

The Effect of Integrated ERP-Based Financial Systems on Regulatory Compliance and Reporting Accuracy in Public and Private Sector Organizations: An Empirical Study

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Abstract- Integrated Enterprise Resource Planning (ERP)-based financial systems are indeed a major driver of organizational financial management in the 21st century because they not only unify business processes but also pave the way for seamless data integration and decision-making effectiveness in both public and private sectors. Through this research, the authors explore the influence of ERP-based financial systems on the level of regulatory compliance and accuracy of financial reporting by means of a structured questionnaire directed at finance professionals accountants auditors, and system users of selected organizations. The research implements a quantitative method to study how ERP systems aid in compliance with financial regulations as well as in upgrading the dependability and accuracy of financial reporting results. The results of this research indicate that financial compliance levels have been substantially elevated by ERP systems through the standardization of financial processes, tightening of internal controls, and assurance of compliance with accounting standards and legal requirements. Besides, the study concludes that the integration of ERP also results in better accuracy in reporting through error reduction, getting the data up to date instantly, and making financial operations more transparent. While highlighting the benefits, the paper also points to some issues such as the large expense of implementation, complexity of the system, unwillingness to organizational change, and lack of technical knowledge. The research found that ERP-driven financial systems are indispensable for enhancing financial governance and reporting quality in public and private sector entities. The paper also gives the future steps to help the effective implementation, optimization, and long-term use of the ERP systems in the financial management scenario.

Keyword: ERP-Based, Financial Systems, Regulatory Compliance, Public and Private Sector

I. INTRODUCTION

As financial management in the modern organizations is becoming increasingly complicated, there is a great need for the enactment of integrated technological solutions that could handle big amounts of financial

data quickly and correctly. ERP-based financial systems that are one of the most powerful tools for changing public and private sector organizations capable of managing large volumes of financial data efficiently and accurately. Integrating different organizational functions, particularly finance accounting procurement, and reporting, ERP systems provide a unified digital platform that ensures data flow without barriers, better coordination of operations, and higher transparency of financial activities.

The very aim of the ERP systems is to eradicate data scattering by proposing the centralization of financial information in one database that could be accessed by all departments. This very integration has a great impact on increasing the productivity of financial operations through getting rid of duplication of efforts, reducing errors in manual processing, and maintaining the consistent quality of financial reports. In his study, Davenport (1998) claims that ERP systems constitute one of the major breakthroughs in enterprise information systems because they completely change the ways in which business processes are carried out and controlled.

Depending on the operating environment, organizations in different sectors are required to comply with different financial regulations, accounting standards, and auditing requirements. Public sector organizations should comply with government financial regulations, budgetary controls, and public accountability frameworks. On the other hand, private sector organizations must conform to international financial reporting standards (IFRS) and corporate governance codes. Romney and Steinbart (2018) point out that compliance is not just a legal requirement, but also a factor that highly influences the organization's credibility and financial integrity.

Implementing and using ERP systems may present some challenges for an organization despite the advantages brought with these solutions. Implementation costs are typically high, the systems are quite complex, employees may resist, and technical skills are frequently lacking. Apart from these challenges result in organizations not being able to reap the full benefits of their ERP systems; this is especially true for developing countries where the digital infrastructure is still under development.

This paper therefore investigates in an evidence-based manner the impact of integrated ERP-based financial systems in enhancing regulatory compliance and reporting accuracy in both public and private sector organizations using a questionnaire-based research design.

II. LITERATURE REVIEW

2.1 Concept of ERP-Based Financial Systems

Enterprise Resource Planning (ERP) software are an all-inclusive set of programs that merge key business functions of an organization into one single platform (Jebreen et. al., 2024). They are made to enable the easy sharing of information between departments like finance, human resources, supply chain, and operations. When it comes to managing finances, ERP solutions are indispensable as they help in eliminating manual entry errors, unifying reporting styles, and enhancing the reliability of the financial records.

Davenport (1998) sees ERP systems as vast, integrated platforms that assist companies in aligning and improving their procedures in various departments. This close connection makes financial information constant, trustworthy, and instantly available thus facilitating higher productivity and better decision-making in the organization. Monk and Wagner (2013) also point out that ERP systems get rid of closed information pockets inside businesses thereby enabling more effective coordination and communication among various departments. Such tight integration is extremely beneficial in financial management as it ensures that the data being used for various purposes like budgeting, forecasting, and compliance reporting is both accurate and timely.

2.2. Capabilities of Enterprise Resource Planning (ERP) Systems

The functionalities of Enterprise Resource Planning (ERP) systems have been a topic of extensive discussion in information systems and management literature, especially under the lenses of organizational performance, integration, and strategic value creation. ERP systems are generally described as integrated information systems that connect major business processes across functional areas like finance, human resources, supply chain, and production through a single centralized database. Integration is one of the key capabilities highlighted by the literature that help organizations not only to get rid of data silos but also to make sure that information flows smoothly from one department to another. Uwizeyemungu and Raymond (2012) argue that integration, flexibility, and process orientation are the key features that characterize ERP systems, which in turn give organizations the ability to implement cross-functional coordination and to increase operational efficiency. Such an integration capability is regarded as the very foundation of ERP operations since it allows real-time data exchange and improves organizational transparency.

Process automation and standardization are really important functions of an ERP system, besides making a huge impact on efficiency and cost reduction, these functions also enable companies to run smoothly. For instance, such systems take care of business tasks such as managing stocks, taking orders, and doing accounts automatically. This means there is less need to rely on people, and the mistakes are fewer. Menezes and Gonzalez-Ladrn-de-Guevara (2010) believe that putting an ERP system into practice can lead to changing the way the company works in a very effective way by matching the company's workflows with the best practices active in the system, which results in better performance. Likewise, Zeng and Badewi (2017) point out that the planning and automation-related capabilities of ERP make up the groundwork for the attainment of benefits like innovation and strategic flexibility at the higher level. Such automation features are especially important for large businesses where efficiency and consistency are key for competition.

ERP systems have very good information management and data processing functionalities, which help to improve decision-making. The centralized database design guarantees that data is only keyed in once and can be used throughout the whole company, thereby lowering double work and bettering data integrity. In a study, Ruivo et al. (2020) mention the existence of ERP advanced functionalities such as analytics, web portals, and collaboration tools that not only enable organizations to derive actionable insights from raw data but are also the main sources of value creation from the organizational point of view. Besides this, ERP systems have built-in reporting and analytical functionalities that help decision-making by giving managers the ability to track performance and make well-informed strategic decisions. Davenport, a scholar cited in the area of ERP decision-support, also points to the significant role of ERP systems in supporting decisions by offering functionalities that go beyond the simple processing of transactions.

Besides that, ERP systems are endowed with supply chain and operational coordination functions that escalate the firm's capacity to respond effectively and perform well. Forslund (2010) argues that ERP systems are instrumental in managing supply chain performance through coordinating various stakeholders and facilitating constant and accurate information flows in the supply chain network. Thus, enterprises using such systems can not only fine-tune their stock levels and make accurate demand estimations but also provide excellent services to their clients. ERP's branching out into linkage of operations inside a company with external partners even highlights their pivotal role in securing a competitive lead in volatile business settings.

On the strategic front, ERP systems are regarded as dynamic resources that foster organizational flexibility and sustain performance over time. Recent research findings highlight that ERP's quality and capability enhancement play a vital role in leading to desirable business results through elevating organizational agility and capability for innovation. As an example, a research paper published in 2022 points out that ERP technology is a kind of dynamic capability which aids in resource management, process reengineering, and upscaling overall organizational performance. These insights perfectly support the resource-based view

(RBV) framework that argues ERP competencies, alongside other internal organizational resources like capabilities and company culture, pave the way to a lasting competitive advantage (Karimi, Somers, & Bhattacharjee, 2007).

In addition, the transformation of ERP systems from merely a software to cloud-based and smart platforms has greatly increased their functionalities. Cloud ERP systems not only provide the ability to quickly scale up or down and change services, but they also lead to cost savings. They allow businesses to get updated information instantly and react swiftly to new or different market conditions. From El Monem, Nasr, and Geith (2016) perspective, cloud ERP promotes the sharing of data and collaboration beyond the dealership boundary, which results in performance improvement of the whole business. The latest tech mainly consists of adding AI and ML capabilities to ERP, power predictive analytics, automate complex tasks, and enhance decision-making abilities of ERP users. Such innovative capacities back up ERP systems' central role in digital transformation strategies of today's businesses.

To sum up, the review of the literature reveals that ERP systems have several capabilities including integration, process automation, information management, decision support, supply chain coordination, and strategic adaptability. ERP capabilities, taken together, make organizations more efficient, effective, and competitive. But on the flip side, ERP benefit realization hinges not only on the technological features but also on the complementary organizational resources such as user's competence, managerial support, and organizational culture. And since the ERP systems are still being improved with the introduction of the cloud computing and AI, their capabilities will very likely be further extended, thereby boosting their position as the crucial facilitators of organizational success in the digital age.

2.3. Regulatory Compliance in Organizational Finance

Regulatory compliance denotes the degree to which a company or an institution follows the laws rules policies, and standards regulating financial activities. For organizations in the public and private sectors,

compliance is an indispensable part of the financial governance and accountability framework.

Regulatory compliance is the extent to which a company or any other business entity follows the established laws rules policies, procedures, and professional standards that relate to financial activities and reporting. By definition, it is a firm and systematic effort by the organizations to work within legal and moral boundaries while at the same time making sure that all financial operations, disclosures, and reporting align with the relevant statutory requirements and regulatory frameworks. In essence, regulatory compliance goes beyond mere rule-following; it entails a regular review, maintenance, and confirmation of financial protocols so as to guarantee that the organization's actions are always in compliance with the changing financial laws, accounting standards, and corporate governance requirements. For the organizations that have business in the public as well as private sectors, compliance becomes a major element of financial management, accountability, and the reputation of the institution. Regulatory compliance in the public sector is primarily about being a trustworthy custodian of public funds. Hence, government departments and public bodies should be able to show that they have been using the taxpayer's money with transparency, efficiency, and accountability. Besides other measures, this calls for a rigid and scrupulous implementation of the budget, public procurement laws, auditing standards, and financial reporting requirements that the concerned regulatory bodies provide. Non-compliance in this area may result in the misuse of public funds and a loss of public confidence, and legal sanctions.

Regulatory compliance is also a vital element in the private sector, although it tends to be more closely tied with financial reporting standards, corporate governance codes, tax laws, and regulations specific to the industry. Private companies need to adhere to frameworks such as International Financial Reporting Standards (IFRS) or Generally Accepted Accounting Principles (GAAP), depending on their location, to make sure that their financial reports depict a true and fair view of their financial condition. Compliance in this sector is necessary not only for avoiding penalties and legal issues but also for retaining investor trust,

keeping market credibility, and backing long-term business survival.

Besides mere legal compliance, regulatory compliance acts as a cornerstone of sound financial management systems. It guarantees the correct implementation of internal controls, a reduction in financial risks, and the alignment of organizational procedures with recognized practices in accounting and auditing. Today, specially those companies who use digital systems such as ERP platforms, financial compliance is part of the automated financial processes which are less prone to human mistakes and deliver greater financial reporting consistency. Romney and Steinbart (2018) mention that well-designed accounting information systems hugely foster compliance by upgrading the precision, dependability, and auditability of financial data.

Regulatory compliance, as a rule, is more than just a procedural requirement; in fact, it is one of the key strategic components through which public and private sector organizations build trust, enforce accountability, and maintain financial discipline.

An ERP system can play a significant role in regulatory compliance by automating and controlling the implementation of standardized financial procedures within the company. According to Granlund and Malmi (2002), ERP systems not only support compliance by making sure that financial transactions are done uniformly and in line with the applicable standards but also generate audit trails that boost openness and make the whole auditing process easier. The exercise of compliance in government entities is very crucial since it directly resonates with the responsibility in the administration of public funds. ERP deployment in such organizations drastically minimizes opportunities for financial errors by thoroughly documenting the financial transactions matching they budgetary items.

2.4 Financial Reporting Accuracy

Financial reporting accuracy refers to the degree to which financial statements and reports reflect the true financial position of an organization (Hasan, 2024). Accurate reporting is essential for decision-making,

stakeholder confidence, and regulatory compliance (Mesioye & Bakare, 2024).

Romney and Steinbart (2018) emphasize that financial reporting accuracy is dependent on the quality of data processing systems used by organizations. ERP systems improve reporting accuracy by integrating financial data from multiple sources into a single database, thereby reducing inconsistencies and manual errors. Kallunki et al. (2011) found that organizations that adopt ERP systems experience significant improvements in the accuracy and timeliness of financial reporting due to automation and real-time data processing capabilities.

2.5 ERP Systems in Public and Private Sector Organizations

ERP systems are very common in both public and private sectors, however their goals in these two sectors may be very different. Government agencies mainly use ERP systems to increase their accountability, transparency and conformity to government rules. On the other hand, companies operating in the private sector improve their efficiency, profitability, and competitiveness by employing ERP systems. According to Hendricks et al. (2007), ERP implementation is a good means for private sectors to improve their financial performance as well as their operational efficiencies. In the same way, through ERP implementation, public sector organizations not only get transparency but also have their risks of corruption minimized.

2.6. Challenges of ERP Implementation

Even though ERP systems offer many advantages, they also come with a number of implementation issues that can reduce their efficiency. The biggest hurdle, by far, is the huge expenditure involved in acquiring, tailoring, and supporting the system over time. Besides this, ERP solutions tend to be very sophisticated and necessitate extensive changes in organizational structures.

According to Al-Mashari (2003), one of the main factors that prevent successful ERP implementations is resistance to change since workers might not be very willing to switch to new systems that change their

usual ways of working. On top of that, if there aren't enough trained individuals who can operate ERP systems, their overall performance might be compromised.

III. METHODOLOGY

In this research, the methodological framework revolves around a quantitative research approach. This method is deemed suitable for investigating the impact of integrated ERP-based financial systems on regulatory compliance and reporting accuracy in public and private sector organizations. Quantitative approach is chosen as it structures the measurement of respondents' perceptions and makes possible statistical analysis of relationships between variables. According to Creswell and Creswell (2018), quantitative research is very effective, especially when a researcher wants to test hypotheses, measure trends, and generalize the study's results to a particular population.

In this paper, major variables are ERP system integration, regulatory compliance effectiveness, and financial reporting accuracy. To carry out a survey research design, this paper used structured questionnaires to gather primary data from respondents who are directly involved in financial management processes at their respective organizations. Respondents are accountants auditors finance officers, internal control staff, and ERP system users. These categories of people have been selected based on the assumption that they have first-hand experience with financial systems and regulatory processes, so their responses will be reliable and valid for analysis.

The study sample was made up of some selected organizations from the public and private sectors, especially those that have implemented ERP-based financial systems. 65 questionnaires were distributed in total, after which 58 questionnaires were properly filled in and returned, hence a very good response rate suitable for empirical analysis. As per Saunders et al. (2019), response rates above 70% in survey research are viewed as strong and help to enhance the trustworthiness of the findings.

The study employed purposive sampling technique to get only respondents with requisite knowledge of ERP

and financial reporting processes to participate in the study. This is the right approach as it permits research to concentrate on information-rich respondents rather than randomly selecting them, so the data collected will be both deep and high in quality (Etikan et al. 2016).

The tool of data collection was a well-organized questionnaire having two parts. Section A deals with personal characteristics like job title, experience, and sector of the company, and Section B is about ERP system usage, adherence to regulations, and accuracy in reporting. The 5-point Likert scale went from Strongly Agree to Strongly Disagree was the basis for measurement of the answers. The tools were also subjected to a number of tests to make sure that they were and these included the review of the instrument by experts in accounting and information systems, and reliability testing using Cronbach's Alpha, which gave a value of 0.84, showing that there was a strong agreement among the items measuring the same construct (Nunnally, 1978). Descriptive statistics such as frequency, percentage, and mean scores, which were shown in tables to facilitate the interpretation, were used to analyze the data gathered.

IV. FINDINGS AND DISCUSSION

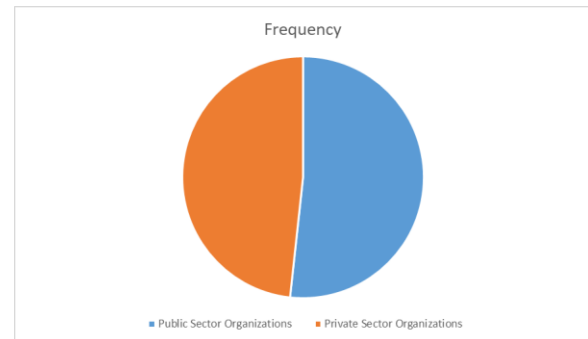
4.1 Response Rate Analysis

Response Status	Frequency	Percentage (%)
Valid Questionnaires Returned	58	89.2
Not Retrieved / Invalid	7	10.8
Total	65	100

An 89.2% response rate suggests a very high level of engagement among the participants and thus greatly enhances the persuasiveness and credibility of the results. In the case of surveys, a high response rate is very important because it minimizes the chance of non-response bias and makes the sample more representative. Baruch and Holtom (2008) note that response rates higher than 80% can be termed as excellent in the field of organizational studies.

The very high response rate obtained here can be interpreted as the informants being not only well-informed but also eager to share accurate details about the implementation of ERP systems at their workplaces. Besides, it shows that the subject matter was of significance to the financial experts who are the ones directly engaged in the compliance and reporting processes.

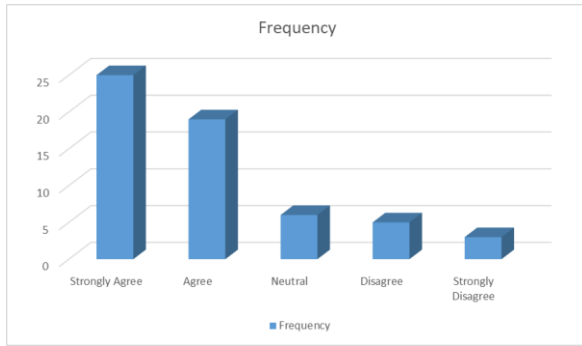
4.2 Sector Distribution of Respondents



The sector breakdown shows a fairly even split between public and private sector organizations, with public sector respondents only marginally leading. Such a balance is significant because it offers a basis for comparison of the functioning of ERP systems in different organizational environments.

While public sector organizations are usually more compliance-oriented as they operate under strict regulatory oversight, private sector firms emphasize efficiency and profitability to a greater extent. It is noted by Khoza (2023) that public sector ICT systems are mainly geared towards the fulfillment of accountability requirements whereas private sector systems are targeted at performance and competitiveness. In view of this, having both sectors represented in the sample study undoubtedly enriches the analysis.

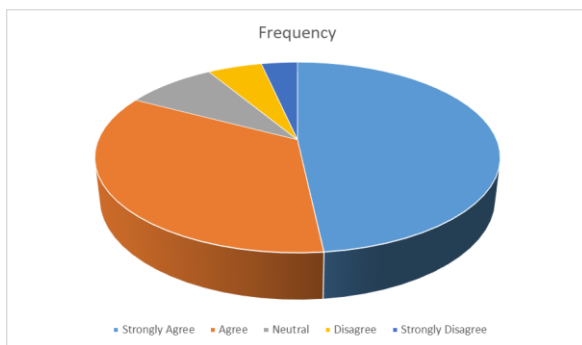
4.3 ERP System Adoption Level



Mean Score = 4.01

Almost three quarters (75.9%) of the respondents agreed that ERP systems are being implemented within their organizations, according to the finding. The very high average score 4.01 also reflects the fact that ERP-based financial systems are being adopted quite extensively. This further confirms that ERP systems have become a standard part of financial management infrastructure in both sectors. Along those lines, Davenport (1998) remarked that ERP systems have been redefined as necessary enterprise-wide systems that facilitate the integration of core business processes and enhance coordination within the organization. On the other hand, the existence of neutral and unsatisfactory replies shows that a few companies are still in the initial phases of ERP implementation or are experiencing barriers to implementation such as struggling with the cost and a lack of technical know-how.

4.4 ERP and Regulatory Compliance



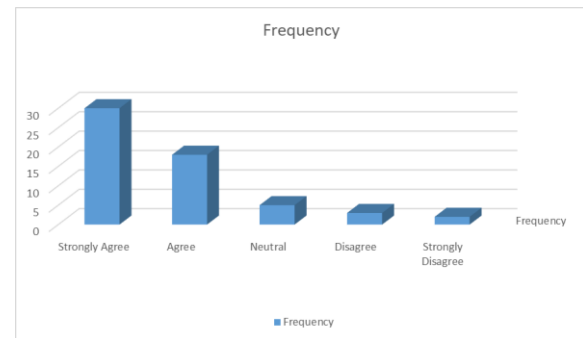
Mean Score = 4.18

Findings show that 82.8% of respondents believe that ERP systems greatly facilitate regulatory compliance. It means that ERP systems are the most instrumental

tool to ensure that financial regulations, internal policies, and external reporting standards are all being adhered to. How ERP systems are able to go about doing this is by financial workflow standardization, integrating compliance rules within system processes, and guaranteeing the real-time monitoring of transactions. Granlund and Malmi (2002) state that ERP systems have the potential to improve compliance through stronger internal controls and reduction of reporting irregularities in the accounting processes.

ERP systems in public sector organizations can aid in maintaining budgetary controls and government financial regulations whereas in private organizations, ERP systems can help ensure compliance with IFRS and corporate governance standards.

4.5 ERP and Financial Reporting Accuracy



Mean Score = 4.25

The results show that 82.7% of the respondents believe that ERP systems enhance the accuracy of financial reporting. The very high mean of 4.25 signals a strong agreement among the respondents on the significant role of ERP implementation in enhancing financial reporting quality. ERP systems help to eliminate errors due to manual data entry, consolidate the financial data coming from different sources, and maintain the uniformity of the reports in the different modules. Romney and Steinbart (2018) hold that integrated accounting systems greatly increase the trustworthiness of financial reports by reducing the occurrence of discrepancies and supporting data validation steps. This finding has strong implications for both public and private sector organizations as

accurate financial reporting is a pre-requisite for accountability, planning, and meeting regulations.

4.6 ERP and Transparency in Financial Management

Response	Frequency	Percentage (%)
Strongly Agree	27	46.6
Agree	19	32.8
Neutral	6	10.3
Disagree	4	6.9
Strongly Disagree	2	3.4
Total	58	100

Mean Score = 4.14

The findings suggest that 79.4% of those who participated consider ERP systems to be a factor in improving financial transparency. This implies that ERP systems facilitate the understanding of financial processes and help in the tracking of the organization's financial operations more effectively. Similarly, findings by Hendricks et al. (2007) echo this point by stating that ERP implementation leads to better transparency through the provision of financial information on a real-time basis and the enhancement of the audit process.

Indeed, transparency is a major aspect when it comes to public sector organizations where one of the main objectives is to be held accountable to stakeholders. On the other hand, it helps private companies gain the trust of investors and enhance the governance of the corporation.

4.7 Challenges of ERP Implementation

Challenge	Agree (%)	Mean Score
High Implementation Cost	84.5%	4.32
System Complexity	79.3%	4.10
Resistance to Change	77.6%	4.05

The study results show that one of the main reasons why companies are not using ERP systems is the high cost of implementing such systems. Other reasons that are still considered problems are system complexity and resistance to change within the organization. These problems point out both the monetary and

organizational difficulties of ERP implementation. According to Al-Mashari (2003), ERP systems are very expensive and require the company to radically change its structure, which may result in only partial adoption. On the other hand, resistance to change is a very natural reaction of people, especially when a great change is introduced such as from the traditional business model to the integrated digital platform one.

V. CONCLUSION

According to the study, combining financial systems based on ERP can greatly help regulated compliance and financial reporting accuracy for both public and private sector organizations. ERP systems facilitate compliance by making financial processes uniform and by providing tighter internal controls. They also contribute to reporting accuracy, as data integration and automation make it possible to generate reliable reports. Nevertheless, there are issues that hinder full optimization such as high costs, complexity of systems, and change resistance among users despite these advantages, the overall notion is that ERP systems are instrumental in enhancing financial governance, transparency, and reporting quality.

VI. RECOMMENDATIONS

Companies should use cloud ERP solutions that can dramatically cut their infrastructure cost.

Finance staff must be constantly trained and their skill levels gradually raised through regular capacity-building sessions.

Policies that facilitate digital finance transformation in public institutions must be the focus of the government support.

The step-by-step ERP adoption strategies that help reduce the resistance from the staff should be the way organizations proceed.

Possessing robust change management approaches to back up system integration is a must.

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