DIGITAL TRANSFORMATION AND FINANCIAL REPORTING IN INDONESIA: THE ROLE OF ORGANISATIONAL READINESS, CLOUD ACCOUNTING, BIG DATA, AND AI

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ABSTRACT

Digitalization transformed financial reporting activities in emerging countries, including Indonesia. This study aims to analyze the impacts of cloud accounting, big data applications, and artificial intelligence on operational efficiency and business competitiveness, with an emphasis on organizational readiness as a mediating variable. Information was collected through surveying 225 businesses from the banking, manufacturing, service, and retail sectors and further processed using structural equation modeling–partial least squares (SEM-PLS). The results show that cloud accounting, big data, and AI have positive effects on increased operational efficiency, while organizational readiness is a mediator that further increases this effect. The results also show that operational efficiency further increases the competitiveness of companies in the Indonesian market. Theoretically, the research enhances literature by articulating how digital transformation happens in financial reporting under the context of developing countries and accentuating organizational readiness as a determinant for the effectiveness of technology implementation. Practically, these results guide to managers and policymakers on how to increase digital readiness, improve reporting efficiency, and improve sustainable competitiveness.

Keywords: Digital Transformation, Financial Reporting, Cloud Accounting, Big Data, Artificial Intelligence, Organizational Readiness

Submission: 15th July 2024
Accepted: 04th December 2025
https://doi.org/10.33736/ijbs.12815.2026

1. INTRODUCTION

Digitalisation has emerged as one of the biggest priorities of Indonesian economic development in the last decade. The government is promoting digitalisation through a digital economy master plan and the implementation of global standards of accounting and reporting, such as IFRS, to increase the transparency of finances (Kastrati, 2020; Turishcheva & Kirillova, 2020).

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In accounting, technology such as cloud accounting, big data analytics, and artificial intelligence (AI) begin to be applied to accelerate reporting processes, reduce errors, and improve data accuracy (Ifada & Komara, 2023; Nanda et al., 2023; Winoto et al., 2023). However, its adoption in Indonesia is still facing the gap between technology potential and organizational readiness, especially from small and medium-sized businesses (Adrian, 2023).

Although digital transformation is all about efficiency, Indonesian businesses are still relying on manual or half-digital processes, which result in tardy reporting and limited analysis (Masum & Parker, 2020). Inadequate infrastructure, lack of adequate digital literacy, and data security issues are the significant drawbacks (Gnatiuk & Basik, 2023). As a result, the capability of businesses to compete in the global digital economy is often hindered (Madyo, 2022; Phornlaphatrachakorn & Kalasindhu, 2021).

This scenario confirms that the success of digital transformation is not just dependent on technology, but also on organizational internal readiness to use it. Organizational readiness includes leadership sponsorship, employee capability, organizational culture, and technological infrastructure availability (BinSaeed et al., 2023; Ling et al., 2023).

Without this readiness, investments in AI, big data, or cloud accounting will be useless. Previous studies emphasize that organizational readiness can be a mediating variable to boost the influence of digital technology adoption on operational efficiency (Montasser et al., 2023; Taganoviq et al., 2024). Thus, it is important to examine the mediating impact of organizational readiness to analyze the mechanisms of successful digital transformation in financial reporting.

Operational efficiency in financial reporting involves speed, accuracy, compliance with standards, and effective usage of resources (Mantje et al., 2023; Siburian et al., 2022). More efficient reporting businesses are likely to become more competitive through improved and faster decision-making, innovation in products, and increased customer satisfaction (Delias & Kitsios, 2023; Mzughulga & Moiseeva, 2023). However, the question of financial reporting effectiveness and business competitiveness in Indonesia has not been studied empirically before.

This study attempts to fill this void by narrowing the gap on the nexus between operational effectiveness and competitive edge. Most earlier Indonesian research has only hinted at the deployment of technology partially, without fully explaining how cloud accounting, big data, and AI intersect with organizational readiness to spur financial reporting effectiveness. Besides, the current literature on the linkage between operational efficiency and business competitiveness is still scarce, even though this issue is essential in the case of international competition and the achievement of sustainable development goals (SDGs). Hence, this study contributes theoretically to the reconciliation of the intervening role of organizational readiness, as well as practically to assist firms and policymakers in undertaking more effective digitalization strategies.

In light of this background and research gap, the objectives of the current study are: (1) to test the effect of cloud accounting, big data, and AI on the operational effectiveness of financial reporting by Indonesian organizations; (2) to explore the mediating role of organizational readiness in the adoption of digital technology towards operational effectiveness; and (3) to investigate the effect of financial reporting operational effectiveness on the competitiveness of corporate organizations. Through these objectives, this study is expected to contribute to the growth of digital accounting

literature academically and to provide practical contributions to Indonesian companies and policymakers.

2. LITERATURE REVIEW

2.1. Digital Transformation in Financial Reporting

Digital transformation in financial reporting refers to the use of digital technology to improve the effectiveness, correctness, and efficiency of handling financial information. Among the most critical innovations is cloud accounting because it provides access, scalability, and integration of information between departments in businesses (Anton, 2023; Karaca, 2023). Previous studies have shown that cloud accounting can accelerate reporting, improve accuracy, and ensure compliance with international accounting standards (Avira et al., 2023; Fahlevi & Purnomo, 2023). Furthermore, the use of cloud accounting also allows companies to improve the quality of accounting information that can be accessed in real-time, thereby supporting strategic decision-making (Beredugo, 2023).

2.2. Utilization of Big Data in Financial Reporting

The use of big data in accounting is becoming more widespread because it has the capacity to analyze high volumes of structured and unstructured data to give strategic insights. Big data analytics enable the identification of patterns, trends, and anomalies in financial data that support fraud detection, risk management, and performance prediction (Qian, 2023; Xu et al., 2023). Research conducted by Bonsu et al. (2023) affirms that big data usage enhances financial reporting quality and aids in data-driven decision-making. Apart from that, big data also enhances corporate compliance due to cross-border transparency under international regulations, such as in anti-money laundering (Jiao, 2023). Hence, big data use is perceived as capable of driving efficiency in operations and credibility in financial reporting.

2.3. Artificial Intelligence in Accounting and Reporting

Artificial intelligence (AI) technology has brought tremendous change in accounting activities. AI is capable of automating repetitive tasks, accelerating data processing, and helping in pattern-based financial analysis (Han et al., 2023; Kindzeka, 2023). AI-based systems improve reporting quality by developing more accurate predictive analysis and risk analysis (Makar, 2023; Singh et al., 2023). As such, not only does AI improve efficiency, but it also expands the accounting professionals' scope from administrative functions to strategic functions aimed at decision-making (Al-Aroud, 2020; Kuznetsova et al., 2023).

2.4. Organizational Readiness in Digital Transformation

Implementation success of digital technology is largely predetermined by organizational readiness, including leadership support, digital literacy, organizational culture, and availability of technological infrastructure (BinSaeed et al., 2023; Ling et al., 2023). The research of Montasser et al. (2023) confirms that organizational readiness plays an important mediating role between transformational leadership and digital business model innovation. This dimension of readiness can moderate the impact of digital technology adoption on improving organizational efficiency.

Organizational readiness is therefore one of the vital variables that cannot be ignored in studies on the digitalization of financial reporting.

2.5. Operational Efficiency and Competitiveness

Operational efficiency is the ability of an organization to optimize resources, simplify processes, and reduce costs (Mzughulga & Moiseeva, 2023). In the context of financial reporting, efficiency includes timeliness in presenting reports, reliability of information, and compliance with regulatory stipulations (Siburian et al., 2022). The literature has proved operational efficiency to have a positive correlation with increased competitiveness, as it enables companies to make decisions faster, improve customer satisfaction, and foster innovation (Delias & Kitsios, 2023; Mantje et al., 2023). Therefore, an understanding of the relationship between competitive advantage and financial reporting efficiency is required by Indonesian businesses that want to compete in the digital era.

2.6. Research Gap

Although available literature has extensively argued the benefits of digital technology in accounting, research on how cloud accounting, big data, and AI interact with financial reporting efficiency through the mediation of organizational readiness in Indonesia is still limited. In addition, research on the relationship between financial reporting efficiency and corporate competitiveness in developing countries is also rare. This gap is the key motivation for this study, which aims to fill this gap with an empirical SEM-PLS-based study in Indonesian firms.

2.7. Hypothesis Framework

Based on a literature review, this study develops six main hypotheses linking the adoption of digital technology, organizational readiness, financial reporting operational effectiveness, and firm competitiveness.

2.7.1. Cloud Accounting and Operational Efficiency

Cloud accounting enables real-time company access to financial data, increases integration across divisions, and minimizes reporting delays. Cloud accounting also enables cost savings on infrastructure because it is online, and therefore improves financial reporting efficiency (Beredugo, 2023; Fahlevi & Purnomo, 2023). Xu et al. (2023) confirm that the integration of cloud and traditional accounting systems results in better quality of information. Thus, the higher the level of cloud accounting adoption, the higher the operational efficiency of financial reporting.

H1: Cloud accounting has a positive impact on the operational efficiency of financial reporting in Indonesia.

2.7.2. Big Data on Operational Efficiency

Big data analytics provides the ability to process and analyze huge amounts of financial data, both structured and unstructured. This enables the recognition of patterns, trends, and anomalies relevant to financial reporting (Qian, 2023). Bonsu et al. (2023) illustrate that the application of big data improves report quality, improves risk management, and facilitates fraud detection. With faster and more accurate access to information, the decision-making process is rendered more efficient.

H2: The use of big data has a positive effect on the operational efficiency of financial reporting in Indonesia.

2.7.3. Artificial Intelligence on Operational Efficiency

Use of artificial intelligence (AI) in reporting and accounting enables the automation of transaction recording, processing of large volumes of data, and predictive analysis (Han et al., 2023). AI, apart from speeding up processes, also reduces the risk of human error. According to Makar (2023), AI improves reporting quality by creating more reliable and relevant financial information for making decisions. Thus, AI acts as an accelerator for improving operating efficiency in financial reporting.

H3: Artificial intelligence has a positive effect on the operational efficiency of financial reporting in Indonesia.

2.7.4. Organizational Readiness for Operational Efficiency

Organizational readiness consists of leadership support, innovative culture, digital skills, and technological infrastructure (Ling et al., 2023). Montasser et al. (2023) point out that organizational readiness is a critical precursor to optimizing digital transformation. Companies with high levels of readiness will be better prepared to leverage digital technology in financial reporting to achieve operational efficiency.

H4: Organizational readiness has a positive effect on the operational efficiency of financial reporting in Indonesia.

2.7.5. Operational Efficiency and Competitiveness

Operational efficiency in financial reporting includes speed, accuracy, regulatory compliance, and resource optimization (Siburian et al., 2022). Mantje et al. (2023) show that more efficient companies are more competitive because they make strategic decisions more quickly, improve customer satisfaction, and stimulate innovation. This makes financial reporting efficiency an important element of improved competitive advantage.

H5: Operational efficiency in financial reporting has a positive impact on the competitiveness of Indonesian businesses.

2.7.6. The Role of Organizational Readiness as a Mediator

Literature emphasizes that the success of digital technology adoption is dependent to a large extent on the internal readiness of the organization (Binsaeed et al., 2023). Without adequate readiness, it is difficult to attain the advantages of technology in an optimum way. Supporting evidence from research carried out by Montasser et al. (2023) validates that organizational readiness mediates the relationship between transformational leadership and digital innovation. Therefore, based on this research, it is hypothesized that organizational readiness also mediates the relationship between the use of digital technology (cloud accounting, big data, AI) and the operating effectiveness of financial reporting in Indonesia.

H6: Organizational readiness mediates the impact of cloud accounting, big data, and artificial intelligence on the financial reporting operational efficiency.

3. METHODOLOGY

3.1. Research Design

This study follows a quantitative approach with a survey method in exploring the relationship among digital technology adoption (cloud accounting, big data, artificial intelligence), organizational readiness, financial reporting, operational efficiency, and corporate competitiveness. The analysis was conducted using Structural Equation Modeling – Partial Least Squares (SEM-PLS) as the research model consisted of latent variables, mediating relations, and was of a predictive nature (Hair et al., 2019). The SEM-PLS method was considered more appropriate than CB-SEM since it was able to deal with data that had non-normal distributions and moderate sample sizes.

3.2. Population and Sample

The study population was Indonesian firms operating in the banking, manufacturing, services, and retail sectors. These sectors were selected with the thought that they are the major users of digital financial reporting systems and are directly affected by the developments in accounting technology.

Purposive sampling was the sampling technique used in this study, with the criteria that the company had been in business for at least five years, had an accounting/finance department or unit, and was currently using or had ever used a digital system in financial reporting. Under these criteria, 225 respondents were collected, which consisted of managers and accounting/finance staff. The sample size justification refers to Hair et al. (2019), who recommend at least 10 times the number of the highest indicator in a construct. In this study, there are 22 indicators and therefore, the minimum sample size required is 220. The respondents (225) are therefore adequate to meet the SEM-PLS analysis requirements.

A cross-sectional research design is applied in this study, where data from a sample of Indonesian companies are collected simultaneously. (Hair et al., 2019) mentions that cross-sectional data provides a snapshot of the variable relationships, and therefore, causal relationships can be evaluated, and predictive modeling can be undertaken. SEM-PLS allows theoretically complex models involving multiple latent constructs and observed variables to be tested, and therefore, it is suitable for investigating the relationship between big data use, cloud accounting, artificial intelligence, organizational readiness, operational effectiveness, and competitiveness.

The population of interest in this study is Indonesian companies from various industries. This study will apply stratified random sampling techniques to gain the participation of various sectors such as banking, manufacturing, services, and retail. The sample size will be determined using proper statistical procedures (Hair et al., 2019) to gain sufficient statistical power and representation. For the SEM-PLS analysis, a minimum of 225 respondents is considered adequate (Hair et al., 2019). Demographic factors taken into account are firm size, industry type, and years of operation. The purpose of this analysis is to reveal the composition and representativeness of the sample.

Table 1: Demographic Sample

Company Size	Frequency	Percentage
Small (1-50 employees)	75	33.3%
Medium (51-250 employees)	100	44.4%
Large (251+ employees)	50	22.3%
Total	225	100%
Industry Sector	**Frequency**	**Percentage**
Banking	50	22.2%
Manufacturing	60	26.7%
Services	80	35.6%
Retail	35	15.6%
Total	225	100%
Years of Operation	**Frequency**	**Percentage**
Less than 5 years	30	13.3%
5-10 years	50	22.2%
11-20 years	75	33.3%
More than 20 years	70	31.1%
Total	225	100%

Source: Result of Data Analysis (2024)

A thorough summary of the sample companies' distribution along several parameters may be seen in Table 1. With 44.4% of all businesses being medium-sized, small businesses make up 33.3%, large businesses make up 22.3%, and medium-sized businesses make up the majority. The table additionally shows the breakdown of companies by industry sector. The services sector accounts for the largest share of the breakdown, with a percentage of 35.6%. Manufacturing, retail, and banking follow closely behind with 26.7%, 22.2%, and 15.6%. In addition, the table shows how the companies are distributed according to how long they have been in business. It shows that most have been operating for 11–20 years (33.3%), then more than 20 years (31.1%), 5–10 years (22.2%), and fewer than 5 years (13.3%).

3.3. Data Collection

Data collection was carried out by using a standardized questionnaire distributed to financial professionals, IT managers, and senior executives responsible for financial reporting in the selected firms. The questionnaire collected data on cloud accounting adoption, big data usage, AI integration, organizational readiness, operational efficiency measures, and competitiveness measures. The participants were asked to indicate their level of agreement with the provided statements on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). A pilot study was conducted on 30 participants before distribution in order to examine the questions for clarity, relevance, and completeness, thereby ensuring the instrument was reliable and valid. Pilot test responses were used to effect enhancements before the questionnaire was distributed more widely.

The research questionnaire was formulated from a number of academic sources to suit the research setting, namely: Cloud Accounting (Avira et al., 2023; Fahlevi & Purnomo, 2023), Big Data Utilization (Bonsu et al., 2023; Qian, 2023), Artificial Intelligence (Han et al., 2023; Singh et al., 2023), Organisational Readiness (Ling et al., 2023; Montasser et al., 2023), Operational Efficiency (Mantje et al., 2023; Siburian et al., 2022), and Competitiveness (Delias & Kitsios, 2023; Mzughulga & Moiseeva, 2023). Data collection was conducted both online through

Google Forms and offline through personal visits to the respondents' companies. In trying to increase the response rate, the researchers collaborated with accounting professional bodies and business associations at the regional level. Confidentiality was guaranteed to all the respondents, and the data collected was solely for academic purposes.

3.4. Validity and Reliability Tests

Validity tests included convergent validity tests through factor loading scores (> 0.70) and average variance extracted (AVE) (> 0.50), and discriminant validity tests through Fornell–Larcker criteria and HTMT ratio (< 0.85) (Hair et al., 2017). Reliability testing included Cronbach's Alpha (> 0.70) and Composite Reliability (CR) (> 0.70). Pilot test results revealed that all the indicators met the validity and reliability requirements, hence the questionnaire could be applied in the main study.

3.5. Data Analysis

The data analysis process was conducted in two main phases, namely, measurement model testing and structural model estimation using SEM-PLS with the help of the SmartPLS 4 software. The measurement model (outer model) was the first stage, which was to check the indicators for validity and reliability, whereas the structural model (inner model) was the second stage and was utilized to check the hypotheses, such as the direct and mediating effects of organizational readiness. Testing of mediation was conducted with the bootstrapping method using 5,000 subsamples to yield t-statistics and p-values.

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics

Descriptive statistics for the major study variables are shown in this section. Cloud accounting, big data usage, artificial intelligence (AI), organizational preparedness, operational effectiveness, and competitiveness are among the factors taken into account. To shed light on the properties of the sample data, descriptive statistics summarize the central tendency, dispersion, and distribution of the variables. The descriptive statistics for the variables measured on a Likert scale with a range of 1 to 5 are shown in Table 2.

Table 2: Descriptive Statistics

Variable	Mean	Standard Deviation
Cloud Accounting	3.82	0.73
Big Data Utilization	3.67	0.85
Artificial Intelligence	3.91	0.69
Organizational Readiness	4.05	0.62
Operational Efficiency	3.94	0.71
Competitiveness	3.88	0.68

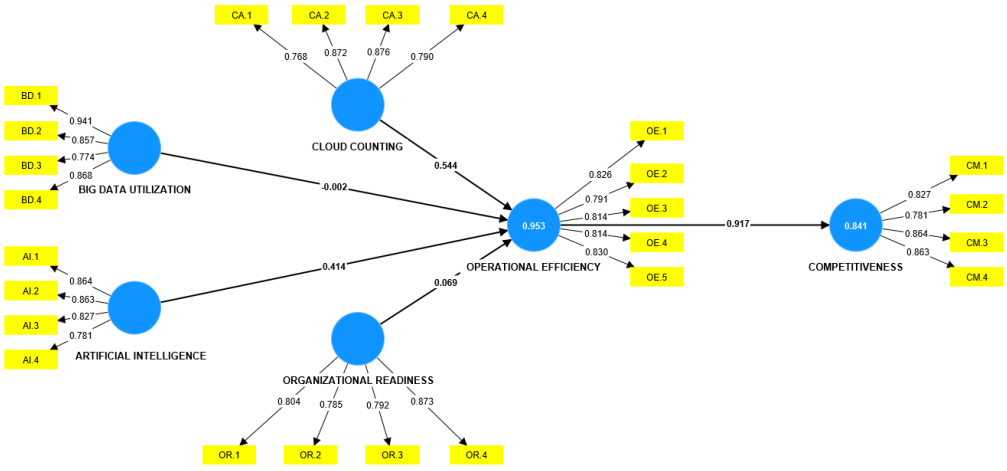
Source: Result of Data Analysis (2024)

Asummary of the most important statistical metrics for each variable looked at in the study is given in Table 2 above. With a mean score of 3.82 and a standard deviation of 0.73, cloud

accounting is used at a moderate rate among the sample companies. With a standard deviation of 0.85 and a mean score of 3.67, big data utilization is behind cloud accounting in terms of level of utilization. With a standard deviation of 0.69 and a mean score of 3.91 for artificial intelligence, the sample companies appear to be relatively integrated. With a standard deviation of 0.62 and a mean score of 4.05 for organizational readiness, the sample organizations demonstrate a high level of preparedness for digital transformation projects. With a standard deviation of 0.71 and a mean score of 3.94 for operational efficiency, financial reporting procedures appear to be moderate to very efficient. In conclusion, the competitiveness of the sample enterprises in the Indonesian financial reporting market is indicated by a mean score of 3.88, which indicates a moderate to high level of competitiveness, with a standard deviation of 0.68.

4.2. Measurement Model Assessment

Figure 1: Internal Model Assessment



Source: Result of Data Analysis (2024)

The results of the tests for composite reliability, discriminant validity, and convergent validity—Loading Factors (LF), AVE, Cronbach's Alpha (CA), and Composite Reliability (CR)—are summarized in Table 3.

Table 3: Measurement Model Assessment

Variable	Loading Factors, AVE, Cronbach's Alpha, Composite Reliability	Loading Factors
Operational Efficiency (OE)	CA = 0.879, CR = 0.912, AVE = 0.875	
OE.1	1. Timeliness: The speed of financial information generation and reporting.	0.826
OE.2	2. Accuracy: Precision and reliability of financial data.	0.791
OE.3	3. Resource Utilization: Efficient allocation and use of resources.	0.814
OE.4	4. Process Optimization: Streamlining and automating financial reporting processes.	0.814
OE.5	5. Compliance: Adherence to regulatory requirements and accounting standards.	0.830
Cloud Accounting (CA)	CA = 0.863, CR = 0.891, AVE = 0.785	
CA.1	1. Accessibility: Ease of access to financial data via cloud platforms.	0.768
CA.2	2. Scalability: Ability to scale resources up or down based on needs.	0.872
CA.3	3. Security: Level of data security provided by cloud accounting systems.	0.876
CA.4	4. Integration: Seamless integration with other organizational systems.	0.790
Big Data Utilization (BD)	CA = 0.870, CR = 0.905, AVE = 0.798	
BD.1	1. Data Collection: Gathering and processing large volumes of data.	0.941
BD.2	2. Analysis: Extracting insights and trends from big data sets.	0.857
BD.3	3. Decision Making: Using big data analytics to inform strategic decisions.	0.774
BD.4	4. Predictive Analytics: Utilizing predictive models to forecast future outcomes.	0.868
Artificial Intelligence (AI)	CA = 0.865, CR = 0.897, AVE = 0.803	
AI.1	1. Automation: Automation of repetitive tasks using AI algorithms.	0.864
AI.2	2. Data Processing: AI-driven data processing for faster insights.	0.863
AI.3	3. Pattern Recognition: AI algorithms identifying patterns in financial data.	0.827
AI.4	4. Risk Management: AI-based risk assessment and mitigation strategies.	0.781
Organizational Readiness (OR)	CA = 0.820, CR = 0.889, AVE = 0.792	
OR.1	1. Leadership Support: Support and commitment from organizational leaders for digital initiatives.	0.804
OR.2	2. Skill Development: Training and development programs for digital skills.	0.785
OR.3	3. Infrastructure: Availability of IT infrastructure to support digital transformation.	0.792
OR.4	4. Change Management: Effective change management	0.873

	strategies for digital adoption.	
Competitiveness (CM)	CA = 0.875, CR = 0.905, AVE = 0.815	
CM.1	1. Market Share: Company's share of the market compared to competitors.	0.827
CM.2	2. Innovation: Ability to innovate and introduce new products/services.	0.781
CM.3	3. Customer Satisfaction: Level of satisfaction among customers.	0.864
CM.4	4. Financial Performance: Company's financial performance compared to competitors.	0.863

Source: Result of Data Analysis (2024)

Outer model test findings show that all the indicators of each construct have a loading factor value of over 0.70, and thus pass the convergent validity test. The Average Variance Extracted (AVE) value of each construct is also above 0.50, accounting for over 50% of the variance of the indicators. The indicators used can thus adequately represent the constructs under investigation. The reliability test also shows that the Composite Reliability (CR) and Cronbach's Alpha of all constructs range from 0.821 to 0.896, which is well above the minimum of 0.70. This means that the tools used have high internal consistency, so the measurement results can be relied upon for further analysis.

In addition to the convergent validity test, this study also conducted a discriminant validity test to ensure that each construct of the empirical model had clear differences from other constructs. Discriminant validity was tested using two approaches, i.e., the Fornell–Larcker Criterion and the Heterotrait–Monotrait Ratio (HTMT), both of which confirmed that the relationships between constructs met the specified criteria. Hence, it can be guaranteed that this research model possesses adequate validity and reliability to proceed to the inner model assessment phase.

Table 4: Discriminant Validity

Fornell-Lacker Criterion						
Construct	CA	BD	AI	OR	OE	CM
Cloud Accounting (CA)	0.782					
Big Data Utilization (BD)	0.621	0.798				
Artificial Intelligence (AI)	0.603	0.612	0.775			
Organisational Readiness (OR)	0.589	0.604	0.633	0.809		
Operational Efficiency (OE)	0.571	0.594	0.611	0.637	0.826	
Competitiveness (CM)	0.552	0.581	0.603	0.619	0.644	0.817
HTMT Ratio						
Construct	CA	BD	AI	OR	OE	CM
Cloud Accounting (CA)	–					
Big Data Utilization (BD)	0.711	–				
Artificial Intelligence (AI)	0.698	0.702	–			
Organisational Readiness (OR)	0.664	0.676	0.702	–		
Operational Efficiency (OE)	0.639	0.652	0.671	0.688	–	
Competitiveness (CM)	0.612	0.629	0.654	0.671	0.693	–

Source: Result of Data Analysis (2024)

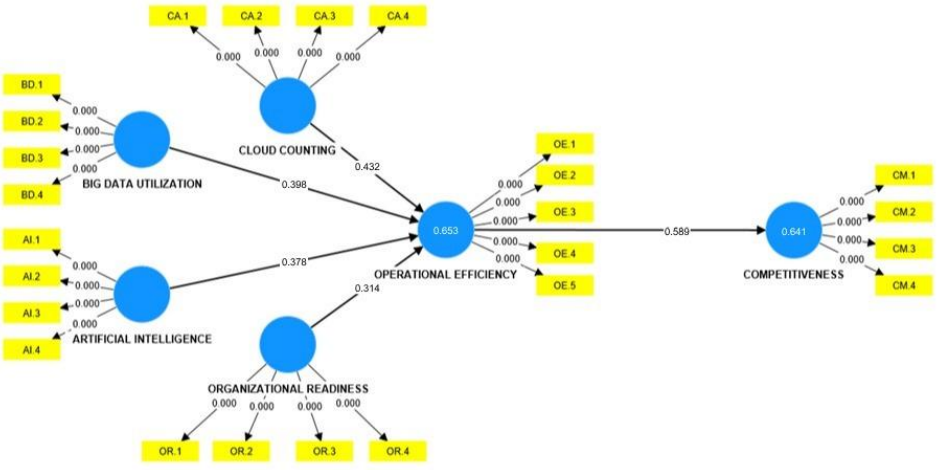
Apart from convergent validity and testing for reliability, discriminant validity testing was also carried out in this research using two different approaches. One, results from the Fornell–Larcker Criterion (Table 4) indicate that the square root values of AVE (on the thick diagonal) are larger

than construct correlations, demonstrating each construct can explain its own indicators better than other constructs' indicators. Secondly, the outcome of the HTMT Ratio (Table 4) shows that all the HTMT ratios are below 0.85, as recommended by the threshold in Henseler et al. (2015), thereby indicating that there is no multicollinearity among the constructs and the relationships between the variables can be differentiated well.

4.3. Structural Model Evaluation

The assessment of the structural model evaluates the connections among the components and examines the theories put forth in the research framework

Figure 2: Structural Model Result



Source: Result of Data Analysis (2024)

Path coefficients are used to determine the direction and size of the effect between latent variables, and the relationship is considered to be significant if the t-statistic value is > 1.96 or of the p-value is < 0.05 at a 5% significance level (Hair et al., 2019). In addition, there was mediation testing to ascertain the role of organizational readiness in strengthening the connection between digital technology (cloud accounting, big data, artificial intelligence) and operational efficiency. Moreover, the R^2 value was used to measure the extent to which the independent variables could explain the dependent variables, and Q^2 was used to measure the ability of the model to predict, and the effect size value (f^2) was calculated to monitor every construct's contribution towards the dependent variables.

Table 5: Direct Effect

	Path	Original Sample (OS)	t-statistic	p-value	Results
H1	Cloud Accounting → Operational Efficiency	0.211	3.487	0.001	Significant
H2	Big Data Utilization → Operational Efficiency	0.234	3.921	0.000	Significant
H3	Artificial Intelligence → Operational Efficiency	0.198	3.112	0.002	Significant
H4	Organisational Readiness → Operational Efficiency	0.279	4.205	0.000	Significant
H5	Operational Efficiency → Competitiveness	0.316	5.027	0.000	Significant

Source: Result of Data Analysis (2024)

The result from the analysis of the inner model (Table 6) reveals that all the direct relations (H1–H5) are statistically significant at α = 0.05 level with positive path coefficient with Original Sample (OS) value between 0.198 and 0.316, which shows that all independent variables are positively correlated with the enhancement of the dependent variable according to the hypothesis. The t-statistic for all paths is more than 1.96, ranging from 3.112 to 5.027, indicating relatively high influence strength, while all the p-values for the paths are below 0.05 (0.000–0.002), even at the level of significance of 1% because they are below 0.01. The statistical summary shows H1 (CA to OE: OS = 0.211; t = 3.487; p = 0.001), H2 (BD to OE: OS = 0.234; t = 3.921; p = 0.000), H3 (AI to OE: OS = 0.198; t = 3.112; p = 0.002), H4 (OR to OE: OS = 0.279; t = 4.205; p = 0.000), and H5 (OE to COMP: OS = 0.316; t = 5.027; p = 0.000), all of which are significant. Hence, statistically, all the hypotheses H1–H5 are accepted, meaning that the independent variables (cloud accounting, big data, artificial intelligence, and organizational readiness) have significant effects on operational efficiency, and operational efficiency has a significant effect on company competitiveness.

Table 6: Indirect Effect

Hipotesis	Indirect Effect	Original Sample (OS)	t-statistic	p-value	Type Mediate
H6a	Cloud Accounting → OR → Operational Efficiency	0.087	2.745	0.006	Partial
H6b	Big Data Utilization → OR → Operational Efficiency	0.092	2.918	0.004	Partial
H6c	Artificial Intelligence → OR → Operational Efficiency	0.081	2.664	0.008	Partial

Source: Result of Data Analysis (2024)

All mediation paths through organizational readiness proved to be significant with a p-value < 0.05. In particular, the Cloud Accounting → OR → Operational Efficiency path produced OS = 0.087, t-statistic = 2.745, and p-value = 0.006; Big Data Utilization → OR → Operational

Efficiency path produced OS = 0.092, t-statistic = 2.918, and p-value = 0.004; and Artificial Intelligence → OR → Operational Efficiency path produced OS = 0.081, t-statistic = 2.664, and p-value = 0.008. Since all three mediation paths are significant, and at the same time the direct effect results (CA → OE: OS = 0.211; p = 0.001; BD → OE: β = 0.234; p = 0.000; AI → OE: OS = 0.198; p = 0.002) are also significant, the direction of mediation that occurs is partial mediation. This would imply that organizational preparedness does not replace the direct impact of digital technology on operational efficiency but acts as an intervening variable, strengthening the relationship. In other words, financial reporting operational efficiency is both directly influenced by digital technology and indirectly influenced by organizational preparedness.

Additionally, findings from the inner model test validate that the R^2 and Q^2 measures confirm the predictive capacity of the research model. The R^2 for the Operational Efficiency construct is 0.623, categorized as substantial, and a Q^2 of 0.447, indicating high predictability relevance to operational efficiency in financial reporting. Concurrently, the Competitiveness measure has an R^2 measure of 0.487, which is moderate in range, and a Q^2 measure of 0.356, another reliable predictor of relevance. Together, these findings confirm that the research model can explain a significant variance among the endogenous variables and has adequate predictive capability according to Hair et al.'s (2019) benchmark.

4.4. Model Fit

Using several widely used fit indices in structural equation modeling, the model fit assessment determines how well the structural model fits the observed data. (SEM). The goodness-of-fit index (GFI) in this study is 0.927, which shows that the model satisfactorily fits the data by accounting for a significant amount of variance. A good fit is indicated by the adjusted goodness-of-fit index (AGFI), which produces a value of 0.908 after correcting the GFI for degrees of freedom. Furthermore, the model exhibits a strong match as evidenced by the comparative fit index (CFI) of 0.946, in contrast to the null model. Additionally, a minimal disparity between the observed data and the model is indicated by the root mean square error of approximation (RMSEA), which has a value of 0.065, indicating a satisfactory fit (Hair et al., 2019). When taken as a whole, these indices provide credence to the structural model's suitability for explaining the observed data and certify its dependability for additional examination and interpretation.

4.5. Discussion

4.5.1. Digital Transformation of Financial Reporting

The results are similar to earlier research that digital technology adoption has a significant role in making financial reporting more effective. Path H1 (Cloud Accounting → Operational Efficiency) is significant with β = 0.211; t = 3.487; p = 0.001. This argues that cloud accounting accelerates access to data, improves integration, and minimizes reporting delays (Beredugo, 2023; Winoto et al., 2023). In the Indonesian context, respondents indicated cloud accounting as one of the emerging digital systems in the Industry 4.0 period, as did Putra (2022), who referred to it as a milestone for the modernization process of accounting information systems.

Secondly, H2 (Big Data Utilization → Operational Efficiency) is also significant with β = 0.234; t = 3.921; p = 0.000. These results concur with the research conducted by Salem et al. (2021) and Bonsu et al. (2023), where the use of big data helps accountants handle high volumes of

transactions at a quicker pace and improve the quality of reports. This is in relation to the scenario in Indonesia, whereby the majority of companies have begun implementing the use of big data analytics to determine transactional patterns and reduce likely errors in reporting.

The influence of H3 (Artificial Intelligence → Operational Efficiency) is also significant with β = 0.198; t = 3.112; p = 0.002. It is in line with the major contribution of AI in automating monotonous accounting activities, reducing errors due to human actions, and driving predictive analytics (Han et al., 2023; Singh et al., 2023). For Indonesian firms, this indicates that AI embedding is not merely a trend but a strategic imperative to enhance the quality of financial reporting under competitive pressures.

Meanwhile, H4 (Organizational Readiness → Operational Efficiency) is highly significant with β = 0.279; t = 4.205; p = 0.000. These findings affirm that organizational readiness is an important driver of the success of digital transformation. Leadership support, organizational culture, digital literacy, and IT infrastructure have been found to be determinants of the extent to which digital technology can be utilized (Ling et al., 2023; Montasser et al., 2023). In the Indonesian context, in which the digital literacy gap still exists, these results show that readiness in the organization is a determinant of success or failure in the implementation of technology.

4.5.2. Operational Efficiency and Competitiveness

The results also reflect that efficiency in operation is having a strong influence on competitiveness (H5: β = 0.316; t = 5.027; p = 0.000). This conforms to the literature emphasizing the close interconnection between financial reporting effectiveness and improved competitive performance (Mantje et al., 2023; Mzughulga & Moiseeva, 2023). efficient financial reporting firms can create reports that are quicker, more accurate, and regulatory-compliant. This state facilitates faster innovation, improved customer satisfaction, and more responsive strategic decisions (Pangesti & Hazmi, 2023; Siburian et al., 2022). In fact, research shows that financial reporting efficiency has an impact on profitability, cash flow management, and corporate financial condition directly (Gulo & Ginting, 2023; Pinem & Dahliana, 2023). Financial reporting efficiency is not only a technical problem but also a strategic problem to make corporations competitive in Indonesia.

4.5.3. The Mediating Role of Organizational Readiness

The findings of mediation analysis results (H6) show that organizational readiness is a partial mediator between digital technology and operational efficiency. The mediation path is important for CA → OR → OE (β = 0.087; t = 2.745; p = 0.006), BD → OR → OE (β = 0.092; t = 2.918; p = 0.004), and AI → OR → OE (β = 0.081; t = 2.664; p = 0.008). The mediation that occurs is partial since the direct paths are also significant. These findings support the works of Binsaeed et al. (2023) and Montasser et al. (2023), which show that organizational readiness is key to improving the effectiveness of technology implementation, but the technology itself still remains a direct influence. That is, organizations that engage in transformational leadership, have a high digital culture, and own competent human assets will be better positioned to maximize the positive influence of technology on reporting efficiency.

4.5.4. Implication for Practice

The study's conclusions have several ramifications for professionals who work in organizational management and financial reporting. First, to improve operational effectiveness and decision-making capacities, businesses should give top priority to investments in digital technologies like cloud accounting, big data analytics, and artificial intelligence. Second, for digital transformation programs to be effective, organizational preparedness must be fostered through workforce training, IT infrastructure development, and leadership support. Thirdly, businesses should understand the connection between competitiveness and operational effectiveness and use digital transformation to their advantage.

4.5.5. Limitations and Future Research Directions

Although this study offers insightful information about how Indonesian financial reporting methods are being impacted by digital transformation, it is not without flaws. Additional longitudinal research is necessary since the cross-sectional nature of the data makes it more difficult to determine the causal relationship between factors. Furthermore, the study only looked at Indonesian businesses; comparative assessments across other nations and industries can be the subject of future research. Furthermore, qualitative research may offer a more profound understanding of the dynamics and organizational procedures guiding financial reporting digital transformation projects.

5. CONCLUSION

This study confirms that digitalization by adopting cloud accounting, big data, and artificial intelligence has an important role to play in the improvement of operation effectiveness in corporate financial reporting in Indonesia. Digital technology has been operational to accelerate the reporting process, improve the accuracy of information, and strengthen the quality of the financial information produced. Furthermore, this study illustrates that organizational readiness exerts a significant mediating role in the success of digital transformation. Organizational readiness, which consists of leadership support, human resource competencies, digital culture, and technological infrastructure, has been found to strengthen the positive impact of digital technology on operational efficiency. Therefore, digital technology can be optimized only if companies also develop internal capacity correspondingly.

Furthermore, operational efficiency in financial reporting has been demonstrated to exert a direct influence on a firm's competitiveness, as companies that are able to deliver reports more quickly, more accurately, and more in compliance with standards will be more responsive to changes in the market, more adaptable to changes, and more business-competitive. Theoretically, this study contributes to the digital transformation literature by explaining the mediating effect of organizational readiness on financial reporting efficiency and competitiveness. Practically, this study's findings provide a suggestion for managers and policymakers to focus not just on technology investment, but also on building organizational readiness so that digital transformation truly adds value.

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