



## Literature Review of XBRL Implementation in South Korean Financial Reporting: Implications for Sustainable Business Practices

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### ABSTRACT

**Purpose:** This paper explores the development of accounting information systems (AIS) and the adoption of eXtensible Business Reporting Language (XBRL) in South Korea, with particular attention to their implications for corporate reporting and business sustainability.

**Method:** A qualitative literature review was undertaken, drawing on scholarly articles and institutional reports identified through targeted keywords. The selected sources encompass empirical studies on XBRL implementation in the Korean capital market, research on AIS development in both large firms and SMEs, and recent works that connect AIS quality with sustainability outcomes.

**Findings:** South Korea was among the earliest countries to mandate XBRL-based electronic filing through the DART system. Empirical evidence demonstrates that XBRL adoption reduces information asymmetry, lowers equity financing costs, and shortens reporting delays, especially for early adopters. Moreover, Korean firms are modernizing AIS by integrating cloud computing, big data, and artificial intelligence, which enhances efficiency and organizational performance. In addition, recent studies highlight that high-quality AIS contributes positively to sustainability performance through improved information reliability, user satisfaction, and system utilization.

**Implication:** The convergence of advanced AIS and XBRL reporting establishes a strong digital infrastructure that fosters transparency, accountability, and long-term sustainability. This experience provides valuable insights for other countries, including Indonesia, in developing digital reporting ecosystems.

**Originality:** By synthesizing diverse strands of literature on AIS and XBRL in South Korea and explicitly linking them to sustainability perspectives, this paper offers an integrated analysis that is useful for students, researchers, and policymakers.

**Keywords:** AIS, Business Sustainability, Digital Financial Reporting, South Korea, XBRL.

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## 1. INTRODUCTION

Digital transformation in the industry 4.0 era has brought fundamental changes to global accounting governance, shifting financial reporting practices from conventional methods to an integrated digital ecosystem. Current literature no longer views technology as a tool, but rather as a system that synergizes Internet of Things (IoT) sensors for real-time data recording, Blockchain technology for security, and eXtensible Business Reporting Language (XBRL) as a data communication standard (Alkayed et al., 2023). This technological integration is key to addressing capital market challenges that demand high transparency while reducing information asymmetry.

South Korea occupies a strategic position in the global technology adoption landscape as one of the countries with the most mature digital accounting ecosystem. Studies on technological development in South Korea show significant evolution in Accounting Information Systems (AIS), which



have transformed from mere administrative bookkeeping tools into complex Enterprise Resource Planning (ERP) systems connected to various external patent innovations (Rhee et al., 2022). This progress is heavily influenced by the country's institutional environment, which encourages companies to continuously update their accounting systems to stay relevant to global business dynamics (Wang & Zhu, 2025).

This modernization of reporting systems is strongly relevant to business sustainability issues. In South Korea, the quality of financial reporting and Environmental, Social, and Governance (ESG) initiatives have been shown to have a positive correlation with a company's financial stability, although the effectiveness of this relationship is also determined by the company's ownership structure (Kim & Lee, 2023).

This link between information system reliability and financial sustainability underscores the need for a valid data foundation in modern risk management (Wang & Zhu, 2025). However, despite this progress, literature comprehensively discussing how the latest AIS technology evolution directly contributes to the sustainability dimension of business in South Korea remains limited. Therefore, this study aims to map the development of digital reporting infrastructure and analyze its contribution to corporate sustainability in the South Korean economic context.

## 2. LITERATURE REVIEW

### 2.1. Transformation of Accounting Information Systems in the Digital Ecosystem

An Accounting Information System (AIS) is essentially a system tasked with processing transaction data into financial information useful for decision-making. Previously, an AIS was viewed as merely a simple administrative recording tool. However, this view has changed. Today, an AIS has evolved into a system that can integrate sensor technology (the Internet of Things) and Blockchain. This combination of technologies allows for automated and real-time recording of physical data, while also enhancing security against the risk of errors or data manipulation (Alkayed et al., 2023).

This development is evident in South Korea. A look at the history of technological advancements in Korea reveals that accounting systems have evolved dramatically. From simple bookkeeping applications, they have now become part of highly complex Enterprise Resource Planning (ERP) systems. These modern systems not only record historical financial records but also utilize big data analytics to predict future trends, crucial for business strategy (Rhee et al., 2022).

### 2.2. Global Reporting Standard: Merging XBRL and Big Data

To address the information gap between companies and investors, global standards have adopted eXtensible Business Reporting Language (XBRL). As an XML-based reporting language, XBRL transforms financial reports into a digital format that can be read and processed directly by computer systems. Recent research indicates that the benefits of XBRL are optimal when combined with Big Data technology. The synergy between these two technologies facilitates investors in comparing financial data between companies from various countries with a high level of efficiency (Wang & Zhu, 2025).

### 2.3. Reporting Infrastructure in South Korea

South Korea has a robust digital financial reporting infrastructure under the supervision of the Financial Supervisory Service (FSS). As a financial supervisory authority, the FSS requires all public companies to submit information disclosures through the DART (Data Analysis, Retrieval, and Transfer) system. DART is a centralized electronic repository that allows the public to access XBRL-based financial reports transparently and easily.

Korean regulators continue to update their policies to improve reporting quality, including providing data in English to attract global investors. Nevertheless, the FSS adopts an adaptive approach for the Small and Medium Enterprise (SME) sector. The gradual implementation of digital reporting requirements ensures that the technological transition does not unduly burden SMEs' operational capacity (Financial Supervisory Service, 2023).

### 2.4. The Relationship Between Digital Accounting and Business Sustainability (ESG)

The relevance of modern AIS is no longer limited to the financial dimension but also encompasses the management of sustainability information, or Environmental, Social, and Governance (ESG). Empirical evidence from the Korean financial industry shows that ESG initiatives are positively correlated with a

company's financial stability. Good corporate governance is a determining factor in ensuring that investments in sustainability contribute optimally to financial performance (Kim & Lee, 2023).

Furthermore, the quality of information systems is also reflected in the accounting policies implemented by management. Environmentally oriented Korean companies tend to record Research and Development (R&D) costs as long-term assets, rather than as operating expenses. This accounting treatment sends a positive signal to the market that the company is confident in the future economic benefits of its green innovations (Rhee et al., 2022). Therefore, reliable information systems and effective risk management are key foundations for business sustainability (Wang & Zhu, 2025).

### 3. RESEARCH METHOD

#### 3.1. Research Design

This research employed a literature review method with a descriptive qualitative approach. This approach was chosen because the purpose of the study was not to quantitatively test hypotheses, but rather to synthesize existing research findings and explain the phenomenon in depth (Wen, 2021; Rhee et al., 2022; Yoon, 2020; Nofel et al., 2024a; Chua & Byun, 2025).

#### 3.2. Sample dan Data Collection

The data used consisted of journal articles, proceedings, policy reports, and official documents relevant to the topics of Accounting Information Systems (AIS), Extensible Business Reporting Language (XBRL), and business sustainability in South Korea. The primary search sources were Google Scholar and the websites of official institutions such as the Financial Supervisory Service (FSS), Extensible Business Reporting Language (XBRL) International, and Extensible Business Reporting Language (XBRL) Korea. The search was conducted using English keywords, including:

1. "South Korea Extensible Business Reporting Language (XBRL)"
2. "Extensible Business Reporting Language (XBRL) financial reporting in South Korea"
3. "Extensible Business Reporting Language (XBRL) in the Korean capital market"
4. "Accounting Information System (AIS) development in South Korea"
5. "Accounting Information System (AIS) Korea sustainability"

The retrieved articles were then screened based on their titles and abstracts to ensure their relevance to the research objectives (Financial Supervisory Service, 2023; XBRL International, 2024; XBRL Korea, 2025).

*Inclusion and Exclusion Criteria.* The inclusion criteria for the literature were:

1. Discusses the adoption or impact of Extensible Business Reporting Language (XBRL), particularly in South Korea.
2. Discusses the development of Accounting Information Systems (AIS), AIS quality, or the use of digital technology in accounting in the Korean context.
3. Examines the relationship between Accounting Information Systems (AIS) or digital reporting and company performance, transparency, or business sustainability.
4. Published primarily between 2020 and 2025, except for classic articles deemed important.

Articles not directly related to accounting (e.g., only discussing general information technology) or not addressing the Korean context or sustainability were excluded from the analysis. Table 1 shows the results in collecting the articles based on the criteria.

**Table 1.** Number of Literature Search Results

Database	Observation Date	Periods	Keywords	Total
Google Scholar, Publish or Perish	20 November 2025	Period 2020-2025	Accounting Information System, AIS, XBRL, Digital Reporting, Financial Reporting Technology, Korea, South Korea, Korean Companies	45
	25 November 2025	Periode 2020-2025	Eliminate articles that do not match the topic/keywords	28
Total samples				27

Source: Processed Data (2025)

### 3.3. Data analysis

Data analysis was conducted using the following steps:

1. Identification: recording bibliographic information and summarizing the main findings of each article.
2. Classification: grouping articles into themes:
  - a. The impact of Extensible Business Reporting Language (XBRL) on the Korean capital market.
  - b. Development of Accounting Information Systems (AIS) and digital transformation in Korean companies.
  - c. The relationship between Accounting Information Systems (AIS)/Extensible Business Reporting Language (XBRL) and business sustainability.
3. Narrative synthesis: compiling descriptive accounts that connect the findings between articles, then drawing theoretical and practical implications related to business sustainability.

The limitations of this method are its reliance on available literature and the potential for bias in article selection. Therefore, the results of this study are descriptive in nature and are not intended to be statistically generalized.

## 4. RESULTS AND DISCUSSION

### 4.1. Article Synthesis Results

This section presents a synthesis of previous research results relevant to the research topic. The synthesis includes information on the title, author, year of publication, and a summary of the main findings of each article that form the basis for the discussion of this research.

**Table 2.** Synthesis Results

No.	Title, Author, and Year	Results
1	“A study on the transformation of accounting based on new technologies: Evidence from Korea.” Yoon, S. (2020).	This study examines new technology-driven accounting transformations using evidence from Korea. It analyzes how technologies such as AI, blockchain, and cloud computing are transforming accounting practices, audit processes, and financial reporting in Korea.
2	“Digital corporate reporting: Research developments and implications.” Troshani, I., & Rowbottom, N. (2021).	This review analyzes research developments in digital corporate reporting and their implications. The study identifies key research trends, implementation challenges, and future opportunities in the transformation of corporate reporting toward a structured digital format.
3	“The impact of accounting information systems on performance management” Al-Delawi, A. S., & Ramo, W. M. (2020).	This study analyzes the impact of accounting information systems on performance management. The results indicate that implementing an effective accounting information system can improve the quality of managerial decision-making and overall organizational performance.
4	“Exploring knowledge trajectories of accounting information systems using business method patents and knowledge persistence-based main path analysis.” Rhee, Y., Yoon, S., & Park, H. (2022).	This study explores the knowledge trajectory of accounting information systems using business method patents and knowledge persistence-based main path analysis. The research identifies key technological developments and innovation trends in accounting information systems from a patent perspective.
5	“The role of XBRL adoption on enhancing transparency of information disclosure: A case study of Jordanian financial companies.” Alkayed, H., Zighan, S., Qabajeh, M., & Almaharmeh, M. I. (2023).	This study examines the role of XBRL adoption in enhancing transparency of information disclosure in Jordanian financial companies. The results show that XBRL adoption significantly improves the transparency and quality of financial reporting, while facilitating access to information for stakeholders.
6	“The determinants of eXtensible Business Reporting Language (XBRL) adoption: A cross-country study.” Sassi, W., Ben Othman, H., & Hussainey, K. (2024).	This cross-country study identifies the determinants of XBRL adoption. The results show that factors such as regulatory pressure, technological readiness, capital market size, and legal culture significantly influence XBRL adoption rates across countries.

No.	Title, Author, and Year	Results
7	“Why digitally tagged reporting is critical in 2024 and beyond.” <a href="#">PwC (2024)</a> .	This publication explains the importance of digitally tagged reporting (XBRL) in 2024 and beyond. PwC outlines how digital reporting improves the accessibility, comparability, and analysis of financial data, becoming a critical requirement in the era of digital transformation.
8	“Development and assessment of a business intelligence-based management accounting information system model: A structural equation modelling approach.” <a href="#">Rahimi, B., Ahmadi, F., Khanmohammadi, M., Ranjbar, M. H., &amp; Kordlouie, H. (2023)</a> .	This study develops and evaluates a business intelligence-based management accounting information system model using structural equation modelling. The results indicate that integrating business intelligence into the management accounting information system improves information quality and supports strategic decision-making.
9	“The effect of environmental factors on accounting systems: a comparison between South Korea and Australia.” <a href="#">Kim, S. H., &amp; An, Y. (2023)</a> .	This comparative study analyzes the effects of environmental factors on accounting systems in South Korea and Australia. The results indicate that differences in the legal, economic, and cultural environments influence the design and implementation of accounting systems in both countries.
10	“ESG initiatives and financial stability in the Korean financial industry: The moderating role of ownership concentration.” <a href="#">Chua, K. T., &amp; Byun, H.-Y. (2025)</a> .	This study explores the relationship between ESG initiatives and financial stability in the Korean financial industry, focusing on the moderating role of ownership concentration. The findings indicate that ESG initiatives positively contribute to financial stability, and this effect is either strengthened or weakened depending on the level of ownership concentration.
11	“Success Factors of the Adoption of Smart Factory Transformation: An Examination of Korean Manufacturing SMEs.” <a href="#">Jung, S., Kim, D., &amp; Shin, N. (2023)</a> .	This study identifies the factors contributing to the successful adoption of smart factory transformation in Korean manufacturing SMEs. The research found that management support, technological readiness, and organizational capability are key factors in the success of digital transformation in the manufacturing sector.
12	“Progressing our digital financial reporting strategy.” <a href="#">IFRS Foundation. (2022a)</a> .	This publication describes the progress of the IFRS Foundation’s digital financial reporting strategy. It outlines initiatives to increase the adoption of XBRL-based digital reporting and the IFRS taxonomy worldwide, as well as the expected benefits for capital market transparency and efficiency.
13	“Korean Taxonomy – IFRS Taxonomy Illustrated 2022.” <a href="#">IFRS Foundation. (2022b)</a> .	This study presents a Korean taxonomy aligned with the IFRS Taxonomy 2022. This publication provides an illustrative guide on how IFRS standards are applied in the Korean context through a standardized XBRL taxonomy structure.
14	“South Korea expanding XBRL scope in financial statements.” <a href="#">XBRL International. (2024a)</a> .	This publication reports on the expansion of XBRL coverage in financial reporting in South Korea. The article explains the mandatory expansion of XBRL to cover more entity types and financial statement elements, reflecting Korea’s commitment to digital reporting standardization.
15	“South Korea’s XBRL implementation finalised.” <a href="#">XBRL International. (2024b)</a> .	This news release announces the finalization of XBRL implementation in South Korea. The publication explains that Korea has completed the regulatory framework and technical infrastructure for the full implementation of XBRL in corporate financial reporting.
16	“2024 DART taxonomy documentation.” <a href="#">XBRL Korea, (2025)</a> .	This documentation provides a comprehensive guide to the 2024 DART (Data Analysis, Retrieval, and Transfer System) taxonomy for Korean XBRL. It covers the taxonomy structure, reporting elements, and implementation guidelines for financial reporters in Korea.
17	“Accounting treatment of R&D for environmentally responsible firms: Evidence from South Korea.” <a href="#">Kim, S., &amp; Lee, J. (2020)</a> .	This study examines the accounting treatment of R&D in environmentally responsible companies in South Korea. The results indicate that companies with strong environmental commitments tend to capitalize their R&D costs, reflecting the expected long-term benefits of sustainability investments.
18	“XBRL disclosure expansion roadmap in Korea.” <a href="#">Financial Supervisory Service (2023)</a> .	This document outlines a roadmap for expanding XBRL disclosures in Korea. The FSS outlines a phased strategy for expanding the use of XBRL in financial reporting, including an

No.	Title, Author, and Year	Results
		implementation timeline and adoption targets for various types of reporting entities.
19	“Research on XBRL financial reporting model under big data.” <a href="#">Wen, Y. (2021).</a>	This study examines the XBRL financial reporting model in the context of big data. The study proposes a framework for leveraging big data technology to improve the efficiency and analytical value of XBRL-based financial reporting.
20	“XBRL standards – mean of improving capital market information process.” <a href="#">Mansour, L., Spătariu, E. C., &amp; Georgescu, C. E. (2023).</a>	This study analyzes XBRL standards as a means to improve capital market information processing. Findings indicate that implementing XBRL standards can increase information processing efficiency, reduce information asymmetry, and improve the quality of investment decisions.
21	“Exploring the relationship between accounting information system (AIS) quality and corporate sustainability performance using the IS success model.” <a href="#">Wang, X., &amp; Zhu, W. (2025).</a>	This study explores the relationship between accounting information system quality and corporate sustainability performance using the IS success model. Findings indicate that high-quality AIS positively contributes to corporate sustainability performance by improving information quality and decision-making.
22	“From sensors to standardized financial reports: A proposed automated accounting system integrating IoT, blockchain, and XBRL.” <a href="#">Nofel, M., Marzouk, M., Elbardan, H., Saleh, R., &amp; Mogahed, A. (2024a).</a>	This study proposes an automated accounting system that integrates IoT, blockchain, and XBRL. The research shows that the integration of these technologies can create a real-time, transparent, and standardized financial reporting system, reducing manual intervention and increasing data reliability.
23	“Integrating blockchain, IoT, and XBRL in accounting information systems: A systematic literature review.” <a href="#">Nofel, M., Marzouk, M., Elbardan, H., Saleh, R., &amp; Mogahed, A. (2024b).</a>	This systematic review explores the integration of blockchain, IoT, and XBRL in accounting information systems. The analysis shows that the convergence of these technologies offers significant potential for accounting system transformation, with benefits in terms of automation, data security, and reporting standardization.

Source: Processed data (2025)

#### 4.2. Discussion

The synthesis of these findings in Table 2 indicates that previous research contributions generally point to strengthening the role of accounting information systems, or XBRL, in improving reporting accuracy, accountability, and organizational performance. These findings suggest that the appropriate use of information technology can be a key factor in supporting higher-quality and more transparent reporting practices.

#### The Impact of Extensible Business Reporting Language (XBRL) Adoption on the Information Environment in South Korea

A literature review indicates that the adoption of Extensible Business Reporting Language (XBRL) in South Korea has had a positive impact on the information environment in the capital market. Following the implementation of Extensible Business Reporting Language (XBRL) through the DART system, several studies reported a reduction in information asymmetry, reflected in narrower bid-ask spreads and increased stock trading activity. Investors gained easier access to structured financial data, enabling more informed investment decisions ([Wen, 2021](#); [Alkayed et al., 2023](#); [Sassi et al., 2024](#); [Mansour et al., 2023](#)).

Other studies found that companies adopting Extensible Business Reporting Language (XBRL) experienced a lower cost of equity capital, particularly for companies that previously had limited information disclosure. This demonstrates that Extensible Business Reporting Language (XBRL) acts as a mechanism to reduce information risk for investors, thus allowing them to provide a lower cost of capital. Furthermore, reporting lag also decreases, as the process of preparing and uploading financial reports becomes more efficient ([Wen, 2021](#); [Sassi et al., 2024](#); [Troshani & Rowbottom, 2021](#)).

From a business sustainability perspective, this supports long-term funding stability. Companies that are able to provide transparent and reliable information are more likely to gain the trust of investors and financial institutions. With a lower cost of capital, companies have more room to invest in long-term projects, including sustainability initiatives such as energy efficiency, environmentally friendly product innovation, and social responsibility programs ([Kim & Lee, 2020](#); [Wang & Zhu, 2025](#); [Chua & Byun, 2025](#)).

### Accounting Information System Development in South Korea

Regarding Accounting Information Systems (AIS), studies from Korea demonstrate a shift from traditional on-premise systems to cloud-based systems and integration with other digital technologies. Cloud-based Accounting Information Systems (AIS) offer flexible access, scalability, and easier integration with other business applications such as sales, inventory management, and business intelligence systems (Yoon, 2020; Rhee et al., 2022; Al-Delawi & Ramo, 2020).

This shift is clearly evident in the implementation of Accounting Information Systems (AIS) used by various companies in South Korea. In large companies, the use of cloud-based Enterprise Resource Planning (ERP) services allows companies to manage large amounts of data in the cloud without having to rely on a company-owned data center. Meanwhile, the retail sector has begun implementing cloud-based Post-of-Sales (POS) systems that automate ordering by estimating consumption data in real time. Furthermore, government institutions such as the National Tax Service of Korea are also adopting Big Data to strengthen tax administration (Yoon, 2020).

Several studies have shown that companies that utilize modern Accounting Information Systems (AIS) tend to have faster accounting processes, lower recording error rates, and better reporting capabilities. In SMEs, increased maturity of Accounting Information Systems (AIS) is associated with improved information quality and timeliness of financial reports. This is crucial for business sustainability, as SMEs often face limited resources and access to financing. Implementing a sound Accounting Information System (AIS) can help them manage their finances more prudently and present credible reports to creditors and investors.

However, the literature also highlights various challenges, such as a lack of technologically proficient accounting personnel, employee resistance to changes in company policies, and concerns about the security of data stored in cloud environments. Therefore, in addition to investing in technology, a balance between human resource (HR) training and strengthening IT governance is necessary to ensure that the implementation of an Accounting Information System (AIS) truly supports business sustainability.

### Integration of AIS and XBRL to Support Business Sustainability

Integration between Accounting Information Systems (AIS) and Extensible Business Reporting Language (XBRL) reporting is key to maximizing the benefits of both. Accounting Information Systems (AIS) serve as the primary data source; transaction data is recorded, processed, and summarized into financial statements and managerial reports. Extensible Business Reporting Language (XBRL) then serves as a standard format that transforms these reports into structured digital data that is easily accessible to external stakeholders (Wen, 2021; Nofel et al., 2024b).

If a company's Accounting Information System (AIS) is well-designed, for example, with a module that manages financial and non-financial information in an integrated manner, the company can easily prepare sustainability reports or ESG reports. Information such as carbon emissions, energy consumption, occupational safety, and social programs can be recorded within the Accounting Information System (AIS) and then reported digitally using the relevant Extensible Business Reporting Language (XBRL) taxonomy (Wang & Zhu, 2025; Nofel et al., 2024a; IFRS Foundation, 2022b).

For South Korean companies, the readiness of the DART infrastructure and extensive experience using Extensible Business Reporting Language (XBRL) provide an opportunity to develop Extensible Business Reporting Language (XBRL)-based sustainability reporting. This will facilitate global investors who are increasingly considering ESG issues in their investment decisions. Furthermore, for regulators, structured data facilitates compliance monitoring and systemic risk analysis (Financial Supervisory Service, 2023; IFRS Foundation, 2022a; XBRL International, 2024; XBRL Korea, 2025).

From a business sustainability perspective, the integration of an Extensible Business Reporting Language (XBRL) Accounting Information System (AIS) helps companies:

1. Increase transparency and accountability, as financial and non-financial information is presented clearly and comparably.
2. Better manage risk through more systematic monitoring of financial and ESG indicators.
3. Increase stakeholder trust, thereby supporting long-term business sustainability (Wang & Zhu, 2025; Chua & Byun, 2025).

South Korea's experience can serve as a reference for Indonesia, especially as it begins to develop a digital taxonomy for financial and sustainability reporting.

## 5. CONCLUSION

This article aims to review the development of Extensible Business Reporting Language (XBRL)-based Accounting Information Systems and financial reporting in South Korea and analyze their contribution to business sustainability. Through a literature review, several key conclusions were drawn.

First, the adoption of Extensible Business Reporting Language (XBRL) through the Data Analysis, Retrieval, and Transfer System (DART) in South Korea has been shown to improve the quality of the information environment in the capital markets. Extensible Business Reporting Language (XBRL) reduces information asymmetry, the cost of equity capital, and reporting delays, thus supporting more efficient access to funding for companies. This is a crucial foundation for business sustainability, as companies can obtain long-term funding sources at a lower cost.

Second, the development of Accounting Information Systems (AIS) in Korean companies and SMEs demonstrates a shift toward more modern and integrated systems, utilizing cloud computing, big data, and artificial intelligence. A quality Accounting Information System (AIS) improves accounting process efficiency, information quality, and a company's ability to respond to changes in the business environment, thereby strengthening organizational competitiveness and resilience.

Third, the integration of the Accounting Information System (AIS) and Extensible Business Reporting Language (XBRL) creates a digital infrastructure that supports simultaneous financial and sustainability reporting. The Accounting Information System (AIS) provides a comprehensive data source, while Extensible Business Reporting Language (XBRL) provides a standard format for conveying financial and non-financial information to stakeholders. This integration enhances transparency, accountability, and enhances trust from investors and other stakeholders.

### 5.1. Implications

The findings of this study provide several important implications for practice, policy, and research. For companies and MSMEs, the integration of Accounting Information Systems (AIS) and Extensible Business Reporting Language (XBRL) is a strategic path to strengthening organizational competitiveness and resilience. Investing in a modern accounting system integrated with a standard reporting format not only improves process efficiency and information quality but also builds transparency and stakeholder trust, ultimately supporting business sustainability.

From a regulatory perspective, South Korea's experience demonstrates that implementing XBRL through a centralized system like DART can improve capital market efficiency by reducing information asymmetry and the cost of capital. This can serve as a reference for other countries, including Indonesia, in designing more transparent and accountable reporting policies. Meanwhile, for investors and stakeholders, AIS-XBRL integration provides a more reliable basis for investment decision-making because the risks resulting from information gaps can be minimized. Finally, for the academic community, the synergy between AIS development and XBRL adoption opens up opportunities for cross-disciplinary research linking financial reporting with sustainability, thereby enriching theory and practice in accounting, finance, and sustainability studies.

### 5.2. Limitations

This study has limitations because it relied solely on online literature and did not conduct its own empirical testing. Further research could employ case studies or surveys of companies in Korea and Indonesia to further explore the integration practices of Extensible Business Reporting Language (XBRL) Accounting Information Systems (AIS) and their impact on business sustainability performance. Nevertheless, the results of this study are expected to provide an initial overview for the development of Accounting Information Systems (AIS) and digital reporting (Troshani & Rowbottom, 2021; Wang & Zhu, 2025) that support business sustainability.

South Korea's experience in developing an XBRL-based reporting system and modernizing AIS offers valuable lessons for Indonesia. Integrating AIS with XBRL can be a crucial foundation for increasing transparency and accountability in financial reporting, while strengthening investor confidence in the national capital market. This is relevant to Indonesia's need to expand access to long-term funding for companies and MSMEs, particularly in the face of global competition. Furthermore, the implementation of technology-based AIS, such as cloud computing, big data, and artificial intelligence, can help

Indonesian companies improve accounting process efficiency and adaptability to changes in the business environment. Thus, policies that encourage AIS–XBRL adoption will not only strengthen corporate governance but also support the national sustainability agenda through more comprehensive reporting, encompassing both financial and non-financial aspects. For the academic community and regulators, this integration opens up opportunities for research and policy development that are more contextualized with local wisdom, enabling Indonesia to build a reporting system that is not only modern but also rooted in national identity and needs.

### Abbreviations

AIS	: Accounting Information System
DART	: Data Analysis, Retrieval and Transfer System
ERP	: Enterprise Resource Planning
ESG	: Environmental, Social, and Governance
FSS	: Financial Supervisory Service
IFRS	: International Financial Reporting Standards
IoT	: Internet of Things
POS	: Point of Sale
R&D	: Research and Development
SIA	: Sistem Informasi Akuntansi
SMEs	: Small and Medium-sized Enterprises
TI	: Teknologi Informasi
UKM	: Usaha Kecil dan Menengah
XBRL	: eXtensible Business Reporting Language

### Authors' contribution

FS: developed the research framework, conducted the primary literature search, wrote the research methods section, formulated the conclusions and abstract, and compiled the bibliography. MAH and JL: conducted an in-depth review of XBRL-related articles, wrote the introduction and literature review that formed the basis for the article's development, and compiled the methods table and its contents. All authors collaborated on final editing and ensured the article adhered to the journal's writing guidelines.

### Conflict of Interest

The authors declare no competing interests.

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### Availability of data and materials

This article is based on a literature review. All data and materials used are derived from journal articles, proceedings, and publicly accessible official documents as listed in the reference list.

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