INTERNATIONAL JOURNAL OF ECONOMICS AND FINANCE STUDIES
Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211
Received: 10.02.2026 | **Accepted:** 20.05.2026 | **Published Online:** 18.06.2026

-RESEARCH ARTICLE-

DIGITAL TECHNOLOGIES AND BUSINESS PERFORMANCE IN FINANCIAL INSTITUTIONS: A MODIFIED MODEL OF ACCOUNTING INFORMATION SYSTEMS, ARTIFICIAL INTELLIGENCE, CLOUD COMPUTING, AND FINANCIAL MANAGEMENT

Abdulkareem Abdulghani Oudah

Shatt Al-Arab University College, Basra, Iraq
ORCID: https://orcid.org/0009-0007-7862-8761
Email: dr.abdulkareem@sa-uc.edu.iq

Hussien Talib Alhamada

Shatt Al-Arab University College, Basra, Iraq
ORCID: https://orcid.org/0009-0009-4171-9074
Email: Hussein.Talib.Abdulbari@sa-uc.edu.iq

Mohammed Qasim Yahya Alqureani

Southern Technical University, Management Technical College,
Basra, Iraq
ORCID: https://orcid.org/0009-0008-1533-4405
Email: mohammed.yahya@stu.edu.iq

─Abstract─

This study examines how digital technologies, namely Accounting Information Systems (AIS), Artificial Intelligence (AI), and Cloud Computing (CC), together with Financial Infrastructure and Management Practices (FIMP), influence Business Performance (BP) in Iraqi financial institutions. Driven by Iraq's ongoing economic development and the strategic importance of the financial sector in fostering sustainable growth, the study assesses both the direct effects of these technologies and practices on BP and the extent to which FIMP shapes these relationships. Data were obtained through a cross-sectional survey, yielding 316 usable responses from senior executives and employees representing 45 financial institutions that actively utilise

Citation (APA): Oudah, A. A., Alhamada, H. T., Alqureani, M. Q. Y. (2026). Digital Technologies and Business Performance in Iraqi Financial Institutions: A Modified Model of Accounting Information Systems, Artificial Intelligence, Cloud Computing, and Financial Management Practices. *International Journal of Economics and Finance Studies*, 18(02), 260-289. doi: 10.34109/ijefs.2026180211

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

these technologies. The analysis was conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM) through SmartPLS 4. The results demonstrate that AIS, AI, CC, and FIMP each contribute positively and significantly to BP. Nevertheless, the moderating influence of FIMP produced varied outcomes. Specifically, FIMP exerted a significant negative moderating effect on the relationship between CC and BP, while its interaction with AIS and AI showed no statistically significant impact on BP. These results indicate that although robust financial structures and management mechanisms can directly improve organisational performance, they may simultaneously constrain the adaptability required to maximise the benefits derived from cloud-based technologies.

Keywords: AIS (Accounting Information Systems); AI (Artificial Intelligence); CC (Cloud Computing); FIMP (Financial Infrastructure and Management Practices); BP (Business Performance); Iraqi Financial Institutions; PLS-SEM.

INTRODUCTION

Looking ahead, the advancement of digital accounting, AIS, and CC is expected to accelerate as technological innovation, evolving accounting standards, and dynamic business conditions continue to reshape the financial landscape (Kroon, 2021). Consequently, increasing scholarly and professional attention has been directed towards understanding the influence of emerging digital technologies on contemporary accounting practices. Among these, CC has attracted considerable interest because of its capacity to strengthen transparency, enhance security, and improve the reliability of financial and accounting transactions (Xue et al., 2019). Recent studies demonstrate that its application in areas including audit trails, transaction verification, and fraud detection has the potential to fundamentally transform conventional accounting processes (Wang, 2023).

Another emerging innovation, the Internet of Things (IoT), is creating new opportunities while simultaneously introducing additional complexities for digital accounting and AIS. Through internet-enabled interconnected devices, IoT facilitates the generation of real-time information that supports financial reporting, inventory management, and asset tracking (Mashayekhy et al., 2022). Nevertheless, the growing adoption of IoT also intensifies concerns surrounding data confidentiality, cybersecurity, and regulatory compliance, making the careful integration of this technology into accounting environments increasingly essential. Likewise, the expanding implementation of financial process automation is anticipated to reshape accounting functions by reducing dependence on manual operations. Automating routine activities, including data recording, account reconciliation, and report preparation, can substantially improve both operational efficiency and reporting accuracy (Kaushal, 2023). Despite these advantages, greater reliance on automation is likely to alter workforce requirements, compelling organisations to redefine

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

accounting roles and invest in the development of new competencies and professional training.

Beyond technological developments, future investigations should also consider the organisational conditions that facilitate successful digital accounting adoption. Organisational culture, managerial commitment, and the availability of adequate resources represent critical determinants of digital transformation success (Leso et al., 2023). A more comprehensive understanding of these organisational dimensions would enable institutions to cultivate an environment that encourages innovation while strengthening long-term digital resilience. In addition, greater attention should be devoted to the wider socioeconomic implications of digital transformation, particularly its effects on employment patterns and income distribution. Although digital technologies can stimulate economic growth and generate new employment opportunities, they may simultaneously contribute to workforce displacement, skills mismatches, and widening income disparities (Brynjolfsson, 2014). Examining these consequences would provide valuable evidence for policymakers and business leaders seeking to balance technological progress with its broader societal implications.

Organisations are increasingly required to formulate, implement, and continuously refine their financial policies in response to rapidly changing business environments. Sound financial management strategies minimise financial exposure while strengthening both BP and organisational financial stability. Consistent implementation of FIMP has been associated with superior BP, whereas ineffective financial management frequently results in costly decision-making errors (Dwangu & Mahlangu, 2021; Kiyabo & Isaga, 2019). Furthermore, effective financial management enhances operational efficiency, thereby contributing to sustained organisational success and improved BP (Erambo et al., 2016).

Although substantial evidence supports the positive contribution of robust FIMP to organisational outcomes, the mechanisms through which these practices enhance BP remain insufficiently understood (Akpan et al., 2022). Existing research has predominantly concentrated on financial institutions located in developed economies, including the UK (Mcmahon, 2001), the USA (McMahon, 1991), Germany (Henschel, 2006), Spain (Chalmers et al., 2020), and the Netherlands (Maes et al., 2005). In contrast, empirical evidence from developing economies, particularly Iraq, remains scarce, with only a limited number of relevant investigations available (Osei et al., 2023). Existing literature consistently identifies FIMP as fundamental to the effective operation and performance of financial institutions (Zaridis et al., 2021). Previous studies further recognise these practices as strategic organisational capabilities that strengthen competitiveness and promote sustainable business success (Adegboye & Iweriebor, 2018; Brijlal et al., 2014; Nthenge & Ringera, 2017).

To address these research deficiencies, the present study develops a conceptual model

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

to evaluate the effects of AIS, CC, and AI on BP within Iraqi financial institutions while simultaneously examining the moderating influence of FIMP. The study advances the existing literature in two important respects. First, it extends the theoretical understanding of the relationships between AIS, CC, AI, and BP within the underexplored Iraqi financial sector. Second, it provides empirical evidence regarding these relationships by incorporating FIMP as a moderating construct and evaluating organisational outcomes exclusively through BP measures. Unlike the current investigation, earlier studies have generally assessed these relationships using either financial indicators or non-financial performance measures rather than relying solely on BP metrics (Ahmad et al., 2019).

THEORETICAL FRAMEWORK AND DEVELOPMENT OF HYPOTHESES

AIS and BP

BP represents the key outcomes achieved through an organisation's strategic initiatives and operational activities. The effective utilisation of AIS can strengthen organisational capabilities and, consequently, improve BP. Previous studies have consistently demonstrated that the adoption and application of AIS and cloud-based technologies contribute significantly to enhanced organisational performance. For example, Lutfi et al. (2022) reported that AIS implementation improves BP by increasing cost efficiency, operational flexibility, forecasting accuracy, costing effectiveness, and financial resource planning.

Within the context of CC, BP is associated with the ability of cloud-based services to optimise organisational processes and business operations (Saad et al., 2022). The effective deployment of these technologies has been shown to generate measurable improvements in overall BP. Similarly, in relation to enterprise resource planning (ERP), Lutfi et al. (2022) found that ERP implementation exerts a significant positive influence on BP. As a strategic organisational resource, AIS enables firms to concentrate on their core competencies, strengthen their competitive position, and achieve superior BP. Existing evidence further indicates that the successful utilisation of AIS enhances the effectiveness of cloud-enabled business operations.

Within AIS research, system usage is commonly described as the extent of effort devoted to operating the accounting system and is typically assessed through the volume or quality of outputs generated over a specified period. Users who perceive that the accounting system enhances their task performance are generally more satisfied with the system and use it more frequently (Saad et al., 2022). User satisfaction reflects the extent to which AIS fulfils users' expectations and information requirements based on their operational experiences and decision-making outcomes (Al-Khasawneh, 2013). Furthermore, prior evidence suggests that satisfaction with AIS is strongly associated with greater system utilisation (Chou & Hong, 2013),

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

which subsequently contributes to improved BP. Supporting this perspective, Hsu et al. (2015) proposed four key dimensions of BP within the context of AIS implementation. Collectively, the existing literature consistently demonstrates a robust positive association between AIS and BP. Accordingly, the following hypothesis is proposed:

Hypothesis: *AIS has a positive and direct effect on BP.*

AI and BP

The implementation of AI enables financial institutions to reduce operational costs, strengthen forecasting capabilities, and improve the effectiveness of both business and accounting functions (Agarwal et al., 2022). As a result, organisations are increasingly investing in AI because of its considerable potential to enhance BP Acemoglu & Restrepo, 2018). Since AI influences both financial and non-financial dimensions of organisational performance within financial institutions (Baabdullah et al., 2021), understanding its adoption and the determinants of its successful implementation has become an important area of interest for both researchers and practitioners (Chen & Lin, 2021). Furthermore, emerging technologies such as the Internet of Things (IoT), when integrated with AI and supported by large-scale financial and accounting data analytics, provide substantial opportunities to improve BP (Haseeb et al., 2019).

Recent literature conceptualises BP across three principal dimensions: environmental, economic, and operational performance (Baeshen et al., 2021; Xue et al., 2019). Within the financial sector, superior BP is largely dependent upon the effective management of financial and accounting processes alongside compliance with recognised quality standards. The incorporation of AI into financial operations enhances organisational efficiency, reduces operating costs, and mitigates financial risks. Additionally, AI improves BP by automating financial statement preparation (Acemoglu & Restrepo, 2018) and fostering innovation within AIS (Babina et al., 2024), thereby strengthening an organisation's competitive advantage (Xue et al., 2019). These technological advancements optimise financial processes, minimise operational expenditure, reduce resource consumption, and lower the likelihood of financial reporting errors. Based on these theoretical and empirical arguments, the following hypothesis is proposed:

Hypothesis: *AI has a positive and direct effect on BP.*

CC and BP

CC represents a transformative information technology paradigm that provides on-demand access to computing resources through network-based platforms (Marston et al., 2011). In contrast to conventional IT infrastructures, CC offers distinctive capabilities that fundamentally reshape the delivery and utilisation of computing

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

services (Armbrust et al., 2009). Although extensive research has examined the organisational implications of CC adoption, its inherent characteristics—including facilitating inter-organisational information exchange, enabling collaborative working environments, and supporting process integration—make it particularly valuable for enhancing business processes Manuel Maqueira et al. (2019); (Novais et al., 2019). By improving interoperability among organisational systems, the implementation of CC can significantly increase the efficiency and effectiveness of business operations (Bruque Camara et al., 2015).

Despite these advantages, cloud-based environments also necessitate robust governance frameworks, comprehensive risk management practices, and effective accountability mechanisms to address challenges relating to data security, regulatory compliance, and information integrity (Ukeje et al., 2024). Likewise, Okon et al. (2025) argued that governance structures and financial control mechanisms embedded within cloud environments may improve reporting quality while simultaneously imposing operational limitations that restrict organisational flexibility. Although previous research has investigated the antecedents of CC adoption and its influence on BP (Cegielski et al., 2012), comprehensive evidence published in leading academic journals remains limited regarding the mechanisms through which CC improves organisational processes and performance.

Information technology constitutes a fundamental component of modern enterprise resource systems. Ross et al. (1996) conceptualised IT capability as an organisation's capacity to effectively manage technology investments while ensuring that IT resources remain aligned with strategic business objectives. This perspective was subsequently extended by Ravichandran et al. (2005), who emphasised the integration of IT resources with core organisational competencies as a source of sustainable competitive advantage. From the standpoint of IT capability theory, the value of CC is reflected primarily through two complementary dimensions: the flexibility of organisational IT infrastructure and the strategic alignment between CC capabilities and BP (Ray et al., 2005).

The adoption of CC encompasses the utilisation of cloud-based service models, including Software as a Service (SaaS), Infrastructure as a Service (IaaS), and Platform as a Service (PaaS). These service models provide financial institutions with technological capabilities that can substantially improve operational activities and organisational processes. When effectively implemented, CC enhances both organisational efficiency and operational effectiveness, thereby contributing positively to BP (Tallon & Pinsonneault, 2011). BP represents a critical indicator of organisational effectiveness, incorporating both financial and non-financial performance outcomes (Sultan, 2011). Evaluating BP is essential because it enables organisations to determine the extent to which strategic objectives are being achieved (Liu et al., 2020). Drawing upon the framework presented by Buyya et al. (2009) and

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

cited by Liu et al. (2016), numerous BP indicators have been identified that are expected to improve following investments in advanced digital technologies. Similarly, Bruque Camara et al. (2015) proposed an expanded set of BP measures by incorporating additional indicators such as reductions in waiting times, further illustrating the operational benefits associated with CC adoption.

Hypothesis: *CC has a positive and direct effect on BP.*

FIMP and BP

FIMP constitute a fundamental element of effective organisational financial resource management (Coleman & Cohn, 2000). They are widely acknowledged as a cornerstone for establishing and sustaining best financial management practices within contemporary organisations (Coleman & Cohn 2000). FIMP encompass systematic approaches to managing budgeting, financial reporting, and other activities associated with financial resources (Ahmed & Mwangi, 2022). Through these structured practices, organisations are better equipped to allocate resources efficiently and make informed financial decisions that support long-term success (Sooriyakumaran, 2022).

According to Alles et al. (2021), the principal dimensions of FIMP comprise working capital management, capital budgeting, and asset management. Effective working capital management is essential for maintaining organisational liquidity and financial stability, thereby exerting a direct influence on profitability, sustainability, and BP (Louw et al., 2022). Likewise, capital budgeting provides a systematic basis for evaluating investment opportunities and supporting long-term financial planning (Farooq et al., 2019). Asset management further contributes to organisational effectiveness by integrating reliable information from multiple sources to facilitate evidence-based decision-making (Abdirad & Dossick, 2020). Collectively, robust FIMP strengthen financial stability, improve organisational profitability, and ensure the availability of adequate cash flows required to sustain efficient business operations (Zietlow et al., 2018).

BP is widely recognised as a multidimensional construct that reflects the overall success of an organisation (Noorani et al., 2025). It is commonly defined as the degree to which an organisation achieves its strategic objectives and desired outcomes (Nitzl et al., 2019). Numerous scholars argue that organisational success depends largely on the ability to formulate and implement strategies capable of responding effectively to dynamic and complex business environments (Rehman et al., 2019). In a similar vein, BP has been identified as a fundamental indicator for evaluating progress towards organisational goals and strategic priorities (Schwenz, 2019). Venkatraman and Ramanujam (1986) further conceptualised BP as an expression of the efficiency and effectiveness with which organisational processes support the achievement of strategic objectives.

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

The assessment of BP can be undertaken using both subjective and objective approaches. Subjective evaluations typically rely on managerial perceptions of organisational success and incorporate both financial and non-financial indicators. In contrast, objective assessments predominantly employ quantifiable financial measures to determine the extent to which organisational goals have been achieved (Singh, 2016). Nevertheless, previous research recommends integrating both subjective and objective indicators to provide a more comprehensive, balanced, and reliable evaluation of BP (Meinhardt et al., 2018).

Hypothesis: *FIMP has a positive and direct effect on BP.*
Hypothesis: *FIMP modifies the relationship between AI and BP.*
Hypothesis: *FIMP modifies the relationship between AIS and BP.*
Hypothesis: *FIMP modifies the relationship between CC and BP.*

METHODOLOGY

Research Design

This study employed a quantitative research methodology based on a cross-sectional survey design. Data were collected through a self-administered questionnaire to maximise response quality, consistency, and population coverage. The target respondents comprised senior financial managers, finance personnel, and accounting professionals from Iraqi financial institutions that had implemented AIS, CC, AI, and FIMP within their organisational operations. Accordingly, the study sought to examine how the adoption of AIS, AI, CC, and FIMP influences BP and to determine whether these technological and managerial capabilities could contribute indirectly to reducing unemployment within the financial sector.

Population and Sample

The investigation concentrated on Iraq's financial and accounting sector because of its strategic contribution to national economic growth and sustainable development during a period of rapid industrialisation and urban expansion (AlMallahi et al., 2022). Owing to its substantial economic significance, the sector has attracted considerable academic and policy attention (Shah & Soomro, 2021) while simultaneously experiencing increasing domestic and international expectations to incorporate more sustainable operational and financial practices (AlMallahi et al., 2022; Shah & Soomro, 2021). For data collection, financial institutions were selected using a random sampling approach during the initial stage of the study. The sampling frame comprised more than 345 professionals employed across 45 financial institutions who were directly involved in the implementation and use of AI, AIS, CC, FIMP, and BP-related initiatives. To ensure the relevance of the collected data, only institutions that had formally adopted these technologies and management practices were considered eligible for inclusion in the study.

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

DATA COLLECTION PROCEDURE

Data collection was undertaken over a three-month period from May to July 2025. Following approval and agreement from the participating institutions, 345 questionnaires were administered to eligible respondents across the selected financial institutions. A total of 328 completed questionnaires were received. After conducting a thorough screening process to eliminate incomplete responses and questionnaires containing missing data, 316 valid cases were retained for the final statistical analysis, yielding an effective response rate of 91.59%. Furthermore, the study investigated whether the adoption of AI, AIS, CC, and FIMP, together with their influence on BP, could contribute to addressing unemployment challenges within Iraq's financial and accounting sector.

QUESTIONNAIRE DEVELOPMENT AND MEASUREMENT INSTRUMENT

The survey instrument was initially developed in English before being translated into Arabic to ensure linguistic accuracy and cultural appropriateness. Subsequently, the Arabic version was translated back into English following the back-translation procedure proposed by Brislin (1986) to verify conceptual equivalence between both versions. The measurement items were adapted from previously validated instruments, and all constructs were assessed using a five-point Likert scale, with response options ranging from 1 ("strongly disagree") to 5 ("strongly agree").

RELIABILITY AND VALIDITY

The internal consistency of the measurement instrument was evaluated using Cronbach’s alpha coefficients. The findings demonstrated satisfactory reliability across all constructs, with every Cronbach’s alpha value exceeding the recommended minimum threshold of 0.70. These results confirm that the measurement scales possess adequate internal consistency and are reliable for subsequent statistical analysis.

DATA ANALYSIS TECHNIQUE

The collected data were analysed using PLS-SEM, a multivariate analytical technique designed to examine complex relationships among observed and latent constructs (Ringle, 2015). This analytical approach is particularly appropriate for testing theoretical frameworks because it simultaneously evaluates multiple structural relationships while minimising the influence of measurement error (Hair et al., 2021). Compared with other SEM techniques, PLS-SEM offers considerable flexibility and is suitable for studies involving small, moderate, or relatively large sample sizes.

ANALYSIS AND RESULTS

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

Owing to these methodological advantages, the proposed research model and hypotheses were assessed using SmartPLS 4 (Ringle, 2015).

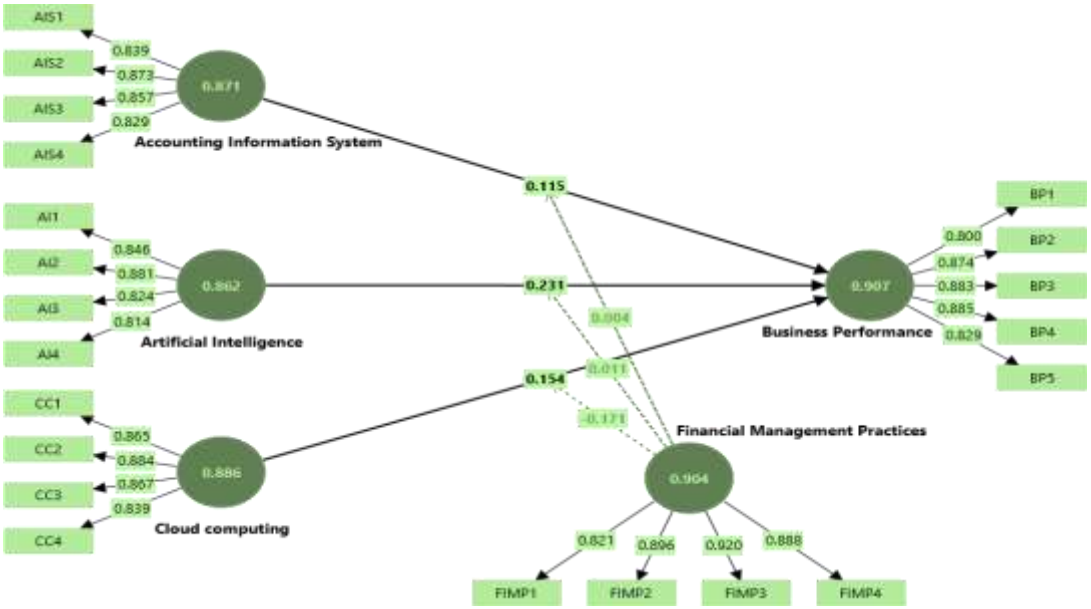


Figure 1: Results of the Factor Analysis (EFA)

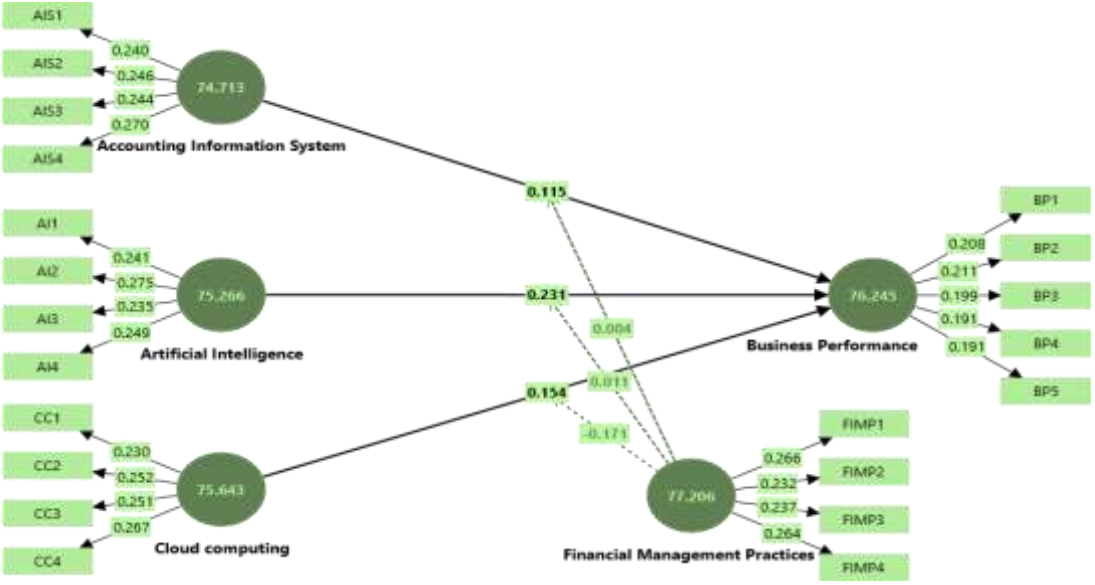


Figure 2: The Confirmatory Factor Analysis (CFA) of the Examined Model

PLS-SEM was employed to evaluate and validate the proposed conceptual framework presented in Figure 1.

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

Table 1: Results of the Factor Analysis (EFA) and the Confirmatory Factor Analysis (CFA) of the Examined Model

	Variables	PCA						Reliability	CFA		
		Factor Loadings	Outer Loadings	VIF	S.d	T Values	P Values	Cronbach's Alpha	C.R (rho_a)	C.R (rho_a)	AVE
AI	AI1	0.846	0.846	2.161	0.013	24.400	0.000	0.862	0.866	0.906	0.708
	AI2	0.881	0.881	2.503	0.013	25.154	0.000				
	AI3	0.824	0.823	1.985	0.011	24.583	0.000				
	AI4	0.814	0.812	1.845	0.013	22.478	0.000				
AIS	AIS1	0.839	0.838	2.302	0.010	29.057	0.000	0.871	0.871	0.912	0.721
	AIS2	0.873	0.872	2.702	0.009	30.795	0.000				
	AIS3	0.857	0.856	2.446	0.011	26.044	0.000				
	AIS4	0.829	0.828	2.123	0.014	22.127	0.000				
BP	BP1	0.800	0.799	2.131	0.009	27.314	0.000	0.907	0.908	0.931	0.731
	BP2	0.874	0.873	3.193	0.007	33.270	0.000				
	BP3	0.883	0.882	3.106	0.007	33.475	0.000				
	BP4	0.885	0.884	3.791	0.007	33.868	0.000				
	BP5	0.829	0.828	2.936	0.008	28.672	0.000				
CC	CC1	0.865	0.864	2.648	0.009	32.646	0.000	0.886	0.886	0.922	0.746
	CC2	0.884	0.883	3.076	0.009	31.453	0.000				
	CC3	0.867	0.867	2.591	0.011	26.714	0.000				
	CC4	0.839	0.838	2.157	0.011	26.238	0.000				
FIMP	FIMP1	0.821	0.819	1.865	0.012	25.247	0.000	0.904	0.904	0.933	0.778
	FIMP2	0.896	0.895	3.738	0.008	36.234	0.000				
	FIMP3	0.920	0.919	4.717	0.007	41.711	0.000				
	FIMP4	0.888	0.887	2.893	0.009	32.719	0.000				

As an initial assessment, Principal Component Analysis (PCA) was conducted to examine the dimensionality of the measurement model. The results confirmed that each of the five latent construct categories exhibited a unidimensional structure Bou-Llusar et al. (2009). The corresponding factor loadings and the proportion of explained variance for each single-factor solution are reported in Table 2. Following the preliminary assessment, Confirmatory Factor Analysis (CFA) was undertaken to further establish the validity and reliability of the measurement model. The CFA results verified that the 18 observed indicators adequately represented the four latent exogenous constructs illustrated in Figure 2 and demonstrated that the measurement model achieved a satisfactory overall level of fit. In addition, the statistical significance of the majority of the estimated parameters ($P < 0.05$) provided further evidence supporting the robustness of the proposed model. A summary of these findings is presented in Table 1.

To examine the representativeness of the collected data, two independent-samples *t*-tests were performed. The findings revealed no statistically significant differences

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

between the study sample and the target population, indicating that the sample adequately reflected the broader population characteristics. The internal consistency of the latent constructs was subsequently assessed using Cronbach's alpha (Cronbach, 1951). Following the recommended reliability criterion, alpha coefficients greater than 0.70 were considered acceptable. As reported in Table 2, all constructs produced Cronbach's alpha values exceeding 0.90 (Bou-Llusar et al., 2009), demonstrating excellent internal consistency and confirming the reliability of the measurement scales. Finally, PLS-SEM was further utilised to examine relationships among pairs of latent constructs in order to assess discriminant validity within the measurement model, thereby providing additional evidence of construct distinctiveness.

Table 2: Discriminate Validity

Variables	AIS	AI	BP	CC	FIMP	FIMP x CC	FIMP x AI	FIMP x AIS
AIS								
AI	0.899							
BP	0.839	0.882						
CC	0.852	0.851	0.857					
FIMP	0.894	0.934	0.881	0.907				
FIMP x CC	0.772	0.801	0.848	0.827	0.862			
FIMP x AI	0.765	0.806	0.822	0.806	0.876	0.939		
FIMP x AIS	0.767	0.810	0.831	0.823	0.864	0.956	0.953	

Discriminant validity represents a fundamental criterion for evaluating the distinctiveness of constructs within a measurement model, as it determines the extent to which each construct is empirically different from the others. Duarte et al. (2010) defined discriminant validity as the degree to which a construct captures a unique underlying concept without sharing excessive variance with other constructs. High discriminant validity therefore indicates that each latent variable measures its intended theoretical domain while remaining conceptually and statistically distinct from related constructs. In the present study, discriminant validity was assessed using the Fornell–Larcker criterion by comparing the square root of the Average Variance Extracted (AVE) for each construct with the corresponding inter-construct correlation coefficients.

Table 3: Fornell-Larcker Criterion

Variables	AIS	AI	BP	CC	FIMP
AIS	0.849				
AI	0.782	0.841			
BP	0.746	0.782	0.855		
CC	0.749	0.745	0.769	0.864	
FIMP	0.794	0.827	0.800	0.813	0.882

Adequate discriminant validity is established when the square root of the AVE

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

exceeds the correlations between that construct and all other latent variables. Applying this criterion provided evidence of the external validity and distinctiveness of the measurement model. The outcomes of the discriminant validity assessment are presented in Table 1.

Table 3 presents the results of the discriminant validity assessment based on the Fornell–Larcker criterion. The bold diagonal entries correspond to the square roots of the AVE for each construct and consistently exceed the associated inter-construct correlation coefficients within their respective rows and columns. This outcome confirms satisfactory discriminant validity, indicating that each latent construct shares greater variance with its own measurement indicators than with any other construct included in the model (Fornell & Larcker, 1981).

Table 4: Cross Loadings

Variables	AI	AIS	BP	CC	FIMP
AI1	**0.846**	0.692	0.678	0.648	0.727
AI2	**0.881**	0.715	0.707	0.647	0.745
AI3	**0.824**	0.617	0.605	0.585	0.632
AI4	**0.814**	0.600	0.638	0.625	0.672
AIS1	0.688	**0.839**	0.651	0.677	0.717
AIS2	0.698	**0.873**	0.629	0.647	0.668
AIS3	0.641	**0.857**	0.610	0.594	0.650
AIS4	0.628	**0.829**	0.644	0.625	0.661
BP1	0.673	0.652	**0.800**	0.669	0.666
BP2	0.665	0.615	**0.874**	0.619	0.693
BP3	0.689	0.663	**0.883**	0.693	0.701
BP4	0.670	0.629	**0.885**	0.652	0.671
BP5	0.643	0.629	**0.829**	0.651	0.686
CC1	0.628	0.666	0.672	**0.865**	0.729
CC2	0.626	0.639	0.657	**0.884**	0.711
CC3	0.681	0.650	0.654	**0.867**	0.683
CC4	0.639	0.633	0.673	**0.839**	0.684
FIMP1	0.702	0.682	0.735	0.685	**0.821**
FIMP2	0.728	0.685	0.701	0.712	**0.896**
FIMP3	0.742	0.725	0.675	0.740	**0.920**
FIMP4	0.741	0.706	0.703	0.726	**0.888**

Note: Accounting Information Systems = AIS, Cloud Computing = CC, Artificial Intelligence = AI, Financial Management Practices = FIMP, Business Performance = BP

Furthermore, the correlation coefficients among the exogenous constructs are all below the recommended threshold of 0.800, providing additional evidence that the constructs remain conceptually and empirically distinct. Collectively, these findings demonstrate that the measurement model satisfies the established requirements for discriminant validity (see Table 1).

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

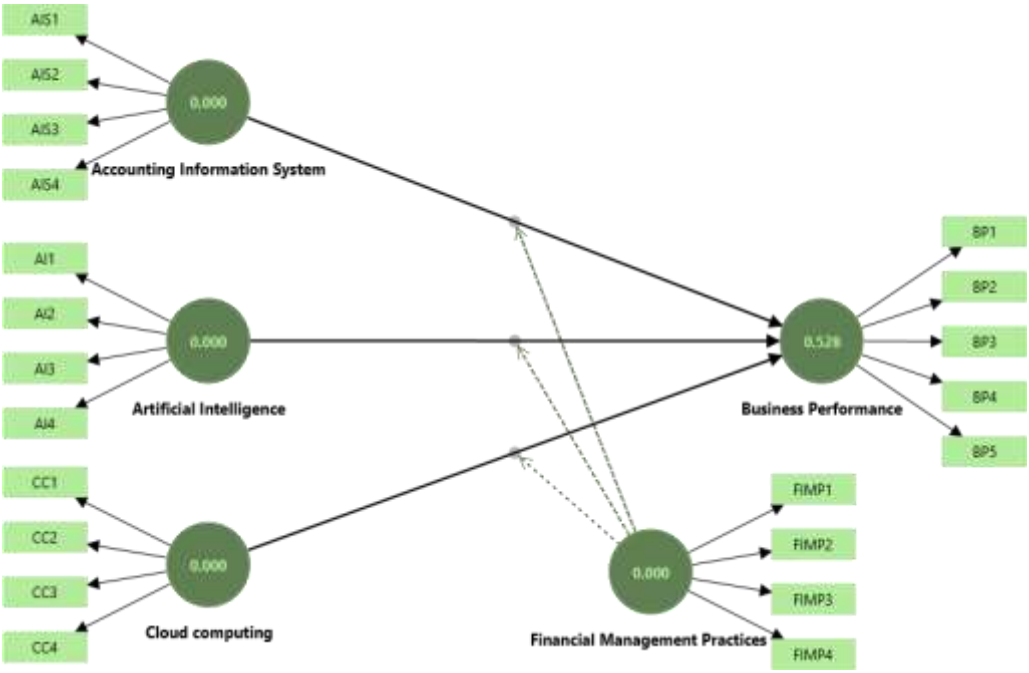


Figure 3: Cross Loadings

The coefficient of determination (R^2) indicates the proportion of variance in an endogenous construct that is explained by its exogenous predictor variables.

Table 5: R^2, Q^2

Variables	SRMR	R^2	Q^2
BP	0.052	0.750	0.528

According to the guidelines proposed by Hair Jr et al. (2017), R^2 values of 0.75, 0.50, and 0.25 represent substantial, moderate, and weak explanatory power, respectively. In the present study, R^2 was employed to assess the explanatory capability of the independent constructs in predicting BP. As reported in Table 5, the R^2 value for BP was 0.750, indicating that approximately 75.0% of the variance in BP is explained by the predictor variables included in the model. This value reflects substantial explanatory power and demonstrates a strong predictive relationship between the endogenous construct and its antecedents. The observed effect sizes further support these findings, providing additional evidence of the model's robustness and internal consistency.

HYPOTHESIS TESTING

To complement the evaluation of explanatory power, the predictive relevance of the structural model was assessed using the Stone–Geisser Q^2 statistic.

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

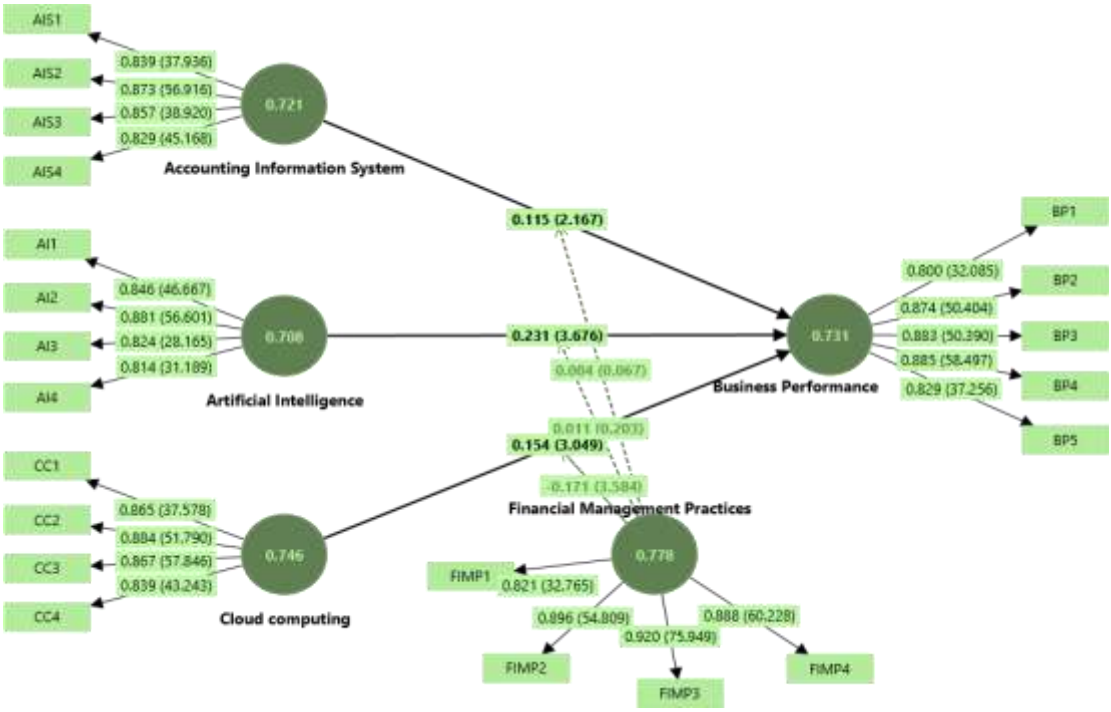


Figure 4: Hypothesis Testing

Table 6: Hypothesis Testing

Variables	Variables	Beta	Mean	S.d	Bais	2.5%	97.5%	T Values	P Values	Decision
H1	AIS → BP	0.115	0.232	0.063	0.001	0.014	0.219	2.167	0.030	Supported
H2	AI → BP	0.231	0.153	0.051	0.001	0.109	0.360	3.676	0.000	Supported
H3	CC → BP	0.154	0.120	0.066	-0.002	0.053	0.251	3.049	0.002	Supported
H4	FIMP → BP	0.121	-0.170	0.048	0.000	-0.009	0.250	2.014	0.048	Supported
H5	FIMP x CC → BP	-0.171	0.013	0.054	0.001	-0.263	-0.077	3.584	0.000	Supported
H6	FIMP x AI→ BP	0.011	0.000	0.059	0.002	-0.097	0.118	0.203	0.839	Not Supported
H7	FIMP x AIS → BP	0.004	0.232	0.063	-0.004	-0.121	0.108	0.067	0.947	Not Supported

This measure evaluates the model's ability to accurately predict omitted observations through blindfolding and cross-validation procedures (Marland et al., 2020).

A Q^2 value greater than zero indicates that the model possesses predictive relevance. In the current study, the Q^2 value for BP was 0.528, demonstrating strong predictive capability and confirming that the structural model possesses substantial predictive relevance for the endogenous construct.

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

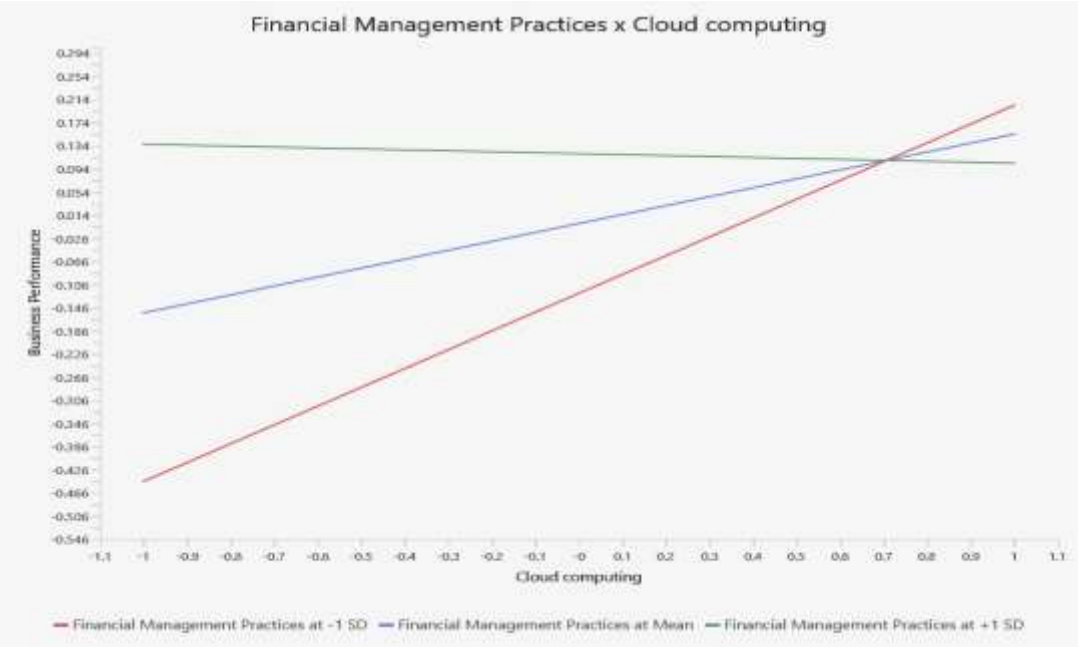


Figure 5: Financial Management Practices with Cloudy computing

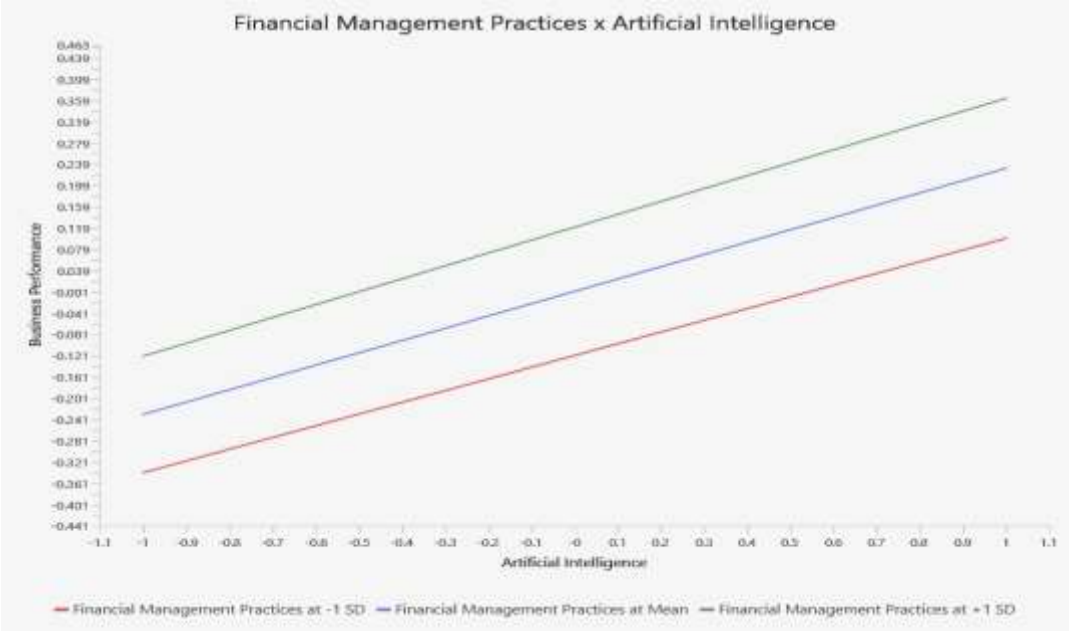


Figure 6: Financial Management Practices with Artificial Intelligence

The evaluation of the structural model, summarised in Table 6, provides empirical evidence regarding the hypothesised relationships among the study constructs.

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211



Figure 7: Financial Management Practices with Accounting Information System

A hypothesis was considered statistically supported when its corresponding *t*-value exceeded the critical threshold of 2.00. Based on this criterion, four direct hypotheses (H1–H4) and one moderating hypothesis (H5) were supported, whereas H6 and H7 were not supported.

H1: *AIS → BP*

The findings demonstrate that AIS exerts a positive and statistically significant influence on BP (β = 0.115, t = 2.167, p = 0.030). Since the *t*-value exceeds the recommended threshold and the *p*-value is below 0.05, H1 is supported, indicating that greater utilisation of AIS contributes positively to BP.

H2: *AI → BP*

The results indicate that AI has a significant positive effect on BP (β = 0.231, t = 3.676, $p < 0.001$). The statistical evidence confirms the proposed relationship, providing strong support for H2.

H3: *CC → BP*

A positive and statistically significant association was identified between CC and BP (β = 0.154, t = 3.049, p = 0.002). Accordingly, H3 is supported, suggesting that the adoption of CC enhances BP.

H4: *FIMP → BP*

The analysis further reveals that FIMP positively and significantly affects BP (β = 0.121, t = 2.014, p = 0.048). As both statistical criteria are satisfied, H4 is accepted,

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

confirming that effective FIMP contributes to improved BP.

H5: *FIMP* × *CC* → *BP*

The moderating effect of FIMP on the relationship between CC and BP was also examined. The interaction term produced a statistically significant negative coefficient ($\beta = -0.171$, $t = 3.584$, $p < 0.001$), indicating that higher levels of FIMP weaken the positive influence of CC on BP. Despite the negative direction of the interaction effect, the relationship is statistically significant; therefore, H5 is supported.

H6: *FIMP* × *AI* → *BP*

The moderating influence of FIMP on the relationship between AI and BP was not statistically significant ($\beta = 0.011$, $t = 0.203$, $p = 0.839$). Although the interaction coefficient is positive, both the *t*-value and *p*-value fail to satisfy the required significance criteria. Consequently, H6 is not supported and is rejected.

H7: *FIMP* × *AIS* → *BP*

Similarly, the moderating effect of FIMP on the relationship between AIS and BP was found to be statistically insignificant ($\beta = 0.004$, $t = 0.067$, $p = 0.947$). The interaction term does not meet the threshold for statistical significance; therefore, H7 is rejected, indicating that FIMP does not significantly moderate the relationship between AIS and BP.

DISCUSSION OF RESULTS

The findings demonstrate that AIS exerts a positive and statistically significant influence on BP within Iraqi financial institutions. This suggests that effective implementation of AIS enhances financial reporting, forecasting accuracy, budgeting, and planning activities, thereby contributing to improved organisational performance. These findings are consistent with those of Lutfi et al. (2022), who reported that AIS enhances cost efficiency and operational effectiveness, as well as Saad et al. (2022), who emphasised its contribution to improving organisational performance. The results also support the findings of Lin (2010) and Chou et al. (2013), who concluded that greater utilisation of AIS improves task performance, increases user satisfaction, and strengthens overall organisational effectiveness.

The results further indicate that AI has a significant positive effect on BP, highlighting the strategic importance of AI-driven applications, including process automation, predictive analytics, and intelligent decision-support systems, in improving both financial and operational performance. These findings are consistent with this reported by Agarwal et al. (2022), who found that AI enhances organisational efficiency through process optimisation, cost reduction, and more accurate financial forecasting.

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

Similarly, the findings corroborate those of Xue et al. (2019), who identified AI as a critical source of competitive advantage and improved organisational performance. The analysis also confirms that CC positively and significantly influences BP. This finding suggests that cloud-based technologies enhance organisational performance by facilitating real-time information accessibility, improving interdepartmental coordination, and supporting efficient information sharing, thereby strengthening organisational decision-making and operational effectiveness. These results are consistent with Tallon and Pinsonneault (2011) and Manuel Maqueira et al. (2019), who demonstrated that CC improves organisational flexibility and process efficiency. They also support the conclusions of Buyya et al. (2009) and Bruque Camara et al. (2015), who reported that CC enhances service quality while reducing operational delays and waiting times.

The direct relationship between FIMP and BP was likewise found to be positive and statistically significant. This indicates that effective budgeting, financial reporting, capital allocation, and financial control practices contribute to greater organisational stability and superior performance outcomes. The findings are consistent with Coleman and Cohn (2000) and Ahmed and Mwangi (2022), who argued that sound FIMP enhance organisational profitability and long-term sustainability. Similarly, the results support the work of Orobia et al. (2017), which highlighted the importance of effective financial management in achieving organisational financial objectives.

Regarding the moderating effects, the findings reveal that although both CC and FIMP independently improve BP, FIMP significantly and negatively moderates the relationship between CC and BP. This outcome suggests that highly structured financial management practices may reduce the positive benefits derived from CC by limiting the organisational flexibility required for effective cloud adoption. Consequently, traditional financial governance mechanisms may constrain the adaptability needed to fully exploit cloud-based technologies. This finding differs from the generally favourable conclusions regarding CC adoption reported by Sultan (2011), while providing support for the argument advanced by Farooq et al. (2019) that overly rigid financial management systems can impede technological innovation and slow the successful integration of dynamic digital technologies.

In contrast, the moderating effect of FIMP on the relationship between AI and BP was found to be statistically insignificant. This suggests that FIMP neither strengthens nor weakens the influence of AI on organisational performance. The finding differs from Baabdullah et al. (2021), who proposed that effective financial management could enhance the organisational benefits generated through AI implementation. The absence of a significant moderating effect may indicate that the successful deployment of AI depends more heavily on technological capabilities and organisational readiness than on existing financial governance practices. It also highlights the need for further investigation into the integration of AI with financial management systems,

particularly within developing economies such as Iraq.

Similarly, FIMP did not significantly moderate the relationship between AIS and BP. This finding implies that the positive contribution of AIS to organisational performance operates largely independently of financial management practices, or alternatively, that existing FIMP do not meaningfully interact with AIS utilisation. This result contrasts with the findings of Ghobakhloo and Tang (2015), who argued that effective financial management strengthens the organisational benefits derived from technological adoption. Within the Iraqi financial context, the insignificant moderating effect may reflect insufficient integration between accounting information systems and financial governance mechanisms, limited employee competencies, or inadequate alignment between technological implementation and organisational financial management practices.

STUDY CONTRIBUTIONS

Theoretical Contributions

This study makes several noteworthy contributions to the existing body of knowledge, particularly within the context of developing economies. First, it addresses an important geographical research gap by examining the integrated relationships among AIS, AI, CC, FIMP, and BP within Iraqi financial institutions—an empirical setting that has received limited scholarly attention compared with the extensive evidence available from developed countries. Second, by employing PLS-SEM, the study extends beyond conventional bivariate analyses and develops a comprehensive theoretical framework that simultaneously captures the complex relationships among digital technologies, FIMP, and BP. This integrated modelling approach provides a more complete understanding of how technological and financial management capabilities collectively influence organisational performance.

Third, the incorporation of FIMP as a moderating construct represents a significant theoretical contribution. Although the moderating effects were not consistently significant across all hypothesised relationships, the findings challenge the prevailing assumption that effective financial management invariably strengthens the organisational benefits of digital technologies. Instead, the results suggest that the interaction between technological capabilities and financial management practices is more nuanced, thereby providing a foundation for future theoretical refinement and empirical investigation. Finally, the study adopts a multidimensional perspective of BP by incorporating both financial and broader organisational performance measures. This approach is consistent with contemporary conceptualisations of organisational performance and aligns with recent theoretical developments that advocate a more comprehensive evaluation of BP beyond purely financial outcomes (Xue et al., 2019). Collectively, these contributions enhance the theoretical understanding of digital

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

transformation and financial management within the financial sector of developing economies.

Practical Contributions

The findings provide robust empirical evidence that investments in AIS, AI, and CC generate positive organisational returns by enhancing BP. Consequently, financial institutions in Iraq and other developing economies can use these findings to support strategic investment decisions and accelerate their digital transformation initiatives. The significant negative moderating effect of FIMP on the relationship between CC and BP also offers an important managerial insight. Although effective FIMP independently contributes to improved organisational performance, excessively rigid or conventional financial management practices may restrict the operational flexibility required to realise the full benefits of cloud-based technologies. This finding underscores the importance of modernising financial governance frameworks and internal control systems alongside technological implementation to ensure that financial management practices complement, rather than constrain, digital transformation.

Furthermore, the results demonstrate that AIS and AI exert direct positive effects on BP, whereas the moderating influence of FIMP on these relationships is statistically insignificant. This pattern suggests that technological adoption alone may not be sufficient to maximise organisational benefits if employees lack the digital competencies required to integrate advanced technologies with existing financial management practices. Accordingly, financial institutions should invest in continuous professional development programmes that strengthen digital capabilities while promoting more agile and technology-oriented FIMP. Finally, the study confirms the direct positive contribution of FIMP to BP, reinforcing the strategic importance of effective budgeting, capital budgeting, working capital management, and financial planning. Strengthening these financial management practices can improve organisational stability, enhance resource utilisation, and contribute to sustained performance optimisation.

Societal Contributions

The findings also have important policy implications by demonstrating how AI and automation are reshaping employment within the financial sector. These insights can assist policymakers in designing reskilling programmes for financial employees affected by digital transformation, thereby supporting a more inclusive transition. By demonstrating the successful implementation of AIS, CC, and AI in Iraqi financial institutions, the study offers a practical reference for other emerging economies facing post-conflict recovery and infrastructure modernisation challenges. The mixed moderating effects of FIMP indicate that existing regulatory frameworks may not be

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

fully compatible with emerging digital technologies. Consequently, financial regulators and supervisory authorities should reconsider existing compliance requirements and auditing standards to better accommodate digital transformation. Although technological advancement may increase inequality if poorly managed, the findings indicate that effective implementation of AIS, AI, and CC can improve transparency, operational efficiency, and stakeholder trust, thereby supporting inclusive economic growth in economically volatile environments such as Iraq.

Theoretical Implications

The study extends existing theoretical perspectives by providing empirical support for the TOE and IT capability frameworks within the Iraqi financial sector. The positive relationships between AIS, AI, CC, and BP reinforce established theoretical models that associate IT adoption with improved organisational performance. The inclusion of FIMP as a moderating construct represents a relatively novel theoretical contribution within this research context. The findings also offer context-specific theoretical evidence for developing economies such as Iraq, where the pace of digital transformation remains slower than in many developed countries. Furthermore, the study enriches the limited literature on the integration of AIS, AI, and CC within Middle Eastern financial institutions. The insignificant moderating effects of FIMP on the relationships between AIS and BP, and between AI and BP, challenge the assumption that financial governance structures consistently strengthen the benefits of IT adoption. Likewise, the negative moderating effect of FIMP on the relationship between CC and BP questions IT governance perspectives that assume stronger financial controls invariably enhance the organisational value of digital technologies.

Practical Implications

The findings indicate that AIS, AI, and CC each have a significant positive effect on BP, suggesting that financial institutions in Iraq and similar developing economies should prioritise investment in these technologies to strengthen their competitive position. The adoption of these technologies can improve forecasting accuracy, reduce operational errors, and enhance overall organisational efficiency. The negative moderating effect of FIMP on the relationship between CC and BP indicates that overly rigid financial management practices may restrict the flexibility required for effective cloud implementation. Accordingly, financial institutions should maintain an appropriate balance between financial control and operational adaptability when adopting CC.

The absence of significant moderating effects of FIMP on the relationships between AI and BP, and between AIS and BP, suggests that existing financial governance mechanisms may require further refinement to better complement digital technologies. This highlights the need for enhanced employee training and effective change

management to facilitate successful digital transformation within Iraqi financial institutions. Given the significant direct effects of AI and AIS on BP, irrespective of FIMP, financial institutions should also emphasise developing employees' digital competencies and system utilisation skills to maximise the benefits derived from these technologies.

Societal Implications

The increasing adoption of AI and automation is expected to improve operational efficiency while potentially reducing demand for routine accounting functions. At the same time, it is likely to create new opportunities in areas such as data analytics, digital auditing, system integration, and regulatory compliance, highlighting the importance of reskilling and workforce development programmes. By promoting the adoption of digital technologies within financial institutions, this study supports the expansion of digital employment opportunities in Iraq. The findings are consistent with national efforts to modernise financial infrastructure and address youth unemployment through technology-driven industries. The study also contributes to reducing the technological gap between Iraq and more advanced economies by demonstrating that AIS, AI, and CC can generate measurable improvements in BP. In doing so, it supports Iraq's broader digital transformation agenda within the MENA region. Finally, the findings provide empirical evidence that can assist Iraqi policymakers and financial regulators in developing digital accounting and fintech policies. They also emphasise the importance of designing flexible financial regulations that facilitate technological innovation without unnecessarily constraining the adoption of CC.

FUTURE STUDY

Future research could examine the integration of AI with financial governance practices, particularly within the context of developing economies.

REFERENCE

Abdirad, H., & Dossick, C. S. (2020). Rebaselining asset data for existing facilities and infrastructure. *Journal of Computing in Civil Engineering*, *34*(1), 05019004. https://doi.org/10.1061/(ASCE)CP.1943-5487.0000868

Acemoglu, D., & Restrepo, P. (2018). Artificial intelligence, automation, and work. In *The economics of artificial intelligence: An agenda* (pp. 197-236). University of Chicago Press. https://www.nber.org/system/files/chapters/c14027/c14027.pdf

Adegboye, A. C., & Iweriebor, S. (2018). Does access to finance enhance SME innovation and productivity in Nigeria? Evidence from the World Bank Enterprise Survey. *African Development Review*, *30*(4), 449-461. https://doi.org/10.1111/1467-8268.12351

Vol: 18 **No:** 02 **Year:** 2026 **ISSN:** 1309-8055 (Online) (**pp.** 260-289) **Doi:** 10.34109/ijefs.2026180211

Agarwal, V., Mathiyazhagan, K., Malhotra, S., & Saikouk, T. (2022). Analysis of challenges in sustainable human resource management due to disruptions by Industry 4.0: an emerging economy perspective. *International Journal of Manpower*, *43*(2), 513-541. https://doi.org/10.1108/IJM-03-2021-0192

Ahmad, S., Munir, S., Zeb, N., Ullah, A., Khan, B., Ali, J., Bilal, M., Omer, M., Alamzeb, M., Salman, S. M., & Ali, S. (2019). Green nanotechnology: a review on green synthesis of silver nanoparticles — an ecofriendly approach. *International Journal of Nanomedicine*, *14*(null), 5087-5107. https://doi.org/10.2147/IJN.S200254

Ahmed, A., & Mwangi, L. (2022). Working Capital Management and Financial Performance of Small and Medium Enterprises in Garissa County, Kenya. *International Journal of Current Aspects in Finance, Banking and Accounting*, *4*(1), 56-71. https://doi.org/10.35942/ijcfa.v4i1.229

Akpan, I. J., Udoh, E. A. P., & Adebisi, B. (2022). Small business awareness and adoption of state-of-the-art technologies in emerging and developing markets, and lessons from the COVID-19 pandemic. *Journal of Small Business & Entrepreneurship*, *34*(2), 123-140. https://doi.org/10.1080/08276331.2020.1820185

Al-Khasawneh, A. (2013). The Relation between Human Resource Management (HRM) Strategies and Job Loyalty as Practiced at the Public Relations (PR's) Units in the Government Ministries of Jordan. *Journal of Management Research*, *5*(3), 146. https://doi.org/10.5296/jmr.v5i3.3689

Alles, L., Jayathilaka, R., Kumari, N., Malalathunga, T., Obeyesekera, H., & Sharmila, S. (2021). An investigation of the usage of capital budgeting techniques by small and medium enterprises. *Quality & Quantity*, *55*(3), 993-1006. https://doi.org/10.1007/s11135-020-01036-z

AlMallahi, M. N., Faroukh, A. M., Alketbi, H. H., Inayat, A., Rocha-Meneses, L., & Said, Z. (2022). Fast Pyrolysis Process for Bio-oil Production from Coffee Waste in the UAE. 2022 Advances in Science and Engineering Technology International Conferences (ASET), https://doi.org/10.1109/ASET53988.2022.9734835

Armbrust, Michael, Fox, A., Armando, Griffith, Rean, Joseph, Anthony, D., Katz, R., H, R., Konwinski, A., Andrew, Lee, G., Gunho, Patterson, A, D., Rabkin, Ariel, Stoica, & Matei. (2009). Above the Clouds: A Berkeley View of Cloud Computing. https://www.researchgate.net/publication/200045935

Baabdullah, A. M., Alalwan, A. A., Slade, E. L., Raman, R., & Khatatneh, K. F. (2021). SMEs and artificial intelligence (AI): Antecedents and consequences of AI-based B2B practices. *Industrial Marketing Management*, *98*, 255-270. https://doi.org/10.1016/j.indmarman.2021.09.003

Babina, T., Fedyk, A., He, A., & Hodson, J. (2024). Artificial intelligence, firm growth, and product innovation. *Journal of Financial Economics*, *151*, 103745. https://doi.org/10.1016/j.jfineco.2023.103745

Baeshen, Y., Soomro, Y. A., & Bhutto, M. Y. (2021). Determinants of green innovation to achieve sustainable business performance: Evidence from SMEs. *Frontiers in Psychology*, *12*, 767968. https://doi.org/10.3389/fpsyg.2021.767968

Bou-Llusar, J. C., Escrig-Tena, A. B., Roca-Puig, V., & Beltrán-Martín, I. (2009). An empirical assessment of the EFQM Excellence Model: Evaluation as a TQM framework relative to the MBNQA Model. *Journal of operations management*, *27*(1), 1-22. https://doi.org/10.1016/j.jom.2008.04.001

Brijlal, P., Enow, S., & Isaacs, E. B. (2014). The use of financial management practices by small, medium and micro enterprises: a perspective from South Africa. *Industry and Higher Education*, *28*(5), 341-350. https://doi.org/10.5367/ihe.2014.0223

Brislin, R. W. (1986). A culture general assimilator: Preparation for various types of sojourns. *International Journal of Intercultural Relations*, *10*(2), 215-234. https://doi.org/10.1016/0147-1767(86)90007-6

Bruque Camara, S., Moyano-Fuentes, J., & Maqueira Marín, J. M. (2015). Cloud computing, Web 2.0, and operational performance. *The International Journal of Logistics Management*, *26*(3), 426-458. https://doi.org/10.1108/IJLM-07-2013-0085

Brynjolfsson, E., & McAfee, A. (2014). The second machine age: Work, progress, and prosperity in a time of brilliant technologies. *W. W. Norton & Company*. https://onwork.edu.au/bibitem/2014-Brynjolfsson,Erik-McAfee,Andrew-The+Second+Machine+Age+Work,Progress,and+Prosperity+in+a+Time+of+Brilliant+Technologies/

Buyya, R., Yeo, C. S., Venugopal, S., Broberg, J., & Brandic, I. (2009). Cloud computing and emerging IT platforms: Vision, hype, and reality for delivering computing as the 5th utility. *Future Generation Computer Systems*, *25*(6), 599-616. https://doi.org/10.1016/j.future.2008.12.001

Cegielski, C. G., Allison Jones-Farmer, L., Wu, Y., & Hazen, B. T. (2012). Adoption of cloud computing technologies in supply chains: An organizational information processing theory approach. *The International Journal of Logistics Management*, *23*(2), 184-211. https://doi.org/10.1108/09574091211265350

Chalmers, D. K., Della Porta, M., & Sensini, L. (2020). Export intensity and leverage: an empirical analysis of Spanish SMEs. *International Journal of Economics and Financial Issues*, *10*(5), 382. https://doi.org/10.32479/ijefi.10071

Chen, Y., & Lin, Z. (2021). Business Intelligence Capabilities and Firm Performance: A Study in China. *International Journal of Information Management*, *57*, 102232. https://doi.org/10.1016/j.ijinfomgt.2020.102232

Chou, J.-S., & Hong, J.-H. (2013). Assessing the impact of quality determinants and user characteristics on successful enterprise resource planning project implementation. *Journal of Manufacturing Systems*, *32*(4), 792-800. https://doi.org/10.1016/j.jmsy.2013.04.014

Coleman, S., & Cohn, R. (2000). Small Firms' Use of Financial Leverage: Evidence from the 1993 National Survey of Small Business Finances. Journal of Business and Entrepreneurship, 12(3), 81–98. https://digitalcollections.babson.edu/digital/api/collection/ferpapers/id/3115/download

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *psychometrika*, *16*(3), 297-334. https://doi.org/10.1007/BF02310555

Duarte, P. O., Alves, H. B., & Raposo, M. B. (2010). Understanding university image: a structural equation model approach. *International Review on Public and Nonprofit Marketing*, *7*(1), 21-36. https://doi.org/10.1007/s12208-009-0042-9

Dwangu, A. M., & Mahlangu, V. P. (2021). Accountability in the financial management practices of school principals. *International Journal of Educational Management*, *35*(7), 1504-1524. https://doi.org/10.1108/IJEM-06-2021-0243

Erambo, G., Mulwa, M. D. J., Aketch, J., Oscar, S., & Muchibi, W. (2016). Financial management practices and firm performance among micro and small enterprises in Busia Town, Kenya. *International Journal of Management and Commerce Innovations*, *4*, 303-310. https://www.researchpublish.com/papers/financial-management-practices-and-firm-performance-among-micro-and-small-enterprises-in-busia-town-kenya

Farooq, M. S., Riaz, S., Abid, A., Abid, K., & Naeem, M. A. (2019). A Survey on the Role of IoT in Agriculture for the Implementation of Smart Farming. *IEEE access*, *7*, 156237-156271. https://doi.org/10.1109/ACCESS.2019.2949703

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50. https://doi.org/10.1177/002224378101800104

Ghobakhloo, M., & Tang, S. H. (2015). Information system success among manufacturing SMEs: case of developing countries. *Information Technology for Development*, *21*(4), 573-600. https://doi.org/10.1080/02681102.2014.996201

Hair, J. F., Astrachan, C. B., Moisescu, O. I., Radomir, L., Sarstedt, M., Vaithilingam, S., & Ringle, C. M. (2021). Executing and interpreting applications of PLS-SEM: Updates for family business researchers. *Journal of Family Business Strategy*, *12*(3), 100392. https://doi.org/10.1016/j.jfbs.2020.100392

Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of multivariate data analysis*, *1*(2), 107-123. https://doi.org/10.1504/IJMDA.2017.087624

Haseeb, M., Hussain, H. I., Ślusarczyk, B., & Jermsittiparsert, K. (2019). Industry 4.0: A Solution towards Technology Challenges of Sustainable Business Performance. *Social Sciences*, *8*(5), 154. https://doi.org/10.3390/socsci8050154

Henschel, T. (2006). Risk management practices in German SMEs: an empirical investigation. *International Journal of Entrepreneurship and Small Business*, *3*(5), 554-571. https://doi.org/10.1504/IJESB.2006.010543

Hsu, P.-F., Yen, H. R., & Chung, J.-C. (2015). Assessing ERP post-implementation success at the individual level: Revisiting the role of service quality. *Information & Management*, *52*(8), 925-942. https://doi.org/10.1016/j.im.2015.06.009

Kaushal, R. (2023). Artificial intelligence and financial forecasting. National conference on IPR, entrepreneurship and technology in changing business environment, https://www.isca.co.in/COMM_MANAGE/book/ISBN%20978-81-963682-9-6.pdf#page=53

Kiyabo, K., & Isaga, N. (2019). Strategic entrepreneurship, competitive advantage, and SMEs' performance in the welding industry in Tanzania. *Journal of Global Entrepreneurship Research*, *9*(1), 62. https://doi.org/10.1186/s40497-019-0188-9

Leso, B. H., Cortimiglia, M. N., & Ghezzi, A. (2023). The contribution of organizational culture, structure, and leadership factors in the digital transformation of SMEs: a mixed-methods approach. *Cognition, Technology & Work*, *25*(1), 151-179. https://doi.org/10.1007/s10111-022-00714-2

Lin, H.-F. (2010). An investigation into the effects of IS quality and top management support on ERP system usage. *Total Quality Management & Business Excellence*, *21*(3), 335-349. https://doi.org/10.1080/14783360903561761

Liu, S., Yang, Y., Qu, W. G., & Liu, Y. (2016). The business value of cloud computing: the partnering agility perspective. *Industrial Management & Data Systems*, *116*(6), 1160-1177. https://doi.org/10.1108/IMDS-09-2015-0376

Liu, Y., Dong, S., Wei, J., & Tong, Y. (2020). Assessing cloud computing value in firms through socio-technical determinants. *Information & Management*, *57*(8), 103369. https://doi.org/10.1016/j.im.2020.103369.

Louw, E., Hall, J. H., & Pradhan, R. P. (2022). The relationship between working capital management and profitability: evidence from South African retail and construction firms. *Global Business Review*, *23*(2), 313-333. https://doi.org/10.1177/0972150919865104

Lutfi, A., Alshira'h, A. F., Alshirah, M. H., Al-Okaily, M., Alqudah, H., Saad, M., Ibrahim, N., & Abdelmaksoud, O. (2022). Antecedents and Impacts of Enterprise Resource Planning System Adoption among Jordanian SMEs. *Sustainability*, *14*(6), 3508. https://doi.org/10.3390/su14063508

Maes, J., Sels, L., & Roodhooft, F. (2005). Modelling the Link Between Management Practices and Financial Performance. Evidence from Small Construction Companies. *Small Business Economics*, *25*(1), 17-34. https://doi.org/10.1007/s11187-005-4255-y

Manuel Maqueira, J., Moyano-Fuentes, J., & Bruque, S. (2019). Drivers and consequences of an innovative technology assimilation in the supply chain:

cloud computing and supply chain integration. *International Journal of Production Research*, *57*(7), 2083-2103. https://doi.org/10.1080/00207543.2018.1530473

Marland, E., Rhoads, G., Bossé, M. J., Sanqui, J. A., & Bauldry, W. (2020). Q^2: A Measure of Linearity. *Electronic Journal of Mathematics & Technology*, *14*(3). https://ejmt.mathandtech.org/Contents/eJMT_v14n3n2.pdf

Marston, S., Li, Z., Bandyopadhyay, S., Zhang, J., & Ghalsasi, A. (2011). Cloud computing—The business perspective. *Decision support systems*, *51*(1), 176-189. https://doi.org/10.1016/j.dss.2010.12.006

Mashayekhy, Y., Babaei, A., Yuan, X.-M., & Xue, A. (2022). Impact of Internet of Things (IoT) on inventory management: A literature survey. *Logistics*, *6*(2), 33. https://doi.org/10.3390/logistics6020033

Mcmahon, R. G. (2001). Growth and performance of manufacturing SMEs: The influence of financial management characteristics. *International Small Business Journal*, *19*(3), 10-28. https://doi.org/10.1177/0266242601193001

McMahon, R. G. P., & Holmes, S. (1991). Small business financial management practices in North America: A literature review. *Journal of Small Business Management*, *29*(2), 19-29. https://researchers.westernsydney.edu.au/en/publications/small-business-financial-management-practices-in-north-america-a-/

Meinhardt, R., Junge, S., & Weiss, M. (2018). The organizational environment with its measures, antecedents, and consequences: a review and research agenda. *Management Review Quarterly*, *68*(2), 195-235. https://doi.org/10.1007/s11301-018-0137-7

Nitzl, C., Sicilia, M., & Steccolini, I. (2019). Exploring the links between different performance information uses, NPM cultural orientation, and organizational performance in the public sector. *Public Management Review*, *21*(5), 686-710. https://doi.org/10.1080/14719037.2018.1508609

Novais, L., Maqueira, J. M., & Ortiz-Bas, Á. (2019). A systematic literature review of cloud computing use in supply chain integration. *Computers & Industrial Engineering*, *129*, 296-314. https://doi.org/10.1016/j.cie.2019.01.056

Noorani, A. H., Jabbin, K., Abbas, Z., Zahra, I., & Khan, R. (2025). Evaluating the impact of financial management practices on organizational performance: The mediating role of working capital management efficiency in Pakistan's service sector. *Journal of Management Science Research Review*, *4*(4), 149–163. https://doi.org/10.5281/zenodo.17380937

Nthenge, D., & Ringera, J. (2017). Effect of Financial Management Practices on Financial Performance of Small and Medium Enterprises in Kiambu Town, Kenya. *American based research journal*, *6*(1), 6-32. https://ssrn.com/abstract=2912155

Osei, A., Osei Agyemang, A., Amoah, J. O., & Sulemana, I. (2023). Empirical study on the impact of working capital management on going concern of

manufacturing firms in Ghana. *Cogent Business & Management*, *10*(2), 2218177. https://doi.org/10.1080/23311975.2023.2218177

Okon, E. E., Nwaobia, A. N., & Ajibade, A. T. (2025). Cloud Computing and Financial Reporting Quality: The Moderating Effect of Corporate Governance. Archives of Business Research, 13(5), 197–219. https://doi.org/10.14738/abr.1305.18832.

Orobia, L. A., Tusiime, I., Mwesigwa, R., & Ssekiziyivu, B. (2017). The impact of financial management practices and competitive advantages on the loan performance of microfinance institutions. International Journal of Social Economics, 44(1), 114–131. https://doi.org/10.1108/IJSE-05-2014-0104.

Ravichandran, T., Lertwongsatien, C., & Lertwongsatien, C. (2005). Effect of Information Systems Resources and Capabilities on Firm Performance: A Resource-Based Perspective. *Journal of Management Information Systems*, *21*(4), 237-276. https://doi.org/10.1080/07421222.2005.11045820

Ray, G., Muhanna, W. A., & Barney, J. B. (2005). Information Technology and the Performance of the Customer Service Process: A Resource-Based Analysis1. *MIS quarterly*, *29*(4), 625-652. https://doi.org/10.2307/25148703

Rehman, S.-u., Mohamed, R., & Ayoup, H. (2019). The mediating role of organizational capabilities between organizational performance and its determinants. *Journal of Global Entrepreneurship Research*, *9*(1), 30. https://doi.org/10.1186/s40497-019-0155-5

Ringle, C., Da Silva, D., & Bido, D. (2015). Structural equation modeling with the SmartPLS. Bido, D., da Silva, D., & Ringle, C.(2014). *Structural Equation Modeling with the Smartpls. Brazilian Journal Of Marketing*, *13*(2). https://doi.org/10.5585/remark.v13i2.2717

Ross, J. W., Beath, C. M., & Goodhue, D. L. (1996). Develop long-term competitiveness through IT assets. *MIT Sloan Management Review*, *38*(1), 31-42. https://sloanreview.mit.edu/article/develop-longterm-competitiveness-through-it-assets/

Saad, M., Lutfi, A., Almaiah, M. A., Alshira'h, A. F., Alshirah, M. H., Alqudah, H., Alkhassawneh, A. L., Alsyouf, A., Alrawad, M., & Abdelmaksoud, O. (2022). Assessing the Intention to Adopt Cloud Accounting during COVID-19. *Electronics*, *11*(24), 4092. https://doi.org/10.3390/electronics11244092

Schwenz, C., & Wagner, M. (2019). The role of firm-internal corporate environmental standards for organizational performance. *Journal of Business Economics*, *89*(7), 823-843. https://doi.org/10.1007/s11573-018-0925-5

Shah, N., & Soomro, B. A. (2021). Internal green integration and environmental performance: The predictive power of proactive environmental strategy, greening the supplier, and environmental collaboration with the supplier. *Business Strategy and the Environment*, *30*(2), 1333-1344. https://doi.org/10.1002/bse.2687

Singh, S., Darwish, T. K., & Potočnik, K. (2016). Measuring organizational performance: A case for subjective measures. *British Journal of Management*, *27*(1), 214-224. https://doi.org/10.1111/1467-8551.12126

Sooriyakumaran, D. L. (2022). The impact of financial management practices on business performance of small and medium enterprises in Northern Province. *Available at SSRN*, 4851493. https://doi.org/10.2139/ssrn.4851493

Sultan, N. A. (2011). Reaching for the "cloud": How SMEs can manage. *International Journal of Information Management*, *31*(3), 272-278. https://doi.org/10.1016/j.ijinfomgt.2010.08.001

Tallon, P. P., & Pinsonneault, A. (2011). Competing Perspectives On The Link Between Strategic Information Technology Alignment And Organizational Agility: Insights From A Mediation Model1. *MIS quarterly*, *35*(2), 463-486. https://doi.org/10.2307/23044052

Ukeje, N., Gutierrez, J., & Petrova, K. (2024). Information security and privacy challenges of cloud computing for government adoption: a systematic review. *International Journal of Information Security*, *23*(2), 1459-1475. https://doi.org/10.1007/s10207-023-00797-6

Venkatraman, N., & Ramanujam, V. (1986). Measurement of business performance in strategy research: A comparison of approaches. *Academy of management review*, *11*(4), 801-814. https://doi.org/10.5465/amr.1986.4283976

Wang, Y., & Li, Z. (2023). . (2023). Blockchain technology and its implications for financial reporting transparency. *Journal of Financial Reporting*, *30*(2), 567-589. https://doi.org/10.1111/jfr3.12345

Xue, M., Boadu, F., & Xie, Y. (2019). The Penetration of Green Innovation on Firm Performance: Effects of Absorptive Capacity and Managerial Environmental Concern. *Sustainability*, *11*(9), 2455. https://doi.org/10.3390/su11092455

Zaridis, A., Vlachos, I., & Bourlakis, M. (2021). SMEs strategy and scale constraints impact on agri-food supply chain collaboration and firm performance. *Production Planning & Control*, *32*(14), 1165-1178. https://doi.org/10.1080/09537287.2020.1796136

Zietlow, J., Hankin, J., Seidner, A., & O'Brien, T. (2018). *Financial Management for Nonprofit Organizations: Policies and Practices*. https://doi.org/10.1002/9781119419242