

The Impact of the Shift to Electronic Systems on Enhancing Tax Revenues in Algeria During the Period (1993–2021)

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Abstract:

This study aims to attempt to determine the impact of digital transformation indicators in enhancing tax revenue levels in Algeria during the period 1993-2021. Considering that digital transformation in vital sectors, especially financial ones, represents a new trend that contributes to enhancing incomes outside the fuel sector, the transformation of electronic systems in tax administration in Algeria is also one of the most important challenges that the government seeks to fully embody in the near future due to the gains that this measure may achieve. For the benefit of the public treasury.

Using the ARDL model, the study finds that an increase in the use of digital transformation indicators in tax administrations leads to an increase in tax revenues by 0.3257 units.

Keywords : Digital Transformation; Tax Revenues; ARDL Model.

Jel Classification Codes : H2, O3, O33, L86.

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1. INTRODUCTION

Taxes are among the most essential sources that any country, regardless of its level of economic development, relies on to finance its expenditures and achieve the objectives of fiscal policy. Therefore, enhancing tax revenues has become a central concern for economic policymakers, especially in light of the current global transformations in the business environment—specifically, the shift from traditional business settings to electronic business environments. In this context, since 1993, the Algerian authorities- like those in many other countries—have sought to adopt policies and strategies that facilitate and enhance tax collection by the relevant tax administrations. One of the core strategies Algeria pursues to boost tax revenues is the integration into digital transformation, particularly in the context of a digital business environment. This includes the development of digital infrastructure (such as internet connectivity) and its extension to all sectors and administrative bodies, particularly tax administrations. The digitization of tax processes is considered a crucial factor in building citizens' trust and increasing tax collection efficiency, as it ensures transparency and helps address issues such as weak collection and tax evasion.

1.1 Study problem:

The central inquiry underpinning this research is articulable as:

How can the digital transformation of electronic systems contribute to enhancing tax revenues in Algeria during the period 1993–2021?

These subsequent inquiries are components of this problem.

- What is meant by digital transformation?
- What is the significance of digital transformation in tax administrations in Algeria?
- What is the nature of the relationship between digital transformation and the level of tax revenues in Algeria?

1.2 Study Hypothesis:

This research is predicated upon the subsequent presumptions:

- The adoption of technology contributes to enhancing tax revenues in Algeria.

- Inflation limits the increase in tax revenues in Algeria.
- Banking sector financing contributes to enhancing tax revenues in Algeria.

1.3 Study importance:

The importance of this research stems from the central role of taxes—being a fundamental component of state revenues—in promoting economic development in Algeria. Therefore, the study focuses on digital transformation as a key strategy for improving tax collection.

1.4 Study objectives:

This study endeavour's to assess the extent to which digital transformation contributes to enhancing tax revenues in Algeria, based on autoregressive distributed lag (ARDL) models.

1.5 Study Scope:

Based on the proposed question and associated hypotheses, and considering the significance of this research and its objectives, the temporal scope is defined from 1993 to 2021. The spatial scope is limited to studying the role of digital transformation in tax revenues in Algeria.

1.6 Study Approach:

Due to the nature of the research topic, it is necessary to adopt an inductive approach, employing statistical tools and econometric methods to estimate the relationship between digital transformation and tax revenues in Algeria.

2. The Contribution of Digital Transformation to Enhancing Tax Revenues

This section focuses on examining the importance of digital transformation in strengthening tax revenues. To properly address this subject, it is essential to begin by defining key concepts related to both digital transformation and tax revenues, as outlined below:

2.1 Theoretical Framework of Digital Transformation

Here's a breakdown of the aspects surrounding digital transformation that we'll be covering.

2.1.1 Definition of Digital Transformation

Digital transformation is, at its core, a process through which

sectors and companies transition to a new and advanced business model based on modern digital technologies to innovate products and services, and create new revenue channels that increase the actual value of their offerings (El-Saba', 2022, pp. 27-28).

The United Nations Commission on Science and Technology for Development defines it as a technology-based economy reliant on infrastructure, hardware, software, networks, and digital mechanisms enabling economic and business operations such as e-commerce and fully online transactions (Berji, 2021, p. 825).

It is also defined as the use of all digital applications and information technology tools to transform the traditional paper-based business model into a digital model for delivering services and goods, with the aim of achieving faster and more accurate commercial transactions, reducing costs and processing time, enhancing crisis management, and transitioning to a digital economy across all sectors (Saeed, 2022, p. 128).

2.1.2 Benefits of Digital Transformation

Digital transformation provides numerous benefits, not only to customers and the public but also to institutions, companies, and industrial entities. Key benefits include:

- Improves operational efficiency and significantly reduces costs and effort.
- Creates opportunities to offer innovative services beyond traditional frameworks.
- Enhances quality and simplifies the process of accessing services for beneficiaries.
- Helps institutions and companies expand their reach and access a wider audience.

2.1.3 Requirements for Digital Transformation

The prerequisites for digital transformation include (Zaazouaa, 2022, pp. 681-682):

- Availability of e-business infrastructure: A fundamental requirement for the digital shift.

- Presence of IT and digital sectors: These produce digital services such as platforms, mobile apps, digital payment systems, and computing devices to ensure connectivity at affordable prices.
- Political will and capacity building: Digital transformation requires strong political leadership, administrative structures, and deep changes in work methods aligned with digital principles.
- Legal framework: A robust legislative system is needed to protect rights within digital systems across administrations.
- Cybersecurity and digital privacy: Laws must safeguard documents, information, and personal data.

2.1.4 Characteristics of Digital Transformation

Digital transformation has several key characteristics (Zouwatnia, 2022, p. 24):

- Heavy reliance on the internet for all operations and transactions.
- Enables transparency and accountability through clearly defined roles, responsibilities, and objectives, and facilitates rapid decision-making.
- Allows for continuous development of systems and processes.
- Improves operational efficiency by streamlining processes, cutting costs, and boosting productivity.

3. Concepts Related to Tax Revenues

3.1 Definition of Tax Revenues

In general, revenues refer to the total income a state collects from various sources to cover public expenditures and maintain economic and social balance (Mehrezzi, 2005, p. 139). Tax revenues specifically refer to the amounts collected by the state through the imposition of taxes.

3.2. Importance of Tax Revenues

The importance of tax revenues includes (Website, 2023):

- A major source of national income regardless of a country's development level.
- Helps reduce income inequality via progressive tax systems that redistribute wealth.
- Essential for economic growth by funding infrastructure projects that

boost productivity and attract investment.

- Crucial during emergencies (e.g., natural disasters, pandemics) as seen during COVID-19, when governments used tax funds for economic relief.

4. Importance of Digital Transformation in Tax Systems

Digital transformation in the tax system refers to the shift from manual, paper-based tax administration to the use of advanced digital technologies, AI, and big data analytics. This transition encompasses the digitization of all tax processes—from registration and filing to payment and auditing.

This transformation is foundational in modern economies as it:

- Enhances transparency.
- Simplifies procedures.
- Boosts tax revenue.
- Reduces tax evasion.
- Aids in integrating the informal economy.

In the 21st century, changing business dynamics depend on advanced technology, prompting tax administrations globally to modernize their systems. Many have adopted digital tax systems. Moreover, taxpayers need to adapt to electronic systems and international financial reporting standards to improve transparency.

Digital transformation helps tax administrations expand the tax base, focus on compliance, improve audit mechanisms, and control all tax processes (Hassan Said, 2022, p. 131).

A joint report by Price water house Coopers (PwC) and Microsoft highlights the importance of digital tax systems in promoting transparency, providing quick solutions, encouraging voluntary compliance, enabling rapid decision-making, and integrating domestic and international tax systems to foster data sharing and taxpayer satisfaction (Hassan Said, 2022, p. 131).

In the case of Egypt's Tax Authority, digital transformation reduces tax collection costs, lessens administrative burdens, increases efficiency, and saves time and effort for both tax administrators and taxpayers. It also simplifies filing procedures, reduces compliance costs, builds taxpayer trust,

increases the number of timely submissions, and expedites the collection of various taxes such as income tax and VAT. All of this leads to higher tax revenue (Hassan Said, 2022, p. 132).

4. Measuring the Relationship Between Digital Transformation and Tax Revenues in Algerian Tax Administrations

To examine the relationship between digital transformation and tax revenues in Algerian tax administrations during the study period, we rely on annual data for both digital transformation indicators and tax revenues. To achieve this, the following components will be addressed:

4.1. The Model Used and Study Variables

The study variables are summarized in Table 1 below:

Table 1. Description of Study Variables

Symbol	Indicator	Indicator Category	Description
Dependent Variable			
y	Total Tax Revenues	—	Represents the total income collected by the state under its sovereign authority.
Independent Variables			
x₁	Individuals Using the Internet	Digital Transformation	This indicator reflects the level of digital infrastructure. The more internet usage increases, especially within economic and tax institutions, the more active and efficient the tax collection processes become.
x₂	Inflation	Economic Stability	Inflation represents a general increase in the price level resulting from money supply growth outpacing real output growth (Ben Al-Ariya & Abdelrahman, 2018, p. 27).
x₃	Loans	Bank Financing	This indicator reflects the ability of banking institutions to finance economic projects. As project financing increases, their profitability improves, leading to higher tax revenues from these profits.

Source: Prepared by the researcher.

If we postulate a linear relationship connecting the variables, the econometric model slated for estimation is expressible thus:

$$Y = \beta_0 + \beta_1 x_1 t + x_2 \beta_2 + \beta_3 x_3 t + \varepsilon t$$

4.2. Model Estimation

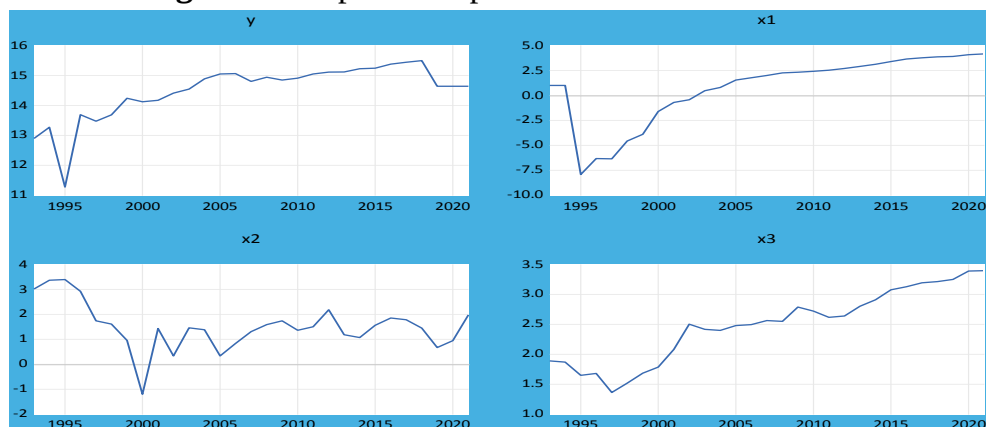
Numerous investigations employing the Ordinary Least Squares (OLS) technique frequently encounter econometric problems, notably spurious regression. This occurs when time series data incorporates non-random elements that skew their characteristics, thereby influencing the evolving associations among economic factors. To ensure accurate model estimation, we will utilize the following procedure:

4.2.1. Testing the Stationarity of Time Series

Checking for stationarity in time series is a crucial step in identifying elements that could lead to inaccurate estimations. Widely used tools for this purpose include the ADF (Augmented Dickey-Fuller) and PP (Phillips-Perron) tests.

Initially, we visualize the time series data through graphs, aiming for a preliminary grasp of their features. Observing the plots of our study variables reveals that their behavior varies unpredictably across time. This observation supports a preliminary hypothesis that these series lack stationarity.

Figure 1. Graphical Representation of Time Series



Source: Prepared by the researcher based on the outputs of EViews 12

software.

Based on the interpretation of the figure above, we proceed to apply the ADF (Augmented Dickey-Fuller) and PP (Phillips-Perron) unit root tests to confirm the non-stationarity of the time series. The results are shown in the following table:

Table 2: Unit Root Test Results for the Time Series

Time Series	ADF Test			PP Test			
	With Constant and Trend ($\lambda=0$)	With Constant Only ($\lambda=0$)	Without Constant or Trend ($\lambda=0$)	With Constant and Trend ($\lambda=0$)	With Constant Only ($c=0$)	Without Constant or Trend ($\lambda=0$)	
y	0.084	0.155	0.021	0.084	0.184	0.021	0.845
x ₁	0.102	0.006	0.001	0.003	0.063	0.590	0.216
x ₂	0.250	0.037	0.019	0.898	0.171	0.019	0.084
x ₃	0.008	0.232	0.602	0.008	0.209	0.602	0.978
After First Differencing							
y	0.233	0.000	0.442	0.000	0.000	0.442	0.000
x ₁	0.066	0.008	0.054	0.003	0.000	0.735	0.000
x ₂	0.294	0.096	0.783	0.042	0.002	0.628	0.000
x ₃	0.625	0.007	0.114	0.001	0.000	0.114	0.000

Source: Prepared by the researcher based on the outputs of EViews 12 software.

Considering the information presented in the aforementioned table and employing the Dickey-Fuller test to investigate the existence of a unit root

within the time series data, a concise overview of the variables' stationarity properties can be articulated thus:

- The total tax revenue series (y) is stationary at the first difference, denoted as: $Y \rightarrow I(1)$;
- The internet usage per 1000 people series (x_1) is stationary at the first difference: $X_1 \rightarrow I(1)$;
- The inflation rate series (x_2) is stationary at the first difference: $X_2 \rightarrow I(1)$;
- The bank lending series (i.e., volume of banking credit) (x_3) is also stationary at the first difference: $X_3 \rightarrow I(1)$.

4.2.2 Cointegration Test

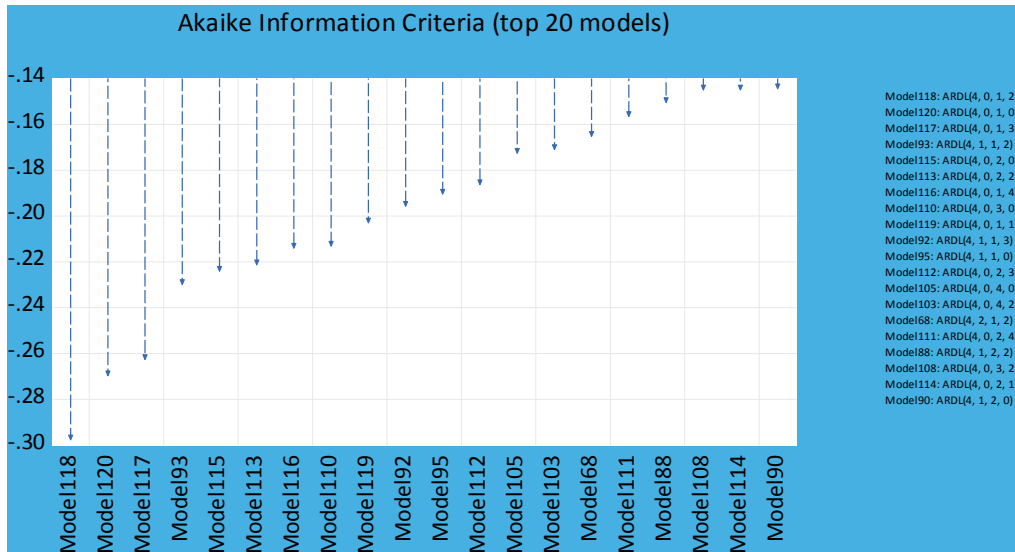
Given that all the time series display non-stationary behavior, specifically integrating to the same order, employing the Johansen test for cointegration proves unfeasible. Consequently, we have opted to utilize the methodology proposed by Pesaran and Shin, further refined by Pesaran et al. Because our data conforms to the core assumptions essential for this particular methodology, we are justified in applying its procedural framework to scrutinize whether a long-term equilibrium relationship exists between the variables under study.

This approach can be implemented using the following steps:

- Determine the best lag order for the initial differences of the variables within the Unrestricted Error Correction Model (UECM). This determination will hinge on identifying the lag length associated with the smallest values produced by both the Akaike Information Criterion (AIC, 1973) and the Schwarz Criterion (SC, 1978).
- The ARDL model is formulated as $ARDL(p, q_1, q_2, q_3)$, which corresponds to the variables under consideration. Selection of the most suitable model is determined by identifying the one exhibiting the smallest figures across the previously outlined criteria, following the estimation of various models, each employing diverse lag configurations.
- Using the EViews 12 statistical software, these models are estimated,

and the corresponding AIC and SC values are generated to facilitate the model selection process, as illustrated in the following figure.

Figure 2. Optimal ARDL Model Among 20 Selected Models



Source: Prepared by the researcher based on the outputs of EViews 12 software.

As demonstrated in Figure 2, the lowest observed Akaike Information Criterion (AIC) value aligns with the highest bar. Considering that these values are negative, this tallest bar coincides with the ARDL (4,0,1,2) model.

- The model chosen is assessed via the Ordinary Least Squares (OLS) technique. To ascertain whether a long-term cointegration connection is present between the involved variables, the Wald test is implemented. Subsequent to applying this test to the chosen model, these findings were observed:

Table 3. Results of the Wald Test to Confirm the Existence of a Long-Run Cointegration Relationship

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F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
Asymptotic: n=1000				
F-statistic	4.580145	10%	2.37	3.2
k	3	5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66
Finite Sample: n=30				
Actual Sample Size	25	10%	2.676	3.586
		5%	3.272	4.306
		1%	4.614	5.966

Source: Prepared by the researcher based on the outputs of EViews 12 software.

Following the computation of our test value, we then matched it with the critical values retrieved from the standard statistical table. This comparison revealed that the computed F-statistic, equalling 4.58, surpassed the upper bound threshold across the common benchmarks for significance levels. Therefore, we conclude that there exists a long-run cointegration relationship among the time series. This finding justifies proceeding with the estimation of the Error Correction Model (ECM) based on the ARDL approach.

4.2.3 Estimation of Long-Run Parameters and the Error Correction Model

Having established a cointegration link among the considered time series, we are then able to go ahead and estimate the parameters that govern both the long-term and short-term dynamics, and also the error correction mechanism, through these steps:

A. Estimation of Long-Run Parameters:

Here's a summary of the findings from the long-term parameter estimation, presented in a table format:

Table 4. Results of Long-Run Parameter Estimation

Levels Equation				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.325736	0.041196	7.907037	0.0000
X2	0.249164	0.094933	2.624625	0.0200
X3	-0.504153	0.248602	-2.027953	0.0620
C	15.12738	0.539354	28.04720	0.0000

$$EC = Y - (0.3257 \cdot X1 + 0.2492 \cdot X2 - 0.5042 \cdot X3 + 15.1274)$$

Source: Prepared by the researcher based on the outputs of EViews 12 software

B. Estimation of Short-Run Parameters and the Error Correction Model:

Error-correction models (ECMs) serve to gauge the adjustment coefficient. This coefficient indicates how rapidly the system reverts to its long-term equilibrium after being disrupted in the short term. The subsequent table displays the outcomes from estimating this particular coefficient:

Table 5. Estimation Results of Short-Run Parameters and the Error Correction Term

ARDL Error Correction Regression				
Dependent Variable: D(Y)				
Selected Model: ARDL(4, 0, 1, 2)				
Case 2: Restricted Constant and No Trend				
Date: 10/08/23 Time: 14:30				
Sample: 1993 2021				
Included observations: 25				
ECM Regression				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(Y(-1))	0.764716	0.153746	4.973897	0.0002
D(Y(-2))	0.639836	0.112782	5.673194	0.0001
D(Y(-3))	0.380440	0.076472	4.974910	0.0002
D(X2)	0.142030	0.043042	3.299831	0.0053
D(X3)	-0.435270	0.277604	-1.567954	0.1392
D(X3(-1))	0.550180	0.250938	2.192496	0.0457
CointEq(-1)*	-1.281129	0.236100	-5.426213	0.0001

Source: Prepared by the researcher based on the outputs of EViews 12 software

It is clear from Table 5 that the value and sign of the error correction term are statistically significant and negative at the 5% significance level. The

negative value (−1.281129) indicates that the short-run disequilibria identified by the proposed model are automatically corrected over a period of approximately 9 months and 11 days following the disturbance.

4.3 Diagnostic Tests for the Estimated Model

These Tests serve to validate the estimated model's quality and dependability. They accomplish this by confirming adherence to the fundamental presumptions underpinning econometric models and by verifying the absence of specification errors. Consequently, the model's appropriateness for both interpretation and prediction is reinforced. A variety of diagnostic tests are available for this purpose, with a summary of the most significant ones presented below:

4.3.1 Autocorrelation Test of Residuals

The Breusch-Godfrey test is widely regarded as a particularly dependable method for this purpose. The outcomes of this test are presented in the subsequent table:

Table 6. Results of the Breusch-Godfrey Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:			
Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	2.534887	Prob. F(2,12)	0.1207
Obs*R-squared	7.425074	Prob. Chi-Square(2)	0.0244

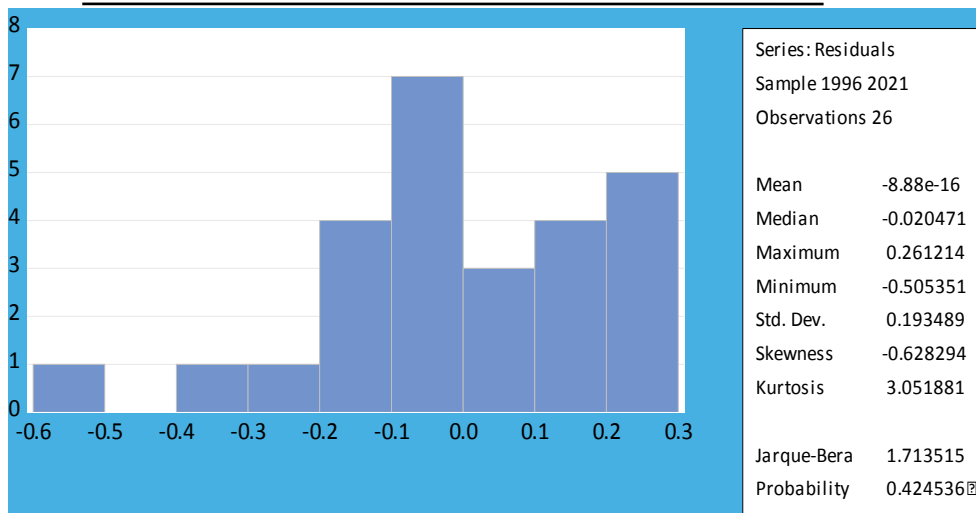
Source: Prepared by the researcher based on the outputs of EViews 12 software

Based on the results presented in Table 6, we find that the calculated F-statistic ($F = 2.5348$) is lower than the critical value at the 5% significance level. Therefore, we fail to reject the null hypothesis, which indicates the absence of autocorrelation among the residuals.

4.3.2 Normality of Residuals

To assess if the model's errors are normally distributed, we use the Jarque-Bera test. This test is predicated on the null hypothesis that the residuals adhere to a normal distribution. The visual outcomes derived from this test are presented in the figure below:

Figure 3. Results of the Jarque-Bera Normality Test on the Estimation Residuals



Source: Crafted by the researcher, utilizing results generated by EViews 12 software.

It is evident from Figure 3 that the histogram of the estimation residuals closely resembles the bell-shaped curve characteristic of the normal distribution. Furthermore, the p-value of the Jarque-Bera test (0.42) is greater than 5%, which leads us to accept the null hypothesis, indicating that the residuals are normally distributed.

4.3.3 Homoscedasticity Test (Error Variance Assumption)

To verify the validity of the homoscedasticity assumption (constant variance of the error term), the Breusch-Pagan-Godfrey test is used, as shown in Table 7.

Table 7. Results of the Breusch-Pagan-Godfrey Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
Null hypothesis: Homoskedasticity			
F-statistic	1.653469	Prob. F(10,14)	0.1891
Obs*R-squared	13.53763	Prob. Chi-Square(10)	0.1951
Scaled explained SS	7.455321	Prob. Chi-Square(10)	0.6819

Source: drawing upon the results generated by EViews 12 software.

Because the computed F-statistic falls below the threshold defined by the 5% significance level, we are led to fail to reject the null hypothesis. This outcome suggests that within the model we've evaluated, the errors maintain a consistent variance, a condition commonly known as

homoscedasticity

4.3.4 Ramsey RESET Test

This test is used to assess the functional form specification of the model and to determine whether the estimated model is appropriately specified to represent the relationship between the economic variables. The results of this test are presented below:

Table 8. Results of the Ramsey RESET Test

Ramsey RESET Test			
Equation: UNTITLED			
Omitted Variables: Squares of fitted values			
Specification: Y Y(-1) Y(-2) Y(-3) Y(-4) X1 X2 X2(-1) X3 X3(-1) X3(-2) C			
	Value	df	Probability
t-statistic	0.466358	13	0.6487
F-statistic	0.217490	(1, 13)	0.6487
Likelihood ratio	0.414790	1	0.5195

Source: drawing upon the results generated by EViews 12 software.

Since the p-value of the F-test is greater than the 5% significance level, the proposed functional form of the model can be considered appropriate for representing the relationship between the studied economic variables.

4.3.5. Structural Stability Test of the Estimated ARDL Model

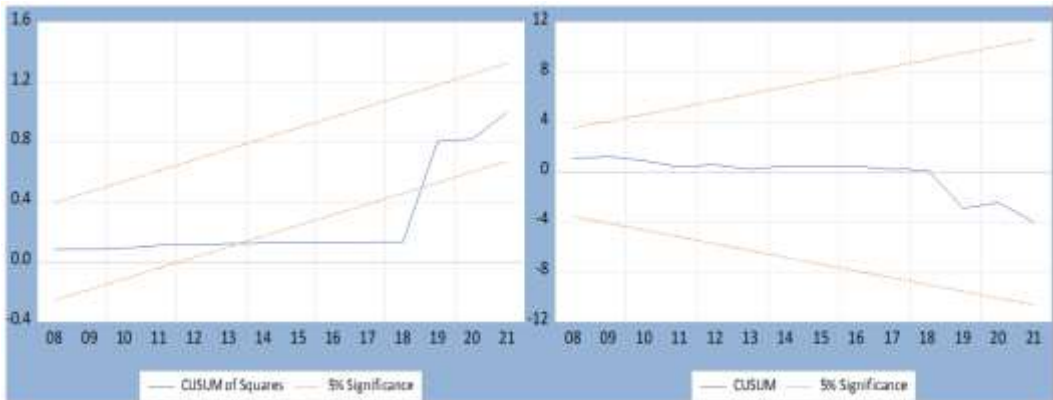
This test's purpose is to ascertain whether the dataset remains structurally consistent throughout its lifespan. To this end, the process employs two distinct verification methods:

- The Cumulative Sum (CUSUM) test of recursive residuals
- The Cumulative Sum of Squares (CUSUM of Squares) test

Upon examining Figure 4, following the completion of both tests, it's clear the ARDL model's coefficient estimates maintain structural stability throughout the investigation's timeframe. This provides evidence affirming a constant relationship between the included variables, further verifying the model's accuracy in capturing both short-term and long-term error correction processes. The visual representations of both test statistics demonstrate adherence to the predefined critical boundaries when assessed at the 5% level of significance.

Figure 4. Cumulative Sum (CUSUM) and Cumulative Sum of Squares

(CUSUMSQ) of Residuals



Source: Prepared by the researcher based on the outputs of EViews 12 software

4.4 Hypothesis Testing and Interpretation of Results

Based on the results of Table 3, the regression equation can be written as follows:

$$y = 15.12738 + 0.325736x_1 + 0.249164x_2 - 0.504153x_3$$

The results of the regression equation support the first hypothesis proposed in this research paper. Specifically, a one-unit increase in the use of modern technology leads to an increase in tax revenue levels by 0.325736 units. This is because the expansion of digital technology integration within tax institutions facilitates the tax collection process and helps reduce costs—both for taxpayers and tax administrations—which in turn leads to higher tax revenues.

The regression results reject the second hypothesis proposed in the study. They show that an increase in inflation rates leads to a rise in tax revenues by 0.249164 units. This can be attributed to the characteristics of the Algerian economy, which is marked by relatively low tax pressure and tax rates. Therefore, increasing the tax base would enhance revenue and help reduce domestic public debt. The unconventional monetary policy, including public debt issuance (forced loans), has contributed to increasing Treasury revenues. However, due to weak investment and production and a heavy reliance on oil-based taxation, overall tax pressure has not increased significantly. Thus, any increase in tax revenue remains contingent on

economic diversification in Algeria.

Finally, the results indicate that the third hypothesis is not supported, as the coefficient for bank financing (represented by the total volume of loans) is statistically insignificant, suggesting that banking credit has not played a meaningful role in strengthening fiscal financing.

5. Conclusion

The tax administration is one of the most critical public institutions striving to keep pace with technological changes. The shift toward electronic systems contributes significantly to increasing tax compliance, simplifying tax procedures, and consequently reducing costs while enhancing transparency and equity among taxpayers. Moreover, digital transformation helps in combating tax evasion and fraud, contributing to the development of an effective tax system through user-friendly electronic platforms.

The analysis of the relationship between digital transformation and tax revenue, both from theoretical and empirical perspectives, has led to several key findings:

- Digital transformation (i.e., the use of technology) plays a vital role in enhancing tax revenue levels in Algeria.
- The success of digital transformation depends on the development and expansion of digital communication infrastructure, along with its proper management and broad accessibility.
- The Algerian tax authority places great emphasis on digital transformation, particularly regarding information systems, modern technologies, and electronic communication.
- Inflation has a positive impact on tax revenues in the Algerian context.
- Bank financing in Algeria does not contribute significantly to enhancing tax revenues.

Based on these findings, the following policy recommendations are proposed:

- The government should invest in and prepare the technological infrastructure for communications to create a conducive environment for digital transformation. This involves increasing budget

allocations for information and communication technologies, enabling all public institutions—including tax administrations—to benefit from digital advancements, especially amid evolving business environments.

- Monetary policymakers in Algeria should rely more on tax policy to increase tax revenues, particularly within the broader goal of achieving economic diversification.
- There is a need to train human resources working in tax administrations to keep up with ongoing technological advancements and to fulfill the requirements of digital transformation.
- Algeria should learn from leading international experiences in implementing digital transformation within tax administrations.

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