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Digital Transformation and the Performance of Government Accountants: Toward an Integrated Model of Competence, Leadership, and Performance Measurement

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Abstract: This study examines the influence of digital transformation on job performance among accounting personnel in Malaysia's public sector, with a specific focus on the Accountant General's Department of Malaysia (JANM). The research is motivated by the growing need to understand how digitalization initiatives such as the iGovernment Financial Management Accounting System (iGFMAS) shape performance management and measurement practices within public financial management. Using a sequential mixed-method approach, the study begins with qualitative interviews to explore the implementation, benefits, and challenges of digital transformation, followed by a quantitative survey to validate the relationships among key constructs. The model investigates digital competence and leadership support as mediating factors linking digital transformation to job performance. Data will be collected from accounting officers across various grades (W1–W14) through purposive sampling, targeting at least 400 survey responses and 10–20 in-depth interview participants. Quantitative data will be analyzed using statistical software such as SPSS and structural equation modeling tools, while qualitative data will be analyzed thematically using NVivo. The study is expected to produce a performance management and measurement framework tailored to Malaysia's digital public finance environment. Findings will offer practical insights for enhancing workforce competence, leadership engagement, and performance accountability in the context of digital transformation. The research contributes to both policy and practice by aligning human capital development with technology-driven performance improvement in the public sector.

Keywords: Digital Transformation, Job Performance, Performance Management and Measurement, Digital Competence, Leadership Support.

INTRODUCTION

The Jabatan Akauntan Negara Malaysia (JANM) has been at the forefront of Malaysia's public financial management reforms, leading efforts to modernize accounting and reporting through digital transformation initiatives. Central to these reforms is the iGovernment Financial Management Accounting System (iGFMAS), launched in 2018 to replace legacy financial platforms across the federal government. iGFMAS integrates seventeen modules—including payments, receipts, payroll, asset management, and fund control—under a single database that supports both modified cash and accrual accounting principles. The system now serves more than 80,000 users across 27 ministries and over 6,000 responsibility

centers, marking one of the most significant digitalization efforts in Malaysia's public sector (JANM, 2024).

This initiative aligns with the 12th Malaysia Plan, which positions digital transformation as a key driver of efficiency, transparency, and accountability in government operations (Economic Planning Unit, 2023). In addition to iGFMAS, JANM's modernization agenda complements other national platforms such as MyGovEA (Malaysia Government Enterprise Architecture)—a structural framework guiding cross-agency digital integration—and the potential use of systems like eVOT, which support electronic fund management and transaction traceability. Together, these systems are intended to strengthen performance management and measurement by enabling real-time monitoring of financial activities, automated reporting, and evidence-based decision-making.

Despite these advancements, the relationship between digital transformation and individual job performance remains ambiguous. JANM's Customer Satisfaction Survey (2025) revealed ongoing issues related to system usability, user adaptation, and training adequacy. Officers cited difficulties in navigating complex digital modules, increased administrative workloads during system rollouts, and insufficient technical support (JANM, 2025). Similarly, a World Bank report on Malaysia's digital government transformation concluded that technology alone does not guarantee productivity gains; performance outcomes depend heavily on human, institutional, and cultural enablers (World Bank, 2024).

From a performance management perspective, the key concern is whether digital transformation has translated into measurable improvements in job performance indicators such as accuracy, timeliness, decision quality, and accountability. Empirical evidence from other public institutions suggests that digital systems can enhance efficiency but may also create transitional challenges, particularly when workforce digital competencies and leadership support are uneven (Ahmad et al., 2022). In Malaysia, while extensive investments have been made in ICT infrastructure, limited attention has been devoted to aligning digital initiatives with performance measurement frameworks that evaluate employee outcomes (OECD, 2023).

Furthermore, theories of digital competence emphasize that an employee's ability to effectively use digital tools is critical to realizing technology's performance benefits (Roll, 2021). Without adequate competence development, digital transformation may increase procedural complexity rather than streamline it. Similarly, digital leadership plays a mediating role by shaping organizational readiness, guiding staff through change, and reinforcing performance expectations (Borah et al., 2022). Studies have shown that leadership support can determine whether digital initiatives enhance or hinder workforce performance (Avolio et al., 2018).

Therefore, the problem underpinning this study lies in the uncertain impact of JANM's digital transformation initiatives—particularly iGFMAS—on the job performance of government accounting personnel. While the systems are operational and data integration has improved, there is limited empirical evidence demonstrating corresponding improvements in employee-level performance metrics. The lack of a performance measurement model that captures how digital transformation, digital competence, and leadership jointly influence job performance represents a significant research and policy gap.

By investigating these relationships, this study seeks to determine whether digital transformation efforts have effectively enhanced job performance within JANM and to propose an integrated Performance Management and Measurement Model that aligns digital capabilities, leadership practices, and employee performance indicators. Such a model will

support the government's broader digital governance agenda by providing evidence-based recommendations for strengthening accountability, productivity, and human capital outcomes in Malaysia's public financial management system.

Research Questions

1. How is digital transformation—particularly through the iGovernment Financial Management Accounting System (iGFMAS)—implemented within JANM, and what are the perceived benefits and challenges affecting the job performance of accounting personnel?
2. What is the relationship between digital transformation and job performance among JANM accounting personnel within the framework of performance management and measurement?
3. How does digital competence influence job performance, and to what extent does it mediate the relationship between digital transformation and job performance?
4. How does digital leadership support influence job performance, and to what extent does it mediate the relationship between digital transformation and job performance?
5. How can findings from this study inform an evidence-based performance management and measurement model to enhance job performance within JANM's digital transformation framework?

LITERATURE REVIEWS

The growing emphasis on digital transformation in the public sector has reshaped how performance is managed, measured, and improved. Globally, governments are shifting from traditional performance management systems—centered on output tracking and compliance—to data-driven, technology-enabled performance frameworks that emphasize accountability, transparency, and continuous improvement (OECD, 2023). In Malaysia, this transformation aligns with the national agenda under the Twelfth Malaysia Plan (2021–2025), which highlights digitalization as a strategic enabler for enhancing public service delivery, efficiency, and governance (Economic Planning Unit, 2023). Within this context, the Jabatan Akauntan Negara Malaysia (JANM) plays a critical role in translating digital transformation into measurable performance improvements, particularly through the implementation of the iGovernment Financial Management Accounting System (iGFMAS).

Digital Transformation and Public Sector Performance

Digital transformation refers to the integration of digital technologies into all aspects of an organization's operations to improve processes, enhance efficiency, and deliver better services (Vial, 2019). In the public sector, digital transformation often aims to automate workflows, improve data accessibility, and strengthen accountability mechanisms (World Bank, 2024). Systems such as iGFMAS exemplify these objectives by enabling real-time data processing, automated financial reporting, and centralized management of transactions across ministries and agencies (JANM, 2024).

However, the effectiveness of digital transformation initiatives is not solely determined by technological advancement but by how these systems interact with institutional structures, leadership practices, and human capabilities (Ahmad et al., 2022). The World Bank (2024) notes that digital transformation must be viewed as a socio-technical

process, where technology adoption is mediated by organizational culture and workforce readiness. This perspective resonates strongly with Malaysia's experience, where digital systems like iGFMAS have improved data accuracy and transparency, yet concerns remain regarding user adoption, technical support, and staff workload (JANM, 2025).

Within the broader theme of performance management and measurement, digital transformation introduces new opportunities for continuous monitoring and evidence-based decision-making. Performance dashboards, digital scorecards, and analytics-driven reporting tools can facilitate real-time measurement of key performance indicators (KPIs) such as timeliness, accuracy, and service quality (OECD, 2023). Nevertheless, achieving these outcomes requires that employees not only adopt new tools but also develop the competencies to interpret and act upon the data generated by such systems.

Digital Competence and Job Performance

The relationship between digital competence and job performance has gained substantial attention in both academic and policy discourse. Digital competence encompasses a set of knowledge, skills, and attitudes that enable individuals to use digital technologies effectively to achieve work objectives (Roll, 2021). According to Roll (2021), these competencies include information literacy, problem-solving, digital communication, and security awareness—all of which are essential for ensuring that digital tools enhance rather than hinder performance outcomes.

In the context of JANM, digital competence is crucial because accounting personnel operate within a highly system-dependent environment where financial accuracy, compliance, and data integrity are paramount. Officers must navigate complex modules in iGFMAS, handle electronic documentation, and ensure transaction traceability. Employees lacking digital competence may experience reduced efficiency, higher error rates, or reliance on manual processes, thereby undermining the system's potential to improve job performance (Ahmad et al., 2022).

Studies in other sectors have shown that digital competence mediates the relationship between technology implementation and job performance by enabling employees to use technology efficiently and creatively to meet performance targets (van Laar et al., 2020). Consequently, developing digital skills and competencies becomes an integral component of effective performance management systems in the public sector, especially when performance measurement increasingly relies on digital data.

Digital Leadership and Performance Enablement

Beyond individual competence, leadership support has emerged as a decisive factor in determining the success of digital transformation initiatives. Digital leadership refers to a leader's ability to inspire, guide, and empower employees to embrace digital technologies for performance improvement (Borah et al., 2022). It involves articulating a clear digital vision, fostering a culture of innovation, and providing necessary resources and training. In public organizations, digital leaders play a dual role as change agents and performance managers, assuring that digital transformation efforts align with organizational goals and performance measurement frameworks (Avolio et al., 2018).

Within JANM, effective digital leadership is critical to overcoming resistance to change and ensuring the integration of digital transformation into everyday performance practices. Leaders who communicate the benefits of digital tools, establish performance

expectations linked to system usage, and provide ongoing support can enhance both employee confidence and accountability. On the contrary, weak leadership engagement may result in superficial compliance, underutilization of digital systems, and unclear performance outcomes.

Empirical studies have established that leadership support significantly influences both job performance and organizational effectiveness in digital contexts (Borah et al., 2022). For instance, leaders who champion digital literacy initiatives and monitor technology-enabled performance metrics can create a supportive environment for continuous improvement. Thus, digital leadership acts not only as a mediator between technology and performance but also as a driver of organizational culture transformation.

PERFORMANCE MANAGEMENT AND MEASUREMENT FRAMEWORKS

The concept of performance management and measurement in the digital era extends beyond traditional assessment models. It involves integrating digital tools for real-time data collection, performance analytics, and feedback loops that inform policy and resource allocation (OECD, 2023). Digital transformation facilitates this shift by providing systems that capture, process, and visualize performance data. However, the presence of digital tools does not automatically translate into improved performance management; success depends on how well organizations align technology with human capabilities, leadership, and strategic objectives (World Bank, 2024).

In Malaysia, performance measurement practices in the public sector are evolving to reflect digital priorities. The government's ongoing digital governance reforms emphasize transparency, accountability, and value for money, all of which rely on accurate and timely data generated through systems like iGFMAS (Economic Planning Unit, 2023). Yet, the challenge remains in connecting system-generated data with individual job performance assessments. Without appropriate measurement models, agencies risk evaluating technology success rather than employee performance outcomes.

This gap underscores the need for a Performance Management and Measurement Model that integrates technological, human, and leadership dimensions of digital transformation. Such a model would allow JANM to evaluate how digital tools influence individual and collective performance, inform capacity-building strategies, and ensure that digital investments contribute directly to improved public service outcomes.

RESEARCH OBJECTIVES

1. To explore how digital transformation (via iGFMAS and other systems) is implemented within JANM and to identify its perceived benefits and challenges influencing job performance.
2. To examine the direct relationship between digital transformation and job performance among JANM accounting personnel.
3. To assess the mediating role of digital competence in the relationship between digital transformation and job performance.
4. To determine the mediating effect of digital leadership support on the relationship between digital transformation and job performance.
5. To propose a comprehensive performance management and measurement model that aligns digital transformation initiatives with job performance enhancement strategies in JANM.

METHODOLOGY

This study adopts an exploratory sequential mixed-method design to investigate how digital transformation initiatives within the Jabatan Akauntan Negara Malaysia (JANM) influence job performance under the broader framework of performance management and measurement. The study begins with a qualitative phase to explore how digital transformation systems—particularly the iGovernment Financial Management Accounting System (iGFMAS)—are implemented, their benefits, and their challenges in practice. Insights from this phase will guide the development of a quantitative survey, which will test the relationships among digital transformation, digital competence, digital leadership, and job performance. This design is chosen because it ensures a contextually grounded understanding of how digital transformation impacts employee-level performance before generalizing findings through statistical analysis. The approach aligns with Objective 1 (exploration of implementation and challenges), Objective 2 (quantitative examination of relationships), and Objective 3 (testing mediating effects).

The target population comprises all government accounting personnel (Grades W1–W14) serving under JANM across federal and state agencies.

- Qualitative Phase: Semi-structured interviews will be conducted with 10–20 officers representing different ranks and departments using focus group discussions. Selection will use purposive sampling, focusing on individuals directly involved in digital system implementation or performance measurement processes. (Linked Objective(s): Objective 1)
- Quantitative Phase: A survey will be distributed to a minimum of 400 officers to test relationships among the study variables. Quota sampling will ensure representation across grades and units. (Linked Objective(s): Objectives 2 and 3)

Research Instruments

- Qualitative: Interview guide focusing on experiences, benefits, challenges, and leadership support in digital transformation and performance measurement. (Linked Objective(s): Objective 1)
- Quantitative: Structured questionnaire based on validated scales adapted from prior studies:
    - Digital Competency: Roll (2021)
    - Digital Leadership: Borah et al. (2022)
    - Job Performance: Van Scotter & Motowidlo (1996)
    - Linked Objective(s): Objectives 2 and 3

Reliability and validity testing (Cronbach's $\alpha > 0.70$) will be conducted during pilot testing.

Data Collection Procedure

Phase	Activities	Purpose / Link to Objective(s)
Phase 1: Qualitative (Exploratory) Jan–Apr 2026	Conduct literature review, develop and validate interview protocol, obtain ethics approval, conduct 10–20 interviews using focus	To achieve Objective 1 — understanding digital transformation implementation, benefits, and challenges

	group discussions in Putrajaya, analyze data using NVivo.	influencing job performance.
Phase 2: Quantitative (Confirmatory) May–Jul 2026	Develop survey items from qualitative findings, pilot test instrument, distribute to 400 officers using Google Forms and/or hard copy questionnaires all over Malaysia, and analyze data using SPSS and SEM (PLS/AMOS/WARP).	To achieve Objective 2 and Objective 3 — testing the relationships between digital transformation, digital competence, digital leadership, and job performance, including mediation effects.
Phase 3: Integration & Reporting Aug–Oct 2026	Integrate qualitative and quantitative results, draft final report, prepare manuscripts, and present findings at colloquium.	To achieve Objective 4 — propose a performance management and measurement model for improving job performance.

Data Analysis Techniques

- Qualitative Analysis (Objective 1): NVivo software will be used for thematic analysis, identifying recurring themes related to digital transformation implementation, leadership support, and performance challenges.
- Quantitative Analysis (Objectives 2 & 3): Data will be analyzed using SPSS for descriptive statistics and SEM (PLS/AMOS/WARP) for hypothesis testing, mediation analysis, and model validation.
- Integration (Objective 4): Qualitative and quantitative results will be merged in an interpretive matrix to develop a holistic Performance Management and Measurement Model for digital transformation in JANM.

RELEVANCE TO GOVERNMENT POLICY

This research directly supports Malaysia's policy vision to build a high-performing, digitally enabled, and accountable public service. Its focus on digital transformation, job performance, and performance management and measurement aligns with the government's major reform frameworks—the Twelfth Malaysia Plan (2021–2025), the Public Sector Digitalisation Strategic Plan (PSDSP) 2021–2025, and the Public Financial Management (PFM) Reform Agenda. Collectively, these initiatives emphasize that effective digitalization must lead to measurable improvements in public service delivery, workforce performance, and governance outcomes.

The Twelfth Malaysia Plan prioritizes "Transforming the Public Service for Productivity" as a strategic enabler for national progress (Economic Planning Unit, 2023). It stresses the need to leverage digital technologies to strengthen performance management, improve decision-making, and increase efficiency across ministries. In this context, the Jabatan Akauntan Negara Malaysia (JANM) serves as a key implementing agency through the deployment of the iGovernment Financial Management Accounting System (iGFMAS), which has centralized accounting processes and enhanced fiscal transparency (JANM, 2024). These efforts reflect the Plan's goal of promoting a data-driven and results-oriented public

service. However, realizing these goals requires ensuring that digital transformation translates into better job performance, not just system automation.

The Public Sector Digitalisation Strategic Plan (2021–2025), led by the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), reinforces this direction by calling for digital competency development, adaptive leadership, and performance measurement frameworks that track the impact of digital initiatives (OECD, 2023). This study directly supports that agenda by examining how digital competence and leadership support influence job performance among JANM personnel. The findings will provide empirical evidence to guide workforce training, leadership capacity building, and data-based performance appraisal systems.

Additionally, this study complements the Public Financial Management (PFM) Reform Agenda, which focuses on modernizing financial practices and enhancing transparency (World Bank, 2024). As the core of this reform, iGFMAS integrates financial data across ministries, improving audit readiness and reporting. Yet, the ultimate measure of success lies in employee performance—specifically accuracy, timeliness, and accountability. By identifying factors that enhance or hinder job performance within JANM, the research offers valuable input for refining PFM reform implementation and ensuring that technology investments deliver measurable human performance outcomes.

Overall, the study supports Malaysia's commitment to Sustainable Development Goal 16 (Peace, Justice, and Strong Institutions) by promoting evidence-based performance management. Through its proposed Performance Management and Measurement Model, the research aims to help JANM, and other public agencies align digital transformation with measurable performance improvements, thereby enhancing efficiency, accountability, and citizen value creation in Malaysia's public sector.

CONCLUSION

In summary, the literature suggests that digital transformation can significantly enhance performance management and measurement when supported by digital competence and leadership. However, existing studies in Malaysia have primarily focused on system implementation and efficiency outcomes, leaving a gap in understanding how digital transformation affects individual job performance within the public financial management context (Ahmad et al., 2022). By examining the mediating roles of digital competence and leadership support, this study will contribute to developing a more holistic understanding of performance measurement in the digital age—aligning technological innovation with human capital and institutional leadership to strengthen accountability and service excellence in JANM.

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