

The reality of the application of the International Public Sector Accounting Standards in Algeria and ways to establish it in the shadow of digital transformation a survey study at the level of - Tlemcen -state

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Abstract:

This study examines the application of International Public Sector Accounting Standards (IPSAS) in the public sector in Algeria and ways to enhance them in light of digital transformation. Research indicates that implementing IPSAS poses challenges in many countries due to legal, regulatory, and cultural obstacles. In Algeria, similar challenges exist, necessitating improvements to the process and enhancing its effectiveness. The study aims to explore how digital transformation can contribute to enhancing the application of IPSAS by utilizing technology to streamline accounting processes and improve the accuracy of financial reporting. The study included Tlemcen province, where a questionnaire was used to gather data following an analytical approach.

Keywords: IPSAS standards, digital transformation, accounting and financial information.

Jel Classification Codes: H83-M41-M48,033-M15-L86

Introduction:

In our digital age, many countries and institutions are undergoing a massive transformation in how they manage and regulate their affairs, including the implementation of International Public Sector Accounting Standards. International Accounting Standards (IAS) play an essential role in enhancing transparency and

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credibility in financial statements, which is critical in light of the current economic and financial challenges faced by countries.

Algeria is one of these countries that faces many challenges in achieving this goal and the focus is growing on how to promote this application and make it more effective, by exploiting the opportunities presented by digital transformations in society.

The main problem revolves around the challenges facing the implementation of IPSAS in the public sector in Algeria, and how can this process be improved and enhanced in light of digital transformation?

To answer the problem, we ask the following sub-questions:

1.1.sub-questions:

Do the system and law in Algeria support the adoption of international accounting standards in public sector?

What is the impact of digital transformation on public accounting and is there a willingness to apply it in the Algerian environment?

1.2. Hypotheses of the study:

H1: Algeria's legal and regulatory structure is supposed to support the adoption of IPSAS.

H0: Algeria's legal and regulatory structure does not supposed to support the adoption of IPSAS.

H1: Digital transformation has a positive impact on public accounting and Algerian institutions are ready to adapt to it.

H0: Digital transformation has a negative impact on public accounting and Algerian institutions are ready to adapt to it.

1.3. Importance of Research:

The importance of this study, crystallizes in enriching the thought of researchers and professionals about the importance of the topic and spreading awareness about the need to pay attention to promoting the adoption of International Public Sector Accounting Standards, among public institutions in an era witnessing tremendous developments, in the field of artificial intelligence and digitization and to clarify the requirements of the Algerian environment, to keep pace with this development and how to apply the necessary reforms and provide the appropriate conditions for that.

1.4. Research Objectives:

This study aims to explore the application of International Accounting Standards, in the public sector in Algeria and analyze the factors that affect this application, in addition to examining how digital transformation can be used to improve and facilitate the application process. By shedding light on these aspects, the research aims to provide practical suggestions and recommendations to improve the application of International Accounting Standards, in the public sector in Algeria and to make the most of digital transformation in this context.

1.5. Study Methodology:

In this research, we relied on the descriptive and analytical approach, where the descriptive approach was used in the theoretical side to clarify the various concepts and the analytical approach in the applied side to circumvent the results of the research and many Arab and foreign references were relied on

1.6. Research Themes:

To address this topic, we will address the following axes:

- ✱ **The first axis:** What are the International Accounting Standards (IPSAS)
- ✱ **Second axis:** The Role of Digital Transformation in the Application of IPSAS Standards
- ✱ **Third axis:** Requirements for the application of IPSAS standards in the Algerian environment
- ✱ **Fourth axis:** The Reality of IPSAS Application in the Light of Digital Transformation (Survey)

The first axis: What are the International Accounting Standards (IPSAS)

The International Public Sector Accounting Standards constitute a frame of reference that guides the development of rules and foundations on which financial statements are designed and prepared, accounting concepts, as they determine the information that makes up the financial statements and the method of their preparation.

1. Definition of International Public Sector Accounting Standards

The Public Sector Committee of the International Federation of Accountants (IFAC) defined IPSAS as "formal statements showing how certain types of transactions and other events should be reflected in government financial statements, accordingly adherence to reliable and recognized accounting standards is necessary to obtain a fair presentation of the financial statements."²

Through these two definitions, we conclude that IPSAS is a set of guidelines and standards that determine how to prepare financial reports for government agencies and public bodies. IPSAS aims to standardize the way financial transactions are recorded and financial information is provided to these entities, making financial reporting more transparent and reliable.³

2. The importance of International Public Sector Accounting Standards:

The purpose of IPSAS is to be high-quality standards that define the requirements for high-quality financial information for users, i.e., understandable, timely, comparable, verifiable and internationally compliant.

They allow for a more comprehensive and accurate picture of the financial situation and performance, provide a better basis for decision-making at different levels of government and strong support for public financial management.⁴

3. Objectives of the International Public Sector Accounting Standards:

The core objectives of IPSAS are:⁵

- ◆ Improving the quality and transparency of the financial reports of public institutions, ensuring accountability in the public sector and preserving state resources.

²Zohir, Chellal; (2013,2014), « PhD thesis on the prospects for reforming the Algerian public accounting system for the implementation of state financial operations », univ AMhamed bouguerra, boumerdasse, Algeria. p 5

³ Zohir, Op. Cit., p5

⁴ Wipo secretaria, (2017) « world international property organization », on the web site <http://wipo.net>

⁵ Walid, Mergheni, and all; (2021), the approach of public accounting in the Algerian environment in light of the trend towards international public sector accounting standards », journal of humanities vol 21/issue 1, p114

- ♦ Apply the principle of accounting for proven rights and achieve quality and reliability in the presentation of public financial reports and financial information, and make them comparable locally or internationally
- ♦ Applying the logic of performance, as the state must go beyond registering its movable and immovable property and all its investments as expenses.
- ♦ Improving the international comparability of financial statements
- ♦ Developing public accounting and comparing it with financial accounting

4. Advantages of IPSAS:⁶

which we explain as follows:

- Keeping pace with the requirements of globalization and economic development in the world
- Accounting reform based on International Accounting Standards increases the quality of financial information
- Contribute to raising the competitiveness of Algerian enterprises
- Facilitating institutional access to international financial markets
- Enhancing transparency and disclosure of financial statements
- Activating the role of the stock exchange
- Qualifying the accounting ratio to work in the internal markets
- Getting rid of the defects of the cash basis and developing the accounting profession in general.

5. Foundations of accounting in the public sector:⁷

The accounting basis is one of the main components of any accounting system and the accounting basis means the standard under which the economic events of the enterprise are recorded.

The accounting basis is classified into two types:

- ♦ For a cash basis.
- ♦ Accrual basis or obligation basis.

The following is an overview of the advantages and disadvantages of each of the accounting fundamentals.

5.1. Cash Basis:

5.1.1 Advantages:

- ✓ Simplicity, clarity and ease of application, as it depends on a simple and uncomplicated accounting system
- ✓ The possibility of preparing the final accounts early, which makes the publication of the final account important as a matter of control.
- ✓ The results achieved from its application can be relied upon in the field of preparing the next budget and in the field of implementing and monitoring the general budget.
- ✓ The speed of extracting the results and not requiring accounting adjustments at the end of the period.
- ✓ It does not require much skill in those in charge of its implementation.

⁶ Meriem, Amer., Mohamed, Twileb, (2021); « the extent of compatibility of the Algerian public accounting standards project with the international accounting standards for the public sector of financial statements, institute of economic sciences », vol 24, issue 01, p.1221

⁷ Institute Elmohassibin sawt elmohassib, (2023); « what is the accounting basis and its advantage and disadvantage? », on the web site: <http://almohasben.com>

5.1.2. Disadvantages:

- ✓ It does not lead to the portrayal and preparation of a sound and honest financial position and to show the correct results of activities.
- ✓ Reduces the importance of comparisons between fiscal years for the reason that the activities of the different fiscal years overlap with each other and bear each fiscal year at costs made in other.
- ✓ It is not suitable to provide the data necessary to determine the cost of government activities and programs and to determine the unit of achievement or the unit of service to be performed.
- ✓ It is not suitable for the purposes of measuring and evaluating government performance in exploiting available resources.
- ✓ It is not suitable for measuring the effectiveness of long-term government programs because the accounts of each year are independent and self-contained

5.2. Accrual Basis:

5.2.1. Advantages:

- ✓ It is consistent with scientific accounting principles, as it is characterized by accuracy and fairness, as each financial year is considered an independent personality and therefore any receivables or advances are taken into account for both revenues and expenses.
- ✓ It helps in applying the principle of matching revenues with expenses regardless of collection or cash reimbursement, allowing for different comparisons between different years within the same unit or between different units.
- ✓ Contributes a lot to determining the cost of the unit of activity or the service unit performed, in light of the budget of programs and performance
- ✓ Facilitates the preparation of estimates of resources and uses for future fiscal years
- ✓ It helps in separating ongoing and capital operations.
- ✓ Assists in the preparation of the honest and fair financial position of the administrative.

5.2.2. Disadvantages:

- ✓ Its application requires a complex and costly accounting system in its preparation and operation, as well as high-level accounting skills and competencies in financial and accounting knowledge.
- ✓ Its use leads to the need to use judgment and personal discretion in some situations, which loses some of the results of their objectivity, as in the inventory and evaluation of stores and the estimation of some allocations.
- ✓ Its application requires that the accounting book group remain open for a long time after the end of the fiscal year until the necessary reconciliations are completed and thus the presentation of business results is delayed...

6. Obstacles to the implementation of IPSAS in the public sector:⁸

- The inability to fully apply international accounting standards in the public sector at the level of countries around the world.

⁸ Khaled Djamel, Eldjaarat; (2014), « Mokhtassar elmaayir Elmohassabia dowalia », univ kasdi merbah, wergula, Algeria, P.8

- Maintaining many accountings alternatives
- The application of some international accounting standards in the public sector requires an amendment to the laws or regulations in the applicable countries and the legislation, instructions and communications issued under them.
- Political pressures on the International Public Sector Accounting Standards Board in developing and amending International Accounting Standards
- Lack of intention and seriousness on the part of governments and governing authorities to apply IPSAS
- Administrative corruption and budget manipulation
- High cost of IPSAS adoption
- The high scientific and professional level of the contents of the standards
- Different environments and systems of political life in developed countries than in developing countries
- Failure to take into account all amendments to IFRS.

7. Aspect of the deficiencies of the public accounting system in Algeria:⁹

Due to the developments in the business environment, there is a deficiency in the public accounting system in several comprehensive aspects of the state's liability, including:

- 7.1. Registration process: only related to the collection of revenues and the implementation of expenses, thus neglecting other important elements such as real and movable property
- 7.2. The method of numbering state accounts: related to treasury accounts according to a linear sequential system that loses the balance of the group of accounts with similar addresses, which makes it difficult for the accountant to know which account matches the type of financial transaction he registers
- 7.3. The difficulty of compiling accounting information according to digitization techniques: with the complexity of accounting documents and the lack of accounting restrictions to follow up the consumption of financial appropriations, which provides useful data in the field of evaluating the performance of public sector units in exploiting available financial resources and measuring costs.
- 7.4. Failure to give a comprehensive view of the state's liability: As the accounting registration process within the framework of public accounting is only related to the collection of revenues and the implementation of expenditures (cash basis), and thus other important elements such as real and movable property, as well as the state's rights debts towards others, which are followed up outside the accounting framework, have been neglected, and this led to poor management of the state's liability.
- 7.5. State account numbering method: Numbering treasury accounts according to a linear sequential system has lost the balance of the group of accounts, so that it contains large numbers of accounts with similar addresses, making it difficult for the accountant to know which account matches the type of financial transaction he registers, especially with the developments imposed by the new operations practiced by the state.
- 7.6. Difficulty in concentrating and compiling accounting information: Collecting and centralizing accounting information is not in line with the new accounting

⁹ Walid, Mergheni, and all, Op, Cit. pp.116-117

techniques that require an automated information system that ensures the concentration of various accounting data from various registration centers, but rather the process of concentration does not take place in the appropriate time, which causes delays in collecting information and making decisions.

- 7.7. Complexity of accounting documents: The accounting documents that must be available within the framework of the state are characterized by their complexity and not easy to exploit.

Second axis: The Role of Digital Transformation in the Application of International Public Sector Accounting Standards:

Digital transformation is a great wealth for countries and institutions, as it has facilitated many professions and practices in all fields. Through this theme, we will discuss highlighting concepts about digital transformation and explaining some digital technologies used in the field of accounting.

1) The concept of digital transformation:¹⁰

Digital transformation or (digitization) is the process of moving government sectors or companies to a business model that relies on digital technologies to innovate products and services, improve efficiency, reduce spending, and apply new services quickly and flexibly so that they respond to the needs of different stakeholders, digital transformation today poses a challenge for organizations to switch to the smart use of technology and study the impact of new business models on their activities, and the extent of the intelligence of institutions in building, managing and operating technology will be one of the most important factors that will determine their future.

Digital transformation is defined as the process of companies moving to business models based on digital technologies and developments associated with the Fourth Industrial Revolution through the use of artificial intelligence, big data analytics, cloud computing and the Internet of Things to support the development and innovation of products and services.¹¹

Digital Transformation Steps

Digital transformation begins with formulating a digital strategy and improving the current state of the organization. This can only be achieved by measuring existing digital capabilities and determining the best business structure for digital marketing activities in the organization. Next, the requirements for investment plans are identified while identifying the obstacles to digital integration to make a comprehensive and robust plan for all circumstances, driving the transition to the desired situation, and finally, the need for a change management for digital transformation to achieve strategic goals.

AWS, a leader in cloud computing, has provided a checklist to build strategies that enable the freedom to innovate and transform ways of working for successful digital transformation based on transforming vision, embracing a culture of change,

¹⁰ Ahmed, Elhwamda; (2020), « governance of the enterprise », Dar Ibn Elnafiss, Jordan, p.24

¹¹ El Noor online, (2023); « the positive and negatif of digital transformation », on the web site: <http://elnooronline.net>

changing the cost model, starting a business in the cloud, and following the application process.¹²

2) Aspects of digital transformation affecting accounting information systems

The great digital revolution in the field of informatics and artificial intelligence systems has contributed to a qualitative leap and a great acceleration in the business environment, which made institutions keep pace with these huge developments to transfer accounting and management information systems from classic technologies to modern digital technologies, which revolutionized the pattern of work behavior by setting standards that allow each facility to choose technologies that suit the nature of its work such as artificial intelligence, the Internet of Things and technologies Blockchain, big data, cloud computing and cybersecurity These technologies will allow to increase transparency and reduce cost, save effort and time, facilitate access to data, protect data and enhance efficiency in the work of the accounting information system.¹³

3.1) Blockchain Technology:

It is an advanced mechanism for databases that stores data in blocks linked to each other in a chain, each of which represents a database, where all transactions that take place within the network are subject to verification and validation by the rest of the network devices, and as a result it can be used to create an immutable or fixed account record to track orders, payments, accounts and other transactions The system has built-in mechanisms that prevent the entry of unauthorized transactions This technology helps in the development of accounting information systems by giving transparency and moving from double entry to automatic triple entry in record keeping. It reduces error in financial reporting and shortens the time and effort spent by accountants, as the accounting recording of transactions will be directly in the ledger shared by all dealers in the chain, thus creating more intertwined accounting systems.¹⁴

3.1.2) Cloud Computing:

Cloud computing means providing IT resources on demand via the Internet with cost pricing per use, instead of buying, owning and maintaining data centers and physical servers, you can take advantage of technological services such as computing capabilities, storage and databases in a manner that depends on your needs through a cloud service provider, it is not just a technical solution or a server that has been stored and has another impact, Rather, it is a form of digital transformation that improves the implementation of accounting work, the most important advantages of which are saving effort and time, thus reducing the cost and speed in processing, data storage, scalability, data protection, ease of data communication, ensuring that services are always running and taking advantage of the huge infrastructure provided by cloud services.¹⁵

¹² Ahmed, Elhwamda, Op, Cit, p.25

¹³ Latifa, Mergheni, all; (2021), « Impact of digital transformation on accounting system-evidence from Algerian firms », Sciendo Economics Business vol 35, p.254

¹⁴ Latifa, Mergheni, all, Op, Cit, p.254

¹⁵ ibid., p.255

3.1.3) Big Data:

Refers to data that is too large or fast and complex to be difficult or impossible to process using traditional methods, representing a huge amount of complex data that exceeds the ability of traditional programs and computer mechanisms to store, process and distribute Big data can be used in accounting because it enables companies to benefit from analyzing data generated by financial markets and social media For example, the New York Stock Exchange produces one terabyte of data every day and is also used to improve accounting process systems and provide better customer service.¹⁶

3) Benefits of digital transformation in the development of public accounting and the application of (IPSAS):¹⁷

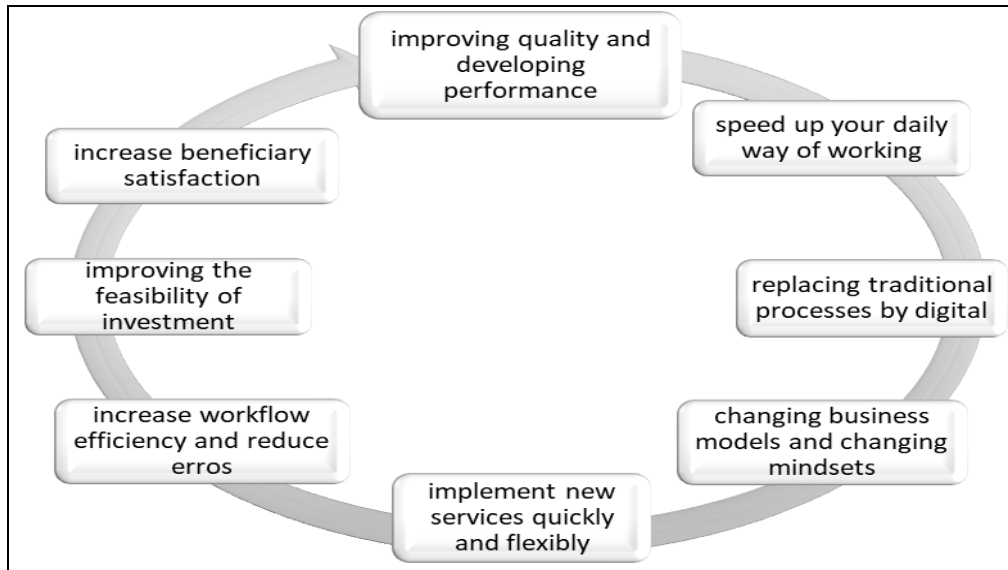
Digital transformation has many and varied benefits not only for customers and the public, but for government institutions and companies as well, as it significantly saves cost and effort, improves operational efficiency and organization, improves quality, simplifies procedures for obtaining services provided to beneficiaries, creates opportunities to provide innovative and creative services away from traditional methods of providing services, and helps to expand and spread wider to reach a larger segment of customers and the public.

Digital transformation in public accounting contributes to getting rid of the practice of repetitive manual work and its slow and ineffective repercussions, improving both the speed of completing tasks and auditing, and reducing errors as much as possible in order to increase accounting efficiency, and therefore the integration of technology in accounting improves the accuracy of information by displaying accurate and updated financial data immediately so that managers and decision-makers in institutions can rely on reliable information to make correct financial decisions, and digital transformation also provides advanced analysis tools, automation and forecasting techniques. In particular, it helps to better understand the financial statements and predict the future more accurately and this contributes to the role of making compatible strategic decisions to facilitate compliance with the application of international standards necessary for the public sector.

¹⁶ Ibid., p.255

¹⁷ Ahmed, Elhwamda, Op, Cit, p.62

Figure N° 1: some of the benefits of digital transformation in the following chart:



Source: Prepared by the researcher based on previous data

4) The need for digital transformation in public accounting:¹⁸

The adoption of digital transformation in public accounting opens up tremendous opportunities for the economic growth of the country and increase customer satisfaction, and the need for digital transformation in accounting is represented in:

4.1. Improving the efficiency of the government accounting system: Digital transformation helps support and enhance the application of International Accounting Standards (IPSAS) to develop accounting systems globally and achieve international compatibility

4.2. Enhanced collaboration: Digital-based accounting solutions facilitate seamless collaboration between organizations and customers – exchanging paper documents or emailing files using cloud accounting is over

4.3) Data-driven decision-making: Digital transformation enables accounting professionals to harness the power of data analysis and better drive decision-making by collecting, analyzing, and interpreting vast amounts of financial data

4.4) Cybersecurity and data protection: Organizations deal with sensitive customer data and any breach can severely damage their reputation and credibility so it is important to invest in cybersecurity measures such as secure ciphers and servers

5) Challenges Facing Digital Transformation

Digital transformation has become a necessity for all institutions and bodies that seek to develop, improve their services and facilitate their access to beneficiaries, and digital transformation does not only mean the application of technology within the institution, but it is a comprehensive program and also how to provide services to the target audience to make the whole touch the institution and touch the way and

¹⁸ Faster Capital, (2023), « Digital transformation in accounting: ICAEW's innovative Approach, on the web site: <http://fastercapital.com>

method of its work internally Services are done easier and faster There are many factors that prevent the digital transformation process within organizations, including the lack of human resources, The lack of dedicated budgets for these programs, which limits their growth , is one of the biggest obstacles, especially if the assets are of high value, and the absence of a regulatory legal framework, especially in developing countries.¹⁹

In this section, we will discuss some of the challenges of digital transformation in accounting and how to overcome them.

5.1) Resistance to Change

One of the biggest challenges of digital transformation in accounting is resistance to change. change can be difficult, especially when it involves new technology and processes. Many employees may be resistant to change because they are comfortable with the way things have always been done. However, it is important to overcome this resistance to ensure a successful digital transformation.

To overcome resistance to change, it is important to involve employees in the process. Provide training and support to help employees understand the new technology and processes. Encourage feedback and be open to suggestions. By involving employees in the process, they will feel valued and more likely to embrace the changes.

5.2) Lack of Skills and Knowledge

Another challenge of digital transformation in accounting is the lack of skills and knowledge. Many employees may not have.

6. Digital Transformation and the Internet of Things:²⁰

Digital transformation requires government institutions and private companies to take advantage of the Internet of Things to be more aware, predictable and flexible at work, which will enable them to innovate faster to achieve the desired results from their business and to achieve ,The huge number of mobile devices, Internet communication tools and digital services in the public and private sectors will need huge networks and advanced infrastructure through networking between people, processes, data and things, which leads to the rapid pace of change.

7. Companies' investments in digital transformation: ²¹

Recent studies revealed that the world's companies have invested \$ 2 trillion in 2020 in developing their digital transformation technologies, and this qualitative shift in the volume of investments is imposed by the need for increasing complexities in the information technology sector in terms of devices, applications and the training of people working in the field of informatics.

8. Obstacles that hinder the digital transformation process:²²

In short, there are many obstacles that hinder the process of digital transformation within institutions and companies, including the lack of competencies, capabilities and capabilities within the institution capable of leading digital transformation programs, and the lack of budgets allocated to these programs limits their growth.

¹⁹ Faster Capital, Op, Cit

²⁰ Ahmed, Elhwamda, Op, Cit, p.64

²¹ Ahmed, Elhwamda, Op, Cit, p.71

²² ibid., p72

Fear of information security risks through the use of technological means is one of the biggest obstacles.

Fourth axis: Requirements for the application of IPSAS standards in the Algerian environment

The shift from cash accounting to accrual accounting requires cultural and mental changes; overcoming them requires strong resistance to change; and requires investments in training and information technology systems.²³

1. Requirements for the application of international accounting standards in the public sector:

- ♦ Reform of the legal system in accordance with the International Public Sector Accounting Standards
- ♦ Change the basis of accounting measurement
- ♦ Decentralization of power
- ♦ Rehabilitation and training of workers in the public sector
- ♦ Political support and support from decision makers
- ♦ Use of smart and digitization technologies

2. Mechanisms for the application of the International Public Sector Accounting Standards:

The mechanisms for developing the public accounting system contribute to the renewal of accounting work in government institutions, using modern principles and theories that seek to achieve the objectives of public accounting, which are: Application of the theory of accounting for allocated credits: This theory emerged with the focus of the attention of professional accounting organizations on the issuance of standards in 1987, after the interest was limited to financial accounting applied in economic institutions only, it came to develop the theory of funds specialized in accounting for those allocated to achieve the goals that the state wants to reach and achieve through the funds granted. The credit accounting system helps to increase efficiency and effectiveness in the optimal use of state resources in:

- 2.1. Achieving the best use of factors of production, especially in developing countries, by using scarce and available economic resources in a manner that ensures the acceleration of the country's economic and social development process
- 2.2. Assist those responsible for planning in order to make rational and appropriate decisions for the economic planning process, and measure the costs of burdens, especially the implementation of economic and social development programs because reforming the accounting system curriculum requires a comprehensive survey of available data sources.
- 2.3. Orientation towards the use of the accrual basis: The accrual basis includes that each fiscal year is independent of other fiscal years, and thus the fiscal year bears all its expenses, whether paid or not, as well as its own resources, whether it occurs or not, and the importance of applying this basis lies in measuring transactions in government units, through the objectives that it seeks on this basis to achieve, according to the following elements:

²³ Ahmed, Elhwamda, Op, Cit, p.72

- 2.4. Finding an accounting approach that gives a comprehensive picture of the implementation of government programs and activities and helps in reaching the cost of performing these programs and activities.
- 2.5. Facilitate the creation of quantitative and valuable relationships between cost and corresponding achievements, which helps to control and reduce cost on the one hand, and increase the volume of achievement, allocate limited resources and set priorities in light of the complexity of government activity and the multiplicity of its outputs and raise its level on the other hand.
- 3. Requirements for the successful implementation of the International Public Sector Accounting Standards:** ²⁴

The successful implementation of IPSAS in the public sector depends on a set of conditions, which can be highlighted as follows:

- 3.1. The shift from cash-flow to accrual accounting requires cultural and mindset changes in governments, investments in training and IT systems.
- 3.2. There must be a strong commitment at the top of politicians and government officials alike.
- 3.3. Political support for the project of applying standards by officials, as the availability of the modernization project depends on the achievement of the objectives and directions of these parties, and thus the success of the project requires the participation of these groups in the preparation, follow-up and monitoring of its implementation
- 3.4. The need for an independent environment aimed at supervising the follow-up and accompanying the implementation of the draft standards so that it has the ability to control, coordinate and effectively with the various ministries
- 3.5. The need to govern the public sector through the existence of an effective legislative and legal framework, in addition to monitoring and ensuring the implementation and accompaniment of the project's work.

Fifth Theme: The reality of the application of IPSAS standards in the shadow of digital transformation in Algeria: A survey of some public institutions in the wilaya of -Tlemcen-

1. Study population and sample:

- 1.1. Study population:** study population is represented by the employees of the Accounting and Finance Department: public accountant, assistant public accountant, financial controllers, financial cadres, in addition to computer technicians and engineers in the wilaya of Tlemcen.
- 1.2. Study sample:** 56 questionnaires were distributed in three public institutions, represented in the municipality of Tlemcen, the state treasury, and the hospital.

Qualification	Percentage	Number
Bachelor of Accounting and Finance	35.71%	20
Master of Accounting and Finance	26.78%	15
High Technician in Accounting	7.14%	4

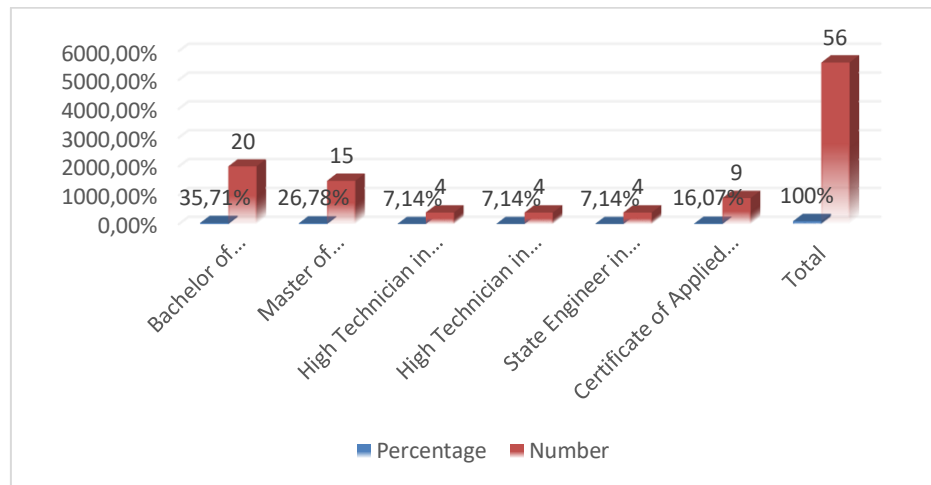
²⁴ Ahmed, Elhwamda, Op, Cit, p.75

High Technician in Informatics	7.14%	4
State Engineer in Informatics	7.14%	4
Certificate of Applied University Studies	16.07%	9
Total	100%	56

Table 01: Distribution of study sample according to academic qualification:

The Source: Prepared by the researcher based on the outputs of SPSS

Figure 02: Distribution of study sample according to academic qualification



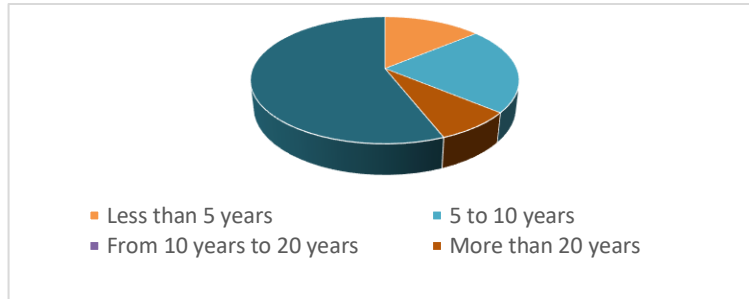
Source: Prepared by the researcher based on the outputs of SPSS

Table 02: Distribution of study sample according to years of experience variable:

Category	Percentage	Number
Less than 5 years	%25	14
5 to 10 years	%39.28	22
From 10 years to 20 years	%21,42	12
More than 20 years	%14.28	8
Total	100%	56

Source: Prepared by the researcher based on the outputs of the SPSS program

Figure 03: distribution of study sample according to year of experience variable



Source: Prepared by the researcher based on the outputs of the SPSS program

Table 03 Distribution of Study Sample by Job

Function	Percentage	Iteration
Public Accountant	8.92%	5
Financial Controller	10.71%	6
Assistant Public Accountant	21.42%	12
Management Controller	5.35%	3
High Technician in Informatics	10.71%	6
Certificate of Applied University Studies	5.35%	3
Total	37.5%	21

Source: Prepared by the researcher based on the SPSS program

2. Psychometric properties:

Stability scale: To ensure the truthfulness of the questionnaire, the Cronbach alpha scale was used to measure the level of internal consistency of the study tools used to collect data as well as analyze them, as this coefficient everything that was greater than 60% is considered good stability and everything that was less is considered weak stability or in other words, everything that approached 1 and was high, this is a good indicator of the stability of the questionnaire and its suitability for the study test, and the following table shows the stability test for variables

Table 4: Stability test for variables

Axis	Percentage %	Coefficient of stability α Cronbach	Number of ferries
Qualifications of Public Accounting Officers	81.8%	0.818	8
The reality of the application of IPSAS standards in the Algerian environment	94,3%	0.943	10
The role of digital transformation in the application of IPSAS standards in public institutions	92.8%	0.928	9
Total Stability coefficient	98.2%	0.982	27

Source: Prepared by the researcher based on the outputs of the SPSS program

Interpretation: Through the table, we note that the coefficients of Cronbach α range between 81% and 92.8%, and this percentage is acceptable as it exceeds 60%, and the resolution coefficient as a whole reached 98.2%, and this means the stability of the study tool, and to ensure the truthfulness of the study, we use the root of the Cronbach α , where: $= 0.990 \sqrt{0.982}$ Therefore, the coefficient is close to one, which indicates that the questionnaire is characterized by honesty and consistency and the tool is suitable for use in research

3. Presenting the results of the respondents' opinions on the reality of the application of the International Public Sector Accounting Standards in light of digital transformation:

Table 05: the results of the respondents' opinions:

Ferr y	Frequency and percentag e %	Yes	No	I Don't know	Arithm etic mean	Standar d deviatio n	General directio n
1	Iteration	2	33	21	33	5.74	Yes
	Ratio	3.57%	58.92%	37.5%			
2	Iteration	10	16	30	33	5.74	Yes
	Ratio	17%	28%	53.57%			
3	Iteration	3	48	5	33	5.74	Yes
	Ratio	5.35%	85.71%	8.92%			
4	Iteration	34	14	8	33	5.74	Yes
	Ratio	60.71%	25%	14.28%			
5	Iteration	56	0	0	3.3	1.81	Yes
	Ratio	100%	0%	0%			
6	Iteration	48	2	6	33	5.74	Yes
	Ratio	85.71%	3.57%	10.71%			
7	Iteration	26	28	2	33	5.74	Yes
	Ratio	46.42%	50%	3.57%			
8	Iteration	53	0	3	18	4.24	Yes
	Ratio	94.64%	0%	5.35%			
9	Iteration	10	35	15	36	5.74	Yes

	Ratio	17.85%	62.5%	26.78%			
10	Iteration	12	38	6	33	5.74	Yes
	Ratio	21.42%	67.85%	10.71%			
11	Iteration	10	40	6	33	5.74	Yes
	Ratio	17.85%	71.42%	10.71%			
12	Iteration	54	2	0	33	5.74	Yes
	Ratio	96.42%	3.57%	0%			
13	Iteration	9	32	15	33	5.74	Yes
	Ratio	16.07%	57.14%	26.78%			
14	Iteration	48	6	2	33	5.74	Yes
	Ratio	85.71%	10.71%	3.57%			
15	Iteration	20	30	6	33	5.74	Yes
Total	Ratio	35.71%	53.57%	10.71%			

Source: Prepared by the student based on the outputs of the SPSS

Interpretation: The results appear in the table on the reality of the application of the International Public Sector Accounting Standards in the shadow of digital transformation, where we note that the results in their entirety were in agreement with an arithmetic average of the axes grouped 33 belonging to the category (33-41) according to the five-pointed Licart scale, which indicates the responses of the sample members. **Hypothesis testing:**

First hypothesis

H1: Algeria's legal and regulatory structure is supposed to support the adoption of IPSAS.

H0: Algeria's legal and regulatory structure does not support IPSAS adoption in the public sector

Table 10: shows the testing of the second hypothesis through the T-test

Certified moral degree	Degree of Freedom	Withdrawn value	Tabular value	Probability (sig-t)	The decision
0.06	45	26.05	2	0	Reject the null hypothesis and accept the alternative hypothesis

Source: Prepared by the student based on the outputs of the SPSS

Interpretation: Through Table, we note that the level of significance sig is non-existent, and therefore the hypothesis H0 is rejected and the alternative hypothesis

H1 is accepted, that is, the legal and regulatory structure in Algeria supports the adoption of international accounting standards in the public sector, due to the consensus of the sample members in agreement to try to gradually move towards the reform of public accounting through various methods, the most important of which is the issuance of Law 15_08, which provides for the adoption of the accrual basis and the inclusion of financial accounting and cost accounting in Public institutions and the promulgation of Law 23_07, which allows the submission of more accurate and reliable financial reports and the achievement of more effective control over the management of public funds, including the rationalization of public spending.

Second hypothesis:

H1: Digital transformation has a positive impact on public accounting and Algerian institutions are ready to adapt to it.

H0: Digital transformation has a negative impact on public accounting and Algerian institutions are not ready to adapt to it.

Table 11 shows the testing of the second hypothesis through the T-test for one sample.

Certified moral degree	Degree of Freedom	Withdrawn value	Tabular value	Probability (sig-t)	The decision
0.06	45	26.05	2	0	Reject the null hypothesis and accept the alternative hypothesis

Source: Prepared by the student based on the outputs of the SPSS

Interpretation: Through Table, we note that the level of significance sig is non-existent, and therefore rejects the hypothesis H0 and accepts the alternative hypothesis H1, that is, according to the opinions of the respondents, digital transformation helps in the application of international accounting standards in the public sector, the development of the public accounting system, the achievement of speed and efficiency in the performance of institutions, and the shortening of time and effort. Digital transformation also helps to analyze data and give results accurately and reliably. Algeria can adapt over time and with care to train professionals. and staff on it.

Conclusion:

International Accounting Standards (IAS) contribute to the rationalization of financial decisions in the public sector. By standardizing accounting principles and methods of issuing financial reports, providing reliable and accurate information for strategic and tactical financial decision-making. This contributes to achieving financial efficiency and enhances transparency and helps in analyzing financial and accounting performance in a more accurate and effective manner, which reduces the chances of financial corruption and manipulation of financial resources and through our studies of this research we have drawn the following results:

The results of the study:

1. The application of IPSAS standards is one of the most important signs of financial and accounting reform that seeks to reduce corruption and control public funds.
2. One of the most important requirements for the development of public accounting in accordance with IPSAS standards and the use of digital transformation
3. Train government officials and employees in the field of digital transformation and to properly understand and apply standards. By offering training courses and workshops for accountants and financial officers.
4. An assessment should be conducted to determine how the application of standards will affect the government accounting system and the impact of digital transformation. This helps in developing a gradual and effective transformation plan.
5. The new standards require improving the accounting information infrastructure and electronic reporting systems to ensure the quality and accuracy of data.
6. The study sample believes that the public accounting system in Algeria is in line with IPSAS standards
7. The study sample believes that the Algerian accounting environment is compatible with international public sector accounting standards
8. The study sample believes that the current scientific and practical qualification in Algeria complies to some extent with the IPSAS standards.

Recommendations:

- Adhere to the application of International Public Sector Accounting Standards and use digital systems to activate this
- The judicial, supervisory and internal audit bodies should be activated to ensure that standards are fully and well applied.
- Strict policies and laws must be enacted to implement international standards and complete the digitization of the public sector
- Conduct periodic monitoring to ensure that standards are effectively applied and keep abreast of any financial or legislative changes.
- Training courses should be provided to employees in the mining sector on digitization and smart systems to develop the government accounting system
- Collaborate with relevant international organizations, such as the International Government Accounting Standards Administration (IPSASB), to obtain guidance and support.

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