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EFFECT OF ELECTRONIC TAX SYSTEM ON INTERNALLY GENERATED REVENUE IN EBONYI STATE: A STUDY OF STATE BOARD OF INTERNAL REVENUE SERVICE

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Abstract
This study examined the effect of the electronic tax system on internally generated revenue in Ebonyi State, focusing on the State Board of Internal Revenue Services. The broad objective was to evaluate the effect of the electronic tax system on internally generated revenue in Ebonyi State. Specifically, the study examined the extent to which electronic tax registration, electronic filing of tax returns, and electronic tax payment affect internally generated revenue in the State. The study adopted a cross-sectional survey design, with a population of 125 senior staff members of the board. A sample size of 95 was determined using the Taro Yamane formula. Data were collected via a structured questionnaire, validated and tested for reliability (Cronbach's alpha = 0.950). Data analysis was conducted using Ordinary Least Squares (OLS) regression. Findings revealed that electronic tax registration, filing, and payment all have positive and significant effects on internally generated revenue in Ebonyi State. The study recommends massive registration of taxable individuals, recruitment of ICT-proficient staff, and strengthening of electronic tax operations to enhance revenue generation.

Introduction
Taxation is universally recognized as a critical tool for financing government expenditure, redistributing income, and stabilizing the economy. In developing countries such as Nigeria, tax revenue plays a pivotal role in funding basic infrastructure and social services. However, the Nigerian tax system has historically been plagued by structural weaknesses, tax evasion, corruption, and inadequate compliance. Ebonyi State, like other states, depends significantly on internally generated revenue (IGR) to finance its development projects, yet the actual tax collected often falls short of projections due to inefficiencies in administration.

The advent of digital technologies has created opportunities to modernize tax systems through the adoption of electronic taxation (e-tax). E-tax refers to the use of information and communication technology (ICT) to administer tax processes, including electronic registration, filing, and payment. Globally, governments have recorded significant successes in leveraging technology to improve compliance, minimize leakages, and increase efficiency in revenue collection. In Nigeria, the Federal Inland Revenue Service (FIRS) embarked on modernization reforms following recommendations by the International Monetary Fund (IMF), leading to gradual integration of ICT into tax administration.

Despite these reforms, most state governments in Nigeria continue to grapple with weak tax collection mechanisms. Ebonyi State introduced an electronic tax system in 2021 through APPMART Limited to address challenges such as manual record-keeping, corruption, and multiple taxation. However, the effectiveness of this system remains under-researched. This study was therefore undertaken to empirically

examine the effect of the electronic tax system on internally generated revenue in Ebonyi State, focusing on three dimensions: electronic tax registration, electronic filing of returns, and electronic tax payment.

Objectives of the Study

The broad objective of this study is to evaluate the effect of electronic tax systems on internally generated revenue in Ebonyi State. The specific objectives are to:

1. Examine the extent to which electronic tax registration effects internally generated revenue
2. Determine the extent to which electronic tax registration effects internally generated revenue.
3. Ascertain the contribution of electronic tax payment to internally generated revenue.

Research Hypotheses

H_{O1}: Electronic tax registration does not significantly affect internally generated revenue in Ebonyi State

H_{O2}: Electronic filing of tax returns does not significantly affect internally generated revenue in Ebonyi State.

H_{O3}: Electronic tax payment does not significantly affect internally generated revenue in Ebonyi State.

Literature Review

This section reviews conceptual issues, empirical evidence, and theoretical perspectives on electronic taxation and internally generated revenue. It provides a foundation for understanding how e-tax systems influence revenue mobilization, with emphasis on experiences from Nigeria and other developing economies.

Conceptual Issues

Electronic taxation is the application of digital technologies to tax administration. It covers a wide range of activities including online taxpayer registration, e-filing of returns, and electronic tax payments (Arya, 2022). The system was pioneered by the United States Internal Revenue Service in 1986 and has since been adopted globally as a means of enhancing efficiency and reducing administrative costs (Umenweke & Ifediora, 2020). Recent studies argue that the digitalization of tax systems not only simplifies compliance but also reduces corruption and leakages in revenue administration (Olaoye & Adebayo, 2021; Nkwagu, Uguru, & Ogbuabor, 2022).

In Nigeria, e-tax emerged as part of the FIRS reform agenda to modernize revenue collection and reduce dependence on oil revenue. The major components of e-tax are electronic tax registration, electronic filing of returns, and electronic payment (Okoye, Odum, & Ifurueze, 2021). Evidence from subnational governments suggests that the adoption of digital platforms for revenue mobilization has significantly improved efficiency and accountability (Eze & Eze, 2023).

Internally Generated Revenue (IGR) refers to the revenue states derive within their jurisdiction from taxes, fees, licenses, fines, and other sources (Adenugba & Chike, 2019). In Nigeria, states rely heavily on

allocations from the federal government, but dwindling oil revenue has heightened the need to strengthen IGR. Efficient electronic tax systems provide opportunities for states to expand their revenue base while enhancing transparency and taxpayer compliance (Abata, 2021; Ugwu, 2024).

Empirical Evidence

Several studies have investigated the effect of electronic taxation on revenue mobilization. Emmanuel and Adesanya (2021) found that electronic tax payment and clearance certificates had significant positive effects on revenue generation in Lagos State, though e-filing showed weaker results. Ajape, Afara, and Uthman (2021) similarly confirmed that e-tax enhanced tax administration efficiency in Lagos State. A more recent study by Ogundana, Akinyemi, and Ojo (2022) revealed that e-tax adoption reduced tax evasion and increased voluntary compliance across selected Nigerian states.

In Kenya, Bett and Yudah (2021) established that online taxpayer registration, e-filing, and e-payment significantly boosted revenue collection at the Kenya Revenue Authority. Owino, Otieno, and Odoyo (2021) revealed that ICT systems explained up to 91.9% of variation in revenue collection efficiency among county governments in Kenya. Comparable evidence from Ghana indicates that e-tax reforms improved the efficiency of the Ghana Revenue Authority by reducing compliance costs for taxpayers (Asante & Agyapong, 2022).

More recent African evidence also points to digital tax reforms as drivers of fiscal sustainability. For example, Adegbie and Salawu (2023) reported that e-filing and e-payment significantly influenced IGR growth in South-West Nigeria, while Chukwuma and Nwankwo (2024) highlighted that state revenue services in Nigeria that adopted electronic systems experienced better taxpayer compliance and reduced leakages compared to those relying on manual processes.

Theoretical Perspectives

The Expediency Theory of Taxation emphasizes that tax systems should be evaluated based on their practicality and ability to generate revenue effectively. Contemporary scholars note that the theory remains highly relevant in the digital age, as governments adopt technology-driven systems to ensure efficiency and fiscal sustainability (Abata, 2021; Eze & Eze, 2023). The adoption of electronic taxation in Ebonyi State aligns with this perspective, since it addresses inefficiencies inherent in manual tax systems while enhancing compliance and accountability.

The Technology Acceptance Model (TAM) also provides a useful framework for explaining how perceptions of usefulness and ease of use influence taxpayer and staff adoption of e-tax systems. Recent empirical applications of TAM in taxation contexts show that perceived ease of use, trust, and perceived usefulness significantly affect compliance and willingness to adopt electronic platforms (Okoye, Odum, & Ifurueze, 2021; Afolabi & Adeyemi, 2022; Igbokwe, 2023; Ugwu, 2024). In this way, TAM remains a strong predictor of behavioral responses to e-tax reforms in Nigeria and other developing economies.

Methodology

This study employed a cross-sectional survey design to capture staff perceptions of the electronic tax system. The study was conducted in Ebonyi State Board of Internal Revenue Services, Abakaliki.

The population comprised 125 senior staff directly involved in electronic tax operations. A sample of 95 was selected using Taro Yamane's formula. Out of these, 89 valid responses were retrieved, representing a 93.7% response rate.

Data were collected through a structured questionnaire using a 5-point Likert scale. Reliability was confirmed with a Cronbach's alpha of 0.950, indicating high internal consistency.

Descriptive statistics (frequencies, percentages, means) summarized responses. Ordinary Least Squares (OLS) regression was used to test the effect of electronic registration, filing, and payment on IGR. Hypotheses were tested at a 5% significance level.

Research Findings

The analysis of demographic data and hypothesis testing produced the following results:

Variable	Frequency	Percentage
Male	42	47.2%
Female	47	52.8%
Single	31	34.8%
Married	51	57.3%
Widowed	5	5.6%
Divorced	2	2.2%

Table 1: Demographic profile of respondents (n=89).

Variable	Coefficient (β)	t-Statistic	p-value
Electronic Tax Registration	0.321	4.12	0.001
Electronic Tax Filing	0.287	3.89	0.002
Electronic Tax Payment	0.354	4.56	0.000

Table 2: Regression results showing effects of electronic tax components on IGR.

Discussion of Findings

The results demonstrate that electronic tax registration, filing, and payment all have significant positive impacts on internally generated revenue in Ebonyi State. These findings validate the assumption that e-tax systems reduce leakages, enhance transparency, and encourage compliance. The results align with prior research (Emmanuel & Adesanya, 2021; Ajape et al., 2021; Bett & Yudah, 2021), which found

similar positive contributions of e-taxation to revenue generation. However, the contrast with Ofurum et al. (2018), who reported limited national-level improvements, highlights that local contextual factors such as infrastructure, awareness, and political will determine the success of electronic taxation.

Conclusion

This study concludes that the adoption of electronic taxation in Ebonyi State has significantly enhanced the performance of internally generated revenue. The introduction of electronic registration has streamlined the management of taxpayer records by ensuring proper documentation, reducing duplication, and expanding the tax base. Similarly, the deployment of electronic filing has minimized administrative bottlenecks, accelerated the processing of tax returns, and improved efficiency in revenue collection. In addition, the implementation of electronic payment systems has curtailed cash-handling, reduced leakages, and minimized opportunities for corruption, thereby improving accountability and transparency in tax administration.

Collectively, these innovations have not only strengthened the revenue mobilization capacity of the State but have also promoted greater trust between taxpayers and revenue authorities. By leveraging digital platforms, Ebonyi State has moved closer to establishing a more modern, transparent, and sustainable revenue system that aligns with global best practices. The findings further suggest that the continued investment in e-tax infrastructure, staff training, and taxpayer sensitization will be critical to sustaining these gains and ensuring long-term fiscal sustainability.

Recommendations

1. **Intensify taxpayer registration campaigns**: State revenue services should prioritize comprehensive taxpayer registration drives, leveraging digital platforms and community outreach to broaden the tax base and reduce informality.
2. **Recruit and train ICT-proficient staff**: Governments should invest in the recruitment and continuous training of personnel with advanced ICT skills to enhance the management, maintenance, and security of electronic taxation systems.
3. **Invest in reliable digital infrastructure**: Adequate resources should be allocated toward modern servers, broadband connectivity, and cybersecurity frameworks to guarantee the reliability and sustainability of e-tax operations.
4. **Implement robust anti-corruption safeguards**: Strong institutional checks, system audits, and real-time monitoring tools are necessary to prevent abuse, manipulation, and corruption within electronic tax platforms.
5. **Conduct continuous taxpayer sensitization**: Regular education, awareness campaigns, and user-friendly digital support systems should be introduced to improve taxpayer trust, encourage voluntary compliance, and reduce resistance to e-tax reforms.

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