

Algeria's readiness for digital transformation in a growing culture of resistance to change

جاهزية الجزائر للتحويل الرقمي في ظل تصاعد ثقافة مقاومة التغيير

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ملخص

تهدف هذه الدراسة إلى فحص قدرات الجزائر وجاهزيتها لإحداث تحول رقمي في البلاد خلال السنوات الأخيرة، في ضوء الأهداف المحددة في استراتيجية التحول الرقمي الجزائرية في آفاق 2025. وظفت الدراسة منهجية متعددة الأدوات، من خلال تحليل الوثائق التي حملت السياسات والخطط الاستراتيجية للحكومة. وتوصلت إلى أن نقائص كثيرة تحول دون توفر جاهزية مقبولة لإحداث التحول المرغوب في الخطط الحكومية ووفق الأهداف المسطرة ما يستدعي المزيد من الجهود من جميع الجهات الفاعلة في المجالات الاقتصادية والاجتماعية والثقافية، للتخفيف من وطأة ثقافة مقاومة التغيير المتفشية معظم القطاعات والتي تواجهها الحكومة باستخدام قوتها الرمزية متغاضية عن الحلول المرنة التي تعبئ جميع الموارد المادية والمالية والبشرية المتاحة.

الكلمات المفتاحية: الجاهزية الإلكترونية، الجزائر، الرقمنة، التحول الرقمي

Abstract:

This study aims to examine Algeria's capacity and readiness to undergo a digital transformation in recent years, in light of the objectives outlined in Algeria's Digital Transformation Strategy for 2025.

Employing a multi-method approach, the study analyzed documents containing the government's policies and strategic plans.

The findings revealed significant shortcomings that hinder the country's readiness to achieve the desired transformation as outlined in government plans and objectives. This necessitates increased efforts from all stakeholders in the economic, social, and cultural spheres to mitigate the widespread culture of resistance to change within most sectors.

The study also finds that the government has confronted this resistance primarily through the exercise of its symbolic authority, overlooking more flexible solutions that could mobilize all available material, financial, and human resources.

Keywords: e-readiness, Algeria, digital transformation, digitalization,

Jel Classification Codes: XN1, XN2.

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. INTRODUCTION

Digital transformation has become a paramount concern for policymakers in most countries striving to align their digital infrastructure and practices with contemporary advancements. Consequently, many nations are witnessing extensive initiatives and discourse aimed at showcasing progress, critically analyzing experiences, and urging stakeholders responsible for implementation to expedite the process.

In Algeria, this transformation is unfolding cautiously and gradually, amidst limited attention from various media outlets and even stakeholders such as academics, critics, and interested parties. In this context, obtaining reliable statistics remains challenging despite the existence of a High Commission for Digitization, previously a standalone ministry. This paper endeavors to examine the measures undertaken by the Algerian authorities to implement the digital transformation project and to elucidate the shortcomings hindering its progress, including resistance encountered across various sectors. The main question that motivated this study is: How effectively has the Algerian government work to achieve digital transformation across various sectors in response to recent technological advancements?

1- Digital transformation in the Algerian Context

The concept of digital transformation remains fluid and multifaceted due to its diverse applications. It is a broad concept encompassing various domains such as education, healthcare, commerce, and industry. However, the fundamental aspects of its definition revolve around tangible changes in work practices achieved through the integration of contemporary digital technologies. The Oxford Dictionary defines it as "the adaptation of particular systems or processes to incorporate digital technology" or "the conversion of data into a digital format that can be readily processed by a computer." Naturally, this definition can be tailored to suit the specific domain in which it is applied (The Oxford English Dictionary. 19, 1991).

The etymological framework of the word "digitization" is employed in two distinct ways in the English language. Firstly, it appears as "Digitization" referring to the process of converting information from analog to digital involves converting physical documents (such as paper reports) into digital files (such as PDFs). (Pellicelli, 2023).

During this conversion, the data remains unchanged; Although digitization can improve operational efficiency, it does not require optimization of processes or data. This includes things like scanning documents and photos or recording analog tapes. In addition, this process leads to what is called "digitalization" which denotes a broader meaning of digitization, encompassing the utilization of digital technology in administrative operations through specialized, precise, and high-speed platforms. Upon their completion, these platforms enable society to transition away from traditional work patterns and enter the digital age.

While the term "transformation" typically implies a substantial shift from one state to another, the precise meaning of "digital transformation" can vary and remains somewhat ambiguous. Does it refer to the utilization of big data, the incorporation of digital media into

traditional practices, or the immersion in new social forms of communication facilitated by algorithms and artificial intelligence?

Dörner and Rundel (2021) posit that engaging in this debate is unnecessary within the context of countries strongly drawn to traditional management and public affairs approaches. They propose that it suffices to view digital transformation as a transition from the analog mode (characterized by the constant presence of paper and files) to the digital mode (characterized by networks, new media, cloud computing, and other digital technologies), accompanied by corresponding changes in various practices (Ifenthaler et al., 2021).

In the case of Algeria, it can be definitively stated that the significant delay in digitizing existing assets (**Digitization**) has compelled the government to synchronize this process with the broader adoption of digital technologies in administrative operations (**Digitalization**). This explains the prominence of this issue in most cabinet meetings overseen by the Head of State. In analysis of the Algerian experience, the study examines the implications of this approach on the overall process and its various stages.

Digital transformation has unfolded in several waves throughout history, playing a central role in the different scientific revolutions witnessed by the world. However, due to the accelerating pace of technological inventions, most researchers have categorized these waves into two main phases. The first wave was characterized by efforts to sow the initial seeds of digitization through the adoption of personal computers and software applications, which significantly contributed to enhancing the efficiency and accuracy of various tasks and administrative operations.

This wave persisted for an extended period until the emergence of the second wave, distinguished by the advent of the internet, the World Wide Web, and Web 2.0 technologies. These advancements facilitated online communication and the proliferation of diverse forms of communication through voice, image, and e-commerce (Siebel, 2019).

Today, we are undoubtedly on the edge of establishing a new wave of highly advanced digital transformation. Its features began to emerge with the launch of the first version of generative AI in early 2023, which has caused a stir that continues at the present day. Therefore, it can be said that a third wave based on generative AI, utilizing the GPT is sweeping the digital world and causing a new scientific revolution, whose full secrets are expected to be revealed in the few coming years.

In the Algerian context, there are no laws or official documents that define the digital transformation to be implemented in reality. They have been content mentioning the reasons and justifications for their adoption. However, this does not hide the government's feeling of being behind the curve in the digital world. Therefore, it adopted the slogan of digitization in most sectors, and the topic was present in the majority of Cabinet of Ministers meetings, which announced that 2023 as a year of comprehensive digitization.

It is noteworthy that the official data of the cabinet of Ministers or the various sectors do not usually speak about the term "digital transformation" but rather about "digitization". Possibly due of the growing awareness of their editors that the transformation process is still in its early stages. This conclusion is further supported by the acceleration of the fiber-optic

network extension to provide high-speed Internet to neighborhoods and urban areas in various cities.

In the Algerian case, it can be asserted that the significant delay in the digitization of assets forced the government to synchronize the first meaning with the second meaning of digitalization. This explains the presence of this file in most cabinet meetings supervised by the Head of State. In our analysis of the Algerian experience, we examined its implications for the overall process and some of its stages.

Digital transformation has undergone several waves throughout history and has been at the core of the different scientific revolutions that the world has witnessed. However, most researchers have condensed these waves into two main waves, owing to the acceleration of technological inventions.

The first wave was characterized by the endeavor to lay the first seeds of digitization through the adoption of personal computers and software applications, which greatly contributed to improving the efficiency and accuracy of various tasks and administrative operations. This wave persisted for a significant period until the second wave emerged, characterized by the emergence of the Internet, the World Wide Web, and Web 2.0 (Siebel, 2019). Undoubtedly, we are currently on the cusp of establishing a new wave of highly advanced digital transformation. Its features began to emerge with the launch of the first versions of generative AI in early 2023, generating significant interest that continues to this day. Therefore, it can be asserted that a third wave, driven by AI utilizing the GPT is sweeping the digital world and prompting a new scientific revolution. the full ramifications of which are expected to be revealed in the coming years.

Within the Algerian context, none of the laws or official documents have explicitly defined the digital transformation intended for implementation. They have merely outlined the rationale and justifications for its adoption. However, this does not conceal the government's awareness of the country's lag behind the global digital landscape. Consequently, it has embraced the slogan of digitization across most sectors, and the topic has featured prominently in most cabinet meetings, culminating in the declaration of 2023 as the year of comprehensive digitization(Algerian radio, 2024).

It is noteworthy that official data from the cabinet of Ministers and various sectors typically refrain from employing the term "digital transformation," opting instead for "digitization." This may be attributed to the editors' recognition that the transformation process remains in its nascent stages. Further corroborating this inference is the accelerated deployment of fiber-optic networks to provide high-speed internet access to neighborhoods and urban areas across various cities, in addition to other infrastructure projects. This constitutes the fundamental first step required to substantiate claims of progress on the path towards comprehensive digitization.

2- Internet sector readiness for digital transformation in Algeria

According to the Digital 2024 report published by data reportal.com, the number of internet users in Algeria reached approximately 33.49 million at the beginning of 2024, with a penetration rate exceeding 72.9%. Among these users, over 24.85 million were active on

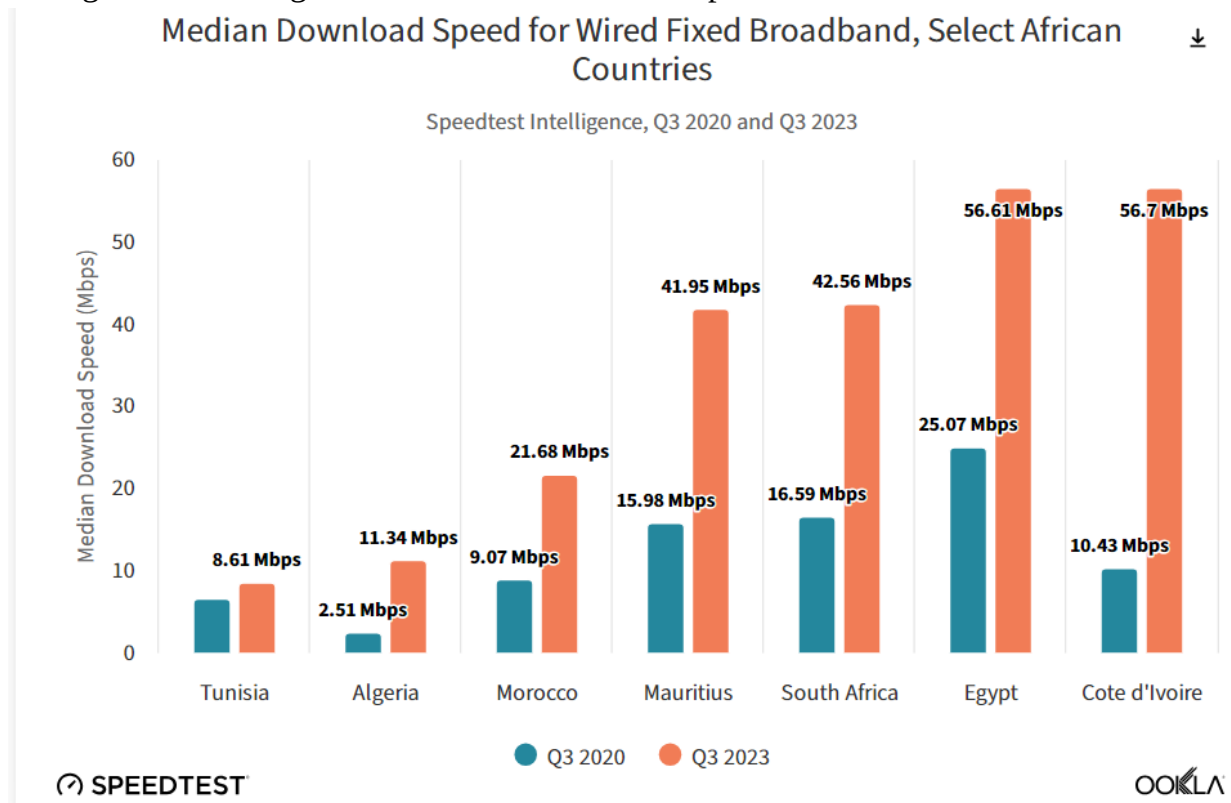
social media platforms by the end of January 2024, representing 54.1% of the total population(Digital 2024, 2024).

Analyses conducted by Kepios, a website specializing in internet user trends, indicate that the number of internet users in Algeria increased by 1.2 million (+3.9%) between January 2023 and January 2024. Based on these figures, 12.46 million individuals in Algeria remained offline at the beginning of 2024, signifying that 27.1% of the population did not utilize the internet at the start of the year (Digital 2024, 2024).

Data published by Ookla, (the global leader in fixed and mobile network testing applications), reveals that the average mobile internet connection speed in Algeria stood at 21.36 megabits per second (Mbps) as of early 2024. Meanwhile, the average fixed internet connection speed did not exceed 12.32 Mbps(Ookla®, 2024)

Ookla's data revealed that mobile internet connection speed in Algeria has increased by 7.96 Mbps (+59.4%) in the twelve months preceding the beginning of 2024.

Figure 01: Average Fixed Internet Download Speed in Some African Countries



Source: Ookla website, specialized in measuring internet speed

The data reveals that Algeria's fixed internet download speed lags behind several other countries in the region, including some African nations. Additionally, the progress made between 2020 and 2023 has been insignificant compared to other countries that have achieved moderate speeds on a global scale.

As of March 2023, Algeria had 3.4 million fixed-line connections, according to the Regulatory Authority for Post and Electronic Communications. The state-owned Algérie Télécom (AT) remains the sole provider of fixed internet services. However, with an additional 1.5 million

4G LTE connections, Algeria still constitutes one of the largest fixed internet markets in Africa(Ookla®, 2024).

Algérie Télécom has focused on replacing copper lines with fiber optic cables in major cities while maintaining ADSL services. Additionally, they have utilized 4G LTE fixed wireless technology to provide internet access in areas lacking wired infrastructure or where deployment is cost-prohibitive. Despite a late start, the company has rapidly expanded its FTTH/B services since their launch in 2018. Maximum fiber speeds for consumers have also increased from 100 Mbps to 300 Mbps in 2023.

The company has introduced regular promotions, such as doubling internet speeds for free for new customers. They have also reduced service prices every year since 2020, with a 100 Mbps fiber line costing \$22 per month in 2023. These measures have contributed to an almost 14-fold increase in fiber subscribers between 2020 and November 2023, reaching one million subscribers and making Algeria one of the largest FTTH/B markets in Africa(Internet Très Haut Débit: Un (1) Million d'abonnés Au FTTH à Novembre 2023, n.d.)

While statistics demonstrate the Algerian people's enthusiasm for the internet and their engagement with various online services, quantitative indicators do not tell the whole story. The quality of the network and the services offered remain at a basic level, primarily catering to browsing, information access, and entertainment. This falls short of enabling users to actively contribute to content creation and experience the transformative potential of the internet in their daily lives.

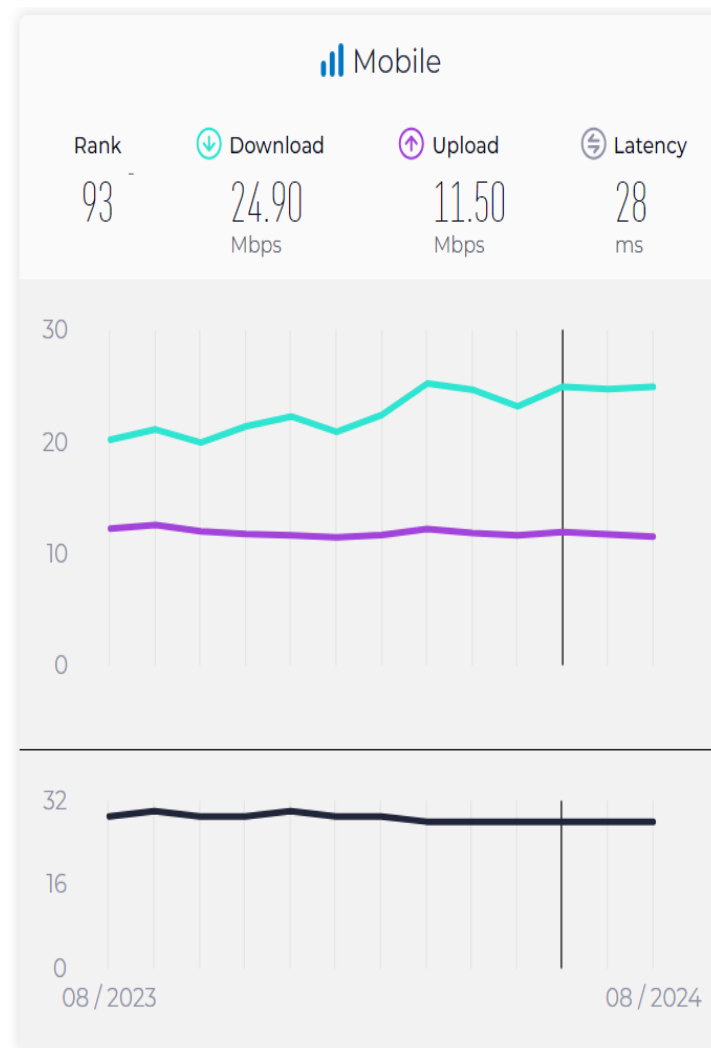
Data from GSMA Intelligence indicates that there were 48.53 million active SIM cards in Algeria at the beginning of 2023. This implies that the number of SIM cards exceeds the population, which is understandable considering many individuals possess multiple SIM cards, encouraged by promotional offers from various operators.

However, when considering internet speed, both fixed and mobile, Algeria ranks poorly globally and regionally despite significant investments in the sector. The reasons for this are varied and complex, but deliberate efforts to control and direct internet usage, and even apprehension based on experiences in other countries, seem to play a significant role. Internet use in Algeria has so far primarily focused on entertainment, communication, and some basic services. It has not yet become a vital resource for the economic life of the country or a platform for e-governance for businesses and public utilities. Consequently, the government has been slow in developing internet infrastructure and increasing speeds while reducing costs for citizens and modernizing networks.

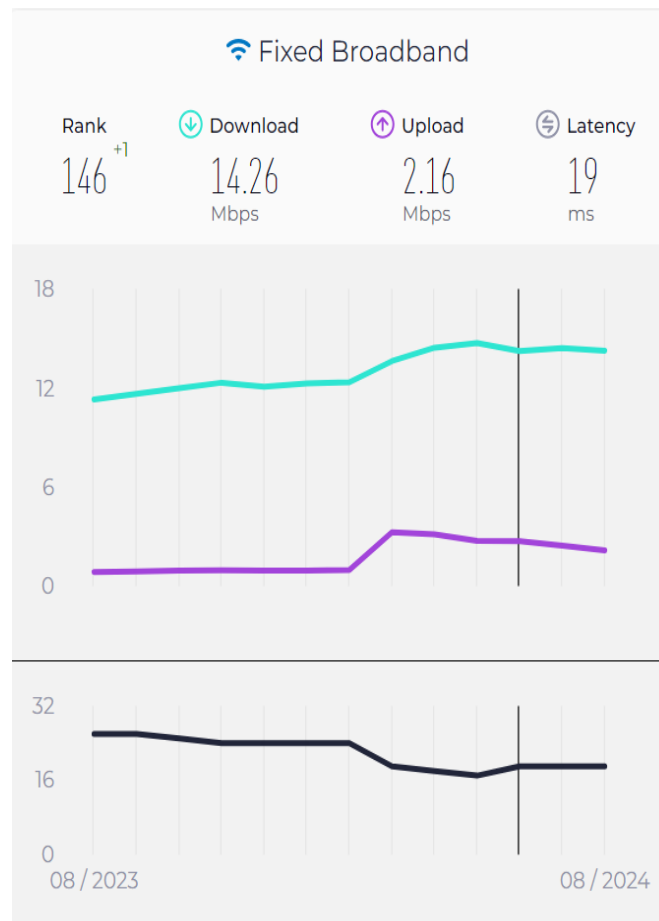
Looking at the 2024 statistics, we find that approximately 28% of the population does not use the internet at all. This group primarily consists of very young children and older adults who are unable to use it due to objective reasons related to digital literacy, for which they are not responsible. The remaining population faces numerous difficulties in accessing stable internet, partly due to inconsistent service and partly due to weak network coverage in many areas. This is despite statistics indicating that the average fixed internet speed in Algeria is estimated at 12 Mbps(Speedtest Global Index, n.d.), while official statistics may claim an average fixed internet

speed of 12 Mbps in Algeria, the reality for consumers is often far from this ideal. Due to filtering and throttling policies, coupled with the inefficiency of copper cable infrastructure, actual browsing and download speeds rarely exceed 1 Mbps.

This discrepancy also extends to mobile internet speeds, which average around 22 Mbps, while fiber optic coverage remains very limited, especially in smaller towns.



According to Ookela.com, a website that measures internet speed, Algeria ranks 93th globally in mobile internet speed, with an average download speed of just 24.90 Mbps and an upload speed of 11.50 Mbps. Additionally, the latency, or delay in information transmission, is recorded at 28 milliseconds, which is relatively high.



Concerning the fixed internet, Algeria has experienced some improvements compared to the first half of 2024. Algeria ranks 146th globally, with an average download speed of 14.26 Mbps and an upload speed of less than 2.20 Mbps. The average latency is notably high at 19 milliseconds. These statistics highlight the significant challenges faced by internet users in Algeria. The combination of slow speeds, high latency, and limited access to fiber optic infrastructure severely restricts the internet's potential to contribute to economic development, education, and social inclusion. Addressing these issues necessitates a collaborative effort from both the government and the private sector to invest in infrastructure enhancements, foster fair competition, and implement policies that ensure a high-quality and affordable internet experience for all citizens (Speedtest Global Index, n.d.).

Since 2023 and into early 2024, Algeria's internet readiness has been characterized by slow speeds, frequent outages, and network congestion, particularly during peak hours and special occasions. While many countries have transitioned to ultra-fast internet and 5G mobile networks with speeds exceeding 500 Mbps, Algerian consumers question the feasibility of digitizing services and public life with such limited internet capabilities. Although there is widespread discussion about digitization, the essential role of robust internet infrastructure in facilitating this transformation is often overlooked.

This issue is particularly pronounced in many sectors such as higher education, where students and faculty suffer from inconsistent and low-quality internet access. Unlike universities worldwide that offer free Wi-Fi in libraries, common areas, and students' residences, students in

Algerian universities frequently rely on "ZERO" data packages just to access social media and maintain connectivity. This presents a considerable challenge as even universities lack adequate internet infrastructure, with some buildings having no access at all. Consequently, professors and students are compelled to use personal mobile data for distance learning to attain the Ministry's digitization objectives.

Despite the increase in Algeria's international internet bandwidth from 1.5 Tbps in 2020 to 9.8 Tbps in early 2024 (APS, 2024), future demand is expected to double as efforts intensify to digitize public administration and society's adoption of digital services grows. This situation requires the government to explore alternatives such as satellite internet provided by Elon Musk's Starlink project, which currently offers a feasible alternative to costly and vulnerable fiber optic infrastructure.

Neglecting these issues while pursuing digitization without first establishing a robust foundation of fast, reliable, and affordable internet access will only exacerbate existing inequalities and impede Algeria's progress in the digital era.

3- The significance of the private sector has been underestimated.

The private sector is often seen as the driving force behind economic growth. It's essential for creating wealth, generating jobs, and drawing in investments. Moreover, it drives innovation and sparks creativity. That's why the private sector is given top priority in projects focused on technological progress. In fact, many advancements come from this sector, as shown by tech giants like Samsung, Facebook, Google, and Apple, which have become a part of daily life for billions of people around the world.

Successful digital transformation goes side by side with re-engineering and optimizing business processes to best align with the digitization strategy. This transformation can only be successful with a clear strategy and strong leadership committed to implementing transformative changes. Research in business practices has shown that companies with successful digital operations possess a clear strategy, commitment from top management to accept change, employee engagement in the process, and a focus on evolving customer needs and interests(Schwertner, 2017).

Even though the pivotal role of the private sector in driving economic growth and innovation, Algeria's long-standing socialist traditions continue to influence policymakers' thinking, often marginalizing private enterprises in key initiatives and projects. This perspective views the private sector as somehow separate from the state, resulting in insufficient attention being given to digitizing interaction mechanisms with this vital segment of the economy. Despite the constitution guaranteeing equal rights and responsibilities for both private and public sectors, a sense of superiority and even hostility towards private businesses persists among state representatives at various levels. The new national vision for public service is not reflected in the absence of any national strategy or effort to digitize the private sector.

Additionally, different ministries approach projects and proposals submitted by private actors for technology import and localization with considerable uncertainty, stemming from a lack of trust in these entities. This, on the other hand, hinders their willingness to update their capabilities and respond to the rapid global advancements in technology and management practices.

Undermining the private sector will ultimately impede efforts to develop and digitize the state. This sector employs more than half of the workforce and contributes significantly to the national tax base. Therefore, it is imperative to firmly incorporate the private sector into any national digital transformation strategy, recognizing it as a genuine partner with full rights and responsibilities. By leveraging the capabilities and dynamism of private enterprises, Algeria can accelerate its digital transformation journey, starting with the digitization of various transactions and extending to participation in decision-making at all levels.

Embracing a more inclusive and collaborative approach that recognizes the private sector as a key driver of progress is essential for Algeria to fully harness the potential of digitization and achieve its development goals.

4- Algeria's banking system necessitates immediate digital transformation.

The Algerian government's plan for reforming and digitizing the banking sector remains unclear. It is also uncertain whether this reform will differ from the illusory reforms promised by previous governments, which had little tangible impact on citizens' daily lives. Banking in Algeria has largely remained restricted to certain segments of the population, such as high-ranking officials, investors, and some depositors. The vast majority of people neither possess bank accounts nor set foot in banks, even avoiding walking past them due to the imposing presence of their grand buildings and stringent security measures.

Dozens of online banks have emerged globally, with PayPal being the most renowned. It is known for its security and speed in conducting financial transactions and offers multiple payment options. As the first online bank established 26 years ago, PayPal now boasts over 426 million customers and a turnover exceeding \$1.5 trillion. Since its inception in 1998, PayPal has been at the forefront of the digital commerce revolution, growing into a network connecting individuals and businesses in over 200 markets worldwide (*PayPal, Inc*, n.d.). Skrill is another prominent online payment bank for purchasing goods and services online, while Western Union is one of the most famous money transfer companies globally, allowing individuals to send and receive funds through its branches worldwide.

Most of these banks are not authorized in Algeria, and Algerians can only interact with them through third parties. This is because the authorities are highly sensitive to any entities dealing with foreign currency. Nevertheless, citizens have managed to circumvent these restrictions and engage with foreign virtual banks, increasingly transacting significant sums, particularly through Wise and Paysera, among other virtual banks.

This growing trend highlights the demand for accessible and convenient digital banking solutions in Algeria. The government needs to recognize this demand and prioritize the

modernization and digitization of the banking sector. This includes facilitating the entry of reputable international online banks, fostering the development of local fintech solutions, and promoting financial inclusion by making banking services more accessible to all segments of society. By embracing digital transformation in the banking sector, Algeria can unlock significant economic and social benefits for its citizens and enhance its competitiveness in the global market.

5- modernizing and streamlining the tax system

To digitize Algeria's tax sector, the General Directorate of Taxes (DGT) has begun the essential task of modernizing this sensitive sector and integrating all its data into a digital network to enhance control and governance.

The DGT has initiated the deployment of the Tax Management System (SGF), despite significantly behind its global counterparts. It has also expanded the "Jabayatic" tax information system to numerous wilayas after piloting it in select model cities and provinces.

These steps are a response to numerous calls from economic experts and stakeholders to restrain the rampant corruption plaguing the sector, which leads to substantial financial losses due to various forms of fraud and evasion. However, the manner in which the digitization of this apparatus is being carried out raises certain concerns. One key issue is the lack of training for the human resources responsible for transferring a vast legacy of records to servers. Additionally, there is a culture of resistance to change, which is somewhat understandable given that these personnel are often suspected of involvement in corruption at various levels.

By dealing these challenges and implementing effective measures to ensure transparency and accountability, Algeria can create a more equitable and efficient economic environment that benefits both businesses and consumers.

6- The absence of vision and planning

Experience has shown that the absence of a clear vision and plan, at least in the medium and long term, can render any project a mere fleeting cloud that fails to deliver. In Algeria, where haphazardness, improvisation, and empty rhetoric often dominate, this point needs to be reiterated constantly. Decision-makers appear to have a lack of trust in the idea of a 'vision,' which has enabled numerous nations to move forward by relying on a defined program of action and clear objectives Providing a specific timeline for implementation over a specific period.

The absence of a political and economic vision has led to the failure of many promising ideas and projects, which were either consumed or suppressed in their infancy before even taking off or during their initial stages. The current issue is that the fate of the digitization project, which theoretically enjoys support from the highest authorities, might mirror that of other initiatives that have faded into oblivion after consuming substantial financial resources, time, and effort, leaving no tangible results in reality. Some projects are even resurrected from their demise for specific occasions and campaigns, but without any genuine economic or social impact.

Returning to the specifics of Algeria's digitization project, for which an entire ministry was created and later transformed into a High Commission for Digitization, there is a noticeable lack of communication, visibility, vision, and concrete plans. A visit to its website (<https://mns.gov.dz>) confirms that it is out of touch with time, with the latest activity under the "News" section dating back over a year. Browsing the website reveals the absence of any language option other than Arabic, further highlighting the country's digital shortcomings when clicking on the English language link, only to be redirected to the Arabic version. The website offers no information regarding the commission's vision for digitization, its achievements, or its objectives, apart from some activities and photos of the minister.

The state of digitization in the country is reflected in the website of the very ministry responsible for it, especially when one discovers that the ministry's title also includes the statistics sector, yet the website provides no statistics on any subject whatsoever, despite the minister being the head of the National Statistics Council. Consequently, legitimate questions arise: What is the purpose of this ministry? What impact does it have on the digitization of various sectors, and what is its responsibility in this regard? What infrastructure does it oversee? And why is its website, which should be the primary interface for any digitization effort, in such a state of disarray?

These observations paint a concerning picture of the lack of direction and effectiveness in Algeria's digitization efforts. Addressing these shortcomings requires a fundamental shift in approach, starting with the development of a clear and comprehensive national digitization strategy, coupled with effective leadership, transparent communication, and genuine commitment to invest in the necessary infrastructure and human resources. Only by tackling these fundamental challenges can Algeria truly tap into the transformative power of digitization, setting the stage for a brighter and more equitable future.

7- CONCLUSION:

Although Algeria began its digital transformation journey several decades after many other countries, it has started making progress in this area since the start of this decade. However, the path is filled with challenges, even though there are significant opportunities to digitize public affairs and transform administrative and economic systems. Algeria faces several hurdles, such as weak telecommunications and internet infrastructure, a lack of digital skills, and minimal involvement from the private sector. These challenges stem from both internal and external factors.

Internal Factors:

Unequivocal government support: This support has been evident in cabinet meetings driven by the President himself, who has demonstrated strong commitment and interest in this area through the launch of the "Digital Algeria 2025" strategy.

Public awareness of the importance of digital transformation: This plays a crucial role in its success by mitigating the effects of a culture resistant to change. This can be achieved by involving civil society and institutions of political and social upbringing in promoting a digital

culture that encourages the use of digital technology in various aspects of life. However, this has not been observed in the Algerian case, where the government has remained alone in the field with no visible role played by other actors in supporting this process.

Lack of digital skills: This gap in government efforts stems from the absence of a culture of training and retraining for human resources and failing to unleash creativity through startups, which have been much discussed but whose role in supporting digitization remains unclear. This observation applies to educational and cultural institutions, places of worship, and other entities.

External Factors:

International cooperation: This path, which requires the combined efforts of all actors in the economic, social, and cultural spheres, is facing considerable resistance in most sectors. The authorities are attempting to overcome this resistance through the use of symbolic force, neglecting flexible solutions that mobilize all available material, financial, and human resources. Consequently, engaging in this process from the outset appears to be a submission to global technological constraints, with no indication of international cooperation with Algeria to transfer and localize modern technology, particularly in the security aspects that are a genuine concern for the Algerian authorities.

Addressing both internal and external challenges is crucial for Algeria to achieve its digital transformation goals. This requires a comprehensive and collaborative approach that involves not only the government but also the private sector, civil society, and educational institutions. By fostering a culture of innovation, investing in digital skills development, and engaging with international partners, Algeria can position itself to reap the benefits of the digital revolution and build a more prosperous and inclusive future for its citizens.

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