

Implication of Using Electronic Fiscal Devices on Audit Effectiveness among Small Business Owners of Arusha – Tanzania

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ABSTRACT

This study evaluated the use of Electronic Fiscal Devices among small business owners based in Arusha City Council – Tanzania. The focus was on the impact of the rate of using Electronic Fiscal Devices on the perceived effectiveness of the audit process. In addition, the study evaluated the impact of demographic variables, that is, the age of respondents, gender, level of education and business experience on the rate of using Electronic Fiscal Devices. Given the constant advocacy of the Tanzania Revenue Authority on the benefits of EFD uses in auditing, it was necessary to validate their assumptions based on the perception of users. In its approach, the study used mixed methods. The sample had 279 respondents. Data analysis was through descriptive and inferential statistics such as ordinal regression and the One-Way ANOVA. Results showed that the age, gender and business experience were not good determinants of the rate of EFD use. The level of education was a good determinant, but, with a reversal impact. Also, the rate of EFD uses among small business owners did not showed its perceived impact on the audit effectiveness. The study concludes that the observed reversal impact of education is a sign that people with a good level of education, may be using their knowledge to facilitate tax evasion. In addition, it concludes that factors other than the rate of EFD use are important to enhance the perception of small business owners on audit effectiveness. The study recommends the increase of EFD use advocacy by the revenue authority. Also, it recommends further studies to factors other than the rate of EFD uses, so as to determine the perception of taxpayers on audit effectiveness.

Keywords: *EFD, Electronic Fiscal Devices, Tanzania, Audit effectiveness, ICT in taxation*

INTRODUCTION

Governments all over the world depend on different sources of funding to meet their administrative and developmental obligations (Mwakalobo, 2015). Some of these sources are internal and some of them come from external sources such as grants and loans. A good example of internal sources of revenue includes; tax, different fee, fines and penalties. According to Chimilila (2018) and Naibei and Siringi (2011), internal sources of income are important to ensure that the country becomes financially independent. This financial independence enables a country to plan its operation without depending on the support from external sources; external sources of funding come at the liberty of the funding entity. According to Bruce-Twum (2014), effective audit unlocks the challenge of poor tax collection because it provides a true and fair view of the business and its processes. Ultimately, this impacts the amount of revenue from internal sources. According to Edogbanya and Sule (2013) the following factors affect audit effectiveness: the competency of the auditor and the level of independence exercised by the auditor.

Also, the study by Savić et al., (2015) highlighted that corruption is another factor which can affect audit effectiveness in taxation. Apparently, corruption decreases when relevant audit data are obtained transparently (Thomas, 2012; Chimilila, 2018). In this case, the use of electronic devices is ideal in ensuring that data are available for an open audit process (Naibei & Siringi, 2011). For over 10 years, the Government of Tanzania has invested effort in the use of Electronic Fiscal Devices (EFD) so as to increase the availability of business data for tax auditing (Chege et al., 2015; Government of Tanzania, 2012). Like in other technological changes, the implementation process was characterised by a rejection from some users. Some of the reasons for technology rejection are the initial costs, the difficulties of use and even technology breakdown (Chimilila, 2018; Pillay et al., 2020). In some cases, users rejected the use so as to create an environment for tax avoidance. Nonetheless, the Government of Tanzania pressed with this project because of the knowledge of its importance. In the current context, there are limited empirical evidence of the impact of the use of Electronic Fiscal Devices on the audit effectiveness. For example, the study by Pillay et al., (2020) focused on the impact of the fear of punishment on the use of Electronic Fiscal Devices, while that of Eilu (2018) and Chege et al., (2015) focused on the adoption of Electronic Fiscal Devices and its use in VAT collection, respectively. Because of this reason, the current study determines the impact of the use of Electronic Fiscal Devices on the audit effectiveness. Also, it determines the impact of demographic variables on the use of Electronic Fiscal Devices.

Literature

The study by Bangumet al., (2018) defines tax audit as the examination of tax returns by the revenue authority. The purpose is to verify that business income and tax deductions are accurate. For the tax audit to be effective, it is expected to be timely, while enabling the taxpayer, consultants and the revenue authority to have a true copy of information for tax estimation (Chege et al., 2015). This part of the literature presents both theoretical and empirical literature on the use of technology and effectiveness in tax and other administrative processes.

Theory of the Study

The Technology Acceptance Model (TAM) is perhaps the most discussed model associated with technology use (Chen et al., 2012). In the third version of the Technology Acceptance Model, four variables are at the centre of the model: the perceived usefulness, the ease of use, the intention to use the technology and the use behaviour (Venkatesh & Bala, 2008). In all these variables, the perceived usefulness of the technology is at the centre of the current study. In fact, the current study determines the technology usefulness in terms of bringing effectiveness in tax auditing. Therefore, the word technology usefulness is equivalent to the usefulness for effective auditing in taxation. The technology under discussion is the Electronic Fiscal Device. Given the current context of the Technology Acceptance Model, the variables tested, in the current study against the audit effectiveness i.e., technology usefulness were not considered by the model. For example, the third version of the Technology Acceptance Model did not consider demographic variables such as; the age, gender, business experience and level of education in its analysis. In addition, the model did not test the impact of the rate of use, on the perceived usefulness. This is the reason why the current study accommodates the use rate in understanding whether it defines the perceived usefulness which in this study is also referred to as audit effectiveness.

Uses of Electronic Fiscal Devices and its Impact on Audit Effectiveness

Electronic Fiscal Devices are designed for use in business so as to manage sales. The device has a signature which confirms the issuance of a genuine receipt after a business transaction. A copy of every transaction is stored in a local memory and a remote server (Naibei & Siringi, 2011; Government of Tanzania, 2012). The business owner uses the local memory while the revenue authority uses the copy submitted to the server for reference. The availability of the same copy of information to the taxpayer and the revenue authority is expected to prevent conflicts due to data difference during tax audit (Savić et al., 2015). In addition, the use of Electronic Fiscal Devices reduces the time it takes in securing tax information for auditing purpose (Kira, 2016). Evidences from previous studies show the increase of revenue

collection in Tanzania since the roll-out of Electronic Fiscal Devices. However, this increase is not necessarily confirming the effectiveness of Electronic Fiscal Devices in tax auditing. In addition, most studies such as Eilu (2018), Chegeet al., (2015), and Pillayet al., (2020) concentrated on the impact of EFD on VAT registered businesses, or areas other than audit effectiveness. The interest of this study was to determine whether the rate of using Electronic Fiscal Devices impacts the perceived audit effectiveness during taxation process. This leads to hypothesis one, presented below.

Hypotheses 1: The use of Electronic Fiscal Devices does not impact audit effectiveness in taxation

Demographic Variables and the Rate of using EFD

Past studies have shown that some demographic variables relates with the rate of using a given technology. For example, the study by Lubua and Pretorius (2018), ascertained that demographic variables are useful in understanding human behaviour. Also, the study by Cascio and Montealegre (2016) suggested the age to impact the use of Information Technologies, with the young being fast learners. Accordingly, Cai and Du (2017), observed that men engage more in the use of technologies than their counterpart. Likewise, Venkatesh and Bala (2008) observed the user experience to have an impact on the attitude toward the use with technology. Collectively, evidence shows demographic variables to have a role in understanding user behaviours with the use of information systems. Nevertheless, the position of these studies is generic; therefore, there is a need of understanding the same observation as it applies in understanding the use behaviour of users of Electronic Fiscal Devices. Because of this reason, the study tested the categorical relationship that exists between demographic variables such as; the age, gender, business experience and level of education and the rate of using EFDs. The hypothesis is stated below.

Hypothesis 2: Demographic variables do not have a significant relationship with the rate of using EFDs

Methodology

This study used mixed methods. The quantitative approach was used in testing hypotheses, while the qualitative approach (interview) was used to offer additional information to statistical patterns observed after analysis. Overall, the study was objective in nature. This objectivity is important to allow generalisation to other settings with characteristics similar to those of the current sample. In order to obtain its data, the study used the survey strategy, as recommended by Ball (2019) and Taherdoost (2018) for quantitative studies. This strategy allows the collection of data to a large

sample, within a short period of time. In order to qualify for quantitative analysis, the study formulated hypothetical statements which are discussed in the next second subsection. The study tested these statements so as to determine its position, with regard to these statements. Other elements of this study, which explains the research strategy, are explained in the remaining part of this section.

Research Area

This study was conducted to small business owners based in Arusha Region, in Tanzania. Arusha is situated in the northern part of Tanzania, within 3.3869⁰ S and 36.6830⁰ E. Traditionally, Arusha is the gateway of top safari destinations in Africa, because it is situated between Mount Kilimanjaro, Mount Meru and prominent parks such as Manyara, Tarangire, Ngorongoro and Serengeti. Also, other citizens are engaging in economic activities such as none tourism business, mining and subsistence farming. Within the Tanzania Revenue Authority, Arusha is among top performing regions in tax collection (Tanzania Revenue Authority, 2021). Therefore, Arusha was chosen as the case for study because of its economic potential and the mixed structure of taxpayers. Knowing that business owners are in different categories, the current study focused on small business owners because of their reluctance to voluntary compliance in regard to the use of EFDs (Pillay et al., 2020).

Sampling

The population of this study included taxpayers of the Arusha tax region, who are in the category of small business owners. Regardless of the potential of having an outstanding contribution to the national income, most of small businesses are reported to avoid using Electronic Fiscal Devices (EFDs), which would provide data for relevant estimation of tax (Chege et al., 2015; Pillay et al., 2020). The sampling frame of this study included small business owners who visited the Tanzanian Revenue Authority (Arusha) in the month of March, 2019; in total, there were 1000 members of this category. In addition, the study used systematic random sampling to obtain the sample; this sampling approach is relevant for quantitative studies (Omona, 2013). The sample size was 279. According to Krejcie and Morgan (1970), the minimum of 278 respondents is required for this sampling frame. In addition, the study interviewed three Heads of Sections, at the Tanzania Revenue Authority, Arusha Office. The purpose was to obtain explanations on the trend observed from taxpayers responses. On the other hand, the study interviewed officers working within the EFD unit, to understand the reasons for the none use of EFD machines. In total, they were three officers who were interviewed.

Data Collection and Analysis

The study collected quantitative data through a structured questionnaire. The method is relevant in studies which follow scientific procedures because it provides a defined set of responses which prevent outliers (Omona, 2013). Table 1 presents the variables, scale and the information extracted from each question. Overall, the following are the variables included in the analysis-age category, gender, level of education, work experience, the rate of EFD use, and the perceived audit effectiveness.

Table 1: Key Variables of the Study

Variable	Information Measured	Scale
Gender	The gender category	Categorical data
Age	The age group of the respondent	Likert scale
Level of Education	The acquired level of education	Likert scale
The rate of using EFD	It measures the perceived percent which respondents uses EFD in business	Likert scale
The audit effectiveness	It measures the extent which the respondent perceives the tax audit exercise as effective	Likert scale

On the other hand, the study used different techniques to analyse data. First, the study used descriptive statistics such as; frequencies, percent and mean to provide required explanations about variables under analysis. Accordingly, the study used the ordinal regression model in determining the impact of demographic variables on the rate of using Electronic Fiscal Devices. In addition, the same model was used in determining the impact of the rate of using Electronic Fiscal Devices on the perceived audit effectiveness. The model is suitable because, in all cases, the dependent variable is ordinal in nature. According to Gutierrez, Perez-Ortiz, Sanchez-Monedero, Fernandez-Navarro and Hervas-Martinez (2018) ordinal regression qualifies for ordinal output variables.

Validity and Reliability

The study conducted the validity analysis to ensure that data presented adequately address the problem in hand. First, the study used the face validity approach so as to ascertain that the questionnaire provided the right content to the problem addressed as recommended by Taherdoost (2018). The study accomplished the face validity through the use of two academic experts in the area of taxation, and one in the area of information systems; the three experts determined whether the questionnaire captured the right set of data needed to respond to hypotheses. Further to this, the study used exploratory factor analysis to test the validity of data captured through the questionnaire. The

study observed the Kaiser-Meyer-Olkin measure of sampling adequacy as 0.831; the minimum acceptable threshold was 0.6 (Taherdoost, 2018; Zamanzadeh, et al., 2015). In testing the reliability of the questionnaire, the study used the Cronbach Alpha. In all items the observed Cronbach Alpha was 0.841, which offer an acceptable reliability value. Details on these analyses are in Table 2 and Table 3.

Table 2: Reliability test by Cronbach Alpha

Cronbach Alpha	Cronbach Alpha Based on Standardised Items	Number of Items
.841	0.793	5

Table 3: Validity Testing by Explanatory Factor Analysis

Kaiser-Meyer-Olkin measure of sampling adequacy	Component Matrix (Principal component analysis)	Number of items in the questionnaire
0.831	All factors had above 0.3	5

Results

This section presents the results of the study. These results are in two key parts. The first part presents the impact of demographic variables on the rate of using Electronic Fiscal Devices, and the second part presents results on the impact of using Electronic Fiscal Devices on audit effectiveness. Overall, the discussion follows after the presentation and interpretation of results. Since the rate of using Electronic Fiscal Devices is the main output variable of this study, its analysis is presented along this introduction. According to Table 4, the rate of using Electronic Fiscal Devices was categorised in five key levels. The levels are below 20%, between 20% and 40%, between 40% and 60%, between 60% and 80% and above 80%. If this scale was to be defined to a Likert scale of between very high and very low use, only 45% of respondents would fit into high and very high category of use. This percent of use is low and do not support the intention of the government to have a self-sustainable economy based on internally generated revenue. The study conducted the interview to understand this characterisation of results. The results suggested two key reasons – frequent breakdown of Electronic Fiscal Devices and the effort by traders to avoid large tax liabilities.

Table 4: The Rate of EFD Use

Scale	Frequency	Percent
Above 80% of use (Very high)	56	20%
Between 60% and 80% of use (High)	71	25%
Between 40% and 60% of use (Moderate)	63	23%
Between 20% and 40% of use (Low)	75	27%
Below 20% of use (Very low)	14	5%
Overall	279	100%

The Impact of Demographic Variables on the Use of Electronic Fiscal Devices

This part presents results on the impact of demographic variables towards the rate of using Electronic Fiscal Devices. The following are the key demographic variables included in the discussion - gender, education, business experience, and the age of respondents. The descriptive results of these variables are between Table 5,7, 9,11 and 13. Details on the results for each variable follows next.

i.) The Age of Respondents

Table 5, presents results about the age of respondents. The categories of this variable are the age between 18 and 30 years, 31 and 40 years, 41 and 50 years, and 51 years and above. Results showed that most small business owners were under 40 years. This is equivalent to 69.5% of all. These were people in their early business career. They were the future of business in Tanzania. Very few, that is, 6.1% were 51 years old and above.

Table 5: The Age of Respondents

Scale	Frequency	Percent
18-30	98	35.1%
31-40	96	34.4%
41-50	68	24.4%
51 and above	17	6.1%
Total	279	100%

In addition, this part of the study determined the position of the *hypotheses* which suggested that the age of respondents did not impact the rate of using Electronic Fiscal Devices. The analysis used ordinal regression, because the output variable was ordinal in nature. According to results presented in Table 6, the model fitting information suggests that the p-value was 0.040. The p-value is less than the maximum threshold, which is 0.050. This observation suggests that ordinal regression equation is suitable for this relationship. On the other hand, the study observed the Nagelkerke Pseudo r-square as 0.053 (5.3%). This value is further interpreted through the p-values for each age

category. In all cases, the p-values were above the maximum threshold. Because of this information, the age category of respondents did not cause a change in the rate of using Electronic Fiscal Devices among small business owners.

Table 6: Ordinal Regression Information for Age and the Rate of using EFD

Model fitting (p-value)	Pseudo r-square	Parameter estimates p-values for age categories			
		18-30 years	18-30 years	18-30 years	18-30 years
0.002	0.053	0.380	0.400	0.280	Ref. value

ii.) Gender

Gender is another demographic variable included in this study. According to Table 7, the sample had 62% of respondents who were female. Male respondents were 38%. Since the data collection process followed scientific processes, it is evident that there were more women engaging in small businesses compared to male.

Table 7: The Gender of Respondents

Scale	Frequency	Percent
Female	173	62%
Male	106	38%
Total	279	100%

In addition, the study conducted the analysis to determine the position of the *null hypothesis* which said that the gender of small business owners did not determine the rate of using Electronic Fiscal Devices. Evidence in Table 8 shows that the model fitting information p-value is 0.434. The p-value exceeded the maximum threshold. Because of this reason the association does not fit to the equation. In addition, the Nagelkerke r-square value was 0.002, the value was very low, suggesting an equivalent impact of the gender of respondents on the rate of using Electronic Fiscal Devices. Furthermore, the parameter estimate value is 0.432, larger than the threshold. This value suggests that changes in gender did not impact the rate of using Electronic Fiscal Devices. These findings confirm the position of the null hypothesis.

Table 8: Ordinal Regression Information for Gender and the Rate of Using EFD

Model fitting (p-value)	Pseudo r-square	Parameter estimates p-values for gender categories	
		Female	Male
0.434	0.002	0.432	Ref. value

iii.) Business Experience

Business experience is another demographic variable thought to be important in determining the rate of using Electronic Fiscal Devices among small business owners. Its descriptive results presented in Table 9 showed that only 19% of respondents had an experience beyond 6 years. This percent is low when compared with those who did not have such an experience.

Table 9: Business Experience

Scale	Frequency	Mean
2 years and below	148	53%
Between 3 and 5 years	78	28%
6 years and above	53	19%
Total	279	100%

Furthermore, the study used ordinal regression to test the null hypothesis which suggested that business experience does not determine the rate of using Electronic Fiscal Devices. Results of this analysis are in Table 10. Based on these results, the p-value for the model fitting information was 0.458. With this information, the two models did not fit well into the equation. In addition, the Nagelkerke r-square was 0.006, which was very low. On the other hand, the parameter estimated of the variable suggests all the p-value to be above the maximum threshold. Collectively, the information from analysis shows that changes to the business experience does not impact the rate of using Electronic Fiscal Device in business. Both experienced and none experienced small business owners had a common rate of using Electronic Fiscal Devices.

Table 10: Ordinal Regression Information for Business Experience and the Rate of Using EFD

Model fitting (p-value)	Pseudo r-square	Parameter estimates p-values for business experience		
		2 years or below	3-5 years	6 years or above
0.458	0.006	0.265	0.274	Ref. value

iv.) Education

Education is the last variable in this series of demographic characteristics explored by the current study. The information in Table 11 suggests that only 39.5% of all respondents had a college education. The majority of respondents had primary and secondary education. Besides, the group Mean is 2.2, which is inclined to the secondary education and below. Additional mean results are as shown in Table 13.

Table 11: The Level of Education

Scale	Frequency	Percent
Primary Education	79	28.3%
Secondary Education	90	32.2%
Certificate or Diploma	88	31.5%
Degree and above	22	8%
Total	279	100%

Furthermore, the study used ordinal regression to determine the impact of the level of education on the rate of using Electronic Fiscal Devices. This was to be fulfilled so as to test the null *hypothesis* suggesting that the level of education does not impact the rate of using Electronic Fiscal Devices. Based on Table 12, the model fitting p-value was 0.040, which was lower than the threshold. With this p-value, the equation fits well to provided data. Accordingly, the Nagelkerke r-square value is 0.031, which is equal to 3.1% of change. A reference to parameter estimates showed a change from those with a Bachelor Degree towards those with a primary level of education. The parameter estimate p-value was at the lowest level among those with primary education. Also, it was below the threshold. Therefore, the level of education impacted the rate of using Electronic Fiscal Devices. The null hypothesis suggesting that the level of education does not impact the rate of use was rejected.

Table 12: Ordinal Regression Information for Levels of Education and the Rate of Using EFD

Model fitting (p-value)	Pseudo r-square	Parameter estimates p-values for levels of education			
		Primary	Secondary	Cert/Dip	Degree/Above
0.040	0.031	0.029	0.064	0.423	Ref. Value

On the same variable, the study determined the descriptive information explaining the type of the impact. In this case, the study used the mean value between the two variables – education and the rate of using Electronic Fiscal Devices. Based on results presented in Table 13, the rate of use mean, increased with the decrease of the level of education. Graduates with college education were more likely to avoid using Electronic Fiscal Devices in their business.

Table 13: Education Level and Rate of EFD Use Mean

Level of Education	Mean	N
Primary Education	2.91	79
Secondary Education	2.82	90
Certificate or Diploma	2.53	88
Degree and above	2.27	22
Total	2.71	279

The Perceived Impact of the Rate of Using Electronic Fiscal Devices on Tax Audit Effectiveness

This subsection tested the *hypothesis*, which stated that the rate of using Electronic Fiscal Devices does not significantly impact the perceived tax-audit effectiveness among small business owners. In the first part on analysis, the study determined the descriptive information of the extent which respondents perceived Electronic Fiscal Devices as useful in tax audit processes. Based on results presented in Figure 1, it is evident that the majority of respondents were convinced that the use of Electronic Fiscal Devices supports the tax audit process. The observation was represented by 54.2%. Equally, findings showed that a reasonable percent i.e. 45.8% of the respondents was not fully comfortable with the support of EFDs in the audit process. According to Bangum et al (2018), this percent requires the revenue authority to step-up awareness creation efforts to enable all taxpayers to enjoy benefits of using Electronic Fiscal Devices in the audit process. Furthermore, the study tested the null hypothesis suggesting no significant

impact was exerted by the use of EFDs on the audit effectiveness. The study used ordinal regression model.

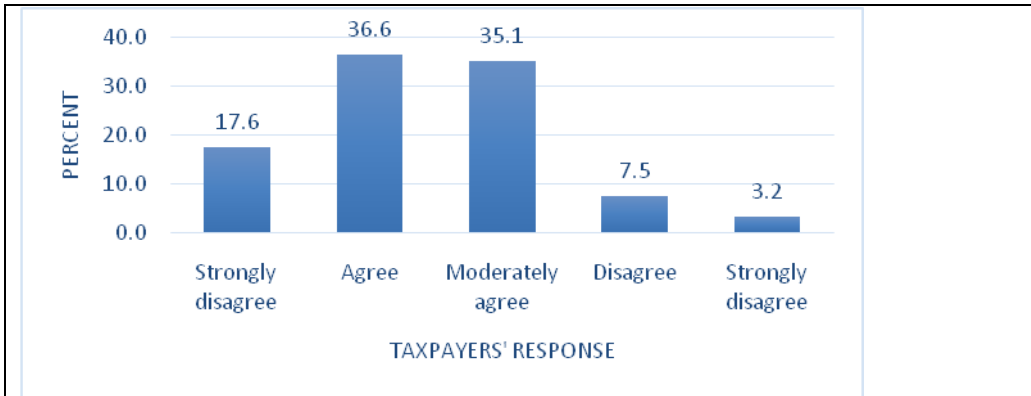


Figure 1: Electronic Fiscal Devices Support Tax Audit Process

Based on results of the ordinal regression presented in Table 14, the current set of data does not fit into the ordinal regression model. The p-value for the model fitting information was 0.186, which was higher than the threshold (0.05). Further to this, the Nagelkerke r-square value is 0.026 (2.6%), which was very low. Since all parameter estimates suggests the p-value above 0.05, this analysis confirms that the rate of using Electronic Fiscal Devices did not impact the perceived audit effectiveness. Therefore, the study confirms the *null hypothesis*.

Table 14: The Impact of Rate of EFD Use on Audit Effectiveness

Model fitting (p-value)	Pseudo r-square	Parameter estimates p-values for levels of education				
		80% >	60%-80%	40%-60%	20%-40%	< 20%
0.186	0.026	0.143	0.268	0.079	0.692	Ref. value

Discussion of Results

This study had three key elements defining its results. In the first element, the study provided descriptive information on the rate of using Electronic Fiscal Devices among eligible small business owners. Surprisingly, the study learned that the rate of using EFD was still low within this group of business owners. The study by Eilu (2018) and Pillay et al., (2020) had similar observations. Reasons reported to affect the rate of use included usability problems, the high cost of Electronic Fiscal Devices, poor network connection, lack of adequate training on the use, and lack of technical support. These challenges were supported by Bangum, Ginting and Iskandar (2018). In addition, the study by Kira (2016) reported other challenges such as the failure by businesses to report challenges, the lack of motivation

among business owners, and the lack of trust in EFD among small business owners. In addition, the study found out that except for the level of education, other demographic variables such as; the age, gender and business experience did not support the use. This observation is supported by Pillay et al., (2020), and Lubua (2022). Accordingly, it was surprising to notice that business owners with primary and secondary education had a higher rate of using Electronic Fiscal Devices than those with a college education. This observation means that education was used as a tool to facilitate both tax avoidance and evasion. This position is in agreement with the study of Bangum, Ginting, and Iskandar (2018), and that of Ali, Fjeldstad and Sjursen (2020). Accordingly, it was surprising to notice that the rate of using Electronic Fiscal Devices did not impact the perception of users on its ability to enhance audit effectiveness. Apparently, audit effectiveness was one of the benefits advocated by the Tanzania Revenue Authority that came with the use of Electronic Fiscal Devices (Tanzania Revenue Authority, 2021). Since the study by Lyimo and Makilully (2022), and that of Savić, Dragojlović, Vujošević, Arsić and Martić (2015) advocated that the use of Electronic Fiscal Devices improved the taxation process, it was surprising to notice that the rate of use did not impact the perceived audit of effectiveness. Arguably, it was enough to think that the rate of use determined the amount of information available for processing; therefore, other factors such as the competency of the auditor and time availability played a role as observed by Chege, Kiragu, Lagat, and Muthoni (2015).

Conclusion and Recommendations

Conclusively, the age, gender and experience of respondents were not good determinants of the rate of using Electronic Fiscal Devices. Also, the rate of EFD use did not impact audit effectiveness.

Recommendations

Based on results of this study, factors other than the rate of using Electronic Fiscal Devices impacted the audit effectiveness in Tanzania. Because of this reason, the current study makes the following recommendations:

- i. To researchers: since tax compliance is still low, researchers are to study other factors determining tax audit effectiveness. Also, researchers are advised to extend this study to other parts of Tanzania;
- ii. To tax auditors: Auditors must complement data from EFDs with other sources so as to improve audit effectiveness;
- iii. The revenue authority must increase awareness effort so that businesses can improve the EFD use. Most people within this category neglect the use, even though they own the device. This affects revenue collection and the ability of the government to generate its income for national developments.

REFERENCES

- Ali, M., Fjeldstad, O.-H., & Sjørusen, I. H. (2020). *Factors affecting tax compliant attitude in Africa*. Retrieved from <https://www.cmi.no/publications/file/4727-factors-affecting-taxcompliant-attitude-in-africa.pdf>
- Ball, H. L. (2019). Conducting online survey. *Journal of Human Lactation*, 35(3), 1-7.
- Bangum, H., Ginting, Y., & Iskandar, R. (2018). The problem of taxpayers compliance. *Advanced in Economics, Business and Management Research*, 35(1), 175-180.
- Bruce-Twum, E. (2014). Gift Tax Compliance in Ghana, an Empirical Study. *Journal of Finance and Accounting*, 2(1), 1-7.
- Cai, Z., & Du, J. (2017). Gender and attitude toward technology use. *Computer and education*, 105, 1-13.
- Cascio, W. F., & Montealegre, R. (2016). How Technology Is Changing Work and Organizations. *Annual Review of Organisational Psychology and Organisational Behaviour*, 3, 349-375.
- Chege, A., Kiragu, N., Lagat, C., & Muthoni, G. (2015). Effect of Electronic Fiscal Devices on VAT Collection in Tanzania. *European Journal of Business and Management*, 7, 125-133.
- Chen, Y., Harold, T., Little, J., Mark, T., & Zhao, Q. (2012). Factors Motivating the Adoption of e-Learning Technologies. *Journal of e-Learning & Higher Education*, 1-17.
- Chimilila, C. (2018). Domestic Resource Mobilization and Long Term Economic Growth in Tanzania. *African Journal of Economic Review*, 6(1), 142-150.
- Edogbanya, A., & Sule, J. (2013). Revenue Generation: It's Impact on Government Developmental Effort (A Study of Selected Local Council in Kogi East Senatorial District). *Global Journal of Management and Business Research Administration and Management*, 13(4), 13-26.
- 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 (AJIC)*, 22, 111-134.
- Government of Tanzania. (2012). Retrieved 12 29, 2021, from Subsidiary Legislation: [https://www.tra.go.tz/tax%20laws/EFD% 20 Regulation.pdf](https://www.tra.go.tz/tax%20laws/EFD%20Regulation.pdf)
- Gutierrez, P. A., Perez-Ortiz, M., Sanchez-Monedero, J., Fernandez-Navarro, F., & Hervas-Martinez, C. (2018). Ordinal regression methods. *EEE Transactions on Knowledge and Data Engineering*, 1-15.

- Kira, A. R. (2016). The perceptions of Taxpayers on the adoption of EFD in revenue collection in Tanzania. *International Journal of Academic Research in Business and Social Science*, 6(12), 39-53.
- Krejcie, R. V., and Morgan, D. W. (1970) Determining sample size for research activities, Educational and psychological measurement, 30, 3, 607-610
- Lubua, E. W. (2022). Uses of Knowledge Management Systems in the African Context: Implementation Gap, Challenges and Prospects. *IST-Africa 2022 Conference Proceedings* (pp. 1-11). Online: IEEE.
- Lubua, E. W., & Pretorius, P. (2018). The Impact of Demographic Factors to the Adoption of Social Commerce in Tanzania. *2018 IST-Africa Week Conference (IST-Africa)* (pp. 1-12). Gaborone, Botswana: IEEE.
- Lyimo, B. J., & Makilully, M. H. (2022). The impact of Electronic Fiscal Devices towards revenue collection in Tanzania. *Olva Academy*, 4(1), 97-100.
- Mgaiwa, S. J. (2018). The Paradox of Financing Public Higher Education in Tanzania and the Fate of Quality Education: The Experience of Selected Universities. *SAGE Open*, 8(2), 1-16.
- Mwakalobo, A. B. (2015). Dynamics of Revenue Generation in Tanzania, Kenya and Uganda. *African Journal of Economic Review*, 3(1), 21-38.
- Naibei, K. I., & Siringi, E. M. (2011). Impact of Electronic Tax Registers on VAT Compliance: A Study of Private Business Firms. *African Research Review*, 5(1), 73-88.
- Omona, J. (2013). Sampling in Qualitative Research: Improving the Quality of Research Outcomes in Higher Education. *Makerere Journal of Higher Education*, 4(2), 170-192.
- Pillay, S., Obalade, A., & Malima, A. E. (2020). Determining the Impact of Taxpayer Perceptions On the Rate of Using Electronic Fiscal Devices Among Small Businesses in Tanzania. *Academy of Entrepreneurship Journal*, 26(4), 1-12.
- Savić, G., Dragojlović, A., Vujošević, M., Arsić, M., & Martić, M. (2015). Impact of the efficiency of the tax administration on tax evasion. *Economic Research*, 28(1), 1138-1148.
- Singh, A. S., & Masuku, M. B. (2014). Sampling techniques & determination of sample size in applied statistics research: an overview. *International Journal of Economics, Commerce and Management*, 2(11), 1-22.
- Taherdoost, H. (2018). Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research. *International Journal of Academic Research in Management*, 5(2), 18-27.

- Tanzania Revenue Authority. (2021). *Why EFDs are preferred?* Retrieved from <https://www.tra.go.tz/index.php/e-fiscal-devices-efd/351-why-efds-is-preferred>
- Thomas, C. (2012). Assessing Tax Fairness Dimensions in a Small Developing Economy. *Business and Economics Journal*, 62, 1-8.
- Venkatesh, V., & Bala, H. (2008). Technology Acceptance Model 3 and a Research Agenda on Interventions. *Decision Sciences*, 39(2), 273-315.
- Zamanzadeh, V., Ghahramanian, A., Rassouli, M., Abbaszadeh, A., Alavi-Majd, H., & Nikanfar, A.-R. (2015). Design and Implementation Content Validity Study. *Journal of Caring Sciences*, 4(2), 165–178.