

The Perceptions on Usage of Electronic Fiscal Devices among Small Business Owners in Tanzania

Emmanuel Magese¹, James Daniel Chindengwike²

¹Research Scientist, Department of Accounting and Finance, University of Dodoma, Dodoma, Tanzania

²Research Fellow, Department of Accounting and Finance, University of Dodoma, Dodoma, Tanzania

¹ emanuelmage2@gmail.com

² chindengwikejames@gmail.com



This is an open-access article distributed under the terms of the [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract— the use of Electronic Fiscal Devices (EFDs) appears to be a current innovation that is broadly promoted for effective revenue collection not only in Tanzania but also in worldwide. This study examined the perceptions on usage of electronic fiscal devices among small business owners in Tanzania. The study adopted cross-sectional survey research design whereby primary and secondary data were used. The population applied on the 152 small business owners (small restaurants owners). The sample size of the study was 110 small restaurants owners. Dodoma City was purposively sampled to be used as a study area of this research and random sampling procedure was used to pick small restaurants owners in Dodoma City. Results revealed that EFDs usage in term of number of years among small restaurants owners was positively and significantly influenced by perceived usefulness of EFDs and perceived ease of use respectively; with P- Value of 0.0439. The study recommends that the government is advised to resolve the dependence challenge of EFDs on electricity, to develop sustained training and taking required measures for the learner restaurants to ensure that they observe rules and regulations mostly on the use of EFDs but not limited to tax compliance only.

Keywords— Electronic Fiscal Devices, Small Business Owner, Tanzania

I. Introduction

The usage of EFDs improves the tax collections to most of the developing countries in the world [13]. The importance of using EFDs to any country is to enhance tax collection and government can increase its public revenues in order to finance economic activities. Additionally, the importance of taxpayers in using EFDs includes keeping proper business records for correct tax returns, improving business records keeping, fostering the transfer of sales information to Tanzania Revenue Authority (TRA) and enhancing transparency and accountability between taxpayers and tax authority, to minimize tax disputes. The other four importance of using EFDs

to the taxpayers are to enhance tax evaluation fairness among taxpayers and to enhance voluntary tax compliance among traders [5]. Additionally, the most of the nations with advanced economies benefit from strong and reliable systems of collecting revenues [3] [11] [16] [18].

The good advantages of EFDs learned from Europe attracted African countries to adopt EFDs. For example, at first, EFDs in Africa were established in Kenya in the year 2005, followed by Tanzania in the year 2010, Rwanda in the year 2014 and Malawi in the year 2015 [9]. Moreover, the developing countries including Tanzania adopted the system by receiving the benefits that have been shown from European countries in using EFDs [4]. Although the success resulting from the EFDs usage, various weaknesses are observed by different scholars [9]. According to [17] criticized that there is an insignificant enforcement in tax collection and innovative skills. Regardless of the different measures taken by the government to increase tax revenue collections by attractive tax compliance, still the response for taxpayers in using EFD is still stagnant [10]. The slow rapid of usage of EFDs is highlighted to be sensitive especially in restaurants as revealed in TRA report which was by 5% contrasts to other sectors, such as trade 7.5%, electricity and water 7.5%, manufacturing 23%, communications 17.5%, and other sectors 33.5% [2]. Nevertheless, it is not Tanzania alone which suffers from this restriction but the characteristics of sub Saharan African countries. Empirical evidence available shows that in sub-Saharan African countries; the revenues collected array from 30% to 40% of their total government budgets and the rest depend on partners and donors [8]. Empirical evidence reported that the sub-Saharan Africa alone received the grants of about \$ 40.1 Billion from the World Bank [4]. What is emphasized here is that revenue collection in these nations is still low and could be augmented if there are effective strategies laid down to collect revenues.

The four groups of EFDs permitted by TRA include the Electronic Tax Register (ETR) used by vendor business that concern with receipts manually, Electronic Fiscal Printer (EFP) used for computerized retail exits and stores all sale transactions or particulars made in its fiscal remembrance, Electronic Signature Device (ESD) uses unique computer programme to produce a unique number (Signature) which is added to and printed to every invoice issued by the user's system and Electronic Fiscal Pump Printer (EFPP) used in petrol stations, usually connected to plumb and print every receipt during the sale transactions [2]. Empirical evidence reported that, African countries do not collect sufficient revenues due to the poor electronic tax administration

system hence causes the developing countries to depend a lot on loans and grants [8] [19]. The explanatory reasons for insufficient revenue collection from tax are caused by poor tax system and failure of taxpayers to use EFDs in their businesses [6] [12]. African countries differ with developed countries which sensitize better to those factors

International Journal of Multidisciplinary Research and Explorer (IJMRE) resulting to increase in revenues [7]. Nevertheless, empirical According to [8] on research of awareness that affects the usage evidence shows that on usage of EFDs firstly prefer to explain of EFDs among small restaurants in Tanzania. This research is adoption rather than usage because adoption of technology is the proposed to make a detailed analysis of these factors for process of introducing new technology while usage is the necessary intervention. Electronic Fiscal Device is used to continuous process of using technology [14] [19]. Despite the enhance tax compliance of taxpayers. The usage of EFDs was various measures taken by TRA to increase tax revenue by introduced in Tanzania for the first time in the year 2010 to enhancing tax compliance to taxpayers, the response for the supplant electronic sales enlists that appeared to be not taxpayers to use EFDs is so slow [2] [7]. Previous study productive to meet the normal goals. With the utilization of the revealed that there are many taxpayers who have EFDs EFDs. TRA hopes to get charge data naturally from the citizens machines but they do not use them to issue EFDs receipts [1] which before TRA used to get data like deals data of different [7]. That why this study intended to examine the perceptions on business exercises by checking manually. However, such usage of electronic fiscal devices among small business owners

II Literature Review

According to [8] evaluate the taxpayers' perceptions on the use and regulations among Value Added Tax (VAT) and non-VAT of EFDs in revenue collection and the perceptions of taxpayers registered taxpayers [3]. According to [17] conducted the study towards the use of EFDs along with the challenges associated on factors hindering and motivating usage of EFDs to the with the use of EFDs. The study came up with the findings those owners of hotels and restaurants in Dar es Salaam. This study taxpayers who had positive perceptions on the use of EFDs with was limited by level of demonstration because they included several advantages that have to their business. It was observed restaurants and hotels so, came out with generalized reasons to that EFDs have diminished the occasion and takes to plan deals all types of businesses. report, secure

duty data for evaluating reason and exchange; and guarantee charge rate to be paid by the citizens. The difficulties machines, swoon c monetary l duty solicitations, p EFD's system Cross sectional survey research design where by primary and issue, and absence of people instruction on EFDs applications small business owners (restaurants owners). The sample size of study was conducted in Dodoma, several limitations of the study the s t u d y w a s 110 r e s t a u r a n t s o w n e r s by u s i n g Y a m a n e f o r m u l a r e s p o n d e n t s; this sample . is too s small contrast to the number of study a r e a of thi s r e s e a r c h a n d r a n d o m s a m p l i n g p r o c e d u r e w a s b u s i n e s s p e r f o r m e r s w h o s h o u l d u s e E F D s i n t h e C o u n t r y t o d a y . I n t h e d i r e c t i o n o f s a y t h a t t h e n u m b e r o f b u s i n e s s p e r f o r m e r s h a s i n c r e a s e d f r o m t h a t t i m e . A s m a l l s a m p l e i n a s t u d y l i k e t h i s c o u l d a l s o l e a d i n t o a b i a s e d E c o n o m e t r i c M o d e l D e v e l o p m e n t : B i n a r y L o g i s t i c m o d e l w a s c o n c l u s i o n o f t h e f i n d i n g s . I n a d d i t i o n , t h e s t u d y w a s l i m i t e d t o u s e d t o e x a m i n e t h e p e r c e p t i o n s o n u s a g e o f e l e c t r o n i c f i s c a l q u a n t i t a t i v e a n a l y s i s o f t h e s u r v e y q u e s t i o n n a i r e f i n d i n g s . d e v i c e s a m o n g s m a l l B u s i n e s s o w n e r s i n T a n z a n i a . T h e r e a s o n E x c l u d e o b s e r v a t i o n s a n d i n t e r v i e w s i n s u c h a s t u d y m a y l e a d o f s e l e c t i n g t h e b i n a r y l o g i s t i c M o d e l i s d u e t o t h e f a c t t h a t t h e i n t o q u e s t i o n a b l e f i n d i n g s b e c a u s e o f t h e e f f e c t i n w h i c h d e p e n d e n t v a r i a b l e o f t h e s t u d y i s " c a t e g o r i c a l d a t a o r d u m m y r e s p o n d e n t s m a y h a v e a d j u s t e d t h e i r b e h a v i o r d e p e n d i n g o n t h e i n a n a t u r e " s o t h a t , t h e b i n a r y l o g i s t i c m o d e l i s s u i t a b l e f o r t h i s p e r c e p t i o n o f t h e p u r p o s e o f t h e r e s e a r c h . S u b s e q u e n t l y , t h i s s t u d y . r e s e a r c h j u s t i f i e s t h e n e e d f o r t h i s s t u d y t o b e d o n e u s i n g a l a r g e r s a m p l e o f t h e r e s p o n d e n t s a n d d i f f e r e n t a p p r o a c h e s t h a t c o n t a i n i n t e r v i e w s . A n e w s t u d y w h i c h i s s i g n i f i c a n c e m e n t i o n i n g h e r e i s t h a t o f [13]. T h i s s t u d y b a s e d f o r t h e f a c t o r s w h i c h m o t i v a t e (x) i s t h e p o s s i b i l i t y o f h a v i n g e v e n t o f a t t e n t i o n ; i n π t a x p a y e r s t o a c c e p t E F D s f o r t a x c o l l e c t i o n i n T a n z a n i a . F o r t h e W h e r e , u p t a k e o f E F D s i n t h e n a t i o n s . N e v e r t h e l e s s , t h i s s t u d y i s l i m i t e d o u r c a s e , i t i s c h a n c e o f p e r c e i v i n g t h a t E F D i s u s e f u l o r e a s e t o t o k e y i n f l u e n c i n g f a c t o r o n t a x p a y e r s ' a c c e p t a n c e t o a c c e p t E F D s , w h i l e f a c i l i t a t i n g c i r c u m s t a n c e s a n d i n t e n t i o n t o u s e E F D s w e r e k e y f a c t o r s f o r t a x p a y e r s ' E F D s a c t u a l u s a g e b e h a v i o r . T h e x_i ' s a r e c o v a r i a t e s a n d i ' s a r e t h e i r r e s p e c t i v e l i m i t a t i o n . T h e p o i n t e d c a p a c i t y o f t h e s t u d y e n d e d u p w i t h a n a r r o w e d r e s u l t s o f t h e m o d e l a r e o b t a i n a b l e i n t h e f o r m o f a r e g r e s s i o n c o n c l u s i o n a n d r e c o m m e n d a t i o n i n t h a t t h e g o v e r n m e n t n e e d s t o p a r a m e t e r e s t i m a t e a n d e s t i m a t e d O d d s R a t i o s (O R) . T h e i n c r e a s e a c c e p t a n c e o f E F D s , t a x r e g u l a t o r p r o v i d e m o r e e s t i m a t e d O R , d e t e r m i n e d b y t a k i n g t h e p r o m o t e d o f t h e a w a r e n e s s c a m p a i g n a n d o n l i n e a s s i s t a n c e t o t h e u s e o f E F D s r e g r e s s i o n

parameter estimates, shows the increase or decrease use r s. One could accept that t here a r e mor e t han [4] [9]. in the likelihood of having occasion of interest for subjects at a given level of the independent variable as compared to those in the reference categor According to [8] on research of awareness that affects the usage evidence shows that on usage of EFDs firstly prefer to explain of EFDs among small restaurants in Tanzania. This research is adoption rather than usage because adoption of technology is the proposed to make a detailed analysis of these factors for process of introducing new technology while usage is the necessary intervention. Electronic Fiscal Devise is used to continuous process of using technology [14] [19]. Despite the enhance tax compliance of taxpayers. The usage of EFDs was various measures taken by TRA to increase tax revenue by introduced in Tanzania for the first time in the year 2010 to enhancing tax compliance to taxpayers, the response for the supplant electronic sales enlists that appeared to be not taxpayers to use EFDs is so slow [2] [7]. Previous study productive to meet the normal goals. With the utilization of the revealed that there are many taxpayers who have EFDs EFDs. TRA hopes to get charge data naturally from the citizens machines but they do not use them to issue EFDs receipts [1] which before TRA used to get data like deals data of different [7]. That why this study intended to examine the perceptions on business exercises by checking manually. However, such usage of electronic fiscal devices among small business owners training is exposed to high danger of misrepresentation and it in Tanzania. was difficult to obtain accurate information due to issues like double book keeping [4] [18]. Furthermore, the EFD machine is II used by taxpayers to rede tax collection costs, obtain correct sales information and helping taxpayer to comply with tax laws According to [8] evaluate the taxpayers' perceptions on the use and regulations among Value Added Tax (VAT) and non-VAT of EFDs in revenue collection and the perceptions of taxpayers registered taxpayers [3]. According to [17] conducted the study towards the use of EFDs along with the challenges associated on factors hindering and motivating usage of EFDs to the with the use of EFDs. The study came up with the findings those owners of hotels and restaurants in Dares Salaam. This study taxpayers who had positive perceptions on the use of EFDs with was limited by level of demonstration because they included several advantages that have to their business. It was observed restaurants and hotels so, came out with generalized reasons to that EFDs have diminished the occasion and takes to plan deals all types of businesses.

II. Research Methodology

Cross sectional survey research design where by primary and secondary data were used. The population applied on the 152 small business owners (restaurants owners). The sample size of the study was 110 restaurants owners by using Yamane formula as follows: $n = \frac{N}{1 + N(e)^2}$ where N is the population size, n is the sample size, and e is the margin of error. The Cronbach's alpha value of the 8 items is 0.885 which is

Econometric Model Development: Binary Logistic model was conclusion of the findings. In addition, the study was limited to used to examine the perceptions on usage of electronic fiscal quantitative analysis of the survey questionnaire findings. devices among small Business owners in Tanzania. The reason Exclude observations and interviews in such a study may lead of selecting the binary logistic Model is due to the fact that the into questionable findings because of the effect in which dependent variable of the study is “categorical data or dummy respondents may have adjusted their behavior depending on the in a nature” so that, the binary logistic model is suitable for this perception of the purpose of the research. Subsequently, this study. research justifies the need for this study to be done using a larger sample of the respondents and different approaches that contain interviews. A new study which is significance mentioning here is that of [13]. This study based for the factors which motivate (x) is the possibility of having event of attention; in taxpayers to accept EFDs for tax collection in Tanzania. For

$$P(x)$$

$$\text{Logit}(x) = \log\left(\frac{x}{1-x}\right) = \beta_0 + \beta_1 x_1 + \dots + \beta_p x_p \dots (i)$$

Where, uptake of EFDs in the nations. Nevertheless, this study is limited our case, it is chance of perceiving that EFD is useful or ease to to key influencing factor on taxpayers' acceptance to accept EFDs, while facilitating circumstances and intention to use EFDs were key factors for taxpayers' EFDs actual usage behavior. The x_i 's are covariates and β_i 's are their respective limitation. The pointed capacity of the study ended up with a narrowed results of the model are obtainable in the form of a regression conclusion and recommendation in that the government needs to parameter estimate and estimated Odds Ratios (OR). The increase acceptance of EFDs, tax regulator provide more estimated OR, determined by taking the promoted of the awareness campaign and online assistance to the use of EFDs regression parameter estimates,

shows the increase or decrease use r s. One could accept that t here a r e m o r e t h a n [4] [9]. in the likelihood of having occasion of interest for subjects at a given level of the independent variable as compared to those in the reference category. An estimate of $OR > 1$ shows likelihood of having event of interest for respondents at a given level of the independent variable is greater than that for the reference category. Similarly, an estimate of $OR < 1$ specifies that the possibility of having happening of interest for subjects at a given level of independent variable is less than that for the reference group

V. Results and Discussion

Table 1 presents the age of the business, the analysis revealed a deviation on the compliance with the usage of EFDs depending on the year which a restaurant established.

Table 1: Influence Age of Business on Perceived Ease of EFDs Usage

Variable	Perceived Ease of Use (%)	Odds Ratio (OR)	[95% C I]	P-Value
Overall Ease of Use Year of Business Initiation	88 (77.9)			0.0439
Before 2016	31 (86.11)	3.47	1.100, 0.96]	0.0337
2016-2018	32 (84.21)	2.99	[1.00, 8.88]	0.0492
2019-2020	25 (64.10)	Reference		

Source: Survey Field Data, 2021

This finding is supported by [8]. With deference to year of business commencement, 86.11% of the restaurants started business before 2016 reported that to use EFDs. While 84.2% of participants those from restaurants started business in 2016-2018 and 64.1% from restaurants started business in 2019-2020 shows that to use EFDs. In addition, the results of the fitted logistic regression model revealed that the odds of perceived ease of use of EFDs was significantly higher in restaurants started business in 2016-2018 as compared to those started business between 2019 and 2020 ($OR=2.99$, P Value.0492) This result supported by [2]. Similarly, participants from restaurants started business before 2016 were significantly more likely to use the EFDs than those started business in 2019-2020 ($OR=3.47$, P- Value = 0.0337). This finding of the study is supported by who said that the EFDs usage in term of number of

years among small restaurants owners was positively and significantly influenced by perceived usefulness of EFDs and perceived ease of use correspondingly [1] [13] [17].

V. Conclusion

The study indicated that the perception of small business owners towards usage of EFDs has positive influence on EFDs usage. The study is supported by different scholars who said that the perception about EFDs influence positively EFDs machine usage [2] [8] [17] [19].

The future researcher suggests that may expand on the study area and sample size in order to define better perceptions in usage of EFDs. Additionally, it is recommended that further studies should include variable like involvement of the stakeholders through adoption processes of new technology, for instance new EFDs.

References

- [1] Agatha, J., "Assessing Factors Hindering Taxpayers on the Use of Electronic Fiscal Devices (EFDs) In Tanzania," Doctoral Thesis, Mzumbe University, pp. 23-76, 2018.
- [2] Azmi, A. A. C., and Kamarulzaman, Y., "Adoption of Tax E-Filing: A Conceptual Paper," "African Journal of Business Management, vol. 4, no. 5, pp. 599–603, 2010.
- [3] Byabato, W., "Perceptions and Adoption of Using Electronic Fiscal Devices among Entrepreneurs : a Case of Dodoma Municipality," Masters Dissertation, The University of Dodoma, pp.3-79, 2017.
- [4] Chege, A., Kiragu, N., Lagat, C., and Muthoni, G, "Effect of Electronic Fiscal Devices on VAT Collection in Tanzania: A Case of Tanzania Revenue Authority," European Journal of Business and Management, vol. 7, no.33, pp. 125– 133, 2015.
- [5] Christian, A., "Factors Influencing Taxpayers' Voluntary Compliance with the Tax System in Tanzania: A Case of Tanzania Revenue Authority in Kariakoo Tax Region," Masters Dissertation, Mzumbe University, pp. 2-87, 2019.
- [6] Eilu, E., "Adoption of Electronic Fiscal Devices (EFDs) for Value-Added Tax (VAT) Collection in Kenya and Tanzania: a Systematic Review,. African Journal of Information and Communication, vol. 22, no. 1, pp. 11–134, 2018.
- [7] Kaisi, C., "Assessing the Adoption of Electronic Fiscal Devices (EFDs) in Increasing Revenue Collection: A Case of Kinondoni Municipality Tanzania," Masters Dissertation, Mzumbe University, pp.4-66, 2019.