital to heritage valuation. Rosdi (2021) similarly argued that the rigidity of such models can marginalise local narratives and reduce heritage significance to economic metrics.

Building on the limitations of IPSAS 17, IPSASB introduces IPSAS 45, which removes scope exclusions for heritage assets and allows the use of current operational value as a measurement basis (IPSASB, 2023; Hooper et al., 2005). This approach enables public sector entities to assess heritage assets based on their service potential and cultural significance, rather than relying solely on market comparators. In Malaysia, the changes could help resolve inconsistencies in the recognition and reporting of heritage assets. Nevertheless, successful adoption will require inter-agency collaboration and capacity-building efforts to ensure readiness, including the JPPH, JWN, JMM, and various planning and environmental agencies.

5.0 Conclusion

In conclusion, heritage asset valuation confronts a complex array of conceptual, methodological, and administrative challenges. While the manifestations vary across national contexts, the shared struggle underscores the urgent need to reform accounting standards, develop culturally responsive and adaptable valuation frameworks, and embed stakeholder voices within valuation practice. These reforms are essential not only for improving financial accountability and transparency but also for preserving and authentically representing heritage assets as embodiments of cultural identity and historical continuity.

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References

- Adam, B., Mussari, R., & Jones, R. (2011). The diversity of accrual policies in local government financial reporting: An examination of infrastructure, art and heritage assets in Germany, Italy and the UK. *Financial Accountability & Management*, 27(2), 107–133. <https://doi.org/10.1111/j.1468-0408.2011.00519.x>.
- Adamus, J. (2023). How much are public spaces worth? Non-market valuation methods in valuing public spaces. *Gospodarka Narodowa The Polish Journal of Economics*, 314(2), 66–89. <https://doi.org/10.33119/GN/163105>
- Aditya Bagas. (2023). Transcending Western and Eastern understanding in cultural landscape management: An insight from Borobudur Temple. *E3S Web of Conferences*, 468, 1–7.
- Albu, S. (2021). The economic value and valuation of architectural heritage. *Journal of Building Construction and Planning Research*, 9, 1–11. <https://doi.org/10.4236/jbcpr.2021.91001>
- Andrew, A., & Pitt, M. (2000). Asset valuation of specialised public sector listed buildings by depreciated replacement cost. *Journal of Property Investment & Finance*, 18(6), 627–636. <https://doi.org/10.1108/14635780010357587>
- Argento, D., & van Helden, J. (2023). Are public sector accounting researchers going through an identity shift due to the increasing importance of journal rankings? *Critical Perspectives on Accounting*, 96, 102537. <https://doi.org/10.1016/j.cpa.2022.102537>
- Arshad, R., Omar, N., & Awang, S. (2013). Moving from rule-based to principle-based in public sector: Preparers' perspective. World Academy of Science, Engineering and Technology, Open Science Index 74. *International Journal of Economics and Management Engineering*, 7(2), 447–451.
- Augustiniok, N., Plevoets, B., Houbart, C., & van Cleempoel, K. (2022). Value as a legal tool for the preservation of monuments in Flanders and Wallonia: Between conservation and adaptation. *The Historic Environment: Policy & Practice*, 13(4), 482–508. https://doi.org/10.1080/17567505.2022.2148963?urlappend=%3Futm_source%3Dresearchgate.net%26utm_medium%3Darticle
- Aversano, N., & Caterina, F. (2012). The accounting problem of heritage assets. *The Proceedings of the Virtual International Conference on Advanced Research in Scientific Fields 2012*, 1–4.
- Azni, M. D. (2018). *The conservation of heritage sites in Peninsular Malaysia: Reformation of the legal framework*. [PhD thesis, Universiti Teknologi MARA]. <https://ir.uitm.edu.my/id/eprint/2542/>

- Azzopardi, E., Kenter, J. O., Young, J., Leakey, C., O'Connor, S., Martino, S., Flannery, W., Sousa, L. P., Mylona, D., Frangoudes, K., Béguier, I., Pafi, M., da Silva, A. R., Ainscough, J., Koutrakis, M., da Silva, M. F., & Pita, C. (2023). What are heritage values? Integrating natural and cultural heritage into environmental valuation. *People and Nature*, 5(2), 368–383.
- Bakri, A. F., Ibrahim, N., Ahmad, S. S., & Zaman, N. Q. (2015). Valuing built cultural heritage in a Malaysian urban context. *Procedia - Social and Behavioral Sciences*, 170, 381–389. <https://doi.org/10.1016/j.sbspro.2015.01.048>
- Bakri, A. F., Yusuf, N. A., & Jaini, N. (2012). Managing heritage assets: Issues, challenges and the future of historic Bukit Jugra, Selangor. *Procedia - Social and Behavioral Sciences*, 68, 341–352.
- Balakrishnan, V., & Narayana, K.A. (2024). Establishing the cultural significance of heritage places through value assessment: Insights from India. *International Society for the Study of Vernacular Settlements*. <https://doi.org/10.14445/23488352/IJCE-V11112P105>
- Barton, A. D. (2000). Accounting for public heritage facilities – Assets or liabilities of the government? *Accounting, Auditing & Accountability Journal*, 13(2), 219–236. [10.1108/09513570010323434](https://doi.org/10.1108/09513570010323434)
- Barton, A. (2005). The conceptual arguments concerning accounting for public heritage assets: A note. *Accounting, Auditing & Accountability Journal*, 18, 434–440. DOI: [10.1108/09513570510600774](https://doi.org/10.1108/09513570510600774)
- Basu, A., & De, A. (2021). Heritage valuation driving sustainability of cultural capital in Bishnupur in Eastern India. *PLURAL History Culture Society*, 9(1), 103–115. https://doi.org/10.37710/plural.v9i1S_7
- Biondi, L., Grandis, F. G., & Mattei, G. (2021). Heritage assets in financial reporting: A critical analysis of the IPSASB's consultation paper. *Journal of Public Budgeting, Accounting & Financial Management*, 33(5), 533–551. DOI: [10.1108/JPBAFM-09-2020-0158](https://doi.org/10.1108/JPBAFM-09-2020-0158)
- Biondi, L., & Lapsley, I. (2014). Accounting, transparency and governance: The heritage assets problem. *Qualitative Research in Accounting & Management*, 11(2), 146–164. DOI: [10.1108/QRAM-04-2014-0035](https://doi.org/10.1108/QRAM-04-2014-0035)
- Chin, T. C., Yan, B. T., Wai, F. W., Kong, S. L., & Koh, Y. X. (2021). Revealing the investment value of Penang heritage properties. *Planning Malaysia*, 19(3), 146–156. <https://doi.org/10.21837/pm.v19i17.994>
- Choi, A., Ritchie, B., Papandrea, F., & Bennett, J. (2010). Economic valuation of cultural heritage sites: A choice modeling approach. *Tourism Management*, 31, 213–220. DOI: [10.1016/j.tourman.2009.02.014](https://doi.org/10.1016/j.tourman.2009.02.014)
- Chun, H., Hasan, A. S., & Noordin, N. (2005). *An influence of colonial architecture to building styles and motifs in colonial cities in Malaysia*.

- Claver, J., García-Domínguez, A., & Sebastián, M. (2020). Multicriteria decision tool for sustainable reuse of industrial heritage into its urban and social environment. Case studies. *Sustainability*, 12(18), 1–26. DOI:10.3390/su12187430
- Cultural Advancement Law (2017). Undang-Undang Republik Indonesia Nomor 5 Tahun 2017 tentang Pemajuan Kebudayaan (Law of the Republic of Indonesia Number 5 of 2017 on Cultural Advancement). Ministry of Law and Human Rights.
- Czajkowski, M., Jusypenko, B., & White, B. (2025). Breaking new ground in heritage valuation: A comprehensive use of discrete choice experiments. *Working Papers. No. 11(474)*, 1–48.
- De Wolf, A., Johan, C., & Aversano, N. (2021). Heritage assets in the due process of the International Public Sector Accounting Standards Board (IPSASB). *Public Money & Management*, 41(4), 325–335. DOI:10.1080/09540962.2020.1727114
- Dias, J. C. (2023). Space-time experience as a resource to dialogue with the place; the example of Álvaro Siza's Saya Park Art Pavilion and Rem Koolhaas' Casa da Música. In M. d. Rosário Monteiro, M. S. Ming Kong, & M. J. Pereira Neto (Eds.), *Time and space* (pp. 175–182). CRC Press. <https://doi.org/10.1201/9781003260554>
- Dragouni, M. (2022). The economic valuation of cultural heritage: An analysis of economics-based tools and their limitations. *The Greek Review of Social Research*, 159, 3–31. <https://doi.org/10.12681/grsr.30814>
- Dutta, M., Banerjee, S., & Husain, Z. (2007). Untapped demand for heritage: A contingent valuation study of Prinsep Ghat, Calcutta. *Tourism Management*, 28, 83–95.
- Duval, M., Smith, B., Høerlé, S., Bovet, L., Khumalo, N., & Bhengu, L. (2019). Towards a holistic approach to heritage values: A multidisciplinary and cosmopolitan approach. *International Journal of Heritage Studies*, 25(12), 1279–1301. DOI:10.1080/13527258.2019.1590449
- El Faouri, B. F., & Sibley, M. (2024). Balancing social and cultural priorities in the UN 2030 Sustainable Development Goals (SDGs) for UNESCO World Heritage cities. *Sustainability*, 16(14). DOI:10.3390/su16145833
- Esraa, M. K., & Meervat, R. A. (2023). Factors affecting building maintenance practices: Review. *Journal of Engineering*, 29(12), 152–172. DOI:10.31026/j.eng.2023.12.10
- Fatin Afiqah, Md. A., Suriatini, I., Rosdi, Ab. R., Mohammad Tahir, S., & Junainah, M. (2018). A sustainable model for heritage property: An integrative conceptual framework. *International Journal of Engineering and Technology*, 7(321), 274–280. DOI:10.14419/ijet.v7i3.21.17173
- Ferri, P., Sidaway, S., & Carnegie, G. (2021). The paradox of accounting for cultural heritage: A longitudinal study on the financial reporting of heritage assets of major Australian public cultural institutions (1992–2019). *Accounting, Auditing & Accountability Journal*, 1–44.

- Fitri, I., Ahmad, Y., & Ahmad, F. (2015). Conservation of tangible cultural heritage in Indonesia: A review current national criteria for assessing heritage value. *Procedia - Social and Behavioral Sciences*, 184, 71–78. DOI:10.1016/j.sbspro.2015.05.055
- Fredheim, L. H., & Khalaf, M. (2016). The significance of values: Heritage value typologies re-examined. *International Journal of Heritage Studies*, 22(6), 466–481. DOI:10.1080/13527258.2016.1171247
- GRAP 103. (2022). *Accounting Standards Board. Standard of Generally Recognised Accounting Practice (GRAP) 103: Heritage assets*. Accounting Standards Board, South Africa. Retrieved from <https://www.asb.co.za/wp-content/uploads/2022/04/GRAP-103-Heritage-Assets-1-April-2022.pdf>
- Halkos, G. E., Koundouri, P. C., Aslanidis, P.-S. C., & Plataniotis, A. (2024). Evaluating the tangible and intangible parameters of cultural heritage: An economic meta-analysis in a global context. *Discover Sustainability*, 5(1), 187. DOI:10.1007/s43621-024-00398-w
- Hanafi, M. A. A., Yatim, N. M., & Salim, A. S. A. (2024). Unveiling the transition: Factors influencing true and fair view reporting in the accrual-based accounting migration of Malaysian federal statutory bodies. *Asian Economic and Financial Review*, 14(5), 389–409.
- Hasif Rafidee, H. (2015). A conceptual framework for conserving heritage buildings in Malaysia from the perspective of facilities management. *International Journal of Economics and Financial Issues*, 5, 45–51.
- Hooper, K., Kearins, K., & Green, R. (2005). Knowing “the price of everything and the value of nothing”: Accounting for heritage assets. *Accounting, Auditing & Accountability Journal*, 18(3), 410–433. DOI:10.1108/09513570510600765
- ICOMOS. (2011). *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties. Manual*. ICOMOS, UNESCO, ICCROM & IUCN. Retrieved from <https://whc.unesco.org/en/guidance-toolkit-impact-assessments>
- Iida, K., & Fukushige, M. (2025). Additional neighborhood effects following renovation of historical heritage: An empirical investigation of the case of Himeji Castle. *International Journal of Economic Policy Studies*, 19(1), 183–208.
- Indera Syahrul, M. R., & Yahaya, A. (2015). Encapsulating incentives system in safeguarding heritage village: The case of Melaka and George Town. *ASEAN Postgraduate Seminar (APGS 2015)*, 8 December. University of Malaya, Kuala Lumpur.
- IPSASB. (2023). *International Public Sector Accounting Standards Board. IPSAS 45: Property, plant, and equipment*. International Federation of Accountants. Retrieved from <https://www.ipsasb.org/publications/ipsas-45-property-plant-and-equipment>
- Iswari, Y., & Mediawati, E. (2024). Literature review on valuation and accounting recognition for heritage assets. *International Journal of Business, Law, and Education*, 5(1), 295–308.

- Jamal, A. A., Cheahshu, E. E., Khiyon, N. A., & Wahab, N. A. A. (2022). Scan-to-BIM approach towards producing quantity take-off of heritage buildings in Malaysia. *Journal of Engineering Science and Technology, Special Issue on STAAUH*, 120–137.
- Jang, H., & Mennis, J. (2021). The role of local communities and well-being in UNESCO World Heritage site conservation: An analysis of the operational guidelines, 1994–2019. *Sustainability*, 13(13).
- Juliza, M., Nik Nurul Hana, H., Nor Hafizah, A., Najah, M. A., & Siti Nuratirah, C. M. N. (2023). Reshaping history: Modernising Heritage timber buildings through adaptive reuse—lessons from Istana Jahar. *BIO Web of Conferences*, 73, 1–11.
- Junainah, M. (2018). *Improved Method for Heritage Property Valuation*. [Doctoral thesis, Universiti Malaysia Kelantan (UMK)]. <https://discol.umk.edu.my/id/eprint/10186/>
- Junainah, M., Suriati, I., & Abdul Rahman, M. N. (2021). The legal requirement of appropriate property valuation method. *Planning Malaysia*, 19(3), 202–213.
- Junainah, M., & Suriatini, I. (2019). Capabilities of revealed preference method for heritage property valuation. *Planning Malaysia*, 17(1), 377–388.
- Junainah, M., Suriatini, I., Rosli, A. R., & Ahmad Rashdan, I. (2015, January 18-21). Valuers' perception on the current practice of heritage property valuation in Malaysia. *21st Annual Pacific-RIM Real Estate Society Conference*, Kuala Lumpur.
- Junjie Qin, & Nikhil Joshi. (2023). Assessing the economic potential of social value of built heritage: A case study of people's park complex in Chinatown, Singapore. *HERITAGES: Past and Present-Built and Social*, 35(1), 116–127.
- Kamarudin, M. K., Yahya, Z., Harun, R., & Jaapar, A. (2014). The needs of having a paradigm shift from public sector to private sector on funding digitizing management work of historical buildings in Malaysia. *IOP Conference Series: Earth and Environmental Science*, 18, 1–6.
- Kim, G.-E., & Lee, J.-R. (2020). The impact of historic building preservation in urban economics: Focusing on accommodation prices in Jeonju Hanok Village, South Korea. *Sustainability*, 12(12).
- Kim, J., Kim, G.-E., & Yoo, S. (2018). *A valuation of the restoration of Hwangnyongsa Temple in South Korea*. *Sustainability*, 10, 369.
- Kim, S., Wong, K., & Cho, M. (2007). Assessing the economic value of a world heritage site and willingness-to-pay determinants: A case of Changdeok Palace. *Tourism Management*, 28, 317–322.
- Kostakis, I., & Lolos, S. (2024). Uncovering the impact of cultural heritage on economic growth: Empirical evidence from Greek regions, 2000–2019. *The Annals of Regional Science*, 73(3), 1209–1239.

- Laing, J., Wheeler, F., Reeves, K., & Frost, W. (2014). Assessing the experiential value of heritage assets: A case study of a Chinese heritage precinct, Bendigo, Australia. *Tourism Management*, 40, 180–192.
- Law on Cultural Conservation. (2010). Undang-Undang Republik Indonesia Nomor 11 Tahun 2010 tentang Cagar Budaya (Law of the Republic of Indonesia Number 11 of 2010 on Cultural Conservation). Ministry of Law and Human Rights.
- Li, Y., Zhao, L., Huang, J., & Law, A. (2021). Research frameworks, methodologies, and assessment methods concerning the adaptive reuse of architectural heritage: A review. *Built Heritage*, 5(1), 6.
- Lockwood, M. (1996). Analysing conflict between cultural heritage and nature conservation in the Australian Alps: A CVM Approach. *Journal of Environmental Planning and Management*, 39, 357–370.
- Lucie Brožová, Iveta Střelcová, Stanislav Vitásek, Radan Tomek, & Tomáš Krulický. (2022). Valuation of construction work on architectural heritage and its influence on project implementation decision. *SHS Web of Conferences*, 1–19.
- Malaysian Government. (2006). *National Heritage Act 2005 (Act 645)*. Kuala Lumpur: Percetakan Nasional Malaysia Berhad.
- Malaysian Valuation Standards. (2025). *The Board of Valuers Appraisers and Estate Agents and Property Managers Malaysia (BOVAEAP) (7th Edition)*. The Board of Valuers Appraisers and Estate Agents and Property Managers Malaysia (BOVAEAP): Kuala Lumpur.
- Maria, S., Hamza, S., Maseeh, U., & Shahid, A. D. (2024). The role of UNESCO World Heritage sites in promoting sustainable tourism. *International Journal of Contemporary Issues in Social Sciences*, 3(3), 985–997.
- Mika, J., Dell, K., Newth, J., & Houkamau, C. (2022). Manahau: Toward an Indigenous Māori theory of value. *Philosophy of Management*, 21, 441–463.
- Mohamad Hafiz, R., & Amrizah, K. (2024). Accounting for tangible heritage asset: The case of the National Archives of Malaysia. *Management and Accounting Review*, 23(2), 1–20. <https://doi.org/10.24191/MAR.V23i02-01>
- Mohamad Hafiz, R., Farhana, H., & Nur Fauzana, Y. (2019). Accounting for heritage assets: Issues and challenges in Malaysia. *International Journal of Innovation, Creativity and Change*, 6(9), 1–15.
- Monson, M. (2009). Valuation using hedonic pricing models. *Cornell Real Estate Review*, 7, 62–73.

- Mourato, S., & Mazzanti, M. (2002). Economic valuation of cultural heritage: Evidence and prospects. In M. de la Torre (Ed.), *Assessing the values of cultural heritage* (pp. 51–76). Los Angeles: The Getty Conservation Institute.
- MPSAS. (2025). *Accountant General's Department of Malaysia. Malaysian Public Sector Accounting Standard (MPSAS)* (7th ed.). Putrajaya: Accountant General's Department of Malaysia. Retrieved from <https://www.anm.gov.my/en/accounting/government-accounting-standards/accrual-basis/malaysian-public-sector-accounting-standards-mpsas>
- National Heritage Act (2005) Act 645 (2006). Laws of Malaysia. Putrajaya: Commissioner of Law Revision, Malaysia
- National Heritage Board. (2025, October 22). *Pride in our past legacy for our future*. National Heritage Board. <https://www.nhb.gov.sg>
- Nor Laili Hassan, Natrah, S., Halimah Nasibah, A., Mohammed Suhaimi, M. S., & Mohamad Sharofi, I. (2016). The accounting practices of heritage assets. *International Journal of Economics and Financial Issues*, 6(S26), 80–83.
- Norida, B., Mohd Fairuz, M. S., Azlina, A., Azmi, H., & Azizah, M. H. (2012). Perakaunan dan pelaporan aset warisan, aset pertahanan dan aset infrastruktur berasaskan akruan. *IPN Journal of Research and Practice in Public Sector Accounting and Management*, 2, 29–40.
- Nur Aina Ilyia, H., & Siti Norlizaiha, H. (2023). The component of historical study influencing heritage building conservation decision: A literature review. *International Journal of Academic Research in Business and Social Sciences*, 13(6), 1413–1425. DOI:10.6007/IJARBS/v13-i6/17138
- Nur Shawalliza, Y., & Hartini, J. (2018). The implementation of accrual-based accounting in Malaysian public sector: Opportunities and challenges. *International Business Education Journal*, 11(1), 49–62.
- Oberholzer-Gee, F., & Bruno, S. F. (1998). Public choice, cost-benefit analysis, and the evaluation of cultural heritage. In A. Peacock (Ed.), *Does the Past Have a Future? The Political Economy of Heritage* (pp. 27–53). London: Institute of Economic Affairs.
- Olesen, K. (2024). Recycling heritage: The double life of architectural representations. *Prague - Heritages: Past and Present - Built and Social*, 35, 529–535.
- Oppio, A., Forte, F., & Biekar, A. (2024). Cultural heritage and accounting reform: Valuation instances. *Valori e Valutazioni*, 133–144. Retrieved from https://siev.org/wp-content/uploads/2024/07/08_OPPIO-ET-AL.pdf
- Ouda, H. (2014). Towards a practical accounting approach for heritage assets: An alternative reporting model for the NPM practices. *Research Journal of Finance and Accounting*, 2(2), 19–33. DOI:10.12691/jfa-2-2-1

- Owen, C. (1999). *Valuation of Specialised Public Sector Assets* (1st Edition). Routledge: USA.
- Park, S., Chung, N., & Lee, W. (2020). Preserving the culture of Jeju Haenyeo (women divers) as a sustainable tourism resource. *Sustainability*, 12(24), 1–11. <https://doi.org/10.3390/su122410564>
- Passey, E., & Burns, E. (2023). The contested shift to a bicultural understanding of place heritage in Aotearoa New Zealand. *International Journal of Heritage Studies*, 29, 988–1003. <https://doi.org/10.1080/13527258.2023.2231911>
- Pires, C., Niyama, J. K., Beuren, I. M., & Ott, E. (2022). Heritage assets: Recognition, measurement and disclosure in museums. *Advances in Scientific and Applied Accounting*, 15(1), 68–80. <https://doi.org/10.14392/asaa.2022150103>
- Pontoppidan, C. A. (2019). Chapter II. Review of the Practical Implementation of International Public Sector Accounting Standards. In *International Accounting and Reporting Issues: 2018 Review. United Nations Conference on Trade and Development*, 27–52.
- Porter, S. (2004). An examination of measurement methods for valuing heritage assets using a tourism perspective. *Qualitative Research in Accounting & Management*, 1(2), 68–92. <https://doi.org/10.1108/11766090410813364>
- Puriri, A., & McIntosh, A. (2019). A cultural framework for Māori tourism: Values and processes of a Whānau tourism business development. *Journal of the Royal Society of New Zealand*, 49, 103–189. <https://doi.org/10.1080/03036758.2019.1656260>
- Ribera, F., Nesticò, A., Cucco, P., & Maselli, G. (2020). A multicriteria approach to identify the highest and best use for historical buildings. *Journal of Cultural Heritage*, 41, 166–177. DOI:10.1016/j.culher.2019.06.004
- Riganti, P., & Throsby, D. (2021). Editors' introduction: Recent developments in urban heritage valuation: Concepts, methods and policy application. *City, Culture and Society*, 26, 100414. doi: 10.1016/j.ccs.2021.100414
- Rolfe, J., & Windle, J. (2003). Valuing the protection of aboriginal cultural heritage sites. *Agricultural & Natural Resource Economics*, 79, 85–95. DOI:10.1111/1475-4932.00094
- Rosdi, A. R. (2021). Valuation of cultural heritage asset: Issues and challenges. *International Journal of Creative Future and Heritage (TENIAT)*, 2(1), 1–12. <https://doi.org/10.47252/teniat.v2i1.230>
- Ruijgrok, E. C. M. (2006). The three economic values of cultural heritage: A case study in the Netherlands. *Journal of Cultural Heritage*, 7(3), 206–213. DOI:10.1016/j.culher.2006.07.002
- Salerno, E. (2020). Identifying value-increasing actions for cultural heritage assets through sensitivity analysis of multicriteria evaluation results. *Sustainability*, 12(21), 1–13. DOI:10.3390/su12219238

- Sandeford, P. (2005). *Case histories demonstrating the use of materials technology approach to restoration of heritage buildings in Singapore and Malaysia*. In M. G. Stewart & B. Dockrill (Eds.), *Australian Structural Engineering Conference 2005: Structural Engineering - Preserving and Building into the Future* (pp. 723–732). Sydney, NSW: Engineers Australia.
- Saputra, R. (2024). Governance frameworks and cultural preservation in Indonesia: Balancing policy and heritage. *Journal of Ethnic and Cultural Studies*, 11(3), 25–50. DOI: <https://doi.org/10.29333/ejecs/2145>
- Scannell, S., & Tawiah, V. (2024). A thematic literature review on International Public Sector Accounting Standards (IPSAS). *Public Organization Review*, 24(3), 1053–1075. DOI:10.1007/s11115-024-00773-1
- Sesana, E., Gagnon, A. S., Ciantelli, C., Cassar, J., & Hughes, J. J. (2021). Climate change impacts on cultural heritage: A literature review. *WIREs Climate Change*, 12(4), 1–9. <https://doi.org/10.1002/wcc.710>
- Sharifah Sabrina, S. A., Sheung, S. C. C., & Mohd Waliuddin, M. R. (2019). Case study in a Malaysian public agency on an asset management - Moving towards the accrual basis of accounting. *Accounting and Finance Research*, 8(3), 149–156. <https://doi.org/10.5430/afr.v8n3p149>
- Steenberg, C., & Cirklová, J. (2024). The welfare state's suburban building culture - discussing values. *Prague - Heritages: Past and Present - Built and Social: AMPS Proceedings Series 35*, 584–594.
- Tan, S. B., & Ti, E. (2020). What is the value of built heritage conservation? Assessing spillover effects of conserving historic sites in Singapore. *Land Use Policy*, 91, 104393. DOI: 10.1016/j.landusepol.2019.104393
- Throsby, D. (2001). *Economics and Culture*. Cambridge: Cambridge University Press.
- Throsby, D. (2016). Investment in urban heritage conservation in developing countries: Concepts, methods and data. *City, Culture and Society*, 7(2), 81–86. <https://doi.org/10.1016/j.ccs.2015.11.002>
- Timothy, D. J. (2011). *Cultural Heritage and Tourism: An Introduction*. UK: Channel View Publications.
- Treasury, H. M. (2011). *The Green Book: Appraisal and Evaluation in Central Government*. The National Archive: London.
- Tuan, T. H., & Navrud, S. (2008). Capturing the benefits of preserving cultural heritage. *Journal of Cultural Heritage*, 9, 326–337. DOI:10.1016/j.culher.2008.05.001

- Valentina, V., Marius-Răzvan, S., Ioana-Alexandra, L., & Stroe, A. (2015). Innovative valuing of the cultural heritage assets. Economic Implication on local employability, small entrepreneurship development and social inclusion. *Procedia - Social and Behavioral Sciences*, 188, 16–26. <https://doi.org/10.1016/j.sbspro.2015.03.334>
- Van der Zee, E., Nicola, C., Dario, B., & Shomali, K. W. A. (2024). UNESCO World Heritage site label and sustainable tourism in Europe: A user-generated content analysis. *Regional Studies*, 58(10), 1858–1873. DOI:10.1080/00343404.2024.2333787
- Widodo, J., Wong, Y. C., & Ismail, F. (2017). Digital Historic urban landscape methodology for heritage impact assessment of Singapore. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, IV-2/W2, 327–334.
- Wong, P. F. (2019). A framework of sustainability refurbishment assessment for heritage buildings in Malaysia. *IOP Conference Series: Earth and Environmental Science*, 268(1), 012011. DOI 10.1088/1755-1315/268/1/012011
- Zolkafli, U. K., Zakaria, N., Mohammad Mazlan, A., & Ali, A. S. (2019). Maintenance work for heritage buildings in Malaysia: Owners' perspectives. *International Journal of Building Pathology and Adaptation*, 31(1), 186–195. <https://doi.org/10.1108/IJBPA-07-2018-0062>

Digital Transformation and Trust in Public Sector Auditing: Roles of Efficiency, Compliance, and Fraud Prevention

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Abstract

Purpose: This study examined the relationship between digital transformation and public trust in the context of public sector auditing by specifically focusing on how five (5) audit-related factors (digital transformation in auditing, efficiency of digital auditing, internal controls, fraud prevention, and compliance with regulations) influence the perception of forensic digital auditing frameworks.

Design/ Methodology/ Approach: A quantitative approach was employed in this study. A structured survey was administered to 407 public sector auditors in Malaysia. Structural equation modelling (SEM) was used to assess the direct effects of the five (5) constructs on audit effectiveness and to evaluate the moderating role of public trust. The study is theoretically anchored in digital governance and public trust perspectives.

Findings: All five (5) constructs were found to have a significant positive impact on the perception of forensic digital auditing frameworks, with digital transformation and compliance emerging as the most influential predictors. Public trust significantly moderates all relationships, indicating that high levels of public trust enhance the effectiveness of digitally enabled audit practices. These findings underscore the crucial interplay between technological advancements and stakeholder confidence in public sector governance.

Research Limitations/ Implications: The study was limited to the Malaysian public sector and focused solely on the selected constructs, potentially limiting the generalisability of the findings. Future research could adopt cross-country

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comparisons and incorporate variables such as digital competency, regulatory environment, and institutional readiness.

Practical Implications: Audit institutions should integrate advanced digital technologies with trust-enhancing measures, including transparent audit reporting, third-party validation, and citizen engagement, to strengthen the credibility and performance of forensic audits.

Originality/ Value: This study focuses on Malaysia, a developing country undergoing rapid digitalisation. The study offers timely insights into how digital transformation and public trust interact to influence the effectiveness of forensic audits in the public sector.

Keywords: Digital auditing, public trust, forensic audit framework, fraud prevention, compliance with regulation

1.0 Introduction

In an era marked by rapid technological evolution and rising demands for public accountability, the digital transformation of auditing practices has emerged as a pivotal agenda in the public sector (Otia & Bracci, 2022). In Malaysia, where the public sector plays a crucial role in national development, the integrity and perception of the forensic auditing framework are essential for promoting transparency, regulatory compliance, and anti-corruption efforts (Chetty et al., 2024). As forensic audits evolve from paper-based processes to digital ecosystems, the trust placed in auditors and their technological tools becomes increasingly central to institutional legitimacy and fiscal governance (Strauss et al., 2020; Makanga et al., 2025).

Digital transformation, which is defined as the strategic integration of technologies such as artificial intelligence (AI), big data analytics, and blockchain into operational and decision-making processes, has revolutionised public-sector auditing (Otia & Bracci, 2022). These technologies offer unprecedented opportunities to enhance audit efficiency, ensure compliance, and proactively detect or prevent fraud (Handoyo, 2024). Despite its potential, the empirical validation of the effectiveness of digital transformation in public sector auditing, particularly from the auditors' perspective, remains underexplored in the Malaysian context (Lopez et al., 2024). The effectiveness of the forensic digital auditing framework (FDAF) refers to the extent to which forensic digital mechanisms enhance transparency, accountability, and fraud prevention in public-sector auditing. The effectiveness reflects the integration of technologies such as AI, data analytics, and blockchain within a structured framework that enhances audit accuracy and regulatory compliance. Moreover, existing studies highlight a lack of clarity on how these transformations affect auditors' ability to maintain stakeholder trust in high-risk environments where ethical breaches and fiscal mismanagement are recurring threats (Tajudin et al., 2022).

The existing literature underscores several gaps that can be addressed. First, while bibliometric analyses offer macro-level overviews of forensic auditing developments, practitioner-level insights, particularly from emerging economies, are often omitted (Kumar et al., 2024). Second, discussions of trust in public institutions frequently decouple it from operational auditing dynamics, failing to integrate technological and human factors into assessments of trust

outcomes. Finally, there is a paucity of empirical research addressing how digital tools mediate the tripartite relationship between audit efficiency, regulatory compliance, and fraud prevention.

This study addressed these gaps by examining the perceptions of Malaysian public sector auditors through a structured questionnaire. The study aimed to assess the role of digital transformation in enhancing audit efficiency, ensuring compliance, and preventing fraud while simultaneously reinforcing trust in public financial governance. Specifically, this study seeks to achieve the following objectives:

- i. To investigate the extent of digital adoption in forensic auditing in the Malaysian public sector.
- ii. To examine the impact of digital tools on audit performance dimensions.
- iii. To analyse how these dimensions collectively influence trust among stakeholders.

This study contributes to both the theoretical discourse on audit digitalisation and the practical imperatives of public sector accountability.

2.0 Literature Review

2.1 Technology-Organisation-Environment (TOE) Framework

The technology-organisation-environment (TOE) framework provides a comprehensive theoretical lens for understanding the adoption of digital transformation initiatives in forensic auditing, particularly within the public sector context (Komna & Mpungose, 2024). Within the Malaysian public sector, technological factors, including system interoperability, data analytics, and automation, have significantly influenced the efficacy of forensic audits (Shamsudin et al., 2025). These tools enhance audit trail precision and reduce manual workload, improving operational efficiency and fraud detection (Khan, 2025). From a technological standpoint, TOE emphasises how compatibility, relative advantage, and complexity influence adoption. Studies have shown that compliance-driven integration of audit technology closely aligns with organisational goals for fraud prevention and transparency. In parallel, the organisational component of the TOE framework highlights the roles of internal readiness, top management support, and culture (Amini & Jahanbakhsh Javid, 2023). For instance, Malaysian audit agencies frequently encounter challenges related to resistance to change and digital skill gaps, which hinder their readiness for large-scale digital adoption (Yusof et al., 2022). These organisational constraints not only affect performance but may also impair the public's perception of audit reliability.

Regulatory pressure and stakeholder expectations are also crucial antecedents in the TOE framework that moderate public trust in digital audit systems. As public audits are closely tied to perceptions of government accountability and legitimacy, the adoption of digital technologies must address not only compliance benchmarks but also public sentiments regarding data privacy, fairness, and transparency. Thus, trust is conceptualised not merely as an audit outcome but as a socially co-produced asset that reinforces institutional integrity in democratic governance. Importantly, empirical evidence from Malaysian and broader emerging-market settings supports the TOE-based premise that trust-building in digital audits is contingent on demonstrating both competence (such as fraud detection) and ethical transparency (such

as non-partisanship in reporting). Furthermore, the environmental dimension encompasses policy, vendor ecosystems, and interagency collaboration, which can either hinder or enable the digital transformation. Therefore, the TOE framework not only maps the technical and structural enablers of digital audit transformation. Rather, the framework also serves as a normative model for aligning audit modernisation with public values, such as trust, integrity, and compliance, in the Malaysian context.

2.2 Variables and Hypothesis Development

The digital transformation of forensic auditing has significantly reshaped audit methodologies, particularly in the public sector. In Malaysia, the deployment of digital technologies, such as AI, blockchain, and real-time analytics, has been identified as key drivers of improved audit outcomes (Shamsudin et al., 2025). These technologies streamline data extraction, pattern recognition, and anomaly detection, enabling auditors to conduct more effective investigations (Mokhtar et al., 2024). Thus, the study hypothesises that digital transformation positively affects the effectiveness of forensic auditing (Barr-Pulliam et al., 2022).

Additionally, audit efficiency plays a critical role in determining the value and responsiveness of public sector audits (Alqudah et al., 2019). Efficiency, in terms of speed, accuracy, and resource utilisation, directly enhances audit reliability and minimises operational lag. Therefore, it is posited that audit efficiency significantly enhances forensic audit performance (Abbas, 2020).

Subsequently, internal control systems are also a cornerstone of audit reliability, providing structured mechanisms to detect and correct errors or misstatements (Hajiani et al., 2024). Well-designed internal controls reinforce procedural integrity, particularly when integrated with digital tools (Handoyo, 2024; Makanga et al., 2025). Hence, the hypothesis that internal control mechanisms positively influence digital forensic audit outcomes is grounded in contemporary audit-governance research.

Another critical factor of this framework is fraud prevention. The capacity of digital forensic auditing to proactively identify red flags, predict high-risk transactions, and support whistleblower analytics is well supported in the forensic accounting and digital governance literature. This notion leads to the hypothesis that fraud prevention practices make a significant contribution to the success of forensic digital audits (Ahmad et al., 2023; Daraojimba et al., 2023).

Compliance, defined as the degree to which audits adhere to regulatory standards and ethical expectations, is crucial for an effective digital audit framework. Digital systems support real-time compliance monitoring, ensuring transparency and traceability in public-sector operations (Tajudin et al., 2022; Lopez et al., 2024). Therefore, it is reasonable to hypothesise that compliance positively affects forensic audit frameworks.

Importantly, public trust plays a moderating variable influencing the strength of these relationships. Trust in audit institutions enhances stakeholder acceptance of digital outcomes and the perceived legitimacy of audit findings. As trust strengthens, technological and organisational innovations impact forensic audit outcomes. This finding suggests that public trust moderates the relationship between the identified independent variables and forensic

audit effectiveness, reinforcing their positive effects when institutional credibility is high. Therefore, the following hypotheses are proposed:

H1: Digital transformation in auditing, efficiency of digital auditing, compliance with regulations, fraud prevention, and internal controls each have a significant and positive influence on the perception of the forensic digital auditing framework in the Malaysian public sector.

H2: Public trust positively moderates the relationship between the five (5) key audit enablers (digital transformation in auditing, efficiency of digital auditing, compliance with regulations, fraud prevention, and internal controls) and the perception of the forensic digital auditing framework, such that these relationships are stronger when public trust is high.

3.0 Methodology

3.1 Population, Sampling Criteria, and Sample Size

A quantitative research design was employed in this study to examine the impact of digital transformation on perceptions of forensic auditing in the Malaysian public sector. The target population comprised professional auditors, compliance officers, internal controllers, and digital audit personnel working in government ministries, public agencies, and government-linked companies in Malaysia. According to the Public Service Department of Malaysia (Jabatan Perkhidmatan Awam, JPA), the estimated number of public-sector personnel involved in auditing and compliance functions exceeds 20,000 nationwide. By utilising the sample size determination table by Krejcie and Morgan (1970), a minimum of 377 respondents was deemed appropriate for this scale. As a measure to ensure robustness and account for potential non-responses or data inconsistencies, 460 questionnaires were distributed through stratified purposive sampling. The study specifically targeted individuals with prior experience with digital auditing tools and compliance processes. After data cleaning and screening for completeness and relevance, 407 valid responses were retained for the final analysis. The retained responses exceeded the recommended sample size threshold and ensured statistical adequacy for model testing.

4.0 Results and Findings

4.1 Descriptives Analysis of Respondents

Based on the questionnaire data from 407 respondents working in Malaysia's public sector forensic auditing, the demographic profiles in Table 1 and Figure 1 reveal insightful trends. In terms of gender distribution, females (54.5%) slightly outnumbered males (45.5%). A significant majority of participants were in the 36-45 age range (63.6%), with 27.3% aged 26-35, suggesting a mature and experienced workforce. The majority of respondents (70.0%) were employed in the private sector, although the study targeted the public sector, indicating some overlap in sector experience or data collection. Over half (54.8%) of the respondents occupied senior-level positions, highlighting that the perspectives gathered likely reflect well-informed and managerial viewpoints.

In terms of academic and professional qualifications, most respondents (63.6%) held a PhD or Doctorate. Subsequently, a small but notable percentages of respondents had a master's degree (9.8%) and bachelor's degree (9.6%). This finding indicates a highly educated sample, which may correlate with a deeper understanding and more nuanced perception of forensic digital auditing frameworks. High-level qualifications and senior roles suggest that the insights derived from this group are anticipated to be particularly valuable in shaping or evaluating audit frameworks, as these individuals are likely to influence implementation strategies and policy direction. The demographic profile underscores a knowledgeable, experienced, and academically accomplished cohort, thus enhancing the study's credibility and relevance.

Table 1: Demographic Profile

Demographic Variable	Category	Frequency (n)	Adjusted Percentage (%)
Gender	Male	185	45.5%
	Female	222	54.5%
	Prefer not to say	0	0.0%
Age Group	18–25	0	0.0%
	26–35	111	27.3%
	36–45	259	63.6%
	46–55	8	2.0%
	56 and above	29	7.1%
Employment Sector	Public Sector	122	30.0%
	Private Sector	285	70.0%
Job Position	Entry-Level	111	27.3%
	Mid-Level	38	9.3%
	Senior-Level	223	54.8%
	Executive/ Top Management	35	8.6%
Industry	Government Auditing	305	74.9%
	Accounting and Finance	74	18.2%
	Banking	39	9.6%
	Consulting	35	8.6%
	Technology	40	9.8%
	Education	60	14.7%
	Manufacturing	33	8.1%
Years of Experience	Less than 1 year	38	9.3%
	1–3 years	111	27.3%
	4–7 years	39	9.6%
	8–10 years	90	22.1%
	More than 10 years	129	31.7%
Highest Educational Level	Diploma	38	9.3%
	Bachelor's Degree	39	9.6%

Table 1: Demographic Profile (continued)

Demographic Variable	Category	Frequency (n)	Adjusted Percentage (%)
Highest Educational Level	Master's Degree	40	9.8%
	PhD/Doctorate	259	63.6%
	Professional Certification (e.g., CPA, ACCA, CIA)	31	7.6%
Country of Work	Malaysia	333	81.8%
	ASEAN Region	37	9.1%
	Asia (excluding ASEAN)	38	9.3%
	United States	25	6.1%
Familiarity with Digital Tools	Not Familiar	185	45.5%
	Slightly Familiar	74	18.2%
	Moderately Familiar	148	36.4%
	Very Familiar	40	9.8%
	Expert Level	0	0.0%
Experience with Digital Auditing	Limited experience	111	27.3%
	Moderate experience	112	27.5%
	Extensive experience	184	45.2%
Involvement in Fraud Detection/ Compliance	Yes	185	45.5%
	No	111	27.3%
	Occasionally	111	27.3%
Use of Forensic Digital Tools in Work	Never	185	45.5%
	Rarely	74	18.2%
	Sometimes	148	36.4%
	Often	55	13.5%
	Always	0	0.0%



Figure 1: Demographic Profile in Pie Charts

4.2 Descriptive Analysis of Construct

The analysis of the questionnaire responses (Refer to Table 2) reveals strong support for digital auditing tools in improving efficiency within Malaysian public sector organisations. The highest-rated item under “Efficiency of Digital Auditing” was the belief that automation reduces human error in audits ($M = 4.73$), followed closely by the perception that digital transformation enhances the reliability and quality of results ($M = 4.45$) and that continuous auditing allows for ongoing rather than periodic assessment ($M = 4.33$). These findings suggest that public auditors value digital tools primarily for their ability to streamline processes, reduce manual mistakes, and support real-time evaluations of critical aspects in a dynamic financial environment where accountability and timeliness are paramount.

In terms of compliance, the responses demonstrated moderately high agreement that digital auditing supports regulatory adherence. The item with the highest mean score was that digital tools helped auditors detect and address non-compliance more effectively than manual methods ($M = 4.44$), suggesting confidence in the role of digital frameworks in improving compliance monitoring. Similarly, the fraud prevention section showed robust support, with the role of technology in reducing opportunities for fraud ($M = 4.62$) and real-time alerts improving fraud detection ($M = 4.28$) being particularly appreciated. These results highlight a growing recognition among public auditors that technology not only enhances oversight but also increases responsiveness in fraud-related situations.

Public trust, functioning as a moderating variable, also received strong support from respondents. Participants most strongly agreed that they trust digital auditing tools to provide accurate and transparent financial information ($M = 4.58$), suggesting that technological integration directly influences perceptions of credibility. Trust in digital auditing also stems from its perceived ability to increase the credibility of financial reports ($M = 4.47$) and increase confidence in governance processes ($M = 4.24$). These findings highlight the importance of public perceptions in digital audit adoption, particularly in Malaysia, where governance, transparency, and accountability in the public sector are continually under close scrutiny. Thus, the integration of digital solutions is not only operationally beneficial but also instrumental in reinforcing trust in public institutions.

The descriptive results indicate that the overall perception of digital transformation in auditing is positive, with mean scores ranging from 3.70 to 4.63. Among the seven indicators, the highest mean score was recorded for audit management software ($M = 4.63$, $SD = 0.96$), followed by robotic process automation ($M = 4.44$, $SD = 1.10$), and real-time dashboards ($M = 4.41$, $SD = 1.15$). These findings suggest that respondents perceive technology-driven tools as instrumental in streamlining audit documentation, automating repetitive tasks, and improving real-time monitoring of audit progress.

Furthermore, the results indicate moderately high agreement on the role of AI ($M = 3.99$, $SD = 0.92$), big data analytics ($M = 3.93$, $SD = 0.76$), and cloud computing ($M = 3.90$, $SD = 1.03$) in improving fraud detection, data accuracy, and collaboration among audit teams. The lowest mean score, blockchain technology ($M = 3.70$, $SD = 0.89$), still reflects a generally favourable perception. The score implies that its adoption in public sector auditing remains in the early stages compared to other digital tools. These findings align with Mlaik et al. (2021), who emphasised that while blockchain adoption is growing gradually, other technologies such

as robotic process automation (RPA) and AI are already transforming audit efficiency and regulatory compliance.

Table 2: Questionnaire Response

Variable	Item (Statement)	Mean Score	Standard Deviation
Digital Transformation in Auditing (DTA)	Q1. Artificial intelligence (AI) helps auditors identify fraud patterns in public sector financial records.	3.99	0.92
	Q2. Blockchain technology enhances the accuracy and security of financial transaction tracking.	3.70	0.89
	Q3. Big data analytics enables auditors to analyse large datasets for irregularities in public sector operations.	3.93	0.76
	Q4. Robotic process automation (RPA) reduces repetitive audit tasks, such as document validation.	4.44	1.10
	Q5. Cloud computing facilitates secure collaboration between audit teams and stakeholders.	3.90	1.03
	Q6. Audit management software enhances the organisation and documentation of audit evidence.	4.63	0.96
	Q7. Real-time dashboards provide live updates on audit progress and key findings.	4.41	1.15
Efficiency of Digital Auditing (EDA)	Q1. Digital tools reduce the time needed to complete financial audits in public sector organisations.	4.07	0.75
	Q2. Predictive analytics improves the ability to forecast potential fraud risks in public sector audits.	4.10	0.95
	Q3. Continuous auditing through digital tools allows for ongoing assessment rather than periodic reviews.	4.33	1.02
	Q4. Cybersecurity measures integrated into auditing tools ensure the protection of sensitive financial data.	3.84	1.01
	Q5. Automation reduces human errors commonly found in manual audit processes.	4.73	0.55
	Q6. IoT devices improve the monitoring of physical assets in public sector operations.	3.74	0.61
	Q7. Digital transformation enhances the overall quality and reliability of audit results.	4.45	1.01
Internal Controls (IC)	Q1. Current internal control mechanisms effectively prevent financial mismanagement in public sector organisations.	4.01	0.64
	Q2. Digital tools improve the monitoring and enforcement of internal control policies.	3.83	1.02

Table 2: Questionnaire Response (continued)

Variable	Item (Statement)	Mean Score	Standard Deviation
Internal Controls (IC)	Q3. Real-time monitoring systems enhance the detection of control breaches in financial operations.	4.38	0.94
	Q4. The integration of digital tools enhances the accuracy of internal controls in public sector audits.	4.18	0.68
	Q5. Technology reduces the likelihood of errors in the execution of internal control policies.	3.96	0.92
	Q6. Data visualisation tools improve the ability to identify control weaknesses and risks.	3.79	0.71
	Q7. Digital systems enable auditors to implement more effective risk management strategies within internal control processes.	4.22	0.83
Fraud Prevention (FP)	Q1. Forensic digital tools are effective in identifying fraudulent activities in financial operations.	3.67	0.87
	Q2. Automated fraud detection systems reduce the chances of undetected fraud.	4.14	0.98
	Q3. Digital tools enable auditors to trace the flow of funds in suspicious transactions.	4.00	0.65
	Q4. Fraud detection software offers more comprehensive insights into financial irregularities than traditional methods.	3.81	0.66
	Q5. Technology reduces opportunities for fraud in public sector organisations.	4.62	0.91
	Q6. Real-time fraud alerts generated by digital tools improve fraud prevention efforts.	4.28	1.16
	Q7. Advanced forensic frameworks provide detailed evidence for prosecuting cases of fraud.	3.89	1.00
Compliance with Regulations (CR)	Q1. Digital tools ensure that public sector audits comply with local and international financial regulations.	3.88	0.91
	Q2. Automated compliance checks reduce the time needed for regulatory reporting.	3.92	0.53
	Q3. Technology enhances auditors' ability to meet evolving regulatory requirements.	3.85	0.93
	Q4. Digital auditing frameworks improve the accuracy and completeness of compliance audits.	3.90	0.62
	Q5. Data analytics tools ensure greater transparency in compliance monitoring.	4.40	0.55
	Q6. Automated systems make it easier for public sector organisations to track compliance deadlines.	3.99	0.67

Table 2: Questionnaire Response (continued)

Variable	Item (Statement)	Mean Score	Standard Deviation
Compliance with Regulations (CR)	Q7. Digital tools help auditors detect and address non-compliance more effectively than manual methods.	4.44	0.82
Public Trust (Moderator) (PT)	Q1. I trust digital auditing tools to provide accurate and transparent financial information.	4.58	0.73
	Q2. The use of digital technology in public sector audits increases my confidence in financial governance.	4.24	0.69
	Q3. Real-time reporting tools enhance public trust in the transparency of audit findings.	4.05	0.84
	Q4. Digital tools improve public confidence in fraud detection and prevention in the public sector.	3.71	0.88
	Q5. The integration of advanced auditing technologies increases the credibility of public sector financial reports.	4.47	0.91
	Q6. I believe digital forensic tools make public sector audits more reliable and trustworthy.	3.82	0.95
	Q7. Digital auditing technologies enhance public confidence in the accountability of government agencies.	3.96	0.90
Perception of Forensic Digital Auditing Framework (FDAF)	Q1. The Forensic Digital Auditing Framework significantly improves fraud detection in public sector organisations.	3.69	0.99
	Q2. The Forensic Digital Auditing Framework is more effective than traditional methods in preventing fraud.	4.13	0.88
	Q3. Public sector organisations benefit from forensic frameworks in identifying and addressing misconduct.	3.86	0.96
	Q4. The Forensic Digital Auditing Framework enhances the accuracy of internal control mechanisms in public sector audit.	4.33	0.94
	Q5. The Forensic Digital Auditing Framework strengthens the ability of auditors to ensure compliance with financial regulations.	4.62	0.91
	Q6. The Forensic Digital Auditing Framework enhances transparency and accountability in managing public finances.	3.79	0.64
	Q7. The Forensic Digital Auditing Framework ensures that public sector organisations maintain high standards of governance.	4.38	1.02

4.3 Validity and Reliability

The validity and reliability assessments (Refer to Table 3) indicated strong internal consistency and satisfactory convergent validity across all constructs. Cronbach's Alpha (α) values exceeded the commonly accepted threshold of 0.70, ranging from 0.81 for fraud prevention to 0.94 for efficiency of digital auditing and internal controls, demonstrating that the items within each construct consistently measure the same underlying concept. Composite reliability (CR) scores further support this finding, with all constructs recording values above the recommended 0.70 cutoff, particularly high in digital transformation in auditing (0.97) and compliance with regulations (0.95), further validating the robustness of the measurement model. Moreover, average variance extracted (AVE) values for all constructs surpassed the minimum criterion of 0.50, with digital transformation in auditing achieving the highest AVE of 0.71. These AVE values confirm that a substantial proportion of the variance in the items is accounted for by the latent constructs, indicating satisfactory convergent validity. These metrics demonstrate that the instrument used in this study is both reliable and valid for measuring the perceptions of digital auditing practices in the Malaysian public sector.

Table 3: Validity and Reliability

Variable	Cronbach's Alpha (α)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Digital Transformation in Auditing (DTA)	0.83	0.97	0.71
Efficiency of Digital Auditing (EDA)	0.94	0.96	0.67
Internal Controls (IC)	0.94	0.86	0.59
Fraud Prevention (FP)	0.81	0.89	0.63
Compliance with Regulations (CR)	0.84	0.95	0.62

4.3.1 Factor Loadings

The factor loading analysis (Refer to Table 4) confirms the construct validity of the measurement model, with the majority of items across all constructs demonstrating strong standardised loadings above the recommended threshold of 0.70. High loadings were particularly evident in items such as "Audit management software enhances the organisation and documentation of audit evidence" (0.91) under digital transformation in auditing, and "Automation reduces human errors commonly found in manual audit processes" (0.90) under efficiency of digital auditing. Similar strong indicators were observed in internal controls, where "Real-time monitoring systems enhance the detection of control breaches" achieved a loading of 0.89, and in fraud prevention, with "Technology reduces opportunities for fraud" loading at 0.91. These results demonstrate that the observed variables reliably represent their respective latent constructs.

The consistency of the high factor loadings supports the convergent validity of the constructs by indicating that the items are closely related to the underlying theoretical concepts. Even items with slightly lower but acceptable loadings, such as "Big data analytics enables auditors to analyse large datasets" (0.65), still contribute meaningfully to the construct structure, ensuring comprehensive representation. Strong factor loadings are important in empirical research because they confirm that the instrument effectively captures the nuances of constructs such as digital auditing efficiency, internal controls, and public trust. In the context of Malaysian public-sector forensic auditing, this robust factor structure enhances the credibility of the findings and

provides a reliable basis for policy and implementation recommendations concerning digital audit adoption.

Table 4: Factor Loadings

Variable	Item No.	Factor Loading
Digital Transformation in Auditing (DTA)	Q1	0.86
	Q2	0.70
	Q3	0.65
	Q4	0.87
	Q5	0.84
	Q6	0.91
	Q7	0.80
Efficiency of Digital Auditing (EDA)	Q1	0.82
	Q2	0.88
	Q3	0.73
	Q4	0.86
	Q5	0.90
	Q6	0.72
	Q7	0.83
Internal Controls (IC)	Q1	0.81
	Q2	0.76
	Q3	0.89
	Q4	0.85
	Q5	0.78
	Q6	0.75
	Q7	0.80
Fraud Prevention (FP)	Q1	0.70
	Q2	0.87
	Q3	0.73
	Q4	0.78
	Q5	0.91
	Q6	0.88
	Q7	0.75
Compliance with Regulations (CR)	Q1	0.79
	Q2	0.84
	Q3	0.73
	Q4	0.88
	Q5	0.90
	Q6	0.86
	Q7	0.81

Table 4: Factor Loadings (continued)

Variable	Item No.	Factor Loading
Public Trust (Moderator) (PT)	Q1	0.89
	Q2	0.85
	Q3	0.77
	Q4	0.74
	Q5	0.92
	Q6	0.81
	Q7	0.79
Perception of Forensic Digital Auditing Framework (FDAF)	Q1	0.80
	Q2	0.87
	Q3	0.83
	Q4	0.76
	Q5	0.90
	Q6	0.82
	Q7	0.85

4.3.2 Heterotrait-Monotrait Ratio and Variance Inflation Factors

The heterotrait-monotrait ratio (HTMT) presented in Table 5 provides a comprehensive view of discriminant validity among the constructs in the forensic digital auditing model. HTMT values below the commonly accepted threshold of 0.85 or 0.90 (depending on the level of conservativeness applied) suggest that the constructs are empirically distinct. In this study, the highest HTMT value is 0.81 between the public trust and forensic digital auditing framework, which remains below the more lenient threshold of 0.90, indicating adequate discriminant validity. Most other inter-construct correlations, such as 0.60 between digital transformation in auditing and fraud prevention and 0.65 between digital transformation in auditing and internal controls, confirmed satisfactory discriminant distinctions. These results indicate that, although the constructs are related, they measure sufficiently distinct concepts, thereby supporting the structural integrity of the conceptual framework used in the study.

Table 5: Heterotrait-Monotrait Ratio

Constructs	DTA	EDA	IC	FP	CR	PT	FDAF
Digital Transformation in Auditing (DTA)	1.00						
Efficiency of Digital Auditing (EDA)	0.78	1.00					
Internal Controls (IC)	0.65	0.73	1.00				
Fraud Prevention (FP)	0.60	0.68	0.74	1.00			
Compliance with Regulations (CR)	0.58	0.70	0.76	0.79	1.00		
Public Trust (PT)	0.67	0.71	0.64	0.68	0.66	1.00	
Forensic Digital Auditing Framework (FDAF)	0.69	0.73	0.71	0.74	0.77	0.81	1.00

Table 6 reports the variance inflation factor (VIF) and its reciprocal (1/VIF, tolerance) for all measurement items across seven (7) variables, providing an assessment of multicollinearity. The general guidelines suggest that VIF values should not exceed 5 (and, in some social science contexts, conservatively 3.3). The highest VIF recorded is 3.29 (DTA Q3), with others, such as 3.24 (DTA Q7), 3.22 (EDA Q1), 3.21 (FP Q3), and 3.28 (CR Q7) also approaching the conservative upper limit. Nevertheless, most items fall within acceptable bounds, supported further by tolerances above the critical cutoff of 0.2, ensuring that multicollinearity does not pose a serious threat to regression-based analyses. For example, Q4 of DTA had a VIF of 2.14 with a tolerance of 0.467, and Q1 of FDAF had a VIF of 2.07 with a tolerance of 0.483, both indicating acceptable collinearity diagnostics.

Table 6: Variance Inflation Factors

Variable	Item	VIF	1/VIF (Tolerance)
Digital Transformation in Auditing (DTA)	Q1	2.58	0.388
	Q2	3.11	0.322
	Q3	3.29	0.304
	Q4	2.14	0.467
	Q5	1.72	0.581
	Q6	2.63	0.380
	Q7	3.24	0.309
Efficiency of Digital Auditing (EDA)	Q1	3.22	0.311
	Q2	2.43	0.412
	Q3	3.04	0.329
	Q4	1.93	0.518
	Q5	2.50	0.400
	Q6	2.98	0.336
	Q7	2.29	0.437
Internal Controls (IC)	Q1	2.79	0.359
	Q2	2.32	0.431
	Q3	2.06	0.485
	Q4	1.76	0.568
	Q5	3.10	0.323
	Q6	2.48	0.403
	Q7	3.07	0.326
Fraud Prevention (FP)	Q1	2.15	0.465
	Q2	1.89	0.529
	Q3	3.21	0.311
	Q4	2.50	0.400
	Q5	2.87	0.348
	Q6	2.96	0.338
	Q7	1.71	0.585

Table 6: Variance Inflation Factors (continued)

Variable	Item	VIF	1/VIF (Tolerance)
Compliance with Regulations (CR)	Q1	2.53	0.395
	Q2	1.83	0.546
	Q3	2.45	0.408
	Q4	2.30	0.435
	Q5	2.93	0.341
	Q6	2.01	0.498
	Q7	3.28	0.305
Public Trust (Moderator) (PT)	Q1	3.14	0.318
	Q2	2.87	0.348
	Q3	2.48	0.403
	Q4	2.66	0.376
	Q5	2.19	0.457
	Q6	2.95	0.339
	Q7	1.69	0.592
Forensic Digital Auditing Framework (FDAF)	Q1	2.07	0.483
	Q2	2.61	0.383
	Q3	3.18	0.314
	Q4	2.39	0.418
	Q5	2.73	0.366
	Q6	2.46	0.407
	Q7	1.90	0.526

4.4 Path Coefficient (Direct and Indirect Effects)

The structural equation modelling results in Table 7 and Figure 2 reveal that all five (5) independent variables exert statistically significant direct effects on the perception of FDAF, as indicated by p-values less than 0.01 across the board. Digital transformation in auditing exhibits the strongest direct effect ($\beta = 0.310$, $t = 6.200$, $p = 0.001$), suggesting that integrating advanced digital tools, such as AI, blockchain, and RPA, plays a pivotal role in shaping public sector auditors' positive perceptions of forensic audit systems. Similarly, CR contributed significantly ($\beta = 0.290$, $t = 5.800$, $p = 0.001$), emphasising that the capability of digital tools to ensure regulatory compliance enhances confidence in forensic frameworks. These findings align with the increasing regulatory scrutiny in Malaysia's public sector and the imperative for digital systems to maintain compliance integrity.

Efficiency in digital auditing also demonstrates a significant impact on FDAF ($\beta = 0.260$, $t = 4.330$, $p = 0.003$), underscoring how real-time, automated, and data-driven processes enhance audit quality and are well-received by auditors. Fraud prevention shows a moderately strong relationship ($\beta = 0.220$, $t = 4.400$, $p = 0.002$), indicating that the effectiveness of fraud-detection technologies directly influences acceptance of the forensic auditing framework. Internal controls, although having the smallest effect, still contributed significantly ($\beta = 0.180$, $t = 3.600$, $p = 0.007$), indicating the supportive but comparatively weaker role of internal digital control

mechanisms. Collectively, these statistically significant coefficients support the theoretical model, confirming that multiple dimensions of digital auditing, from technological transformation to regulatory alignment, are crucial drivers of forensic framework perception in the Malaysian public audit context.

Table 7: Path Coefficient (Direct Effect)

Relationship	Coefficient Sample (O)	Coefficient Sample (M)	t-statistics (O/STERR)	p-values
Digital Transformation in Auditing → FDAF	0.310	0.305	6.200	0.001
Efficiency of Digital Auditing → FDAF	0.260	0.258	4.330	0.003
Internal Controls → FDAF	0.180	0.177	3.600	0.007
Fraud Prevention → FDAF	0.220	0.225	4.400	0.002
Compliance with Regulations → FDAF	0.290	0.295	5.800	0.001

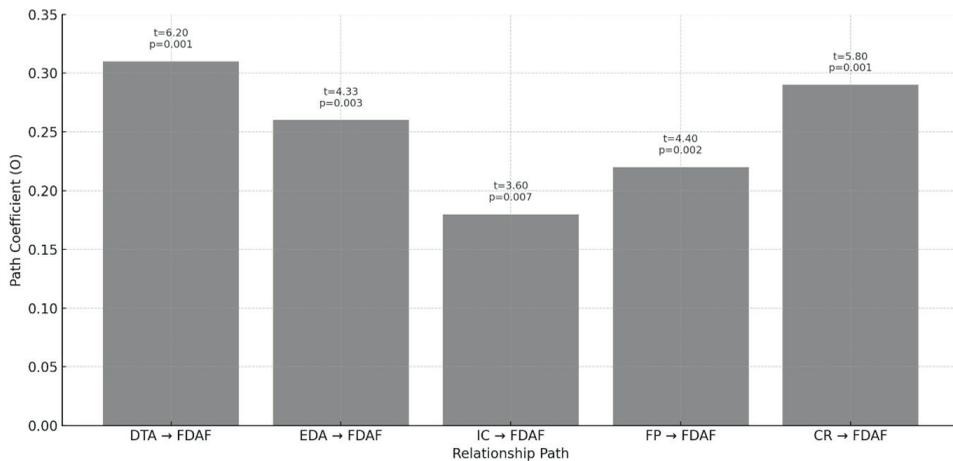


Figure 2: Path Coefficient (Direct Effect)

The analysis of moderating effects in Table 8 and Figure 3 reveals that public trust significantly improves the relationship between all five predictor variables and the perception of the FDAF, with all interaction terms demonstrating statistically significant p-values ($p < 0.05$). Among the interaction terms, the moderating effect of public trust was most pronounced in the relationship between internal controls and FDAF ($\beta = 0.091$, $t = 2.64$, $p = 0.009$), followed closely by fraud prevention ($\beta = 0.088$, $t = 2.33$, $p = 0.020$). These results suggest that the perceived contribution of internal controls and fraud-prevention efforts to the forensic framework is amplified significantly when public trust in digital auditing systems is high. The trust serves as a psychological enabler, heightening stakeholder confidence in the reliability of digitally enforced auditing measures.

Similarly, the interaction effects between public trust and other predictors of digital transformation in auditing ($\beta = 0.072$, $t = 2.21$, $p = 0.028$), compliance with regulations ($\beta = 0.063$, $t = 2.01$, $p = 0.042$), and the efficiency of digital auditing ($\beta = 0.054$, $t = 1.89$, $p = 0.049$) were also statistically

significant, albeit with slightly lower effect sizes. These findings indicate that, although these constructs already exert a direct positive impact on FDAF, their influence is amplified in contexts where the public perceives auditing technologies as credible and transparent. Essentially, trust serves as a reinforcing mechanism that strengthens the link between digital audit strategies and their acceptance and perception in public-sector governance. These findings underscore the importance of cultivating public confidence to maximise the institutional value derived from forensic digital auditing technologies in Malaysia’s public sector.

Table 8: Path Coefficient (Moderator)

Relationship	Coefficient Sample (O)	Coefficient Sample (M)	t-statistics (O/STERR)	p-values
Digital Transformation × Public Trust → FDAF	0.072	0.070	2.21	0.028
Efficiency of Digital Auditing × Public Trust → FDAF	0.054	0.052	1.89	0.049
Internal Controls × Public Trust → FDAF	0.091	0.089	2.64	0.009
Fraud Prevention × Public Trust → FDAF	0.088	0.086	2.33	0.020
Compliance with Regulations × Public Trust → FDAF	0.063	0.062	2.01	0.042

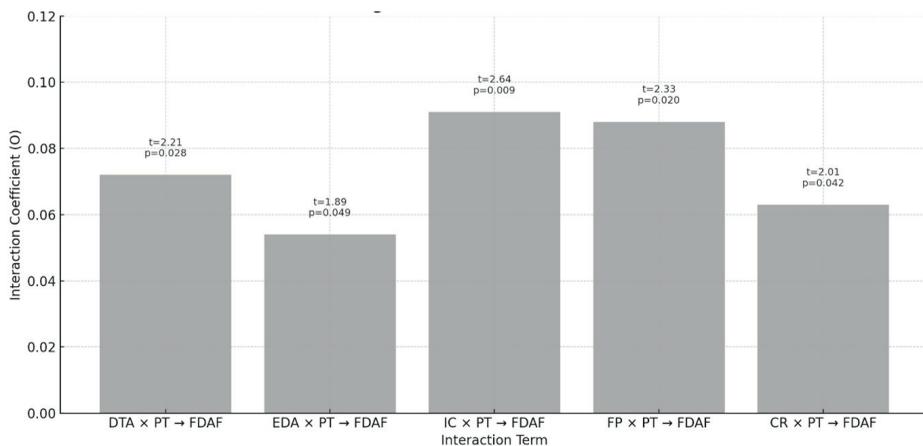


Figure 3: Path Coefficient (Moderator)

The results of this study highlight the central roles of compliance, audit efficiency, internal controls, and fraud prevention in reinforcing the perception of forensic digital auditing within the Malaysian public sector. Respondents expressed strong confidence in compliance mechanisms supported by digital systems, particularly in promoting transparency and ensuring adherence to both local and international regulations. These findings support Strauss et al. (2020), who argued that regulatory frameworks embedded within digital audit systems are essential for enhancing credibility in public financial management. The present study also aligns with Shamsudin et al. (2025), who identified the utilisation of predictive analytics, real-time monitoring, and automation as key contributors to increased audit efficiency, especially within large-scale public institutions. Internal controls, when digitally enabled, were viewed

as necessary safeguards for mitigating financial mismanagement. Handoyo (2024) similarly emphasised that integrating audit technologies significantly improves internal control procedures by enabling error detection, enforcement of controls, and risk mitigation.

Beyond operational functions, this study confirms the vital role of public trust in strengthening internal controls and fraud-prevention strategies. Trust was found to enhance the perception of audit processes, reflecting a broader shift in audit governance towards a trust-centric model. As Makanga et al. (2025) asserted, the success of fraud prevention systems depends not only on technological design but also on their public legitimacy. This finding is further corroborated by Khan (2025), who noted that citizens' perceptions of fairness, ethical practice, and auditor independence strongly influence trust in digital auditing outcomes. These comparisons demonstrate that digital capabilities must be matched with trust-building measures to ensure that compliance, internal control, and fraud-prevention initiatives are both effective and sustainable in the public sector.

5.0 Conclusion

The findings of this study reinforce the pivotal role of digital transformation in shaping the perception of forensic digital auditing in the Malaysian public sector. The results clearly demonstrate that variables such as digital transformation in auditing, efficiency of digital auditing, internal controls, fraud prevention, and compliance with regulations all significantly and positively influence the perception of the FDAF. Among these, digital transformation and regulatory compliance have emerged as the most influential predictors, indicating that modernising audit practices and adhering to evolving regulatory requirements are key drivers of audit credibility, transparency, and reliability. These relationships are substantiated by strong path coefficients and statistical significance in the structural model, indicating the readiness of the public sector to adopt advanced audit tools, such as AI, RPA, and real-time dashboards.

Additionally, this study highlights the moderating effect of public trust as an essential component that amplifies the strength of these relationships. Public trust was shown to moderate all five independent variables significantly, with the strongest interaction observed between internal controls and FDAF. These results indicate that when the public perceives digital auditing systems as trustworthy, transparent, and tamper-proof, the effects of internal controls, fraud-prevention mechanisms, and regulatory compliance become even more pronounced. Thus, trust serves as both a catalyst and stabiliser that enhances the acceptance of digital practices while reducing scepticism about technological surveillance or misuse. This dynamic is especially critical in Malaysia, where concerns about governance, accountability, and digital literacy remain prominent.

5.1 Theoretical, Managerial, and Policy Implications

Theoretically, this study advances the discourse on forensic digital auditing by empirically validating a multidimensional framework integrating digital transformation, internal controls, fraud prevention, compliance, and public trust. By demonstrating the significant direct effects of these constructs and the moderating influence of trust on perceptions of forensic digital auditing frameworks, this study extends the application of technology acceptance and institutional trust theories to a specialised public sector context. The findings highlight that technological innovation alone is insufficient without institutional and societal acceptance, particularly in

governance-intensive environments such as Malaysia's public audit system. The study also contributes to auditing theory by providing empirical evidence that aligns digital capabilities to governance objectives such as transparency, accountability, and regulatory compliance.

From managerial and policy perspectives, the findings provide critical insights for audit institutions, public service leaders, and national policymakers. Managers in public sector audit units should prioritise investments in digital tools that improve efficiency, internal control, and fraud detection while also initiating cultural change programmes to build digital confidence among staff. At the policy level, this study highlights the importance of establishing a unified national digital audit framework with clear standards for the interoperability, cybersecurity, and legal admissibility of digital evidence. Furthermore, policymakers must update outdated regulatory frameworks to accommodate emerging technologies and incorporate trust-building measures, including transparent reporting, audit trail integrity, and stakeholder engagement, into governance reforms. Collectively, these implications signal a paradigm shift towards a digitally empowered, trust-driven public audit ecosystem in Malaysia.

5.2 Limitations and Recommendations

Despite its valuable contributions, this study has several limitations that warrant consideration and provide direction for future research. First, the cross-sectional design limits the ability to draw causal inferences about the relationships between digital transformation, audit performance variables, and public trust. Longitudinal studies would enable future researchers to investigate how these relationships evolve over time, particularly in response to rapid technological advancements and evolving governance landscapes. Second, although the study achieved a substantial sample size of 407 respondents, it was confined to the Malaysian public sector, which may limit the generalisability of the findings to other geopolitical or institutional contexts. Future research could adopt comparative designs across different countries or regions to explore cultural and institutional variations in digital audit implementation. Additionally, this study relied on self-reported data, which may be subject to social desirability bias. Future studies could integrate observational or secondary data to triangulate findings and enhance validity.

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References

- Abbas, G. (2020). Role of forensic auditing in enhancing the efficiency of public sector organization: Role of forensic auditing. *Reviews of Management Sciences*, 2(2), 40–59. <https://doi.org/10.53909/rms.02.02.030>
- Ahmad, H., Mokhtar, N., & Ismail, S. (2023). Bibliometric analysis and review of digital audit practices in the public sector of different countries. *IPN Journal of Research and Practice in Public Sector Accounting and Management*, 13(2), 37–60. <https://doi.org/10.58458/ipnj.v13.02.03.0094>
- Alqudah, H. M., Amran, N. A., & Hassan, H. (2019). Factors affecting the internal auditors' effectiveness in the Jordanian public sector: The moderating effect of task complexity. *EuroMed Journal of Business*, 14(3), 251–273. <https://doi.org/10.1108/EMJB-03-2019-0049>
- Amini, M., & Jahanbakhsh Javid, N. (2023). A multi-perspective framework established on diffusion of innovation (DOI) theory and technology, organisation and environment (TOE) framework toward supply chain management system based on cloud computing technology for small and medium enterprises. *Organization and Environment (TOE) Framework Toward Supply Chain Management System Based on Cloud Computing Technology for Small and Medium Enterprises (January 2023)*. Available at SSRN: <https://ssrn.com/abstract=4340207>
- Barr-Pulliam, D., Brown-Libur, H. L., & Munoko, I. (2022). The effects of person-specific, task, and environmental factors on digital transformation and innovation in auditing: A review of the literature. *Journal of International Financial Management & Accounting*, 33(2), 337–374. <https://doi.org/10.1111/jifm.12148>
- Chetty, K., Saal, P., Ntshayintshayi, N., Masuku, N., & Moosa, T. (2024). AI as a catalyst for good governance: Transforming South Africa's fight against corruption. *Development*, 67(2), 134–146. <https://doi.org/10.1057/s41301-024-00404-8>
- Daraojimba, R. E., Farayola, O. A., Olatoye, F. M. O., Mhlongo, N., & Oke, T. T. L. (2023). Forensic accounting in the digital age: A US perspective: Scrutinising methods and challenges in digital financial fraud prevention. *Finance & Accounting Research Journal*, 5(11), 342–360. <https://doi.org/10.51594/farj.v5i11.614>
- Hajjani, H., Afshari, M. H., & Rezaei, M. (2024). Identifying and evaluating a model for enhancing the assessment of internal controls and accounting systems. *Business, Marketing, and Finance Open*, 1(4), 14–24. <https://doi.org/10.61838/bmfopen.1.4.2>
- Handoyo, S. (2024). Mapping the landscape of internal auditing effectiveness study: A bibliometric approach. *Cogent Business & Management*, 11(1), 2289200. <https://doi.org/10.1080/23311975.2023.2289200>

- Khan, M. A. (2025). Contextual considerations of audit technology acceptance, accounting regulations, administrative influences, and organizational efficiency: A Novel I-TOE adoption formulation. *Pakistan Journal of Life and Social Sciences*, 23(1), 4563–4582. <https://doi.org/10.57239/PJLSS-2025-23.1.00361>
- Komna, L., & Mpungose, S. (2024). Enhancing digital transformation strategies: A framework for SITA. *International Journal of Business Ecosystem & Strategy (2687-2293)*, 6(4), 235–252. <https://doi.org/10.36096/ijbes.v6i4.592>
- Kumar, S., Khan, S., & Yadav, R. (2024). A bibliometric analysis of research on forensic accounting from 2006 to 2024. *SSRN*. <https://doi.org/10.1016/j.ssaho.2025.101693>
- Lopez, L. J. R., Millan Mayorga, D., Martinez Poveda, L. H., Amaya, A. F. C., & Rojas Reales, W. (2024). Hybrid architectures used in the protection of large healthcare records based on cloud and blockchain integration: A review. *Computers*, 13(6), 152.
- Makanga, C. N., Orobia, L. A., & Kaawaase, T. K. (2025). Enhancing public accountability in a city authority. *Journal of Work-Applied Management*, 17(1), 62–78. <https://doi.org/10.1108/JWAM-10-2023-0111>
- Mokhtar, N., Ismail, S., & Ahmad, H. (2024). Benefits and challenges of digital audit implementation in the Malaysian public sector: Evidence from the Accountant General's Department of Malaysia. *IPN Journal of Research and Practice in Public Sector Accounting and Management*, 14(1), 1–23. <https://doi.org/10.58458/ipnj.v14.01.01.0099>
- Otia, J. E., & Bracci, E. (2022). Digital transformation and the public sector auditing: The SAI's perspective. *Financial Accountability & Management*, 38(2), 252–280. <https://doi.org/10.1111/faam.12317>
- Shamsudin, A., Khan, M. N. A. A., & Jusoh, A. (2025). Unveiling challenges and opportunities in the integration of emerging technologies in the accounting profession. *Jurnal Pengurusan*, 73, 15–28. <https://doi.org/10.17576/pengurusan-2025-73-1>
- Strauss, H., Fawcett, T., & Schutte, D. (2020). Tax risk assessment and assurance reform in response to the digitalised economy. *Journal of Telecommunications and the Digital Economy*, 8(4), 96–126. <https://doi.org/10.18080/jtde.v8n4.306>
- Tajudin, A., Khan, N. I., & Ismail, A. H. (2022). Twelve decades of public sector accounting research: A bibliometric review. *Management & Accounting Review*, 21(3), 45–63. <https://doi.org/10.24191/MAR.V21i03-10>
- Yusof, N. A. M., Mohamad, Z. Z., & Kumaran, V. V. (2022, March). Enhancing the Role of Audit as an Effective Governance Mechanism via Digital Transformation. In *International Conference on Business and Technology* (pp. 593-602). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-26956-1_56

The Impact of the Current Operational Value (COV) on Public-Sector Asset Management: A Case Study of the Fire and Rescue Department of Malaysia under IPSAS 45 and 46

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Abstract

Purpose: The current study seeks to explore the application of the current operational value (COV) in public-sector asset management by focusing on the Fire and Rescue Department of Malaysia, or *Jabatan Bomba dan Penyelamat Malaysia (JBPM)*, through the adoption of IPSAS 45 and IPSAS 46. The aims are to (i) analyse the technical implications of applying the COV, specifically for motor vehicles and operational equipment at the JBPM, and (ii) determine the impact of the COV on the financial statements of the federal government through simulation.

Methodology: A quantitative research design was employed to analyse the asset data of the JBPM, in which the data were gathered through document review and simulation.

Findings: The COV provided a more realistic valuation compared to the net book value by reflecting actual usage and remaining service potential. Technically, the COV supported more informed asset planning and performance monitoring. Financially, the COV assisted in altering how expenses and asset values could be reported without directly affecting cash flows, although the COV produce an influence on future capital decisions.

Limitations: The present study excluded property and plant from the investigation scope.

This article is part of a research on The Impact of Current Operational Value (COV) on Public Sector Asset Management: A Case Study of Fire and Rescue Department of Malaysia (*Jabatan Bomba dan Penyelamat Malaysia*) Under IPSAS 45 and IPSAS 46 through *Geran Penyelidikan Perakaunan dan Kewangan Sektor Awam Tahun 2025* (JANM.600-21/1/7 Jld. 2 (83)).

Practical Implications: This study provides practical insights for the public sector. Applying COV allows asset valuations to reflect actual usage, improving financial information for budgeting, procurement, and maintenance planning. It supports efficient resource allocation, compliance with IPSAS 46, and enhances transparency and accountability in financial reporting. COV values also strengthen funding justification, investment decisions and inter-agency comparisons based on real asset conditions.

Originality / Value: As the COV remains relatively new in practice, the current study could offer several original insights into the technical and financial implications. The findings also provided guidelines to improve financial reporting and decision-making in the public sector.

Keywords: Current operational value (COV), Jabatan Bomba dan Penyelamat Malaysia (JBPM), IPSAS 45, IPSAS 46, public-sector accounting

1.0 Introduction

Assets, such as property, plant, and equipment (PPE), intangible assets, and investments in the public sector, play vital roles in the operation and service delivery of governmental entities. Infrastructural deterioration can occur without effective asset management, which can hinder governmental performance and suggest the importance of governmental infrastructure for both national and local governments to maintain assets and ensure the effective delivery of public services (Nasir et al., 2022). Traditionally, public-sector entities have employed the historical cost or fair value to value respective assets, although the methods might not reflect the actual service potential of public-sector assets [International Public Sector Accounting Standards Board (IPSASB), 2023]. Therefore, the current study focused on how governmental agencies, especially the Fire and Rescue Department of Malaysia, or JBPM, managed respective assets, such as operational equipment and vehicles.

Two (2) complementary accounting standards, namely IPSAS 45 and IPSAS 46, have been issued by the IPSASB to enhance the quality and consistency of public-sector financial reporting. Specifically, IPSAS 45 aids in guiding the management and reporting of PPE, whereas IPSAS 46 supports IPSAS 45 by explaining the techniques to select the appropriate asset valuation method after the assets have been recorded (IPSASB, 2023). A key feature of both standards is the introduction of the current operational value (COV), which concentrates on the cost to replace the ability of an asset to provide services rather than the market price of the asset. The COV is more relevant to public-sector entities that do not operate for profit. Nevertheless, several challenges have been present in applying the COV. For instance, the COV requires detailed asset data, trained professionals, and advanced valuation techniques, such as depreciated replacement cost (IPSASB, 2023). Numerous public-sector agencies in Malaysia may not contain the resources or systems necessary to effectively implement the COV (Isa et al., 2024). Furthermore, limited research was conducted on how the COV could be adopted, especially in the Malaysian context.

Several concerns have been raised about how to appropriately and effectively apply the COV. Stakeholders, such as Certified Practising Accountant (CPA) Australia and the Malaysian Institute of Accountants (MIA), have expressed uncertainty about the guidance provided in

the exposure drafts and whether the COV would lead to inconsistent or inappropriate asset valuations (IPSASB, 2023). The concern has highlighted a significant gap in both practical application and academic research. Moreover, the introduction of the COV in the IPSAS 45 and 46 has raised certain concerns among various stakeholders. Regarding the Exposure Drafts (ED) 76, 77, and 78, organisations, including CPA Australia and Chartered Accountants Australia and New Zealand (CAANZ), have argued that the drafts do not adequately clarify the implementation of the three measurement techniques, namely the market, cost, and income, under the COV. The Pan African Federation of Accountants has also expressed opposition to the introduction of the COV and advocated for the retention of replacement cost as a measurement basis and the removal of the cost approach in ED 77. Similarly, the MIA has admonished that the COV could lead to inappropriate measurement bases for items within the PPE class, owing to the varying features, measurement objectives, and the nature of financial information. In addition, critics have underscored the lack of clear guidance, the unexplored effectiveness of the COV in asset measurement, and the potential implications of adopting the COV. While several initiatives have been proposed by the IPSASB to facilitate an asset measurement approach in public-sector accounts, the recommended approach remains ambiguous, especially for governmental entities such as the JBPM, which manage substantial infrastructure and operational assets.

A notable research gap concerning the practical application of the COV in real-world settings has been discerned, despite the introduction of IPSAS 46 and its significance for public-sector accounting. Existing literature has primarily focused on the theoretical foundations of fair value and historical cost (DeFond et al., 2020; McDonough et al., 2020; Le Quang, 2021; Tonye & Ikegima, (2022), with limited empirical studies exploring the COV, especially among Malaysian public-sector entities. Additionally, a significant knowledge gap remains on how the implementation of the COV can impact financial reporting, asset valuation, and the broader implications for risk management and audit requirements among governmental agencies. Simultaneously, the absence of localised studies or frameworks on the current subject has demonstrated a critical need for local research to bridge existing gaps and provide public-sector entities with actionable guidelines for aligning with the updated standards. Accordingly, the present study aimed to fill the gaps by conducting a data-driven simulation to assess the financial and operational impacts of the COV.

The current study focused on the JBPM, which managed motor vehicles and operational equipment. While motor vehicles and operational equipment were classified under PPE in accounting, this study did not perform a comprehensive analysis of all PPE assets managed by the JBPM. Particularly, PPE encompasses a broad range of tangible assets, including land, buildings, roads, machinery, transmission networks, ships, and aircraft, which have been outlined in the public-sector accounting standard MPSAS 17 [Malaysian Public Sector Accounting Standards Board (MPSASB), 2023]. Meanwhile, the current study scope was deliberately limited to motor vehicles and operational equipment, as both asset types were crucial to the frontline services, such as fire engines, rescue tools, and related apparatus, of the JBPM. The focus was on assets directly involved in emergency response, wherein availability, performance, and maintenance would be essential for effective service delivery. Moreover, comprehensive data on all PPE assets were either unavailable or impractical to obtain within the study timeframe. A narrower focus allowed for a more in-depth and meaningful analysis of asset condition, utilisation, and management specific to this high-impact category. Concurrently, time, manpower, and logistical constraints justified the need for a targeted scope. In addition,

the transition to utilising the COV presented several challenges in accurately measuring and reporting governmental assets and maintaining operational efficiency. The current study aimed to examine the impacts of the transition and offer insights into how the COV could be effectively applied within the public sector, especially among governmental entities such as the JBPM. The findings could aid in addressing existing gaps by (i) analysing the technical implications of employing the COV compared to current methods and (ii) simulating the impact of the COV on governmental financial statements. Additionally, the current study outcomes could assist in improving asset valuation practices and support more informed financial decision-making in the Malaysian public sector.

2.0 Literature Review

2.1 Historical Asset Measurement Method in the Public Sector

The historical method of asset measurement in the public sector has been subject to debate, particularly in the context of transitioning from cash-based to accrual accounting systems. The method, which has been primarily based on historical cost, has encountered extensive scrutiny for its inability to reflect current asset values, which has prompted discussions on alternative valuation methods. A key approach for asset measurement in public-sector accounting is the historical cost method, which records assets based on the original purchase price or acquisition cost at the time of purchase. The approach relies on verifiable transaction data and emphasises objectivity and reliability to enhance transparency and accountability in managing public finances. Hence, the historical cost method has provided a clear and transparent audit record, especially in the public sector, where stewardship and responsible management of public resources are vital. Nonetheless, the method might not constantly reflect the current market value or replacement cost of assets accurately, which can result in potential undervaluation due to different factors, such as depreciation and inflation. Recent literature has also revealed that the historical cost method remains the prevalent measurement basis in various jurisdictions due to its simplicity, reliability, consistency, and lower risk of manipulation, although certain public entities have explored fair value or revaluation models to complement the method for improved quality and relevance of financial reporting (Alam & Zaman, 2021; Hassan & Haniffa, 2023).

2.2 IPSAS 45: Property, Plant and Equipment

The IPSAS 45 has superseded IPSAS 17, Property, Plant and Equipment, by introducing the COV as a measurement basis within the updated current value model for applicable assets after being published in May 2023. The standard has also delineated the characteristics of heritage and infrastructure assets and offered alternative guidance on the recognition and measurement of assets in the public sector (IPSASB, 2023).

2.3 IPSAS 46: Measurement

The IPSAS 46 has introduced an alternative standard for measuring assets and liabilities to accurately reflect respective costs, operational capabilities, and financial values. Simultaneously, it has incorporated general guidance on fair value and introduced the COV, which has assisted in addressing the need for an alternative measurement method, specifically for certain public-sector assets (IPSASB, 2023).

2.3.1 Initial Measurement

- Paragraph 7 of IPSAS 46 states that assets and liabilities should be initially measured at the transaction price and adjusted for any related transactional costs.
- According to Paragraph 6, the transaction price is defined as the amount paid to acquire, construct, or develop an asset, or the amount received when assuming a liability.

2.3.2 Subsequent Measurement

- Figure 1 depicts the subsequent measurement after the initial measurement. Particularly, Paragraph 17 of IPSAS 46 allows entities to choose an accounting policy for measuring assets and liabilities, either utilising a historical cost basis or a current value basis, which determines the measurement method to be adopted in the future.

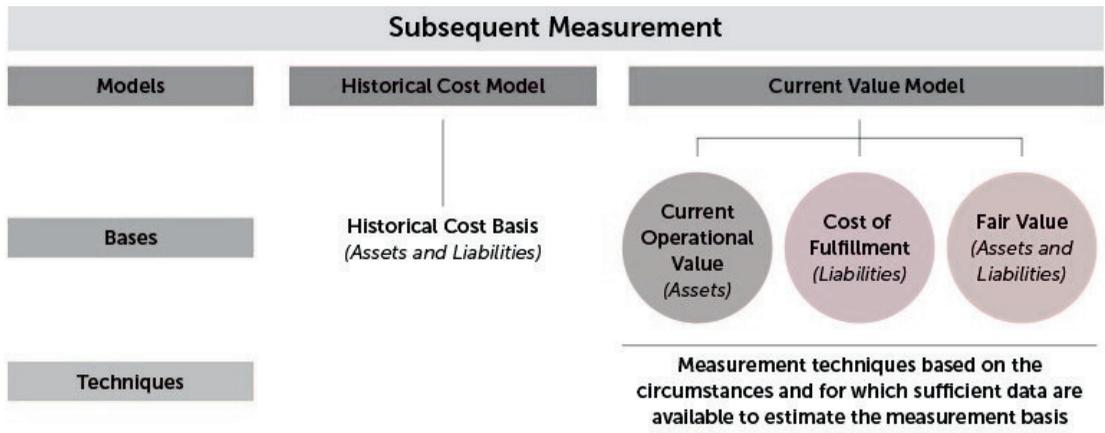


Figure 1: Subsequent Measurement

Source: IPSASB, 2023

2.4 Current Operational Value (COV)

The COV is a measurement basis specifically developed to address the key service delivery characteristics of various public-sector assets. The COV represents the amount an entity would pay for the remaining service potential of an existing asset or the conditions of asset consumption present at the measurement date, according to the Statement of Financial Position (IPSASB, 2023). Essentially, the COV measures assets in the existing usage condition to capture the unique characteristics of assets held by the public sector entities. The term also refers to how an asset or group of assets is utilised, which generally reflects the policy objectives of the entity operating the asset (IPSASB, 2023). For example, the JBPM focuses on the safety and well-being of the public, with fire stations and operational equipment operated to deliver emergency services instead of generating commercial returns.

2.5 Measurement of COV

Measurement is a key element of financial statements, which has continuously involved the application of complex models and professional judgment that are inherently subjective. Selecting an appropriate measurement basis for assets and liabilities is pivotal to supporting the objectives of public-sector financial reporting by providing users with integral information to evaluate:

- The cost of services delivered during the reporting period, whether measured in historical or current terms;
- The operational capacity of a governmental entity to continue delivering services in the future through existing physical resources; and
- The financial capacity of a governmental entity to support and finance ongoing activities (IPSASB, 2024).

Measurement is fundamental to producing high-quality financial information. Assigning assets a monetary value is integral to recognising the assets in the financial statements, which can be achieved through the measurement process by selecting both the appropriate measurement basis and method (Vardiashvili, 2019). The IPSAS 46 has introduced a holistic framework, which has integrated key concepts and recommendations related to measurement into a single standard that elucidates how different measurement approaches should be practically applied across the public sector. The standard primarily emphasises the determination of current value by introducing the following updated approaches to substitute previous methods:

- COV: Measuring assets;
- Cost of Fulfilment: Measuring liabilities; and
- Fair Value: Applied to both assets and liabilities to replace the former market value approach.

The guidance on fair value is consistent with the framework established in IFRS 13 Fair Value Measurement (Druzhirovskaya, 2021; Institute of Chartered Accountants in England and Wales, 2023). Fair value is appropriate when an asset is primarily held for the ability to generate economic benefits, such as producing cash inflows, reducing cash outflows, or for sale. Nevertheless, the IPSASB has ascertained that fair value is not suitable for measuring the current value of assets employed in operations. Instead, the IPSASB has introduced the COV as a more relevant basis for such assets (Druzhirovskaya, 2021; Institute of Chartered Accountants in England and Wales, 2023). Both the market approach and the cost approach can be applied to determine the COV. An active market may also exist for an identical asset in certain circumstances, which suggests that the market approach is a straightforward and effective valuation method (Vardiashvili, 2025). The market approach involves utilising prices and relevant data from market transactions involving identical or comparable assets, liabilities, or groups of assets and liabilities (Maisuradze & Vardiashvili, 2023). When such an active market exists, the COV can be measured based on:

- The price to acquire an identical or similar asset in that active market, or
- The cost to produce an identical or similar asset (IPSASB, 2023).

The existence of an active market becomes less probable when assets have become more specialised. Thus, the cost approach becomes more suitable. For example, adjustments should be performed to reflect the current condition and remaining useful life when market prices are only available for new assets and the asset being valued has been utilised. The fundamental objective remains the same regardless of the approach being employed, namely, to represent the value of the asset in the current state and function for service delivery under existing market conditions (IPSASB, 2023). A reliable acquisition price for a similar asset may not be available in the absence of an active market. Therefore, the COV should be estimated based on the cost to develop or produce the asset through accessible pricing data. For instance, numerous specialised fire and rescue department assets, such as custom-built fire trucks or higher-capacity rescue vehicles, do not contain active markets. The assets frequently cannot be purchased as complete and comparable items, which requires calculating the cost of individual components, such as water tanks and engines, and the cost of assembling the components into a similar asset for estimating the COV. The estimates should also be calibrated for respective age, condition, and functionality (IPSASB, 2023).

3.0 Research Methodology

3.1 Research Design

The current study adopted a quantitative research design to offer an evidence-based understanding of the research objectives. The data were collected from governmental agencies under the jurisdiction of the Kementerian Perumahan dan Kerajaan Tempatan (KPKT) by focusing on the JBPM offices located in Putrajaya and Meru Raya Ipoh. The selection was guided by the accessibility of relevant financial and operational data, on top of the willingness of the agencies to participate in the present study. The quantitative analysis was centred on secondary data derived from the most recent financial statements and asset registers of the JBPM. Specifically, the current study assessed information related to motor vehicles and specialised equipment utilised in fire and rescue operations. The focus enabled a systematic evaluation of asset utilisation, depreciation management, and resource allocation efficiency. Moreover, financial indicators and asset-related data were appraised to identify patterns and trends that could reflect the operational effectiveness and fiscal accountability of the organisation. The present study also provided empirical insights into the management and optimisation of public assets within a critical service agency by applying a structured quantitative approach. The findings were expected to contribute to a deeper understanding of how quantitative data could inform strategic asset management decisions, enhance resource sustainability, and support evidence-based policy formulation within the broader framework of public-sector management.

3.2 Sampling

The present study employed a purposive sampling technique by focusing on agencies under the KPKT, specifically the JBPM offices located in Putrajaya and Meru Raya Ipoh. The offices were selected based on the availability, completeness, and reliability of financial and asset management data. The quantitative data were extracted from official secondary sources, namely the most recent audited financial statements, logbooks, and asset registers, maintained by the JBPM. The documents aided in offering comprehensive information on the tangible assets managed by the governmental agency, especially motor vehicles and operational

equipment utilised in fire and rescue services. The selection of the data sources served to ensure high levels of consistency, comparability, and relevance to the study objectives of evaluating asset utilisation and management efficiency. Hence, the quantitative analysis was grounded in accurate, verifiable, and contextually relevant financial information by employing purposive selection of secondary data, which aided in enhancing the robustness and validity of the research findings.

3.3 Data Collection Procedure

The data collection procedure was according to the quantitative design. Quantitative data were collected from two primary sources, namely the asset listing provided by the JBPM and the asset register maintained by the KPKT. The listing from the JBPM contained detailed information on physical assets, including asset identification, acquisition cost, and asset description, although the list did not include depreciation amounts. Conversely, the listing from the KPKT encompassed both acquisition cost and accumulated depreciation. The two datasets were reconciled and matched based on asset identifiers to ensure consistency and accuracy, which enabled the calculation of the net book value (NBV) via acquisition cost and depreciation data. The finalised dataset constituted the basis for simulating asset values under both the conventional NBV method and the proposed COV approach.

3.4 Measurement of COV

In accordance with IPSAS 46: Measurement, it is proposed that COV be adopted as a measurement basis for specialised public sector motor vehicles and operational equipment not traded in active markets (e.g. emergency vehicles). COV reflects an entity-specific entry price, representing the cost the entity would incur to replace the remaining service potential of the motor vehicles and operational equipment in its current condition and usage.

Consistent with IPSAS 46, paragraph 25(a), which stated that: “Current operational value differs from fair value because it: is explicitly an entry price and includes all the costs that would necessarily be paid for the remaining service potential of an asset” (IPSASB, 2023, p. 9).

In line with this principle, IPSASB (2025) introduces COV as a comprehensive framework for measuring the amount an entity would pay for an asset’s remaining service potential in the most cost-effective and orderly manner. Appendix B of IPSAS 46 explains that COV may be determined using observable market prices where available or, in the absence of an active market, through estimated development or production costs of a similar asset. Furthermore, the IPSASB (2025) extends the application of COV to right-of-use assets under IPSAS 43, acknowledging it as an appropriate measurement basis under either the market or cost approach. The Board concludes that discounting cash flows, while typically associated with income-based valuation, can be conceptually valid when applied under these approaches to estimate the COV of such assets (IPSASB, 2025).

IPSAS 46 recommends that asset measurement should reflect the asset’s current age, functionality, and condition by considering physical, functional, and economic obsolescence.

(a) Physical Obsolescence – Physical obsolescence relates to any loss of service potential due to the physical deterioration of the asset or its components resulting from its age and use. In assessing physical obsolescence, an entity should also consider any probable future routine, regular maintenance, as such maintenance may provide insight into the asset or its components' useful lives and their rate of deterioration.

(b) Functional Obsolescence – Functional obsolescence relates to any loss of service potential resulting from inefficiencies in the asset that is being valued compared with its modern equivalent – is the asset suitable for its current function? Functional obsolescence might occur because of advances or changes in the design and/or specification of the asset, or because of technological advances. For example, advances in health care technology might mean that the asset in use is outdated, or technological advances in educational material could mean that chalk/white boards would be replaced by digital screens. Such advances will need to be incorporated into the assessment of functional obsolescence.

(c) Economic (or External) Obsolescence – Economic obsolescence relates to any loss of utility caused by economic or other factors outside the control of the entity. This may include, for example, capacity that is excess to the usage requirements of the existing asset (IPSASB, 2023, p. 163).

In essence, the implementation of the formula for measuring COV must align with IPSAS guidelines, whereby the Operating Capacity Factor (OCF) should be assessed according to IPSAS's prescribed approach for valuing assets in the public sector. Under these standards, the COV represents the amount the entity would pay to acquire an asset with the same service potential or operating capacity as the existing one, adjusted for its current condition and circumstances. The OCF is a critical component because it ensures that the valuation reflects the asset's operational usefulness, rather than its market or resale value. When applying this concept, IPSAS requires the consideration of several factors; therefore, the formula to calculate OCF is formed as below:

i) To illustrate for physical deterioration (wear and tear of the asset) measurement:

$$1 - (\text{Total repair/maintenance cost} \div \text{Total cost of asset}) \times 100\%$$

ii) To illustrate for functional obsolescence (loss of utility due to outdated design or technology):

$$1 - (\text{Cost of technological component in the new asset} \div \text{Total replacement cost of new asset}) \times 100\%$$

iii) To illustrate for economic obsolescence (external economic factors reducing the asset's usefulness):

$$1 - (\text{Remaining service potential (km/hours)} \div \text{Total expected maximum utilisation (km/hours)}) \times 100\%$$

These factors together define the OCF, which influences the calculation of COV. In practical terms, this means that when entities measure asset values, they must evaluate how much of the asset's service potential remains, considering these three aspects. Therefore, the implementation of the COV formula under IPSAS must integrate OCF to ensure the valuation accurately represents the current operational capacity of the asset, consistent with public sector accounting principles.

By extension, these principles indicate that COV should include all costs necessary to acquire equivalent motor vehicles and operational equipment with comparable service potential. To operationalise this measurement concept in the public sector context, the proposed formula is as follows:

$$\text{COV} = \text{Net Book Value} \times \text{Operating Capacity Factor (OCF)}$$

However, the limitation of this technique highlighted that OCF may be subjectively determined, based on internal assessments or condition ratings. Limited data reliability and lack of standardised scoring criteria can reduce verifiability, comparability, and auditability of COV figures. This subjectivity introduces measurement bias and reduces the faithful representation of asset value.

3.5 Ethical Considerations

The present study considered all relevant instructions. The Scientific and Ethical Review Committee of the current researcher's university also approved the survey questionnaire with the approval number: Re: U/SERC/56(A)-549/2025. The respondents' information was managed with the highest confidentiality level to guarantee full privacy.

4.0 Data Analysis and Findings

The first objective of this study is to analyse the technical implications of applying the COV for post-recognition measurement of motor vehicles and operational equipment under IPSAS 45 and IPSAS 46, compared to historical cost. Below are findings from the quantitative data collection.

Table 1 and Table 2 reveals that most motor vehicles in JBPM Putrajaya and JBPM Meru Raya Ipoh respectively, when assessed using COV, reflect lower values than their NBV using the historical cost method, implying greater operational consumption or diminished physical condition. The results support the notion that COV provides a more faithful representation of an asset's current service potential compared to historical cost-based depreciation alone, as it considers the asset's existing condition and remaining operational capacity.

In this study, the assessment also involved a review of the physical condition of motor vehicles and operational equipment at both JBPM Meru Raya, Ipoh and JBPM Putrajaya. Physical verification, inspection reports, and maintenance records were examined to validate whether the COV figures corresponded to the actual asset conditions observed on-site. The findings indicated that, in most cases, the COV values were consistent with the real physical state of the assets. For instance, the higher the consumption of the asset, the lower the COV.

This consistency between the COV valuations and the physical condition evidence strengthens the reliability of COV as a measurement basis for reflecting true service potential in public sector assets. It also highlights the importance of combining quantitative valuation techniques with qualitative assessments such as condition surveys and maintenance histories to ensure accurate and meaningful asset valuations. This supports the notion that COV offers a more truthful representation of an asset's current service potential than historical cost-based depreciation alone. It can be proven based on the findings shown in Table 1. The three (3) Kawasaki Motor Rapid Rescue Vehicles (RRV) exhibit varying levels of remaining consumption, which are further reflected in their COV. This variation highlights how COV effectively captures the operational and physical differences among assets, offering a more accurate representation of their service potential.

According to IPSAS 46, COV reflects the value of an asset in its current state, considering usage, condition, and cost of replacement. The divergence between the two (2) locations reflects the core intent of IPSAS 46 and provides a valuation method that adapts to context and better enlightens decision-making, asset management, and financial reporting. The application of IPSAS 46 and support from past studies further advocate for the COV method as a more realistic and policy-relevant measure in public asset management. While historical cost accounting remains widely used, it has received continued criticism due to its inability to reflect current economic conditions and asset utility. As noted by Simanjuntak et al. (2023), many elements of financial statements prepared using the historical cost principle do not accurately represent economic value, which challenges the fundamental characteristics of relevance and reliability in financial reporting. Therefore, adopting COV aligns better with the qualitative objectives of financial statements by providing a more accurate and meaningful assessment of an asset's remaining service potential, particularly in operationally diverse environments such as those observed in JBPM.

Table 1: JBPM, Putrajaya

Asset	Cost (RM)	Accumulated Depreciation (as on 31.12.2024) (RM)	NBV (RM)	Basis	Lifespan/ Utilisation	Total Expected Maximum	OCF	COV (RM)	NBV (RM)	Difference (NBV - COV) (RM)
Motor Vehicle										
PACUAN 4 RODA (4X4)/ TOYOTA HILUX	96,500.00	(64,333.33)	32,166.67	km	164,479.00	200,000.00	0.1776	5,712.96	32,166.67	26,453.71
PACUAN 4 RODA (4X4)/ RAPID RESCUE VEHICLE (RRV)	490,000.00	(457,333.34)	32,666.66	km	156,289.00	200,000.00	0.2186	7,139.46	32,666.66	25,527.20
KAWASAKI MOTOR RAPID RESCUE VEHICLE (RRV)	84,400.00	(30,008.91)	54,391.09	km	16,109.00	100,000.00	0.8389	45,629.23	54,391.09	8,761.86
KAWASAKI MOTOR RAPID RESCUE VEHICLE (RRV)	84,400.00	(30,008.91)	54,391.09	km	15,128.00	100,000.00	0.8487	46,162.81	54,391.09	8,228.28
KAWASAKI MOTOR RAPID RESCUE VEHICLE (RRV)	84,400.00	(30,008.91)	54,391.09	km	41,692.00	100,000.00	0.5831	31,714.36	54,391.09	22,676.73
AERIAL LEDDER PLATFORM (ALPT)	3,698,200.00	(3,482,471.00)	215,729.00	km	7,136.00	250,000.00	0.9715	209,571.23	215,729.00	6,157.77
LIGHT FIRE RESCUE TENDER (LFRT)	1,056,000.00	(884,400.00)	171,600.00	km	80,480.00	250,000.00	0.6781	116,358.53	171,600.00	55,241.47
LIGHT FIRE RESCUE TENDER (LFRT)	1,056,000.00	(884,400.00)	171,600.00	km	73,320.00	250,000.00	0.7067	121,273.15	171,600.00	50,326.85
SCANIA (BKN 1396) FIRE RESCUE TENDER	1,861,157.00	(1,349,338.82)	511,818.18	km	41,692.00	250,000.00	0.8332	426,463.29	511,818.18	85,354.89
Operational Equipment										
KOMPUTER MEJA	3,145.00	(2,197.46)	947.54	hours	78,840.00	113,880.00	0.3077	291.55	947.54	655.99
RADIO DUJA HALA	3,951.00	(2,765.70)	1,185.30	hours	113,880.00	175,200.00	0.3500	414.86	1,185.30	1,600.16
RADIO DUJA HALA	3,951.00	(2,765.70)	1,185.30	hours	113,880.00	175,200.00	0.3500	414.86	1,185.30	1,600.16
PERALATAN DATA KOMUNIKASI FREKUENSI RADIO	5,000.00	(3,500.00)	1,500.00	hours	113,880.00	175,200.00	0.3500	525.00	1,500.00	2,025.00

Table 2: JBPM, Meru Raya Ipoh

Asset	Cost (RM)	Accumulated Depreciation (as on 31.12.2024) (RM)	NBV (RM)	Basis	Lifespan/ Utilisation	Total Expected Maximum	OCF	COV (RM)	NBV (RM)	Difference (NBV - COV) (RM)
Motor Vehicle										
AMBULANS TOYOTA HIACE	490,000.00	(351,166.67)	138,833.33	km	139,397.00	200,000.00	0.3030	42,068.58	138,833.33	96,764.75
BOT PENYELAMAT (ALUMINIUM)	74,990.00	(33,120.58)	41,869.42	km	44,000.00	74,990.00	0.4133	17,302.75	41,869.42	24,566.67
FIRE RESCUE TENDER (FRT) SCANIA	710,000.00	(1,005,833.33)	704,166.67	km	124,100.00	250,000.00	0.5036	354,618.34	704,166.67	349,548.33
HONDA ET12000 GENSET	41,900.00	(16,760.00)	25,140.00	km	900.00	250,000.00	0.9964	25,049.50	25,140.00	90.50
Operational Equipment										
KOMPUTER MEJAJ DESKTOP	2,000.00	(1,782.05)	217.95	hours	96,360.00	113,880.00	0.1538	33.53	217.95	184.42
WALKIE TALKIE (PORTABLE COMM RADIO)	4,169.00	(1,858.68)	2,310.32	hours	70,080.00	175,200.00	0.6000	1,386.19	2,310.32	3,696.51

The second study objective was to affirm the direct effects of applying the COV on the financial statements of the federal government through data simulation. The findings demonstrated that the depreciation expenses and actual repair and maintenance costs for the four-wheel drive (4X4) or the RRV through the historical cost method, which were recorded in the Statement of Financial Performance. Comparatively, only the consumption was included as part of the total expenses under the COV method. The adoption of the COV method in public-sector accounting introduced significant implications for financial reporting. Table 3 displays the effect of applying the COV on the Statement of Financial Performance, the Statement of Financial Position, and the Statement of Cash Flows through a comparative perspective against the traditional historical cost approach, which is in line with IPSAS 46 principles.

Table 3: Impact of the COV on the Financial Statement

Year	Historical Cost				Current Operational Value (COV)				
	Cost (RM)	Depreciation (RM)	Accumulated Depreciation (as at 31.12.2024) (RM)	NBV (RM)	NBV b/f	Lifespan/ Utilisation	Total Expected Maximum	OCF	COV (RM)
2022	490,000	32,667	392,000	98,000	-	130,241	200,000	0.3488	34,181
2023	490,000	32,667	424,667	65,333	34,182	143,265	200,000	0.2837	9,696
2024	490,000	32,667	457,333	32,667	9,697	156,289	200,000	0.2186	2,119

4.1 Statement of Financial Performance

Depreciation was calculated on a straight-line basis under the historical cost method, which provided a fixed annual expense. Specifically, the asset, which was initially valued at RM490,000, was depreciated by RM32,667 annually and led to an NBV of RM98,000 in 2022, RM65,333 in 2023, and RM32,667 in 2024. The values were recognised as depreciation expenses in the Statement of Financial Performance regardless of the actual usage or condition of the asset. Contrarily, the COV method recognised the consumption of service potential in the long term rather than relying on rigid depreciation schedules. Table 4.3 demonstrates that the COV of the asset decreases from RM34,181 in 2022 to RM9,696 in 2023, which indicates a consumption-based expense of only RM24,485 (RM34,181 minus RM9,696) that is significantly lower than the RM32,667 recorded under the historical approach. The difference was more pronounced at JBPM Putrajaya, where assets were underutilised (lower consumption) or well-maintained (higher retained value). Resultantly, the COV could lead to higher reported surpluses in the Statement of Financial Performance.

4.2 Statement of Financial Position

The historical cost method presented asset values by subtracting accumulated depreciation from the acquisition cost in the Statement of Financial Position. The NBV of the asset estimated under the method was reduced to RM32,667 in 2024, whereas the COV method reported the asset at RM2,119 in the same year, which was more than double the NBV. The discrepancy suggested that the COV incorporated remaining service potential, the condition of the asset, and replacement cost in the least costly manner. For example, the NBV under historical cost was RM65,333 in 2023, whereas the corresponding COV was RM9,696. The variation illustrated that the COV approach could offer a more operationally grounded and context-

specific valuation, which could be useful in settings such as JBPM Putrajaya and Meru Raya Ipoh, where asset usage patterns significantly differed. In addition, the COV method could enable a more accurate representation of asset utility, which was consistent with IPSAS 46 by more accurately reflecting the current ability of an asset to provide services. Simanjuntak et al. (2023) supported the perspective by noting that historical cost values frequently could not represent the actual condition and utility of public assets, especially in service-driven sectors.

4.3 Statement of Cash Flows

The COV method did not involve direct cash movements and alter actual cash inflows or outflows. Nevertheless, the impact of the COV on the Statement of Cash Flows would emerge indirectly. Adjustments in asset valuation under the COV are generally non-cash and reflected in the reconciliation of surplus to net cash from operating activities when the indirect method has been employed. Depreciation is a fixed non-cash expense of RM32,667 annually under the historical cost method, which results in consistent adjustments to reconcile the surplus to net cash from operating activities, irrespective of the actual condition or usage of the asset. Contrastingly, the COV method records depreciation-equivalent adjustments based on the actual consumption of service potential. For instance, the COV-based expense was RM24,485 in 2023, which was lower than the RM32,667 under the historical cost model. Therefore, the adjustment to reconcile operating surplus to cash flows would also be lower, which led to a relatively higher reported net cash from operating activities for the same year. Furthermore, the COV approach could provide more accurate insights for capital expenditure and asset replacement planning by recognising retained service potential, whereas replacement decisions might rely on accounting life rather than actual condition under the historical cost approach, which could trigger premature cash outflows.

5.0 Conclusion

The present study provided robust empirical evidence on the applicability and advantages of adopting the COV method in the valuation and management of public-sector assets. A comparative analysis of historical cost and COV approaches across different geographical contexts revealed that the COV could offer a more accurate, relevant, and operationally aligned representation of asset values. Contrary to the traditional historical cost model, which frequently could not reflect the economic reality of the condition and service potential of an asset, the COV could integrate asset usage, physical condition, and location-based variables into valuation practices to improve the quality of financial reporting. The COV not only strengthened the reliability and transparency of financial statements according to IPSAS 46 but also supported informed policy and operational decisions by aligning asset data with current usage and performance metrics. Meanwhile, the differences observed between JBPM Putrajaya and JBPM Meru Raya Ipoh highlighted the contextual strength of the COV approach in capturing operational realities across diverse environments. Nonetheless, successful implementation requires robust institutional readiness, including skilled personnel, unambiguous valuation frameworks, and consistent audit oversight to ensure compliance and comparability. Hence, the COV method represents a significant transition in public-sector asset management, with the adoption of the method potentially leading to improved fiscal responsibility, enhanced strategic planning, and increased stewardship of public resources. Policymakers and financial managers are also encouraged to adopt the COV as an accompaniment to existing valuation

models, especially in environments where asset utilisation and operational intensity profoundly vary.

5.1 Practical Implications

The current study offered several practical implications for the public sector. Particularly, the COV allows for asset valuations that are more aligned with actual operational usage, which can assist in improving the relevance of financial information employed in budgeting, procurement, and maintenance planning. Concurrently, the COV can enable more tailored and efficient resource allocation for departments such as JBPM, where asset usage varies by location, which can reduce the risk of underutilisation or premature replacement. Adopting the COV can also support compliance with IPSAS 46 and ensure that public-sector entities report assets based on remaining service potential rather than arbitrary historical costs. Hence, the truthfulness and accountability of financial reporting can be enhanced, which reinforces internal audit processes and external transparency. The COV values can also provide a useful reference for justifying funding needs, informing capital investment decisions, and designing cost-effective asset replacement cycles. Moreover, inter-agency comparisons can become more meaningful when valuations are based on real-time asset conditions rather than uniform depreciation schedules, which allows central agencies or ministries to perform more informed macro-level decisions on funding and performance benchmarking.

5.2 Limitations and Recommendations

The current study conducted a foundational analysis of COV implementation in the public sector. Nevertheless, several limitations exist. The analysis was based on a limited set of asset categories, namely motor vehicles and operational equipment, and a small geographical sample size (Putrajaya and Meru Raya Ipoh), which restricted the generalisability of the findings across other departments or jurisdictions with different asset profiles or operational contexts. The accuracy of the COV also highly depended on professional judgment, the availability of market data, and expertise. The method requires estimates of entry price, current usage, and remaining service potential, and this inherent subjectivity may affect consistency and comparability when not properly standardised. Additionally, the current study primarily concentrated on financial statement impacts and did not evaluate broader outcomes, such as cost savings, efficiency gains, or public service delivery improvements, following COV adoption. The broader operational outcomes could offer a more holistic picture of COV effectiveness.

5.3 Recommendations for Future Research

Future researchers can explore the application of the COV across a wider range of asset types and public-sector agencies, including high-value infrastructure and Information and Communication Technology (ICT) equipment assets. The exploration may aid in determining whether the benefits observed in this study are consistent across more complex or service-critical assets. Longitudinal studies should also be conducted to assess the long-term financial and operational impacts of COV implementation, such as how the COV would influence asset lifecycle costs, funding efficiency, or capital expenditure planning over multiple years. Furthermore, more research can be performed on stakeholder readiness, change management, and training frameworks to support a nationwide transition to COV-based accounting, including the role of central agencies, audit institutions, and professional bodies.

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References

- Alam, M., & Zaman, M. (2021). Asset valuation practices in public sector accounting: Challenges and perspectives. *Journal of Public Budgeting, Accounting & Financial Management*, 33(2), 248–267. <https://doi.org/10.1108/JPBAFM-05-2020-0071>
- DeFond, M. L., Erkens, D. H., & Zhang, J. (2020). Why do standard setters choose fair value accounting? *Journal of Accounting and Economics*, 69(2–3), 101264. <https://doi.org/10.1016/j.jacceco.2020.101264>
- Druzhilovskaya, T. Y. (2021). Accounting for non-financial tangible assets: Convergence with ifrs, achievements, challenges, prospects. *International Accounting*, 24(2), 142. <https://doi.org/10.24891/ia.24.2.142>
- Hassan, R., & Haniffa, R. (2023). Accounting for public sector assets: Historical cost versus fair value. *Public Money & Management*, 43(1), 56–65. <https://doi.org/10.1080/09540962.2022.2084214>
- Institute of Chartered Accountants in England and Wales. (2023). *IFRS vs IPSAS in public sector financial reporting: Part III: Impairment*. <https://www.icaew.com/technical/public-sector/public-sector-financial-reporting/financialreporting-insights-listing/ifrs-vs-ipsas-3>
- International Public Sector Accounting Standards Board (IPSASB). (2023). *IPSAS 46: Measurement*. In Handbook of International Public Sector Accounting Pronouncements (Vol. I). International Federation of Accountants (IFAC). <https://www.ipsasb.org>
- International Public Sector Accounting Standards Board (IPSASB). (2024). *The Conceptual Framework for General Purpose Financial Reporting by Public Sector Entities*. In Handbook of International Public Sector Accounting Pronouncements (Vol. I). International Federation of Accountants (IFAC). <https://www.ipsasb.org/publications/2024-handbook-international-public-sector-accounting-pronouncements>
- International Public Sector Accounting Standards Board (IPSASB). (2025). *Amendments to IPSAS standards as a result of the application of IPSAS 46, Measurement*. International Federation of Accountants (IFAC). <https://www.ipsasb.org>
- Isa, C. R., Abu Hasan, H., & Saleh, Z. (2024). Issues and challenges in accounting for infrastructure assets in the Malaysian government and the way forward. *IPN Journal of Research and Practice in Public Sector Accounting and Management*, 14(1), 89–108. <https://doi.org/10.58458/ipnj.v14.01.05.0103>
- Le Quang, N. (2021). Fair value measurement in the public sector: A conceptual and practical analysis. *Public Money & Management*, 41(8), 590–598. <https://doi.org/10.1080/09540962.2020.1777282>

- Malaysian Public Sector Accounting Standards Board. (2023). *Malaysian Public Sector Accounting Standard (MPSAS) 17: Property, plant, and equipment*. <https://www.anm.gov.my/perakaunan/piawaian-perakaunan-kerajaan/asas-akruan/malaysian-public-sector-accounting-standards-mpsas>
- Maisuradze, M., & Vardiashvili, M. (2023). *Applying methods for estimation of the fair value of non-financial assets*. Ivane Javakhishvili Tbilisi State University Press.
- McDonough, R., Shakespeare, C., & Zhang, Z. (2020). Fair value accounting: Evidence from investment properties under IAS 40. *The Accounting Review*, 95(4), 233–257. <https://doi.org/10.2308/accr-52625>
- Nasir, A. A. M., Azri, S., & Ujang, U. (2022). Asset management in Malaysia: Current Status. *IOP Conference Series: Earth and Environmental Science*, 1064(1), 012001. <https://doi.org/10.1088/1755-1315/1064/1/012001>
- Simanjuntak, D., Nurjanah, S., & Muda, I. (2023). Historical cost vs current cost accounting method. *Brazilian Journal of Development*, 9(12), 31828–31840. <https://doi.org/10.34117/bjdv9n12-100>
- Tonye, O. & Ikegima, A. C. (2022). Fair value accounting and stock valuation of firms listed in the manufacturing sector in Nigeria. *International Journal of Business and Management Review*, 10(2), 24–32. <https://www.eajournals.org/wp-content/uploads/FAIRVA1.pdf>
- Vardiashvili, M. (2019). *Some issues of measurement of impairment of non-financial assets in the public sector* (1). Retrieved from https://www.researchgate.net/publication/333372157_Some-Issues-of-Measurement-of-Impairment-of--Non-Financial-Assets-in-the-Public-Sector
- Vardiashvili, M. (2025). Measurement of non-financial assets at current operational value. *Finance, Accounting and Business Analysis*, 7(1), 109–119. <https://doi.org/10.37075/FABA.2025.1.09>

Developing a Non-Technical Professional Competency Framework for Succession Planning Among Public Sector Accountants in Malaysia

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Abstract

Purpose: This study aimed to define the criteria for accountants' professional competence in the public sector, focusing on non-technical competency criteria for inclusion in the Jabatan Akauntan Negara Malaysia (JANM) succession planning framework.

Design/ Methodology/ Approach: A questionnaire survey was conducted among accountants holding strategic public sector positions from Peninsular Malaysia, Sabah, and Sarawak. This study was guided by the Malaysian Institute of Accountants' Framework and the Competency Framework used in the education sector. Initially, six (6) non-technical competencies were proposed: intellectual, interpersonal, and communication skills; personal and organisational skills; professional scepticism and judgement; ethical principles; and commitment to the public interest.

Findings: Factor analysis revealed seven (7) components: organisational, intellectual, personal, interpersonal, and communication skills; professional scepticism and judgement; ethical values; and commitment to the public good. Of the 31 items analysed, 23 were suitable for inclusion in the proposed framework. The findings suggest that incorporating professional scepticism, integrity, values, and ethics enhances accountants' vigilance and effectiveness in fulfilling public sector responsibilities.

Research Limitations/ Implications: This study provides a validated framework that broadens understanding of non-technical competencies essential for public sector accountants and supports further research in

competency development, succession planning, and human capital strategies within government accounting institutions.

Practical Implications: The framework supports strategic talent development, recruitment, and promotion decisions in the public accounting service, strengthening ethical practice and accountability in Malaysia's public financial management.

Originality/ Value: This study presents an empirically validated, context-specific framework of non-technical competencies for public sector accountants in Malaysia, offering direct value to JANM's succession planning and professional development initiatives.

Keywords: Professional competency, non-technical skills, accountants, public sector, Malaysia

1.0 Introduction

Succession planning is a strategic method of risk management (Rothwell, 2010) that involves identifying and preparing individuals to take over key leadership positions after they leave the organisation (Burdett, 1993). The traditional method of succession planning, which involves appointing specific individuals to specific positions, is ineffective in the current dynamic environment, which is characterised by aggressive competition, adaptable work arrangements, unforeseen external influences, streamlined organisational hierarchies, and constant organisational restructuring. Consequently, organisations require a cohort of employees who are highly successful at every hierarchy level (Mamprin, 2002). During this period, organisations routinely search for potential successors to key employees who will be leaving the organisation. Consequently, organisations struggle to find suitable individuals to fill the vacancies left by departing employees. Furthermore, employers have increasingly realised that they can identify potential managers and leaders within their own organisations (Mehrabani & Mohamad, 2011). Hence, employers have realised that the strategic use of tools, such as succession planning, enables them to effectively address future challenges.

Currently, the JANM is attempting to effectively supervise the recruitment and development of qualified personnel to facilitate the implementation of its succession plan. This plan highlights the need for JANM to improve its succession planning and human resource management to meet industry standards in Malaysia and those of similar organisations internationally. Improving the methodology for cultivating key skills and competencies is essential for the successful implementation of JANM succession planning and future talent management. This approach would ensure that JANM services are delivered by competent professionals who enable the realisation of JANM vision and goals.

A major challenge in succession planning is the lack of a thorough human resource management database. Such a database is essential to identify and train future JANM accountants and to measure employees' performance, competencies, and career development. Without a suitable database, JANM may encounter challenges, such as knowledge gaps, limited development opportunities, extended decision timelines, and challenges in identifying talent. Hence, JANM is establishing a succession planning framework for the talent

management of public sector accountants to ensure the future implementation of its talent management and succession planning efforts. This approach will ensure that the exemplary JANM staff deliver services effectively aligned with JANM vision and objectives. The JANM can achieve these objectives by establishing professional competency criteria to determine an auditor's necessary skills before creating the talent management database. Accordingly, this study aimed to determine the competency criteria required for accounting positions at JANM.

2.0 Literature Review

Public sector accountants are essential for the efficient use of public resources, financial accountability, transparency, and compliance with government regulations. Public sector accountants' role is important for maintaining trust in public institutions, as their responsibilities frequently overlap with public policy, administration, and the public interest. Public sector auditors significantly influence government fund management. Hence, auditors are important for the efficient delivery of public services, the promotion of sound governance, and the maintenance of public trust by ensuring that public funds are used transparently, accountably, and efficiently.

Auditors' responsibilities exceed traditional accounting and include budgeting, auditing, financial planning, risk management, and advisory activities. Thus, auditors are key players in the public administration system. Mamprin (2002) stated that fostering comprehensive skills that enhance adaptability and leadership potential at all organisational levels made more sense than focusing on developing skills for specific positions, and emphasised the need to involve all employees in succession planning.

In modern organisations, implementing strategies to cultivate adaptability skills, promote flexibility, and improve leadership competencies at all levels is a strategic decision (Mehrabani & Mohamad, 2011). Furthermore, companies have recognised the potential of identifying future managers and leaders within their organisations. This approach is consistent with studies indicating that organisations can efficiently meet their future needs through succession planning (Byham et al., 2001). While the need is obvious for succession planning in commercial, for-profit organisations, government and non-profit organisations more commonly operate without such preparation. The literature suggests that substantive research on succession planning within governmental organisations is lacking (Al-Tamimi et al., 2017). Furthermore, government organisations, such as JANM, lack of knowledge about succession planning.

Professional competence is the ability to perform a function to a specific standard defined by a specific set of expectations of a professional organisation (MIA, 2020). Thus, professional competence refers to the totality of information, skills, talents, and behaviours that enable a person to perform their job or profession competently and to the required standard. Professional competence includes the mastery of certain technical or domain-specific activities while maintaining thorough interpersonal and ethical behaviour (Epstein & Hundert, 2002). Stuebs et al., (2021, p. 38) stated that soft skills "are important for accountants to fulfil their moral broker role in society". Epstein and Hundert (2002) stated that competence is dynamic and develops over time through experience, practice, and continuous learning. Epstein and Hundert's (2002) seminal work characterised competence not as a static trait, but as a quality that can develop and improve over the course of a career. The researchers stated that competence is dynamic

and develops through lifelong learning, practice, and self-improvement over the course of a career, and involves the following (Epstein & Hundert, 2002, p. 226):

The habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served.

Accounting research aims to identify the essential components of professional competence an accountant needs to improve their skills (Sarapaivanich et al., 2019; Joshi, 2023). These studies recognised that accounting requires a mix of technical knowledge and broader skills for effective practice. Numerous studies have described essential competencies for accountants, which have frequently been categorised into two (2) overarching areas: technical and non-technical skills. A mastery of accounting and finance are essential to the accounting profession. Nonetheless, accountants have rarely or never used general knowledge and information technology in their work (Rufino et al., 2022). Conversely, professional accountants typically use non-technical skills related to intellectual, interpersonal, and communication skills. Professional accountants emphasise the need for collaboration, critical thinking, and written and verbal communication skills (Asabeh et al., 2023).

Accountants consistently adhere to professional standards, ethics, and morals when providing accounting services to clients (Palmer et al., 2004). Kane (1992) stated that assessing professional skills is challenging and occasionally frustrating due to the complexity and intellectual rigour of professional practice. Consequently, such skills are challenging to accurately describe or assess. Experts occasionally disagree about the mastery of certain scenarios in professional practice, which renders it challenging to evaluate a candidate's performance in such cases. Kane (1992) stated that assessing job skills can be easy if a basic understanding of skills in many areas is present. This understanding can be achieved by identifying the challenges in assessing job skills and suggesting methods to mitigate the influence of these challenges.

Professional accounting organisations, such as the International Federation of Accountants (IFAC) and the American Institute of Certified Public Accountants (AICPA) have attempted to create a competency framework that encompasses fundamental areas, such as professional knowledge, personal skills, and leadership skills. Additionally, accounting education researchers frequently focus on the importance of developing technical accounting skills and critical thinking, communication, and ethical reasoning to respond to the changing nature of the profession (Hunter et al., 2023). These studies consistently emphasised the need for the comprehensive development of accountants who combine technical expertise with interpersonal and strategic business insight to succeed in a more complicated and global financial landscape.

Numerous studies have analysed the professional competence of accountants and identified key competencies for accountants in two (2) primary categories: technical and non-technical skills (Palmer et al., 2004; Douglas & Gammie, 2019; Rufino et al., 2022). The professional competency criteria for accountants were developed based on the literature and professional organisations in the USA, Uganda, Australia, Canada, New Zealand, Singapore, and Malaysia (see Table 1). All professional organisations have divided the criteria into technical and non-technical skills. The USA, Uganda, and Malaysia categorised technical skills into three (3) dimensions: basic, intermediate, and advanced.

Table 1: Professional Competency Criteria

Countries or Professional Associations	Framework	Source
USA	International Education Standards	IFAC (2021)
Australia	International Accreditation Guidelines	CPA Australia (2024)
Canada	The Chartered Professional Accountant Competency Map	Certified Public Accountants (CPA) Canada (2022)
New Zealand	Chartered Accountant Capability Model	Chartered Accountants of Australia and New Zealand (CAANZ) (2023)
Singapore	ACRA Skills Framework for Accountancy	Accounting and Corporate Regulatory Authority (ACRA) (2023)
Uganda	CPA Uganda Competency Framework	Institute of Certified Public Accountants of Uganda (ICPAU) (2021)
Malaysia	MIA Competency Framework	MIA (2020)
American Institute of Certified Public Accountants (AICPA)	Core Competency Framework	AICPA (2018)
Chartered Global Management Accountant (CGMA)	CGMA Competency Framework	CGMA (2019)
World Bank	Competency Frameworks for Professional Accountants and Auditors	Centre for Financial Reporting Reform (2018)
Institute of Chartered Accountants in England and Wales (ICAEW)	Professional Development Ladders	ICAEW (2023)
Institute of Management Accountants	IMA Management Accounting Competency Framework	Institute of Management Accountants (2019)
Higher Education Leadership Academy	Leadership Competency Framework	Mohamed Jais, Yahya and Ghani (2020)

3.0 Research Methodology

3.1 Sample Selection

The study population was 880 public sector accountants in strategic positions from grade WA44 to JUSA B as of July 2024. This study selected 265 accountants employed with the JANM as the sample. In this study, the sample involved accountants in strategic positions who were assigned to the main JANM in Putrajaya, and government agencies, state governments, and ministries throughout Malaysia.

3.2 Research Instrument and Data Collection

The research instrument was a questionnaire, which was used to ensure that the professional competency criteria of accountants holding strategic positions matched that of JANM accountants or stakeholders. The original items for this framework were based on AICPA (2018), Centre for Financial Reporting Reform (2018), CGMA (2019), Institute of Management Accountants (2019), Mohamed Jais, Yahya and Ghani (2020), IFAC (2021), ICPAU (2021), MIA (2022), CPA Canada (2022), CAANZ (2023), ACRA (2023), ICAEW (2023), CPA Australia

(2024). The questionnaire was developed based on the Higher Education Competency Framework and MIA professional competency criteria. The questionnaire was improved after the completion of the second phase (interviews with public sector accountants).

The questionnaire consisted of five (5) sections. For Section A, respondents were required to indicate their current position and categorisation. Section B required respondents to respond to the professional competency criteria from a non-technical perspective. There were 31 non-technical competencies, which included conceptual thinking, strategic thinking, decision-making, and self-confidence. Section C required the respondents to answer the job competency criteria from a non-technical perspective. In Section D, respondents were required to respond to the professional competency criteria from a general technical viewpoint. This section contained 16 statements, such as “lead projects and tasks by combining ideas and theories from different technical fields and make recommendations tailored to stakeholder needs”, “evaluate, research, and solve problems under limited supervision”, and “communicate and explain relevant information consistently and convincingly to different stakeholders”.

The final Section E required the respondents to respond to a series of questions about their demographic profile, such as age, gender, qualifications, current grade, and years of experience in the public sector. The responses for Sections B and D were answered using a six-point Likert scale to prevent respondents from choosing “neutral” as an easy escape. Hence, the results may provide clearer insight into whether the respondents’ perceptions were truly positive or negative.

4.0 Data Collection

The questionnaire was conducted with JANM accountants. The participants were public-sector accountants in Putrajaya and governmental departments and ministries throughout Malaysia, and had been directly appointed by the state governments. Furthermore, accountants working at public universities were identified. The total number of accountants holding strategic positions in the public sector was reported to be 880 as of 31 July 2024. An appropriate sample size was determined by using Krejcie and Morgan’s (1970) stratified sample size table. The sample size was based on the total population rather than each position, as the number of accountants in each position varied significantly. Thus, the required sample size was 265 accountants.

The data were collected by distributing the questionnaires to public sector accountants in Malaysia from 1 October 2024 until 31 October 2024. The accountants were mainly approached via email and with the assistance of Institut Perakaunan Negara (IPN) and JANM. In total, 170 respondents completed and returned the questionnaires, which represented a 64% response rate.

5.0 Results and Discussion

5.1 Profile of Respondents

Table 2 indicates that 57 respondents (33.5%) were male, while 113 respondents (66.5%) were female. Table 1, Panel B, indicated that most respondents (59.4%) were between the ages of 41 and 50 years old, followed by those aged > 50 years old (34.7%). The remaining 10 respondents (5.9%) were under the age of 40 years. A significant proportion of the

respondents (63.5%) held an accounting degree, while three (3) respondents (1.8%) possessed a bachelor's degree in a non-accounting field (see Table 2). Furthermore, only one (1) respondent pursued an Advanced Diploma in Accounting, while 54 respondents pursued a master's in accounting (31.8%), and three (3) respondents (1.8%) held a PhD.

A considerable number of respondents had a professional qualification (see Table 2). This study shows One hundred and sixty-two of the 170 respondents (95.3%) had professional qualifications, such as Association of Chartered Certified Accountants (ACCA), Chartered Institute of Management Accountants (CIMA), Malaysian Institute of Certified Public Accountants (MICPA), Chartered Institute of Public Finance and Accountancy (CIPFA), and Chartered Public Finance Accountant (CPFA). Nevertheless, the remaining 4.7% of respondents had no professional qualifications.

Table 2: Individual-Related Profile

Panel A: Respondents' Gender	N	Percentage
Male	57	33.5
Female	113	66.5
Panel B: Respondents' Age	N	Percentage
< 30 years old	1	0.6
31 - 40 years old	9	5.3
41 - 50 years old	101	59.4
> 50 years old	59	34.7
Panel C: Education Level	N	Percentage
Advanced Diploma in Accounting	1	0.6
Bachelor's in Accounting	108	63.5
Bachelor's (non-accounting)	3	1.8
Master's	54	31.8
PhD	3	1.8
Other	1	0.6
Panel D: Professional Qualification	N	Percentage
Yes	162	95.3
No	8	4.7

5.2 Work-Related Profile

Table 3 presents the descriptive statistics of the respondents' work-related profile. It was found that just over half of the respondents (53.5%) were in grades 48 to 52 positions, followed by respondents in grades 54 to JUSA (40.6%), and the remaining 10 respondents (5.9%) were in grades 41 to 44. The JANM-appointed accountants held different department and ministry positions. Therefore, their work scope may also have varied depending on the departments and ministries where they are employed. Furthermore, the respondents' positions would also determine the titles of their job positions. Of the 170 respondents, 55.3% have worked in the public sector for more than 20 years (see Table 2), while 37.1% of respondents have worked in this sector for between 16 and 20 years. The remaining 7.6% of respondents have worked in

the public sector for less than 15 years. Overall, these figures suggested that more than half of the respondents are well acquainted with their roles in the public sector.

Further analysis revealed that most respondents (91.2%) had less than 10 years of experience in their current position. Specifically, 118 respondents (69.4%) had less than five (5) years of experience in the position, which indicated that they were new or novices in their current position. In most cases, novices could have inadequate knowledge and skills when taking on a new position. Fifteen respondents (8.8%) had accumulated 5–10 years of experience in their current position (see Table 2, Panel C).

Table 3: Work-Related Profile

Panel A: Current Position Grade	N	Percentage
54–JUSA	69	40.6
48–52	91	53.5
41–44	10	5.9
Panel B: Years of Service	N	Percentage
1–5	2	1.2
6–10	5	2.9
11–15	6	3.5
16–20	63	37.1
> 20	94	55.3
Panel C: Years of Service	N	Percentage
1–5	118	69.4
6–10	37	21.8
11–15	1	0.6
16–20	7	4.1
> 20	7	4.1
Panel D: Current Placement	N	Percentage
Eastern region (Kelantan, Terengganu, Pahang)	6	3.5
Northern region (Perlis, Kedah, Penang, Perak)	5	2.9
Southern region (Melaka, Johor)	4	2.4
Central region (Selangor, Federal Territory, Negri Sembilan, Putrajaya)	143	84.1
Sabah and Sarawak	12	7.1

A significant number of the respondents ($n = 143$, 84.1%) were in the central region of Malaysia (see Table 3), which was a common situation. In this study, the central region consists of Selangor, the Federal Territory, and Negri Sembilan. This region also includes Putrajaya, a city established in 1995 as the administrative and judicial capital of Malaysia (Moser, 2010). Therefore, most public sector accountants would reside in this city. Six (6) respondents (3.5%) worked in the eastern region (Kelantan, Terengganu, and Pahang), five (5) respondents (2.9%) worked in the northern region (Perlis, Kedah, Pahang, and Perak), and 12 respondents (7.1%) worked in Sabah and Sarawak. The remaining four (4) respondents (2.4%) were in the southern region (Melaka and Johor). Overall, all respondents resided in large cities.

5.3 Perceived Non-Technical Competency Skills

This study demonstrated the importance of non-technical skills for public sector accountants. Non-technical expertise is critical for accountants to navigate the unique challenges of the public sector, effectively engage stakeholders, and contribute to transparent and accountable governance. Table 4 presents the descriptive statistics from the exploratory factor analysis, which focused on the non-technical skills from the questionnaire survey. The results demonstrated that the respondents considered 24 of the 31 related items important for non-technical skills.

Table 4: Descriptive Statistics of Public Sector Accountants' Non-Technical Competency Skills (in percentages)

No.	Non-Technical Competency	Strongly Disagree	Disagree	Moderately Disagree	Moderately Agree	Agree	Strongly Agree
1.	Conceptual thinking				2.5	40.9	56.6
2.	Analytical thinking				1.2	28.8	70.0
3.	Critical thinking				2.4	34.7	62.9
4.	Strategic thinking				2.9	25.9	71.2
5.	Decision-making ability					26.5	73.5
6.	Planning and organising ability				0.6	24.7	74.7
7.	Networking and relationship building				3.5	35.9	60.6
8.	Teamwork and team leadership				0.6	27.6	71.8
9.	Self-confidence				0.6	25.9	73.5
10.	Empathy			0.6	7.6	38.2	53.6
11.	Information seeker and lifelong learning and personal development				2.9	44.2	52.9
12.	Leveraging diversity				5.9	43.5	50.6
13.	Negotiation, impact, and influential				4.1	41.8	54.1
14.	Initiative and proactive behaviour				2.9	39.4	57.7
15.	Professional scepticism	0.6	1.2	0.6	11.1	40.0	46.5
16.	Professional judgment				0.6	31.2	68.2

Table 4: Descriptive Statistics of Public Sector Accountants' Non-Technical Competency Skills (in percentages) (continued)

No.	Non-Technical Competency	Strongly Disagree	Disagree	Moderately Disagree	Moderately Agree	Agree	Strongly Agree
17.	Integrity, values, and ethics					14.1	85.9
18.	Resilience				0.6	32.3	67.1
19.	Achievement orientation				3.5	40.6	55.9
20.	Organisational and environmental awareness			0.6	5.3	45.9	48.2
21.	Organisational commitment				4.1	32.4	63.5
22.	Forward thinking				1.2	34.1	64.7
23.	Coaching & mentoring		0.6		7.1	42.4	50.5
24.	Listening & considerate				4.1	44.1	51.8
25.	Pleasant appearance				7.1	43.5	49.4
26.	Self and time management				1.8	33.5	64.7
27.	Customer service			2.4	14.7	44.7	38.2
28.	Entrepreneurial	0.6	1.8	8.2	32.4	37.0	20.0
29.	Resource management			1.2	7.6	41.2	50.0
30.	Conflict resolution				2.4	40.0	57.6
31.	Adaptability				1.2	36.4	62.4

The results demonstrated that some respondents disagree with some of the items. For example, the respondents disagreed that empathy, professional scepticism, and organisational and environmental awareness were important when holding a public sector position. Furthermore, customer service, entrepreneurial thinking, and people management were not considered important non-technical skills. The results suggested that some respondents considered empathy more relevant to social work or healthcare, and not crucial to accountancy, which is frequently perceived as a technical and number-orientated profession. Thus, such respondents may prioritise analytical skills over interpersonal understanding. Public sector accountants are heavily guided by regulations, guidelines, and standards. Therefore, some respondents may have believed that empathy plays a limited role in decision-making or financial reporting, where objectivity and compliance with rules are dominant.

In terms of professional scepticism, the respondents may have assumed that the structured public sector work, with rigorous audits and regulatory frameworks, reduces the need for individual scepticism. Some respondents may have underestimated professional scepticism as they perceived public sector accountants as less vulnerable to fraud or unethical behaviour than those in the private sector. In terms of organisational and environmental awareness,

the respondents may have considered that accountants are only required to focus on their technical tasks, and that broader organisational or environmental awareness is unnecessary. Furthermore, public sector accountants might mistakenly believe that their work is immune to political, economic, or social shifts, thereby downplaying the significance of environmental awareness. Although the respondents downplayed these skills, empathy, professional scepticism, and organisational and environmental awareness are important for effective public sector accounting. These skills improve accountability, adaptability, and stakeholder engagement, which are all essential for responsible stewardship of public resources. Nonetheless, the results indicated a slight disagreement regarding the concept of coaching and mentoring.

5.4 Factor Analysis Loading of Non-Technical Competency Skills

Table 5 presents the results of Bartlett's test and the Kaiser-Meyer-Olkin (KMO) value. Watkins (2018) used the Bartlett's test to estimate the likelihood of factor analysis stability, while the KMO test ensures the suitability of the data for the factor analysis in the Exploratory Factor Analysis (EFA). The EFA procedure was conducted by constructing elements using the principal component and the Varimax rotation extraction method. Based on Bahkia et al. (2019), the significance value of Bartlett's Test of Sphericity must be < 0.05 for the factor analysis to be acceptable.

In this study, Bartlett's test of sphericity (Bartlett, 1954) demonstrated that the correlation matrix was not random, as Watkins (2018) stated [$\chi^2 (170) = 4526, p < 0.001$]. The KMO statistic, as suggested by Watkins (2018), was 0.934, which was > 0.9 and indicated a remarkable level of performance (see Table 5). Consequently, this study concluded that the correlation matrix was suitable for factor analysis. Additionally, the KMO test for sampling adequacy yielded an outstanding result (KMO = 0.934). These results indicated that there were sufficient data to proceed with the data reduction process in EFA.

Table 5: Bartlett's Test and KMO Value

KMO Measure of Sampling Adequacy		0.934
Bartlett's Test of Sphericity	Approx. chi-square	4526.606
	df	465
	Sig.	< 0.001

Table 6 presents the proposed items for the seven (7) components, which total 31. The seven (7) components were similar to the proposed succession planning framework for public sector accountants. The results demonstrated that these components had a highly reliable loading factor (> 0.50), which aligned with Hair, Black, Babin and Anderson's (2010) suggestion that the loading should be > 0.5 to be considered adequate in an exploratory study and smaller sample sizes. For reliability, Nunnally (1978) suggested that a factor loading > 0.7 is considered acceptable for exploratory study, while factor loading > 0.8 indicates good reliability, > 0.9 indicates excellent reliability, but a factor loading < 0.6 indicates poor reliability.

For the organisational component, six (6) items had a factor loading > 0.5 : teamwork and team leadership, negotiation, impact and influence, achievement orientation, organisational and environmental commitment, and forward thinking. For the intellectual component, four (4)

items had a factor loading > 0.5 : conceptual thinking, analytical thinking, critical thinking, and strategic thinking.

The personal component encompassed three (3) key elements: the ability to make decisions, planning and organisational skills, and integrity, values, and ethics. Component 4 was the interpersonal and communication component, which included empathy, coaching, and mentoring, and listening and consideration. For the ethical principle components, the relevant items of pleasant demeanour, self-management, time management, and conflict resolution had a factor loading > 0.5 . Three (3) of the five (5) commitment to the public interest component items had factor loadings > 0.5 : customer service, entrepreneurship, and resource management. For the professional scepticism and professional judgement component, two (2) items had a factor loading > 0.5 : professional scepticism and professional judgement.

Table 6: Factor Loading of Public Sector Accountants' Non-Technical Competency Skills

No.	Code	Non-Technical Competency	Organisational	Intellectual	Personal Effectiveness	Interpersonal and Communication	Ethical Principles	Commitment to Public Interest	Professional Scepticism and Professional Judgment
1.	N1	Conceptual thinking		0.571*			0.421		
2.	N2	Analytical thinking		0.866*					
3.	N3	Critical thinking		0.778*					
4.	N4	Strategic thinking		0.798*					
5.	N5	Decision-making ability			0.751*				
6.	N6	Planning and organising ability			0.695*				
7.	N7	Networking and relationship building	0.426			0.465			
8.	N8	Teamwork and team leadership	0.500		0.467				
9.	N9	Self-confidence			0.532				
10.	N10	Empathy				0.832*			
11.	N11	Information seeker and lifelong learning and personal development				0.498			
12.	N12	Leveraging diversity	0.433			0.498			
13.	N13	Negotiation, impact, and influential	0.570*			0.402			
14.	N14	Initiative and proactive behaviour	0.505						
15.	N15	Professional scepticism						0.826*	
16.	N16	Professional judgment		0.447	0.428			0.455	
17.	N17	Integrity, values, and ethics			0.776*				
18.	N18	Resilience	0.419		0.484		0.426		

Table 6: Factor Loading of Public Sector Accountants' Non-Technical Competency Skills (continued)

No. Code	Non-Technical Competency	Organisational	Intellectual	Personal Effectiveness	Interpersonal and Communication	Ethical Principles	Commitment to Public Interest	Professional Scepticism and Professional Judgment
19. N19	Achievement orientation	0.575*						
20. N20	Organisational and environmental awareness	0.637*		0.46				
21. N21	Organisational commitment	0.811*						
22. N22	Forward thinking	0.616*						
23. N23	Coaching and mentoring				0.552*		0.414	
24. N24	Listening and considerate				0.57*	0.551		
25. N25	Pleasant appearance					0.595*		
26. N26	Self and time management					0.669*		
27. N27	Customer service						0.752*	
28. N28	Entrepreneurial						0.762*	
29. N29	Resource management						0.694*	
30. N30	Conflict resolution	0.441				0.629*		
31. N31	Adaptability	0.629*				0.522		

A factor analysis revealed a change in the components from six (6) to seven (7). The seven (7) components consist of organisational, intellectual, personal effectiveness, interpersonal and communication, professional scepticism and judgment, ethical principles, and commitment to the public interest. The items related to each component were identified and included in the proposed succession planning framework for JANM accountants. Thirty-one items were tested using factor analysis to determine the appropriateness of each item for each component. Of the 31 items, 23 items were suitable for the respective components (see Table 7). The Cronbach's alpha for each component suggested that they had good and excellent reliability, while the commitment to public interest component had acceptable reliability. Only the professional scepticism component retained more than one (1) element.

Table 7: Final Items of Public Sector Accountants' Non-Technical Competency Skills

No.	Code	Statement	Loading	Cronbach' Alpha for Internal Reliability
Organisational				
1.	N19	Achievement orientation	0.575	0.917
2.	N20	Organisational and environmental awareness	0.637	
3.	N21	Organisational commitment	0.811	
4.	N22	Forward thinking	0.616	
5.	N13	Negotiation, impact, and influential	0.57	
6.	N31	Adaptability	0.629	
Intellectual				
7.	N1	Conceptual thinking	0.571	0.894
8.	N2	Analytical thinking	0.866	
9.	N3	Critical thinking	0.778	
10.	N4	Strategic thinking	0.798	
Personal Effectiveness				
11.	N5	Decision-making ability	0.751	0.863
12.	N6	Planning and organising ability	0.695	
13.	N17	Integrity, values, and ethics	0.776	
Interpersonal and Communication				
14.	N10	Empathy	0.832	0.867
15.	N23	Coaching and mentoring	0.552	
16.	N24	Listening and considerate	0.57	
17.	N15	Professional scepticism	0.826	
Professional Scepticism and Professional Judgment				
17.	N15	Professional scepticism	0.826	-

Table 7: Final Items of Public Sector Accountants' Non-Technical Competency Skills (continued)

No.	Code	Statement	Loading	Cronbach' Alpha for Internal Reliability
Ethical Principles				
18.	N25	Pleasant appearance	0.595	0.840
19.	N26	Self and time management	0.669	
20.	N30	Conflict resolution	0.629	
Commitment to Public Interest				
21.	N27	Customer service	0.752	0.745
22.	N28	Entrepreneurial	0.762	
23.	N29	Resource management	0.694	

5.5 The Implication of Non-Technical Competency Skills

This exploratory study conducted on the Malaysian public sector used a research methodology that enabled replication by researchers and practitioners in other countries or government agencies. Thus, this study is relevant to the accounting profession. The replicable methodology used in this study provided a foundation for comparative research and the potential for benchmarking non-technical competency development across various public sector settings. This replicability enhanced the value of the results and encouraged broader application and validation in diverse governmental contexts.

The validated items from this study can be used as measurement indicators for future quantitative studies on competency development. Researchers who use these items can assess the effectiveness of initiatives aimed at enhancing public sector accountants' non-technical skills. This approach will enable the development of competency growth and provide valuable data to inform the continuous improvement of training programmes. Furthermore, these measurement indicators support the development of more robust and generalisable findings, and contribute to the advancement of competency frameworks within the Malaysian public sector accounting profession.

5.6 Limitations and Future Research

This study aimed to identify a set of criteria for public sector accountants' professional competency, specifically the non-technical competencies. This study suggested the inclusion of non-technical competency skills in the succession planning framework. The finalised non-technical competency skills suggested in this study (see Table 8) included intellectual, interpersonal, and communication skills; personal and organisational skills; professional scepticism and judgment; ethical principles; and a commitment to public interest.

Table 8: Final Items of Public-Sector Accountants' Non-Technical Skills

No.	Code	Statement
		Organisational
1.	N19	Achievement orientation
2.	N20	Organisational and environmental awareness
3.	N21	Organisational commitment
4.	N22	Forward-thinking
5.	N13	Negotiation, impact, and influential
6.	N31	Adaptability
Intellectual		
7.	N1	Conceptual thinking
8.	N2	Analytical thinking
9.	N3	Critical thinking
10.	N4	Strategic thinking
Personal Effectiveness		
11.	N5	Decision-making ability
12.	N6	Planning and organising abilities
13.	N17	Integrity, values, and ethics
Interpersonal and Communication		
14.	N10	Empathy
15.	N23	Coaching and mentoring
16.	N24	Listening and considerate
Professional Scepticism and Professional Judgment		
17.	N15	Professional scepticism
Ethical Principles		
18.	N25	Pleasant appearance
19.	N26	Self and time management
20.	N30	Conflict resolution
Commitment to the Public Interest		
21.	N27	Customer service
22.	N28	Entrepreneurial
23.	N29	Resource management

The results suggested that the key competencies indicated the importance of enhancing development that can emphasise their role in public sector accounting. Therefore, JANM can enhance non-technical competency through training and also mentorship based on each accountant's function and role. The JANM can ensure the usefulness of this succession planning framework by implementing regular evaluations based on continuous feedback from its internal and external stakeholders to ensure the prioritisation of the skills needed. Furthermore, the development of non-technical skills should be tailored to roles, operations, and functions, which can also fit with accountants' expertise and the JANM objective.

The first limitation of this study is that the number of public sector accountants participated in this study was considerably smaller compared to the population. The distribution of respondents was focused on the Central region, with limited representation from the Northern, Southern, Eastern, and East Malaysia regions. Thus, this focus limited the generalisability of the results to all regions in Malaysia. Nevertheless, the sample size was considered sufficient to achieve the study objectives. Hence, future studies should focus on stratified sampling based on each state to reflect the application in the public sector. Second, the quantitative analyses used in this study were limited to descriptive and simple statistical tools, such as factor analysis. Hence, the implementation of professional competency should be investigated further.

6.0 Conclusion

The JANM is important in aiding public sector accountants in improving their level of competency skills by providing training to improve these competencies. An introduction to the concepts of non-technical competency skills (professional scepticism, integrity, values, and ethics) can encourage accountants to be more alert and attentive when performing their public sector duties and responsibilities. Furthermore, JANM can provide mentoring programmes where young accountants are paired with experienced accountants to develop practical knowledge and leadership skills.

The results contributed significantly by identifying 23 distinct items related to non-technical skills, which are crucial for the professional competency framework tailored to Malaysian public sector accountants. This framework integrates behavioural, ethical, and cognitive dimensions derived from factor loadings. The analysis revealed high factor loadings for these items, which underscored their importance and provided valuable insights into which non-technical skills should be prioritised. These high-loading items can inform the JANM focus areas when designing and delivering training programmes aimed at enhancing public sector accountants' competencies. In the future, these 23 non-technical skill items are intended to be a foundational blueprint for the ongoing development and construction of a comprehensive competency framework. This framework will guide future efforts to systematically advance accountants' non-technical skills and ensure that training and professional development initiatives are aligned with the most critical areas for improvement.

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References

- ACRA. (2023). *Skills framework for accountancy*. <https://www.acra.gov.sg/accountancy/professional-development/career-development/skills-framework>
- AICPA. (2018). *Core competency framework*. <https://us.aicpa.org/content/dam/aicpa/interestareas/accountingeducation/resources/downloadabledocuments/aicpa-pre-certification-core-compentency-framework.pdf>
- Al-Tamimi, A .R. M., Agarwal, M. & Hamner, M. (2017). What if you don't have the data? Acquiring and exploring data to initiate government programs, *Procedia Computer Science*, 118, 1–14.
- Asabeh, S. A., Alzboon, R., Alkhakaileh, R., & Alshurafat, H. (2023). Soft skills and knowledge required for a professional accountant evidence from Jordan. *Cogent Education*, 10(2), 2254157. DOI:10.1080/2331186X.2023.2254157
- Bahkia, A. S., Awang, Z., Afthanorhan, A., Ghazali, P. L., Foziah, H. (2019). *Exploratory factor analysis on occupational stress in context of Malaysian sewerage operations*. In: AIP Conference Proceedings
- Bartlett, F. C. (1954). *Remembering: A study in experimental and social psychology*. Cambridge University Press.
- Burdett, J. O. (1993). Crafting tomorrow's leadership today: A practitioner's view of succession and replacement planning. *International Journal of Manpower*, 14(8), 23 –33. <https://doi.org/10.1108/01437729310044023>
- Byham, W. C., Smith, A. B. & Paese, M. J. (2001). *Grow your own leaders, acceleration pools: A new method of succession management*. Bridgeville: DDI Press.
- CAANZ. (2023). *A capability model to help shape profession of the future*. <https://www.charteredaccountantsanz.com/learning-andevents/learning/capability-mode>
- Centre for Financial Reporting Reform. (2018). *Competency-based accounting education, training and certification*. <https://cfr.worldbank.org/publications/competency-based-accounting-education-training-certification-implementation-guide>
- CGMA. (2019). *CGMA competency framework: 2019 update*. <https://us.aicpa.org/content/dam/cgma/resources/tools/downloadabledocuments/cgma-competency-framework-2019-edition.pdf>
- CPA Australia. (2024). *Professional accreditation guidelines*. <https://www.cpaustralia.com.au/get-involved/academic-institution-support/professional-accreditation-guidelines>

- CPA Canada. (2022). *The CPA competency map: Qualifications for the Canadian CPA Designation*. <https://www.cpacanada.ca/become-a-cpa/why-become-a-cpa/the-cpa-certification-program/the-cpa-competency-map>
- Douglas, S. & Gammie., E. (2019). An investigation into the development of non-technical skills by undergraduate accounting programmes. *Accounting Education*, 28(3), 304 – 332. <https://doi.org/10.1080/09639284.2019.1605532>
- Epstein, R. M. & Hundert, E. M. (2002). Defining and assessing professional competence. *Journal of the American Medical Association*, 287(2), 226–235. DOI: 10.1001/jama.287.2.226
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. 7th Edition, Pearson, New York.
- Hunter, K., Lee, J. & Massey, D. W. (2023). Professional competencies for accountants: Advancing our understanding of soft skills, in Shawver, T.J. (Ed.). *Research on Professional Responsibility and Ethics in Accounting*, 25, 1–24.
- ICAEW. (2023). *Continuing Professional Development Regulations 2023*. <https://www.icaew.com/regulation/training-and-education/cpd-regulations-2023>
- ICPAU. (2021). *CPA Uganda competency framework*. <https://www.icpau.co.ug/sites/default/files/Resources/CPA%20Competency%20Framework%20for%20Professional%20Accountants.pdf>
- IFAC. (2021). *Syllabus and competencies matrix for a three-level qualification*. <https://www.ifac.org/knowledge-gateway/professional-accountancy-organization-pao-development/publications/syllabus-competencies-matrix-three-level-qualification>
- Institute of Management Accountants. (2019). *IMA management accounting competency framework*. <https://asiapac.imanet.org/research-publications/statements-on-management-accounting/ima-management-accounting-competency-framework>
- Joshi, P. L. (2023). A survey of the influence of skill sets on the performance of professional accountants, *Journal of Accounting, Finance and Auditing Studies*, 9(3), 162–196. DOI:10.32602/jafas.2023.029
- Kane, M. T. (1992). The assessment of professional competence. *Evaluation and the Health Professions*, 15(2), 163–182. DOI: 10.1177/016327879201500203
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610. <https://doi.org/10.1177/001316447003000308>
- Mamprin, A. (2002). *Next in line: Five steps for successful succession planning*, Washington, DC: The Center for Association Leadership.

- Mehrabani, S. E. & Mohamad, N. A. (2011). Succession planning: A necessary process in today's organisation. *International Journal of e-Education, E-Business, e-Management and e-Learning*, 1(5), 371–377. DOI:10.7763/IJEEEE.2011.V1.61
- MIA. (2020). *MIA competency framework*. <https://mia.org.my/mia-competency-framework/>
- Mohamed Jais, I. R., Yahaya, N., & Ghani, E. K. (2020). Higher education leadership competency framework in Malaysia: A refinement. *Humanities and Social Sciences Letters*, 8(4), 438–449. DOI:10.18488/journal.73.2020.84.438.449
- Moser, D. V. (2010). An experimental examination of information bias in audit judgment. *The Accounting Review*, 85(3), 885–910.
- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Palmer, K. N., Ziegenfuss, D. E., & Pinsker, R. E. (2004). International knowledge, skills, and abilities of auditors/ accountants: Evidence from recent competency studies. *Managerial Auditing Journal*, 19(7), 889–896. DOI:10.1108/02686900410549411
- Rothwell, W. J. (2010). *Effective succession planning: Ensuring leadership continuity and building talent from within*. AMACOM, P.7.
- Rufino, H., Payabyab, R. G., & Lim, G. T. (2022). Competency requirements for professional accountants: Basis for accounting curriculum enhancement. *Review of Integrative Business and Economics Research*, 7(3), 116–129. DOI:10.2139/ssrn.3172508
- Sarapaivanich, N., Trakarnsirinont, W., Laohavisudhi, S., & Viriyachinkarn, T. (2019). Factors affecting the need to have accounting technical competence, professional skills and professional values, ethics and attitudes – The case of Thailand. *Asian Journal of Business and Accounting*, 12(1), 71–97. <https://doi.org/10.22452/ajba.vol12no1.3>
- Stuebs, M., Miller, W., & Mintz, S. (2021). Advancing practical wisdom in ethics as an essential soft skill developed through experiential learning. *Research on Professional Responsibility and Ethics in Accounting*, 24(1), 37–53. DOI:10.1108/S1574-07652023002
- Watkins, M. W. (2018). Exploratory factor analysis: A guide to best practice. *Journal of Black Psychology*, 44(3), 219–246. <https://doi.org/10.1177/0095798418771807>

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