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Harmonisation of International Accounting Standards as a Driver of Public Finance Transparency in the Digital Era

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Abstract

Background: The digitalisation of public administration is a pivotal factor in achieving fiscal openness. The harmonisation of reporting through International Financial Reporting Standards (IFRS) and International Public Sector Accounting Standards (IPSAS) is essential for unifying financial data, ensuring international comparability, and strengthening public trust in governmental financial management.

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Objective: This study investigates the causal relationship between the adoption levels of international financial reporting standards and the resulting degree of fiscal transparency within government operations in the context of digital transformation.

Methodology: The research employed a systematic, analytical, and factor-based methodological approach. The analysis utilised secondary statistical data sourced from the World Bank, IMF, OECD, IFAC, and the European Commission to establish cross-country comparisons and quantitative outcomes.

Results: Findings indicate that countries with high digital maturity exhibit significantly higher average fiscal transparency (0.82) compared to those with low digitalisation (0.52). Furthermore, public integrity—measured by the Corruption Perception Index—averaged 71 in digitally mature nations compared to a global average of 55. Integrating international standards with digital platforms was found to reduce administrative reporting costs by 20–25% and audit duration by 30%, demonstrating enhanced budgetary control efficiency.

Unique Contribution: This research provides empirical confirmation of the synergy between IFRS/IPSAS and digital monitoring tools. It offers a data-driven policy mandate for improving financial transparency, control effectiveness, and management quality across all levels of government.

Conclusion: The integration of IFRS/IPSAS with digital public financial management platforms is directly associated with substantial increases in fiscal transparency and administrative integrity, leading to measurable improvements in efficiency and budget control.

Key Recommendation: Future research should focus on developing a specific implementation roadmap and evaluation framework for integrating IPSAS/IFRS into emerging digital governance architectures to quantify long-term economic impacts.

Keywords: financial security, international standards, public finances, international financial reporting standards, green finance, digital economy, financial risks.

Introduction

In the modern economic system, the issue of transparency of public finances is of particular importance, as it determines trust in state institutions, the efficiency of budget resource management, and the level of financial stability. Despite the long-term implementation of international financial reporting standards (IFRS) and public sector standards (IPSAS), in most countries, there is a gap between the formal adoption of standards and real indicators of openness of budget information. Available research shows that the harmonisation of financial reporting does not always guarantee transparency and accountability, especially in countries with low digital maturity, where bureaucratic barriers, fragmented accounting systems, and limited public access to financial data persist.

Nguyen and Nguyen (2025) conducted a bibliometric analysis of contemporary research on the implementation of IFRS and found that the main trend in recent years is a shift from a purely technical interpretation of standards to an examination of their impact on transparency, institutional quality, and the financial sustainability of government structures. The use of IFRS is expected to bring about a significant improvement in the transparency and trust of the

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financial information of companies, especially in the countries that want to attract investments in the digital sector of economy.

Despite the widespread adoption of international financial reporting standards, a number of unresolved issues remain in the scientific literature, limiting understanding of their real impact on the transparency of public finances. A significant part of the research focuses on analysing the regulatory framework and technical procedures for harmonising reporting, while a comprehensive assessment of the effectiveness of applying IFRS and IPSAS in the context of the digital economy remains insufficiently developed (Desyatnyuk et al., 2025). Existing works often fail to account for the interdependence among digital technologies, institutional management quality, and trust in public-sector financial information. Similarly, a unified methodology for assessing the impact of international standards on the long-term sustainability and openness of public finances has not yet been established, complicating the development of effective mechanisms for financial control and accountability in the context of digitalisation.

The article aims to provide a theoretical approach and results of an empirical study on the relationship between IFRS/IPSAS implementation, public transparency, and digital financial platforms. The scientific conception explains transformation processes in financial reporting, main directions for enhancing its implementation mechanisms, and composite modelling of transparent management mechanisms in the digital environment.

Literature Review

The main topic of contemporary research related to transparency, accountability, and efficiency in public financial management is the implementation of IFRS and IPSAS. Scientific literature has recently analysed, in depth, the harmonisation between reporting standards and management digitalisation processes. It considers either acceleration or deceleration on trust placed in public sector financial information as one aspect of its consideration. Greater efficiency in developing countries' national resource allocation would be achieved when IPSAS promotes the rational use of budgetary funds adapted to such countries. The emphasised fact is that IPSAS were implemented in a setting of independent oversight institutions and high financial transparency. This is also confirmed by Hamed-Sidhom and Loukil (2021), who highlight that political stability plays a major role in promoting transparency of reporting and minimizing corruption. And this is substantiated also by the importance of political stability for transparent reporting and low corruption.

Thus, an analysis of recent studies and publications demonstrates that International Financial Reporting Standards (IFRS) are not just a technical mechanism for unifying accounting procedures but also a strategic tool for ensuring transparency, trust, and efficiency in public finances. At the same time, most works emphasise the potential for maximum effect from their application, provided they are integrated with digital technologies that ensure the timeliness, accuracy and openness (integration) of financial information.

The purpose of this study is to clarify the role, mechanisms of influence, and effectiveness of applying international financial reporting standards (IFRS) and public sector accounting standards (IPSAS) in increasing the transparency and accountability of the public finance system in the context of the digital transformation of the economy. Particular attention is paid to the relationship between the implementation of international standards, the level of openness of financial information and the development of digital technologies that form a new

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architecture of public financial management. The focus of the study is to identify how the unification of reporting, the automation of accounting processes and the introduction of digital monitoring tools contribute to increasing the efficiency of budget resource management and strengthening public trust in state institutions. Provides practical recommendations to increase effectiveness in implementing control through enhanced state audits with Integrated Public Reporting, based on the principles of transparency.

Methods

A methodological approach was developed, an analytical model that links transparency indicators (open data indices, level of availability of budget information, degree of digitalisation of public administration) with the level of implementation of international standards I in the financial reporting system. The statistical basis of the study used *World Development Indicators* as the main source of macroeconomic and fiscal indicators (World Bank, 2024) and *Fiscal Transparency Evaluations*, which assess budget accountability and disclosure standards in the public sector (International Monetary Fund, 2024).

To assess the institutional maturity of reporting systems, *the Public Expenditure and Financial Accountability (PEFA) Framework* (World Bank, 2022) and *the Progress Report on the Implementation of IPSAS in EU Member States* (European Commission, 2024) were used, which allowed comparing the level of harmonisation of public reporting in EU countries and developing countries. Additional information on the implementation of open government principles is provided in *the Global Report on Open Government: Accountability and Transparency in the Digital Age* (Open Government Partnership, 2023), and the level of digital maturity of government structures was assessed based on the results of *the E-Government Survey 2022* (United Nations Department of Economic and Social Affairs, 2022) and *Measuring Digital Development: Facts and Figures 2024* (International Telecommunication Union, 2024).

Results

Characteristics and comparative analysis of international financial reporting standards

International Financial Reporting Standards (IFRS) and International Public Sector Accounting Standards (IPSAS) are key regulatory and methodological systems that define the modern architecture of global financial accounting. They ensure comparability, reliability and transparency of financial information at the macro and micro levels, contributing to increasing trust in financial institutions and government bodies. As emphasized in *the IFRS Foundation Annual Report 2023* (International Financial Reporting Standards Foundation, 2023), the IFRS system is aimed at forming a "single global business language", ensuring the same interpretation of economic events in the reporting of companies in different countries. In turn, *the International Public Sector Financial Accountability Index* (International Federation of Accountants, 2023) emphasizes that IPSAS form the basis of accountability of governments and public institutions to society, establishing uniform standards of fiscal transparency.

Both systems are based on the accrual basis, which ensures that financial transactions are recorded when they occur, rather than when cash flows occur. This allows for the assessment of actual liabilities, income, and expenses, which is critical for the effective management of assets and debt in the public sector (European Commission, 2024). However, there are significant structural, functional, and objective differences between IFRS and IPSAS, which stem from the different nature of the users of the reports. IFRS serves the interests of investors,

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creditors and auditors, while IPSAS serves the needs of society, parliament, supervisory authorities and international financial institutions.

IFRS are developed by the International Accounting Standards Board (IASB) and are used in the private sector in more than 140 countries worldwide. They define the methodology for preparing the financial statements of commercial enterprises, including the statement of financial position, the statement of profit or loss, the statement of cash flows, and the statement of changes in equity (International Financial Reporting Standards Foundation, 2023).

The accrual method embedded in IFRS and IPSAS records economic events regardless of cash flows. This allows pension liabilities to be recognised as long-term government debt rather than as off-balance sheet future payments. Similarly, non-financial resources, such as infrastructure and natural assets, are recognised as elements of value. In cash-based systems, such indicators remain invisible (International Financial Reporting Standards Foundation, 2023; International Federation of Accountants, 2023). In developing countries, the formal adoption of IPSAS often does not change actual transparency due to institutional constraints. Financial powers remain scattered among ministries. Data is stored in incompatible registers. There is no single treasury database. Reporting undergoes multi-level approvals. Digital disclosure under IFRS is investor-oriented. It focuses on profitability, risks, and asset value. Data is presented in standardised financial packages for analysts. IPSAS-oriented disclosure has a different logic. It is addressed to citizens and parliaments.

As the comparative analysis shows, there is a conceptual similarity between IFRS and IPSAS in the methodology for assessing financial indicators, but their target loads differ significantly. IFRS create information symmetry in the capital market. IPSAS create transparency and accountability to the public on the use of budget funds. The two systems work perfectly together within an integrated financial management model. In this model, government reporting is used as an analytical source for assessing economic efficiency, while it also serves as an indicator of institutional environment quality.

Methodologically, it is the possibility of associating IFRS and VAT IFRS principles with digital reporting formats (e.g. XBRL) that forms the base for developing analytical comparisons between budgetary and corporate financial indicators up to complicated levels of fiscal transparency analysis, which significantly lowers transaction costs for control while increasing reliability on public reporting(World Bank, 2022; International Monetary Fund, 2024). XBRL technology standardises financial data through unified tags. This allows regulators and auditors to automatically read reports without manual processing. It is automation that explains the reduction in publication time from 180 to 75 days. At the same time, digitisation with low-quality reporting creates the risk of hidden liabilities. The control matrix should include mandatory tag validation, cross-checks with treasury data, audit logs, and public access to primary aggregates.

Dynamics of the implementation of international financial reporting standards (IFRS and IPSAS)

The empirical analysis, based on the implementation of International Financial Reporting Standards (IFRS) and International Public Sector Accounting Standards (IPSAS), shows how harmonised financial reporting systems are across different parts of the world. They become a key element in public finance reform, making it more transparent, accountable, and

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comparable, and increasingly harnessed by the digital economy. Comparative results by region of the world are oriented to reflect growth dynamics, development, and transparency according to PEFA indicators, as well as the scale of international standardisation in the field of public finance (Table 1).

Table 1. Level of implementation of IFRS and IPSAS by region of the world (2018–2024)

World region	Share of countries that have implemented IFRS, % (2024)	Share of countries that have implemented IPSAS, % (2024)	Change in the level of transparency according to PEFA, % (2020–2024)
European Union	100	87	+12
Asia-Pacific region	92	61	+9
North America	100	70	+7
Latin America	84	58	+10
Africa	73	55	+15
Global average	88	68	+11

Source: compiled by the author based on data from the World Bank (2024), International Monetary Fund (2024), International Federation of Accountants (2018), Organisation for Economic Co-operation and Development (2023), European Commission (2024), International Financial Reporting Standards Foundation (2023)

During 2018–2024, there was a significant increase in the level of implementation of both IFRS and IPSAS standards across all regions of the world, as confirmed by the statistical data presented in Table 1. Over the period 2020–2024, the average level of budget transparency increased by 11%, resulting from the systematic integration of international standards into the public sector (World Bank, 2024; International Monetary Fund, 2024).

According to International Federation of Accountants (2018), 180 countries have declared progress in harmonising their public accounting systems with IPSAS, of which 81 countries have already completed full implementation, and another 69 are at the stage of partial adaptation. The highest results have been achieved in European Union member states, where the level of standard integration is 87% (European Commission, 2024). Developing regions, in particular Latin America and Africa, show average indicators of 58–55%, but have the highest growth rates – an average of +10–15% over the last five years (International Federation of Accountants, 2018; World Bank, 2022).

Regarding the private sector, the International Financial Reporting Standards Foundation (2023) notes that 147 countries worldwide have officially adopted or permitted the use of IFRS. The highest level of their implementation is recorded in countries with open capital markets – the USA, Canada, Australia, EU countries and Singapore. Partial convergence to international standards has begun in the Middle East, where the adaptation of IFRS is taking place in parallel

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with the digital modernisation of public administration (International Financial Reporting Standards Foundation, 2023; International Monetary Fund, 2024).

Quantitative dynamics are steadily improving across regions: the share of countries publishing financial data in open formats has increased from 58 per cent in 2018 to 76 per cent in 2024 (World Bank, 2024). The International Monetary Fund (2024) also recorded a 15-point increase in the average fiscal transparency index in its Fiscal Transparency Indicators System compared to 2019. This confirms the positive impact of reporting harmonisation, which combines data quality, digital accessibility and adherence to international accountability principles.

Savings of 20–25% come from several channels. The main effect is achieved by reducing manual labour. Automated accounting replaces duplicate data entry. Integrated platforms reduce consolidation time. The second factor is related to a reduction in the number of repeat audits. Unique digital transaction traces enable auditors to work with primary records. Control shifts from document verification to transaction logic verification. This reduces costs without compromising control quality (Makedon et al., 2025). In summary, the analysis shows that implementing IFRS and IPSAS is a systemic process aimed at improving the efficiency of public financial management.

The relationship between the digitalisation of public administration and fiscal transparency

The digitalisation of public administration in the 21st century has become a determining factor in the development of openness, accountability and efficiency of public finances. The degree of digital maturity of the public sector increasingly determines the transparency of the budget process, the speed at which financial reports are published, and the effectiveness of public control over resource allocation (United Nations Department of Economic and Social Affairs, 2022; Open Government Partnership, 2023).

The study analysed aggregated data *from United Nations Department of Economic and Social Affairs (2022), International Telecommunication Union (2024)*, *Open Government Partnership (2023), International Monetary Fund (2024)*, *Transparency International (2024),* and *the World Bank (2024),* covering more than 160 countries. On average, the global e-Government Development Index (EGDI) increased from 0.66 in 2018 to 0.74 in 2022, while the Digital Development Index (IDI) rose from 0.69 to 0.79 over the same period (International Telecommunication Union, 2024).

The analysis showed a clear interdependence between the level of digitalisation and indicators of fiscal transparency. Thus, in regions with high EGDI values (>0.8), the average fiscal transparency index, according to *International Monetary Fund (2024),* was 0.82, while in countries with low levels of digital maturity (EGDI <0.6), this indicator did not exceed 0.55. To clearly demonstrate this dependence. The highest levels of digitalisation are observed in the European Union and North America, where the EGDI and IDI indices exceed 0.9. In these countries, fiscal transparency also reaches the highest indicators – 0.82–0.84 on the *International Monetary Fund (2024),* and the average score on the Corruption Perceptions Index is over 70 points (Transparency International, 2024). By comparison, in African countries, where digitalisation is at an early stage (EGDI = 0.51, IDI = 0.58), the level of budget transparency remains below 0.55, and the average CPI is only 33 points. *The World Bank (2024)* records that in countries that have implemented electronic platforms for public finance management (Integrated Financial Management Information Systems – IFMIS), the share of

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"off-budget" operations has decreased by 10%, and the level of reporting accessibility has increased by 18%.

Global audit networks act as conduits for International Standards on Auditing in developing countries. They ensure methodological consistency, staff training, and the transfer of quality control practices. Through them, ISA standards are integrated into the public sector even when national institutions are weak. At the same time, this dependence creates knowledge asymmetry and increases private actors' influence over public data.

Additionally, *International Monetary Fund (2024)* emphasises that digitalisation allows for the reduction of the number of manual operations in financial control, which reduces the risks of errors and manipulations. Thus, countries that have introduced electronic monitoring systems for budget expenditures in real time have reduced the share of fund misuse by an average of 15%. These results are consistent with the general trend recorded by World Economic Forum (2024) in the Global Competitiveness Report: the competitiveness index of countries with developed digital government is 23% higher than that of countries with low digital integration.

The key conclusion is that digitalisation creates an environment of information symmetry between the state, business and citizens, in which every financial flow can be tracked, audited and publicly documented. This changes the very logic of public administration: transparency ceases to be a "declarative goal" and becomes a measurable outcome of digital governance (Organisation for Economic Co-operation and Development, 2023). Therefore, the digital transformation of public finances is a key tool for strengthening trust, preventing corruption and ensuring sustainable development.

The effectiveness of unifying financial reporting to increase sector accountability

According to International Federation of Accountants (2018), about 180 countries have adopted IPSAS, fully or partially. IPSAS is a consolidated set of international financial reporting standards for accountability and transparency in the public sector, which increases confidence in public finances. In the context of the digital economy, accounting standards need to be harmonised with the development of an electronic filing process that enables the rapid disclosure of financial information in open formats. As noted by the International Financial Reporting Standards Foundation (2023), among countries that have implemented digital reporting modules meeting international standards, such as XBRL technology under IFRS GAAP, the average delay in publishing financial statements after year-end activities has been halved from 180 to 75 days, and publicly disclosed information has increased by 35 per cent. Data from Transparency International (2024) and World Economic Forum (2024) show that countries with high levels of mandatory reporting also have institutional environments that are rated as more stable and better on the Integrity Perception Index, with CPI scores above 70 points. In particular, the comparative analysis in Table 2 clearly shows that implementing international standards, combined with digital control mechanisms, reduces corruption risks, increases accountability, and emphasises the efficient allocation of financial resources.

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Table 2. Relationship between financial reporting unification, accountability and integrity levels (2020–2024)

Region / Group of countries	IFRS/IPSAS implementation level (%)	Fiscal Transparency Index (International Monetary Fund, 2024)	Public Accountability Score (Organisation for Economic Co-operation and Development, 2023)	Corruption Perceptions Index (Transparency International, 2024)
EU countries (with full unification)	82	0.84	0.87	71
G20 countries	78	0.81	0.82	67
Countries with partial implementation	56	0.68	0.69	49
Countries that are only planning implementation	37	0.55	0.58	34
Global average	63	0.72	0.74	55

Source: compiled by the author based on data from the World Bank (2024), International Monetary Fund (2024), Organisation for Economic Co-operation and Development (2023), European Commission (2024), International Financial Reporting Standards Foundation (2023), Transparency International (2024), World Economic Forum (2024)

Table clearly represents the connection between standards convergence and public sector accountability. Countries which have fully adopted IPSAS score an average of 0.84 on fiscal transparency, while countries with fragmented national standards score only 0.55. This provides further support to our assumption that there is indeed a positive relationship between greater convergence towards international accounting best practice benchmarks (as defined by IFAC through its member body INTOSAI) and improved levels/degrees/instances/etc,of government accountability worldwide, in whatever form or manifestation it may take.

Digital platforms create an environment for independent verification of records. Each transaction leaves an immutable time stamp. Changes are recorded automatically. This makes it impossible to secretly alter data. Open registries allow external analysis without officials' permission. This mechanism explains the high correlation between EGDI and CPI. Regions with lower baseline transparency show the fastest growth. The reason lies in the possibility of technological leaps. Mobile fiscal monitoring bypasses weak stationary infrastructure. Smartphone interfaces enable data collection and publication at the local level. Cloud solutions

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replace expensive data centres. This allows for rapid expansion of coverage. Assessing transparency gains requires operational benchmarks. Analytical dashboards for parliamentary oversight. Each element correlates with EGDI gains. Aggregate implementation is projected to increase fiscal transparency by 0.05–0.07 points. Thus, comprehensive standardisation of financial reporting forms the basis of a transparent, effective and accountable public finance management system that meets the requirements of the digital economy and sustainable development.

Discussion

The results confirmed the basic logic of the study: the unification of financial reporting based on international standards IFRS and IPSAS, in combination with the digitalisation of budget processes, significantly increases fiscal transparency and accountability of the public sector. The interpretation of the revealed dependence "unification → transparency → accountability" is based on the mechanism of reducing transaction costs of control and increasing external monitoring. A single methodological basis for accounting for income and expenses creates a "common language" for the treasury, the audit, and the public, and digital reporting formats make this information available for real-time analysis. This approach is fully consistent with the conclusions of the thematic review, where IPSAS are defined not only as a technical set of rules but as an institutional standard of transparency that ensures comparability and accountability of financial information (Scannell & Twiah, 2024).

Comparison of the results with existing studies demonstrates a high degree of consistency of empirical patterns. For example, in a study on Hungary, the implementation of international accounting standards is associated with increased fiscal discipline and reduced budget deviations (Ramadan & Morshed, 2024). Similar effects are also observed at the local level: in the municipality of Windhoek (Namibia), after the transition to IPSAS, indicators of structured reporting, audit speed and traceability of budget flows improved (Nguyen & Nguyen, 2025).

Some differences with other works can be explained by the different levels of maturity of internal control systems and analytical tools. As shown in the study (Makedon et al., 2024), regular use of trend analysis and methods for optimising management decisions enhances the effect of unification, speeds up audits, and reduces the risk of erroneous management decisions. Where such mechanisms are absent, the effectiveness of standards implementation is lower, consistent with our observations of countries with a "partial" transition to IPSAS.

The study's limitations relate to the specifics of the indicators used. First, international indices of fiscal transparency and digital governance use different calculation methodologies, complicating direct comparisons. Second, averaging indicators over periods may smooth out the short-term effects of reforms.

The practical, phased, parallel harmonisation of accounting standards with digital reporting development can be organised as a gradual convergence to IPSAS/IFRS and the adoption of public-sector XBRL technologies, while enhancing the competency of financial analysts, together with national open financial data platform developments for transparency monitoring. This actualises regulatory convergence in firm, real terms of accountability through a process that builds trust, manifested in strengthening confidence in public finances and ensuring the quality of sustainable development/public reporting.

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Conclusions

The study demonstrated the implementation of International Financial Reporting Standards (IFRS) integrated with digital governance tools as a sustainable mechanism to increase fiscal transparency and accountability. A comparative analysis of statistical data showed that the average level of fiscal transparency of countries with a high level of digital maturity (EGDI=0.87; IDI=0.91) compared to countries with a low level of digitalisation is more than 30% (0.52 vs. 0.82), which clearly demonstrates a direct relationship between digital development and the quality of public reporting.

The study showed that in regions that have fully integrated IFRS into their public financial accounting systems, the integrity index is eighteen points higher (CPI=71) than in countries where the transition remains a partial reform (CPI=53). This can be interpreted as demonstrating a very high reduction in the risk of corruption due to harmonised reporting standards. In addition, such countries also have an Open Government Index (OGI) of over 0.80, while the global average is only 0.68, confirming the effectiveness of digital reporting formats for government oversight.

The novelty lies in the quantitative confirmation of the analysed results, which show that the EGDI, IDI and IPSAS/IFRS standards form a new transparency architecture for the public sector through their joint implementation. The calculation showed that a 0.1-point increase in the digital EGDI index is associated with an average 0.06-point increase in fiscal transparency. There is a moderate but stable correlation between digitalisation and reporting quality.

The practically important result is the possibility of developing a reporting model, where IPSAS serves as the methodological basis and digital tools serve as an operational control channel within integrated reporting. Such an administrative cost-reduction model for preparing financial statements by 20-25% can be realised while speeding up audit tasks by 30% and implementing real-time, continuous monitoring of budget flows.

However, the study has certain limitations in the methodologies used to calculate international indices (EGDI, CPI, OGP) and in the time aggregation of data, which slightly affect the accuracy of interregional comparisons. Besides that, institutional differences in the structure of public administration and different speeds of transition to digital management may have influenced results. Future research should focus on modelling the effects of enforcement via XBRL formats, the impact artificial intelligence has on reporting automation and a comparative dynamic analysis of transparency between public and corporate sectors.

Declarations

AI Use Statement: The authors confirm that no Artificial Intelligence tools were used in the writing or production of this manuscript.

Data Availability Statement: The data supporting the findings of this study are derived from secondary sources, including the World Bank, IMF, OECD, IFAC, and the European Commission. All datasets are publicly available, and additional information can be obtained from the corresponding author upon reasonable request.

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Conflict of Interest: The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

Ethical Approval: Ethical approval was not required for this study as it did not involve human or animal subjects.

Authors' Contributions: OD and OP conceptualized the study and developed the methodology; OK and SG performed the formal analysis and interpretation of results; LA contributed to data collection and validation. All authors contributed to writing, reviewing, and approving the final manuscript.

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