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Tax Digitalization: The Driving Force of Digital Transformation in Algeria's Financial Administration

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Abstract:

This study aims to introduce the general framework for digitizing tax administration towards digital transformation and present the various advantages of digitizing tax collection , as well as addressing the procedures and steps for digitizing tax administration in Algeria , this research relied on the descriptive method and the analytical method .

Among the results of the research, Algeria is seeking to digitize public administrations according to the Electronic Algeria plan , including the tax administration , it adopted tax information systems to digitize the tax system and create electronic platforms to facilitate tax declaration , collection , and control processes .

Keywords: digitization, digital transformation, digitization of tax administration, tax collection, NIF.

Jel Classification Codes: XN1, XN2

Introduction:

The tax system is one of the most important sources of public revenue that most countries rely on to achieve their political, financial, and economic objectives, particularly developing countries, in order to accelerate development.

Algeria, like other nations, places great importance on its tax system as it serves as the cornerstone of its economic growth. Therefore, the government is working to modernize it to keep pace with the latest technological advancements, aiming to enhance its efficiency and preserve this vital financial resource. This is being

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achieved through the adoption of modern technical means to streamline administrative processes—both for tax authorities and taxpayers. The digitization of tax administration is part of Algeria’s broader e-government strategy, which seeks to establish the foundational infrastructure for digital transformation to leverage its numerous benefits, such as cost reduction, effort optimization, and time savings.

This leads us to the central research question:

What does the digitization process entail, and what are the steps for digitizing tax administration in Algeria?

What is the structure of Algeria’s tax system?

From this main research question, several sub-questions arise:

What are the advantages of digitizing tax administration?

What are the steps involved in digitizing tax administration?

What measures has Algeria taken to digitize its tax administration?

Significance of the Study:

This research holds particular importance as it addresses one of the most critical and sensitive topics concerning public finance in Algeria. Taxes represent a primary source of government revenue, and their integration into the digitization plan for public administrations aims to enhance efficiency and align with current technological advancements.

Research Objectives:

Through this study, we seek to achieve the following key objectives:

- To define the concept of digitization.
- To present the framework of tax administration digitization.
- To examine the key measures implemented for digitizing tax administration in Algeria.
- To highlight the main challenges facing the digitization of Algeria's tax system.

Methodology:

To accomplish these objectives and address the central research problem, the study adopts both descriptive and analytical methodologies.

Research Structure:

This study has been organized into three main sections. The first section examines the concept of digitization, the second section addresses the general framework of tax administration digitization, and the third section focuses on the digitization of tax administration in Algeria.

1. The Concept of Digitization:

The rapid developments in information and communication technologies have brought significant changes to administration by introducing modern technologies into administrative work, transforming it from traditional to electronic operations. Digitization enables the rapid and highly accurate provision of information and represents the first step toward digital transformation.

1.1 Definition of Digital Transformation:

Digital transformation is defined as the process of using technology, computers, and the internet to create more efficient and effective economic value. More broadly, it refers to the changes brought about by modern technology in general regarding how work is conducted, how interactions occur, and how wealth is generated within this system (Kadri, 2023, p. 741).

Digital transformation is also defined as the process by which institutions transition from a traditional business model to another model based on integrating digital technology into the business world. This involves converting vital and essential services related to serving individuals, institutions, and various transactions from their traditional form to a smart electronic form (Chaouchi and Khelouf, 2023, p. 19).

From these definitions, digital transformation can be understood as a radical shift in business models built on digital technologies. It is important to note that this new model can only be achieved after the digitization process, which is the first and fundamental step that enables the adoption of various modern digital technologies and applications.

2.1 Definition of Digitization:

Digitization is defined as an integrated system based on information and communication technologies (ICT) that transforms manual administrative work into digital administrative processes. It represents an information-age strategy

aimed at delivering better services to citizens, institutions, and customers while optimally utilizing available information resources. This is achieved by deploying physical, human, and intangible resources within a modern electronic framework that maximizes time and effort efficiency (Denden, 2023, p. 58).

Digitization constitutes the transition from a paper-based to an electronic environment, where all administrative interactions between citizens, economic operators, public authorities, and government agencies become digital. Essentially, digitization enables citizens to complete administrative or institutional services remotely through electronic channels and obtain desired outcomes—from initial request to final response (Belkaibat, 2023, p. 36).

From these definitions, digitization can be summarized as the process of converting data and documents from traditional paper formats into digital forms using modern technologies.

3.1 Objectives of Digitization:

Digitization serves multiple key objectives, including:

- **Document management:** Enabling file review and content access instead of physical storage, and facilitating document editing rather than rewriting.
- **Digital correspondence:** Shifting entirely to email communications for both outgoing and incoming mail.
- **Process efficiency:** Reducing processing time and accelerating transactions through real-time electronic interactions without delays.
- **Administrative modernization:** Enhancing public service delivery through advanced technical mechanisms in public administration.
- **Transparency:** Promoting administrative transparency by making information accessible to clients and citizens (Boudiaf, 2022, p. 395).
- **Enhanced financial services:** Delivering superior financial services to citizens, which requires developing a skilled workforce capable of leveraging modern technologies, particularly in competitive environments.
- **Data-driven decision making:** Focusing on information utilization, analysis, and evidence-based problem-solving.
- **Digital transformation optimization:** Eliminating service delays by fully leveraging digital ecosystems to meet client needs promptly.
- **User convenience:** Reducing burdens on users by minimizing effort, wait times, and frustration through 24/7 automated services and high-efficiency processing.
- **Providing simplified and accessible services:** that accommodate most age groups and competency levels for financial transactions.

- **Understanding user needs** to deliver high-quality services (Al-Danoun, 2022, p. 561).

4.1 Characteristics of Digitization:

Digitization possesses several key features (Belkaibat, 2023, p. 37):

- **Paperless processes:** Enables uninterrupted workflow, particularly during exceptional crises like pandemics, natural disasters, or wars.
- **Location-independent operations:** Allows remote administration without physical presence requirements.
- **Time-flexible services:** Operates beyond standard working hours/days, enabling 24/7 citizen service responsiveness.
- **Anti-corruption mechanism:** Eliminates administrative corruption and nepotism through systematic transparency.
- **Rapid intervention capability:** Ensures efficient and timely service delivery.
- **Authenticity and reliability:** Implemented through programs guaranteeing operational transparency.
- **Data accuracy:** With ensured confidentiality and privacy protections.

5.1 Digitization Requirements:

Successful digitization requires coordinated efforts across multiple domains:

1. Legal Requirements:

- Comprehensive legislation establishing necessary operational frameworks.

2. Organizational/Administrative Requirements:

- Structural modifications to government agencies to:
 - Simplify procedures
 - Enhance operational flexibility
 - Improve institutional effectiveness

3. Technical Requirements:

- **Infrastructure:**
 - Robust telecommunications networks
 - High-performance internet connectivity
 - Effective information systems for data aggregation/quality control

- **Human**
 - Qualified ICT professionals
 - Cross-sector digital competency development
- **Software/Hardware:**
 - Specialized digital equipment
 - Advanced software tools with trained operators (Hamidouch & Bouzida, 2020, p. 47)

2. The General Framework for Digitizing Tax Administration

Tax administration is one of the most important sources of public revenue due to its critical role in financing national development plans. Therefore, digitizing tax administration is a top priority, as it represents one of the state's most significant administrative projects.

2.1 Definition of Tax Administration

Tax administration refers to the technical body vested with legal authority to implement tax legislation. It serves as the intermediary between taxpayers and the tax system, applying various procedures and regulations while ensuring taxpayer awareness (Sali & Gashi, 2021, p. 33). The tax administration is responsible for the following key tasks:

- **Enhancing taxpayer services:** Ensuring improved assistance to taxpayers by informing them of their rights and obligations.
- **Disseminating tax information:** Providing taxpayers with access to reports, circulars, and practical guides.
- **Enforcing tax legislation:** Applying tax laws while offering clarifications and interpretations to taxpayers regarding regulatory decisions.
- **Revenue collection:** Recovering tax debts, penalties, and late-payment fines for remittance to the treasury.
- **Human resource development:** Training and recruiting personnel in accordance with approved procedures.
- **Combating tax evasion:** Implementing tax audit mechanisms and fiscal monitoring systems.

2.2 Definition of Digitalization in Tax Administration

Digitalization in tax administration refers to a modern technological approach aimed at providing high-quality tax services to taxpayers while efficiently implementing tax collection procedures. The key advantage of digitalizing tax administration lies in delivering services through digital platforms. It represents a

contemporary government technology designed to meet the needs of both tax authorities and taxpayers. Its objectives include improving tax collection, combating tax evasion, streamlining administrative procedures for tax officials, and offering taxpayers high-quality services tailored to their needs (Slimani & Gara Malak, 2023, p. 364).

2.3 Definition of Electronic Tax Payment

Electronic tax payment refers to the fulfillment of tax obligations by taxpayers to the General Tax Directorate through digital means, including electronic commercial papers, e-money, credit cards, or any other internet-based payment method (Mezouz, 2022, p. 531).

2.4 Types of Electronic Tax Collection

There are two types of electronic tax collection (Mezouz, 2022, p. 531):

1. Partial Electronic Collection:

- In this method, tax collection occurs through installments facilitated by a third-party intermediary (e.g., banks) acting between the taxpayer and the tax administration to complete tax payments.

2. Full Electronic Collection:

- Here, taxpayers pay their taxes directly to the tax administration via the internet or authorize their bank to process the payment directly. This method enhances tax collection efficiency, making it faster, more accurate, and less costly.

5.2 Advantages of Digitalizing Tax Collection

Digitalizing tax collection offers numerous benefits, which is why most Arab countries are striving to implement it—primarily because it increases tax revenues. Below are the key advantages of adopting digital tax collection (Jenai & Boumessad Samia, 2023, p. 52):

1. Expanding the Tax Base and Maximizing Tax Revenue:

Digital tax collection contributes to obtaining additional information, enabling the creation of an expanded database that helps assess tax compliance levels. This ensures steady tax revenue flow and increases collection rates.

2. Improving Tax Collection Efficiency:

Digitizing tax procedures—shifting from traditional to electronic

methods—reduces time and effort while simplifying processes. This also minimizes tax disputes due to streamlined and transparent procedures.

3. **Enhancing Tax Compliance and Reducing Tax Evasion:** Digitalization increases transparency and provides additional data to broaden the tax base, helping combat tax evasion. It encourages voluntary compliance while allowing authorities to monitor non-compliant taxpayers and take legal action when necessary.
4. **Integrating the Informal Sector into the Formal Economy:** The informal sector includes unlicensed freelance workers and unregistered businesses operating outside legal frameworks. Tax authorities can register them in the tax system, enforcing fiscal laws and integrating them into the formal economy. Digital collection via bank accounts and cards ensures compliance. Even unregistered importers and businesses can be brought into the formal economy through digital tax collection on due payments, including import and real estate transactions.

3. Digitalization of Tax Administration in Algeria: Algeria's tax system has undergone several reforms to enhance efficiency and fairness by adopting modern systems and simplified procedures.

3.1 Structure of Algeria's Tax System

The Algerian tax structure has seen multiple reforms to align with international standards, particularly after recent fiscal policy changes (Boukra, 2023, p. 331):

3.1.1 Directorate of Large Enterprises

Established under Article 32 of the 2002 Finance Law, this directorate is part of a broader program to modernize tax administration, both organizationally and operationally. It builds on the 1992 tax reform, which introduced internationally aligned taxes (IRG, VAT, IBS). Its objectives include:

- Unifying tax services and records
- Simplifying declaration and payment procedures (e.g., introducing the **G50 tax declaration**)

Since its public launch on **January 2, 2006**, the Directorate of Large Enterprises manages tax files for:

- Algerian companies subject to corporate tax with annual revenues exceeding **100 million DZD**
- Petroleum companies

- Foreign companies without a professional establishment in Algeria

2.1.3 Tax Centers

Seven tax centers were established to provide a unified tax collection service for medium-sized enterprises. These centers represent a new operational division under the General Tax Directorate, exclusively handling tax files and collecting dues from mid-sized taxpayers. The key objectives of tax centers:

- Develop a new partnership with taxpayers based on **accessibility, responsiveness, and efficient processing** of requests.
- Serve as the **sole tax liaison** for taxpayers, managing their files comprehensively.

In late 2011, the General Tax Directorate operationalized six tax centers in:

- Mostaganem
- Sidi Bel Abbès
- Mascara
- Guelma
- Oum El Bouaghi
- Souk Ahras

3.1.3 Local Tax Centers

The launch of local tax centers marked the final phase of modernizing Algeria's tax administration structures and procedures, a program initiated in 2006. The functions of local tax centers:

- Exclusively manage tax files and collect dues, particularly from taxpayers under the **flat-rate tax system**.
- Replace previous structures (inspectors and tax offices) to **improve service quality** through simplification, coordination, and digitization.

Like the tax centers, local tax centers act as the **sole tax authority** for taxpayers, providing a **single specialized structure** to handle all fiscal obligations.

2.3 Digitalization Measures in Algeria's Tax Administration

To deliver high-quality tax services aligned with digital transformation, Algeria's tax administration has integrated **ICT (Information and Communication Technology)** into its operations. Key digitalization measures include (Slimani & Gara Malak, 2023, p. 364):

1.2.3 Development of a Dedicated Tax Administration Website

The advancement of information and communication technologies has enabled the tax administration to adopt digital solutions, including the creation of an official website (www.mfdgi.gov.dz) for delivering tax services. This platform allows taxpayers to access all necessary information to fulfill their fiscal obligations, such as:

- **Tax and financial laws**
- **Practical guides**
- **Official circulars and tax texts**

Additionally, the tax administration uses this website to:

- **Disclose taxpayer-specific information**
- **Notify users of the latest regulatory changes**

2.2.3 Introduction of the Digital Tax Identification Number (NIF)

The tax administration has established an online platform for obtaining the **Tax Identification Number (NIF)** digitally. This system also enables verification of submitted information, ensuring **credibility and transparency** in interactions between the administration and taxpayers.

3.2.3 Electronic Tax Declaration

To simplify compliance, the tax administration launched the **"Djibaitek" portal**, allowing taxpayers to:

- **File tax declarations remotely**
- **Pay owed taxes online**
- **Reduce time and effort in fulfilling obligations**

4.2.3 Remote Bank Localization

Following the digitization of tax declarations, the **Djibaitek portal** was integrated with **bank localization services**. Enrolled taxpayers can:

- **Request bank localization directly through the portal**
- **Make electronic tax payments seamlessly**

5.2.3 Digital Tax Auditing

To align with the shift toward a fully digital tax administration, the law now permits **electronic accounting audits**. Tax authorities can:

- **Review digitally submitted records** (replacing paper-based audits)
- **Verify the accuracy of declarations**
- **Ensure compliance with digital administration standards**

6.2.3 The New "Moussahamatik" E-Portal

On **July 19, 2021**, an agreement was signed at the Ministry of Finance between:

- **The General Tax Directorate**
- **The CEO of Banque Extérieure d'Algérie (BEA)**

This partnership established an **electronic payment acceptance system (CIB)** to further digitize tax transactions (Boukra, 2023, p. 337).

3.3 Objectives of the "Djibaitek" and "Moussahamatik" Platforms

The General Tax Directorate launched the "**Djibaitek**" and "**Moussahamatik**" platforms to achieve the following goals (Darbal & Si Mohammed, 2023, p. 707):

For the Tax Administration:

- **Streamline tax administration processes** by eliminating time-consuming paper-based procedures.
- **Accelerate information exchange** between different tax departments, improving analytical and forecasting outcomes.
- **Enable timely and accurate decision-making** based on real-time data.

For Taxpayers:

These platforms provide taxpayers with the following advantages:

- **Remote transactions** with the General Tax Directorate, eliminating the need for in-person visits to submit tax declarations.
- **24/7 access** to tax administration services.
- **Updated tax calendar notifications** with clear deadlines for obligations.

- **Access to submitted declarations** for review and verification.
- **Online payment** of taxes and fees.
- **View total tax liabilities** in real time.
- **Request tax certificates.**
- **File appeals** electronically.
- **Apply for tax exemptions or incentives.**

4.3 Future Prospects for Digitalizing Tax Administration in Algeria

Modernizing Algeria's tax administration requires creating an environment conducive to digital transformation. Success depends on coordinated efforts across **political, economic, social, cultural, and technological** dimensions. Key prerequisites include (Raki & Amari Samir, 2020, p. 31):

1. **Essential Electronic Infrastructure:**

Computers, software, mobile devices, and secure networks to ensure seamless connectivity.

2. **Promoting Digital Literacy:**

Raising awareness among taxpayers about using e-tax services effectively.

3. **Legal Flexibility & Credibility:**

Adapting laws and regulations to facilitate digital tax administration while ensuring trust.

4. **Robust IT Infrastructure:**

Modern data and telecommunications networks (wired/wireless) for reliable communication between the administration and taxpayers.

5. **Cybersecurity & Data Protection:**

Implementing strong safeguards to protect taxpayer confidentiality.

6. **International Collaboration:**

Exchanging best practices and software solutions with other countries to leverage global expertise.

5. Analysis of Findings

Through this research paper, we have derived the following key findings:

- **Digitization of tax administration has provided multiple benefits,** including reduced administrative costs (e.g., savings on paper and

stationery) by transitioning to electronic management. It has also **improved processing speed** compared to traditional methods.

- **Reduced workforce and salary expenses** due to automation and reliance on computer systems and software.
- **Lower effort and costs for taxpayers**, as remote digital declaration and payment eliminate travel requirements, saving time and transportation expenses.
- **Enhanced tax auditing and monitoring**, reducing errors and increasing taxpayer trust in the system.
- **Algeria's tax digitization followed a structured and integrated approach**, ensuring positive outcomes.

Conclusion

The digitization of public administration is a crucial step in Algeria's government strategy to transition into an **e-government** framework. Given the inevitability of technological advancement, the tax administration—like other public sectors—has undergone reforms, restructuring, and digitization to **improve efficiency** and **simplify processes** for taxpayers. This program included the establishment of new directorates, centers, and digital platforms to optimize tax administration.

Recommendations

Based on the findings, we propose the following recommendations:

1. Enhancing Transparency

- Tax procedures should be **clear and understandable** for taxpayers.
- Digitization should ensure **fairness** by applying laws uniformly without favoritism.

2. Adopting Advanced Communication Technologies

- Strengthen digital infrastructure to **improve service quality**.
- Eliminate bureaucratic practices, **combat corruption**, and reduce tax evasion.

3. Tax Awareness Campaigns

- Conduct **ongoing educational programs** via media and social platforms to **build taxpayer trust and compliance**.

4. Encouraging Digital Platform Usage

-Incentivize taxpayers to use **e-filing and e-payment systems** to save time and reduce crowding during tax declaration periods.

5. Digitization as the Foundation for Digital Transformation

-Digitization is the **first essential step** toward a successful digital transition, ensuring Algeria keeps pace with global advancements.

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