

The impact of using smart technology systems in developing the government accounting system and supporting the application of International Public Sector Accounting Standards (IPSAS) - a field study at the level of the wilaya of Tlemcen

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Abstract: Technological developments in the world have led to fundamental changes in government accounting systems, where accounting work has become more accurate, easy, and with less effort and time shortening, this research seeks to show the extent to which the latter is used in public institutions and the extent of its impact on the preparation of financial statements and reports within the framework of compliance with the International Public Sector Accounting Standards (IPSAS) Through the field study using a questionnaire tool and an interview with specialists in the field, the results were reached that these smart systems contribute to enhancing transparency and reliability, reducing errors and fraud, and also works to strengthen control, which helps to protect public funds and accountability in line with international standards. It's limited to digital transformation and some information systems.

Keywords: smart technology systems; government accounting; IPSAS standards.

Jel Classification Codes: 033; H83; M48

I. Introduction

In light of the rapid developments in the world of technology in many fields, including the field of finance and business, accounting systems have become more sophisticated and characterized by ease of application, especially in the field of government accounting, where smart technology systems have contributed to the development and strengthening of the government accounting system Supporting the application of the International Public Sector Accounting Standards by enhancing the implementation of the state's public plans and policies efficiently and effectively, rationalizing public funds, automating financial operations efficiently and quickly, improving data accuracy, and enhancing financial control, as these systems are responsible for providing information and data at the required speed to decision makers. These smart technologies include artificial intelligence and blockchain technology, big data analysis, and cloud computing. and others, and to implement the latter, many efforts should be concerted and the requirements should be provided.

Based on the above, this research revolves around the following problem:

✱ **Problem:**

How does the use of smart technology systems contribute to the development of the government accounting system and support the application of IPSAS standards?

To answer this problem, the following sub-questions are first addressed:

I.1. Sub-questions

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What is the impact of smart technology systems on the accuracy and transparency of government financial reports?

How does the application of this technology facilitate the application of IPSAS standards in public institutions?

What challenges do governments face in adopting smart technology in order to develop their accounting system?

What is the impact of smart technology on the efficiency of auditing and financial control in the public sector?

I.2. Hypotheses

From the problem posed, the following hypotheses can be formulated:

- **The first hypothesis:** smart technology systems improve the accuracy and transparency of financial reporting in public institutions, which supports the application of IPSAS standards.
- **The second hypothesis:** the speed and efficiency of the adoption of IPSAS standards. It depends on the challenges faced by public institutions when applying smart technology systems in accounting, such as infrastructure and legislation.

I.3. Importance of research

The importance of this research is highlighted in the following points:

- This research contributes to enriching the information of researchers about government accounting and technology by studying the relationship between smart technology and IPSAS standards.
- Guiding professionals and decision-makers in public institutions to understand how technology systems can be used to improve the management of public funds, improve the efficiency of government spending, and reduce financial corruption.
- The research sheds light on the role of smart technology in enhancing the financial governance of government institutions.

I.4. Research methodology

This research relied on the descriptive and analytical approach in the theoretical aspect of analyzing the role of smart technology systems in government accounting and their impact on supporting the application of IPSAS standards, and the inductive approach was used to conclude the effectiveness of these smart technologies and their applicability in the government accounting system.

I.5. Research Objectives

The research aims to:

- Highlighting the impact of smart technology techniques in the development of the government accounting system.
- Analyze the impact of these systems on the implementation of IPSAS and achieve financial transparency.
- Highlighting the most important challenges and obstacles facing public institutions and providing necessary solutions.
- Provide recommendations and guidance to facilitate the integration of smart technology into the government accounting system.

II. Theoretical framework for smart technology systems

II.1. The concept of smart technology systems:

Smart technology is defined as a set of advanced technologies used to analyze data and make accurate decisions such as artificial intelligence that relies on machine learning in accounting these

technologies use advanced applications based on smart software that contribute to increasing the efficiency of accounting work, producing more accurate and transparent reports, reducing human errors and reducing financial corruption.

II.2. Definition of Artificial Intelligence:

is the ability of the machine to Carry out activities that need intelligence to simulate the human mind By Programmes Human-designed informatics. (Research and Information Center, 2021)

It consists of Information software capable of simulating the Mind and behavior of Intelligent humans, artificial intelligence Is Currently in all Fields around us, such as drones self-driving cars, and other applications spread in life. (Mussa & Ahmed, 2019), Assists in the analysis of financial statements Makes decisions automates repetitive tasks such as recording invoices, and detects unusual patterns that may indicate Operations Corruption and fraud.

II.3. The most important artificial intelligence techniques used in accounting information systems: (Belaïd & Benhawasse , 2024):

AI applications and software are designed by studying how the human mind thinks, learns, works, and decides when trying to solve problems, and then use the results of the study of the latter as a basis for the development of intelligent systems.

- A. **Machine learning (ML):** It is a method that enables the intelligent system to learn and develop so that if the system encounters a problem, it will try to find appropriate solutions, and in the event of failure, it will look for alternatives to find a way out and save the model that led to success, that is, through experience, it learns how to do things.
- B. **Deep Learning (DL):** "It is the most powerful technology in artificial intelligence, consisting of using advanced algorithms that mimic the network of neurons in the brain to learn an area with or even without human supervision."
- C. **Neural Network (NN):** Technology In artificial intelligence we can Computers Who is it Process and analyze data in a way inspired by the human brain, consisting of a nerve network and nodes Interconnected by the human brain. Learns on their own Who is it Trials and errors to work on for continuous improvement. and solve complex problems, such as analyzing Documents and recognizing faces, more accurately. (Amazon Web Services, 2024) .
- D. **Natural Language Processing (NLP):** Defined as programming computers to learn and process all human languages to facilitate machine-human interaction.

II.4. Cloud Computing: (Amazon Web Services, 2024)

II.4.1) Definition of cloud computing:

Cloud computing is defined as information technology that is acquired on demand on the Internet for a certain cost depending on usage through a cloud service provider such as Amazon (AWS). Instead of buying and owning servers and data centers, you can reach your needs by taking advantage of technological services. Offered by computing, storage, and databases.

II.4.2) Advantages of cloud computing

Cloud services provide easy access to a range of large-scale technologies that allow resources to be quickly exploited when they are needed, from infrastructure services such as computing, storage, and databases, to the Internet of Things, machine learning, and more. You can deploy services in just a few minutes, for huge numbers of things more quickly. This gives you the freedom to try and test new ideas to provide a different customer experience and succeed in your business.

II.5. Technology Blockchain: (Audai, 2024).

Also called blockchain, it is used, for example, in digital currencies such as Bitcoin, and it even has huge potential that goes far beyond that, it is a decentralized technology to records transactions securely and transparently, which enhances the credibility of accounting and financial information.

II.5.1) The Importance of Working with Blockchain

- Giving more confidence and transparency in various transactions, which prevents fraud and fraud.
- Facilitate access to financial services for customers by providing a fairer and more equitable environment, and narrowing the digital divide.
- They help to automate repetitive tasks quickly and smoothly, improve the efficiency of various processes, and reduce the need for intermediaries.
- It contributes to the creation of new opportunities in various fields, which stimulates innovation and enhances the growth of the national economy.

II.6. Big Data : (CPA comptables professionnels agréés , 2019):

It is a huge data set characterized by complexity that requires sophisticated data processors that cannot be processed by traditional data processing applications. According to IBM data scientists, it is characterized by the following characteristics:

- Big Data Quantity
- Multiple and diverse data sources
- Speed of data creation and processing
- The degree of uncertainty associated with the data.

II.6.1) Big Data Analysis:

Big data analysis is another concept It is used in Accounting Information Systems By merging Artificial intelligence technologies. To generate new insights this technology allows companies to analyze large quantities of financial statements quickly and efficiently. Helps provide accurate insights to make good financial decisions that enable Strategic Financial Decision Making. For Example, Data processing inventory turnover; forecasting potential sales or purchases, Market information, and others. (Barrazi, 2025).

III. Overview of the Government Accounting System and International Accounting Standards IPSAS

"The Government Accounting System Which depends on the use of standards IPSAS Powerful and efficient system in amelioration Governance of public institutions and combating financial corruption Especially if smart technology is integrated into the performance of Government activities and operations in a manner that achieves the purposes of Users from what Governments must Attention to that where it included the unification of Practices Global public accounting and application of accounting standards occasion Provides a reporting framework Financial transparently and reliably." (Taha Akab, 2012).

III.1. Government Accounting System

III.1.1) Definition of the Government Accounting System:

The government accounting system is defined as the set of rules and procedures that govern the recording of financial transactions and the preparation of reports in public institutions and aims to provide accurate financial information that supports administrative decision-making. It also sets out and governs how budgets, accounts, and operations are implemented and controlled, as well as the

obligations and responsibilities of disbursement officers and public accountants, as well as how accounts are kept... (Mansori, s.d.).

III.1.2) Objectives of the Government Accounting System: (Taha Akab, 2012)

They can be summarized as follows:

It aims to organize accounting for the collection and government expenditure processes, financial control over the implementation of the state's general budget, providing appropriate information to users of reports, policy-making, and decision-making, in addition to measuring the effectiveness of the use of resources by the administration.

III.1.3) Features of the government accounting system under smart technology systems:

- A fundamental change is expected in all stages of accounting processes, under the use of smart technologies and digitization, paper documents will be eliminated, and processed automatically with easy financial reporting design.
- The presence of ready-made programs for preparing budgets will help a lot in moving towards using a new system for preparing them with the introduction of the performance programs budget system, which many researchers have called for its application,
- Providing programs dedicated to pre-exchange and post-exchange control that need to provide internal control controls and information integrity protection

III.2. International Public Sector Accounting Standards:

III.2.1) Definition of International Public Sector Accounting Standards:

are standards Designed To be applied to the financial statements and reports with Interest General for all public institutions Issued by the International Accounting Standards Board (IPSASB), which works on Setting accounting standards to Contribute to the imparting of Quality and transparency in Financial Reports For unified public sector institutions Worldwide These criteria indicate the method of Accounting and how to report transactions and events Finance In the financial statements of public institutions. (SOAA, 2020).

III.2.2) The importance of IPSAS: (Ahmed, 2022).

- Preparing comparable financial statements characterized by credibility, transparency, and impartiality away from personal interests
- Eliminate divergence of views and make appropriate decisions
- Organizing how to distribute the institution's resources, accountability, and reduce financial corruption

III.2.3) Objectives of IPSAS:

The goal of the criteria Ipsas is represented in the following: (Kamou, 2021)

Bringing public accounting closer to private accounting and improving the quality and quality of information

- Developing and standardizing accounting standards that are accepted in various countries of the world
- Application of the principle of liability accounting and accrual accounting
- Determine the quality and presentation of public sector financial reports
- Strengthening the certification of accounts by auditors

- Achieving transparency, credibility, and reliability of financial information in the public sector.

IV. The impact of the use of smart technology systems on the development of the government accounting system and the application of IPSAS standards:

IV.1. Uses of Smart Technology Systems in Accounting Governmental:

The use of artificial intelligence in accounting has accumulated many advantages as it contributes to: (Belaid & Benhawasse , 2024):

A) Automate routine accounting tasks

Automate various routine accounting tasks of data entry, basic number processing, and even some aspects of financial reporting so that this automation has quickly boosted efficiency and accuracy. For example, AI-powered OCR technology can scan and process invoices much faster and with fewer errors than manual methods.

B) Deliver predictive insights

The ability of AI to handle large amounts of data enables accountants to gain deeper insights into financial information. Advanced AI algorithms can load patterns into financial statements, providing predictive insights into cash flow trends, budget variances, and potential financial risks.

C) Automate and upload tax processes

AI uploads various financial statements to identify tax deductions and credits, saving time and helping companies blindly reduce tax liabilities. It also detects errors and fraud in tax returns to ensure compliance with regulations and maximize tax savings.

D) Analysis and classification of expenses and revenues

AI technologies can contribute to the analysis and classification of expenses and revenues more accurately and effectively. Intelligent systems can extract information related to expenses and revenues from accounting documents quickly and accurately, helping to identify key expenses and achieve cost savings.

E) Sales and treasury forecasting

AI provides the ability to predict sales and treasury based on historical data and external factors. AI-powered accounting systems can analyze data, trends, and relationships between different variables, and manage cash flows more effectively.

IV.2. The impact of the use of smart technology on the development of the government accounting system:

There are many benefits to automating processes and using AI techniques in the accounting industry

A. Improve audits : (Belaid & Benhawasse , 2024)

Thanks to artificial intelligence, auditing and accounting processes can be improved. This reduces the chances of errors and fraud and increases the level of compliance with legal and accounting standards. This enables accountants to make strategic and financial decisions that support the success of organizations.

Enables financial auditors to collect larger samples and analyze all accounting transaction data in real-time, without sorting or filtering. A complete record of all steps is created for human review or subsequent audit. The use of AI also has the advantage of reducing or even eliminating errors and omissions that can occur during the traditional audit process based on small samples.

B. Improve accuracy and reduce human error: (Belaid & Benhawasse , 2024)

One of the main benefits of using AI in accounting information systems is the reduction of human error. An accountant by nature may make mistakes in traditional calculations, but with AI, accurate and error-free results are obtained. This leads to improved reliability of financial statements and the provision of accurate information for financial decision-making.

C. Data speed and quality :

They help free employees from routine and time-consuming tasks that are performed manually. The time saved allows them to focus on value-added activities that rely on strategic thinking and decision-making because the time employees spend collecting and processing data has been significantly reduced. Repetitive tasks such as matching purchase orders with vendor invoices or directive exceptions for approval have decreased significantly for accountants preparing declarations of tax, for example, The software package allows automatic recognition of the data provided by the customer and its placement in the organizer electronically, these automated processes have the advantage of eliminating human errors that can occur when entering data manually. (Steve & all, 2020).

D. Processing a large amount of information in a short period: (Steve & all, 2020)

But also, because this information can be unstructured and come in different forms and from different sources, such as emails, contracts, graphics, videos, blogs, etc. As data volumes grow year after year, organizations recognize the value of using smart technologies to ensure proper data management.

E. Accounting reporting and data analysis frequently in real-time: (Steve & all, 2020)

In the past, organization managers and their accountants made decisions based on often outdated figures, but with the expert system and automation of data processes, information about the organization is constantly updated, allowing for more informed decisions.

F. Ability to improve the accuracy and accuracy of forecast data: (Steve & all, 2020)

The use of predictive models based on machine learning algorithms has the potential to significantly improve the accuracy of forecast data, and thus the quality of the budget and strategic management processes within organizations.

G. Fraud detection in a short period:

Allows merging Artificial intelligence in accounting simplifies fraud detection in the wake of accounting scandals in the early 2000s, Congress enacted the Sarbanes-Oxley Act. Since then and now the importance of ensuring the integrity of financial information has increased significantly. Governments and companies have set strict standards and invested heavily to reduce fraud and misrepresentation. PricewaterhouseCoopers, one of the world's leading audit firms, has developed its own Halo system to identify suspicious transactions and alert people at increased risk... (clinquarte, 2024, p. 12)

To illustrate all these Benefits, report an example of an accounting firm that used AI to detect fraudulent transactions. The company was able to manage a very large volume of data and infer relationships between them. Unlike traditional accounting methods that rely on intuition to choose an account to analyze before making a sift AI offers thinking based on current accounting data and lessons learned from past analytics. therefore, without any modification from Staff AI analyzed the complete data in the customer's ledger and reported fraudulent transactions in a short period. AI

enables the identification of coupons showing large amounts recorded in non-account accounts, in addition to coupons that the same person has posted several times. (Steve & all, 2020)

IV.3. The role of smart technology in the development of the accounting profession: (Steve & all, 2020)

A) Improving the accounting system and transforming the role of accountants towards an organizational advisory service:

Studies show that smart technologies have had a positive impact on the performance of accounting operations and increased the productivity and competitiveness of accountants on the one hand, the use of technology reduces operating costs: it reduces the time required to perform repetitive tasks and eliminates data entry errors and on the other hand, robots can work without interruption, unlike humans. It can respond to customers 24 hours a day.

With the advent of artificial intelligence, accounting professionals will not be completely replaced by machines. On the contrary, their responsibilities and contributions within organizations will develop positively. It also helps transform the boring and repetitive activities of machines to reduce the stress felt by employees and increase their sense of satisfaction with their work. In addition, it allows accountants to focus their efforts where human attention, reflection, and focus are needed on processes that add value to the organization. For example, if a robot processes supplier invoices for payment, accounting staff can in turn focus on exceptions and respond. For supplier requests and develop analytical skills. Similarly, the fact that machines take on repetitive and time-consuming tasks allows auditors to spend more time on complex analysis and understanding patterns.

B) Expanding the role of accountants towards administrative functions within the organization:

It enhances their participation in strategic planning and decision-making processes as well as in problem-solving. Accountants are becoming more engaged in valuation and planning tasks that can provide significant opportunities for organizations. In some respects, AI reduces the "boring" nature of the accounting profession and allows it to evolve into a more effective consulting service for the benefit of the organization. Some AI-based information systems now have capabilities that go beyond data collection and classification tasks to include an advanced forecasting feature. It equips accounting professionals with tools to conduct Mandatory analytics and scenario-based revenue estimates, which are completed in a short period therefore artificial intelligence plays an important role in the emergence of predictive accounting

C) Acquisition of technical skills :

Studies confirm that accountants are not just users, they need to become experts in artificial intelligence and related technologies. They need to move from being able to work with machines to understanding how these machines work and solving problems. Coding and programming knowledge of AI techniques as well as data science is now the basic recruitment criteria for accounting jobs. These skills are not just a desirable competitive advantage, but a commitment to the profession. Practicing accountants must inevitably develop these skills to maintain their positions. Some believe that accounting firms can accelerate their entry into AI if they focus on hiring recent graduates who have acquired a certain level of AI knowledge through courses or internships.

IV.4. The impact of the use of smart technology systems in supporting the application of IPSAS:

Artificial intelligence is a powerful tool in improving accounting information systems, as it helps to analyze financial statements accurately and quickly and generate accurate financial information for strategic decision-making. (Barrazi, 2025).

- A. Improving the accuracy and preparation of financial reports:** A report from Qoyod indicates that artificial intelligence enhances the accuracy of accounting processes and helps predict financial performance, reducing human errors in recording financial transactions under IPSAS standards
- B. Enhancing transparency and accountability:** According to an article on Mohammed Al-Ardah's website, AI technologies can analyze big data and provide a more transparent financial assessment, aligning with IPSAS's goals of improving financial transparency and accountability.
- C. Support for audits and financial control:** The same guide suggests that AI can identify unusual patterns in financial records, helping auditors detect fraud or financial errors, supporting IPSAS audits
- D. Risk Forecasting and Asset Management:** AI helps predict financial risks and provide proactive suggestions to financial departments, supporting government asset management per approved standards

IV.5. Legal and ethical challenges to using AI in accounting information

IV.5.1) Protection of personal data

Accountants and business owners must ensure that the personal data of individuals associated with the system is protected and kept strictly confidential under applicable laws. The issue of AI's dealings with humans is also ethical. Accounting systems must be designed and programmed to comply with recognized ethical standards in interacting with humans and to ensure that humans are not harmed or discriminated against.

IV.5.2) Moral and Legal Liability

Individuals and companies must be responsible for the correct and responsible use of artificial intelligence in the accounting field, and ensure its compatibility with local and international laws and regulations, as ethical and legal principles must be adhered to and work to develop an appropriate legal framework that ensures data protection and faces ethical challenges related to robots and people with artificial intelligence dealing with humans.

IV.5.3) The future of the use of artificial intelligence in government accounting

We are entering an era where digital and AI technologies will be everywhere. It will be possible through them to create a more efficient and more likely workforce to achieve accurate results at a lower cost (savings estimated at 40%) . These technologies will be able to automatically update financial forecasts based on daily changes and make recommendations to achieve growth goals. (Barrazi, 2025)

In addition, the use of artificial intelligence in accounting information systems requires training and qualification to understand and use artificial intelligence techniques effectively, in addition to taking the necessary measures to ensure the security and protection of financial data.

In short, the use of artificial intelligence in accounting information systems holds many opportunities and challenges. It is important to focus on the readiness of accountants for this future by keeping abreast of technological developments and directing investment in appropriate training and qualification.

With the prevalence of the use of these Techniques, Digital assistants will be able to perform the most scalable accounting tasks to predict, Including answering common questions about billing and cash management (e.g. Example Who are they Debtors And when is it worth Loan and what is the balance of the bank account). They will even be able to determine the accounting methods and procedures that will be implemented Contact experts within the organization to obtain appropriate information.

Chartered accountants will be responsible for managing these technologies. and its control, they will have more time to devote to strategic tasks with a higher degree of complexity and risk... (CPA comptables professionnels agréés , 2019)

VI. A field study of a sample of public sector institutions in the wilaya of Tlemcen

This study aims to analyze the extent to which smart technology contributes to the development of the government accounting system and the promotion of the application of IPSAS standards in public institutions in the wilaya of Tlemcen, and a questionnaire tool was used to collect the opinions of accountants, auditors, and computer engineers.

Study population and sample:

The questionnaire was distributed to 47 workers in government institutions in the wilaya of Tlemcen, and the sample included employees from the following institutions:

Table 01: Distribution of Study Population and Sample

Institution	Staff
Hospital	16
Treasury	13
Municipality	10
Directorate of University Services	8

Source: Prepared by the researchers based on data

Method and tools:

- 1) Use the questionnaire and interview tool through oral questions to gather the opinions of public accountants, auditors, and IT engineers
- 2) Note: Included the digital systems on which public institutions rely in accounting and business conduct
- 3) Using **SPSS** to obtain a statistical analysis of the respondents participating in the questionnaire

Table 02: Percentage of use of smart technology systems

Staff	Percentage of employees
23	49%
14	29%
10	21%

Source: Prepared by researchers based on data

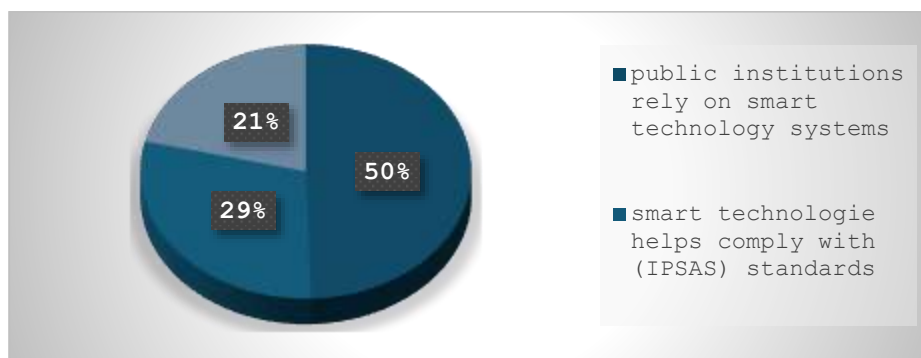
Commentary:

The results show that the majority of public institutions rely on smart technology to an average extent, as 49% of employees reported that public institutions rely on technology systems for accounting

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represented in digitization, while 29% of employees reported that technology systems help adopt IPSAS standards and 21% said that institutions face challenges in adapting to technology systems

Figure n° 01: Percentage of use of smart technology systems



Source: Prepared by researchers based on SPSS outputs

Table 03: The role of smart technology in improving the transparency and accuracy of accounting information:

Number of participants	Percentage of Answers
23	81%
14	66%
10	52%

Source: Prepared by researchers based on SPSS outputs

Figure 02: The impact of smart technology on the accuracy and transparency of accounting information



Source: Prepared by researchers based on SPSS outputs

Commentary:

Through the analysis of the table, it is found that 81% of the participants believe that modern smart technology technologies contribute significantly to improving the accuracy, quality, and efficiency

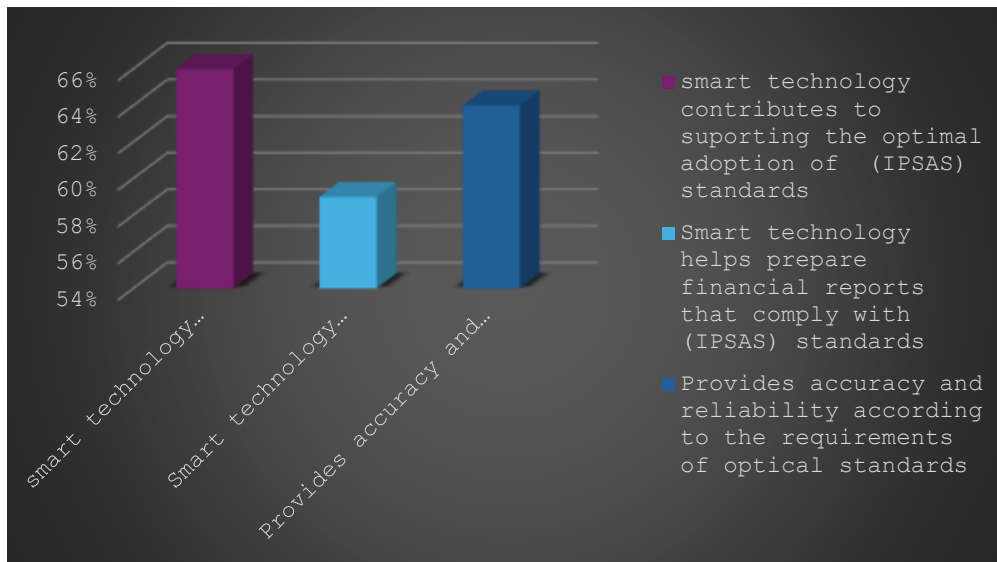
of accounting data and information compared to traditional methods, while 66% of the participants consider that they have a major role in detecting nests and errors and preventing corruption, while 52% of the participants believe that smart technology contributes to enhancing transparency in reports and financial statements, and this requires intensifying support for digitization mechanisms and smart technologies.

Table 04: The extent to which smart technology technologies support the application of IPSAS standards

Number of Employees	Percentage	Pointer
35	66%	Smart technology optimally supports IPSAS adoption
31	59%	Smart technology helps prepare IPSAS-compliant financial reports
32	64%	Provides accuracy and reliability under IPSAS requirements

Source: Prepared by researchers based on SPSS outputs

Figure n° 03: The impact of smart technology on supporting the application of IPSAS standards



Source: Prepared by researchers based on SPSS outputs

Commentary:

We can see from the table that 66% of the participating employees indicated that smart technology contributes to supporting the adoption of IPSAS standards optimally, but not completely as this requires greater development in infrastructure and intensive training.

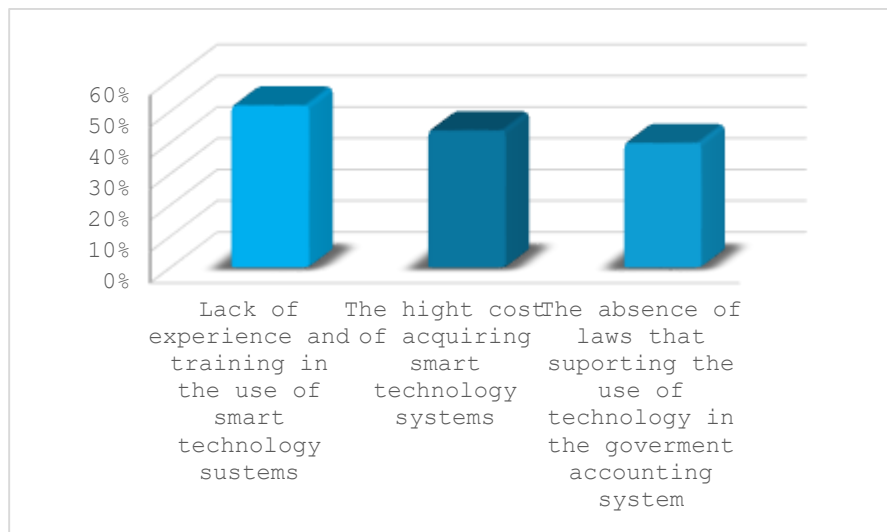
Table 05: Limits of applying smart technology in government accounting:

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Number of participants	Challenge Type	Percentage of Answers
25	Lack of experience and training in the use of smart technology systems	52%
24	High costs of acquiring and implementing smart technology systems	44%
22	Absence of laws supporting the use of technology in the government accounting system	41%

Source: Prepared by researchers based on SPSS outputs

Figure 04: Challenges of applying smart technology in government accounting:



Source: Prepared by researchers based on SPSS outputs

Interpretation:

The results showed that the lack of expertise and training in the use of technology systems is the biggest obstacle for organizations at 52%, followed by the high cost of acquiring them at 44%. As for the absence of laws that support the use of technology in the government accounting system, 41% of the participating employees indicated it, and this requires clear laws to support technological and digital transformation.

Table 06: Drawing the results of statistical indicators:

Statistical Indicator	M
Level of use of smart technology	2.8/ 5
The extent to which smart technology supports the IPSAS application	3.6 /5
Level of impact on accuracy and transparency	0.84

Source: Prepared by researchers based on SPSS outputs

Interpretation:

Correlation coefficient: (relationship between the use of technology and IPSAS): 0.71

Simple regression rate: The more intelligent technology is used by 10%, the easier it is to adopt IPSAS standards by 7%.6%

The arithmetic average of the level of use of smart technology is shown with a value of (2.8), and this indicates an average use of smart technology in government institutions limited to digitization, some smart software, and the Internet of Things

The arithmetic mean of the extent to which smart technology supports IPSAS (3.6), indicates that most participating employees see it as playing a key role in facilitating compliance with the standards. The standard deviation of the level of impact on accuracy and transparency was recorded (0.84), which indicates a difference in opinions on the level of transparency improvement.

Hypothesis analysis :

❖ Analysis of the first hypothesis

The first hypothesis: smart technology systems impart transparency and accuracy in financial reporting in public institutions, which supports the application of IPSAS standards.

1) T-Test per sample:

If the value of $p < 0.05$, we accept the alternative hypothesis **H1** and reject the null hypothesis **H0**: **P=0.002**, a strong signal and therefore considered statistically significant, we conclude that smart technology encourages accuracy and transparency in government financial reporting, it is concluded that IPSAS supports the application of International Public Sector Accounting Standards

❖ Analysis of the second hypothesis:

Public institutions face infrastructure and legislative challenges when implementing smart technology systems in accounting, which affects the speed and efficiency of IPSAS adoption.

2) Chi-Square Test to see the relationship between challenges and IPSAS application level:

p=0.015 Strong statistical significance, the results confirm that government institutions face structural and legislative challenges when applying smart technology systems in accounting, which affects the speed of adoption of IPSAS standards.

General result: The statistical results support the first hypothesis, as smart technology improves the accuracy and transparency of financial reporting, enhancing the application of IPSAS.

The results confirm the validity of the second hypothesis, as there are real challenges in infrastructure and legislation that hinder digital transformation in government accounting.

Conclusion

The application of smart technology in the government accounting system is of great benefit and a basis for supporting compliance with international accounting standards in the public sector and the development of all businesses and financial services, as these smart technologies improve transparency and accuracy in the financial performance of public institutions, through a field study on a sample of public institutions in Tlemcen, which aims to identify the extent of the use of smart technology and its impact on the level of transparency, accuracy and quality of financial reports of institutions, which represents a valuable opportunity. To develop the government accounting system in Algeria based on smart digital technology, and for the success of the implementation process, various challenges and difficulties should be overcome, and policies that support the adoption of IPSAS standards should be encouraged.

The results of the study:

1. The use of smart technology systems contributes to improving the quality and accuracy of financial data and reports, reducing accounting errors and fraud, increasing the reliability and credibility of financial data and information provided, and standardizing accounting treatment as required by IPSAS standards.
2. The study shows smart technology systems such as big data, cloud computing, artificial intelligence, and blockchain technology help strengthen oversight and accountability of public money
3. Automation of smart systems contributes to raising the operational efficiency of the organization, shortening time and effort, and increasing speed in the internal and external financial audit process
4. many challenges hinder the use of smart technology in the government accounting system, including the lack of expertise and qualifications, the weakness of the digital infrastructure, the lack of an appropriate regulatory framework that supports the process of digital technological transformation in the public sector, and the high cost of financing.
5. The idea of using smart technology in government accounting was widely accepted in public institutions in Tlemcen, where most of the participating employees confirmed that it helps to improve the quality, accuracy, and transparency
6. Smart technology has a key role in enhancing compliance with IPSAS standards due to its contribution to improving the quality of information, efficiency, and accuracy of financial reports and facilitating accounting work

Recommendations :

- To enhance skills and experience in the use of smart technology in government accounting, special training, and education programs should be provided to public sector employees
- Technical expertise in the field of smart accounting systems should be utilized by promoting cooperation between the public and private sectors
- Providing a regulatory and legislative framework through laws that encourage the use of smart technology in the application of international standards of accounting in the public sector
- Providing the necessary financial support for the acquisition and development of smart technological systems in the field of accounting
- Provide the necessary solutions and ensure facilities to overcome the challenges of implementation
- Conduct periodic evaluations to study the impact of smart technology on supporting the application of IPSAS standards

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