The impact of digitizing tax administration in Algeria on tax Evasion

اثر رقمنة الادارة الجبائية في الجزائر على التهرب الضريبي

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Received (2025-11-26) Accepted (2025-12-20)

Abstract: This research addresses the impact of digitizing tax administration in Algeria on reducing tax evasion, by analyzing the adopted digital transformations and their effects on processing accuracy and the flow of tax information. The study relied on a descriptive-analytical approach to monitor the effectiveness of digital platforms and systems in enhancing transparency and strengthening control mechanisms. It was found that digitization clearly contributed to improving taxpayer tracking, reducing administrative errors, and facilitating tax procedures, which positively reflected on lowering evasion levels. Nevertheless, several challenges remain, particularly those related to technical readiness, lack of training, and weak full integration of platforms within various tax structures.
Keywords: Digitization;TaxAdministration;TaxEvasion.
JEL Classification code: H26, H83

ملخص : تناول هذا البحث أثر رقمنة الإدارة الجبائية في الجزائر على الحد من التهرب الضريبي، من خلال تحليل التحولات الرقمية المعتمدة وآثارها على دقة المعالجة وتدفق المعلومات الجبائية. واعتمدت الدراسة منهج وصفي تحليلي لرصد مدى فعالية المنصات والأنظمة الرقمية في تعزيز الشفافية وتقوية آليات الرقابة. وتبين أن الرقمنة أسهمت بوضوح في تحسين تتبع المكلفين، وتقليص الأخطاء الإدارية، وتسهيل الإجراءات الجبائية، الأمر الذي انعكس إيجابا على خفض مستويات التهرب. ورغم ذلك، ما تزال عدة تحديات قائمة، خصوصا تلك المتعلقة بالجاهزية التقنية، ونقص التكوين، وضعف الاندماج الكامل للمنصات داخل الهياكل الجبائية المختلفة.
الكلمات المفتاحية :الرقمنة ؛الإدارة الجبائية ؛ التهرب الضريبي .
تصنيف Jel :H26 , H83

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1- Introduction:

The tax administration in Algeria is witnessing a clear shift towards the use of digital tools in managing its transactions and exchanging information with taxpayers. This approach aligns with developments in tax systems worldwide, where reliance on technology has become part of daily operational mechanisms. Conversely, tax evasion remains one of the phenomena associated with the tax system, due to practices aimed at avoiding compliance with legal obligations. Here, digitalization intersects with this phenomenon, considering both as key elements for understanding the changes currently occurring in the tax administration. The administration aims to improve collection methods and enhance transparency in order to reduce the scope of tax evasion. However, the extent to which this digitalization can bring about actual changes in taxpayer behavior and improve the quality of tax oversight remains a matter of debate. Hence, the following issue arises: To what extent has tax digitalization in Algeria contributed to reducing tax evasion? Based on this main issue, we raise the following questions:

- To what extent does tax digitalization affect the improvement of transparency in tax transaction How have digital tax systems affected the efficiency of tax collection and monitoring mechanisms?

- To what extent has tax digitization contributed to simplifying procedures and reducing direct interaction between the taxpayer and the administration? In order to answer the previous sub-questions, we propose the following hypotheses:

- Tax digitization in Algeria contributes to raising the level of transparency in tax transactions by reducing information gaps, thereby limiting opportunities for tax evasion.
- The adoption of digital tax platforms has enhanced the effectiveness of tax collection and facilitated monitoring processes, which reduces behaviors associated with tax evasion.

- Simplifying tax procedures through digitization helps reduce direct dealings between the taxpayer and the administration, thereby decreasing opportunities for fraud, manipulation, and tax evasion.s and the flow of information?

2- **The Theoretical Framework for Digitalizing Tax Administration and Tax Evasion :**The theoretical framework for digitalizing tax administration and tax evasion forms the scientific basis for understanding the relationship between digital transformation and tax compliance. It explains how modern technologies contribute to enhancing transparency and the accuracy of tax transactions, while also analyzing the factors that drive some taxpayers to evade taxes. This framework also allows for identifying the concepts and theoretical approaches that help

explain the impact of digitalization on reducing negative phenomena within the tax system.

2.1 Digitalization of Tax Administration : The digitalization of tax administration is a modern transformation aimed at developing tax work methods and making them more effective and transparent. It facilitates interactions between the administration and citizens and reduces administrative complexities. It also enables better tax monitoring and supports data-driven decision-making.

2.1.1 The Concept of Digitalization and Its Importance in Administration Digitalization: is the process of converting information and data from their traditional form, such as paper, images, or audio, into a digital format that computer systems can process (Laudon, 2020, p. 13). However, it is not limited to digital storage only. It also includes improving the way information is processed and operations are managed within institutions. (Westerman, Bonnet, & McAfee, 2014, p. 22)

In the field of management, digitization helps increase work efficiency by reducing the time required to complete transactions, facilitating access to data, and minimizing errors. (Brynjolfsson & McAfee, 2014, p. 17)

It also gives institutions the ability to better analyze data to support more accurate decision-making. Therefore, digitization is not just about converting paper into a digital format (Gartner, 2021, p. 26) , it is about reorganizing administrative processes to align with the digital environment and benefit from modern technologies.

2.1.2 Characteristics of the Tax Administration in Algeria Before Digitization
The tax administration is one of the fundamental pillars for ensuring state financing and providing the necessary resources to implement public policies. Before adopting digitization, the tax administration in Algeria was characterized by several features that affected the way taxes were collected and the relationship between taxpayers and the administration. We summarize them as follows
- Reliance on paper-based and traditional methods: most tax operations relied on paper documents, such as tax declarations, invoices, and commercial records. The administration lacked a centralized database that would allow it to monitor taxpayers accurately, which led to slow information processing, difficulty in verifying the reliability and accuracy of data on taxpayer performance, increased likelihood of human errors, and loss of documents.

- Bureaucracy and procedural complexity characterized tax administration before digitization, with numerous and complicated bureaucratic procedures. Taxpayers had to move between different departments to submit declarations or obtain information, which consumed a lot of time and effort (Belkacem, 2016, p. 51). The length of procedures sometimes also created a psychological barrier to paying taxes, thus affecting tax compliance.

- Weak transparency and difficulty in controlling tax evasion: The absence of digitalization affected the level of transparency in tax administration, as there were no effective tools to monitor all financial transactions, allowing some taxpayers the opportunity to evade taxes or provide inaccurate information. (Makhlouf, 2017, p. 31)

- Relying on individual expertise before the digitization process, the success of tax work depended on the experience and professionalism of the employees. Each employee's personal knowledge of records and taxpayers was essential to ensure tax collection.

This reliance on human resources has led to a disparity in performance between different departments of the tax administration and has reduced the ability to monitor taxpayers equitably.

- Lack of precise analysis and statistics: Due to the tax administration's dependence on traditional methods, the ability to produce accurate analyses and statistics was limited, as it was not easy to determine the tax compliance rate or assess the overall performance of the tax departments, which affected strategic planning and data-driven decision-making. (Algerian Ministry of Finance, 2017)

- The relationship between the administration and taxpayers: The relationship between the tax administration and taxpayers was characterized by distance, with communication being limited and often conducted face-to-face or through traditional mail. This situation affected the speed of responding to inquiries and handling tax disputes.

- The focus was on collection rather than assessment, as the main goal of the tax administration before digitization was centered on gathering financial resources without sufficient emphasis on continuous performance evaluation or improving taxpayer services. This sole focus on collection reduced the administration's role in providing advice or guidance to taxpayers on how to comply with tax obligations more effectively. (Ben Hamouda, 2018, p. 45)

It can be said that the tax administration in Algeria before digitalization relied on paper-based procedures, with low transparency and excessive bureaucracy, a heavy reliance on individual expertise, limited precise analysis, and a focus on revenue collection rather than providing advanced administrative services.

2.1.3. Objectives of Digitalizing the Tax Administration and Implementation Mechanisms: In recent years, the tax administration in Algeria has undergone qualitative transformations due to the adoption of information and communication technology, which is referred to as "digitalization of the tax administration." Digitalization aims to improve tax performance and enhance the efficiency of the

administration in addressing contemporary economic and social challenges. The main objectives of digitalization can be summarized as follows:

- Enhancing administrative efficiency: Digitalization contributes to simplifying tax procedures and reducing the time required to handle tax files, which decreases bureaucracy and increases the speed of decision-making. (Bin Yahya, 2020 , p. 23)

- Digital systems have also enabled monitoring of employees' daily performance and preparing accurate reports on various operations.

- Reducing tax evasion Tax evasion is one of the major challenges facing tax administration. Digital systems provide effective mechanisms to monitor financial transactions and record dealings accurately, reducing the chances of manipulating figures or hiding income. (Al-Hajj, 2019 , p. 61)

Digitalization also allows the exchange of information between different government departments, which enhances transparency.

- Improving the quality of services for citizens: Digitalization enables the provision of electronic tax services such as online tax filing, paying taxes electronically, and inquiring about violations or amounts due, which makes it easier for taxpayers to fulfill their tax obligations without the need to visit tax offices.

- Decision Support: Digital systems provide an integrated database that enables officials to analyze information and prepare studies and reports, contributing to making strategic decisions based on accurate data. These tools also help in forecasting future financial resources and in setting effective tax policies. As for the mechanisms for implementing the digitalization of tax administration, to apply digitalization effectively, a set of organizational and technical mechanisms are adopted, the most important of which are:

- Tax information systems: Tax information systems are the backbone of digitalization, as they allow data to be processed quickly and accurately, and link various administrative departments with each other to exchange information securely. (Al-Maz , 2018 , p. 18)

- The electronic tax declaration allows taxpayers to submit tax returns online, reducing manual errors and saving time, while also facilitating the digital archiving of files.
- Digital monitoring and analysis are carried out through specialized software to track financial transactions and detect any violations or attempts at evasion, in addition to preparing periodic reports that help improve performance.
- Training and capacity building: Training employees to use digital systems and develop their technical skills is considered one of the most important elements for the success of digitization, ensuring sustainable performance and achieving the desired objectives.

Cybersecurity and data protection: Given the sensitivity of tax information, advanced protection mechanisms are adopted to ensure the confidentiality of the data and protect it from breaches or tampering.

From this, we can say that the digitization of tax administration aims to improve administrative efficiency, reduce tax evasion, enhance the quality of services, and support decision-making based on accurate information. These objectives are achieved through the use of tax information systems, electronic filing, digital monitoring, continuous training, and ensuring cybersecurity, as digitization is considered a fundamental step towards modernizing the tax administration in Algeria and aligning it with global requirements.

2.2 Tax Evasion: Concept and Causes

Tax evasion is considered one of the main challenges facing the tax administration in the modern era, as it reflects the weak tax awareness among taxpayers and leads to a disruption of tax justice and a decline in public revenues. **2.2.1The Nature of Tax Evasion and Its Difference from Tax Fraud:** Tax evasion is defined as a set of practices that are legally apparent which the taxpayer follows with the aim of reducing or avoiding paying tax without explicitly violating the law. It is the exploitation of legislative loopholes or inaccuracies in tax texts. This type of evasion is often carried out by transferring profits to low-tax regions or recording fictitious expenses. (Ben Hamou, 2019, p. 45)

As for tax fraud, it is an explicit criminal behavior that involves a direct violation of tax laws. It is represented by hiding information, falsifying accounts and invoices, or deliberately failing to declare actual income. Unlike tax evasion, which operates in a legal gray area, tax fraud falls within the realm of criminal offenses and is punishable by law with fines or even imprisonment. (Boushrir, 2020, p. 33)

The fundamental distinction between the two concepts lies in the legal element of the behavior; tax evasion is practiced within the bounds of the law with the intent to circumvent it, whereas tax fraud is practiced outside the law with the intent to deceive and cheat. (Abdel Latif, 2018, p. 67)

The economic and social impact of both also differs; tax evasion is considered a phenomenon that harms financial resources without shaking citizens' trust in the state to the same extent as fraud, whereas tax fraud is an act that undermines confidence in the tax system and fosters frustration among compliant taxpayers. Many countries, including Algeria, have moved toward adopting digital and legislative reforms to tackle both phenomena together, by updating tax control systems, implementing electronic transparency in reporting and payment, and expanding information exchange between administrations and financial institutions,

which reduces opportunities to exploit legal loopholes and detects attempts at fraud early.

. Tax evasion and tax fraud can be considered two sides of the same coin; both weaken public resources and undermine tax justice. However, their severity differs in terms of legal nature, which requires the state to combine legislative reform and tax awareness as pillars to ensure a fair and effective tax system.

2.2.2 Causes of Tax Evasion

Among the causes of tax evasion in Algeria are:

- Weak tax culture among taxpayers: Tax awareness is one of the key factors affecting tax compliance. A large portion of taxpayers lack sufficient knowledge of their tax rights and obligations, which sometimes drives them to evade taxes to avoid payment. (Bouchikhi, 2018, p. 45)

- Complexity of the Tax System and Administrative Procedures: The Algerian tax system is considered complex in terms of laws and regulations, in addition to the numerous administrative procedures that require time and effort. This complexity encourages some taxpayers to bypass the law rather than comply with it.
- Weak Tax Supervision and Inspection: The lack of human and technical resources in the tax administration reduces the effectiveness of supervision over taxpayers, making some individuals and institutions more prone to evasion.
- High Taxes and Lack of Flexibility: Especially for companies and individuals with middle incomes, this encourages some to evade taxes to reduce the financial burden. The situation worsens in the absence of incentives for tax compliance. (Saadi, 2020, p. 33)

- Corruption and favoritism in tax administration in some cases lead to practices within tax offices that create an environment allowing tax evasion, where statements are manipulated or laws bypassed in favor of taxpayers who have connections. (Qazawi, 2016, p. 94)

3- The Reality of Digitizing Tax Administration in Algeria

Tax administration in Algeria is undergoing an important transitional phase towards digitization, aiming to improve its performance and simplify the relationship with taxpayers. The state has begun implementing a set of digital programs to enhance transparency and efficiency in managing tax resources. However, this path still faces some challenges related to technical infrastructure and the limited digital training of tax staff.

3.1 Tax Digitization Programs and Procedures in Algeria

Algeria is working to implement digital transformation in the tax sector by adopting modern programs and procedures aimed at simplifying tax transactions and reducing bureaucracy. These efforts focus on adopting electronic systems for

declaration and payment, which enhances transparency and increases the efficiency of tax administration.

3.1.1- Legal and Institutional Framework for Digitizing Tax Administration
In recent years, Algeria has sought to consolidate digital transformation across various sectors, particularly tax administration. To achieve this goal, an integrated legal and institutional framework has been established to regulate the digitization process and direct it towards serving tax and financial reform.

On the legal front, a set of laws has been issued to establish the use of digital tools in administrative and financial transactions. Among the most notable is Law No. 15-04 dated February 1, 2015, concerning electronic signatures and authentication, which granted legal validity to digital documents and records, allowing the use of electronic declarations and invoices in tax transactions (Law No. 15-04 dated February 1, 2015, 2015). The Finance Law for the year 2020 also came to reinforce this approach by including provisions that encourage the establishment of a unified IT system for electronic invoicing and remote reporting. (Finance Law for the year 2020, 2019) In addition, Executive Decree No. 20-56 of 2020 was issued, which established the National Cybersecurity Agency to protect digital systems and sensitive data within public institutions, including tax systems. (Executive Decree No. 20-56 dated January 19, 2020)

From an institutional perspective, several bodies have emerged to oversee the implementation of tax digitization projects. The General Directorate of Taxes (DGI) serves as the central authority responsible for launching and managing digital platforms for electronic declaration and payment. The Ministry of Finance also supervises the coordination of digital transformation efforts in the financial sector by developing national strategies to improve tax performance through electronic means. Additionally, the National Agency for Digital Development, established under Executive Decree No. 21-155 of 2021, plays a key role in monitoring and evaluating the progress of digitization projects across various sectors. (Executive Decree No. 21-155, 2021)

This legal and institutional framework forms a solid basis for supporting digital transformation in tax administration by ensuring the legal security of electronic transactions and clearly defining institutional roles. This contributes to improving transparency, facilitating the relationship between the administration and taxpayers, and reducing instances of tax evasion through precise electronic tracking of transactions.

3.1.2 - Key Digital Platforms and Systems

The digital platforms and systems of the tax administration in Algeria have seen significant development in recent years within the framework of the state's policy

aimed at modernizing public facilities and improving the relationship between the administration and taxpayers. The tax sector is one of the most prominent sectors that has benefited from this transformation through the introduction of several digital systems and platforms that have facilitated tax operations and enhanced transparency and oversight.

-**JIBAYATIC System**

The 'JBAYATIC system is considered one of the most prominent digital projects launched by the General Directorate of Taxes. It is a comprehensive information system aimed at digitizing various stages of tax processing, from declaration to collection. This system allows taxpayers to view their tax status, submit declarations remotely, and pay dues electronically, which has helped reduce pressure on tax centers and improve administrative processing time. (The General Directorate of Taxes, 2023)

-**The Electronic Platform for Tax Declarations**

The e-Impôt platform is an electronic gateway that enables businesses and individuals to submit tax declarations online without the need to visit tax offices. It has been linked to the electronic payment system approved by Algerian banks, allowing taxes to be paid securely and quickly (Algerian Ministry of Finance, ., 2022).

The platform also provided the ability to download tax certificates digitally, which reinforced the principle of electronic administration and facilitated transactions between taxpayers and the administration.

- **The Information System of the General Directorate of Taxes**

It is an administrative program adopted with the support of some international organizations, aiming to improve tax management through the automation of registration, monitoring, and collection processes. This system has helped enhance transparency, reduce human errors, and track tax transactions in real-time. (UNCTAD, 2021)

- **The Electronic Payment Platform for the Public Treasury**

This platform was developed as part of the Ministry of Finance's efforts to facilitate the payment of fees and taxes online. Taxpayers can pay their dues via bank cards (CIB or Gold), which enhances confidence in electronic transactions and helps reduce cash dealings. (Ministry of Finance, 2023)

- **The National System for Exchanging Tax Data**

Among the modern mechanisms is also the Tax Data Exchange System, which connects the tax administration with other public institutions (such as the Central

Bank, commercial registry, customs, etc.), ensuring the integration of information and preventing tax evasion or fraud. This integration is considered a key pillar in building an effective digital tax collection system. (General Directorate of Taxes, 2022)

- **Dedicated Platform for Digital Tax Identity**

A digital service has been developed that allows for registration and obtaining the Tax Identification Number (NIF) online, which has facilitated the process of establishing businesses and monitoring their legal and tax status, while reducing bureaucratic procedures. (the ministerial decision, 2023)

The digitization of the tax administration in Algeria through these platforms and systems represents a strategic step towards modernizing the tax system and consolidating the principles of electronic governance. It has also contributed to simplifying procedures, enhancing transparency, and improving the relationship between citizens and the administration, which positively reflects on increasing tax efficiency and combating tax evasion.

3.1.3- Assessment of the Level of Digitalization Implementation in Tax Services

In recent years, the tax administration in Algeria has witnessed significant shifts towards digitalization, as part of the state's efforts to improve tax performance and facilitate services for taxpayers. This digitalization aims to simplify procedures, reduce errors, and combat tax evasion through advanced information systems within the tax services. It can be observed that the implementation of digitalization varies from one service to another, as some offices have fully adopted electronic services such as filing and payment through digital platforms, while some other services still face challenges related to human resources, lack of training, and insufficient technological infrastructure. These disparities reflect the reality of partial and incomplete digital transition in some areas, which limits its effectiveness Complete digitization.

On the other hand, reports issued by the General Directorate of Taxes indicate a noticeable improvement in the speed of processing files and a reduction in manipulation in tax operations as a result of using electronic monitoring systems. Digitization has also contributed to enhancing transparency and providing an accurate database that helps in making better administrative decisions. Nevertheless, there is still a need to develop the system comprehensively to include all departments, with a focus on continuous employee training and improving digital infrastructure to ensure that the goals of digitization are achieved effectively and sustainably.

3.2 Challenges and Obstacles Facing Tax Digitization

The experience of tax digitization in Algeria reflects a clear ambition to simplify procedures and enhance performance, yet this path faces several difficulties. Among the main obstacles are weak digital infrastructure and varying resource capabilities Humanity in dealing with modern systems. Institutional resistance and legal challenges also play a role in slowing down the pace of digital transformation within tax authorities.

3.2.1- Technical and Human Obstacles

Tax digitalization in Algeria faces a range of technical and human obstacles that limit the effectiveness of digital systems. From a technical perspective, some administrative departments suffer from weak digital infrastructure, including inadequate communication networks and outdated devices, which hinders the speed of information transfer and the efficient operation of applications. (Bougara, 2021) Software also faces difficulties related to compatibility and continuous updates to ensure the protection of sensitive tax data from any breaches or loss. (Boutaher, 2019) On the human level, the lack of specialized training and the failure to acquire modern digital skills stand out as one of the main challenges, leading to resistance to change and weak performance, especially when dealing with advanced technological tools. (Boutaher, 'Developing Employee Competencies in Government Digitalization,', 2019)

In addition, some departments still cling to traditional paper-based procedures, which creates a gap between digital development and usual administrative practices. Psychological and social factors also play a role in slowing down digital transformation, as some employees feel anxious about losing control over their work or jobs due to reliance on modern technology. Therefore, the success of digitization requires addressing these obstacles by improving infrastructure, updating software, enhancing cybersecurity, and developing employee capabilities through continuous training and changing the organizational culture to embrace digital innovation.

3.2.2-Organizational and Legal Challenges

Tax digitization in Algeria faces multiple challenges that can primarily be divided into organizational and legal difficulties affecting its effective implementation. At the organizational level, weak coordination between various tax departments and authorities poses a significant obstacle to digital integration, as digital projects are often managed in isolation from each other, leading to duplication of efforts and difficulty in information sharing. The system also suffers from a lack of technical infrastructure, including computers, networks, and modern management software,

along with limited qualified human resources to manage and maintain these systems, which delays implementation and increases operational costs. From a legal perspective, digitization struggles with insufficient legislation concerning electronic transactions and the protection of tax and personal data, which limits taxpayers' trust and increases the risk of fraud or data manipulation. Furthermore, the absence of legal recognition for electronic signatures and digital transactions hampers the broader use of digital platforms and exposes the administration to legal disputes. The delay in updating current laws to keep pace with technological developments also poses a barrier. ...

The delay in updating current laws to keep pace with technological developments also constitutes a barrier to fully investing in digitalization to improve revenue collection and reduce tax evasion. Therefore, it is necessary to adopt a clear digitalization strategy along with developing digital infrastructure, qualifying human resources, and updating the legal framework to ensure effective tax performance and enhance transparency and credibility in digital transactions (National Committee for Digitalization).

3.2.3- Proposed solutions to enhance digital transformation

The proposed solutions to enhance the digital transformation of the tax administration in Algeria consider that strengthening the digital transformation of the tax administration in Algeria is a fundamental step to improve revenue collection and reduce tax evasion.

-Develop a comprehensive digital strategy that defines the implementation phases, responsibilities, and measurement tools, linking them to the national objectives of tax policy.

-Develop the technical infrastructure as a fundamental pillar, which includes updating information systems and connecting databases across various departments and institutions, with a focus on information security and the protection of tax data.

-Enhance human resources efficiency by training employees on using digital platforms, data analysis, and adopting a digital work culture, in addition to educating taxpayers about using electronic services.

-Simplify digital services for taxpayers by creating integrated online portals to complete all procedures, from declaration and payment to inquiries and handling appeals, facilitating electronic payments, and connecting systems to the banking sector to reduce paperwork.

-Leverage data analysis and artificial intelligence to monitor tax risks and improve oversight, contributing to the early detection of tax evasion and promoting tax

compliance.
-Strengthen the legal and regulatory framework by updating legislation to cover digital transactions and data protection, alongside establishing an internal governance structure to monitor implementation and regularly evaluate outcomes.

-Change management and ensuring sustainability are essential elements, including motivating employees to adopt digitalization, conducting pilot tests before full implementation, and ensuring continuous funding for system maintenance, with a focus on low-income taxpayers and less developed areas to ensure inclusivity of services.

With these measures, the digital transformation of the tax administration becomes an integrated process that allows the execution of operations and procedures, enhancing performance, transparency, and tax compliance.

4- The Impact of Digitizing the Tax Administration on Tax Evasion in Algeria

Digitalization in the Algerian tax administration focuses on technological transformations in the collection and processing of tax data and the management of financial transactions. It also highlights the role of digital systems in organizing information exchange between different departments and improving the efficiency of administrative procedures, with the goal of demonstrating the relationship between the use of technology in tax administration and tax processes.

4.1-Indicators of the Evolution of Tax Evasion Before and After Digitalization

Analyzing the evolution of tax evasion before and after digitalization is one of the key aspects of understanding the effectiveness of the digital reforms adopted by the tax administration. However, the difficulty of obtaining direct data on the extent of tax evasion has led us to rely on indirect indicators, foremost of which is the development of actually collected tax revenues. The changes recorded in tax revenues, whether increases, stability, or fluctuations, can to some extent reflect the level of tax compliance and the improvement in detection and control mechanisms resulting from digitalization. Therefore, analyzing the trajectory of tax revenues before and after the implementation of digital systems allows for approximate conclusions regarding trends in tax evasion and provides a basis for assessing the contribution of digitalization to reducing it and enhancing collection efficiency.

Table 1.4: Evolution of Total Tax Revenues for the Period 2018-2024

2024	2023	2022	2021	2020	2019	2018	Years
8302	10718	9524	6598	5362	6034	5061.5	Revenue value in billion dinars

Source: (Prepared by the researcher, 2025)

Comment: The previous table shows the development of total tax revenues during the period 2018–2024, with noticeable fluctuations in the overall trend of collections.

After revenues increased from 5,061.5 billion in 2018 to 6,034 billion in 2019, there was a decline in 2020 to 5,362 billion, a decrease that can generally be attributed to the unstable economic conditions of that year. In 2021, revenues rose again to reach 6,598 billion, then recorded a significant jump in 2022 to reach 9,524 billion, and continued to grow in 2023 to around 10,718 billion, reflecting the expansion of the tax base and improvements in compliance levels or economic activity. However, the year 2024 saw a decline to 8,302 billion, indicating a return of some economic pressures or changes in collection policies. Overall, despite the fluctuations, the general trend of revenues during the period shows a clear increase compared to the base year (2018), but it is characterized by annual instability, which calls for a deeper analysis of the factors that may have influenced taxation, whether economic, regulatory, or related to digitization and transparency efforts.

Table 4.2: Evolution of Ordinary Tax Revenues for the Period 2018-2024

Years	2018	2019	2020	2021	2022	2023	2024
Revenue value in billion dinars	2711.8	2843.5	2625.2	2762.00	2988.2	3496.00	3376

Source (Prepared by the researcher, 2025)

Comment: The timeline of tax revenues during the period 2018–2024 shows cyclical changes that reflect the tax system's sensitivity to economic variables. Despite the slight increase recorded at the beginning of the series, revenues declined in 2020 due to a slowdown in economic activity, before resuming an upward trend during 2021 and 2022 thanks to improved collection levels and a return to growth momentum. The 2023 level represents the highest value during the period, indicating the effectiveness of tax control measures and the expansion of the tax base. The notable decline in 2024 can be explained by temporary disruptions or changes in taxpayer behavior or the structure of taxation. Thus, the overall trend demonstrates the ability of tax revenues to move in a manner directly linked to economic performance and the quality of collection mechanisms.

Tax Revenues	2022	2023	2024
Income Taxes	٪41.83	٪44.69	٪48.36
Consumption Taxes	٪42.01	٪40.03	٪36.28
Customs Duties and Equivalent	٪11.29	٪10.13	٪10.90
Other Taxes and Fees	٪3.08	٪3.37	٪2.41
Capital Taxes	٪1.70	٪1.72	٪1.97
Fines Revenues	٪0.08	٪0.07	٪0.08

Source (Prepared by the researcher, 2025)

Comment: The structure of tax revenues during the period 2022–2024 shows gradual changes reflecting a repositioning of collection sources within the tax system. Income taxes maintained their position as a key component, with a noticeable increase from 41.83% in 2022 to 48.36% in 2024, indicating either an expansion in the taxable base or an improvement in monitoring and collection mechanisms. Conversely, consumption taxes show a gradual decline from 42.01% to 36.28%, which may reflect changes in demand levels or the adoption of more precise accounting and tax policies in assessing consumption. Meanwhile, customs duties remained relatively stable at around 10%, indicating the limited impact of external changes on the import structure during the period. A relative decrease in other taxes and fees is also noted, which may reflect reduced reliance on non-recurring revenues or improved classification of collection items. On the other hand, a slight increase in capital taxes is recorded in 2024, indicating a trend toward diversifying revenue sources.

As for fine revenues, they have remained steady at low levels, reflecting their limited weight within the tax structure.

In general, this development reveals a gradual shift towards a tax structure that relies more on direct taxes, with a relative decline in indirect taxes, which may reflect efforts to improve tax fairness and enhance the tax administration's ability to monitor sources of income.

4.2-The Contribution of Digitalization in Detecting Tax Evaders and Improving Transparency

Tax digitalization has contributed to improving the administration's ability to detect tax evasion by enabling the tracking of tax transactions in real time, which makes

any discrepancies in data or gaps in declarations more apparent Compared to traditional methods, linking government databases enabled the comparison of information obtained from customs, banks, and the commercial registry, which helped reduce the scope of false declarations and detect unauthorized activities. In addition, modern digital tools allowed the use of data analysis techniques to identify unusual patterns in tax behavior, as suspicious cases are quickly recognized through matching with historical records or sector averages. Regarding transparency, digitization has led to the standardization of procedures and reduced direct contact between employees and taxpayers, limiting opportunities for favoritism and giving taxpayers a clearer view of their tax obligations and rights. Electronic records also enhanced the ability to audit and track the tax process in a documented manner, which increased the administration's credibility and raised the level of trust in the overall tax system.

4.3- The Impact of Digitization on Taxpayers' Trust and Compliance

Tax systems around the world are witnessing a fundamental transformation due to the spread of digital technologies that have changed the nature of interaction between taxpayers and the tax administration. In Algeria, this transformation has accelerated in recent years through the introduction of electronic filing, digital payment, electronic invoicing, and portals dedicated to managing tax files. This development was not merely an administrative update but carried deep effects on building tax trust and changing taxpayers' perception of the tax system, which has reflected on their level of commitment and compliance. Among the most important points that enhance transparency:

- Digitization allows for the provision of clear information on procedures, deadlines, rights, and fines, reducing the area of ambiguity that was a main reason for forming a negative view of the tax administration. A taxpayer who can view their transactions moment by moment and receive automated notifications about their tax status tends to perceive the system as fairer and less complicated, which supports trust and encourages voluntary compliance.

- Digitization reduces direct contact with collectors and employees, an element that was often associated with delays in transactions, miscommunication, or some informal practices. With a large part of the tax process moving to electronic methods, dealings have become more objective, and taxpayers feel that all procedures are carried out based on standardized rules applied to everyone without discrimination. This sense of equality in treatment is considered one of the factors that increase trust and encourage individuals to comply with tax obligations without resistance.

- Digitization has provided a new model of fast services that shorten transaction times and reduce costs associated with compliance, such as traveling between departments or searching for paper files.

- The experiences of many countries have proven that reducing time and bureaucratic complexities is directly related to higher compliance rates, as taxpayers are often hesitant to fulfill their obligations when the process is burdensome or uncertain in its outcome.

As for oversight:

- Digitization has imposed new discipline in tax behavior, as digital systems reduce opportunities for manipulating declarations or hiding actual activity. The existence of interconnected databases and verification systems Management in monitoring violations reduces informational gaps that previously allowed room for evasion. This type of organized oversight also enhances trust because it reassures compliant taxpayers that competitors who evade will not benefit from an unfair situation.

- Digitization provides advanced safeguards for protecting tax information through encryption systems and security controls, which increases confidence in electronic transactions. A taxpayer who feels that their data is protected is more likely to use digital platforms without fear, especially given the increase in the value of electronic transactions in the market. This aspect is considered one of the most influential factors on the psychological relationship between the taxpayer and the administration, as trust in data security is directly linked to the level of compliance.

It can be said that digitization has significantly contributed to strengthening taxpayer confidence thanks to transparency, neutrality, service speed, and data protection. It has also led to increased tax compliance by reducing time costs, limiting evasion, and improving the effectiveness of oversight. It seems that continued investment in digitization, alongside supporting cultural transformation among taxpayers, will be a key factor in enhancing the relationship between citizens and the tax administration in Algeria

5- Conclusion:

The digitization of tax administration can be seen as one of the modern methods that has emerged to keep pace with contemporary technological transformations. It aims to simplify and accelerate various tax procedures for the benefit of both taxpayers and the administration alike. Our discussion of the topic highlighted the important role that digitization plays in reducing tax evasion, through improving the flow of tax information, developing collection methods, and enhancing effective oversight.

Testing the validity of the hypotheses

The first hypothesis states that tax digitization in Algeria contributes to increasing the transparency of tax transactions by reducing information gaps, which limits opportunities for tax evasion. This hypothesis was confirmed, as the study showed that digitization helped enhance the transparency of tax transactions by providing accurate and timely data that reduces information gaps between the administration and taxpayers, making inspection and monitoring processes more effective.

The second hypothesis suggested that relying on digital tax platforms improves the efficiency of tax collection and facilitates monitoring processes, thereby reducing behaviors associated with tax evasion. This hypothesis was also confirmed, as reliance on digital platforms contributed to enhancing the efficiency of tax collection by simplifying procedures, reducing errors, and enabling real-time tracking of transactions, making the system more accurate and efficient.

The third hypothesis posits that simplifying tax procedures through digitization helps reduce direct interactions between taxpayers and the administration, thereby reducing opportunities for fraud, manipulation, and tax evasion. This hypothesis was confirmed, as simplifying tax procedures through digitization contributes to minimizing direct interactions between the taxpayer and the This hypothesis has been confirmed, as simplifying tax procedures through digitalization contributes to reducing direct interaction between the taxpayer and the administration, which limits opportunities for human intervention and reduces the likelihood of fraud or evasion by relying on clear electronic pathways.

Results:

- Despite the significant benefits of digitalization in reducing costs and facilitating procedures, it still faces a number of challenges, including some legal gaps and weak digital infrastructure.

- The Algerian legislator's resort to digitizing the tax administration without enacting special laws for it.

- The incomplete transition to electronic declarations.

- Shortcomings in some technical aspects, such as not including certain fees (like value-added tax in some cases), which may affect the comprehensiveness of the digital system.

- Digitization is an effective tool that enables tax administration officers to quickly access taxpayers' tax status and track various electronic transactions, contributing to reducing tax evasion opportunities, enhancing transparency, and consolidating the principle of tax equity thanks to the clarity of transactions and ease of use.

Despite the clear benefits, there are still challenges that somewhat reduce the positive impact of digitization, most notably the lack of digital literacy among certain groups, the absence of comprehensive technical coverage in some areas, and the difficulties faced by small businesses in understanding electronic systems. These challenges slow down the expansion of the beneficiary base and limit the full exploitation of digitization potential in improving tax compliance. However, the development of training programs and the expansion of digital service infrastructure are expected to strengthen this impact in the future.

Recommendations:
- Work on reducing tax evasion instead of imposing additional taxes
- Work on providing the requirements for digitization

- It is necessary to pay more attention to digitizing the tax administration and guiding it

- Follow the experiences of leading countries in the field of digitizing tax administration and try to apply them to the Algerian reality

- Expand the electronic declaration system to include all categories and types subject to tax

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