

Effect of Digitalization of Service on Housing Tax Compliance Among Landlords in Agoe, Lome City, Togo

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Abstract

Housing taxation is a critical revenue source for local governments to finance urban services and infrastructure, yet compliance remains a persistent challenge across sub-Saharan Africa. This study aimed to determine the effect of service digitalization on housing tax compliance among landlords in Agoe, Lome City, Togo. The study drew on the Ability to Pay Theory and the Diffusion of Innovation Theory. The study used an explanatory research design, and primary data were collected using a structured questionnaire. The target population was 2,061 property owners in Agoe, Lome City, Togo, and the sample size was 335 respondents. Of the 335 questionnaires, the response rate was 86%, indicating that 288 respondents fully completed and submitted their responses. The primary data were collected using closed-ended questionnaires. The data were collected through a structured questionnaire. The data were analyzed using descriptive statistics and linear regression. The study found that digitalization of service had a positive and significant effect on housing tax compliance ($\beta = 0.101$, $p = 0.005$). The study found a positive effect of digitalization of service on housing tax compliance; the Government of Togo should invest in expanding digital tax platforms by ensuring accessibility and integrating user-friendly interfaces that reduce administrative burdens. Future research should also examine how property owners' income levels affect housing tax compliance.

Keywords: *Digitalization of service, housing tax compliance, Landlords*

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1. Introduction

Tax is the main source of public revenue for most governments worldwide. Taxes are compulsory, unrequited payments to the general government or a supranational authority, without expectation of a direct, commensurate, or proportional return to the taxpayer (OECD, 2021). Taxes collected finance investment in human capital and infrastructure, provide public goods and services, and set the right price for private-sector investment (World Bank, 2024).

Housing taxation is a critical revenue source for local governments to finance urban services and infrastructure, yet compliance remains a persistent challenge across sub-Saharan Africa. Weak property registers, valuation problems, limited administrative capacity, and low taxpayer

morale undermine the efficiency of property tax systems (Local Government Revenue Initiative (LoGRI), 2024). In Togo, the *Taxe Foncière sur les Propriétés Bâties* (TFPB) is the primary tax levied on built property, administered by the Togolese Revenue Office (TRO).

Digitalization of service refers to integrating digital technologies into business, administrative, or governmental processes to improve efficiency, accessibility, and transparency (Brennen & Kreiss, 2016). In the context of taxation, digitalization of service involves using electronic systems for tax filing, payment, record-keeping, and monitoring, enabling both taxpayers and revenue authorities to interact more efficiently (OECD, 2022). The automation age is rapidly transforming the relationship between tax authorities and taxpayers (Ernst & Young, 2023). Automation disruptions have significant implications for an economy's functioning and organization. One consequence is their impact on taxation. In a digital context, this implies the necessary tax reform (European Commission, 2022). Tax administration technology entails five elements: technologies, people, tax risk management, financial resources, and communication.

In Togo, the *Taxe Foncière sur les Propriétés Bâties* (TFPB) is the primary housing tax, administered by the Togolese Revenue Office (TRO). The TFPB is levied annually on the rental value of built property and remains a critical source of municipal revenue. However, compliance has historically been low due to incomplete property registers, outdated valuation methods, and limited taxpayer awareness, particularly in urban areas such as Lomé (LoGRI, 2024). To address these challenges, the TRO has undertaken reforms, including a pilot project (2023–2024) to simplify property identification and valuation, as well as modernization programs that nearly doubled national tax collections between 2013 and 2022 (Togo First, 2023). In 2025, Parliament approved further reforms to strengthen TRO's governance and enforcement capacity, signaling an effort to enhance transparency and improve housing tax compliance (TRO, 2025).

Lomé is the capital and largest city of Togo, a sub-Saharan West African country. It's a coastal city on the Atlantic Ocean known for its wide, tree-lined roads, clean main thoroughfares, and a large, prominent beach. Key landmarks include the Monument of Independence, the University of Lomé, and the Assigame market. The city has a mix of modern architecture, like the International Bank building, and colonial-era historical houses

Housing in Lomé, Togo, includes both high-end modern options with amenities like pools and traditional homes, as well as affordable housing projects for civil servants and social housing units. Apartment rent ranges from about 150,000 CFA francs for middle-class units to over 400,000 CFA francs for furnished two-bedroom flats. Land and housing costs vary significantly by location within the city, ranging from CFA 2 million for a bare plot to CFA 20 million for the cheapest urban housing.

1.1 Problem Statement

Despite the tremendous growth in Togo's real estate sector over the past few years, tax collection from the sector has remained very low. The Togolese Revenue Office (TRO) aimed to collect CFA 1,042 billion in 2025, representing 48% of the national budget, but as of August 2025, it had collected only CFA 737.2 billion, achieving 61% of the CFA 1.2 trillion target (TRO, 2025). Housing and property taxes, primarily through the *Taxe Foncière sur les Propriétés Bâties* (TFPB), contribute less than 0.1% of GDP, well below the Sub-Saharan African average of 0.5% (IMF, 2024).

Compliance challenges include incomplete cadastral registers, outdated valuations, and widespread informality, especially in Lomé (LoGRI, 2024). Recent reforms, including a pilot project on simplified property identification and valuation (2023–2024) and digitalization initiatives, aim to improve collection efficiency, strengthen enforcement, and expand the taxable base, but gaps remain that hinder the full realization of housing tax revenue targets (Togo First, 2023). Therefore, this study investigated whether digitalization of services significantly affects housing tax compliance among landlords in Lomé City, Togo.

2. Literature Review

2.1 Theoretical Review

2.1.1 Ability to pay theory

The Ability to Pay Theory of taxation is most commonly associated with the Swedish economist Knut Wicksell, who developed the concept in 1896. Another Swedish economist, Erik Lindahl, later refined and expanded the theory in 1919. Adam Smith, in *The Wealth of Nations* (1776), stated that such things as defending the country and maintaining the institutions of good government are of general benefit to the public. Thus, it is reasonable that the population as a whole should contribute to the tax costs. It is also reasonable to demand certain other things of a tax system, for instance, that the amounts of tax individuals pay should bear some relationship to their abilities to pay.

The ability-to-pay theory holds that every person should pay taxes to the government based on their ability to pay (Zolt & Bird, 2003; Rai, 2004; Chodorow, 2008; Batt, 2012). The theory suggests they should pay higher taxes to the government because, without government protection, they could not have earned the income they do. Adam Smith argued that the taxes should be proportional to the income (Zolt & Bird, 2003; Rai, 2004; Chodorow, 2008; Batt, 2012). It can therefore be argued that this is a critical principle of tax because it advocates applying tax equitably, with those who have the financial resources making the payment.

The Ability to Pay Theory in the context of housing tax compliance is a concept rooted in the idea that taxes should be levied based on an individual's or entity's capacity to pay, i.e., their income or wealth. Applied to housing tax, this theory suggests taxing landlords and property owners based on the rental income they generate, with those earning more required to pay more in taxes. The Ability to Pay Theory emphasizes that higher-income individuals have a greater obligation to contribute to public revenue. For housing tax compliance, this means that property owners who earn significant rental income are seen as having a greater ability to pay taxes. The more rental income an individual or business earns, the higher their tax liability should be, promoting fairness and progressive taxation. This theory supports housing tax compliance.

2.1.2 Diffusion of Innovation Theory

Everett M. Rogers developed the Diffusion of Innovation Theory in 1962 and first presented it in his seminal book, *Diffusion of Innovations*. The theory explains how new ideas, technologies, products, or practices spread through a social system over time. The Diffusion of Innovation Theory (Rogers, 2003) offers a robust framework for understanding how taxpayers adopt digital tax systems. The theory suggests that five key attributes of innovation influence the adoption process: relative advantage, compatibility, complexity, trialability, and observability. In the context of digital taxation, taxpayers are more likely to adopt e-filing platforms and electronic payment systems when they perceive clear benefits, such as reduced processing time, increased accuracy, and easier record-keeping (Onu, 2023).

Compatibility with existing accounting practices and interface simplicity also play a critical role in uptake, as taxpayers are more inclined to adopt systems that align with their current workflows and are easy to navigate. Trialability, such as demo platforms or pilot programs, lets taxpayers experiment with the system before fully committing, while observability ensures that peers or early adopters' success motivates others to follow suit (Rogers, 2003).

In developing countries, including Togo, digital tax initiatives have faced challenges such as limited digital literacy, resistance to change, and infrastructure constraints; however, emphasizing the system's benefits and demonstrating its ease of use have helped overcome these barriers (Onu, 2023). By applying Diffusion of Innovation Theory, policymakers can design strategies that not only increase uptake of digital tax platforms but also improve revenue collection, transparency, and trust in the tax system. The theory supports the digitalization of service variables.

2.2 Empirical Review

2.2.1 Digitalization of Service

Jupri and Sarno (2023) examine the effect of service digitalization, including online remittance and online registration, on tax compliance in Malaysia. Using machine learning techniques, they analyzed taxpayer behavior with algorithms such as CART 4.5, Support Vector Machine (SVM), K-Nearest Neighbors (KNN), Naïve Bayes, and Multilayer Perceptron (MLP). The findings showed that the CART 4.5 algorithm was most effective at accurately classifying taxpayer compliance levels and identifying loyalty patterns. The study concluded that integrating machine learning into tax administration enhances audit effectiveness and tax collection efficiency.

Muturi and Kiarie (2021) examined the impact of digitalization, specifically online registration and online remittance, on tax compliance. Using a descriptive research design, they collected data via structured questionnaires from small taxpayers. The findings indicated that adopting online tax systems positively influenced compliance by simplifying registration and facilitating timely tax remittance. The study concluded that digitalization enhances tax compliance by reducing administrative burdens and improving efficiency, and recommended further investment in digital infrastructure and training to encourage wider adoption of online tax systems.

Eli et al. (2023) conducted a study titled Determinants of Business Tax Compliance: A Case Study of Togo to examine factors influencing tax compliance among formal businesses. Using survey data from 413 firms collected by the Togolese Revenue Office (TRO) and analyzed with a probit model, the study found that compliance is significantly influenced by the perception of tax fraud, disapproval of bribes, severity of penalties, legitimacy of taxes, tax knowledge, and perceived benefits from taxes, while factors such as tax law changes, tax amounts, and overall tax burden were not significant. Regional and business-size variations were observed. The authors recommended targeted tax education and policy reforms to strengthen compliance.

2.2.2 Housing Tax Compliance

Housing tax compliance refers to the extent to which property owners, including landlords, accurately declare, assess, and remit taxes on their real estate holdings in accordance with legal requirements (Bird & Slack, 2022). It encompasses voluntary compliance, driven by taxpayers' trust in government, perceived fairness of the tax system, and the link between taxes paid and public service delivery, as well as enforced compliance, which relies on administrative

measures such as audits, penalties, and updated property valuation systems (Franzsen & McCluskey, 2017; OECD, 2022).

Effective housing tax compliance is crucial for municipal revenue generation, providing a stable, predictable funding source for infrastructure, urban development, and social services (Bird & Slack, 2022). Non-compliance, manifested through underreporting of property values, delayed payments, or informal rental practices, reduces local government revenue, weakens financial sustainability, and limits service provision, especially in rapidly urbanizing areas (LoGRI, 2024; Togo First, 2023).

3. Methodology

A research design is an outline or approach that a study uses to address its research objectives. It is the framework within which research is carried out systematically (Kothari, 2017). The study design should be thorough enough to enable the research to be conducted smoothly and in a structured manner by collecting all necessary information. This study used an explanatory research design. The design helped to define the research phenomenon by analysing the independent variables and how their variations make changes in the dependent variable. A population is a complete set of individuals, cases, or objects with common observable characteristics, while the target population refers to the population to which a researcher wants to generalize the study's results (Mugenda & Mugenda, 2003). The study used descriptive and inferential statistics. The target population was 2,061 property owners in Agoe, Lome City, Togo (TRO, 2025). Table 1 showed that, out of 335 questionnaires, the response rate was 86%, indicating that 288 respondents fully completed and submitted their responses. The remaining 47 questionnaires were not filled out or submitted, indicating a 14% non-response rate

Table 1: Response Rate

	Number	%
Response rate	288	86.0%
Non-response rate	47	14.0%
n	335	

Reliability analysis

Reliability measures the accuracy of a research instrument's results over repeated trials (Singh, 2014). Cronbach's Alpha Coefficient of 0.7 was used as the cutoff, and all items with values less than 0.7 were considered weak and left out of the final questionnaire. Table 2 shows the reliability test results: the housing tax compliance questionnaire items have high reliability ($\alpha = 0.971 > 0.7$), and the digitalization of service items have $\alpha = 0.954 > 0.7$, indicating high reliability of the measurement items.

Table 2: Test of Reliability of Questionnaire

Factor	Number Items	of Cronbach score	Alpha	Conclusion
Housing tax compliance	5	0.954		Reliable
Digitalization of service	5	0.971		Reliable

4. Results and Discussion

4.1 Descriptive Statistics

4.1.1 Descriptive statistics for Digitalization of service

Table 3 showed that the statement “I use online platforms to remit housing tax payments” had a mean response of 4.08, indicating that respondents generally agreed with this item on the Likert scale. The standard deviation of 0.775 indicated relatively low variation in responses, suggesting consistent agreement. The statement “Online remittance has made housing tax payments easier and more convenient” recorded a mean of 4.05, showing that respondents tended to agree with this assertion. The standard deviation of 0.719 indicated limited variability, reinforcing the consistency of responses. For the statement “Online registration has simplified the housing tax compliance process”, the mean response was 4.13, reflecting strong agreement among respondents. The standard deviation of 0.759 indicated low variability, suggesting that most participants held similar views. The statement “Digital platforms have improved your overall compliance with housing tax obligations” had the highest mean of 4.14, suggesting strong agreement. The standard deviation of 0.764 implied low variability, reinforcing the consistency of responses. Finally, the statement “Online registration reduces the likelihood of errors in tax records” yielded a mean of 4.01, showing agreement among respondents. The standard deviation of 0.851 was slightly higher than that of the other items, indicating greater variability in responses.

Table 3: Digitalization of Service

n= 288	Mean	Std. Deviation
I use online platforms to remit housing tax payments	4.08	.775
Online remittance has made housing tax payments easier and more convenient.	4.05	.719
Online registration has simplified the housing tax compliance process	4.13	.759
Digital platforms have improved your overall compliance with housing tax obligations	4.14	.764
Online registration reduces the likelihood of errors in tax records	4.01	.851

4.1.2 Descriptive statistics for Housing Tax Compliance

Table 4 shows that for the item “I file tax returns on time”, the mean response was 4.10, which indicates that respondents generally agreed with this statement. The standard deviation of 0.781 indicates low variation, suggesting that most participants consistently reported timely filing. For the statement “I have registered for housing tax compliance obligation”, the mean was 3.97, showing that respondents tended to agree with the statement. The standard deviation of 0.843 implies a modest spread of responses, indicating some variation in registration status. Regarding the item “I pay the tax liability that arises from my housing tax obligation without failure”, the mean was 4.08, again reflecting agreement among respondents. The standard deviation of 0.801 shows relatively consistent responses. For the statement “The tax system in place motivates me to voluntarily comply with tax obligation”, the mean was 4.14, the highest

among the items, showing strong agreement. The standard deviation of 0.834 suggests moderate consistency in responses. Finally, for the item “I make housing tax returns for every month and have never been late as per the requirement of housing tax regulations”, the mean was 4.03, indicating agreement among respondents. The standard deviation of 0.776 indicates low variability, suggesting consistent responses.

Table 4: Housing Tax Compliance

n= 288	Mean	Std. Deviation
I file tax returns on time	4.10	.781
I have registered for housing tax compliance obligation	3.97	.843
I pay the tax liability that arises from my housing tax obligation without failure	4.08	.801
The tax system in place motivates me to voluntarily comply with tax obligations	4.14	.834
I make housing tax returns for every month and have never been late as per the requirements of housing tax regulations	4.03	.776

4.2 Correlation Analysis

The correlation analysis was conducted to determine the strength, direction, and significance of the relationships among the study variables: housing tax compliance and tax audit, digitalization of service, taxpayer sensitization, deterrence measures, and trust in government. Correlation coefficients of 1 and -1 signify a perfect relationship between the variables. The sign of the coefficient, whether positive or negative, reflects the direction of the relationship, indicating a positive or negative association (Omes, 2017). The correlation analysis between predictor variables and housing tax compliance among landlords in Agoe, Lome City, Togo revealed several significant relationships. Table 5: The results showed a positive and significant correlation between digitalization of service and housing tax compliance ($r = 0.526$, $p = 0.000$). This implies that the adoption of digital platforms and automated systems enhances compliance, as landlords find it easier and more efficient to meet their tax responsibilities through modernized service delivery

Table 5: Correlation Statistics

	Housing tax compliance	Digitalization of service
Housing tax compliance	1	0.526**
Digitalization of service Sig.	0.526** 0.000	1

** . Correlation is significant at the 0.05 level (2-tailed).

4.3 Regression Analysis

The regression analysis was conducted to determine the effects of digitalization of service on housing tax compliance. Table 6 shows that digitalization of service had a positive correlation with housing tax compliance of 52.6% ($R = 0.526$). The results show that digitalization of service explained 27.6% of the variation in housing tax compliance ($R^2 = 0.276$; adjusted $R^2 = 0.272$). The remaining 72.4% of the variation was attributable to other factors not included in the model.

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.526 ^a	0.276	.272	.35890

a. Predictors: (Constant), digitalization of service _mean

The analysis of variance was conducted to determine the significance of the model Table 7. The ANOVA results in Table 7 show an F statistic of 385.91 and a p-value of 0.000 (< 0.05), indicating that the model significantly explains the variance in housing tax compliance.

Table 7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	63.290	1	63.290	385.91	0.000
	Residual	47.010	286	0.164		
	Total	110.3	287			

a. Dependent Variable: housing tax compliance

b. Predictor: (Constant), digitalization of service

Table 8: Standardized coefficients indicate that digitalization of services has a significant positive effect on housing tax compliance, with a standardized beta coefficient ($\beta = 0.101$, $p = 0.005$). This indicates that the digitalization of services led to a 0.221 increase in housing tax compliance. The study found that digitalization of services had a positive and significant effect on housing tax compliance ($\beta = 0.101$, $p\text{-value} = 0.005 < 0.05$). Consequently, we rejected the null hypothesis.

Table 8: Regression Coefficient Analysis

Variable	Standardized β	Std. Error	t-Statistic	Unstandardized β	Prob.
Constant	1.550	0.130	11.923		0.000
Digitalization of service	0.101	0.026	3.885	0.072	0.005

4.4 Discussion

The study aimed to determine the effect of service digitalization on housing tax compliance among landlords in Agoe, Lome City, Togo. The correlation analysis found a positive and significant correlation between service digitalization and housing tax compliance ($r = 0.526$, $p = 0.000$). This implies that adopting digital platforms and automated systems enhances compliance, as landlords find it easier and more efficient to meet their tax responsibilities through modernized service delivery. The study found that Digitalization of service had a positive and significant effect on housing tax compliance ($\beta = 0.101$, $p = 0.005$); these findings highlighted the importance of modernized service delivery systems. This result is strongly supported by empirical evidence. Muturi and Kiarie (2021) and James et al. (2021) found that digital tax systems, including online platforms and Electronic Fiscal Devices (EFDs), enhanced compliance by simplifying processes and improving efficiency.

5. Conclusion

The objective was to determine the effect of service digitalization on housing tax compliance among landlords in Agoe, Lome City, Togo. The study concluded that digitalization positively influences housing tax compliance, showing that modernized platforms simplify tax processes and reduce barriers to payment. This contributes new knowledge by revealing that digitalization of services is most effective when paired with user-centered design, ensuring accessibility and efficiency.

6. Recommendations

The study found a positive effect of digitalization of services on housing tax compliance; the Government of Togo should invest in expanding digital tax platforms by ensuring accessibility and integrating user-friendly interfaces that reduce administrative burdens. Future research should also examine how property owners' income levels affect housing tax compliance.

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