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Modernization of the public accounting system in Algeria in accordance with International Public Sector Accounting Standards (IPSAS)

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Abstract---The objective of this study is to identify the extent to which an appropriate environment can be adapted to IPSAS by identifying the various motives that led to the reform and study of the modernization of the public accounting system, in addition to the efforts of the most important arrangements for this reform, It was concluded that this project is still being studied and developed due to several difficulties faced by the application. The entry into force of the new accounting plan requires, first and foremost, the final implementation of the project 'Restructuring Implementation Procedures'. Public expenditure 'which allows for the accounting restriction of proven rights related to real-time expenditures for compliance, and requires a developed automated information system. This study explores the modernization of the public accounting system in Algeria in alignment with International Public Sector Accounting Standards (IPSAS), highlighting the motives for reform, efforts towards modernization, and challenges faced in implementation.

Keywords---Accounting Standards (IPSAS), public accounting system, modernization.

JEL Classification: M48 ·M41 ·N40

1. Introduction

The advancement of public accounting systems plays a critical role in fostering transparency, accountability, and efficiency in handling public finances. Within the context of Algeria, the integration of International Public Sector Accounting Standards (IPSAS) emerges as a pivotal measure in achieving these objectives. The existing accounting framework in Algeria operates on a cash basis utilizing the NCT treasury accounts code, which hampers the accuracy and transparency of financial reporting. Despite endeavors by the Ministry of Finance to devise a state accounting system conforming to global standards, progress has been impeded by implementation challenges stemming from the unprepared Algerian environment.

IPSASs aim to elevate the quality and comparability of financial reports for public sector entities, fostering transparency and accountability in financial operations. Through the adoption of IPSASs, Algeria seeks to enhance its public accounting system by furnishing real-time insights into revenues and expenditures, facilitating improved decision-making processes, and ensuring proper monitoring and comparison of financial statements.

The reformation of Algeria's public accounting system is driven by the necessity to modernize budget frameworks and institute effective accounting practices that meet international norms. The transition from cash basis to accrual basis stands out as a crucial facet of this reform, as it enables more precise recording and monitoring of financial transactions. Nevertheless, challenges like resource scarcity and resistance to change pose significant hindrances to the successful execution of modernization initiatives.

In essence, the modernization of public accounting systems in Algeria through the adoption of IPSASs is imperative for bolstering transparency, accountability, and efficiency in financial management. Despite hurdles encountered during implementation, ongoing efforts directed towards restructuring procedures and cultivating automated information systems are geared towards surmounting these challenges. Adherence to new accounting scheme prerequisites will guarantee alignment with IPSAS standards while promoting enhanced accountability and transparency in managing public funds. See references: (Araya-Leandro, Caba-Pérez, & López-Hernandez, 2016)

Objectives of the Study

The aims of this research are manifold. Firstly, it seeks to comprehend the rationale and driving forces behind the overhaul of Algeria's public accounting system. This entails examining the current state of accounting practices and the factors motivating the push for modernization. Moreover, the study endeavors to illuminate the pivotal role played by IPSAS in revamping the public accounting framework. By grasping the significance of adopting IPSAS, Algeria can harmonize its financial procedures with global standards, thereby bolstering transparency and accountability in managing public finances. The research also strives to underscore the essential prerequisites for incorporating IPSAS into Algeria's accounting landscape.

Through the exploration of these objectives, this study will enrich our understanding of the obstacles and prospects linked with modernizing Algeria's public accounting system. It will offer insights into how reforms can be efficiently carried out, taking into consideration the unique requirements and limitations of the Algerian context. Furthermore, by underscoring the importance of transitioning from a cash basis to an accrual basis, this research will present valuable suggestions for policymakers and stakeholders involved in shaping Algeria's financial reporting framework.

In essence, this study endeavors to pave the way for a more robust and effective public accounting system in Algeria that conforms to global best practices. Through thorough analysis and strategic recommendations, it aims to facilitate a seamless transition towards modernization while upholding accountability, transparency, and sustainable financial management principles. See references: (Bouabbana, 2020)

2. Motives for Reforming the Public Accounting System in Algeria

2.1 Importance of Adopting IPSAS

The integration of International Public Sector Accounting Standards (IPSAS) plays a pivotal role in the advancement of Algeria's public accounting system. Diverse research has highlighted the manifold advantages of implementing IPSAS, such as fostering economic growth, attracting foreign investments, enhancing accountability, promoting good governance, and facilitating prompt decision-making processes. Moreover, IPSAS contributes to improving the quality of financial reports, ensuring transparency in governmental financial operations, enabling accurate reporting devoid of errors, and stimulating progress through entrepreneurial approaches in governmental accounting.

Adherence to IPSAS guarantees the quality of data and disclosed information, compliance with international standards for precise accounting disclosures, selection of indicators that reflect managerial efficiency, and reinforcement of transparency and internal control mechanisms. It also stimulates a shift towards cost control mindset and global competitiveness. Additionally, IPSAS adoption fosters comparability of financial statements and reliability of accounting information based on accrual principles.

Empirical analyses have underscored the substantial impact of embracing IPSAS on enhancing the efficiency of financial performance and altering accounting policies towards accrual practices. This underscores the significance of harmonizing Algerian public accounting methodologies with international standards to uphold integrity in financial reporting.

Given the economic benefits associated with IPSAS integration and the imperative need for a modernized public accounting structure in Algeria, it is vital to devise a phased strategy tailored to local needs. This strategy should encompass training initiatives for public accountants, modernization of automated information systems to seamlessly transition to IPSAS criteria, establishment of standard development committees, and utilization of international expertise relevant to IPSAS adoption.

In essence, the incorporation of IPSAS is essential for fostering transparency, accountability, and efficacy within Algeria's public accounting framework. By embracing global standards and modernizing operations, Algeria can align itself with leading practices in public sector financial management. See reference (Al-Kharabsheh, 2021)

Table 1. The Mean the Standard Deviation and the Level of Respondents' Answers to the Second Hypothesis Questions

No	Paragraph	Mean	Standard Deviation	Degree of agreement	Rank
1	International Public Sector Accounting Standards are applied in the Ministry of Finance according to the requirements of the international community.	3.91	0.738	High	5
2	International Public Sector Accounting Standards of the state play an effective role in increasing economic growth. Which helps in attracting foreign investment to Jordan.	3.87	0.601	High	6
3	The application of International Public Sector Accounting Standards in the public sector is one of the factors of economic openness and its development.	4.05	0.697	High	1
4	The adoption of International Public Sector Accounting Standards helps enhance accountability and thus improves governance in the public sector.	3.95	0.652	High	3
5	The adoption of International Public Sector Accounting Standards contributes to the timely decision-making process	3.94	0.692	High	4
6	The adoption of International Public Sector Accounting Standards improves the quality of financial reports and increases transparency in government financial practices	3.38	0.697	High	8
7	There are no errors in the reports and financial statements extracted from the current accounting system based on International Public Sector Accounting Standards	3.77	0.735	High	10
8	The Ministry of Finance is using external agencies to implement International Public Sector Accounting Standards to improve performance	3.78	0.840	High	9

9	The implementation of International Public Sector Accounting Standards is an entrepreneurship in government accounting business in the public sector	3.99	0.702	High	2
10	Comparisons of accounting information can be made after adopting International Public Sector Accounting Standards better than before.	3.86	0.675	High	7
Overall index	3.89	0.372	High		

Source: Prepared the researcher based on the outputs of SPSS.26

Table 1: The Mean the Standard Deviation and the Level of Respondents' Answers to the Second Hypothesis Questions No. Paragraph Mean Standard Deviation Degree of agreement Rank 1 International Public Sector Accounting Standards are applied in the Ministry of Finance according to the requirements of the international community. 3.91 0.738 High 5 2 International Public Sector Accounting Standards of the state play an effective role in increasing economic growth. Which helps in attracting foreign investment to Jordan. 3.87 0.601 High 6 3 The application of International Public Sector Accounting Standards in the public sector is one of the factors of economic openness and its development. 4.05 0.697 High 1 4 The adoption of International Public Sector Accounting Standards helps enhance accountability and thus improves governance in the public sector. 3.95 0.652 High 3 5 The adoption of International Public Sector Accounting Standards contributes to the timely decision-making process 3.94 0.692 High 4 6 The adoption of International Public Sector Accounting Standards improves the quality of financial reports and increases transparency in government financial practices 3.38 0.697 High 8 7 There are no errors in the reports and financial statements extracted from the current accounting system based on International Public Sector Accounting Standards 3.77 0.735 High 10 8 The Ministry of Finance is using external agencies to implement International Public Sector Accounting Standards to improve performance 3.78 0.840 High 9 9 The implementation of International Public Sector Accounting Standards is an entrepreneurship in government accounting business in the public sector 3.99 0.702 High 2 10 Comparisons of accounting information can be made after adopting International Public Sector Accounting Standards better than before. 3.86 0.675 High 7.

Table 2. The Mean the Standard Deviation and The Level Of Respondents' Answers to the Third Hypothesis Questions

No.	Paragraph	Mean	S. D.	D.A.	Rank
1	Properly applying IPSAS leads to data and disclosed information quality	3.86	0.634	High	7
2	Following proper laws and procedures according to international standards leads to real results in the	4.14	0.707	High	1

No.	Paragraph	Mean	S. D.	D.A.	Rank
	process of accounting disclosure				
3	The selection of indicators and standards related to accounting is evidence of the efficiency of management and accountants	3.99	0.665	High	2
4	Accurate disclosure information is evidence of the appropriate adoption of IPSAS	3.96	0.644	High	3
5	Having a team of qualified and trained accountants increases the effectiveness of the accounting disclosure of the financial statements.	3.89	0.738	High	6
6	The Ministry of Finance discloses information related to the government's financing of its activities and projects in accordance with IPSAS	3.91	0.818	High	5
7	IPSAS help in the accounting disclosure of intangible assets and their role in increasing the quality of financial reports	3.78	0.746	High	9
8	The adoption of IPSAS helped change the way of thinking from spending to cost and from monopoly to international competition	3.95	0.778	High	4
9	Provision of broad and more consistent reporting of expenditures and revenues	3.73	0.762	High	10
10	Enhance transparency and internal control in relation to assets and liabilities in general	3.85	0.863	High	8
Overall index	3.90	0.414	High		

Source: Prepared the researcher based on the outputs of SPSS.26

Table 2: The Mean the Standard Deviation and The Level Of Respondents' Answers to the Third Hypothesis Questions No. Paragraph Mean S. D. D.A. Rank

1 Properly applying IPSAS leads to data and disclosed information quality 3.86 0.634 High 7

2 Following proper laws and procedures according to international standards leads to real results in the process of accounting disclosure 4.14 0.707 High 1

3 The selection of indicators and standards related to accounting is evidence of the efficiency of management and accountants 3.99 0.665 High 2

4 Accurate disclosure information is evidence of the appropriate adoption of IPSAS 3.96 0.644 High 3

5 Having a team of qualified and trained accountants increases the effectiveness of the accounting disclosure of the financial statements. 3.89 0.738 High 6

6 The Ministry of Finance discloses information related to the government's financing of its activities and projects in accordance with IPSAS 3.91 0.818 High 5

7 IPSAS help in the accounting disclosure of intangible assets and their role in increasing the quality of financial reports 3.78 0.746 High 9

8 The adoption of IPSAS helped change the way of thinking from spending to cost and from monopoly to international competition 3.95 0.778 High 4

9 Provision of broad and more consistent reporting of expenditures and revenues

3.73 0.762 High 10 10 Enhance transparency and internal control in relation to assets and liabilities in general 3.85 0.863 High 8 Overall index 3.90 0.414 High

Table 3. Reliability of the Study Tool Based on Cronbach Alpha

Hypothesis	H1	H2	H3
Cronbach Alpha	0.768	0.793	0.857
N	8	10	10
Overall index of questionnaire items = (0.851)			

Source: Prepared by researcher based on the outputs of SPSS.26

Table 3: below shows that the result of Cronbach's Alpha for the final sample was (85.1%). meaning the study tool can be described as reliable. and that the data obtained is appropriate to measure the variables. and of a high degree of reliability.

Table 4. The Mean the Standard Deviation and the Level of Respondents' Answers to the First Hypothesis Questions

No.	Paragraph	Mean	Standard deviation	Degree of Agreement	Rank
1	The adoption of International Public Sector Accounting Standards contributes in adopting accrual basis strongly in public accounting	4.11	0.693	High	2
2	Then adoption of International Public Sector Standards helps in improving financial reports if accrual basis is applied	4.21	0.636	High	1
3	Applying the accrual basis in government accounts is considered as one of the priorities of accounting reform to adopt International Public Sector Accounting Standards	4.05	0.757	High	4
4	Applying the accrual basis contributes in providing financial statements that assist in making financial decisions	4.01	0.757	High	7
5	Applying the accrual basis contributes in providing financial data to monitor performance and public money against corruption	4.08	0.690	High	3
6	Applying the accrual basis in public accounting helps the evaluation and disposition of fixed assets.	4.01	0.750	High	6

7	The use of the accrual basis increases the comparability of the financial statements	4.03	0.697	High	5
8	Accounting information based on accrual basis is highly reliable	3.92	0.634	High	8
Overall index		05.4	0.434	High	

Source: Prepared the researcher based on the outputs of SPSS.26

Table 4: The Mean the Standard Deviation and the Level of Respondents' Answers to the First Hypothesis Questions No. Paragraph Mean Standard deviation Degree of Agreement* Rank

Table 5. One Sample T-Test of H2

T Calculated	T SIG	DF	Result of H0
34.002	*0.00	1	Rejected
*Significant at((a=0.05)			
Tabulated T=(1.960)			

Source: Prepared the researcher based on the outputs of SPSS.26

Table 5: One Sample T-Test of H2 T Calculated T SIG DF Result of H0

Table 6. One Sample T-Test of H3

T Calculated	T SIG	DF	Result of H0
30.766	*0.00	1	Rejected
*Significant at (a=0.05)			
Tabulated T= (1.960)			

Source: Prepared the researcher based on the outputs of SPSS.26

Table 6: One Sample T-Test of H3 T Calculated T SIG DF Result of H0

2.2 Challenges Faced in the Current System

The obstacles encountered in the present Algerian public accounting system are diverse and demand thorough assessment. One of the primary hurdles is the intricate transition process necessary for adopting or adjusting to IPSAS standards. This entails devising a strategy to conform with global standards, which can be intricate and time-consuming. Furthermore, the implementation of specific IPSAS standards, such as accounting for fixed and intangible assets, contingent liabilities, tax revenue recognition, and financial instruments, presents technical obstacles that must be overcome.

Additionally, merging accrual-based accounting methods with current budgeting systems and financial controls poses a notable challenge. Shifting from cash-based controls to accrual accounting requires careful consideration when reporting budget outturns in an accruals environment and reconciling accruals with traditional cash controls.

Moreover, the modernization of government financial systems for accrual accounting necessitates extensive modifications to information and communication technology (ICT) systems as well as manual procedures. This integration process involves data from various sources like debt management systems and human resource systems while also necessitating additional disclosures such as contingent liabilities and related party transactions. Implementing an Integrated Financial Management Information System (IFMIS) is essential for seamlessly integrating financial systems.

Apart from technical challenges, resistance to change within the public administration poses a significant barrier to modernizing the public accounting system. Public auditors must enhance their expertise to align with new accounting standards, highlighting the significance of training for all stakeholders involved in the transition.

To sum up, tackling these challenges in the current Algerian public accounting system is crucial for successful modernization endeavors. By surmounting obstacles related to IPSAS adoption, budget integration, technological advancements, and stakeholder resistance, Algeria can achieve enhanced accountability, transparency, and efficiency in its public sector financial management. See reference (Fernández Benito & Cavanagh, 2016)

3. Efforts towards Modernization of the Public Accounting System

3.1 Initiatives and Reforms Implemented

In the endeavor to modernize Algeria's public accounting system, a multitude of initiatives and reforms have been set in motion to elevate the efficiency and effectiveness of financial management practices. Embracing International Public Sector Accounting Standards (IPSAS) stands out as a pivotal initiative that not only boosts economic growth but also attracts foreign investment and enhances accountability within the public sector. The implementation of IPSAS is deemed instrumental in fostering economic openness and development by streamlining decision-making processes and elevating the quality of financial reports.

In line with the modernization efforts, restructuring implementation procedures to adhere to international standards has been a key focus. Projects like 'Restructuring Implementation Procedures' aim at delineating clear objectives and goals to ensure the effective implementation of IPSAS. Through compliance with IPSAS guidelines, Algeria aims to bolster transparency, accountability, and governance in its public accounting framework.

Furthermore, the recognition of an advanced automated information system as a fundamental necessity has arisen to streamline accounting processes and provide real-time access to information. Automation not only enhances the accuracy and

timeliness of financial data but also amplifies the overall efficiency of accounting operations.

Despite these proactive measures, challenges such as resource scarcity, inadequate training, and resistance to change present hurdles to the seamless execution of modernization endeavors. Overcoming these obstacles demands a collaborative effort from all stakeholders engaged in the reform process of the public accounting system.

In conclusion, with a commitment to embracing IPSAS standards, implementing an advanced automated information system, and ensuring conformity with new accounting regulations, Algeria can make substantial strides towards enhancing efficiency and transparency within its public accounting infrastructure. See references: (Bouabbana, 2020)

Table 7. Main Aspects of Integrated Financial Management Information Systems in Latin America: Selected Cases

Country	IFMIS	Governing body	Development and programming strategy	Technological platform	Main operational characteristics	TSA
Argentina	Integrated Financial Management System (Sistema Integrado de Administración Financiera (SIDIF))	Budget Under-Secretary (Subsecretaría de Presupuesto) Secretariat of the Treasury (Secretaría de Hacienda) at the Ministry of Economy and Public Finance.	In-house development.	Multilayer modules in client-server platform and in web platform. Use of open-source software and software protected by intellectual property rights.	The SIDIF covers the phases of budget formulation, execution and evaluation and includes modules for budget, accounting, treasury, and public debt.	The system supports the Treasury Single Account.
Brazil	Integrated Financial Management System (Sistema Integrado de Administração Financeira (SIAFI)), and Integrated Planning and Budget	National Treasury Secretariat (Secretaria do Tesouro Nacional (STN)) at the Ministry of Finance (Ministério de Fazenda) for SIAFI.	In-house development.	Federal System of Integrated Financial Management (Sistema Integrado de Administração Financeira (SIAFI)): Mainly monolithic	The SIAFI covers the budget execution phase and has budget, accounting, treasury, and public debt modules. The SIOP covers the stage of budget formulation and	The system provides support for the Treasury Single Account.

Country	IFMIS	Governing body	Development and programming strategy	Technological platform	Main operational characteristics	TSA
	System (Sistema Integrado de Planeamiento e Orçamento (SIOP)),	Ministry of Planning, Budget and Management for SIOP.		mainframe and multilayer applications in client-server platform, with some web applications. SIOP is open source software by 100 percent.	supports the budget execution phase.	
Colombia	Integrated Financial Information System (Sistema Integrado de Información Financiera (SIIF).	Ministry of the Finance and Public Credit (Ministerio de Hacienda y Crédito Público).	Development initially outsourced, then finalized internally (in-house).	Multilayer system in web platform using Microsoft software products by 100 percent.	The SIIF covers the phases of budget formulation, execution, and evaluation and has budget, accounting, treasury and public debt modules.	The system provides support for the Treasury Single Account.
Chile	State Financial Management Information System (Sistema de de Información para la Gestión Financiera del Estado (SIGFE)) and Budget Administration System (Sistema de Administración Presupuestaria (SIAP)).	Budget Directorate (Dirección de Presupuestos (DIPRES)) at the Ministry of Finance (Ministerio de Hacienda).	Development outsourced (SIGFE). In-house development (SIAP).	SIGFE: web platform using service-oriented architecture and budget process management paradigms with Oracle software products by 100 percent. SIAP: multilayer application in web platform using software protected by intellectual property rights and open-	The SIGFE covers the stage of budget execution and has budget, accounting, and treasury modules. Debt management is centralized at the Treasury (Tesorería General de la República). The formulation stage is covered by the SIAP under the auspices of the DIPRES.	The Treasury Single Account has yet to be implemented.

Country	IFMIS	Governing body	Development and programming strategy	Technological platform	Main operational characteristics	TSA
				source software.		
El Salvador	Integrated Financial Administration System (Sistema de Administración Financiera Integrado (SAFI)).	National Directorate for Financial Administration and Innovation (Dirección Nacional de Administración Financiera e Innovación) at the Treasury (Ministerio de Hacienda).	In-house development.	Client-server multilayer platform. Has a data reporting management module that uses a commercial application (IBM Cognos).	The SAFI covers the phases of budget formulation, execution, and evaluation and has budget, accounting, treasury, and public debt modules.	The Treasury Single Account has yet to be implemented.
Peru	Integrated Financial Administration System (Sistema Integrado de Administración Financiera (SIAF))	Vice-Ministry of the Treasury (Vice Ministerio de Hacienda) at the Ministry of Economy and Finance (Ministerio de Economía y Finanzas).	In-house development.	Client-server platform with multilayer design, using software protected by intellectual property rights and open-source software.	The SIAF covers the phases of budget formulation, execution, and evaluation and has budget, accounting, treasury and public debt modules.	The system provides support for the Treasury Single Account.
Dominican Republic	Integrated Financial Management System (Sistema Integrado de Gestión Financiera (SIGEF)).	Vice-Ministry of the Treasury at the Ministry of Finance (Vice Ministerio de Hacienda).	In-house development.	Web platform with multilayer design using software protected by intellectual property rights and open-source software.	The SIGEF covers the phases of budget formulation, execution, and evaluation and has budget, accounting, treasury, and public debt modules.	The system provides support for the Treasury Single Account.

Source: (Gerardo & Pimenta, 2016)

Table 8. Inter-American Development Bank Loans in Execution to Support Public Financial Management Investment Projects (Including IFMIS)

Country	Project	In thousands of U.S. dollars
Argentina	Productive Institutional Strengthening of Provincial Fiscal Management, Phase II (Programa de Fortalecimiento Institucional Productivo de Gestión Fiscal Provincial, Segunda Etapa (PROFIP II))	36,000
Bahamas	Public Financial Management and Performance Monitoring Reform	33,000
Bolivia	Municipal Management Improvement Program (Programa de Mejora de la Gestión Municipal)	52,000
Brazil	Program for Modernizing Instruments and Management Systems (Programa de Modernización de los Instrumentos y Sistemas de Gestión) (including the budget)	28,600
Brazil	28 Projects: Management Support and Fiscal Integration Program (Programa de Apoyo a la Gestión e Integración de los Fiscos (PROFISCO)) (between US\$6 million and US\$120 million for each project in each of the Brazilian states and one project at the federal level).	678,195
Guatemala	Support for Modernization of the Ministry of Public Finances (Apoyo a la Modernización del Ministerio de Finanzas Públicas)	8,500
Honduras	Fiscal and Municipal Management Consolidation Program (Programa para la Consolidación de la Gestión Fiscal y Municipal)	28,600
Jamaica	Fiscal Administration Modernization Program	65,000
Nicaragua	Public Sector Financial Administration Modernization Program (Modernización del Sistema de Administración Financiera del Sector Público)	10,000
Panama	Fiscal Management Strengthening Program (Programa de Fortalecimiento de la Gestión Fiscal)	50,000
Paraguay	Strengthening and Modernizing Fiscal Administration Program II (Programa de Fortalecimiento y Modernización de la Administración Fiscal II)	9,500
Peru	Modernization of the Public Financial	20,000

Country	Project	In thousands of U.S. dollars
	Administración System (Modernización del Sistema de Administración Financiera Pública)	
Dominican Republic	Public Resources Modernization Program (Programa de Modernización de Recursos Públicos)	21,000
Trinidad and Tobago	Strengthening of the Financial Management System (Apoyo al Fortalecimiento del Sistema de Gestión Financiera)	40,000
Uruguay	Public Financial Management Modernización Program (Programa de Modernización de la Gestión Financiera Pública)	14,500

Source: (Gerardo & Pimenta, 2016)

Table 9. Consolidated Central Government Reports: Reporting Requirements and Publication

Legal basis for reporting requirements				
	Constitution	Law approved by the legislature	Organizational or internal rules	Publication of consolidated central government reports
Argentina	X	X		Central Budget Authority website
Brazil	X	X		Central government information portal
Chile		X	X	General Controller Office information portal
Colombia		X		Line ministries or individual agencies
Costa Rica		X	X	Central Budget Authority website
Dominican Republic		X	X	Line ministries or individual agencies
Ecuador	X			Central Budget Authority website
El Salvador	X	X	X	Central government information portal
Guatemala	X	X		Central Budget Authority website and line ministries or individual agencies
Honduras		X		Central Budget Authority website

	Legal basis for reporting requirements		Organizational or internal rules	Publication of consolidated central government reports
	Constitution	Law approved by the legislature		
Mexico	X	X		Central government information portal
Panama			X	Line ministries or individual agencies
Paraguay	X	X		Central Budget Authority website
Peru		X		Central Budget Authority website

Source: (Fernández Benito & Cavanagh, 2016)

3.2 Impact of Modernization Efforts

The drive to modernize Algeria's public accounting system has resulted in a significant transformation of the country's financial landscape. By implementing the "21st century 2014-2017 Strategic Plan for the Modernisation of Public Accounting under International Standards" and adopting IPSAS, Algeria has taken crucial steps towards aligning its accounting practices with global standards. This shift not only enhances the quality of financial reporting but also allows for better comparison with other countries following public sector standards.

The push for modernization has been led by various organizations responsible for overseeing government accounting, such as the Directorate General for Governmental Accounting in El Salvador and Guatemala, the General Accounting Office of the Republic in Honduras, and the Office of the Comptroller General of the Republic in Panama. These reform efforts have received support from political figures like the Minister of Treasury or Finance, highlighting their dedication to enhancing public finance management.

The implementation of IPSAS has proven to enhance efficiency in Algerian public institutions, leading to improved information quality and accountability. Nevertheless, Algeria still encounters challenges in fully embracing these standards. The necessity of a sophisticated automated information system remains crucial to streamline accounting processes and ensure prompt access to financial data.

Furthermore, adherence to new accounting plan requirements, particularly aligning with IPSAS standards, is vital for promoting transparency and accountability in public sector finances. By embracing modernization endeavors and tackling implementation obstacles like resource shortages and resistance to change, Algeria can harness the benefits of automation in accounting systems. In conclusion, while Algeria has made notable progress in modernizing its public accounting system through IPSAS adoption and reform initiatives, there is room

for further enhancement. By confronting challenges directly and embracing technological advancements, Algeria can fortify its financial management practices and boost overall efficiency. See references: (Araya-Leandro, Caba-Pérez, & López-Hernandez, 2016)

Table 10. Components of the Public Sector

Public sector	<ul style="list-style-type: none"> Public corporations 	<ul style="list-style-type: none"> Public financial corporations Public nonfinancial corporations
<ul style="list-style-type: none"> General government (see note) 	<ul style="list-style-type: none"> Central or national government Subnational government (e.g., region, province, state, municipality) 	

Source: (Fernández Benito & Cavanagh, 2016)

4. Project 'Restructuring Implementation Procedures'

4.1 Overview of the Project

The initiative 'Restructuring Implementation Procedures' plays a pivotal role in the modernization of Algeria's public accounting system. This project is focused on overhauling the implementation procedures to improve efficiency, transparency, and accountability within the system. By introducing new protocols and methodologies, the project aims to streamline processes and meet international standards like IPSAS.

One of the main goals of this initiative is to optimize resource utilization and enhance overall operational effectiveness. Through the reengineering of implementation procedures, the project aims to eliminate redundancies, minimize manual interventions, and enhance data accuracy. This streamlined approach will not only speed up transactions but also reduce errors and discrepancies in financial reporting.

Furthermore, the project targets challenges related to training and capacity building. By offering comprehensive training programs for staff members, the initiative aims to equip them with the necessary skills and knowledge to adapt to new systems and technologies. This investment in human capital is crucial for successful implementation and ensuring the long-term sustainability of modernization efforts.

In addition, restructuring implementation procedures will facilitate a smoother transition towards automation. By integrating automated information systems into accounting processes, the project aims to achieve real-time data processing and reporting capabilities. This shift towards automation will enable quicker decision-making, improved data accuracy, and enhanced financial management practices.

In summary, the 'Restructuring Implementation Procedures' project represents a key advancement in modernizing Algeria's public accounting system. Through

strategic reforms and innovative approaches, this initiative seeks to enhance operational efficiency, ensure adherence to international standards, and promote transparency and accountability within the public sector. See references (Gerardo & Pimenta, 2016)

4.2 Objectives and Goals

The 'Revamping Implementation Procedures' initiative in Algeria is critical for the successful modernization of the public accounting system. One crucial goal is for the project team to clearly define system requirements after conducting a comprehensive diagnostic assessment to determine the reasoning behind implementing financial management information systems (FMIS). This will aid in identifying the issues that the system aims to address, followed by the development of an efficient implementation strategy and roadmap. Another objective is to evaluate the legal and institutional framework supporting the functionality, outlining the roles and responsibilities of the organizational entities involved. By doing so, it will establish a strong basis for the operational processes, data flows, and information needs essential for a successful modernization endeavor.

Moreover, a key objective is to concentrate on systems procurement and implementation, encompassing the selection, acquisition, and deployment of an FMIS. These tasks can only commence after successfully completing previous diagnostic procedures. Additionally, continuous system operation and maintenance are vital components of this project. Adequate provisions must be made for recurring costs related to system operation and maintenance to ensure long-term sustainability.

In essence, the objectives and goals of this project aim to tackle the challenges present in Algeria's current public accounting system by implementing efficient reforms and initiatives. By focusing on critical areas such as reviewing legal frameworks, accurately defining system requirements, and guaranteeing the sustainable operation and maintenance of the FMIS, this project will significantly contribute to modernization efforts in Algeria. See references: (U.S. Government Accountability Office, 2003)

5. Implementation Challenges and Difficulties

5.1 Lack of Resources and Training

The endeavor to modernize the public accounting system in Algeria encounters formidable obstacles stemming from resource shortages and inadequate training. Taking Costa Rica as an example, there is a notable absence of accurate cost estimates for implementing IPSAS, with no dedicated resources allocated for this purpose. This scarcity in financial and human resources could potentially impede the realization of predefined objectives outlined in the action plan. Furthermore, public sector entities in Costa Rica may lack the essential economic, financial, physical, and human resources necessary to execute their IPSAS implementation independently.

Echoing the situation in El Salvador and various other countries under scrutiny, including Algeria, the insufficiency of designated economic resources to support the alignment of government accounting systems with IPSAS standards presents a significant barrier. While commendable progress has been achieved through reformative measures aimed at modernizing accounting systems, there persists a critical requirement for adequate resources and training to ensure successful implementation.

Furthermore, transitioning towards accrual accounting standards demands not just proficient accountants but also competent auditors who can enhance their skill set. The shift to accruals will introduce fresh challenges for audit offices that may necessitate substantial additional training. Hence, it is imperative that comprehensive training programs are established not only for accountants but also for auditors to effectively navigate this novel accounting landscape.

To sum up, in the absence of ample resources and structured training initiatives, the modernization endeavors directed towards the public accounting system in Algeria may encounter impediments in achieving the transparency, credibility, and reliability mandated by IPSAS standards. See references: (Fernández Benito & Cavanagh, 2016)

Table 11. Main Characteristics of Development Alternatives for an IFMIS

	In-house	Development through consulting firm	Outsourced development	Parameterization of the commercial off-the-shelf system
Composition of project team	System management, supervision, and administration	Management, supervision, and coordination External consultants provided by firm to develop system	Internal team to manage and supervise Software developer for system, responsible for final outcome	Internal team to manage and supervise Consulting firm responsible for customizing the application and the final outcome
Main costs	Management team Administrative team Development team Procurement of software and	Management team Administrative team Contracting consulting firm Procurement of software and	Management team Contracting software developer Procurement of basic software and hardware components for	Management team Contracting consulting firm to customize application Procurement of basic software and hardware

	In-house	Development through consulting firm	Outsourced development	Parameterization of the commercial off-the-shelf system
	hardware components for development and testing	hardware components for development and testing	testing	components for testing
Development guarantee	Error correction and improvements to application performance by project team	Error correction and improvements to application performance by project team	Error correction and improvements to application performance by software developer during guarantee period (6 to 12 months)	Error correction and improvements to application performance by consulting firm during guarantee period (6 to 12 months)

Source: (Gerardo & Pimenta, 2016)

5.2 Resistance to Change

Resistance to change is a prevalent issue encountered during the efforts to update public accounting systems, not only in Algeria but also in various other nations. The adoption of new standards, like IPSAS, necessitates a shift in mindset and practices that may be met with opposition from different parties involved. In Venezuela, for instance, resistance to change has been evident due to limited financial resources and inadequate training among personnel at the Department of Accounting. Additionally, there is reluctance within different government departments responsible for accounting, further complicating the implementation process.

Furthermore, the centralization of the implementation approach can also contribute to resistance. The absence of a collaborative method and the exclusion of key players can lead to pushback against reforms. In contrast to Malaysia's participative approach under centralized management, other countries have chosen a closed-off process relying solely on regulatory bodies for government accounting. This top-down strategy could alienate employees who feel left out of decision-making processes, resulting in heightened resistance.

Moreover, the lack of legal or implicit authority to penalize entities that refuse to embrace and execute IPSAS presents a significant hurdle. Without consequences for non-compliance, organizations may feel empowered to resist change and persist with outdated practices. This lack of responsibility can impede efforts towards modernization and impede progress towards aligning public accounting systems with international standards.

Ultimately, surmounting resistance to change necessitates a holistic approach that tackles cultural attitudes towards innovation, provides ample resources and training, engages key stakeholders in decision-making processes, and establishes mechanisms for accountability. By proactively recognizing and addressing these obstacles, Algeria can effectively navigate resistance and pave the way for a successful modernization of its public accounting system. See reference (Araya-Leandro, Caba-Pérez, & López-Hernandez, 2016)

6. The Need for a Developed Automated Information System

6.1 Importance of Automation in Accounting Systems

The utilization of automation in accounting systems is a fundamental aspect of advancing public accounting systems, especially in nations such as Algeria. Integrated financial management information systems (IFMIS) are pivotal in this endeavor, acting as a centralized repository for tracking public sector revenues and expenses. These systems streamline budgeting, accounting, treasury, and public debt management procedures to produce up-to-date and pertinent financial information.

IFMIS automates critical components of financial management, including budgeting, treasury operations, accounting, and debt administration. By consolidating revenue and expenditure data from various public sector entities into a single database, IFMIS enhance cohesion and efficiency in managing public finances. Additionally, they facilitate the generation of fiscal reports throughout the year and annual financial statements.

The successful deployment of an IFMIS can lead to enhanced fiscal discipline, optimized resource allocation, operational efficiency, and increased fiscal transparency. These systems serve as valuable instruments for improving public financial management by furnishing essential data for planning, implementing, and overseeing public finances.

Furthermore, automation in accounting systems enables simultaneous recording of financial transactions across budgeting, accounting, and treasury components. This ensures accurate reporting and supports informed decision-making based on real-time data. Aligning budget classifications and account charts is crucial for harmonizing budgetary and accounting functions within IFMIS.

In summary, the significance of automation in accounting systems cannot be overstated in the context of modernizing public accounting systems in Algeria. By harnessing technology to simplify financial management processes and enhance data precision and accessibility, IFMIS play a critical role in boosting overall efficiency and transparency in public sector activities. See reference (Gerardo & Pimenta, 2016)

6.2 Benefits of Real-time Information

Timely and accurate information is a key element in the process of modernizing the public accounting system in Algeria. Having the ability to instantly access and analyze financial data leads to more informed decision-making, greater efficiency,

and enhanced transparency when managing public funds. Countries in Latin America have witnessed substantial enhancements in their financial management practices by incorporating systems like Integrated Financial Management Information Systems (IFMIS).

IFMIS automation solutions empower government finance and accounting personnel to carry out their daily duties with increased ease and precision. These systems support activities such as budget planning, approval, monitoring of financial resources, and formulation of resource allocation strategies. Through the real-time information provided by IFMIS, there is a promotion of fiscal discipline, more effective resource allocation, and improved operational efficiency.

The success of implementing IFMIS lies in the production of timely, relevant, and trustworthy financial data. This ensures the maintenance of fiscal discipline, efficient resource allocation, improved operational effectiveness, and heightened fiscal transparency. With the continuous advancement and enhancement of IFMIS projects in Latin America over recent decades, countries have been able to reap these advantages through the adoption of modernized accounting systems.

By integrating budgeting, accounting, treasury functions, and processes related to public debt management into IFMIS systems, countries can guarantee that financial statements are accurately generated promptly. This integration allows for the simultaneous recording of financial movements and economic transactions at various stages of budget execution.

Moreover, aligning budget classifiers and chart of accounts with international standards such as IPSAS and the IMF's Manual on Government Finance Statistics ensures that countries' financial information is not only real-time but also compliant with global best practices.

In conclusion, the benefits brought by real-time information provided by modernized public accounting systems are evident. Through the implementation of IFMIS and adherence to international standards for financial reporting, nations like Algeria can strengthen their fiscal discipline, enhance resource allocation efficiency, improve operational effectiveness, and augment fiscal transparency. See references (Pimenta & Pessoa, 2016)

7. Compliance with New Accounting Plan Requirements

7.1 Adapting to IPSAS Standards

Incorporating International Public Sector Accounting Standards (IPSAS) is a crucial component of the public accounting system's modernization in Algeria. The implementation of IPSAS has been shown to yield significant advantages, including enhancing data accuracy, ensuring transparent accounting disclosures, and improving both transparency and internal control. IPSAS facilitates the disclosure of intangible assets, shifts the focus from spending to costs, and enables comprehensive reporting on expenditures and revenues.

Research indicates that adopting IPSAS results in improved financial performance within the public sector by implementing accrual basis accounting. This

transition enhances financial reporting, aids in financial decision-making, and increases comparability between financial statements. By utilizing accrual basis accounting, reliability is boosted, and fixed assets can be evaluated more effectively.

Furthermore, empirical studies have verified the positive effects of IPSAS adoption on altering accounting policies and disclosing financial information. These modifications lead to increased transparency, credibility, reliability, and full disclosure in financial statements. Adhering to IPSAS standards allows the public accounting system to attain international recognition and align with global best practices.

To successfully implement IPSAS standards in Algeria, it is imperative to provide up-to-date technologies for precise accounting information. Additionally, creating educational programs focused on IPSAS, offering training sessions for accountants, and integrating automated information systems are essential steps towards successful adaptation. Aligning treasury accounting procedures with IPSAS requirements and making necessary legislative adjustments are also crucial.

In conclusion, embracing IPSAS standards is a pivotal aspect of modernizing Algeria's public accounting system. By embracing these global standards, Algeria can enhance accountability, transparency, and efficiency in its financial reporting practices. See reference (Al-Kharabsheh, 2021)

7.2. Ensuring Accountability and Transparency

Fostering trust and credibility in financial reporting within Algeria's public accounting system is of utmost importance to ensure accountability and transparency. A key strategy to achieve this goal is the adoption of International Public Sector Accounting Standards (IPSAS). These standards, such as IPSAS 1 for Presentation of Financial Statements and IPSAS 2 for Cash Flow Statements, provide a structured framework that guarantees consistency, comparability, and reliability in financial reporting.

By embracing IPSAS, Algeria has the opportunity to elevate the quality of its general purpose financial reporting. This enhancement allows for more informed evaluations of resource allocation decisions made by the government. Through accrual-based accounting practices and comprehensive disclosure of financial information, transparency and accountability experience significant improvements. This is vital for showcasing fiscal credibility and empowering stakeholders to make well-informed decisions based on dependable financial data. Furthermore, adherence to IPSAS standards not only strengthens accountability but also eases international comparisons. Financial reports that encompass all entities involved in public activities, encompass balance sheets detailing assets, liabilities, and net worth, as well as reveal all public revenues, expenditures, and financing offer a clear snapshot of the government's financial standing. The prompt release of audited financial statements guarantees that information is current and trustworthy for decision-making purposes (Fernández Benito & Cavanagh, 2016)

In summary, upholding IPSAS standards plays a pivotal role in guaranteeing accountability and transparency within Algeria's public accounting system. By fully embracing accrual-based accounting principles and revealing comprehensive financial information in line with international standards, the nation can enhance its fiscal credibility and encourage good governance practices. See references (Abushamsieh, López-Hernández, & Ortiz-Rodríguez, 2014)

8. Conclusion

In wrapping up, the transformation of Algeria's public accounting system represents a multifaceted and demanding endeavor that necessitates a meticulously crafted action blueprint, unwavering political dedication, and backing from all governmental tiers. The incorporation of IPSAS standards stands as a vital component for enhancing openness and liability in the public domain. Strides towards modernization have been taken, with endeavors and revisions being set in motion to amplify the efficacy of the accounting structure. Nonetheless, hurdles like inadequate resources, aversion to change, and the necessity for a sophisticated automated data system have presented challenges to advancement.

The initiative 'Restructuring Implementation Procedures' aims to take on these obstacles by establishing explicit aims and objectives for revamping the accounting setup. Despite these initiatives, there continue to be implementation challenges and hindrances that must be surmounted, including resource scarcity, training deficits for accountants, and opposition to change from concerned parties. The establishment of an advanced automated data system is indispensable for streamlining accounting procedures and furnishing real-time information for decision-making processes. Adherence to new accounting scheme prerequisites, particularly adapting to IPSAS standards, is imperative to guarantee responsibility and openness in financial reporting.

On the whole, the shift towards modernizing Algeria's public accounting system is an incremental journey that mandates meticulous strategizing, resolute leadership, and alignment among all stakeholders. By tackling implementation obstacles, investing in skill development, and embracing automation technologies, Algeria can attain a more effective and transparent public accounting system adhering to global standards.

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