

The Role of E-Management in Advancing Tax Collection: A Case Study of Tlemcen Province's Tax Directorate Using The PLS-SEM Model

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Received: 03/01/2025; **Accepted:** 14/02/2025; **Published:** 01/03/2025

Abstract: The study aimed to examine the impact of implementing e-management on improving tax revenue in the Tax Directorate of Tlemcen province, Algeria. It employed a descriptive approach for the theoretical framework and a quantitative analysis for the practical part, using a questionnaire for data collection. E-management was assessed across several dimensions, including infrastructure, human and financial requirements, and the degree of implementation, with tax revenue improvement as the dependent variable. The relationships between the variables were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM).

The findings revealed that while the implementation of e-management did not significantly influence the improvement of tax revenue, all dimensions of e-management—particularly infrastructure, human requirements, financial requirements, and the degree of implementation—had a positive effect on its adoption within the Tax Directorate of Tlemcen.

Keywords: E-Management ; Tax; Tax Directorate of Tlemcen ; PLS-SEM.

Jel Classification Codes : M15 ; H21.

I. Introduction and Conceptual Framework:

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Electronic management represents one of the most significant outcomes of modern technological advancements. The integration of connectivity and innovative communication technologies has prompted countries and governments to harness the benefits of the technological revolution. This approach seeks to address challenges such as overcrowding, prolonged waiting times in government offices, and bureaucratic inefficiencies, while accelerating the completion of administrative tasks. It also aims to eliminate barriers such as mediation and red tape, thereby fostering a more efficient public administration system. Furthermore, electronic management offers the advantage of saving time and effort by modernizing traditional workflows into more flexible and responsive mechanisms, driven by the rapid growth of information and communication technologies¹.

As a contemporary trend, electronic management is increasingly adopted by governments worldwide to enhance the efficiency of their institutions. This transformation leverages advanced information and communication technologies to develop administrative functions such as planning, organizing, directing, and controlling, alongside operational tasks like production, financing, and investment. By embracing digital tools, organizations aim to optimize their processes and operate in a globally integrated and timely manner, reflecting the ongoing evolution toward modern management practices².

Electronic management has been described through various definitions emphasizing its role and purpose. The International Finance Corporation (IFC) views "electronic management systems" as mechanisms designed to oversee and regulate institutional operations efficiently³. Al-Ani and Jawad (2013) consider it an administrative approach tailored to the information age, aiming to optimize the use of information resources within an advanced electronic framework⁴. This strategy seeks to effectively utilize both human and material resources through digital means, ensuring efficiency in managing efforts and expenditures to achieve organizational objectives. Similarly, Al-Hassan (2010) defines electronic management as a set of administrative activities focused on the rapid and cost-effective exchange of information and delivery of services to citizens and businesses. These activities leverage computer systems and internet networks while maintaining the security and confidentiality of information⁵. According to Minwar and Whebeh (2018), electronic management serves as a modern alternative in administration, relying on digital tools such as computers, internet technologies, intranets, extranets, and specialized software to streamline administrative tasks⁶. This approach emphasizes reduced effort, faster execution, and high-quality outcomes⁷.

Electronic management seeks to enhance organizational efficiency by leveraging modern information and communication technologies. As noted by Amer (2003), its goals include improving management practices, reducing bureaucracy, facilitating timely decision-making, and attracting investments through innovative mechanisms. It also aims to cut costs by minimizing paperwork, enhancing communication between departments, and centralizing operations⁸.

Radwan (2004) highlights its role in collecting accurate data, removing decision-making barriers, and providing real-time information while reducing monitoring expenses⁹. Similarly, Al-Hiyt

(2015) focuses on its ability to boost productivity, develop skilled personnel, and foster economic growth through streamlined processes and resource optimization¹⁰⁻¹¹.

Electronic management fosters administrative change by modifying traditional processes. It includes dynamic, continuous electronic planning, where all employees can contribute, and electronic organization, which shifts from hierarchical to decentralized structures with self-managed teams. Electronic control enables real-time monitoring and quick corrections, enhancing trust and loyalty. Finally, electronic leadership incorporates technical, human, and self-leadership to adapt to the evolving digital environment¹².

In recent years, the Algerian government has made significant efforts to transition from traditional administrative methods to electronic management by adopting information and communication technologies. This transformation aims not only to modernize the delivery of public services but also to improve the relationship between public administrations and citizens. Among the sectors targeted for this transformation, the tax sector has been a key focus, given its critical role in funding the state's treasury. Extensive reforms have been implemented in this sector to facilitate services for taxpayers, improve tax collection, and ultimately enhance tax performance and resource mobilization.

As part of these efforts, Algeria has introduced several initiatives to modernize its tax administration. One notable development is the launch of the "JIPAYTECH" electronic portal, which enables taxpayers to file their tax declarations and make payments online. This system offers several advantages, including automating tax calculations and reducing the risk of errors in determining tax rates¹³. Additionally, the "e-Algeria" program, implemented between 2008 and 2013, sought to enhance the country's digital infrastructure, develop human resources, and establish the necessary legal framework to support e-governance¹⁴.

The tax administration has also simplified the process for creating tax files and introduced an online system for taxpayers to obtain their tax identification numbers¹⁵. Furthermore, the remote tax declaration system has been made mandatory for large enterprises, streamlining procedures and improving efficiency in tax reporting and payments¹⁶. These initiatives reflect a broader strategy aimed at improving public sector performance and enhancing the relationship between taxpayers and the government¹⁷.

Based on the theoretical aspects of e-management and its applications in Algeria, particularly in the tax sector, which is the focus of our study, it is evident that the information technology infrastructure, human and financial requirements, as well as the level of implementation, all play a crucial role in the successful application of e-management. Through this research paper, we aim to study the impact of e-management implementation on the tax collection process, with a focus on the Tax Directorate in Tlemcen Province, which will be the subject of our practical case study.

II. Analysis of Related Literature:

In the context of our study on "The Impact of E-Management on Tax Collection in Algeria," several previous studies have examined the role of digitalizing tax administration in improving tax collection efficiency at both local and international levels. To provide a comprehensive overview of the existing literature, highlight its contributions, and define the distinct aspects of our research, this section is structured into three parts. The first part reviews international studies, the second explores local studies, and the third situates our study within the framework of the reviewed literature.

Among the international studies addressing the impact of e-management on tax collection is the research titled "Exploring the Adoption of Selected Digital Technologies in Tax Administration: A Cross-Country Perspective" by Manabu Nose and Andualem Mengistu . This study utilized multidimensional data sources such as ISORA, TADAT, and RA-GAP to analyze the effects of digital technologies on tax collection and compliance. The findings revealed that digital tools significantly enhance tax collection efficiency, although the impact varies depending on the type of technology implemented. Moreover, the study emphasized that realizing revenue gains requires complementary policy, legislative, and administrative reforms, along with adequate digital infrastructure and skilled administrative staff. It also incorporated single-country case studies to identify the key enabling factors necessary for sustaining the benefits of digital investments¹⁸.

A relevant study by Oladele, Rotimi, and Aribaba, Foluso Olugbenga et al, examined the impact of electronic tax administration on tax compliance and revenue in Nigeria. Using data from the Federal Inland Revenue Service (FIRS), the study compared tax revenue before and after the adoption of e-tax administration in 2013. The analysis, based on descriptive statistics and a pairwise t-test, showed a significant increase in tax revenue post-adoption, with a p-value of 0.012, indicating a strong connection between electronic tax systems and improved tax compliance. The study emphasized the need for continuous improvement in ICT infrastructure and security measures to ensure effective e-tax administration and encourage taxpayer participation¹⁹.

The study by Kanyabwira Jean Claude investigated the impact of the electronic tax system on tax collection efficiency in Rwanda. Despite the implementation of digital transformation by the Rwandan government and the Rwanda Revenue Authority (RRA) in 2012, challenges such as tax evasion, late payments, and inadequate taxpayer skills persist. The research, using both secondary data (1998-2011, 2012-2022) and primary data from surveys of 150 taxpayers and 50 tax officers, found that the e-tax system positively impacted tax revenue collection. The study emphasized the need for taxpayer education on technical skills and perceptions to enhance tax collection efficiency²⁰.

The paper by Chun-xiao Zhu examines the impact of the digital economy on tax collection and management in China. It highlights how the rapid growth of technologies such as cloud computing, big data, and 5G has accelerated the development of China's digital economy. However, the digitization of goods and services, along with the intangibility of assets, has posed both opportunities and challenges for traditional tax collection and management systems. The paper discusses the scale of China's digital economy and the effects on tax collection and administration, offering suggestions and countermeasures to address the challenges posed by the digital economy in the tax system²¹.

The study by Enerson, Johnson, Adegbe, Folajimi Festus, and Olaoye, Samuel Adebayo investigates the impact of electronic tax management systems on tax revenue collection efficiency in selected states in southwest Nigeria. It addresses issues such as poor record-keeping, tax complexity, and the lack of a reliable database, which have hindered effective revenue generation in the country. The research employed a survey design with a sample of 2,670 structured questionnaires, yielding a response rate of 82.4%. The data analysis, using descriptive and inferential statistics (multiple regression), revealed that electronic tax systems, including online and mobile payment systems, significantly improved tax compliance. The study suggests that incentives for taxpayers could further enhance compliance and revenue collection efficiency²².

At the local level in Algeria, several studies have explored the impact of digitalization on tax administration and revenue collection. Hammouche Ramzi's research investigates how digitalization has enhanced the efficiency and cost-effectiveness of Algeria's tax system. The study found that digital transformation led to a significant increase in tax revenue (by 70%) and reduced the cost of tax collection by 50%, contributing to the consistent achievement of revenue targets in recent years. These findings underscore the importance of digital tools in improving tax administration, and the study offers valuable insights for policymakers in Algeria and other developing countries seeking similar reforms²³.

Similarly, Benredjem Mohamed KHEMISSI's study examines the role of the "Jibayatik" system in Algeria's tax administration. This research focuses on how the system has improved transparency, service quality, and efficiency in tax collection by providing taxpayers with easier access to information and reducing the scope for fraud. The study emphasizes that digitization not only helps curb tax evasion but also fosters trust between taxpayers and tax authorities, thereby enhancing the overall tax collection process in Algeria. These efforts demonstrate the significant positive impact of digital systems on improving the effectiveness of tax administration and compliance²⁴.

Benazzoug and Messeguem examined the role of electronic administration in enhancing tax collection and combating tax evasion. Their research highlighted the importance of using ICT tools to streamline processes and address inefficiencies associated with traditional tax management. The study underscored Algeria's efforts to modernize its tax administration as a means to secure public revenues and curb tax evasion²⁵.

Kamilia Boukra's study focused on the implications of digitization on tax collection in Algeria from 2006 to 2022. Using a descriptive analytical method, the research concluded that digitization has played a pivotal role in increasing tax revenues, especially after 2008, when taxpayer identification systems were first implemented²⁶.

Bouzekri Djillali conducted a field study at the Tax Center in Tissemsilt to analyze how e-management improves the quality of fiscal services. The study, which surveyed 45 employees, found a statistically significant impact of e-management on service quality dimensions such as reliability, responsiveness, security, and social empathy²⁷.

Ramzi Hammouche and Samia Boudiaf evaluated the effectiveness of e-tax management elements and their role in enhancing tax services. Their field study, involving 162 employees across Algerian tax departments, revealed that the technical and human resources available in the

Algerian tax administration significantly contribute to the successful application of e-tax management. The study also established a strong statistical correlation between e-tax management efficiency and the improvement of tax services²⁸.

These studies collectively highlight Algeria's efforts to adopt digital solutions to modernize tax administration, improve efficiency, and enhance compliance. Our study aligns with previous local and international research on electronic or digital administration but differs by focusing specifically on Algeria, particularly Tlemcen Province. While we utilized the descriptive-analytical approach, as in other studies, our research stands out by employing second-generation statistical methods—PLS-SEM—for data analysis. Furthermore, unlike most studies that used SPSS for questionnaire data, we adopted the advanced SMART PLS software, which sets our work apart.

III. Methodological Design and Hypotheses:

To achieve the objective of this study, which focuses on examining the impact of implementing electronic management on enhancing tax collection, a questionnaire was employed as the primary data collection tool. The questionnaire consisted of three main sections:

- **Section One:** Collected general and professional information about the participants, including gender, age, job position, educational level, and professional experience.

- **Section Two:** Addressed the independent variable, which is the implementation of electronic management. This section was divided into four dimensions: infrastructure, human requirements, financial requirements, and the level of implementation, comprising a total of 35 statements distributed across these dimensions.

- **Section Three:** Focused on the dependent variable, which is the improvement of tax collection, and included 12 statements. In total, the questionnaire comprised 47 closed-ended statements, utilizing a five-point Likert scale.

The study was conducted at the Tax Directorate of Tlemcen Province, targeting 84 employees distributed across five sub-directorates: Resources, Collection, Tax Auditing, Tax Operations, and Disputes. Following the distribution of the questionnaires, 59 valid responses were retrieved for analysis.

Using a purposive sample of employees from the Tlemcen Tax Directorate as a case study, we will apply Partial Least Squares Structural Equation Modeling (PLS-SEM) to assess the impact of electronic management on tax collection improvement. PLS-SEM is a widely recognized analytical tool across disciplines such as marketing, management, and healthcare, valued for its flexibility and ability to handle complex models, especially with small samples or limited theoretical foundations²⁹⁻³⁰. Unlike covariance-based SEM (CB-SEM), PLS-SEM maximizes explained variance and does not require strict data distribution assumptions³¹⁻³². Additionally, its user-friendly software, such as Smart PLS, enhances accessibility and ease of use³³.

The study model consists of two variables explaining the relationship between e-management implementation and improved tax collection. The independent variable, e-management implementation, includes four dimensions: infrastructure, human requirements, financial requirements, and level of implementation. The dependent variable is improved tax collection. The following hypotheses have been defined and will be tested later.

- **Main hypothesis:**

- **Hypothesis 1:** There is a statistically significant effect at the 0.05 significance level between application of e- management and improved tax collection in the Tax Directorate of Tlemcen Province.

- **Sub-hypotheses:**

- **Hypothesis 2:** There is a statistically significant positive effect at the 0.05 significance level of the infrastructure dimension on application of e- management.

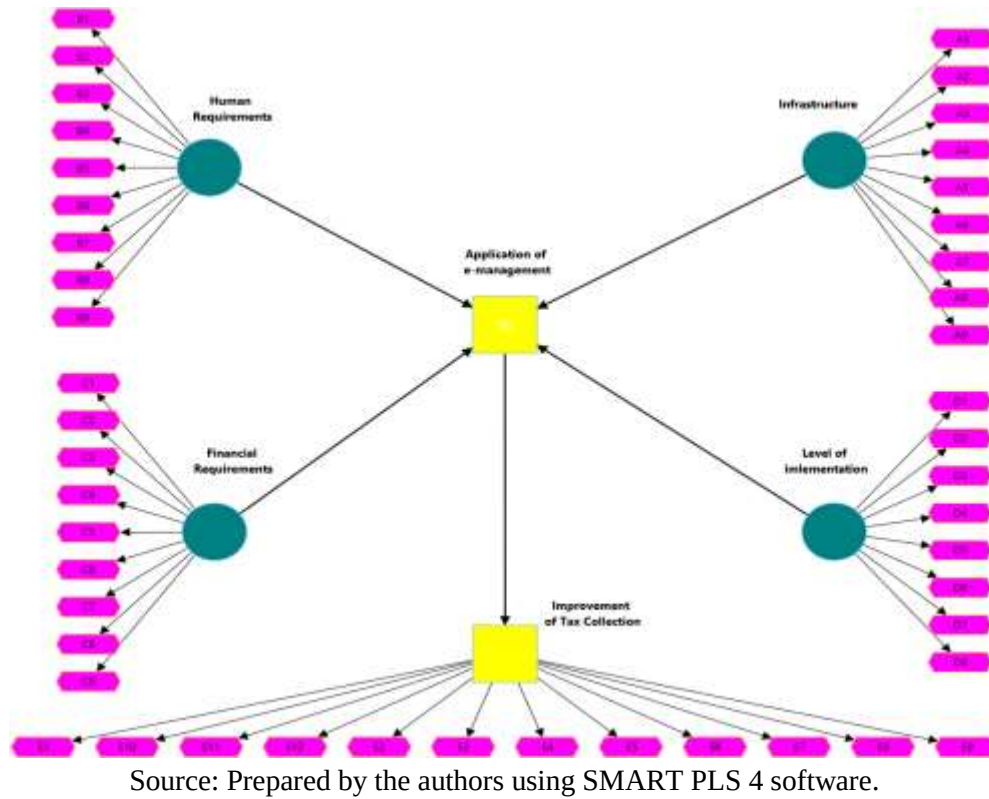
- **Hypothesis 3:** There is a statistically significant positive effect at the 0.05 significance level of the human requirements dimension on application of e- management.

- **Hypothesis 4:** There is a statistically significant positive effect at the 0.05 significance level of the financial requirements dimension on application of e- management.

- **Hypothesis 5:** There is a statistically significant positive effect at the 0.05 significance level of the level of implementation dimension on application of e- management.

The following diagram shows the preliminary study model and its causal relationships.

Figure 1: The preliminary study model

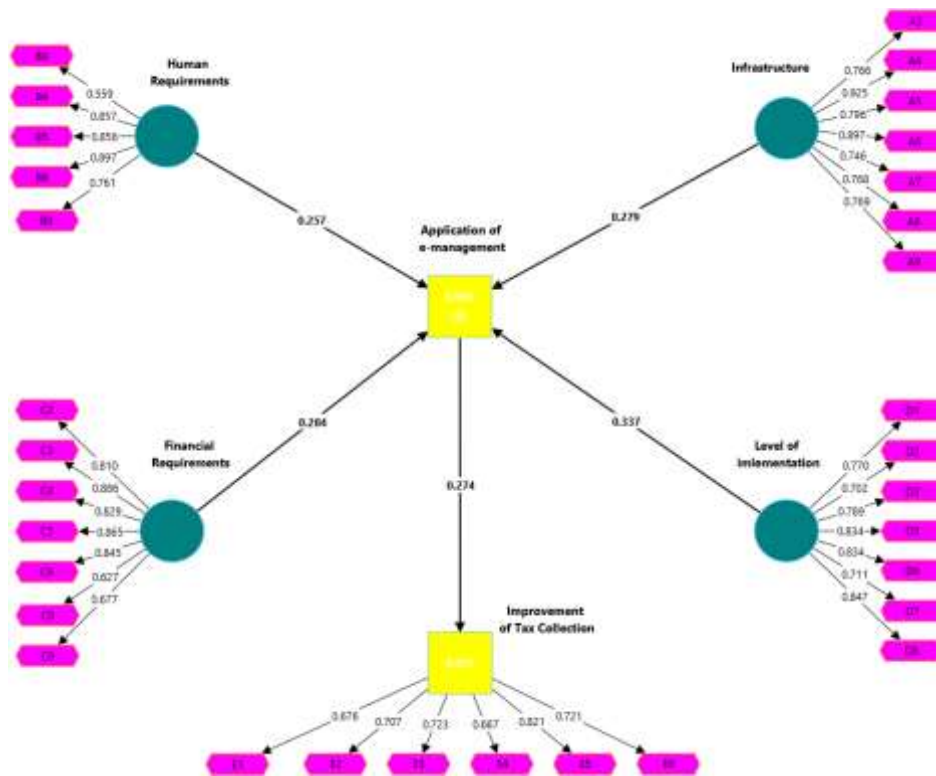


IV. Study Results and Interpretation:

➤ Model Robustness and Validity :

To evaluate the reliability and validity of the model, the Outer Loadings Test was conducted. Indicators with loadings of 0.70 or higher were retained due to their satisfactory reliability. Conversely, indicators with loadings below 0.70 were removed if their exclusion improved the values of Composite Reliability (CR) and Average Variance Extracted (AVE) to acceptable levels³⁴. Following this process, 15 items were eliminated, resulting in the adoption of the final model for the study.

Figure 2: The study model displaying the outer loading factors.



Source: Prepared by the authors using SMART PLS 4 software.

In evaluating the reliability and appropriateness of the model for our study, several additional tests were performed, focusing on convergent validity and discriminant validity, which are key components of the standard model assessment process. For convergent validity, we applied the following measures: internal consistency reliability (Cronbach's Alpha), composite reliability (CR), and average variance extracted (AVE). The results of these assessments are shown in Table 1 and Figure 3. For discriminant validity, the Fornell-Larcker criterion was used, with its results displayed in Table 2.

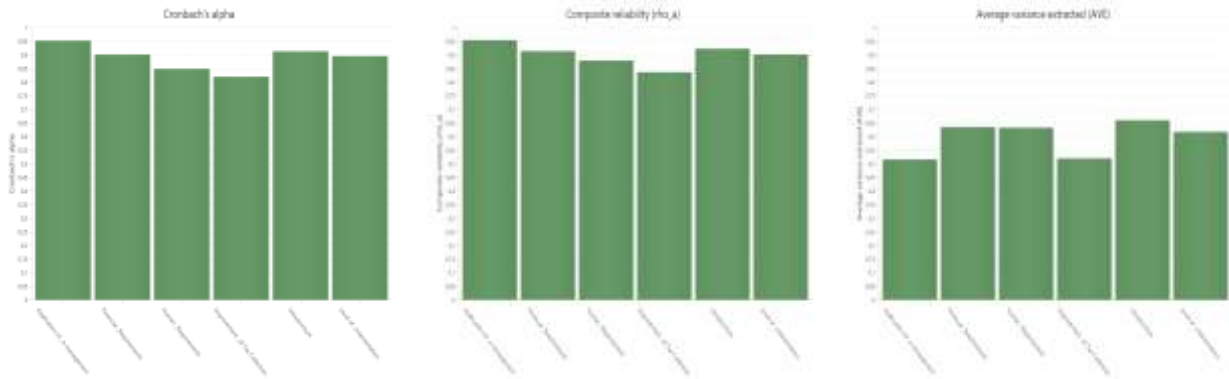
Table 1 : Results of Convergent Validity Tests

Variables	cronbach's alpha	composite reliability	AVE
Application of_ e-management	0.952	0.954	0.516
Financial _Requirements	0.901	0.914	0.635
Human _Requirements	0.849	0.879	0.633
Improvement _of Tax Collection	0.820	0.836	0.520
Infrastructure	0.913	0.923	0.660
Level of _implemmentation	0.896	0.902	0.617

Source: Prepared by the authors using SMART PLS 4 software.

Figure 3: Graphical Representation of Cronbach's Alpha,

Composite Reliability, and AVE Results



Source: Prepared by the authors using SMART PLS 4 software.

Table 2: Discriminant Validity Indicators (Dimension Overlap)

	Application of e-management	Financial Requirements	Human Requirements	Improvement of Tax Collection	Infrastructure	Level of implementation
Application of e-management	0.718					
Financial Requirements	0.797	0.850				
Human Requirements	0.749	0.795	0.876			
Improvement of Tax Collection	0.274	0.314	0.314	0.721		
Infrastructure	0.812	0.499	0.730	0.168	0.837	
Level of implementation	0.786	0.696	0.602	0.191	0.680	0.880

Source: Prepared by the authors using SMART PLS 4 software.

In line with the guidelines provided by Hair et al³⁵, the reliability and validity of the model are evaluated through the examination of Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). To ensure the model's robustness, these values should be greater than 0.7, 0.7, and 0.5, respectively. The results shown in Table 1 and Figure 3 confirm that these criteria are met. Specifically, all Cronbach's Alpha values are above 0.7, indicating strong internal consistency among the variables. Likewise, all CR values exceed 0.7, demonstrating the internal reliability of the variables, and the AVE values are all greater than 0.5, signifying satisfactory convergent validity for the model.

According to Hair et al³⁶, the correlation of a variable with itself should be higher than its correlation with other variables, confirming its independence. The Fornell-Larcker Criterion in Table 2 shows that the correlation of each variable with itself is greater than with other variables. For example, the correlations of application of e-management and improvement of tax collection with themselves are 0.718 and 0.721, respectively, which are higher than with other variables. This pattern indicates that the study variables are distinct and independent.

➤ **Evaluation of the Structural Model:**

To assess the structural model, two criteria will be used: the R^2 coefficient, which determines the strength of the predictive relationship, and the Q^2 coefficient, which measures the predictive relevance. The results are presented in Table 3.

Table 3: Results of the R^2 and Q^2 Evaluation Criteria

	R-square	R-square adjusted	Q^2 predict
Application of_ e-management	0.996	0.996	0.994
Improvement _of Tax Collection	0.075	0.059	0.012

Source: Prepared by the authors using SMART PLS 4 software.

Table 3 presents the R^2 and Q^2 values for the endogenous variables in the model: e-management application and tax collection improvement. The R^2 values of 0.996 and 0.075, respectively, indicate a high degree of explanatory power, suggesting that the model is able to accurately represent the data and the variables can effectively predict the outcomes. The Q^2 criterion assesses the model's predictive relevance beyond the sample. A Q^2 value greater than 0 signifies that the model has predictive relevance, while a value below 0 indicates a lack of predictive power. The results in Table 3 show that all Q^2 values are positive, confirming the model's satisfactory predictive validity.

➤ Hypothesis Testing and Interpretation:

After assessing the structural outcomes of the model, the focus shifted to testing the hypotheses and interpreting the results. To achieve this, the Bootstrapping technique was applied using SMART PLS.4 software, with the sample size expanded to 5,000 observations. The analysis relied on Path Coefficients to evaluate the hypotheses. The findings and their interpretations are presented below.

Main Hypothesis:

- **Hypothesis 1:** There is a statistically significant effect at the 0.05 significance level between the application of e-management and improved tax collection in the Tax Directorate of Tlemcen Province.

Table 4: Results of Testing the Main Hypothesis

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Application of_ e-management -> Improvement _of Tax Collection	0.274	0.313	0.182	1.504	0.133

Source: Prepared by the authors using SMART PLS 4 software.

Based on the results presented in the table above, the main hypothesis was not confirmed. The p-value was estimated at 1.133, which is greater than the 0.05 significance level, and the T-statistic value reached 1.504, which is less than the critical value of 1.96. Therefore, based on the

above statistical indicators, we conclude that there is no significant effect of e-management adoption on improving tax collection in the directorate under study.

Sub-hypotheses:

- **Hypothesis 2:** There is a statistically significant positive effect at the 0.05 significance level of the infrastructure dimension on application of e- management.
- **Hypothesis 3:** There is a statistically significant positive effect at the 0.05 significance level of the human requirements dimension on application of e- management.
- **Hypothesis 4:** There is a statistically significant positive effect at the 0.05 significance level of the financial requirements dimension on application of e- management.
- **Hypothesis 5:** There is a statistically significant positive effect at the 0.05 significance level of the level of implementation dimension on application of e- management.

Table 5: Results of Testing the Sub – Hypothesis

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Infrastructure -> Application of_ e- management	0.279	0.275	0.025	11.020	0.000
Human _Requirements -> Application of_ e- management	0.257	0.259	0.029	8.854	0.000
Financial _Requirements - > Application of_ e- management	0.284	0.285	0.027	10.458	0.000
Level of _implemmentation -> Application of_ e- management	0.337	0.336	0.028	11.976	0.000

Source: Prepared by the authors using SMART PLS 4 software.

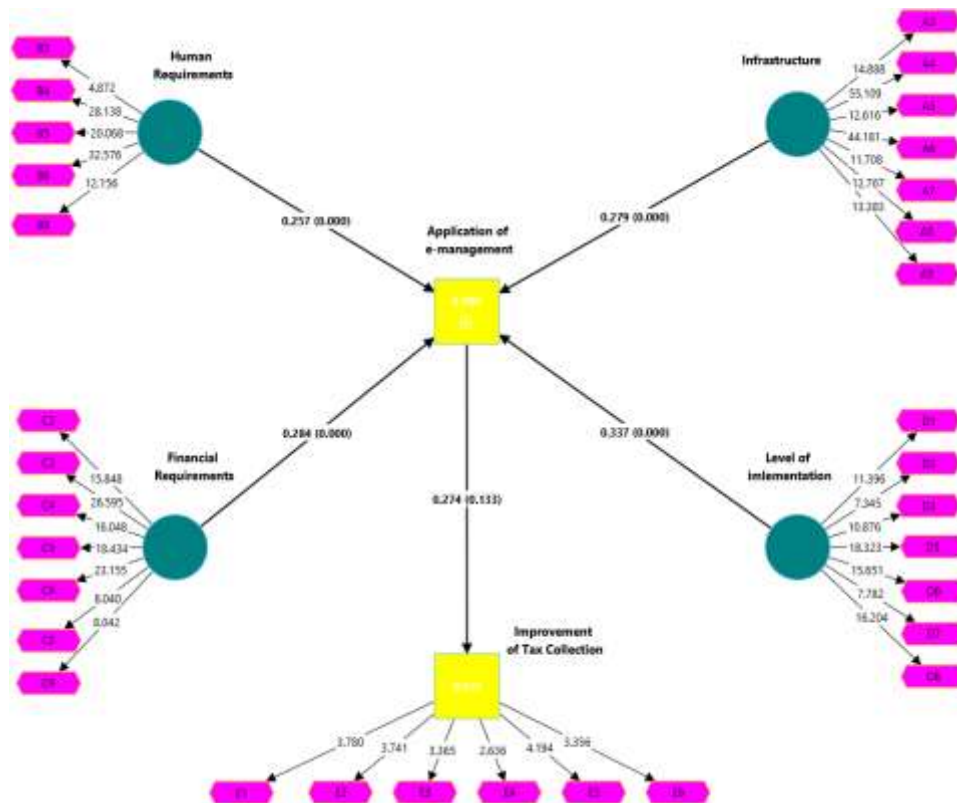
Based on the findings outlined in the table 5:

- **Hypothesis 2:** The analysis shows that the p-value is 0.000, well below the 0.05 significance threshold, and the T-statistic value is 11.020, surpassing the critical value of 1.96. This demonstrates a statistically significant positive influence of the infrastructure dimension on the adoption of e-management in the Tax Directorate of Tlemcen Province.
- **Hypothesis 3:** The p-value is also 0.000, with a T-statistic of 8.854, meeting the statistical requirements. This confirms a significant and positive effect of the human requirements dimension on the implementation of e-management in the same directorate.
- **Hypothesis 4:** With a p-value of 0.000 and a T-statistic of 10.458, the financial requirements dimension is shown to have a statistically significant positive impact on the adoption of e-management within the Tax Directorate of Tlemcen Province.
- **Hypothesis 5:** The results further indicate a p-value of 0.000 and a T-statistic of 11.976, highlighting a significant positive effect of the level of implementation dimension on e-management in the studied directorate.

These results collectively confirm that all sub-hypotheses are supported. The dimensions of infrastructure, human requirements, financial requirements, and the level of implementation significantly contribute to the successful adoption of e-management in the Tax Directorate of Tlemcen Province.

The following figure illustrates the final model of the study after extracting the Path Coefficients.

Figure 3: Path Coefficients of the Study Model



Source: Prepared by the authors using SMART PLS 4 software.

V. Conclusion:

The findings highlight a complex relationship between the adoption of e-management and its impact on tax collection in the Tax Directorate of Tlemcen Province. While the main hypothesis was not confirmed—indicating no statistically significant direct effect of e-management on improving tax collection—the sub-hypotheses reveal a positive and significant impact of the underlying dimensions, namely infrastructure, human requirements, financial resources, and the level of implementation, on the successful adoption of e-management systems.

Economically, this suggests that while the immediate effects on tax collection may not yet be evident, the establishment of a solid foundation through adequate infrastructure, skilled human resources, and sufficient financial investment is essential for the long-term success of e-management initiatives. The absence of a direct effect could be attributed to the transitional nature of implementing e-management in the directorate, as such systems often require time to fully integrate, optimize processes, and deliver measurable results.

Furthermore, these results underline the importance of strategic planning and prioritizing investments in the foundational elements of e-management. By addressing operational challenges and ensuring the smooth implementation of e-management systems, the Tax Directorate of Tlemcen Province can create the conditions necessary for achieving enhanced tax collection efficiency in the future. This gradual progress reflects the potential for e-management to transform public administration, provided that critical dimensions are continuously supported and improved.

Referrals and referen

- ¹ - Haider Basil Ali (2023). The role of e-Management in enterprise resource planning case study on Industry Sector in Iraq. *Journal for Educators, Teachers and Trainers*, Vol. 14(2). P :26.
[DOI: 10.47750/jett.2023.14.02.003](https://doi.org/10.47750/jett.2023.14.02.003)
- ² - Mohammed Murshed Ali Al-Khasi, Gajanan.P.Mudholkar: (2021), The Role Of Electronic Management Systems In Improving The Quality Of Educational Services, *Ilkogretim Online - Elementary Education Online*, Vol 20 (Issue 6). P:2918. [doi: 10.17051/ilkonline.2021.06.271](https://doi.org/10.17051/ilkonline.2021.06.271)
- ³ - Fadhil Abd Ali Khermeed, (2023), Electronic management systems and their impact on the performance of information institutions, P:04. Retrieved December 6, 2024, from: <file:///D:/study/MY%20WORKING%20PAPERS/RAFIF%20N%20spcial/E2.pdf>
- ⁴ - Al-Ani, M. S., & Jawad, S. N. (2013). *Electronic management*. Jordan: Culture House for Publishing and Distribution, Amman.
- ⁵ - Al-Hassan, H. M. (2010). *Electronic management, concepts, characteristics, requirements*. Al- Warraq Institution for Publishing and Distribution, Amman.
- ⁶ - minwar, B., & whebeh, M. (2018). *Electronic management applications in public administrations: a case study of the town of Amchdala*. master thesis, akli mohand oulhadg university- bouira.
- ⁷ - Naif Hezam F Alruways, (2020), The effect of electronic management practices on improving the level of medical services in Saudi hospitals, *Multi-Knowledge Electronic Comprehensive Journal For Education And Science Publications (MECSJ)*, Issue (36), P: 4.
<file:///D:/study/MY%20WORKING%20PAPERS/RAFIF%20N%20spcial/E3.pdf>
- ⁸ - Amer, Tariq Abdel-Raouf (2003), *Electronic Management, Contemporary Models*. Dar Al-Sahab for publishing and distribution.
- ⁹ - Radwan, Raafat (2004), *Electronic Administration, Management and Global Changes*, The Second Administrative Forum of the Saudi Management Association.
- ¹⁰ - Al-Hiytit, Ahmed Fathy (2015). *Principles of electronic management*. Al-Hamed House for Publishing and Distribution, Jordan, Amman.
- ¹¹ - GajananP.Mudholkar, MohammedMurshed Ali Al-Khasi, (December 2020), *The Role of Electronic Management in Improving Administrative Performance*, *IOSR Journal of Business and Management (IOSR-JBM)*. Volume 22, Issue 12. PP 41-56. [DOI: 10.9790/487X-2212044156](https://doi.org/10.9790/487X-2212044156)
- ¹² - Dahmani Abdelali, Gherbi laide, (2023), *journal of legal and economic research*, Volume06 / N°: 02, P:981.
<file:///D:/study/MY%20WORKING%20PAPERS/RAFIF%20N%20spcial/E9.pdf>
- ¹³ - Boualem Wellahi, Othman Hadi. (2019). The Impact of the Use of Information Technology on the Effectiveness of Tax Management Case Study of a Group of Institutions. *Journal of Research in Finance and Accounting*, 4(2), PP:201-203.
- ¹⁴ - Belarabi Abdelkader, (March 13-14, 2012). *Challenges of transition to electronic governance in Algeria*. The Fifth International Forum on the Virtual Economy and its Reflection on International Economics. University Center Khemis Miliana, Algeria.
- ¹⁵ - mfdgi (2020.), *IMMATRICULATION FISCALE EN LIGNE*, Retrieved December 6, 2024, from: <https://nifenligne.mfdgi.gov.dz/>
- ¹⁶ - mfdgi (2018.), *MODERNISATION DE L'ADMINISTRATION FISCALE Un axe stratégique du Ministre de Finances*, Retrieved December 6, 2024, from: [https://www.mfdgi.gov.dz/fr/publications/lettres-de-la-dgi?view=frontlist&catid\[0\]=558](https://www.mfdgi.gov.dz/fr/publications/lettres-de-la-dgi?view=frontlist&catid[0]=558)
- ¹⁷ - Arab .F, Moustafaoui .S, (April 2023), The Effect of Digitizing the Tax Administration on Both the Tax Collection Process and Taxpayers' Commitment: Empirical Evidence from the Tax Administration in Bechar – Algeria, *Al-Basha'er Economic Journal*, Volume IX, n°01, PP:816-817. <https://asjp.cerist.dz/en/article/219113>
- ¹⁸ - Manabu Nose and Andualem Mengistu (2023), Exploring the Adoption of Selected Digital Technologies in Tax Administration: A Cross- Country Perspective, *International Monetary Fund*. Not for Redistribution, NOTE/2023/008, PP: 01-15, Retrieved December 7, 2024, from: <file:///D:/study/MY%20WORKING%20PAPERS/RAFIF%20N%20spcial/068-article-A001-en.pdf>
- ¹⁹ - Oladele, Rotimi/Aribaba, Foluso Olugbenga et. al. (2020). E-tax administration and tax compliance among corporate taxpayers in Nigeria. In: *Accounting and taxation review* 4 (3), S. 93 -101. This Version is available at: <http://hdl.handle.net/11159/4894>
- ²⁰ - Kanyabwira, J. C. (2022). The Contribution of Electronic Tax System in Efficiency Tax Collection in Rwanda: A Case Study of Rwanda Revenue Authority. *Global Scientific Journals: Volume 12, Issue 3*, PP: 63-152.
[DOI: 10.11216/gsj.2014.03.224379](https://doi.org/10.11216/gsj.2014.03.224379)
- ²¹ - Chun-xiao Zhu (2021), Analysis on Tax Collection and Management of Digital Economy, *E3S Web of Conferences* 253, 03046, <https://doi.org/10.1051/e3sconf/202125303046>

- ²² - Enerson, J., Adegbie, F. F., & Olaoye, S. A. (2020). Electronic Tax Management System and Tax Revenue Collection Efficiency in Selected States in South West, Nigeria. *Current Trends in Social and Management Sciences Research*, vol. 1, No. 1, PP: 52-73, DOI: [10.61867/pcub.v1i1a.004](https://doi.org/10.61867/pcub.v1i1a.004)
- ²³ - Hammouche Ramzi (2024), THE IMPACT OF DIGITALIZATION ON ALGERIAN TAX ADMINISTRATION: IMPROVING EFFICIENCY AND REDUCING COSTS, *Intern. Journal of Profess. Bus. Review. Miami*, v. 9 n. 11 pp. 01-21.
file:///C:/Users/HP/Downloads/THE_IMPACT_OF_DIGITALIZATION_ON_ALGERIAN_TAX_ADMIN.pdf
- ²⁴ - Benredjem Mohamed KHEMISSI (2024), THE IMPACT OF ADOPTING DIGITIZATION IN TAX ADMINISTRATION ON TAX COLLECTION IN ALGERIA WITH THE IMPLEMENTATION OF THE JIBAYA'TIC SYSTEM, *International Journal of Humanities and Social Sciences*, Volume 6, Issue 6, pp: 581-603, <http://dx.doi.org/10.47832/2717-8293.32.34>
- ²⁵ - M. Benazzoug and M. Messeguem (2020), The role of electronic administration in improving tax collection and combating tax evasion, *Tabani Journal of Scientific and Academic Studies*, Vol 03,N 05, pp: 514-529 (In Arabic), from: <https://asjp.cerist.dz/en/article/139644>
- ²⁶ - Kamilia Boukra (2023), The implications of the digitization on tax collection in Algeria(2006-2022), *North African Economics Journal*. Vol 19, N31, pp: 329-342, (In Arabic), from: <https://asjp.cerist.dz/en/article/216362>
- ²⁷ - Bouzekri Djillali (2021), The role of e-management in improving the quality of fiscal services- A field study at the centertax of Tissemsilt, *New Economy Journal*, Vol 16, N 01, pp: 451-479, (In Arabic), from: <https://asjp.cerist.dz/en/article/175130>
- ²⁸ - Ramzi Hammouche; Samia Boudiaf (2021), EFFECTIVENESS OF E-TAX MANAGEMENT ELEMENTS AND ITS ROLE IN IMPROVING TAX SERVICES - FROM THE PRESPECTIVE OF THE EMPLOYEES OF THE ALGERIAN TAX ADMINISTRATIONS -, *Journal of Management and Economics Horizons*.Vol 05, N01, pp: 201-220, (In Arabic), from: <https://asjp.cerist.dz/en/article/158890>
- ²⁹ - Hair Jr, J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106–121. <https://www.emerald.com/insight/content/doi/10.1108/eb-10-2013-0128/full/html>
- ³⁰ - Ali, F., Rasoolimanesh, S. M., Sarstedt, M., Ringle, C. M., & Ryu, K. (2018). An assessment of the use of partial least squares structural equation modeling (PLS-SEM) in hospitality research. *International Journal of Contemporary Hospitality Management*, 30(1), 514–538. <https://www.emerald.com/insight/content/doi/10.1108/ijchm-10-2016-0568/full/html>
- ³¹ - Sarstedt, M., Ringle, C. M., Smith, D., Reams, R., & Hair Jr, J. F. (2014). Partial least squares structural equation modeling (PLS-SEM): A useful tool for family business researchers. *Journal of Family Business Strategy*, 5(1), 105–115. <https://doi.org/10.1016/j.jfbs.2014.01.002>
- ³² - Vinzi, V. E., Chin, W. W., Henseler, J., & Wang, H. (2010). *Handbook of partial least squares* (Vol. 201): Springer. <https://link.springer.com/book/10.1007/978-3-540-32827-8>
- ³³ - Ringle, C. M., Wende, S., & Becker, J.-M. (2015). *SmartPLS 3*, SmartPLS GmbH, Bönningstedt. Retrieved from <https://www.smartpls.com/>
- ³⁴ - Hair Jr, J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106–121. <https://www.emerald.com/insight/content/doi/10.1108/eb-10-2013-0128/full/html>
- ³⁵ - Hair, J. F. J., Black, W. C., Babin, B. J., & Anderson, R. E.(2010). *Multivariate Data Analysis* (7th ed.). Prentice Hall, New Jersey. https://www.amazon.com/Multivariate-Analysis-Joseph-Anderson-William/dp/9353501350?tag=googhydr-20&hvqmt=&hvbm={BidMatchType}&hvdev=c&ref=pd_sl_1ehi8sny9z_e
- ³⁶ - Hair, J., Ringle, C., & Sarstedt, M (2011) .PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–151. <https://doi.org/10.2753/MTP1069-6679190202>