



## East African Journal of Information Technology

[eajit.eanso.org](http://eajit.eanso.org)

Volume 7, Issue 1, 2024

Print ISSN: 2707-5346 | Online ISSN: 2707-5354

Title DOI: <https://doi.org/10.37284/2707-5354>



EAST AFRICAN  
NATURE &  
SCIENCE  
ORGANIZATION

Original Article

### Challenges Facing the Use of Electronic Fiscal Devices for Tax Reporting in Zanzibar

Haitham Abdulla Ramsa<sup>1\*</sup>, Dr. Yahya Hamad Sheikh, PhD<sup>1</sup> & Dr. Abubakar Diwani Bakari, PhD<sup>1</sup>

<sup>1</sup> The State University of Zanzibar, P. O. Box 146 – Zanzibar, Tanzania.

\* Correspondence ORCID ID: <https://orcid.org/0009-0008-6586-6274>; email: [haithamramsa@gmail.com](mailto:haithamramsa@gmail.com).

Article DOI: <https://doi.org/10.37284/eajit.7.1.1708>

Date Published: **ABSTRACT**

24 January 2024

**Keywords:**

Virtual Fiscal  
Management System,  
Electronic Fiscal Device,  
Tax Collection,  
Information Technology,  
Application

The study aims to identify the challenges facing the use of Electronic Fiscal Devices (EFDs) for tax reporting. The study applied a descriptive research design where primary data was used with a quantitative research approach. The sample size of the study was 98 taxpayers obtained using Yamane's formula. SPSS v.26 was used to analyse the data. Results revealed that the challenges facing the use of EFDs for tax reporting include network problems, lack of trust in the use of EFDs for tax reporting, training were not enough, customers do not have a culture of requesting receipts, high cost of EFDs and EFDs often breakdown and not working. This study recommends that the government should provide more training to taxpayers and educate the public about the importance of tax and claiming receipts, and reduce the price of EFDs to encourage more taxpayers to afford to buy the machine or, if possible, to be given to taxpayers free of charge. Also, the government should provide good infrastructure to solve a slow or no network and provide strong punishment for those taxpayers who do not issue a receipt and for those customers who do not request a receipt.

#### APA CITATION

Ramsa, H. A., Sheikh, Y. H. & Bakari, A. D. (2024). Challenges Facing the Use of Electronic Fiscal Devices for Tax Reporting in Zanzibar. *East African Journal of Information Technology*, 7(1), 60-67. <https://doi.org/10.37284/eajit.7.1.1708>

#### CHICAGO CITATION

Ramsa, Haitham Abdulla, Yahya Hamad Sheikh and Abubakar Diwani Bakari. 2024. "Challenges Facing the Use of Electronic Fiscal Devices for Tax Reporting in Zanzibar". *East African Journal of Information Technology* 7 (1), 60-67. <https://doi.org/10.37284/eajit.7.1.1708>.

#### HARVARD CITATION

Ramsa, H. A., Sheikh, Y. H. & Bakari, A. D. (2024) "Challenges Facing the Use of Electronic Fiscal Devices for Tax Reporting in Zanzibar", *East African Journal of Information Technology*, 7(1), pp. 60-67. doi: 10.37284/eajit.7.1.1708.

#### IEEE CITATION

H. A. Ramsa, Y. H. Sheikh & A. D. Bakari "A Review of Current Research Trends in Green Computing", *EAJIT*, vol. 7, no. 1, pp. 60-67, Jan. 2024.

#### MLA CITATION

Ramsa, Haitham Abdulla, Yahya Hamad Sheikh & Abubakar Diwani Bakari "Challenges Facing the Use of Electronic Fiscal Devices for Tax Reporting in Zanzibar". *East African Journal of Education Studies*, Vol. 7, no. 1, Jan. 2024, pp. 60-67, doi:10.37284/eajit.7.1.1708.

## INTRODUCTION

Tax collection is the main source of income for all governments. Governments use taxation as a means of funding the delivery of public services such as education, health, electricity, water supply, law enforcement, and urban planning. As a result, governments use numerous tactics to optimise tax collection to finance these public services, including the automation of tax collection system, that is, Virtual Fiscal Management System (VFMS) and the use of Electronic Fiscal Devices (EFDs) (Cornelius, 2019). The automation of business processes in organisations has become increasingly popular. The performance of businesses is greatly impacted by contemporary trends, particularly those that adopt technology and undergo significant transformation. The effective application of taxes, transparency in the tax system, and resource allocation results in improved good governance, fiscal performance, and equitable distribution of public amenities and it strengthens state legitimacy (Mutheu, 2018).

The Application of information technology in tax administration aims to increase tax collection efficiency, and it has decreased data collection errors and overall tax administration costs. Automation of revenue collection has accelerated tax collection for taxpayers and given them a better audit trail of their taxes (Kinyua, 2019). Though it is a statutory obligation for any business to pay tax, tax evasion has been a major problem for tax administration across the globe, hindering public service provision by the responsible authorities. Automatic tax collection and administration, commonly deployed as Virtual Fiscal Management System (VFMS), are increasingly becoming useful in tax administration, with Electronic Fiscal Devices (EFDs) used at the point of sales (Millanzi, 2019).

EFDs refer to a broad range of technology tools that tax administrations utilise to support business transaction monitoring (Agatha, 2018). The main function of EFDs is to monitor and record

transactions in real-time, assuring the accuracy and transparency of financial data. It provides trustworthy and unchangeable records of sales and revenue, which is beneficial to both enterprises and tax authorities (Magese, 2020).

In Africa, countries adopted EFDs due to their many benefits following successes in Europe. Within the region, EFDs were first introduced in Kenya in 2005, then in Tanzania in 2010, Rwanda in 2014, and Malawi in 2015 (Magese, 2020). In all these countries, however, their adoption has been hampered by the high cost of deployment, the desire to cheat taxes, the reluctance to embrace new technology, and the inability of the users to operate the devices (John, 2021). This is contrary to the governments' desire for effective and efficient tax collection, thereby maximising collection through efficient reporting that attempts to avoid fraud and leakage (Millanzi, 2019).

In Zanzibar, the Zanzibar Revenue Authority (ZRA<sup>1</sup>) introduced EFDs in 2021 as part of VFMS to receive all transactions, including copies of receipts, summary of daily sales from all EFDs connected to it and generate various required reports in the year (ZRB, 2021). The reasons for VFMS were the system of issuing manual receipts was having challenges, including taxes are not collected properly, information being lost due to the use of the book, book can be stolen, taxpayer can cheat, taxpayers did not have a specific design type of receipt to give customers which contributed during the sale, also it was difficult to move the taxpayer from one stage to another stage of taxation. The reason for EFDs are to be used in every point of sales after being connected with VFMS (ZRB, 2021). This ongoing implementation of EFDs in developing countries has attracted the attention of researchers, largely focusing on assessing the effectiveness of the use of the EFDs and factors affecting their use, as well as challenges facing their use by the responsible taxation authorities (Agatha, 2018; Eilu, 2018; Millanzi, 2019; & Cornelius, 2019). Thus, this study aims to contribute to the understanding of

---

<sup>1</sup> Zanzibar Revenue Board

the use of EFDs in Zanzibar, Tanzania. The research will aid in creating a very clear understanding of the use of the EFDs and their contribution to tax administration in the setting of developing nations by understanding them in the Zanzibar context. This study identifies the challenges that facing the use of EFDs in tax reporting as the objective of this research and provides the answers to the basic research question of what are the challenges that face the use of EFDs in tax reporting?

## EMPIRICAL REVIEW

Mlima (2013), in his study of the effect of the use of EFDs at Morogoro Municipal in mainland Tanzania, VAT collection shows positive outcomes where the findings show taxpayers using the EFDs had an easier understanding of daily and monthly sales, efficient record keeping while they simplified the work of the traders through cost saving and stock control. The study further outlines challenges related to their use, such as insufficient knowledge, maintenance cost, bleaching of printed papers, non-issuance of receipts, network problems and printing errors. The study recommended that training should be provided on the best practices for using EFDs for users; the machine should be set up such that it has two entries: one on the debit side for sales, which enters output taxes, and one on the credit side, which enters input taxes and automatically deducts the difference and there should be more Global Position System (GPS) providers.

Siraji (2015), in his study at Nyamagana District, Mwanza City, pointed out that the challenges faced by taxpayers in using EFDs were the cost of purchasing the machines, lack of technical support, severe power outages, lack of education and slow device operation as major obstacles.

Agatha (2018) revealed that the main barriers preventing taxpayers from using EFDs are negative attitudes of taxpayers, increased expenses, and technical concerns connected with using EFDs, a high number of operational errors related to EFDs, and EFDs are very expensive. In order to boost the use of EFDs among traders, the study advises cost reduction, legal mobilisation

and reinforcement, training, and technological risk management.

Cornelius (2019) on factors preventing SMEs in mainland Tanzania's Ilala Municipality from issuing receipts using EFDs. The results demonstrated that poor education levels, language barriers, and a lack of regular EFD use training are the exact characteristics that prevent small and medium enterprises (SMEs) from using EFD to issue receipts. Other factors include not registering for Value Added Tax (VAT) and having the purpose of making enormous profits. Additionally, the network issue, slow speed, Tanzania Revenue Authority (TRA) system issue, and network disconnection due to EFD detection are the reasons why SMEs in Ilala municipality do not use EFD. The results also demonstrate that the most frequent EFD fault conditions, such as network failure, screen darkness, and crackedness, are what prevent EFDs from being used to generate receipts. It is advised that taxpayers be provided with tax education, that there be increased training on how to use EFDs, that the TRA network system and infrastructure be strengthened, and that the quality and model of the EFD battery be improved so that the battery will always be charged, and that low-cost EFD repair services be made available.

Millanzi (2019) assesses research on the Application and challenges of EFDs in Tanzania's Ilala Municipality's tax and revenue administration. The results of her study revealed that there are a number of difficulties that make it difficult to collect money using EFD. These included the issue of system network failure, financial limitations, the high expenses associated with EFD machines, and a lack of adequate education for EFD users. The study suggests ensuring that taxpayers receive adequate education to ensure that they are aware of how to use EFDs properly, working with other stakeholders to increase revenue collection devices, and lowering or subsidising EFD prices to make them more affordable for taxpayers in order to increase their effectiveness.

This study aims to develop further knowledge on the understanding of the use of EFDs with a focus on Zanzibar, Tanzania, as the justification for using EFDs at every point of sale. By understanding the EFDs in the Zanzibar context, the research will help in building a very clear understanding of the use of the EFDs and their contribution to tax administration in developing nations context. However, Zanzibar is a semi-autonomous region of Tanzania, and it has its own tax regime distinct from mainland Tanzania. The tax system in Zanzibar is governed by the ZRA, and TRA oversees taxation in the mainland Tanzania. the tax regimes in Zanzibar and mainland Tanzania can change over time due to legislative updates and government policies.

When the ZRA deployed the VFMS, it aimed to increase tax and revenue collection from all groups of taxpayers (small, medium, and large). One of the binding mechanisms is the issuance of receipts using the EFD when making sales online and offline. The VFMS was expected to facilitate easy transactions of tax to both taxpayers and tax collection authorities (ZRB, 2021). Overall, the use of VFMS and EFDs comes with its challenges. These include high costs of purchasing the machines, limited training, poor technical support, malfunctioning of the EFDs (Eilu, 2018) as observed in Kenya while language barriers, lack of training, problems with slow or no network, reliability of the TRA system, frequent EFDs breakdown were observed in Tanzania (Cornelius, 2019).

The aforementioned studies show that little has been examined on the use of EFDs in the Zanzibar context, the study aims to contribute to the understanding of the use of EFDs in Zanzibar, Tanzania.

## METHOD

A descriptive research design was employed with a quantitative research approach to collect data. The sample size of 98 taxpayers was calculated from a population of 6,177 taxpayers who were registered in VFMS and provided with EFDs in Zanzibar. This sample size was based on the Yamane's formula (Israel, 1992). A simple

random sampling technique was used to select respondents among the taxpayers from Zanzibar within in three regions of Unguja Island, namely Urban West Region, North Region, and South Region. Questionnaires with close-ended questions were distributed to the taxpayers in order to provide a clear and unambiguous set of questions to the respondents and the questionnaires were administered to the taxpayers indirectly by the researcher who filled in the responses to the printed questionnaires. SPSS v.26 was used to analyse the quantitative data.

## RESULTS

The results of this study present challenges facing the use of EFDs for tax reporting. Hence, these results are categorised into demographic information and presentation of findings on challenges facing the use of EFDs for tax reporting in Zanzibar.

### Demographic Information

This is used to describe the characteristics of the participants in a given population. Characteristics such as gender, education level, and any background characteristics are believed to be critical in the research study (Allen, 2017).

The gender of the respondents in this study was aimed to identify the information gathered from all genders so as to be impartial in results analysis and decision-making. *Table 1* presents the education level of the respondents, which shows all the respondents can read and write.

### Education Level

The education level was categorised from O-Level, A-Level, Certificate, Diploma, Degree, Master, and PhD. The study found that 40.8 per cent of respondents with O-Level, 16.3 per cent with A-Level, 25.5 per cent with a Certificate, 14.3 per cent with a Diploma, and 3.1 per cent with Degree (see *Table 1*). There was no respondent who reported that they had not reached at least O-Level, meaning all can read and write. Moreover, no respondent reported having a Master or PhD education.

### Experience in Business

In this study, experience in business was measured in the form of duration of conducting business and duration of using the EFDs. Analysis of the data shows that 2.0 per cent of respondents had less than one year of operating as traders, 31.6 per cent between one to three years, 48.0 per cent between three to five years and 18.4 per cent of the respondents had more than five years of experience (see *Table 1*). This shows that most respondents had enough experience working as merchants to comment reasonably on questions posed to them.

*Table 1* also presents the duration of using EFDs to the respondents, which shows that many

taxpayers have little experience of using this technology in business. Respondents were asked about the duration of using EFD categorised into less than a month, between one to six months, between six months to one year and more than one year. The finding shows that 6.1 per cent were using EFD for less than a month, 39.8 per cent between one to six months, 48.0 per cent between six months to one year and 6.1 per cent were using EFD for more than one year. Therefore, though data found that the establishment of VFMS over EFD shows taxpayers who use EFD between months out numbers those who have used the same for more than a year, it means that many taxpayers have little experience of using this technology in business.

**Table 1: Demographic Information**

		Frequency	%
Education level	O-level	40	40.8
	A- level	16	16.3
	Certificate	25	25.5
	Diploma	14	14.3
	Degree	3	3.1
	Total	98	100.0
Duration of conducting business	Less than one year	2	2.0
	Between one to three years	31	31.6
	Between three to five years	47	48
	More than five years	18	18.4
	Total	98	100.0
Duration of using EFD	Less than month	6	6.1
	Between one to six months	39	39.8
	Between six months to one year	47	48
	More than one year	6	6.1
	Total	98	100.0

### Challenges Facing the Use of EFDs for Tax Reporting

To understand the challenges facing the taxpayers on the use of EFDs and reporting, a series of

questions were used and presented to the respondents, whose results are shown in *Table 2*.



**Table 2: The challenges facing the use of EFDs for tax reporting**

Statement		SD	D	N	SA	A
Training on the use of EFDs is widely available and enough	n	22	56	12	8	0
	%	22.4	57.1	12.2	8.2	0
I have full trust in the use of EFDs for tax reporting	n	6	60	23	6	3
	%	6.1	61.2	23.5	6.1	3.1
The price of buying the EFD machine is affordable	n	61	24	7	5	1
	%	62.2	24.5	7.1	5.1	1.0
Acquiring an EFD machine is easy, and its installation is simple	n	5	10	45	30	8
	%	5.1	10.2	45.9	30.6	8.2
Customers perceive requesting receipt as an important step in tax payment control	n	47	16	22	10	3
	%	48	16.3	22.4	10.2	3.1
Customers believe that it is their duty to request electronic receipts produced by the EFD	n	4	52	14	20	8
	%	4.1	53.0	14.3	20.4	8.2
The EFD machine often breaks and does not work	n	2	31	17	44	4
	%	2.0	31.6	17.3	45	4.1
I often experience slow or no network when using the EFD	n	3	8	28	54	5
	%	3.1	8.2	28.5	55.1	5.1
I usually report EFD problems to the supplier immediately after a breakdown or network problem	n	34	33	11	14	6
	%	34.7	33.7	11.2	14.3	6.1

Key: SD=Strongly Disagree, D= Disagree, N=Neutral, A=Agree, SA=Strongly Agree, n= Number of the respondent

## DISCUSSIONS

In this section, the findings are discussed in relation to the literature review that was presented above. The discussion is organised through the challenges identified in order to address the research objective of this study, which was to identify the challenges that face the use of EFDs in tax reporting.

### Network Problem

The study finding shows that “taxpayers often experience slow or no network at the time of using the EFDs”. This problem was also reported by Cornelius (2019) and Millanzi (2019), meaning that this challenge is common within Tanzania. Thus, reliable network infrastructure may help in improving tax collection. Consequently, this will help the government meet its tax collection objectives.

### Insufficient Training

The result unveils “insufficient training given to the taxpayers before they were provided with the devices”. The result coincides with that of Mlima (2013); Siraji (2015); Millanzi (2019) and Cornelius (2019). This implies that taxpayers had

difficulty operating EFD machines in an effective manner, which is a common problem in Tanzania, both in Zanzibar and mainland Tanzania.

### Lack of Trust in The Use of EFDs

The study's findings indicate that “taxpayers do not trust the use of EFDs for tax reporting”. This finding is supported by Millanzi (2019), who declares that the majority of Tanzanian taxpayers lack trust in the use of EFDs and are consequently reluctant to accept and employ them in their businesses. This implies that these people's hesitation causes the government to lose the majority of the taxes and revenue they contribute.

### Failure to Demand Receipt

The findings show that “most of the customers do not have a culture of requesting receipts, which presents a loophole for taxpayers (businesses) to avoid providing receipts”. This was also noted in the study of Millanzi (2019), who said that taxpayers in the Ilala Municipality had a reputation for not demanding receipts.

### High Cost of EFDs

Another problem facing the taxpayers is the “high costs of purchasing the EFDs, where the majority

of the respondents stated that they are not affordable". Similar results were presented by Siraji (2015) and Agatha (2018), who stated that some traders find it difficult to afford the EFD machines. Consequently, this has a negative effect on the attitude of the taxpayers towards the use of EFDs and, hence affecting tax collection across the country, in both Zanzibar and mainland Tanzania.

### **Frequent Breakdown and Malfunctioning of the EFDs**

The study findings unveiled "frequent breakdowns of the EFDs and frequent cases of device malfunctioning". These results are in line with those of Millanzi (2019), who claimed that one of the reasons some businessmen refrain from utilising EFD machines is the breakdown issue, which reduces the efficacy and efficiency of employing EFD devices for tax collection.

### **CONCLUSION**

The study unveiled various challenges facing the use of EFDs for tax collection and reporting, including the high cost of purchasing the EFDs, customers do not have the culture of requesting receipts, lack of trust in the use of EFDs for tax reporting, Shortage of training on the use of EFD, network problem, and delaying reporting EFD problem to the supplier after a breakdown or network problem.

Therefore, the study recommends several measures to be taken in order to solve these difficulties as well as exploit the opportunities present. These include providing education, working collaboration between the ZRA and taxpayers, improving network infrastructure, provide strong punishment for those taxpayers who do not issue a receipt and for those customers who do not request a receipt, and free distribution of the EFDs to the taxpayers. Furthermore, the research recommends extending the scope of this study to include the customers to the taxpayers in order to get their experience of the whole EFDs-based tax collection process.

### **REFERENCES**

- Agatha, J. (2018). Assessing factors hindering taxpayers on the use of Electronic Fiscal Devices (EFDs) in Tanzania.
- Allen, M. (2017). The SAGE encyclopedia of communication research methods. SAGE publications.
- Cornelius, E. C. (2019). Factors hindering the use of electronic fiscal devices during receipts issuance among SMEs in Ilala Municipality. Mzumbe University.
- Eilu, E. (2018). Adoption of electronic fiscal devices (EFDs) for value-added tax (VAT) collection in Kenya and Tanzania: a systematic review. *The African Journal of Information and Communication*, 22, 111–134.
- Israel, G. D. (1992). Determining Sample Size, Program Evaluation and Organizational Development, IFAS. *PEOD-6. Florida (FL): University of Florida*.
- John, N. W. (2021). Assessment of Electronic Fiscal Devices (EFDs) Performance for Revenue Collection in Tanzania: A Case Study of TRA Mbeya in Mbeya Region. *Open University of Tanzania*.
- Kinyua, C. N. (2019). Effect of information technology on tax administration and performance by Kenya Revenue Authority (KRA): A study of Sameer park branch.
- Mageese, E. (2020). Factors influencing usage of electronic fiscal devices among small restaurants in Dodoma city.
- Millanzi, Z. (2019). Application and challenges of using the electronic fiscal devices (EFDs) in tax and revenue administration: The case of Ilala Municipality. Mzumbe University.
- Mlima, W. J. (2013). The Impact of EFD on VAT collection in Tanzania: a case of Morogoro municipal. Mzumbe University.
- Mutheu, M. C. (2018). Factors Affecting Acceptance of the Online Tax System in

Kenya: a Case of the Kenya Revenue Authority Itax System.

Siraji, Y. K. (2015). Challenges faced by taxpayers in using Electronic Fiscal Devices in Tanzania, A Case Study of selected taxpayers in Nyamagana District, Mwanza City. [http://scholar.mzumbe.ac.tz/bitstream/handle/11192/1088/MBA-CM\\_YUNUSI K.SIRAJI\\_2015.pdf?sequence=1](http://scholar.mzumbe.ac.tz/bitstream/handle/11192/1088/MBA-CM_YUNUSI_K.SIRAJI_2015.pdf?sequence=1)

ZRB. (2021). *The Virtual Fiscal Management System Regulations, 2021* / Zanzibar Revenue Board (ZRB). <https://www.zanrevenue.org/resources/view/the-virtual-fiscal-management-system-regulatin-t>