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Understanding Factors Influencing Employee Adoption of Digital Tools in the Tax Sector : A Case Study of Jibaya'tic

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Abstract

The successful implementation of digital transformation in public administration depends largely on employees' willingness to adopt new technologies. This study explores the behavioral factors influencing the adoption of Jibaya'tic, a digital tool implemented within Algeria's tax administration. Drawing upon the Unified Theory of Acceptance and Use of Technology (UTAUT), the research investigates the roles of performance expectancy, effort expectancy, social influence, and facilitating conditions in shaping behavioral intention and actual system use. Conducted under the supervision of the central tax authority, the study is based on a sample of 82 employees working at the Directorate of Large Enterprises and two tax centers located in Bab Ezzouar and Rouiba. Findings indicate that effort expectancy and facilitating conditions significantly affect adoption, while performance expectancy and social influence show limited influence. Additionally, the analysis highlights the moderating effects of age, gender, experience, and seniority. The results provide important insights for enhancing digital tool implementation and support the advancement of e-government initiatives within public sector institutions.

Keywords : Digital Transformation, Technology Adoption, UTAUT, Public Administration, Employee Behavior, Jibaya'tic, Algeria.

Résumé

La réussite de la transformation numérique dans l'administration publique dépend en grande partie de l'adhésion des employés aux technologies numériques. Cette étude examine les facteurs comportementaux influençant l'adoption de Jibaya'tic, un outil numérique déployé au sein de l'administration fiscale algérienne. Fondée sur le modèle théorique UTAUT (Unified Theory of Acceptance and Use of Technology), la recherche analyse l'impact des attentes de performance, de la facilité d'utilisation, de l'influence sociale et des conditions facilitatrices sur l'intention comportementale et l'utilisation effective du système. Réalisée sous la supervision de l'administration fiscale centrale, l'étude repose sur un échantillon de 82 employés travaillant au sein de la Direction des Grandes Entreprises et de deux centres fiscaux situés à Bab Ezzouar et Rouïba. Les résultats montrent que la facilité d'utilisation et les conditions facilitatrices ont un effet significatif sur le comportement d'adoption, tandis que les attentes de performance et l'influence sociale présentent un impact limité. L'analyse met également en évidence l'effet modérateur de l'âge, du sexe, de l'expérience et de l'ancienneté. Cette recherche propose des recommandations concrètes pour améliorer l'implémentation des outils numériques et renforcer les initiatives d'administration électronique dans le secteur public.

Mots-clés : Transformation numérique, adoption technologique, modèle UTAUT, administration publique, comportement des employés, Jibaya'tic, Algérie

ملخص

تعتمد فعالية التحول الرقمي في الإدارة العامة بشكل كبير على مدى استعداد الموظفين لتبني الأدوات التكنولوجية الحديثة. تهدف هذه الدراسة إلى تحليل العوامل السلوكية المؤثرة في تبني جبايتك، وهو أداة رقمية مطبقة ضمن الإدارة الجبائية الجزائرية. تستند الدراسة إلى النموذج الموحد لقبول واستخدام التكنولوجيا (UTAUT) لتحليل تأثير كل من توقعات الأداء، سهولة الاستخدام، التأثير الاجتماعي، والظروف الميسرة على نية الاستخدام والاستخدام الفعلي للنظام. أنجزت الدراسة تحت إشراف الهيئة المركزية للضرائب، واستندت إلى عينة مكونة من 82 موظفًا يعملون في مديرية المؤسسات الكبرى ومركزين جبائيين في منطقتي باب الزوار والروبية. أظهرت النتائج أن سهولة الاستخدام والظروف الميسرة لهما تأثير كبير على سلوك التبني، بينما كان تأثير توقعات الأداء والتأثير الاجتماعي محدودًا. كما كشفت التحليلات عن وجود تأثيرات معدلة تتعلق بالعمر، والجنس، والخبرة، والأقدمية. تقدم هذه الدراسة توصيات عملية تهدف إلى دعم تنفيذ الأدوات الرقمية وتعزيز نجاح مبادرات الحكومة الإلكترونية داخل المؤسسات العمومية.

الكلمات المفتاحية: التحول الرقمي، تبني التكنولوجيا، نموذج UTAUT، الإدارة العامة، سلوك الموظف، جبايتك، الجزائر

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From Hadil:

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And if this is the final page, then let it be with peace because I gave it everything I had, and I'm proud of how far I've come.

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Abbreviations List

DGI : The General Directorate of Taxes (Direction Générale des Impôts)

DGE : Directorate of Large Enterprises (Direction des Grandes Entreprises)

CDI : Tax Centers (centres des impôts)

UTAUT: Unified Theory of Acceptance and Use of Technology

PE: Performance Expectancy

EE: Effort Expectancy

SI: Social Influence

FC: Facilitating Conditions

BI: Behavioral Intention

General Introduction

Introduction

Over the past two decades, digital transformation has emerged as a critical force shaping both private and public sectors around the world (Schwab, 2017; Heeks, 2018). Driven by advances in information and communication technologies (ICT), governments are increasingly turning to digital platforms to improve service delivery, administrative efficiency, and citizen engagement (Heeks, 2018; Odeh, 2019). Algeria is no exception to this trend. Through initiatives such as the e-Algeria program, the country has made strategic efforts to modernize its public services, particularly in sectors like education, healthcare, and taxation (Ministry of Post and Telecommunications, n.d.).

In the private sector, Algeria saw early adoption of digital technologies in banking, telecommunications, and e-commerce. The public sector followed, albeit at a slower pace, due to regulatory and infrastructural constraints (Salama, 2019; Addis Tax Initiative, 2023). Notable progress has been made in health (e.g., the Chifa platform) (National Social Insurance Fund for Employees, n.d.), education (e.g., Moodle, Google Classroom, and PROGRES) (Ministry of Higher Education and Scientific Research, n.d.), and more recently, in the tax sector through the launch of the Jibaya'tic platform (Ministry of Finance, General Directorate of Taxes, n.d.). Jibaya'tic enables online tax declarations, payments, and access to fiscal information. It represents a cornerstone in Algeria's digital public finance strategy, intended to streamline tax administration and improve transparency (Faiz, 2022).

However, despite the technical potential of these platforms, successful implementation often faces significant challenges. Resistance to change, lack of digital literacy, and limited infrastructure especially in rural areas remain barriers to full adoption (Yassien, 2023; Ahmad et al., 2021; Salama, 2019). In the tax sector specifically, employees and users alike experience difficulties related to unfamiliarity with the system, poor internet connectivity, and lack of confidence in digital security (Suharti & Susanto, 2014; Plewa et al., 2012). These challenges highlight the importance of focusing not just on the technology itself, but on the human and organizational factors that affect its use.

To address these issues, it is crucial to measure the degree of employee acceptance of digital tools before their widespread implementation (Deng, Mo, & Yang, 2022; Talukder, 2012). The Unified Theory of Acceptance and Use of Technology (UTAUT) offers a robust framework for doing so. Developed by Venkatesh et al. (2003), the model identifies four core constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions that influence a user's intention to adopt a technology. Over time, the UTAUT model has been refined and extended to UTAUT2 to better capture technology adoption behaviors in consumer and voluntary-use contexts. This development was necessary because the original model, while effective in organizational settings, did not fully account for motivational factors such as enjoyment, cost perceptions, or habitual use patterns that significantly influence individuals' acceptance of technology outside formal work environments. UTAUT2 introduces new constructs like hedonic motivation, price value, and habit to provide a more comprehensive and context-sensitive understanding of technology acceptance (Venkatesh, Thong, & Xu, 2012).

This thesis explores the adoption of the Jibaya'tic digital platform within Algeria's tax administration through the lens of the Unified Theory of Acceptance and Use of Technology (UTAUT). Focusing on the insights and lived experiences of employees in the tax sector, the study investigates what drives or hinders the integration of digital tools in a public institutional setting. The results aim to enrich academic discourse while offering concrete recommendations to enhance the success of digital transformation initiatives in Algeria—especially in environments where employee involvement plays a critical role (Ciborra, 2002; Ifenthaler & Schweinbenz, 2013; Tarafdar et al., 2010).

Context of the Study:

Across the globe, governments are accelerating efforts to digitize public services in a bid to enhance efficiency, transparency, and citizen satisfaction. The integration of Information and Communication Technologies (ICT) in public administration commonly referred to as e-government has become a central pillar of modernization in both developed and developing countries (Heeks, 2018). Countries such as Estonia, Singapore, and the UAE have emerged as pioneers in digital governance, leveraging ICT to simplify administrative procedures, reduce corruption, and promote data-driven decision-making (UN E-Government Survey, 2022).

In Algeria, the government has recognized the imperative to digitalize its public institutions. Through national strategies such as *e-Algerie 2013* and *Algerie Numérique 2020*, multiple ministries have launched digital platforms aimed at improving public service delivery and administrative efficiency (Ministry of Post and Telecommunications, n.d.). One prominent example is the Jibaya'tic platform, initiated by the General Directorate of Taxes (DGI). This platform enables taxpayers to declare and pay taxes online, streamlining interactions between citizens and tax authorities (Ministry of Finance – DGI, n.d.).

Despite the strategic value of platforms like Jibaya'tic, adoption rates among public employees remain uneven. While the platform is intended to improve performance, reduce administrative burdens, and modernize the tax sector, its success largely depends on the extent to which employees themselves embrace and use the system in their daily operations (Faiz, 2022). Previous research suggests that digital transformation initiatives in the public sector often face resistance from employees due to a variety of socio-organizational and technological factors (Talukder, 2012; Ahmad et al., 2021).

To address these obstacles, researchers have increasingly relied on theoretical models like the Unified Theory of Acceptance and Use of Technology (UTAUT), proposed by Venkatesh et al. (2003), to better understand user behavior. This framework proves especially valuable in the Algerian context, where the rollout of e-government initiatives is often hindered by institutional rigidity, inadequate infrastructure, and limited digital competencies among public employees (Salama, 2019; Yassien, 2023).

Problem Statement:

As digital governance becomes a cornerstone of public sector reform, employee adoption of new technologies emerges as a critical success factor. Numerous studies have shown that beyond infrastructure and policy, the behavioral intentions and perceptions of users particularly public servants can significantly influence the effectiveness of digital platforms (Dwivedi et al., 2017). In Algeria, the rollout of the Jibaya'tic digital tax platform reflects the state's ambition to modernize its fiscal administration. However, challenges such as resistance to change, limited digital competencies, and institutional rigidity continue to hinder widespread adoption (Al-Shafi & Weerakkody, 2010).

Therefore, the central research question of this study is:

“What are the key factors influencing Algerian public sector employees’ adoption of the Jibaya'tic digital tax platform?”

The question can be elaborated into two sub-questions:

1. What are the main organizational and psychological sources of resistance to change among employees regarding the Jibaya'tic platform?
2. How does the bureaucratic structure or rigidity within Algerian public institutions affect the adoption of digital tools like Jibaya'tic?

Objectives of the Study

The primary objective of this research is to examine the key factors influencing the adoption of the Jibaya'tic digital tax platform among public sector employees in Algeria. Grounded in the Unified Theory of Acceptance and Use of Technology (UTAUT), the study seeks to assess how performance expectancy, effort expectancy, social influence, and facilitating conditions shape employees’ acceptance and use of the platform. Specifically, the Study aims to achieve the Following objectives :

- 1. Investigating the factors that influence Algerian public employees’ behavioral intention to use the Jibaya'tic platform, using the UTAUT framework.**
- 2. Analyzing the role of performance expectancy (PE) in shaping employees’ perceptions of the platform’s usefulness and its effect on their intention to use it.**
- 3. Examining the impact of effort expectancy (EE) on the ease of use perceived by employees and its influence on their willingness to adopt the system.**
- 4. Assessing the influence of social influence (SI), including peer and managerial expectations, on employees’ behavioral intention to use Jibaya'tic.**
- 5. Evaluating the effect of facilitating conditions (FC), such as infrastructure and technical support, on the actual use of the platform.**

6. Identifying practical recommendations for the General Directorate of Taxes (DGI) and policymakers to enhance user adoption and digital transformation in the Algerian public administration.

Through these objectives, the study aims to provide actionable insights into employee behavior, enabling public institutions to improve the implementation, adoption, and sustainability of e-government platforms such as Jibaya'tic.

Originality

This thesis is original in its application of the UTAUT model to the Algerian public sector, particularly in the context of tax digitalization. While the UTAUT model has been widely utilized in other sectors and countries, its application to employee adoption of digital platforms within Algerian public administration remains underexplored. This study is among the first to empirically assess the behavioral drivers behind the use of the Jibaya'tic system by civil servants. By focusing on this platform, the research introduces a new dimension to the academic discourse on e-government adoption in developing countries.

Rationale of the Study

Despite national efforts to modernize public administration through digital platforms like Jibaya'tic, adoption by public sector employees in Algeria has been inconsistent and under-researched. While similar studies have been conducted in countries like Egypt, Indonesia, and Nigeria, there is a notable gap in understanding employee behavior in the Algerian context. This study aims to fill that gap by applying a proven theoretical model (UTAUT) to identify barriers and enablers of digital adoption within the Algerian tax administration. Insights from this research will support the successful implementation of e-government strategies, inform training and support systems, and enhance institutional readiness for future digital transformations. It also contributes to the broader academic literature on public sector innovation and digital governance in developing countries.

Choice of Theme

Subjective Reason:

Our choice of this research theme is deeply rooted in our academic backgrounds and personal aspirations. As students specializing in Entrepreneurship and Project Management, we are constantly exploring the intersection of innovation, strategy, and human behavior. This research allows us to integrate and apply knowledge from our previous specializations: Marketing for one of us, and Human Resources for the other, creating a rich, interdisciplinary approach. The adoption of digital technologies, especially in traditionally rigid sectors such as public administration, presents a fascinating challenge that resonates with our shared passion for driving meaningful change through innovation. By exploring the adoption of the Jibaya'tic digital platform, we are not only venturing into a new and complex sector: the Algerian tax system, but also pursuing a deeper understanding of how individuals respond to institutional

change, technology, and reform. This journey reflects our entrepreneurial spirit: to step into uncharted territory with the goal of creating value, solving real-world problems, and contributing to the modernization of public services in our country.

Objective Reason:

The digitalization of public administration has become a critical priority for modern states seeking efficiency, transparency, and citizen satisfaction. In Algeria, the launch of platforms such as Jibaya'tic represents a major step toward this transformation. However, the success of such platforms depends not only on technological infrastructure, but also on the willingness and ability of employees to adopt and use them effectively. Despite the importance of this issue, little academic research has been conducted on the behavioral factors influencing digital tool adoption in the Algerian public sector. By applying the Unified Theory of Acceptance and Use of Technology (UTAUT), our research seeks to fill this gap. We aim to provide both theoretical insights and practical recommendations that will support policymakers, public administrators, and digital transformation leaders in making informed decisions. This study also aspires to contribute to the growing body of research on e-government in developing countries, reinforcing the role of human behavior as a critical success factor in the implementation of technological innovation.

Host Organization

This research was conducted in collaboration with the Ministry of Finance of Algeria, specifically within the General Directorate of Taxes (Direction Générale des Impôts – DGI). More precisely, we were hosted by the Department of Modernization and Digitalization (Service de la Modernisation et de la Digitalisation), which plays a central role in the digital transformation of the national tax system.

To complement our theoretical and analytical work, we also carried out field studies in two additional key structures under the DGI:

- The Directorate of Large Enterprises (Direction des Grandes Entreprises – DGE) which manages tax-related matters for major companies in Algeria.
- Two Local Tax Centers (Centres des Impôts – CDI) located in Bab Ezzouar and Rouiba, which are responsible for delivering tax services and implementing digital tools at the local level.

This multi-site collaboration provided us with a comprehensive view of the digitalization process from both a strategic and operational perspective. It allowed us to gather first-hand data from a variety of employees with different roles and responsibilities, thereby enriching our understanding of the behavioral and organizational dynamics involved in the adoption of the Jibaya'tic digital platform.

By partnering with these institutions, we ensured that our research remains closely tied to the realities of the public sector, making our findings both academically robust and practically actionable for improving digital transformation initiatives within Algeria's tax administration.

Research epistemology:

Epistemological Approach:

Our chosen epistemological approach is rooted in a deductive and positivist research tradition, which allows us to transition from well-established theoretical frameworks to empirically testable hypotheses. This study applies the Unified Theory of Acceptance and Use of Technology (UTAUT) as the guiding model to understand employee adoption of the Jibaya'tic platform within the Algerian tax administration. As highlighted by Venkatesh et al. (2003), the UTAUT model provides a structured basis for identifying causal relationships between behavioral constructs and technology acceptance.

A deductive approach, as defined by Streefkerk (2019), involves moving from general theory to specific observation. In this research, the theoretical propositions of UTAUT namely performance expectancy, effort expectancy, social influence, and facilitating conditions are translated into measurable variables and tested against real-world data collected from public sector employees. This process ensures the systematic validation of theoretical assumptions in a specific institutional setting.

The rationale for this approach lies in the objective of producing generalizable findings that can inform both academic theory and practical implementation strategies. By anchoring the research in a deductive logic, the study aligns with positivist principles of objectivity, replicability, and methodological rigor. It further ensures that the analysis remains structured, transparent, and evidence-based, enhancing the scientific reliability and practical relevance of the results.

Methodological approach/ Research methodology:

This study adopts a quantitative research methodology to analyze employee adoption of the Jibaya'tic platform in the Algerian tax administration. Data was collected using a structured questionnaire based on the Unified Theory of Acceptance and Use of Technology (UTAUT). The questionnaire was distributed to employees across multiple tax offices, including the Direction of Large Enterprises (DGE) and two Centers of Taxation (Bab Ezzouar and Rouiba).

To analyze the data, this study uses JASP, a free and open-source statistical software, to perform Structural Equation Modeling (SEM). This includes assessing the reliability and validity of the

UTAUT constructs and examining the structural relationships between them through path analysis and regression.

This methodological approach ensures transparency, replicability, and accessibility of the analytical process, in alignment with current open science standards

Chapter 01: THEORETICAL FRAMEWORK

Section 01:

Literature review

Digitalization, initially propelled by advancements in computing and telecommunications in the private sector, gained significant momentum with the Fourth Industrial Revolution, which integrated AI, cloud computing, and big data (Schwab, 2017).

The public sector's shift toward digitalization has been primarily driven by the need for greater efficiency, transparency, and improved public service delivery. Governments around the world have harnessed digital technologies to streamline operations, reduce corruption, and foster citizen engagement (Heeks, 2018). In Algeria, this transformation began with the launch of the e-Algeria program by the Ministry of Post and Telecommunications, which aimed to modernize government services and integrate ICT solutions across various sectors (Ministry of Post and Telecommunications, n.d., accessed February 4, 2025).

Sector-specific digitalization efforts have had a profound impact in key areas. In healthcare, for instance, the Chifa system, implemented by the National Social Insurance Fund for Employees, has greatly enhanced patient care by enabling real-time access to medical records and treatment plans (National Social Insurance Fund for Employees, n.d., accessed February 4, 2025). In education, the Ministry of Higher Education and Scientific Research introduced the PROGRES platform to improve services for the university community, enabling online course enrollment and the management of academic records (Ministry of Higher Education and Scientific Research, n.d., accessed February 4, 2025). The tax sector has also undergone significant digital transformation through the Jibaya'tic platform, launched by the General Directorate of Taxes, which facilitates electronic tax filings and payments, improving efficiency and transparency (Ministry of Finance, General Directorate of Taxes, n.d., accessed February 4, 2025).

According to Odeh (2019), implementing technology within organizations can enhance business transparency and operational efficiency. However, adopting digital solutions introduces challenges that must be addressed to ensure successful implementation and sustainability (Yassien, 2023). For instance, Rural areas often lack the necessary infrastructure for high-speed internet and digital tools, hindering the deployment of e-government services like online tax systems and digital healthcare platforms (Salama, 2019). Financial limitations further impede progress, as public sector entities frequently struggle to secure the adequate funding for advanced technologies and cybersecurity measures (Madsen, Miller, & John, 2005). Additionally, concerns about data privacy and security are critical, as digitalization heightens

the risk of cyber threats and unauthorized access to sensitive governmental information (Park & Im, 2012).

Resistance to change is another persistent issue, employees may fear job displacement or find it challenging to adapt to new technologies (Hampel & Martinsons, 2009). Concerns about job security and increased workload stress contribute to resistance against digital transformation (Ahmad et al., 2021). According to Talukder (2012), employees often hesitate to embrace new technologies unless they perceive direct benefits, with fear of job loss and steep learning curves creating psychological barriers.

In the context of the tax sector, both taxpayers and officials encounter difficulties due to unfamiliarity with new systems, inconsistent internet access, and limited technical support (Faiz, 2022). Tax employees may experience increased stress due to the complexity of new digital platforms, as they must learn and adapt to evolving technologies while managing taxpayer inquiries (Suharti & Susanto, 2014). Moreover, data security and privacy concerns add complexity, requiring tax officials to comply with strict regulations to protect taxpayer (Plewa, Troshani, Francis, & Rampersad, 2012).

Further complicating digital transformation efforts are issues like inadequate technological infrastructure, especially in developing regions, which hampers the adoption of digital systems (Addis Tax Initiative, 2023). Data quality and integration pose significant challenges, as transitioning from physical to digital records requires digitizing existing data and integrating information from various agencies with differing protocols (Tripathy, 2024). Moreover, Cultural resistance to change among employees accustomed to traditional methods can impede the successful implementation of new technologies (Ballards LLP, 2023).

as result, understanding employees' attitudes, perceptions, and readiness to adopt digital tools is key to ensuring a smooth transition and avoiding resistance-related challenges (Deng, Mo, & Yang, 2022). Assessing these factors before implementation assessment enables organizations to identify potential obstacles—such as lack of digital literacy, fear of job loss, or resistance to change—that could hinder the success of digital initiatives (Venkatesh et al., 2003). According to (Choi, 2011; Ifenthaler & Schweinbenz, 2013), assessing employee acceptance early allows managers to design targeted training programs, provide necessary support, proactively address concerns, and foster a more conducive environment for digital adoption. This approach also aids in customizing digital tools to meet the specific needs of the workforce, ensuring the

technology is both user-friendly and relevant to their tasks. (Ciborra, 2002; Tarafdar et al., 2010). Strategically measuring acceptance not only reduces the risks of failure but also promotes a culture of collaboration and innovation, essential for the long-term success of digitalization in any sector, especially in the public domain (Davis, 1989).

Numerous studies have explored the impact of digital transformation on human resource management (HRM) through the lens of the Unified Theory of Acceptance and Use of Technology (UTAUT). Researchers such as (Yusoff et al. (2010), Erdoğanmuş and Esen (2011), Giri et al. (2019), and Anjum and Islam (2020) have applied UTAUT to analyze the adoption and integration of digital technologies in HRM. UTAUT has been firmly approved as able to demonstrate a systematic description regarding the level of technology acceptance (Khechine, Lakhal, & Ndjambou, 2016).

In essence, UTAUT is a theory that measures the level of acceptance of a technology by a group of users with behavioral intensity as a result of evaluating user behavior using these technologies (Thomas, Singh, & Gaffar, 2013; Williams, Rana, & Dwivedi, 2015).

UTAUT segregates the assessment of the level of technology acceptance into four main elements: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Condition (FC) (Venkatesh et al., 2003). According to (Rumangkit, S., Surjandy, & Billman, A., 2023), performance expectations (PE) express the degree to which an individual believes that using a system will help him achieve gains in job performance. Effort expectancy (EE) assesses the degree of ease associated with using a system (Fedorko, I., Bačík, R., & Gavurova, B., 2021). Social influence (SI) assesses the degree to which an individual perceives the importance of others' beliefs in using a new system (Bozan, K., Parker, K., & Davey, B., 2016). Ultimately, FC indicates the level of user confidence in using a technology based on the available infrastructure and other facilities (Mahzan & Lymer, 2014). These elements are moderated by variables that describe the users (Venkatesh et al., 2003).

Since the introduction of UTAUT, researchers have increasingly tested its applicability in explaining technology compatibility and adoption (Afonso et al., 2012; Kabanda & Brown, 2017; Sezer & Yilmaz, 2019; Wang, Wu, & Wang, 2009). While UTAUT has been widely employed in technology adoption studies, it has also faced several critiques. One key limitation, as highlighted by (Shachak et al. (2019), is that UTAUT oversimplifies the adoption process by focusing primarily on individual perceptions while neglecting the broader socio-technical

system. This includes factors such as governance, project management, workflow integration, and organizational culture, which play a crucial role in technology adoption. Additionally, Bagozzi (2007) criticizes UTAUT's reliance on behavioral intention as a direct predictor of technology adoption, arguing that intentions can change over time and do not always lead to actual usage. Furthermore, Abbad (2021) suggests that the extensive use of UTAUT in research—particularly in studies focusing on students—has led to saturation, limiting its ability to provide novel insights. Another critique, raised by Shachak et al. (2019), is that UTAUT fails to account for post-adoption behaviors, such as long-term implementation and sustained technology use within organizations. Moreover, Benbasat & Barki (2007) and van Raaij & Schepers (2008) argue that contextual and geographical differences may diminish the model's relevance. UTAUT's constructs may not have the same significance in developing countries, necessitating a re-evaluation of its applicability in diverse economic and cultural contexts (source).

Despite these critiques, prior research has shown that employees' willingness to adopt digital tools is influenced by organizational culture, available technical support, and management commitment to digital transformation, all of which align with UTAUT's core constructs (Bondarouk & Ruël, 2013).

The Unified Theory of Acceptance and Use of Technology (UTAUT) was developed to unify previous models and provide a structured framework for understanding technology adoption (Venkatesh & Bala, 2008). Initially designed for workplace settings, UTAUT primarily examined how organizational factors influenced employees' adoption of digital tools. However, researchers identified limitations in its applicability to consumer behavior, as UTAUT was primarily developed for mandatory workplace technology adoption and did not fully capture voluntary and hedonic aspects of consumer behavior. Studies have shown that consumer adoption is often influenced by factors such as enjoyment, habit, and perceived financial cost, which UTAUT does not explicitly address (Williams, Rana, & Dwivedi, 2015; Escobar-Rodríguez & Carvajal-Trujillo, 2014). To address these limitations, UTAUT2 was introduced, incorporating additional constructs, hedonic motivation, price value, and habit, that better capture voluntary consumer adoption (Venkatesh, Thong, & Xu, 2012). Unlike UTAUT, which focuses on structured environments, UTAUT2 explains technology use in more flexible, individual-driven contexts such as e-commerce and social media (Al-Marroof et al., 2022).

Despite the evolution of UTAUT into UTAUT2, UTAUT remains highly relevant in workplace research, particularly in the study of digital transformation in human resource management

Section 02:

CONCEPTUAL FRAMEWORK

1. Introduction

The rapid advancement of digital technology has significantly transformed organizational processes, particularly in the adoption of digital collaboration tools in workplaces (Venkatesh et al., 2012; Dwivedi et al., 2019). Organizations are increasingly relying on these tools to enhance productivity, efficiency, and communication among employees (Alalwan et al., 2017; Chatterjee et al., 2021). However, technology adoption is not always straightforward and depends on multiple factors, including perceived usefulness, ease of use, and social influence (Venkatesh et al., 2003; Taherdoost, 2018). To understand the determinants of technology adoption, researchers have proposed several theoretical models. Among them, the Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh, Morris, Davis, and Davis (2003) has emerged as one of the most comprehensive and widely used models. This model integrates constructs from eight earlier models: the Technology Acceptance Model (TAM) (Davis, 1989), the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), the Theory of Planned Behavior (TPB) (Ajzen, 1991), the Innovation Diffusion Theory (IDT) (Rogers, 1995), the Motivational Model (MM) (Davis et al., 1992), the Model of PC Utilization (MPCU) (Thompson et al., 1991), the Social Cognitive Theory (SCT) (Bandura, 1986), and the Diffusion of Innovations (DOI) (Rogers, 1983), offering a robust framework to analyze user acceptance and behavioral intentions toward technology adoption.

2. Definition of UTAUT

The UTAUT model was introduced by Venkatesh et al. (2003) to provide a unified view of the factors influencing the acceptance and use of technology. According to Venkatesh et al. (2003), UTAUT posits that four key constructs influence technology adoption: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC). These constructs are moderated by age, gender, experience, and voluntariness of use. UTAUT extends previous models such as the Technology Acceptance Model (TAM) (Davis, 1989), Theory of Planned Behavior (TPB) (Ajzen, 1991), and Innovation Diffusion Theory (IDT) (Rogers, 1995). While these models focus on specific factors, UTAUT integrates multiple perspectives, making it a more holistic approach to understanding technology adoption. Studies have shown that UTAUT explains up to 70% of the variance in user intention to adopt technology, making it one of the most effective models in this field (Venkatesh et al., 2003).

2.1 Efficiency and Adaptations of UTAUT

Different researchers have expanded or modified UTAUT to fit specific contexts. For example, Venkatesh, Thong, and Xu (2012) introduced UTAUT2, which includes additional constructs like hedonic motivation and price value, particularly for consumer contexts. Similarly, Dwivedi et al. (2019) conducted a meta-analysis of UTAUT studies and highlighted variations in findings based on cultural and organizational settings. Alaiad and Zhou (2014) found that UTAUT's applicability varies depending on whether the adoption setting is voluntary or mandatory. These perspectives emphasize that while UTAUT provides a strong foundation, its effectiveness depends on contextual factors. For example, Venkatesh, Thong, and Xu (2012) introduced UTAUT2, which includes additional constructs like hedonic motivation and price value, particularly for consumer contexts. Similarly, Dwivedi et al. (2019) conducted a meta-analysis of UTAUT studies and highlighted variations in findings based on cultural and organizational settings. Alaiad and Zhou (2014) found that UTAUT's applicability varies depending on whether the adoption setting is voluntary or mandatory. These perspectives emphasize that while UTAUT provides a strong foundation, its effectiveness depends on contextual factors.

3. Key UTAUT Constructs

The UTAUT model consists of four key constructs that influence technology adoption: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions. These constructs are influenced by different theoretical foundations and play varying roles in determining user adoption.

3.1 Performance Expectancy (PE)

Performance Expectancy is defined as "the degree to which an individual believes that using a technology will help him or her attain gains in job performance" (Venkatesh et al., 2003). It is conceptually similar to Perceived Usefulness in TAM (Davis, 1989) and Relative Advantage in IDT (Rogers, 1995). Research consistently identifies Performance Expectancy as the strongest predictor of behavioral intention to use technology (Venkatesh et al., 2003; Tai & Ku, 2013). Studies have found that Performance Expectancy significantly influences technology adoption across various domains. For instance, Kijisanayotin et al. (2009) found that PE was the primary factor driving healthcare professionals to adopt electronic medical records. Similarly, Chou et al. (2018) found that Performance Expectancy was a key determinant of mobile commerce adoption. However, some studies have reported exceptions; for example, Schaper and Pervan (2007) found that in certain professional contexts, Performance Expectancy did not significantly impact adoption. Factors influencing Performance Expectancy include job

relevance, perceived benefits, and expected efficiency gains (Devolder et al., 2012). Additionally, gender and age moderate the effect of Performance Expectancy, with younger users and men being more influenced by perceived performance benefits (Venkatesh et al., 2003).

3.2 Effort Expectancy (EE)

Effort Expectancy is defined as "the degree of ease associated with the use of the system" (Venkatesh et al., 2003). It reflects users' perceptions of how easy or difficult a technology is to use. This construct is closely related to Perceived Ease of Use in TAM (Davis, 1989) and Ease of Use in IDT (Rogers, 1995). According to Tan et al. (2012), Effort Expectancy plays a crucial role, particularly in the early stages of adoption. Several studies confirm the significance of Effort Expectancy. Faqih and Jaradat (2015) found that users are more likely to adopt mobile commerce technologies if they perceive them as easy to use. Similarly, Teo and Noyes (2014) reported that pre-service teachers' intention to use technology was strongly influenced by Effort Expectancy. However, Morosan and DeFranco (2016) found that experienced users may not consider Effort Expectancy as a major factor, as they prioritize functionality over ease of use. Effort Expectancy is influenced by user experience, technology complexity, and system design. Additionally, research suggests that women, older adults, and individuals with lower technical expertise are more affected by Effort Expectancy (Venkatesh et al., 2003).

3.3 Social Influence (SI)

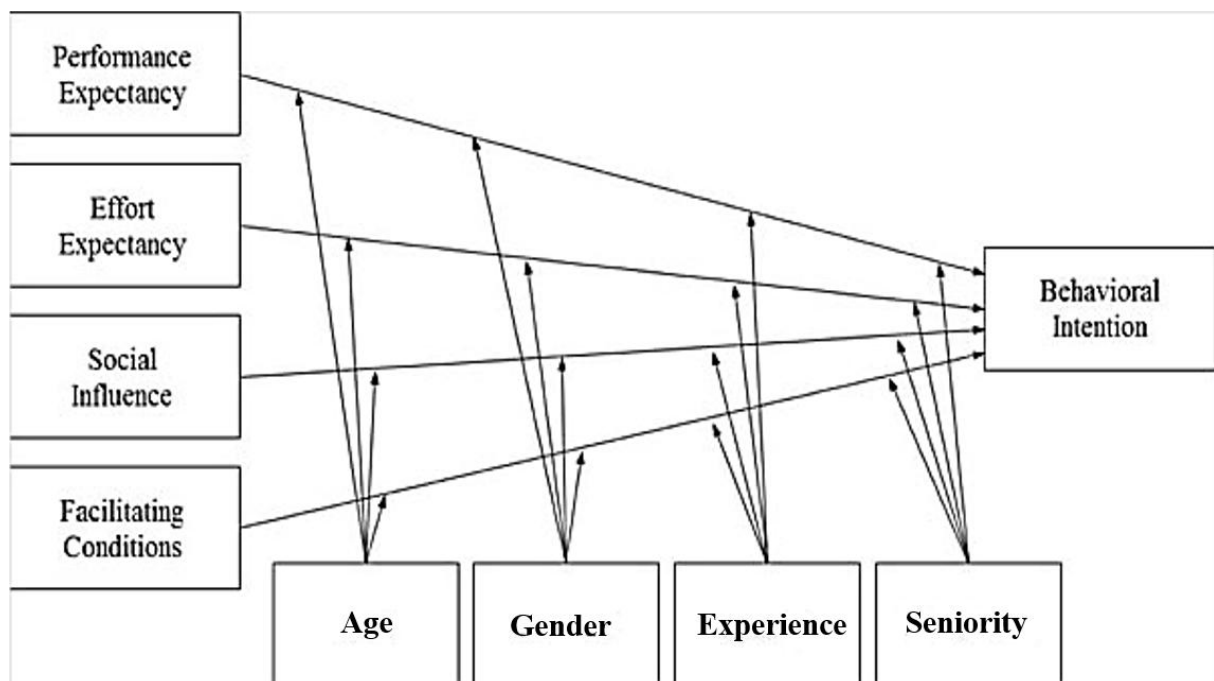
Social Influence is defined as "the degree to which an individual perceives that important others believe he or she should use the new system" (Venkatesh et al., 2003). This construct is rooted in Subjective Norm (TRA & TPB), Social Factors (MPCU), and Image (IDT) (Venkatesh et al., 2003; Rogers, 1995). It reflects how social norms, workplace policies, and peer pressure impact technology adoption (Ajzen, 1991). Empirical evidence highlights the role of Social Influence in various contexts. Hoque and Sorwar (2017) found that Social Influence was a major factor in older adults' adoption of mobile health technologies. Similarly, Dwivedi et al. (2019) confirmed that social norms significantly impact technology adoption in collectivist cultures. However, Bennani and Oumlil (2013) found that Social Influence had little impact in voluntary settings, where users made independent decisions. Social Influence is particularly strong in mandatory adoption environments, workplaces, and collectivist cultures (Venkatesh et al., 2003; Joa & Magsamen-Conrad, 2021).

3.4 Facilitating Conditions (FC)

Facilitating Conditions is defined as "the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the system" (Venkatesh

et al., 2003). This construct captures external factors such as available resources, technical support, and system compatibility, ensuring users can effectively adopt technology. Facilitating Conditions is influenced by **organizational policies, training programs, access to help desks, and IT infrastructure** (Venkatesh et al., 2012). Research suggests that **Facilitating Conditions play a crucial role in workplace environments** where users rely on organizational support to use new technologies effectively (Alalwan et al., 2017). For example, **Kijisanayotin et al. (2009)** found that strong IT infrastructure and training programs significantly increased healthcare professionals' adoption of electronic medical records. Similarly, **Alalwan et al. (2017)** found that mobile banking users were more likely to adopt the technology when they had access to reliable customer support. However, **in voluntary settings, Facilitating Conditions have a weaker effect** because users often rely on their own abilities rather than external support (Venkatesh et al., 2012). Furthermore, studies show that **experienced users are less affected by Effort Expectancy but continue to depend on Facilitating Conditions, such as system reliability and availability of technical support** (Venkatesh et al., 2003).

Figuer 01: Theory of UTAUT Diagram



Source: Developed through personal efforts based on Venkatesh et al., 2003;

4 Hypotheses:

Performance Expectancy: Performance expectancy refers to the extent to which an individual believes that utilizing a particular technology will improve job performance. It is a primary determinant of behavioral intention in technology adoption models, including the Unified Theory of Acceptance and Use of Technology (UTAUT). Venkatesh et al. (2003) identified performance expectancy as a crucial factor influencing an individual's intention to use digital tools, emphasizing that the perceived benefits of efficiency and productivity drive adoption. Similarly, research in the tax sector highlights that digital tools enhance accuracy, reduce workload, and facilitate compliance, making them valuable for employees (Davis, 1989). Employees are more likely to embrace digital tools when they perceive a direct correlation between technology use and performance improvements (Taherdoost, 2018). Therefore, employees in the tax sector will adopt digital tools if they believe these tools will enhance their job performance and effectiveness.

H1: Performance expectancy positively influences employees' intention to adopt digital tools in the tax sector.

Effort Expectancy: Effort expectancy is defined as the degree of ease associated with using a technology (Venkatesh et al., 2003). It encompasses the cognitive effort required to learn and operate digital tools, which significantly affects adoption intentions (Davis, 1989). Employees in the tax sector, who often deal with complex regulatory frameworks, may be hesitant to adopt digital tools if they perceive them as cumbersome or difficult to use (Al-Qeisi et al., 2014). Conversely, when digital tools are designed with user-friendly interfaces and require minimal training, employees exhibit higher adoption rates (Gupta & Arora, 2020). The perception of ease of use is particularly crucial for employees with limited prior experience in using advanced digital tools (Venkatesh et al., 2012).

H2: Effort expectancy positively influences employees' intention to adopt digital tools in the tax sector.

Social Influence: Social influence refers to the degree to which an individual perceives that important others believe they should use a particular technology (Venkatesh et al., 2003). In the workplace, social influence stems from colleagues, supervisors, and organizational culture, which collectively shape employees' attitudes towards technology adoption (Schepers &

Wetzels, 2007). Employees in the tax sector often rely on peer recommendations and managerial encouragement to determine the relevance of digital tools in their work. Research indicates that industries with rigid hierarchical structures, such as taxation, experience stronger social influence effects on technology adoption (Tarhini et al., 2015). When influential figures within the organization advocate for digital transformation, employees are more likely to follow suit (Venkatesh et al., 2003).

H3: Social influence positively affects employees' intention to adopt digital tools in the tax sector.

Facilitating Conditions: Facilitating conditions refer to the organizational and technical infrastructure that supports technology adoption (Venkatesh et al., 2003). Employees in the tax sector require adequate resources, including training programs, IT support, and clear regulatory guidance, to facilitate digital tool adoption (Ifinedo, 2012). The presence of well-structured training programs and accessible support mechanisms significantly enhances technology acceptance (Santos & Okazaki, 2016). In cases where organizations fail to provide adequate technical support, employees may resist digital transformation due to uncertainties about troubleshooting and system integration (Burton-Jones & Hubona, 2006).

H4: Facilitating conditions positively influence employees' actual use of digital tools in the tax sector.

Age: Age is a critical moderating factor in technology adoption, as it affects the way individuals interact with digital tools. Research suggests that younger employees are more open to adopting new technologies due to their familiarity with digital interfaces and adaptability to change (Venkatesh et al., 2003). Conversely, older employees may exhibit resistance due to a preference for traditional work methods (Morris & Venkatesh, 2000). In the tax sector, digital tools often require continuous learning, which younger employees may find easier to navigate compared to their older counterparts (Venkatesh et al., 2003).

H5: Age moderates the relationship between performance expectancy, effort expectancy, and social influence on the intention to adopt digital tools, with younger employees showing stronger relationships.

Gender: Gender differences influence technology adoption patterns, particularly in terms of perceived usefulness and ease of use. Research has shown that men are generally more

influenced by performance expectancy, whereas women place greater emphasis on effort expectancy when adopting digital tools (Venkatesh et al., 2003). In the tax sector, gender differences may affect how employees perceive digital transformation initiatives, with female employees potentially requiring additional training support to enhance ease of use perceptions (Venkatesh et al., 2003).

H6: Gender moderates the effect of performance expectancy and effort expectancy on the intention to adopt digital tools, with males showing a stronger relationship for performance expectancy and females for effort expectancy.

Experience: Experience plays a crucial role in determining employees' comfort levels with digital tools. Employees with prior experience in digital systems are more likely to adopt new tools due to familiarity and perceived ease of use (Venkatesh et al., 2012). In the tax sector, employees with extensive experience using software applications will find it easier to integrate new digital tools into their workflow (Venkatesh et al., 2012).

H7: Experience positively moderates the relationship between facilitating conditions and actual use of digital tools, with more experienced employees showing a stronger relationship.

Seniority (Years Working with Jibaya'tic): Seniority in terms of years spent using the Jibaya'tic platform may influence employees' attitudes toward adopting and using digital tools. Employees with longer experience using Jibaya'tic may develop fixed routines and preferences within the platform, potentially leading to resistance when updates or new features are introduced (Burton-Jones & Hubona, 2006). In contrast, employees who are newer to the platform may be more adaptable and open to exploring its functionalities, as they are still in the process of developing their usage habits and expectations (Burton-Jones & Hubona, 2006).

H8: Seniority with Jibaya'tic negatively moderates the relationship between effort expectancy and the intention to adopt new digital tools, with more experienced users showing a weaker relationship.

Chapter 02: METHODOLOGICAL CHAPTER

Section 01: METHODOLOGY

Methodology

In this methodological chapter, the objective is to measure the degree of acceptance of the Jibaya'tic digital platform by employees of the Algerian tax administration, using the theoretical framework developed by Venkatesh et al. (2003): The Unified Theory of Acceptance and Use of Technology (UTAUT). This model identifies four key constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions as critical factors that shape behavioral intention and technology usage. This study applies the UTAUT framework to empirically **assess** how these constructs influence employee adoption of Jibaya'tic in a public sector context.

This chapter presents the research's epistemological positioning, research design, and the tools used for data collection, including a structured questionnaire based on UTAUT.

1.Methodological Approach:

Our study seeks to measure the degree of acceptance of the Jibaya'tic platform by employees of the Algerian tax administration. The goal is to determine to what extent users adopt the system, what factors influence their usage, and what barriers may hinder broader acceptance and integration. To meet this objective, a quantitative approach was adopted. This method allows for the systematic collection of measurable data, enabling statistical analysis to identify patterns and relationships between variables. It is especially suitable for testing theoretical models like UTAUT and for providing insights that can inform strategic decisions on digital implementation in public institutions.

The research was conducted during a field internship within the DGI and included data collection from several major structures where the platform is operational: The Directorate of Large Enterprises (DGE) in Ben Aknoun, and two Tax Centers (CDIs) namely CDI Bab Ezzouar and CDI Rouiba, all located in Algiers.

A UTAUT-based questionnaire was distributed to employees working with the Jibaya'tic platform to assess their perceptions of digital tool adoption. This questionnaire targeted core UTAUT variables: performance expectancy (perceived usefulness), effort expectancy (ease of use), social influence, and facilitating conditions. The responses provide insight into the behavioral intention and actual usage of the system, helping to identify both barriers and enablers in the digital transformation process within the public tax administration sector.

2.Research Method and Tools:

2.1. Data Collection Tool:

To gather the necessary data, we used a structured questionnaire as the primary tool. Structured questionnaires are particularly effective in quantitative research as they allow for systematic data collection and enable the evaluation of relationships between multiple variables through statistical analysis. The use of a questionnaire ensures consistency across responses and facilitates comparative evaluation across different demographic segments and work environments.

A. Questionnaire description :

The questionnaire was designed based on the UTAUT model, and constructed to measure perceptions, attitudes, and behaviors of employees toward the Jibaya'tic platform. It was distributed both physically (in-person) and digitally (via Google Forms) over a two-week period from April 14 to April 30, 2025.

To maximize accessibility, the questionnaire was made available in Arabic, French, and English, accommodating the linguistic diversity of public sector staff.

The questionnaire consisted of three parts:

- **Part 1** measured UTAUT variables: performance expectancy, effort expectancy, social influence, facilitating conditions, and behavioral intention. A 5-point Likert scale was used to capture employee attitudes and perceptions.
- **Part 2** included open-ended questions aimed at identifying practical challenges, desired improvements, and the perceived effect of Jibaya'tic on collaboration within the organization.
- **Part 3** gathered demographic data (age, gender, education level, job position, years of experience, assigned department, and duration of Jibaya'tic use).

This methodology was designed to provide a detailed understanding of employee acceptance and the digital transformation process in the public tax administration. The structured format of the questionnaire allows for rigorous statistical analysis to validate the UTAUT model in this specific context.

B. Questionnaire content:

To facilitate a smooth and comprehensive data collection process, the questionnaire was structured into **three main sections**, each carefully designed to support the study's objectives. The sections are outlined as follows:

Part one: Research Questions (UTAUT Constructs)

This section constitutes the core of the questionnaire, directly addressing the research objectives by exploring the factors influencing employees' acceptance and use of the Jibaya'tic platform. The questions are grouped according to the Unified Theory of Acceptance and Use of Technology (UTAUT), and each construct is measured using 5-point Likert scale items (from *Strongly Disagree* to *Strongly Agree*).

The constructs include :

- **Performance Expectancy (PE):** Measures the degree to which employees believe the platform enhances their job performance.
- **Effort Expectancy (EE):** Assesses the perceived ease of use of Jibaya'tic.
- **Social Influence (SI):** Evaluates the perceived pressure from peers and supervisors to use the platform.
- **Facilitating Conditions (FC):** Gauges the availability of organizational support and resources.
- **Behavioral Intention (BI):** Captures the intent to continue using the platform in the future.

1. Performance Expectancy (PE)

Performance Expectancy (PE) is the first independent variable and is assessed through a question comprising four statements. Respondents are required to select one of the five provided responses. These responses follow a five-point Likert scale, where 1 corresponds to 'Strongly disagree' and 5 to 'Strongly agree'. This scale is used to measure the extent to which employees believe that using the Jibaya'tic platform enhances their job performance.

Table 01: Measurement scales for the variable 'Performance Expectancy (PE)'

Variable	Items	Source
Performance Expectancy (PE)	"Jibaya'tic" improves my efficiency in managing tax-related tasks.	Venkatesh et al., 2003
	"Jibaya'tic" helps me accomplish my work more quickly.	Venkatesh et al., 2003
	"Jibaya'tic" enhances my overall job performance.	Venkatesh et al., 2003
	"Jibaya'tic" reduces errors in tax processes.	Venkatesh et al., 2003

Source : Developed through personal efforts

2. Effort Expectancy (EE)

Effort Expectancy (EE) is an independent variable measured through four statements. This variable captures the perceived ease of use of the **Jibaya'tic** platform, focusing on learnability, user-friendliness, and adequacy of support and training.

Table 02: Measurement scales for the variable 'Effort Expectancy (EE)'

Variable	Items	Source
Effort Expectancy (EE)	It is easy for me to learn how to use "Jibaya'tic".	Venkatesh et al., 2003
	The interface of "Jibaya'tic" is intuitive and easy to use.	Venkatesh et al., 2003
	I find it easy to perform my tasks using "Jibaya'tic".	Venkatesh et al., 2003
	The support and training available for "Jibaya'tic" are sufficient to help me use it effectively.	Venkatesh et al., 2003

Source : Developed through personal efforts

3. Social Influence (SI)

Social Influence (SI) evaluates the extent to which employees feel influenced by others — such as colleagues, supervisors, and the organization — in their decision to use the Jibaya'tic platform.

Table 03 : Measurement scales for the variable 'Social Influence (SI)'

Variable	Items	Source
Social Influence (SI)	My colleagues support the use of "Jibaya'tic".	Venkatesh et al., 2003
	My supervisors encourage the adoption of "Jibaya'tic".	Venkatesh et al., 2003
	The organization promotes the use of "Jibaya'tic" to enhance efficiency.	Venkatesh et al., 2003
	I feel pressure from my team to adopt "Jibaya'tic".	Venkatesh et al., 2003

4. Facilitating Conditions (FC)

Facilitating Conditions (FC) assesses the degree to which employees feel they have the technical, educational, and organizational support needed to use **Jibaya'tic** effectively.

Table 04: Measurement scales for the variable 'Facilitating Conditions (FC)'

Variable	Items	Source
Facilitating Conditions (FC)	I have the necessary resources (hardware, software) to use "Jibaya'tic" effectively.	Venkatesh et al., 2003
	I receive sufficient training on how to use "Jibaya'tic".	Venkatesh et al., 2003
	Technical support is available when I encounter difficulties.	Venkatesh et al., 2003
	The organization implements policies that support the adoption of "Jibaya'tic".	Venkatesh et al., 2003

Source : Developed through personal efforts

5. Behavioral Intention (BI)

Behavioral Intention (BI) captures the willingness and intention of employees to continue using the Jibaya'tic platform in their work and promote its use among others.

Table 05: Measurement scales for the variable 'Behavioral Intention (BI)'

Variable	Items	Source
Behavioral Intention (BI)	I intend to use "Jibaya'tic" in my daily work.	Venkatesh et al., 2003
	I am willing to learn more about using "Jibaya'tic" effectively.	Venkatesh et al., 2003

	I see myself using "Jibaya'tic" regularly in the future.	Venkatesh et al., 2003
	I will encourage my colleagues to use "Jibaya'tic".	Venkatesh et al., 2003

Source: Developed through personal efforts

Part 2: Open-Ended Section – Observations and Recommendations

In addition to the structured questionnaire based on the UTAUT model, a final section is included to collect qualitative insights through open-ended questions. The goal of this section is to explore nuanced, personal experiences with the Jibaya'tic platform, identify unanticipated challenges or opportunities, and gather constructive suggestions for improvement that may not be fully captured through predefined variables.

This qualitative component adds depth to the quantitative data and provides a more holistic understanding of the real-world dynamics of digital tool adoption in the public tax sector.

Open-Ended Questions and Their Objectives:

1. What are the biggest challenges you face when using "Jibaya'tic" at work?

This question aims to uncover the practical and technical difficulties users encounter during daily operations with the platform. The responses can highlight systemic issues such as lack of training, system bugs, limited user access, or organizational resistance, offering insights into barriers to performance expectancy and effort expectancy as conceptualized in the UTAUT framework.

2. What improvements would make "Jibaya'tic" more acceptable or user-friendly for you?

This question is designed to capture user-centered recommendations that can guide future platform updates, policy changes, or support measures. It serves to identify specific facilitating conditions that would enhance adoption, usability, and satisfaction, while also providing feedback for technical teams and decision-makers responsible for digital transformation.

3. In your opinion, how does "Jibaya'tic" influence collaborative work within your organization?

This question assesses the perceived social and organizational impact of the platform. It explores whether Jibaya'tic enhances communication, transparency, or workflow coordination between departments or if it introduces friction. This links directly to the

social influence variable in the UTAUT model and adds depth to understanding how digital tools reshape institutional culture and team dynamics.

By including this open-ended section, the study aims not only to measure but also to inviting participants to become active contributors in shaping the future of digital transformation in the Algerian tax sector. This rich qualitative layer is essential for identifying underlying factors that might otherwise remain invisible through closed-ended responses alone.

Part 3: Data Sheet

We conclude our questionnaire with this section, which is dedicated to collecting demographic and contextual information about the respondents. This section contains both dichotomous and multiple-choice questions designed to provide insights into the sample's profile. The purpose is to ensure a comprehensive understanding of the participants' background and examine the representativeness and distribution of the sample. Specifically, this section includes two dichotomous questions (gender and external service), and multiple-choice questions covering age group, education level, job position, function, years of experience in the tax sector, department, and duration of use of the Jibaya'tic platform.

Measuring Scale

To evaluate the factors influencing employees' adoption of the digital platform Jibaya'tic, we employed a five-point Likert scale. This scale, initially developed by psychologist Rensis Likert in 1932 (Pimentel, 2019), is widely used to measure attitudes and perceptions. Respondents were asked to indicate their level of agreement with a series of statements related to the UTAUT constructs, ranging from performance expectancy to behavioral intention.

Table 06: Interpretation of 5-Point Likert Scale Measurements

Likert Scale	Interval	Difference	Description
1	1.00–1.79	0.79	Strongly disagree
2	1.80–2.59	0.79	Disagree
3	2.60–3.39	0.79	Neutral
4	3.40–4.19	0.79	Agree
5	4.20–5.00	0.80	Strongly agree

Source : Pimentel, 2019

This Likert scale allows us to quantify subjective perceptions and evaluate the strength of the relationship between the independent variables and the users' intention to adopt the **Jibaya'tic** platform.

Research Sample (Population and Method)

Population :

The target population for this study comprises employees working within Algeria's tax administration sector, specifically those interacting with the digital platform Jibaya'tic. The study focuses on personnel from three key institutions: the General Directorate of Taxes (DGE) in Ben Aknoun and two local tax centers (Centres des Impôts – CDIs) located in Bab Ezzouar and Rouiba. While the Ministry of Finance has not officially published the number of active users of the Jibaya'tic platform, exploratory inquiries and internal consultations estimate that approximately 100 employees across these three institutions use the platform in their daily tasks. Regarding institutional staffing, available data confirms that the Bab Ezzouar CDI employs around 138 staff members, and the Rouiba CDI approximately 148, totaling 286 employees across the two CDIs. Participants in this study were selected based on their roles and likelihood of using the Jibaya'tic system, ensuring the sample includes administrative staff, tax inspectors, IT technicians, and managerial personnel. Their professional background and responsibilities allowed for a diverse yet relevant representation of platform users within the public fiscal administration. Prior to participation, respondents were informed of the study's objectives and voluntarily consented to provide their insights.

Method – Sample Calculation and Sampling :

Due to the lack of officially published data on the exact number of users of the Jibaya'tic platform, and considering the contextual limitations in accessing the entire eligible population, a non-probability convenience sampling method was employed. This approach allowed for practical and timely data collection from users who were available and willing to participate. The sample size was calculated using the SurveyMonkey online calculator, based on a target population of 100 users identified through exploratory research across the DGE and the CDIs of Bab Ezzouar and Rouiba. With a confidence level of 95% and a margin of error of 5%, the recommended sample size was 80 respondents. Ultimately, 82 valid responses were collected and analyzed. It is important to note that the relatively small size of the user population is due to the fact that Jibaya'tic is a newly introduced platform, still in its initial phase of implementation. As a result, access remains limited, and the number of active users across the involved institutions is still progressively increasing.

Data Treatment Method :

Collected data were carefully organized and coded in Excel before being imported into JASP for further statistical analysis. The study employs Structural Equation Modeling (SEM) as the primary analytical technique to explore relationships between constructs in the Unified Theory of Acceptance and Use of Technology (UTAUT) framework. This method ensures precise evaluation of latent variables and their interdependencies.

Reliability Tests:

To evaluate the internal consistency of the measurement constructs, Cronbach's alpha was calculated using JASP software. Reliability levels were interpreted according to the scale proposed by Schrepp (2020):

- $\alpha > 0.9$: Excellent
- $\alpha > 0.8$: Good
- $\alpha > 0.7$: Acceptable
- $\alpha > 0.6$: Questionable
- $\alpha > 0.5$: Poor
- $\alpha < 0.5$: Unacceptable

Table 07: Cronbach's Alpha Measurements

Factor	Cronbach's Alpha	N of Items
Performance Expectancy (PE)	0.912	4
Effort Expectancy (EE)	0.818	4
Social Influence (SI)	0.921	4
Facilitating Conditions (FC)	0.783	4
Behavioral Intention (BI)	0.707	4

Source: Developed through personal efforts based on the JASP outputs

According to this Table, Cronbach's Alpha values for the measured factors are as follows:

- Performance Expectancy (PE) has an Alpha value of 0.912, indicating excellent reliability, as it exceeds the threshold of 0.9.
- Effort Expectancy (EE) shows an Alpha value of 0.818, which reflects good reliability, falling within the acceptable range of 0.8–0.9.
- Social Influence (SI) records the highest Alpha value of 0.921, also indicating excellent reliability, confirming strong internal consistency among the items.
- Facilitating Conditions (FC) has an Alpha value of 0.783, which is acceptable, but slightly below the ideal threshold of 0.8, suggesting moderate internal consistency.
- Behavioral Intention (BI) has an Alpha value of 0.707, which is acceptable, though relatively lower compared to the other constructs. This value still meets the minimum acceptable level for exploratory research.

Overall, the results demonstrate that the measurement scales used in this study exhibit satisfactory to excellent internal consistency, ensuring the reliability of the questionnaire in assessing the adoption of the Jibaya'tic platform.

Section 02: ORGANIZATIONAL CONTEXT

Internship Location:

During my internship at the General Directorate of Taxes (DGI), located within the Ministry of Finance in Ben Aknoun, Algiers, I conducted a field study on the adoption of the Jibaya'tic digital platform. The study was carried out in several key structures that use the platform, including the Directorate of Large Enterprises (DGE) in Ben Aknoun, and two Tax Centers (CDIs): CDI of , Bab Ezzouar and CDI of Rouiba, all based in Algiers. A UTAUT-based questionnaire was distributed to assess employee perceptions and usage of the system.

Presentation:

The General Directorate of Taxes (DGI)

The General Directorate of Taxes (DGI) was created in 1963 by Decree No. 63-127. It is a public administrative institution with legal personality and financial independence, under the supervision of the Ministry of Finance. It is the main body responsible for implementing tax policies in Algeria, managing the collection of various taxes and duties, and enforcing tax laws.

Its responsibilities, as outlined in Executive Decree No. 07-364 of November 28, 2007 (amended by Executive Decree No. 21-252 of July 6, 2021), include:

- Drafting, proposing, and developing legislative and regulatory tax texts.
- Implementing procedures for tax base establishment, liquidation, and collection.
- Simplifying tax procedures for assessment, control, recovery, and disputes.
- Developing and ensuring the implementation of strategic modernization programs.
- Developing IT systems, communication interfaces, and tools.
- Managing IT and communication technology frameworks.
- Preparing and negotiating international tax treaties and agreements.
- Fighting against fraud and tax evasion.
- Managing administrative and judicial tax disputes.
- Creating performance monitoring and management tools for tax services.
- Enhancing relationships between tax services and taxpayers.

Organizational Structure:

The central administration includes:

- Three Divisions:
 1. Legislation, regulations, and legal affairs.
 2. Recovery management and business process modernization.
 3. Auditing and tax investigations.
- Four Support Departments:
 1. Information Systems.
 2. Human Resources and Training.
 3. Infrastructure, Operations, and Budget.
 4. Communication.
- General Tax Inspection Office (IGSF) governed by a specific regulation.
- Four Directors of Studies attached to the office of the DGI's General Director.

Figure 02: The Logo Of DGI



Source: The Ministry of Finance;

Modernization Efforts

To optimize tax collection, the DGI implemented a modernization strategy with new structures at central and regional levels.

1. Directorate of Large Enterprises (DGE)

Established during the 2002 finance law reforms and fully operational since 2006, its responsibilities include:

- Managing tax files of large economic partners.
- Issuing and validating tax roles, reimbursements, and certificates.
- Investigating disputes and processing complaints.
- Providing information and guidance to businesses (taxpayers).
- Handling staff affairs and resource planning.
- Communicating with businesses on their tax rights and obligations.

Enterprises under the DGE are:

- Algerian capital companies or groups with an annual turnover $\geq$ 100 million DZD.
- Foreign companies under Article 156-1 of the direct tax code.
- Oil companies under Law No. 86-14 related to hydrocarbons.

2. Tax Centers (CDI)

Established under Decree No. 06-327 and launched in 2008 with the pilot center in Rouiba (Algiers). The CDIs handle:

- Tax files of companies under the actual regime (except those managed by DGE).
- Liberal professions, regardless of tax regime.
- Collection of income tax, corporate profits, and duties.
- Control and investigation of tax declarations.
- Customer service and handling complaints.
- Processing business registration and status changes.
- Appointments and taxpayer communication.

Jibaya'tic Platform

"Jibaya'tic" is a fusion of the Arabic word "Jibaya" (tax) and the French acronym "TIC" (Information and Communication Technologies). Launched on April 4, 2017, it allows online tax declaration and payment, and became mandatory for DGE companies in 2018.

Legal Framework:

- Ordinance No. 08-02 of July 24, 2008 – Complementary Finance Law.
- Law No. 16-14 of December 28, 2016 – Finance Law for 2017.
- Law No. 05-10 of June 20, 2005 – Civil Code amendment on electronic signature.
- Executive Decree No. 07-162 of May 30, 2007 – Electronic certification and telecom services.

Figure 03: The Logo Of Jibaya'tic



Source: the Ministry of Finance;

Chapter 03:

Results and Discussion

Section 01: Results

I. Quantitative Results

In this chapter, we present and interpret the results obtained from the analysis of the survey responses collected as part of this study. The analysis aims to understand the factors influencing employees' adoption of the Jibaya'tic digital platform within the Algerian tax administration, grounded in the Unified Theory of Acceptance and Use of Technology (UTAUT). We begin with a presentation of the descriptive statistics that outline the demographic profile of respondents and provide insight into their organizational roles, experience levels, and departmental affiliations. These characteristics help contextualize the behavioral patterns observed.

Following this, we analyze the univariate responses for each UTAUT construct—Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, and Behavioral Intention. Each construct is examined through its central tendency and dispersion measures to evaluate general perceptions. Reliability analysis using Cronbach's Alpha is also presented to ensure the internal consistency of the measurement model.

This statistical overview sets the foundation for subsequent inferential analysis, including Structural Equation Modeling (SEM), which will be performed using JASP. The aim is to validate the hypothesized relationships between UTAUT constructs and the behavioral intention to adopt the platform, while also examining how median variables such as age, gender, experience, and seniority may moderate or influence these relationships. Finally, we conclude the chapter with a critical discussion of the findings, comparing them to prior literature and reflecting on their practical implications for digital transformation in public sector institutions.

univariate analysis

1. Descriptive Statistics:

1.1. Demographic characteristics of Employees:

Understanding the demographic profile of the respondents is critical to interpreting their behavior toward digital adoption in the public sector. The demographic variables in this study, such as gender, age, education, job position, years of professional experience, department, and seniority provide a comprehensive view of the organizational context in which the Jibaya'tic system is being adopted.

Table 08: Demographic characteristics of Employee

Particulars	Items	Frequency (n =82)	Percentage
Gender	Female	53	64.6 %
	Male	29	35.3 %
Age	18–25 years	2	2.4 %
	26–35 years	2	2.4 %
	36–45 years	26	31.7 %
	46–55 years	41	50.0 %
	56 years and above	11	13.4 %
Educational level :	Primary	0	0.0 %
	Middle	2	2.4 %
	Secondary	15	18.2 %
	University	65	79.2 %
Job	Service Manager	19	23.1 %

	Accounting Officer	14	17.0 %
	Execution Officer	20	24.3 %
	Cashier	10	12.1 %
	Enforcement	6	7.3 %
	IT Specialist	3	3.6 %
	Front Desk Officer	3	3.6 %
	Revenue Officer	4	4.8 %
	Recovery Officer	3	3.6 %
Experience	0–3 years	2	2.4 %
	3–5 years	4	4.8 %
	6–10 years	4	4.8 %
	10–15 years	17	20.7 %
	15–20 years	15	18.2 %
	More than 20 years	40	48.7 %
service :	Directorate of Large Enterprises	17	20.7 %
	Tax Center	65	79.2 %
Department :	Main Management Department	29	35.3%
	Main Control and Research Department	0	0.0%
	Main Litigation Department	0	0.0%
	Treasury Office	48	58.5%

	Reception and Information Department	3	3.6 %
	IT and Logistics Department	2	2.4%
Seniority	Less than a year	11	13.4%
	1–3 years	13	15.8%
	3–6 years.	58	70.7%

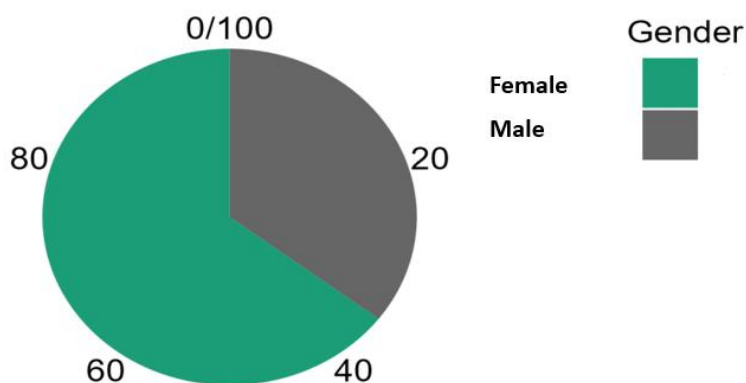
Source: Developed through personal efforts based on the JASP outputs

The table below presents a comprehensive overview of the demographic and professional characteristics of employees within the tax administration who participated in the survey. It includes variables such as gender, age, educational level, job position, professional experience, organizational service, departmental affiliation, and seniority in their current role. Understanding these attributes is essential for contextualizing user perceptions and behavioral intentions regarding the adoption of the Jibaya'tic digital platform. This descriptive analysis not only outlines the profile of the workforce but also provides a foundation for interpreting how individual and organizational factors may moderate the relationships proposed in the UTAUT framework. These insights will inform subsequent inferential analyses and guide practical recommendations for successful technology adoption in public sector institutions.

Gender

The majority of respondents are female, accounting for (64.6%) of the sample, while males represent (35.3%). This gender distribution suggests that women are more present or more actively involved in the surveyed public tax administration roles, which could reflect broader employment trends within Algerian public sector institutions.

Figure 04: The Gender Pie Chart

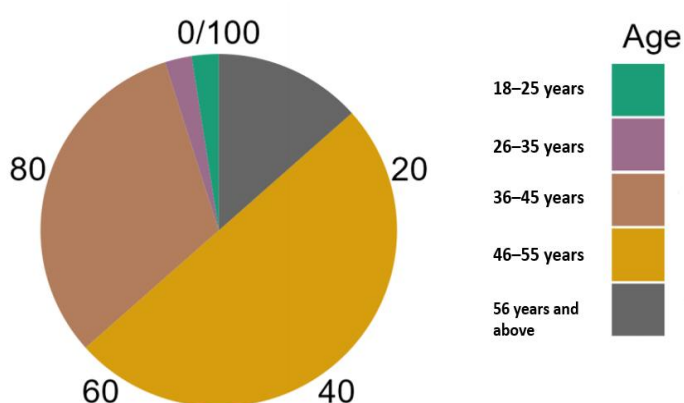


Source: Developed through personal efforts based on the JASP outputs

Age:

The age distribution shows that the majority of respondents are between 46–55 years old (50%), followed by those aged 36–45 years (31.7%). Only a small proportion of the sample is under 35 or over 56. This suggests that the workforce using the Jibaya'tic platform is predominantly composed of mid-to-late career professionals, which may influence their openness or resistance to adopting digital tools, as older employees might be less digitally native.

Figure 05: The Age Pie Chart

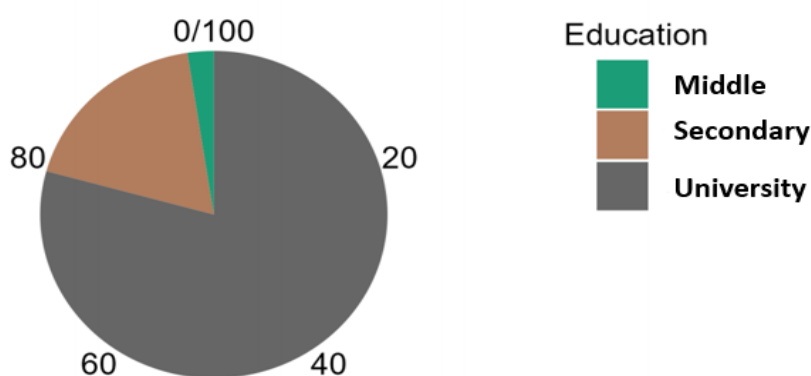


Source: Developed through personal efforts based on the JASP outputs

Educational level:

Most respondents have a university-level education (79.2%), while (18.2%) have completed secondary education. Only (2.4%) possess a middle school level, and none have only primary education. This high level of academic qualification indicates a well-educated workforce, which can positively affect digital tool adoption if appropriate training and motivation are provided.

Figure 06: The Education Pie Chart

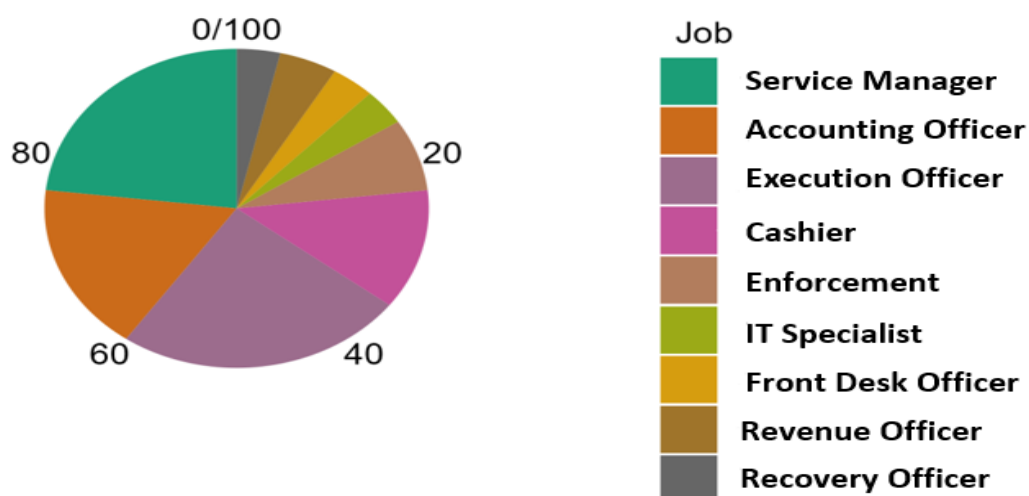


Source: Developed through personal efforts based on the JASP outputs

Job position:

The most common job roles include Execution Officers (24.3%), Service Managers (23.1%), and Accounting Officers (17.0%). Other positions such as Cashiers, Enforcement agents, and IT Specialists represent smaller percentages. The diversity of roles suggests that a wide range of public service functions interacts with the Jibaya'tic platform, which may lead to varying levels of engagement and technological needs depending on job function.

Figure 07: The Job Pie Chart

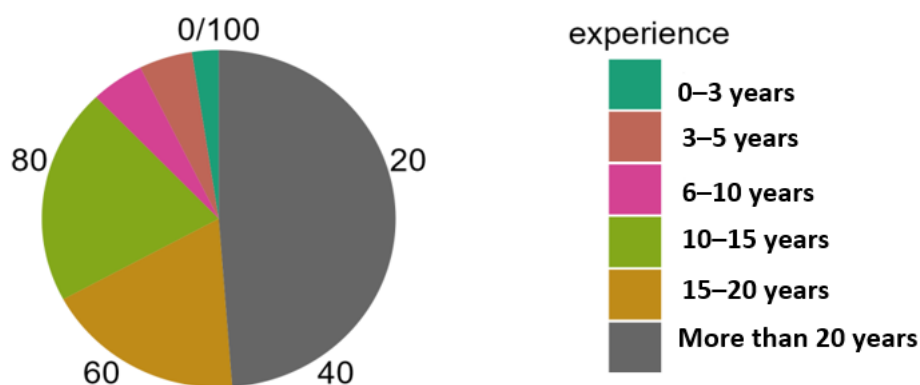


Source: Developed through personal efforts based on the JASP outputs

Experience:

Nearly half of the respondents (48.7%) have more than 20 years of experience, with another (20.7%) having 10–15 years of experience. Only a small proportion (12%) have under 6 years of experience. This indicates that the workforce is highly experienced and possibly accustomed to traditional processes, which might result in some resistance to digital transformation unless adequate change management is implemented.

Figure 08: The Experience Pie Chart

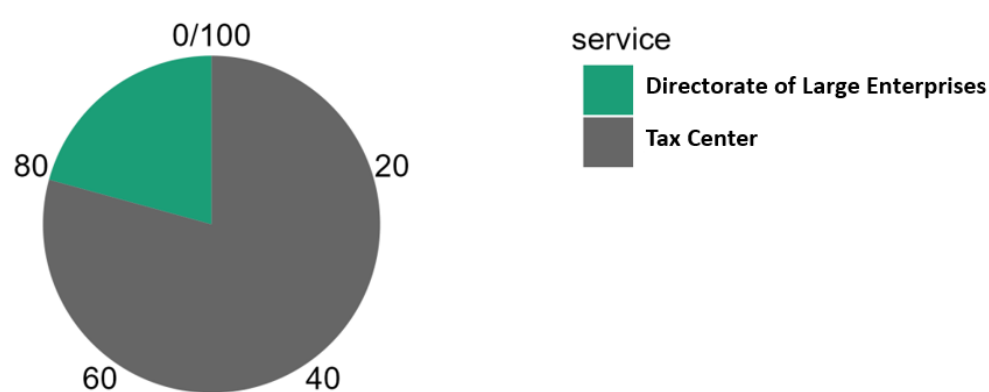


Source: Developed through personal efforts based on the JASP outputs

Service Type:

A significant portion of respondents (79.2%) work at Tax Centers, while (20.7%) are from the Directorate of Large Enterprises. This imbalance could reflect the operational scale of these institutions and shows that most feedback about Jibaya'tic usage and effectiveness will come from the Tax Center level, where frontline tax administration is performed.

Figure 09: The Service Pie Chart

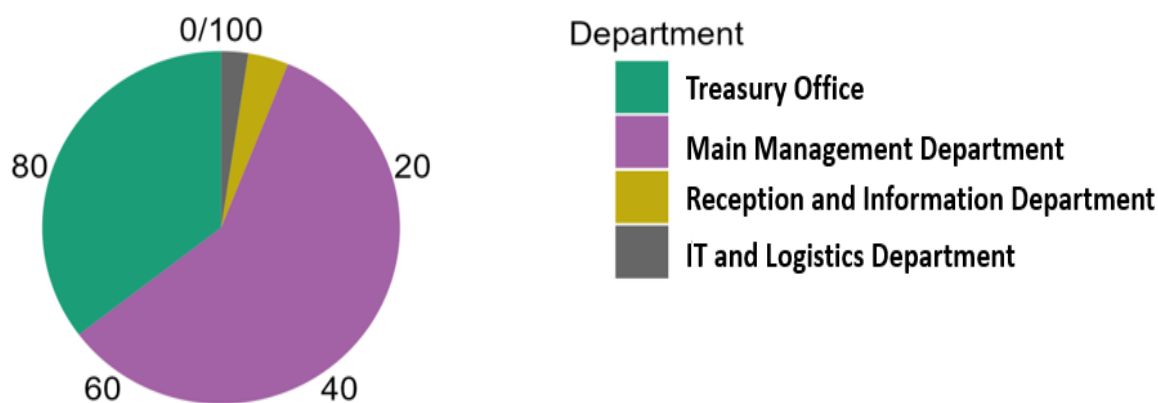


Source: Developed through personal efforts based on the JASP outputs

Department:

The majority of respondents (58.5%) work in the Treasury Office, followed by (35.3%) in the Main Management Department. Other departments, such as IT and Logistics or Reception and Information, are underrepresented. This may suggest that financial management functions are central to Jibaya'tic platform usage, and their experiences may provide critical insights into the system's effectiveness.

Figure 10: The Department Pie Chart

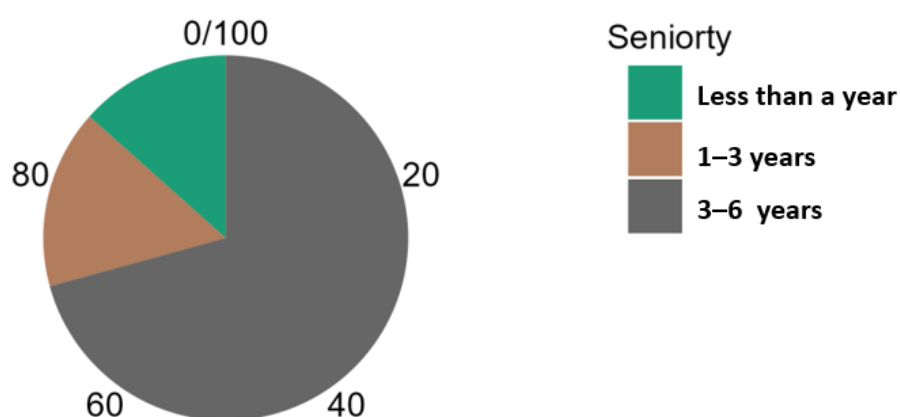


Source: Developed through personal efforts based on the JASP outputs

Seniority:

Most respondents (70.7%) have been in their current positions for 3–6 years, while (15.8%) have 1 to 3 years of seniority and (13.4%) less than one year. This suggests that although the workforce is experienced overall, many have relatively recent tenure in their specific roles, which could enhance adaptability to new technologies if accompanied by appropriate onboarding and digital training.

Figure 011: The Seniority Pie Chart



Source: Developed through personal efforts based on the JASP outputs

Descriptive Statistics of UTAUT Constructs:

This section analyzes the perceptions of respondents regarding the five core constructs of the Unified Theory of Acceptance and Use of Technology (UTAUT), namely: Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, and Behavioral Intention to Use. These constructs were measured using Likert-scale items designed to capture the extent of agreement or disagreement with statements related to the adoption of the Jibaya'tic digital platform.

It is also worth noting that 100% of the respondents completed the questionnaire in French, reflecting the administrative and professional language commonly used in public institutions in Algeria.

1.2. UTAUT Model Constructs

Performance Expectancy (PE)

- PE 1 = "Jibaya'tic " improves my efficiency in handling tax-related tasks.
- PE 2 = "Jibaya'tic " helps me complete my work faster.
- PE 3 = "Jibaya'tic " enhances my overall job performance.
- PE 4 = "Jibaya'tic " helps reduce errors in tax processes.

Table 09: Descriptive Statistics of Performance Expectancy (PE) Items

Items	PE1		PE2		PE3		PE4	
Modality	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Strongly Disagree	3	3.6%	1	1.2%	2	2.4%	3	3.6%

Disagree	6	7.3%	9	10.9%	1	1.2%	7	8.5%
Neutral	12	14.6%	9	10.9%	19	23.1%	9	10.9%
Agree	48	58.5%	50	60.9%	51	62.1%	52	63.4%
Strongly Agree	13	15.8%	13	15.8%	9	10.9%	11	13.4%
Total	82	100%	82	100%	82	100%	82	100%
Mean	3.756		3.793		3.780		3.744	
Standard Deviation	0.937		0.885		0.754		0.927	
Evaluation	Agree		Agree		Agree		Agree	
Mean of the variable	3.768							
General standard deviation of the variable	0.876							
Evaluation of the variable	Agree							

Source: Developed through personal efforts based on the JASP outputs

The table presents the descriptive statistics for the variable Performance Expectancy (PE), which measures the extent to which employees believe that using the Jibaya'tic digital platform

improves their job performance. It includes the mean, standard deviation, and evaluation of each item, as well as the general mean and standard deviation for the overall variable.

For the item PE1 ("Jibaya'tic " improves my efficiency in handling tax-related tasks), the mean is 3.756 with a standard deviation of 0.937, indicating that respondents generally *agree* with this statement.

For PE2 ("Jibaya'tic " helps me complete my work faster), the mean is 3.793, with a standard deviation of 0.885, reflecting consistent *agreement* among participants.

PE3 ("Jibaya'tic " enhances my overall job performance) shows a mean of 3.780 and a standard deviation of 0.754, suggesting a slightly stronger and more consistent agreement.

Finally, PE4 ("Jibaya'tic " helps reduce errors in tax processes) has a mean of 3.744 and a standard deviation of 0.927, also indicating general agreement, though with slightly more variability.

Overall, the general mean of the Performance Expectancy variable is 3.768, and the general standard deviation is 0.876. This reflects that respondents agree that the Jibaya'tic platform positively impacts their job performance, including efficiency, speed, accuracy, and overall effectiveness.

Effort Expectancy (EE)

- EE1 = It is easy for me to learn how to use "Jibaya'tic ".
- EE2 = The interface of "Jibaya'tic " is user-friendly and intuitive.
- EE3 = I find it easy to complete my tasks using "Jibaya'tic ".
- EE4 = The available support and training for "Jibaya'tic " are sufficient to help me use it effectively.

variable	
Evaluation of the variable	Agree

Source: Developed through personal efforts based on the JASP outputs

The table presents the descriptive statistics for the variable Effort Expectancy (EE), which reflects the perceived ease of use of the Jibaya'tic platform. It includes the mean, standard deviation, and evaluation for each item, as well as the overall mean and standard deviation for the variable.

For the item EE1 (It is easy for me to learn how to use "Jibaya'tic "), the mean is 3.841 with a standard deviation of 0.881, indicating that respondents generally agree with this statement.

For EE2 (The interface of "Jibaya'tic " is user-friendly and intuitive), the mean is 3.890, and the standard deviation is 0.889, suggesting a strong and consistent agreement among participants.

EE3 (I find it easy to complete my tasks using "Jibaya'tic ") has a mean of 3.829 and a standard deviation of 0.798, also reflecting general agreement.

In contrast, EE4 (The available support and training for "Jibaya'tic " are sufficient to help me use it effectively) shows a slightly lower mean of 3.427 and a higher standard deviation of 1.078, indicating agreement but with greater variability in responses, suggesting that perceptions of support and training are more divided among respondents.

Overall, the general mean of the Effort Expectancy variable is 3.747, with a general standard deviation of 0.912. This indicates that respondents agree that the Jibaya'tic platform is generally

easy to learn and use, although opinions are somewhat more mixed regarding the adequacy of support and training resources.

Social Influence (SI)

- SI1 = My colleagues support the use of "Jibaya'tic ".
- SI2 = My supervisors encourage the adoption of "Jibaya'tic ".
- SI3 = The organization promotes using "Jibaya'tic " to improve efficiency.
- SI 4= I feel pressure from my team to adopt "Jibaya'tic ".

Table 11: Descriptive Statistics of Social Influence (SI) Items

Items	SI1		SI2		SI3		SI4	
Modality	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Strongly Disagree	2	2.4%	8	9.7%	3	3.6%	6	7.3%
Disagree	4	4.8%	3	3.6%	7	8.5%	8	9.7%
Neutral	11	13.4%	7	8.5%	2	2.4%	8	9.7%
Agree	54	65.8%	30	36.5%	43	52.4%	52	63.4%
Strongly Agree	11	13.4%	34	41.4%	27	32.9%	8	9.7%
Total	82	100%	82	100%	82	100%	82	100%
Mean	3.829		3.963		4.024		3.585	

Standard Deviation	0.814	1.242	1.018	1.042
Evaluation	Agree	Agree	Agree	Agree
Mean of the variable	3.850			
General standard deviation of the variable	1.029			
Evaluation of the variable	Agree			

Source: Developed through personal efforts based on the JASP outputs

The table presents the descriptive statistics for the variable Social Influence (SI), which reflects the degree to which individuals perceive that people important to them believe they should use the Jibaya'tic platform. The statistics include the mean, standard deviation, and evaluation for each item, as well as the overall mean and general standard deviation for the variable.

For the item SI1 (My colleagues support the use of "Jibaya'tic "), the mean is 3.829 with a standard deviation of 0.814, indicating that respondents generally agree with this statement.

For SI2 (My supervisors encourage the adoption of "Jibaya'tic "), the mean is 3.963 with a higher standard deviation of 1.242, reflecting overall agreement but with more variability in responses, likely due to differences in supervisory influence across workplaces.

The item SI3 (The organization promotes using "Jibaya'tic " to improve efficiency) shows the highest mean of 4.024 and a standard deviation of 1.018, suggesting a strong level of agreement that is relatively consistent among participants.

Finally, SI4 (I feel pressure from my team to adopt "Jibaya'tic ") has a mean of 3.585 and a standard deviation of 1.042, still indicating agreement, though this item reflects a slightly lower perception of peer pressure compared to the encouragement and support expressed in the other items.

Overall, the general mean for the Social Influence variable is 3.850, with a general standard deviation of 1.029. These results indicate that respondents generally agree that their professional environment: colleagues, supervisors, and the organization as a whole support and encourages the use of the Jibaya'tic platform, although the level of perceived pressure from peers is somewhat lower and more variable.

Facilitating Conditions (FC)

- FC1 = I have the necessary resources (e.g., equipment and software) to use "Jibaya'tic " effectively.
- FC2 = I receive sufficient training on how to use "Jibaya'tic ".
- FC3 = There is adequate technical support available when I face difficulties using "Jibaya'tic ".
- FC4 = The organization provides policies that support the adoption of "Jibaya'tic

variable	
Evaluation of the variable	Neutral

Source: Developed through personal efforts based on the JASP outputs

This section presents the descriptive statistics for the variable Facilitating Conditions (FC), which assesses the extent to which individuals believe that the organizational and technical infrastructure supports the use of the Jibaya'tic platform. The analysis includes the mean, standard deviation, and evaluation for each item, as well as the overall mean and general standard deviation for the variable.

For FC1 (I have the necessary resources to use "Jibaya'tic " effectively), the mean is 3.415 with a standard deviation of 1.088, indicating a general level of agreement among respondents, though with noticeable variation.

The item FC2 (I receive sufficient training on how to use "Jibaya'tic ") shows the lowest mean of 2.793 and the highest standard deviation of 1.303, reflecting a more neutral stance with considerable variability. This suggests that many respondents feel the training provided is inadequate or inconsistent across the organization.

For FC3 (There is adequate technical support available when I face difficulties using "Jibaya'tic "), the mean is 3.549 with a standard deviation of 1.020, showing general agreement and a moderate level of consensus.

FC4 (The organization provides policies that support the adoption of "Jibaya'tic ") has a mean of 3.598 and a standard deviation of 0.967, again reflecting agreement with relatively less dispersion in responses.

Taken together, the overall mean for Facilitating Conditions is 3.339, while the general standard deviation is 1.094. This places the evaluation of the variable at a neutral level. While respondents generally agree that resources, support, and policies are in place, the low score for training (FC2) notably pulls down the overall evaluation, highlighting an area where improvement is needed to strengthen adoption of the Jibaya'tic platform.

Behavioral Intention (BI)

- BI1 = I intend to use "Jibaya'tic " in my daily work.
- BI2 = I am willing to learn more about using "Jibaya'tic " effectively.
- BI3 = I see myself using "Jibaya'tic " regularly in the future.
- BI4 = I will encourage my colleagues to use "Jibaya'tic ".

Table 13: Descriptive Statistics of Behavioral Intention (BI) Items

Items	BI1		BI2		BI3		BI4	
Modality	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Strongly Disagree	1	1.2%	0	0.0%	0	0.0%	0	0.0%
Disagree	1	1.2%	1	1.2%	4	4.8%	1	1.2%
Neutral	0	0.0%	2	2.4%	5	6.0%	4	4.8%
Agree	58	70.7%	52	63.4%	53	64.6%	54	65.8%
Strongly Agree	22	26.8%	27	32.9%	20	24.3%	23	28.0%

Total	82	100%	82	100%	82	100%	82	100%
Mean	4.207		4.280		4.085		4.207	
Standard Deviation	0.623		0.573		0.706		0.582	
Evaluation	Strongly Agree		Strongly Agree		Agree		Strongly Agree	
Mean of the variable	4.195							
General standard deviation of the variable	0.621							
Evaluation of the variable	Strongly Agree							

Source: Developed through personal efforts based on the JASP outputs

This section provides the descriptive analysis of the variable Behavioral Intention (BI), which evaluates respondents' willingness and intention to use the Jibaya'tic digital platform in their professional activities. The analysis includes individual item means, standard deviations, and overall evaluations.

For BI1 (I intend to use "Jibaya'tic " in my daily work), the mean is 4.207 with a standard deviation of 0.623, indicating a strong agreement with high consistency among respondents.

BI2 (I am willing to learn more about using "Jibaya'tic " effectively) has the highest mean of 4.280 and the lowest standard deviation of 0.573, reflecting a very positive and uniform attitude toward continuous learning and skill development regarding the platform.

BI3 (I see myself using "Jibaya'tic " regularly in the future) yields a mean of 4.085 with a slightly higher standard deviation of 0.706, suggesting a general agreement, though with slightly more variability in responses compared to other items.

BI4 (I will encourage my colleagues to use "Jibaya'tic ") has a mean of 4.207 and a standard deviation of 0.582, again indicating strong agreement and consistent support for peer adoption.

Overall, the mean for the Behavioral Intention variable is 4.195, with a general standard deviation of 0.621. These results indicate a clear and strong intention among employees to adopt and promote the use of the Jibaya'tic platform, both in their own workflow and within their teams. This high level of acceptance reflects a favorable attitude toward the digital transformation initiatives within the tax administration sector.

Multivariate analysis:

1. Model Fit Evaluation:

Table 14: Structural Model Fit Indices and Evaluation

Validity Index	Chi-square (χ^2)	SRMR	GFI	AGFI	RMSEA	TLI	NFI	PNFI
Acceptance Threshold	—	≤ 0.08	≥ 0.90	≥ 0.90	≤ 0.08	≥ 0.90	≥ 0.90	≥ 0.90
Obtained Value	220.000	0.008	0.973	—	0.060	0.958	0.8	0.8

Validity Index	Chi-square (χ^2)	SRMR	GFI	AGFI	RMSEA	TLI	NFI	PNFI
Evaluation	Acceptable	Verified	Verified	—	Verified	Verified	Verified	Verified

Source: Developed through personal efforts based on the JASP outputs

To assess the adequacy of the structural equation model, a set of well-established fit indices were examined. These indices serve as quantitative indicators of how well the hypothesized model replicates the observed data structure. The results confirm that the model demonstrates satisfactory fit across multiple dimensions. Each fit index is discussed below in detail.

The Chi-square statistic (χ^2) was recorded at a value of 220.000. This index tests the null hypothesis that the observed covariance matrix equals the estimated covariance matrix derived from the model

The Standardized Root Mean Square Residual (SRMR) was reported at 0.008, which is well below the conventional threshold of 0.08. SRMR represents the standardized difference between the observed and predicted correlations. A value close to zero is indicative of a nearly perfect match between the model and the data. The obtained value of 0.008 suggests an exceptionally close fit, reinforcing the validity of the proposed model structure. As one of the most interpretable indices in structural equation modeling, the SRMR result strongly supports the model's empirical adequacy.

With regard to the Goodness of Fit Index (GFI), the value obtained was 0.973. This measure estimates the proportion of variance and covariance in the data that is explained by the model. Values of 0.90 and above are generally considered indicative of good model fit. The obtained GFI of 0.973 far exceeds this benchmark, suggesting that the hypothesized model accounts for

a very high proportion of the observed variance. This reinforces confidence in the model's descriptive power and internal coherence.

The Adjusted Goodness of Fit Index (AGFI), which accounts for model complexity by adjusting the GFI based on degrees of freedom, was not included in the results. However, since the reported GFI is high, it is likely that the AGFI would also fall within the acceptable range. Although AGFI values are usually slightly lower than GFI, well-specified models with good overall fit often meet the recommended threshold of 0.90. While the absence of AGFI limits direct evaluation, the strong performance of related fit indices supports the assumption that the AGFI would also indicate a good model fit.

The Root Mean Square Error of Approximation (RMSEA) was recorded at 0.060, which is comfortably below the maximum acceptable threshold of 0.08. RMSEA evaluates how well the model approximates the population covariance matrix per degree of freedom. Values under 0.05 indicate excellent fit, while values between 0.05 and 0.08 are considered indicative of acceptable approximation. The result of 0.060 suggests a solid model that generalizes well to the population level without overfitting the sample data. Moreover, RMSEA is particularly valued for its balance between parsimony and fit, and its confidence interval (if provided) would likely reinforce this conclusion.

The Tucker-Lewis Index (TLI) yielded a value of 0.958, which surpasses the recommended cutoff of 0.90. TLI compares the fit of the proposed model to that of a null model, adjusting for model complexity. Higher values represent better comparative fit. The obtained result demonstrates that the hypothesized model offers a substantial improvement over a baseline model, with sufficient parsimony. This suggests the model is both explanatory and efficiently constructed, avoiding over-specification.

In contrast, the Normed Fit Index (NFI) was reported at 0.800, which falls slightly below the commonly accepted threshold of 0.90. NFI also compares the target model to a null model but is known to underestimate fit in small samples or complex models. While this lower value may suggest room for improvement, it should be interpreted cautiously and in the broader context of the model's performance across other indices. Given the strong results obtained for TLI, GFI, and RMSEA, the modest NFI value does not significantly detract from the overall model adequacy.

Finally, the Parsimony Normed Fit Index (PNFI) was found to be 0.800. Although there is no universal cutoff for PNFI, values above 0.70 are often deemed acceptable, particularly when considered in conjunction with more stringent indicators. The PNFI adjusts the NFI for model complexity, rewarding models that achieve good fit with fewer parameters. A value of 0.800 indicates that the model balances fit and simplicity reasonably well, adding to the robustness of the overall evaluation.

In summary, the ensemble of fit indices presents compelling evidence that the structural model offers a valid and parsimonious representation of the empirical data. The particularly strong results for SRMR, GFI, TLI, and RMSEA provide robust support for model adequacy. Although NFI and PNFI fall slightly below ideal levels, they remain within a range that, when triangulated with other indices, does not compromise the credibility of the model. These findings confirm that the model is statistically sound and conceptually appropriate for further hypothesis testing and interpretation.

2. Structural Model Analysis:

The structural model proposed in this study was developed based on the Unified Theory of Acceptance and Use of Technology (UTAUT), extended to assess the behavioral intention (BI)

of public sector employees toward adopting a new digital system. The model incorporates four latent exogenous constructs: Facilitating Conditions (FC), Social Influence (SI), Effort Expectancy (EE), and Performance Expectancy (PE). These constructs are hypothesized to influence the endogenous latent variable Behavioral Intention (BI). Additionally, four moderating demographic variables Seniority (Snr), Experience (Exp), Gender (Gnd), and Age—are included in the model to account for their potential interaction effects.

The model was tested using structural equation modeling (SEM), and the results are presented in the standardized path coefficient diagram (see Figure 12). Overall, the model demonstrates a good fit, as evidenced by the following model fit indices: SRMR = 0.008, GFI = 0.973, RMSEA = 0.060, and TLI = 0.958 all of which fall within or exceed the recommended thresholds. These indicators confirm that the hypothesized model structure is statistically sound and can adequately represent the relationships among the constructs under study.

Path Coefficients and Construct Relationships

Among the four main predictors of behavioral intention, Performance Expectancy (PE) exhibited the strongest direct influence on BI with a standardized path coefficient of $\beta = 0.30$, suggesting that the perceived utility or performance advantage of the system is a significant determinant of intention to use it. This finding is consistent with the UTAUT framework, in which PE is often one of the most influential predictors of technology adoption behavior. The relatively high coefficient value indicates that when users perceive the system as beneficial to their job performance, they are more likely to accept and use it.

Effort Expectancy (EE) was also positively associated with BI, with a standardized path coefficient of $\beta = 0.14$. This suggests that ease of use plays a supportive but secondary role in shaping behavioral intention. Although the effect is less pronounced than PE, it indicates that users still value a user-friendly interface and minimal learning curve. In environments where

digital literacy may vary, the role of EE becomes even more critical to driving technology acceptance.

Social Influence (SI) showed a modest but positive effect on BI, with a coefficient of $\beta = 0.12$. This finding suggests that the opinions and behaviors of colleagues, supervisors, or institutional norms play a role—though not dominant—in shaping individual behavioral intentions. The result aligns with prior studies showing that SI is particularly relevant in collectivist or hierarchical organizational cultures, such as those often found in public sector settings.

Interestingly, Facilitating Conditions (FC) had the weakest effect on BI with a coefficient of $\beta = 0.03$, indicating that access to resources, technical support, or infrastructure does not significantly drive behavioral intention in this context. This may be attributed to the assumption that such conditions are already met institutionally, or that users consider them as prerequisites rather than influential decision factors.

DIRECT SIGNIFICANT PATHS ($p < 0.05$) :

Table 15: Significant Paths in the Structural Model ($p < 0.05$)

Path	β (Estimate)	p-value
EE_total $\rightarrow$ BI_total	0.287	0.003
FC_total $\rightarrow$ BI_total	0.234	0.017
Gender $\rightarrow$ EE_total	-0.297	0.003
Age $\rightarrow$ FC_total	-0.412	< 0.001
Experience $\rightarrow$ FC_total	0.445	< 0.001

Source: Developed through personal efforts based on the JASP outputs

The structural equation modeling (SEM) results revealed five statistically significant direct paths, each offering valuable insights into employees' perceptions and intentions regarding digital tool adoption.

First, Effort Expectancy ($\beta = 0.287$, $p = 0.003$) had a strong and positive influence on Behavioral Intention, indicating that employees who perceive the digital platform as easy to use are significantly more likely to intend to adopt it. Similarly, Facilitating Conditions ($\beta = 0.234$, $p = 0.017$) were positively associated with Behavioral Intention, suggesting that the availability of technical support, training, and infrastructure plays a critical role in motivating employees to engage with the system.

Among the demographic predictors, Gender showed a significant negative influence on Effort Expectancy ($\beta = -0.297$, $p = 0.003$), implying that one gender (potentially female, depending on coding) finds the system less intuitive or user-friendly. This may point to gender-based disparities in digital confidence or access to training.

Age also demonstrated a significant negative relationship with Facilitating Conditions ($\beta = -0.412$, $p < 0.001$), indicating that older employees are less likely to feel adequately supported in using the platform possibly due to generational differences in digital familiarity.

Conversely, Experience had a strong positive effect on Facilitating Conditions ($\beta = 0.445$, $p < 0.001$), meaning that employees with more years of service tend to perceive greater support or ease in accessing digital resources.

Together, these significant paths confirm that ease of use and perceived support are key drivers of digital adoption, and that demographic factors especially age, gender, and experience shape how employees interact with the underlying UTAUT constructs.

These findings reinforce the practical relevance of the tested UTAUT model, emphasizing that the decision to adopt digital tools in the public sector is not solely driven by theoretical expectations but shaped by tangible experiences and personal characteristics. By identifying which factors truly influence behavioral intention and how demographic variables interact with these perceptions, the model offers meaningful guidance for improving adoption strategies tailored to the specific needs of public administration employees.

Non-Significant Paths :

Table 16: Non-Significant Paths in the Structural Model ($p > 0.05$)

Path	β (Estimate)	p-value
PE_total $\rightarrow$ BI_total	-0.143	0.139
SI_total $\rightarrow$ BI_total	0.040	0.702

Path	β (Estimate)	p-value
Seniority $\rightarrow$ EE_total	-0.042	0.619
Seniority $\rightarrow$ BI_total	-0.088	0.235

Source: Developed through personal efforts based on the JASP outputs

While some UTAUT variables such as Performance Expectancy and Social Influence were originally theorized to affect behavioral intention, they did not show statistically significant effects in this context. This may be due to the organizational and institutional environment of the Algerian tax sector, where collective influence and perceived performance may be less decisive than practical usability and infrastructure support. Similarly, Seniority although important in many adoption models did not significantly shape perceptions or intentions among respondents. This suggests that long tenure with the platform does not guarantee stronger intention to adopt, possibly due to outdated habits or system fatigue. By focusing on the most impactful drivers, this model provides clearer and more accurate insights into the behavioral dynamics of digital tool adoption within public sector institutions.

Moderating Effects of Demographic Variables

The model also incorporated four demographic moderators to assess potential differential effects across population segments. However, the analysis revealed no significant moderating effects from seniority, experience, gender, or age. For example, the paths from demographic variables to BI yielded low coefficients: $Snr \rightarrow BI = -0.02$, $Exp \rightarrow BI = 0.18$, $Gnd \rightarrow BI = -0.06$, and $Age \rightarrow BI = 0.09$. These values suggest that behavioral intention toward using the digital system is relatively stable across different demographic groups within the organization. This homogeneity may reflect a shared organizational culture, consistent exposure to digital technologies, or standardized training programs.

Measurement Model Assessment

The reliability and validity of the measurement model were supported by adequate factor loadings. Most items demonstrated loadings above 0.70, indicating good convergent validity. However, a few indicators particularly within SI and EE had loadings below the recommended threshold, such as SI3 (0.16) and EE2 (0.03). These low loadings may suggest measurement

error or weak item alignment with the underlying constructs. While they do not severely compromise the model fit, they highlight the potential for refinement in future survey instrument design.

R² Values and Model Predictive Power

The model explains a reasonable proportion of variance in the endogenous construct. The R² value for Behavioral Intention (BI) is 0.43, indicating that approximately 43% of the variability in BI is accounted for by the four exogenous predictors. This level of explanatory power is considered acceptable in behavioral research, especially in studies conducted in complex organizational settings.

The results of the structural model analysis provide strong empirical support for the proposed extension of the UTAUT model. Performance Expectancy emerged as the most significant determinant of Behavioral Intention, while Effort Expectancy and Social Influence also contributed positively, albeit to a lesser degree. Facilitating Conditions were found to have minimal direct influence on BI, suggesting that infrastructural support is not a primary concern among users. Moreover, the absence of significant moderating effects implies that the model is robust across different demographic segments.

Taken together, these findings confirm the validity of the model and underscore the importance of focusing on perceived usefulness and ease of use to drive technology adoption in public administration contexts.

II. Qualitative Thematic Analysis of Open-Ended Responses

To complement the quantitative analysis based on the UTAUT model, a qualitative thematic analysis was conducted using Braun & Clarke's (2006) approach. Open-ended responses from participants were analyzed to identify recurring themes regarding the adoption and use of the

Jibaya'tic platform. Frequencies of themes were noted to understand the most pressing issues faced by users. This analysis deepens the understanding of behavioral, technical, and organizational factors influencing adoption.

Q1: What are the biggest challenges you face when using Jibaya'tic in your work?

Table 17: Thematic Analysis of Responses to Q1

Theme	Frequency	Sample Comment
Technical Challenges	44	System bugs, frequent outages
Lack of Training/Support	15	Insufficient support or guidance
Interface Complexity	13	Difficult to navigate
Data Transfer Issues	8	Problems with file or data transfer

Source: Developed through personal efforts

Technical reliability emerged as the most significant issue, with 44 mentions. This aligns with known barriers to digital adoption in public sector environments. Lack of training and interface complexity also highlight weaknesses in Facilitating Conditions and Effort Expectancy as described in the UTAUT model.

Q2: What improvements would make Jibaya'tic more acceptable for you?

Table 18: Thematic Analysis of Responses to Q2

Theme	Frequency	Sample Comment
System Stability	20	Eliminate bugs
Simplification of Interface	13	Make it easier to use
Legal-System Alignment	10	Match platform with procedures
Training and Support	15	Provide technical help

Source: Developed through personal efforts

The most frequent suggestions were technical calling for a more stable and user-friendly system. Other key points involved aligning the platform with legal frameworks and providing adequate training, which again reflect UTAUT's constructs of Effort Expectancy and Facilitating Conditions.

Q3: How do you think Jibaya'tic impacts teamwork in your organization?

Table 19: Thematic Analysis of Responses to Q3

Theme	Frequency	Sample Comment
Improved Communication	14	Use of internal messaging tools
Time Efficiency	16	Speeds up data sharing and workflow
No Significant Influence	8	Minimal impact on teamwork

Source: Developed through personal efforts

Respondents generally agreed that Jibaya'tic improved communication and saved time. However, some noted that it had minimal effect on collaboration, suggesting that social aspects and teamwork features of the system are underutilized or not well integrated.

Synthesis with Quantitative Findings

These qualitative findings reinforce the quantitative results derived from the UTAUT model. Technical barriers and lack of support relate directly to lower Effort Expectancy and weak Facilitating Conditions. Suggestions for training, support, and legal alignment also support the notion that successful adoption depends not only on the platform's technical design, but also on organizational and human-centered factors. Moreover, the perceived improvement in communication ties into Social Influence, one of the key UTAUT constructs.

SECTION 2: Discussion of Results

The results of this study, conducted on a sample of 82 employees within the Algerian tax administration, offer valuable insights into the demographic and organizational context surrounding the adoption of the Jibaya'tic digital platform. The gender distribution reveals that the majority of participants were female (64.6%), while males accounted for 35.3%. This notable female predominance suggests that women are not only well represented in the Algerian public sector workforce but also play a central role in administrative functions. Their greater involvement in such institutional reforms may reflect broader socio-economic dynamics and employment trends favoring female participation in the civil service sector. In terms of age, the respondents were primarily concentrated in the 46–55 years category (50%), followed by the 36–45 years group (31.7%). Much smaller percentages were observed in the younger brackets of 18–25 and 26–35 years, both representing just 2.4% each. Likewise, employees aged 56 years and above comprised 13.4% of the sample. These figures point to a workforce composed largely of mid-to-late career professionals who possess extensive institutional knowledge and operational familiarity. While their experience offers stability and expertise, it may also pose challenges to digital transformation initiatives, particularly if such employees are less comfortable with new technologies compared to digital-native younger cohorts. Regarding educational background, a significant majority of respondents hold university degrees (79.2%), while 18.2% reported having completed secondary education, and only 2.4% had middle school qualifications. No respondents held only primary-level education. This high level of educational attainment suggests that the workforce is generally well-prepared for knowledge-intensive tasks and should, in principle, be capable of adapting to digital innovations like Jibaya'tic especially if appropriate training and change management strategies are implemented. Occupationally, the distribution of job roles was diverse. Execution Officers made up the largest group at 24.3%, closely followed by Service Managers (23.1%) and Accounting Officers (17.0%). Other roles, such as Cashiers (12.1%), Revenue Officers (4.8%), and various technical or support positions

(including IT Specialists and Front Desk Officers, each around 3.6%), were also represented. This spread across hierarchical and functional roles suggests that Jibaya'tic interacts with multiple levels of operation, requiring tailored training and support structures to accommodate the differing technical proficiencies and system needs across roles. Professional experience was another key characteristic of the sample. Almost half of the respondents (48.7%) had more than 20 years of experience, while 20.7% had between 10 and 15 years, and 18.2% between 15 and 20 years. Only a small minority (12%) had fewer than 6 years of experience. This overwhelmingly seasoned workforce likely possesses a strong familiarity with traditional procedures, which may lead to both inertia and skepticism toward technological change unless clearly demonstrated benefits and adequate support are provided. With regard to organizational service type, the majority of respondents (79.2%) were affiliated with Tax Centers, while 20.7% worked at the Directorate of Large Enterprises. This disproportionate representation may be reflective of the operational scale and workforce distribution within Algeria's tax administration. Given their central role in day-to-day tax operations, feedback from Tax Center employees is likely to be particularly critical in assessing the practical effectiveness and adoption barriers of the Jibaya'tic platform. Analyzing departmental affiliation, most respondents came from the Treasury Office (58.5%) and the Main Management Department (35.3%). Other departments, including IT and Logistics, Reception and Information, and Control or Litigation services, were either marginally represented or not represented at all. This suggests that financial and administrative departments are at the forefront of Jibaya'tic usage, likely due to the platform's alignment with budgeting, tax processing, and revenue collection functions. Seniority in current roles also offers insight into the workforce's dynamics. A substantial majority (70.7%) had between 3 and 6 years of seniority, while 15.8% had 1 to 3 years, and 13.4% had less than one year. This indicates that while employees may be institutionally experienced, many have relatively recent tenure in their specific roles. Such a

profile may enhance adaptability and openness to digital tools like Jibaya'tic, provided these individuals receive structured onboarding and are supported through institutional learning initiatives. Altogether, these demographic and organizational features underscore the complexity of digital transformation in public institutions. They highlight the importance of targeting interventions not just by technology function but also by employee characteristics such as experience, role, and departmental context. These insights serve as a foundational step toward understanding the behavioral trends observed in the subsequent analysis of the UTAUT constructs and the overall intention to adopt the Jibaya'tic platform.

Understanding the factors that shape behavioral intention toward adopting digital tools in the public sector is essential for designing effective digital transformation strategies. This study applied the Unified Theory of Acceptance and Use of Technology (UTAUT) within the context of Algeria's tax administration to explore how various constructs: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions influence employees' willingness to use the Jibaya'tic digital platform. The analysis revealed several important insights. Notably, Effort Expectancy emerged as a strong driver of behavioral intention. This finding reinforces the idea that when public sector employees perceive a digital system as easy to use and intuitive, they are more inclined to adopt it. This observation is consistent with earlier UTAUT-based studies, which have consistently highlighted ease of use as a fundamental determinant of user acceptance, particularly in contexts where digital literacy may vary across individuals (Venkatesh et al., 2003; AlAwadhi & Morris, 2008). Facilitating Conditions were also found to play an important role in encouraging adoption. The availability of support structures such as training, technical assistance, and necessary infrastructure appears to significantly influence whether employees engage with digital platforms. This result aligns with findings from other public sector studies, which emphasize the critical role of organizational readiness and institutional support in driving successful technology implementation (Ifinedo,

2012; Rana et al., 2016). In contrast, Performance Expectancy did not emerge as a significant factor in influencing behavioral intention. This is somewhat unexpected, as previous studies frequently identify perceived performance benefits as a central element of adoption behavior. One possible explanation is that in structured bureaucratic environments like public administrations, employees may take performance enhancements for granted or view them as organizational imperatives rather than personal motivators (Venkatesh et al., 2012). Similarly, Social Influence did not appear to significantly shape intention to adopt the platform. While such influence is often significant in collectivist cultures or hierarchical institutions, its limited role here may suggest that individual decision-making within the Algerian tax administration is driven more by internal evaluations than by peer or managerial pressure (Dwivedi et al., 2017).

Demographic factors provided additional nuance. Gender differences were evident in perceived ease of use, suggesting the existence of potential disparities in digital confidence or access to training opportunities (Gefen & Straub, 1997). Age also influenced perceptions of support, with older employees feeling less adequately supported likely a reflection of generational gaps in familiarity with digital tools (Morris & Venkatesh, 2000). On the other hand, employees with more experience in the organization reported greater ease in accessing resources, indicating that institutional familiarity may enhance perceptions of support. Despite these relationships, none of the demographic variables showed a direct effect on behavioral intention, nor did they significantly moderate the primary model constructs. This suggests a relatively uniform perception of digital adoption across different employee groups, possibly due to consistent training programs or a shared organizational culture. Overall, the findings provide strong empirical support for an extended UTAUT framework adapted to the public administration context. The results suggest that initiatives aimed at enhancing system usability and strengthening institutional support are likely to be the most effective strategies for fostering

technology adoption. Conversely, strategies that rely on promoting performance benefits or peer influence may have limited impact in this specific setting.

These insights contribute to the broader literature on e-government and public sector digitalization by emphasizing the importance of tailoring adoption strategies to institutional realities rather than relying solely on generalized models. By identifying what truly drives or hinders user engagement, this study offers actionable recommendations for administrators and policymakers overseeing digital transformation efforts. Ultimately, fostering successful adoption of digital platforms like Jibaya'tic requires more than just infrastructure it demands a deep understanding of user perceptions, organizational culture, and the everyday realities of public sector employees. This study contributes to that understanding, offering a grounded, evidence-based framework for guiding future digital initiatives.

Table 20: Summary of Hypotheses Testing Results

Nº	Hypotheses	Status
1	H1: Performance expectancy positively influences employees' intention to adopt digital tools in the tax sector.	Not Supported
2	H2: Effort expectancy positively influences employees' intention to adopt digital tools in the tax sector.	Supported
3	H3: Social influence positively affects employees' intention to adopt digital tools in the tax sector.	Not Supported
4	H4: Facilitating conditions positively influence employees' actual use of digital tools in the tax sector.	Supported
5	H5: Age moderates the relationship between performance expectancy, effort expectancy, and social influence on the	Not Supported

N°	Hypotheses	Status
	intention to adopt digital tools, with younger employees showing stronger relationships.	
6	H6: Gender moderates the effect of performance expectancy and effort expectancy on the intention to adopt digital tools, with males showing a stronger relationship for performance expectancy and females for effort expectancy.	Partially Supported (<i>Gender affected EE but not PE</i>)
7	H7: Experience positively moderates the relationship between facilitating conditions and actual use of digital tools, with more experienced employees showing a stronger relationship.	Supported
8	H8: Seniority with Jibaya'tic negatively moderates the relationship between effort expectancy and the intention to adopt new digital tools, with more experienced users showing a weaker relationship.	Not Supported

Source: Developed through personal efforts

Validated Conceptual Model

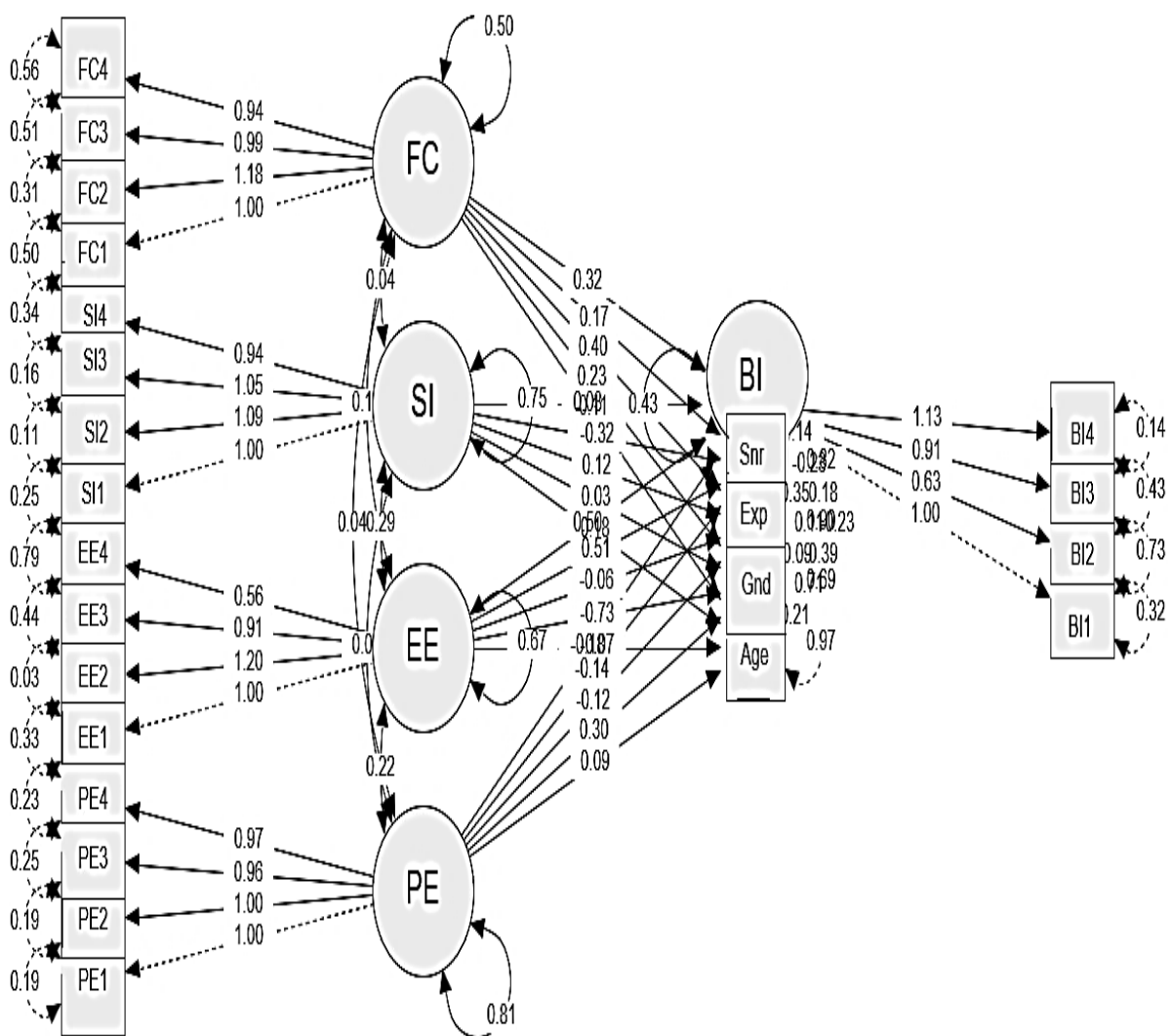
We employed hypothesis testing within the framework of Structural Equation Modeling (SEM) to confirm or reject the initial assumptions that structured the relationships between the core variables of our study, as illustrated in the proposed conceptual model.

Following the hypothesis testing process and the examination of path coefficients and their corresponding significance levels, we were able to empirically validate the theoretical model. The validated conceptual model highlights the significant relationships between variables based on their statistical significance thresholds (p-values).

The final model retains only the paths that were statistically supported, thereby offering a refined and evidence-based representation of the factors influencing the intention and actual use of digital tools in the tax administration context.

The validated conceptual model is presented in figure below.

Figure 12: The Finalized Structural Model



Source: the JASP outputs

GENERAL CONCLUSION

The aim of this study was to investigate the factors influencing the behavioral intention of public sector employees toward adopting digital tools within the Algerian tax administration, with a specific focus on the Jibaya'tic digital platform. Grounded in the Unified Theory of Acceptance and Use of Technology (UTAUT), this research employed a quantitative methodology using structured questionnaires completed by 82 employees from various departments and service levels within the tax administration. The goal was to evaluate how constructs such as Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions along with demographic moderators impact the intention to adopt digital tools in a governmental context.

The results of the study offered significant insights into the drivers of digital adoption within public sector institutions. The proposed conceptual model identified the following key variables as significant influencers of behavioral intention to adopt the Jibaya'tic platform:

- Effort Expectancy (EE)
- Facilitating Conditions (FC)
- Experience (as a moderator of FC)

The empirical findings validated the influence of Effort Expectancy and Facilitating Conditions on behavioral intention. The analysis revealed that the perceived ease of use of the platform and the availability of technical and institutional support are pivotal in shaping employees' willingness to engage with the system. Experience also emerged as a meaningful moderator, reinforcing that seasoned employees are more likely to feel supported and confident in their use of digital tools. In contrast, Performance Expectancy and Social Influence did not show significant effects, suggesting that perceived performance benefits and peer encouragement are less decisive within this organizational environment. Additionally, demographic moderators

such as age, gender, and seniority showed limited or no significant moderation effects on the core UTAUT relationships.

Our study emphasizes the critical role of practical usability and infrastructural support in driving the adoption of digital technologies in the public sector. By aligning digital transformation efforts with these key factors, tax authorities can better facilitate system uptake among employees and ensure the successful implementation of platforms like Jibaya'tic. This is especially important in settings where traditional administrative practices are deeply entrenched, and resistance to change may stem from a lack of familiarity or perceived institutional readiness.

The integration of empirical findings with the UTAUT framework not only confirms the theoretical robustness of our model but also provides practical guidance for policymakers and public administrators. For example, investing in structured training programs, offering clear technical support pathways, and simplifying platform interfaces can significantly boost adoption rates. These insights are particularly relevant for government-led digital transformation initiatives in similar socio-institutional contexts. This research contributes to a deeper understanding of technology acceptance in public administrations, particularly within developing countries such as Algeria, where digital transitions are increasingly viewed as strategic imperatives. It lays the groundwork for future inquiries and cross-institutional comparisons aimed at exploring how contextual and cultural factors shape digital adoption behavior among civil servants.

In practical terms, the findings are highly relevant for digital strategy designers within the Ministry of Finance and Directorate General of Taxes. By tailoring interventions based on user perceptions especially regarding ease of use and available support these institutions can significantly enhance the effectiveness and sustainability of their digital reforms.

Despite the valuable contributions of this study, it is essential to acknowledge its limitations. The relatively small sample size, drawn from a single sector, limits the generalizability of the findings. Moreover, the study relied solely on the UTAUT model, which, while comprehensive, may not capture all dimensions of digital adoption, such as institutional culture, user motivation, or resistance to change. Future research could benefit from extending the theoretical framework to include additional constructs such as trust in technology, digital self-efficacy, or organizational commitment. Furthermore, adopting a mixed-methods approach including qualitative interviews could yield richer insights into the lived experiences and challenges employees face during digital transitions.

In conclusion, the successful adoption of digital tools in the public sector hinges not only on technological infrastructure but also on human-centered strategies that prioritize user support and interface simplicity. By understanding and addressing the factors that influence behavioral intention, public institutions in Algeria can pave the way toward a more efficient, transparent, and responsive administration in the digital era.

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Annexes

Annex -A- Questionnaire English version

UTAUT-Based Questionnaire: Employee Adoption of "Jibaya'tic " in the Tax Sector.

This questionnaire aims to evaluate the factors influencing the adoption of the "Jibaya'tic " system by employees in the tax administration, based on the UTAUT (Unified Theory of Acceptance and Use of Technology) model. Your responses, which will remain anonymous and confidential, will help provide a better understanding of the perceptions, expectations, and needs related to the use of this tool.

Thank you for your participation!

Section 1: UTAUT Model Constructs

1. Performance Expectancy (PE)

(1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree)

- "Jibaya'tic " improves my efficiency in handling tax-related tasks.
- "Jibaya'tic " helps me complete my work faster.
- "Jibaya'tic " enhances my overall job performance.
- "Jibaya'tic " helps reduce errors in tax processes.

2. Effort Expectancy (EE)

- It is easy for me to learn how to use "Jibaya'tic ".
- The interface of "Jibaya'tic " is user-friendly and intuitive.
- I find it easy to complete my tasks using "Jibaya'tic ".
- The available support and training for "Jibaya'tic " are sufficient to help me use it effectively.

3. Social Influence (SI)

- My colleagues support the use of "Jibaya'tic ".
- My supervisors encourage the adoption of "Jibaya'tic ".
- The organization promotes using "Jibaya'tic " to improve efficiency.
- I feel pressure from my team to adopt "Jibaya'tic ".

4. Facilitating Conditions (FC)

- I have the necessary resources (e.g., equipment and software) to use "Jibaya'tic " effectively.

- I receive sufficient training on how to use "Jibaya'tic ".
- There is adequate technical support available when I face difficulties using "Jibaya'tic ".
- The organization provides policies that support the adoption of "Jibaya'tic ".

5. Behavioral Intention (BI)

- I intend to use "Jibaya'tic " in my daily work.
- I am willing to learn more about using "Jibaya'tic " effectively.
- I see myself using "Jibaya'tic " regularly in the future.
- I will encourage my colleagues to use "Jibaya'tic ".

Section 2 : Open-Ended Questions

- What are the biggest challenges you face when using "Jibaya'tic " in your work?
- What improvements would make "Jibaya'tic " more acceptable for you?
- How do you think "Jibaya'tic " impacts teamwork in your organization?

Section 3 : Demographic Information

- **Age group :**
☐ 18–25 ☐ 26–35 ☐ 36–45 ☐ 46–55 ☐ 56 and above
- **Gender :**
☐ Male ☐ Female
- **Educational level:**
 Primary – Middle – Secondary – University
- **Job title :** _____
- **Years of experience in the tax sector:**
☐ 0–3 years ☐ 3–5 years ☐ 6–10 years ☐ 10–15 years ☐ 15–20 years ☐ More than 20 years
- **External service :**
 Directorate of Large Enterprises – Tax Center
- **Department:**
 Main Management Department – Main Control and Research Department – Main Litigation Department – Treasury Office – Reception and Information Department – IT and Logistics Department.

- **How long have you been using "Jibaya'tic "?**
- ☐ Less than a year ☐ 1–3 years ☐ 3–6 years.

Annex -B- Questionnaire French version

Questionnaire basé sur le modèle UTAUT : Adoption de "Jibaya'tic " par les employés dans le secteur des impôts

Ce questionnaire vise à évaluer les facteurs influençant l'adoption du système "Jibaya'tic " par les employés des services fiscaux, en s'appuyant sur le modèle UTAUT (Unified Theory of Acceptance and Use of Technology). Vos réponses, anonymes et confidentielles, contribueront à mieux comprendre les perceptions, les attentes et les besoins liés à l'utilisation de cet outil.

Merci pour votre participation !

Partie 1 : Variables du modèle UTAUT

1. Attentes en matière de performance (PE)

(1 = Pas du tout d'accord | 2 = Pas d'accord | 3 = Neutre | 4 = D'accord | 5 = Tout à fait d'accord)

- "Jibaya'tic " améliore mon efficacité dans la gestion des tâches fiscales.
- "Jibaya'tic " m'aide à accomplir mon travail plus rapidement.
- "Jibaya'tic " améliore ma performance globale au travail.
- "Jibaya'tic " réduit les erreurs dans les processus fiscaux.

2. Attentes en matière d'effort (EE)

- Il est facile pour moi d'apprendre à utiliser "Jibaya'tic ".
- L'interface de "Jibaya'tic " est intuitive et facile à utiliser.
- Je trouve facile d'accomplir mes tâches avec "Jibaya'tic ".
- Le soutien et la formation disponibles pour "Jibaya'tic " sont suffisants pour m'aider à l'utiliser efficacement.

3. Influence sociale (SI)

- Mes collègues soutiennent l'utilisation de "Jibaya'tic ".
- Mes superviseurs encouragent l'adoption de "Jibaya'tic ".
- L'organisation promeut l'utilisation de "Jibaya'tic " pour améliorer l'efficacité.
- Je ressens une pression de mon équipe pour adopter "Jibaya'tic ".

4. Conditions facilitatrices (FC)

- Je dispose des ressources nécessaires (matériel, logiciels) pour utiliser "Jibaya'tic " efficacement.
- Je reçois une formation suffisante sur l'utilisation de "Jibaya'tic ".
- Un support technique est disponible lorsque je rencontre des difficultés.
- L'organisation met en place des politiques qui soutiennent l'adoption de "Jibaya'tic ".

5. Intention comportementale (BI)

- J'ai l'intention d'utiliser "Jibaya'tic " dans mon travail quotidien.
- Je suis prêt(e) à en apprendre davantage sur l'utilisation efficace de "Jibaya'tic ".
- Je me vois utiliser "Jibaya'tic " régulièrement à l'avenir.
- Je vais encourager mes collègues à utiliser "Jibaya'tic ".

Partie 2 : Questions ouvertes

- Quels sont les plus grands défis que vous rencontrez dans l'utilisation de "Jibaya'tic " au travail ?
- Quelles améliorations rendraient "Jibaya'tic " plus acceptable pour vous ?
- Selon vous, comment "Jibaya'tic " influence-t-il le travail collaboratif dans votre organisation ?

Partie 3 : Informations démographiques

- **Tranche d'âge :**
☐ 18-25 ans ☐ 26-35 ans ☐ 36-45 ans ☐ 46-55 ans ☐ 56 ans et plus
- **Sexe :**
☐ Homme ☐ Femme
- **Niveau d'éducation :**
 Primaire – Moyen – Secondaire – Universitaire
- **Poste occupé :** _____
- **Années d'expérience dans le secteur des impôts :**
☐ 0 à 3 ans ☐ 3 à 5 ans ☐ 6 à 10 ans ☐ 10 à 15 ans ☐ 15 à 20 ans ☐ Plus de 20 ans
- **Service extérieur :**
 Direction des grandes entreprises – Centre des impôts
- **Service :**
 Service principal de gestion – Service principal de contrôle et recherche – Service

principal des contentieux – Recette – Service accueil et information – Service informatique et moyens

- **Depuis quand utilisez-vous "Jibaya'tic" :**

☐ Moins d'une année ☐ 1 à 3 ans ☐ 3 à 6 ans

Annex -C- Questionnaire Arabic version

استبيان مبني على نموذج: UTAUT تبني الموظفين لـ "جبايتك" في قطاع الضرائب.

يهدف هذا الاستبيان إلى تقييم العوامل التي تؤثر على تبني الموظفين في المصالح الجبائية لنظام "جبايتك"، بالاعتماد على نموذج التوحيد لنظرية تقبل واستخدام التكنولوجيا (UTAUT) ستساهم إجاباتكم، التي ستعامل بسرية وبدون ذكر الأسماء، في فهم أفضل للتصورات والتوقعات والاحتياجات المتعلقة باستخدام هذا النظام. شكرًا لمساهمتكم!

القسم الأول: متغيرات نموذج UTAUT

1. التوقعات المتعلقة بالأداء (PE)

(أعارض بشدة - 1 | أعارض - 2 | محايد - 3 | أوافق - 4 | أوافق بشدة - 5)

- "جبايتك" يحسن كفاءتي في التعامل مع المهام المتعلقة بالضرائب.
- "جبايتك" يساعدني في إنجاز عملي بشكل أسرع.
- "جبايتك" يعزز أدائي العام في العمل.
- "جبايتك" يساعد في تقليل الأخطاء في العمليات الضريبية.

2. توقعات الجهد (EE)

- من السهل بالنسبة لي تعلم كيفية استخدام "جبايتك".
- واجهة "جبايتك" سهلة الاستخدام وبديهية.
- أجد أنه من السهل إتمام مهامتي باستخدام "جبايتك".
- الدعم والتدريب متاح لـ "جبايتك" كافيان لمساعدتي على استخدامه بفعالية.

3. التأثير الاجتماعي (SI)

- زملائي يدعمون استخدام "جبايتك".
- مشرفي يشجعون على اعتماد "جبايتك".
- المؤسسة تروج لاستخدام "جبايتك" لتحقيق الكفاءة.
- أشعر بضغط من فريقتي لاعتماد "جبايتك".

4. الظروف المساعدة (FC)

- أملك الموارد اللازمة (مثل الأجهزة والبرامج) لاستخدام "جبايتك" بفعالية.
- أتلقى تدريباً كافياً حول كيفية استخدام "جبايتك".
- يتوفر الدعم الفني الكافي عندما أواجه صعوبات في استخدام "جبايتك".
- تقدم المؤسسة سياسات تدعم اعتماد "جبايتك".

5. النية السلوكية (BI)

- أنوي استخدام "جبايتك" في عملي اليومي.

- أنا مستعد لتعلم المزيد حول استخدام "جبايتك" بفعالية.
- أرى نفسي أستخدم "جبايتك" بشكل متكرر في المستقبل.
- سأشجع زملائي على استخدام "جبايتك".

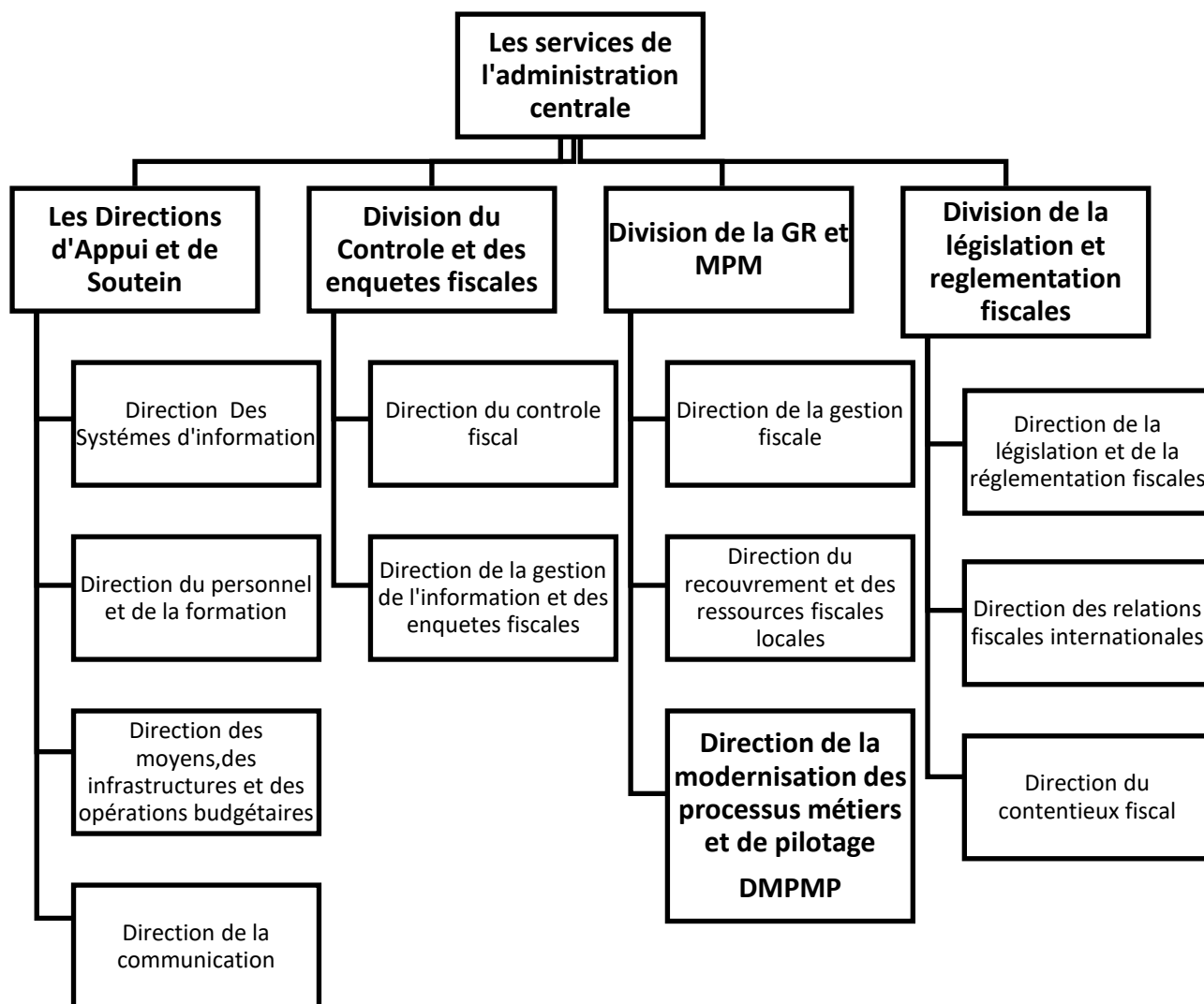
القسم الثالث: الأسئلة المفتوحة

- ما هي أكبر التحديات التي تواجهك عند استخدام "جبايتك" في عملك؟
- ما هي التحسينات التي قد تجعل "جبايتك" أكثر قبولاً بالنسبة لك؟
- كيف تعتقد أن "جبايتك" يؤثر على العمل الجماعي في مؤسستك؟

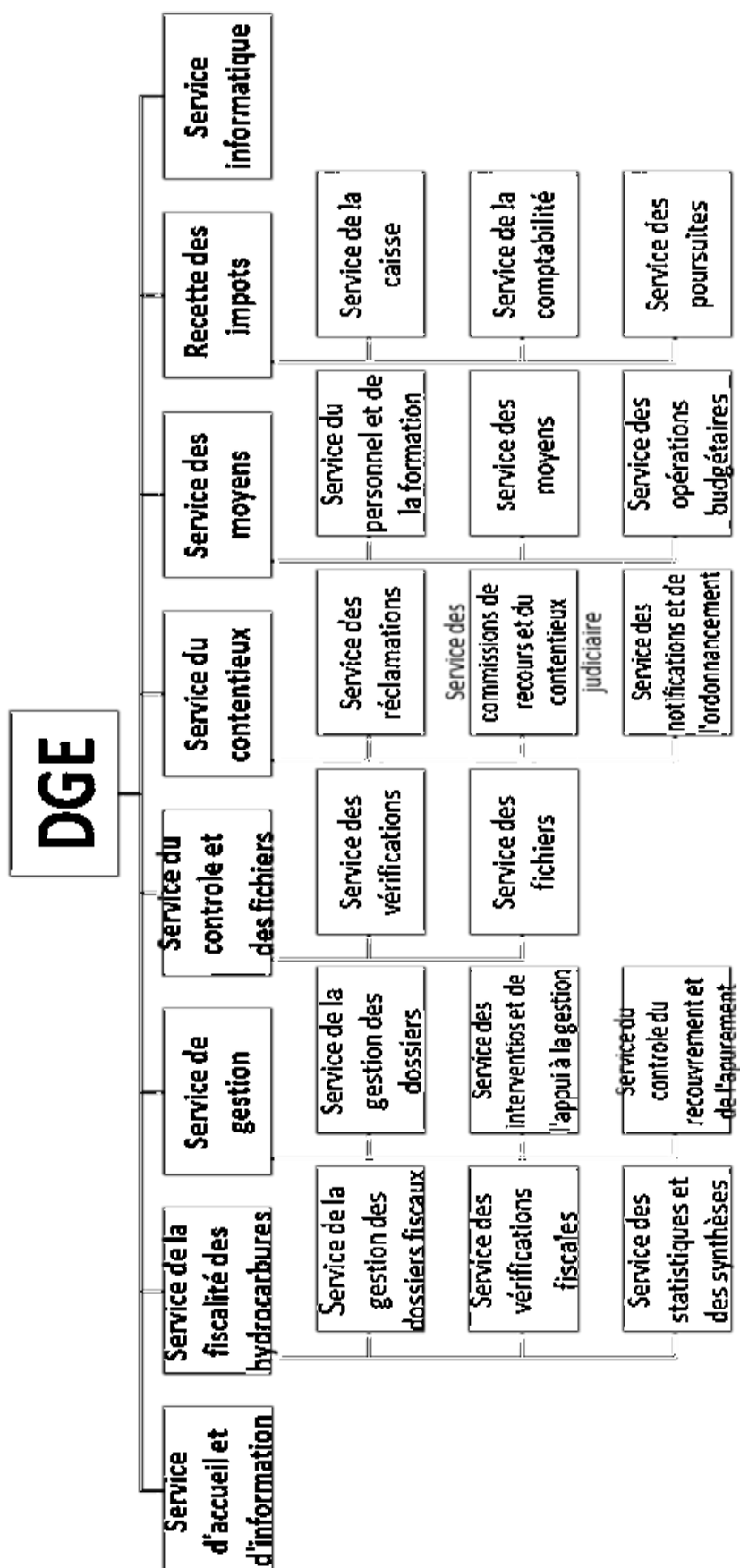
القسم الثالث: المعلومات الديموغرافية

- الفئة العمرية: من 18-25؛ من 26-35؛ من 36-45؛ من 46-55؛ من 56-فما فوق
- الجنس: ☐ ذكر ☐ أنثى
- المستوى التعليمي: ابتدائي - متوسط - ثانوي - جامعي
- الوظيفة: _____
- سنوات الخبرة في قطاع الضرائب: من 0 إلى 03 سنوات؛ من 03 إلى 05 سنوات؛ من 06 إلى 10 سنة؛ من 10-15 سنة؛ من 15 إلى 20 سنة؛ من 20 فما فوق.
- المصلحة الخارجية: مديرية كبريات المؤسسات – مركز الضرائب.
- المصلحة: المصلحة الرئيسية للتسيير – المصلحة الرئيسية للمراقبة والبحث- المصلحة الرئيسية للمنازعات – القباضة – مصلحة الاستقبال والاعلام – مصلحة الاعلام الالي والوسائل.
- منذ متى تستخدم نظام "جبايتك"؟: أقل من سنة؛ من 01 إلى 03 سنوات؛ من 03 إلى 06 سنوات.

ANNEX -D- THE ORGANIZATIONAL CHART OF DGI



ANNEX -E- THE ORGANIZATIONAL CHART OF DGE



ANNEX -F- THE ORGANIZATIONAL CHART OF CDI

