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The Effect of Online Tax Payments on Tax Compliance among Large Taxpayers in the North-Rift Region, Kenya

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Abstract

Tax compliance is a key emphasis area of the Kenya Revenue Authority in a bid to maximise revenue collection to finance government services. However, complex processes and ineffective methods of revenue generation continue to mar tax compliance especially among the large taxpayers in the North Rift. This study sought to investigate the effect of online tax payments on tax compliance among large taxpayers in the North-Rift region, Kenya. The study was underpinned by the general systems theory. A descriptive research design was adopted by the study to guide data collection and analysis procedures. The study's target population was 200 large taxpayers operating in North rift region, Kenya from which a random sample of 133 participants was selected with the use of Yamane's (1967) formula. The study utilized structured questionnaires as a tool for data collection from 133 financial managers purposively selected from the 133 randomly selected large taxpayer companies in North rift region, Kenya. Data collected was entered into the Statistical Package for Social Sciences (SPSS) and quantitatively analysed using descriptive statistical techniques namely mean, percentages, and standard deviations, and inferential statistical analyses techniques namely correlation analysis and multinomial logistic regression analysis. The findings were presented in figures and tables. The study established significant and positive influence of online tax payments (Coeff=0.108, Sig=0.032). The study's findings are capable of being used to inform research, revenue collection practice, and academic/research.

Keywords: Kenya Revenue Authority, tax compliance, North-Rift Region, online tax payments.

1. Introduction

Automating revenue collection is among the most important strategic foundations for attaining economic development by fulfilling projected expenditures and meeting taxpayer expectations. If properly implemented, the automated system is expected to be beneficial to taxpayers and boost collection of revenue by decreasing operational costs and filing workload (KRA, 2016). Given the instrumentality of taxes on national development, the government has made unprecedented efforts to streamline tax collection (Laban & Muthinja, 2023). Nevertheless, tax compliance remains a serious globally, given the difficulties and large number of taxpayers failing to meet their tax obligations effectively.

Globally, governments have adopted the electronic (automated) tax administrations and the benefits are huge despite the challenges of adopting the method. In Korea, Awasthi et al. (2019) discovered that even cash payments are now electronically trackable by tax authorities thanks to expanding payments that are electronically traceable to include electronically traceable cash receipts (ETCR). Developing countries tax system face some challenges, including weak tax administration, low taxpayer morale and hard-to-tax sectors. Despite the challenges, several African countries have implemented electronic tax systems. For instance, by use of electronic billing machine (EBM), Rwanda was able to increase tax revenue by 6 percent, demonstrating the broad potential for revenue increases (Harelimana & Gayawira, 2019).

Modern governments must encourage a culture of voluntary tax compliance in order to collect sustained tax income, and this calls for efficient, trustworthy, and dependable tax administrations (Awasthi, 2019). The most effective, efficient, cheap, and transparent method of collecting revenue is automation, which is acknowledged on a global scale (Maina, 2017). Sustaining the culture of voluntary tax payment could require governments to provide a variety of options to enable citizens pay tax as stipulated in the constitution.

Online tax payment, otherwise referred to as automated tax filing, involves creating various tax returns and relevant documents on a computer and then uploading them on the system. Taxpayers have the option of filing their tax online or can use consultancy programs, which assist them in filing their taxes. There are several categories of tax to be paid, however, the PIN of the taxpayer assists/guides in filing tax returns (KRA, 2016). A study by Ekundina (2018), online tax filing constructs include paying all the types of taxes via the automated tax systems, frequent visits to online tax system to guarantee timely tax filing, and taxpayer accurate registration to ensure that all taxes are captured via the taxpayer PIN. The key proxies of online tax payment include filing tax revenue online, registration for online riling, and tax filed online.

Youde and Lim (2019) states that tax compliance is when a taxpayer decides to abide by the laws and regulations of taxation by making accurate and on-time tax payments. In both developed and emerging nations, tax compliance has grown in importance since it highlights the obligation of taxpayers to disclose their income and establishes their tax liability (Inasius, 2018). Slemrod (2018) asserts that tax collection has a significant impact on GDP and that for the government to generate money, taxpayers are obligated to abide by the law and make the required payments on time. Tax compliance is critical for governments in providing public goods and reallocating wealth

(Sadress et al., 2019). According to Ibrahim et al. (2020), tax revenue acts in support of economic growth while funding social programs and infrastructural investment. Therefore, the most significant way that government may deliver public services is by mobilizing of tax income through taxing every economic agent.

Kenya measures tax compliance through assessments by the authority, number of filing cases, and in some measure, registered taxpayer compliments and complaints, as well as, revenue collected as a proxy measure of compliance. Over the past five years, Kenya's tax revenue performance has increased, with KRA collecting a total of Kes. 1.58 trillion in the 2019–20 fiscal year. In the recent years, the revenue collected has been on upward trend. For instance, KRA gathered Kes 1.58 trillion in 2018/19 financial year an increase from Kes 1.435 trillion in 2017/18. This may suggest an improvement in tax collection and may paint the automated tax system successful. However, the revenue authority failed to reach the National Treasury's revenue target; for the 2017–2018 fiscal year, Sh. 1.17 trillion were collected by KRA versus the targeted 1.4 trillion (KRA financial year 2017–2018 performance evaluation). In addition, the targeted revenue collection in 2019/20 financial year was Kes 1.64 trillion. With an average accomplishment of 96.2%, Kenya Revenue Authority has continuously fallen short of its revenue goal (KRA, 2020).

According to classifications by Kenya Revenue Authority, large taxpayers are those with annual turnover exceeding KSh. 750 million comprising their associates and subsidiaries. Large taxpayers include all insurance and bank businesses, regardless of revenue, wine and spirits producers, state corporations with annual budgets exceeding Sh750 million, the headquarters of central government ministries and divisions, and local governments with city status (KRA, 2014). Eight counties are found in the North rift region and they include Uasin Gishu, West Pokot, Baringo, Elgeyo Marakwet, Turkana, Nandi, Trans Nzoia, and Bungoma. KRA segments the large taxpayers into the following sectors; Banks and insurance, government and construction, mining, manufacturers, transport, domestic excise, agriculture and wholesalers, petroleum and motor vehicles, petroleum exploration and gas. According to Kenya Revenue Authority (2021), they are 213 large taxpayers in the Northrift region consisting of banks and insurance, government and construction, mining, manufacturers, transport, domestic excise, agriculture and wholesalers, petroleum and motor vehicles, petroleum exploration and gas. Among them include the Noble Sacco Limited, Kenya Flourspar company, Geothermal development company limited, Elgeyo saw mills limited, Unga limited, Mount Elgon Orchards among others (Appendix II). The study will specifically focus on the firms that have their headquarters in the North-rift.

The compliance levels of large-corporate taxpayers in the North Rift region follow the compliance trend of all large-taxpayers in Kenya. The compliance levels differ with the type of taxes. According to Kenya Revenue Authority (2019) tax revenue performance report, large-taxpayers in the northern region reported 12.3 percent increase from 2017/18 VAT revenue and 16.5 percent withholding VAT revenue while the corporation tax increased by 5.5 percent. This indicates high compliance levels in VAT tax and withholding tax by large taxpayers in north-rift during the 2018/19 financial year. However, excise duty and capital gains tax declined by 40.9 percent and 82.3 percent respectively, which may reveal that the large-taxpayers in the northern region are not compliant in these types of taxes. However, other factors such as decline in capital gains and imports may also have contributed to the decline.

Problem Statement

Large taxpayers in the North Rift region are expected to be the biggest contributors of total tax revenue. However, tax compliance among the large taxpayers in the North Rift region continues to raise concerns, owing to the observation that large taxpayers perform differently in different types of taxes (Ondoro, 2021). For instance, the VAT and PAYE by large taxpayers in the north rift region recorded a decline of 7.9 percent and 9.3 percent respectively in the 2020/2021 financial year, while withholding tax increased by 3.8 percent and corporation tax by 3.7 percent (KRA, 2022). This may indicate good compliance levels in withholding and corporation tax but low-compliance levels in VAT and PAYE. Factors such as Covid-19 pandemic may have contributed to the decline. Despite the introduction of automated tax system in Kenya, it is evident that large taxpayers in the North Rift are still grappling with meeting the tax compliance expectations.

Studies on the influence of automated tax system on tax compliance among large taxpayers in the North Rift are scarce. Numerous studies that have been carried out regarding automated tax systems and tax compliance and performance. An East of Nairobi district study by Wasao (2014) showed that automated tax system features such as online tax registration, and payments via iTax improved small taxpayers' tax compliance. Njenga (2020) found that Kenya's iTax certainty, convenience and simplicity positively affect tax compliance by large tax payers. A study by Kamau (2015) about adopting technology as a tactical means to improve tax compliance by Kenya's large taxpayers. The study concluded that indeed technology adoption does influence large taxpayers' levels of tax compliance. In addition, Maithya (2020) study in Kenya on large taxpayers' iTax adoption determinants and value added tax found that adoption of iTax correlates with increase in value added tax performance by large taxpayers over the past few years. Despite the existence of these studies, researchers have not adequately concentrated on the influence of automated tax system on tax compliance of North Rift's large taxpayers.

This study identifies contextual gaps left unattended by the extant studies. The research by Wasao (2014) focused on small taxpayers, while the current study focus is on large taxpayers. Njenga (2020), Kamau (2015) and Maithya (2020) approached their studies from the automated tax system adoption perspective and did not analyse the influence of iTax features on tax compliance. Given that KRA introduced automated tax system several years ago, large taxpayers are expected to have adopted and developed capabilities required to utilize the system. Scanty literature has been documented to explain the efficacy of automated tax system and tax compliance by large taxpayers in Kenya and no study has specifically focused on large taxpayers in the North-rift. The current study intends to address the extant gaps by investigating the effect of automated tax system on tax compliance with a particular focus on large taxpayers in the North Rift.

Aim

The study aimed to investigate the effect of online tax payments on tax compliance of large taxpayers in the North-Rift region Kenya.

Significance

This study's findings presented great value to numerous stakeholders. Primarily, the study's findings will help the KRA implement incentive strategies to increase taxpayer adoption of the online tax filing system and close any revenue-loss gaps caused by tax evasion. Furthermore, beneficial effects of automated system will facilitate the campaigns and enforcement of the use of iTax systems. Since there will be fewer in-person meetings between taxpayers and tax authorities as a result of the study, the government will be better able to collect taxes, which would in turn spur economic growth. The findings can therefore be used by the government to improve the formulation of future policies and to draw attention to important problems that still need to be solved. The study findings can also be valuable in teaching large taxpayers in the North-rift issues regarding tax compliance and educate them on automated tax system, consequently diminishing the impact of tax punishments forced on them due to tax non-compliance.

2. Literature Review

Theoretical Review

The General Systems Theory serves as the foundation for the study of systems automation. The theory was created by Ludwig von Bertalanffy and Kennet Boulding in 1954. By condensing and combining reality's multidimensionality, it provides a non-representational reality with an emphasis on the fundamental system characteristics. It covers the most fundamental system principles, characteristics, and features (Mesarovic & Takahara, 2004). This theory's central premise is that, regardless of their internal makeup, all systems share certain properties (Skyttner, 2001). It crosses most disciplinary boundaries and focuses on interactions while identifying universal principles that apply to all systems. The contrast between open and closed systems is one of the fundamental tenets of general systems theory. In contrast to closed systems, which do not engage in such exchanges, open systems show interactions with the outside world in the form of exchanges of energy, people, matter, and information. Open systems theory, a viable systems model, and a viable systems approach have emerged from general systems theory (Skyttner, 2001). The main emphasis of general systems theory is on the relationships between organizations and the environment.

Past studies that have used the general systems theory, such as Frecknall-Hughes and Kirchler (2015), Kamara (2020), Bassi et al. (2021) credited the general systems theory for providing a basis for supporting the automation of tax processes to streamline collection efforts. The theory is relevant to the research since it focuses more on the KRA as an organization than on customs tax systems in general. This makes it easier to access always growing automation system procedures that are reviewed and modified to take into account local and regional requirements. The theory serves as the foundation for the Kenya i-tax system and all of its elements, including automated tax payer reports and statistics, online tax payer payments, and online filing and issuing of tax-related papers.

Empirical Review

Wasao (2014) studied the impact of Kenya's online tax system and tax compliance among small and medium-sized businesses in Nairobi County. The research design for the study combined quantitative and descriptive methodologies. Quantitative data analysis on the collected data was conducted by SPSS (version 20). The findings of the study indicate that online systems have an effect on small taxpayers' tax compliance levels in East of Nairobi in terms of registration, payments, and filing. The regression analysis results show that tax compliance would be equal to 3.663 if online tax registration, filing, and payment were kept at a constant zero. Small taxpayers' tax compliance in Nairobi's east would rise by a factor of 0.051 for every unit increase in online tax payments. The study, however, concentrated on SMEs, whereas the current study concentrates on large taxpayers. The contextual situation of SMEs is different from those of taxpayers; hence, it can affect their perspective of tax compliance.

Online tax payment systems were studied by Stafford and Turan (2011) as an emerging feature of Turkey's governmental change. The study used a qualitative research approach to describe aspects associated to the use of information technology by accounting professionals to support electronic tax filing systems. As the ongoing electronic transformation of the governmental revenue system contributes to efforts to transform governments through alternative service delivery venues and channels, the study findings on the use and acceptance of e-Tax systems are relevant and applicable to a large number of countries and contexts. The study found that normative pressures and perceptions of behavioural control, which training and education may potentially alleviate, are the main elements mediating actual plans to deploy automated systems as part of the modernization of the government's treasury role. The study found that normative pressures and perceptions of behavioural control, which training and education may potentially alleviate, are the main elements mediating actual plans to deploy automated systems as part of the modernization of the government's treasury role.

In Nakuru Town, Kenya, Gwaro, Maina, and Kwasira (2016) conducted a study on the impact of online tax filing on small and medium-sized business tax compliance. The study used a survey descriptive research methodology, and it acquired quantitative data by using primary data gathering methods. Questionnaires were used to gather primary data. The research design and data collection tools were effective in Gwaro et al.'s (2016) type of study because it focused on SMEs that could easily fill in closed-ended questionnaires. The Nakuru Small and Medium Enterprises provided a sample of 100 respondents. Considering the large number of SMEs in Nakuru County, the sample size of 100 was small and might not permit the generalizability and credibility of the findings. The study discovered that computer literacy improved online payments and had a big impact on the level of tax compliance among Nakuru's small and medium businesses. The new study, however, is focused on large taxpayers, whereas the previous study focused on SMEs. Moreover, the study concentrated on Nakuru County, which may exhibit varied contextual features to the North-Rift region.

Conceptual Framework

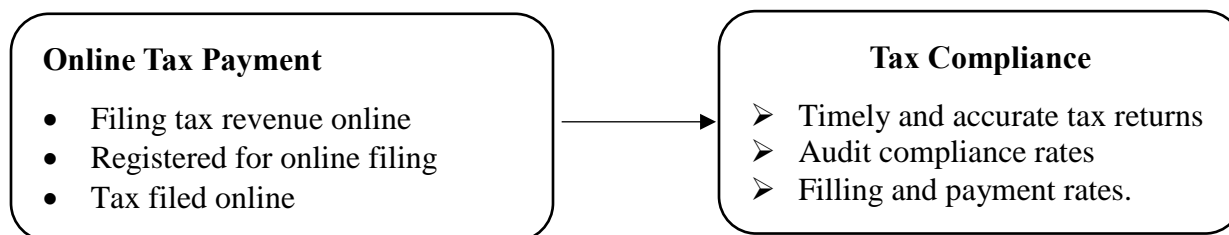


Figure 1. Conceptual framework.

3. Methodology

Research Design

Collis and Wussey (2013) states that research design is a classification of strategies and approaches for obtaining the data required to address the research problems. The descriptive study design was used to address the research issue. This design allowed for an investigation of the connection between tax compliance levels and technology. The descriptive study design enabled collection of data through the utilization of self-administered questionnaires, making it suited for this investigation. The relevance of the descriptive research design in this study was that it allowed the researcher to describe the behaviour of large taxpayers in relation to the research phenomena, namely, automated tax system and tax compliance.

Population and Sampling

This study targeted all the large-taxpayers located in the Northrift region in Kenya. The North rift region covers eight counties namely Uasin Gishu, Elgeyo Marakwet, West Pokot, Turkana, Baringo, Nandi, Trans Nzoia, and Bungoma (see Appendix II). The study however got information from financial managers as the respondents and units of observations. According to Kenya Revenue Authority (2021), there are 200 large taxpayers in the Northrift region consisting of banks and insurance, agriculture and wholesalers, transport, manufacturers, petroleum and motor vehicles, mining, government and construction, petroleum exploration and gas companies, as detailed in Table 1.

Table 1: Target population

Firm Sector	No. of large taxpayers
Banks and insurance	34
Manufacturers	56
Transport & Logistics	14
Petroleum and motor vehicles	16
Agriculture and wholesalers	53
Government and construction	20
Mining	4
Petroleum exploration and gas companies	3
Total	200

Source: KRA (2022).

Yamane’s (1967) formula was used to determine sample size (refer to equation).

$$n = \frac{N}{1+N(e)^2}$$

Where n is the sample size, N is the population size, and e is the level of precision. When this formula is applied to the target population as shown in equation 3.2, the sample size is 133.

$$n = \frac{200}{1+200(0.05)^2} = 133$$

The sample size of 133 (unit of observation) according to Berg (2015) was large enough to alleviate any concerns of sampling error.

The study adopted simple random sampling and purposeful sampling. Simple random sampling was used to select the organizations to participate in the study by giving equal chance of being selected to all companies. Purposeful sampling was used to determine the specific persons within the companies to participate in the study based on their knowledge and experience of the automated tax system and tax compliance.

Data Collection and Analysis

A research method utilizing a questionnaire helped in gathering primary data. The semi-structured questionnaire entailed open-ended and closed-ended questions. Open-ended questions were acknowledged for permitting judgements and perceptions from the select respondents as regards to the subject under study hence gave an in-depth grasp of the question (Collis & Hussey, 2013). On the other hand, close-ended questions were vital in operationalizing and assessing the study’s

variables through the use of a category scale. The researcher trained two research assistants who helped in administering, following-up and collecting the filled questionnaires, as well as, editing and data entering process. Questionnaires were dropped onto the desk of respective respondents who were notified and picked two weeks later after allowing the respondents ample time to fill the questions.

Qualitative and quantitative methods were both utilised in analysing the data collected for this study before the final conclusions and findings were put together. Statistical Packages for Social Sciences (SPSS) version 26.0 served as the primary statistical tool for analyses. Figures and tabular formats were considered in presenting the results whereas the significance level was decided at a 0.05 significance level. Equation 3.1 shows the regression model that was used.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon \dots \dots \dots (3.1)$$

Where:

Y = Tax compliance

X₁ = Online tax payments

β₁ ... β₄ = Coefficient of the the variable, online tax payment'.

ε = Error term

Research Ethics

Neumann (2013) states that "ethical" actions are those considered proper and fitting in a given occupation. Three factors were considered by the researcher when conducting the study: personal ethical concerns of the researcher, participant-related ethical concerns, and methodological concerns. To ensure that the study was authorized, a permission from the NACOSTI (National Commission for Science, Technology, and Innovation) was requested. The surveys were sent with a letter of introduction from the Kenyatta University School of Business. When working with respondents, the researcher adhered to high standards of ethics and integrity.

4. Findings

Response Rate and Reliability

The researcher conducted a response rate analysis for the study's targeted sample and recorded the results in Table 4.2.

Table 1: Response rate

Particulars	Frequency	Percentage
1. Targeted sample size	133	100%
2. Number of questionnaires administered	133	100%
3. Number of questionnaires filled and received back	130	97.74%
4. Non-response	3	2.26%

The study had a target of collecting responses from 133 participants including financial managers of large-taxpayers in the North Rift region in Kenya. 133 questionnaires were successfully administered but the researcher only received responses for 130 participants constituting a response rate of 97.74%. The response rate was more than the recommended threshold of 70% hence considered sufficient for necessitating the researcher to continue with the data analysis and interpretation exercise.

Reliability analysis revealed that the Cronbach’s alpha for the independent variable is 0.74, indicating that the research instrument was reliable.

Table 3: Response rate

Variable	No. of Items	Cronbach’s Alpha	Inference
1. Online tax payment	11	0.74	Reliable

Demographic Characteristics

Based on the study results, only 33.1% of the respondents were female while 66.9% were male. The disproportionate representability is manifest in this study demonstrating gender disparity in large taxpayer firms’ pool of financial managers in the North Rift region. Moreover, 46.15% of the participants had postgraduate credentials as their highest level of education followed by university undergraduates with a representation of 37.69%. Only 16.15% of the participants had college credentials as their highest level of education. Analysis of the period of experience revealed that 33.85% and 27.69% of the participants had worked in the select companies for over 16 years and less than 5 years respectively. Cumulatively, 38.46% of the participants had spent between 6 to 15 years working for the select companies. According to the results in Figure 4.4, 80.8% (n=105) of the firms had not recorded any tax compliance issue while 19.2% (n=25) of the large taxpayers in the North Rift had recorded tax compliance issues.

Descriptive Analysis for Online Tax Payments

The researcher conducted descriptive statistics for independent variable regarding online tax payment and the results were recorded in Table 4.

Table 4: Descriptive statistics for online tax payment

	N	Mean	Std. Deviation
1. The company has registered for online tax filing	130	4.25	.499
2. The company has KRA pin	130	4.14	.644
3. The company makes PAYE online and on time	130	3.98	.752
4. The company files for corporation tax via iTax by filing an Income Tax Company on or before the sixth month after the end of an accounting period	130	4.12	.678
5. If the annual liability tax exceeds Kes 40,000 the company pays in instalments via iTax	130	4.14	.594
6. The company uses online calculators to find out how much could be taxed in import duty, income tax, VAT and more.	130	4.26	.699
7. If the company has no PAYE to pay, it files for NIL returns	130	4.26	.604
8. The company pays withholding tax via iTax	130	4.37	.599
9. The company pays for VAT via iTax	130	4.31	.569
10. The company pays for excise duty via iTax	130	4.35	.619
11. All other taxable revenue include capital gains tax, agency revenue and stamp duty are filed and paid via iTax	130	4.52	.546
Aggregate	130	4.25	.618

According to Table 4.4, the aggregate mean of 4.25 and an aggregate standard deviation of 0.618 demonstrated that the participants agreed with the statements regarding online tax payment with response consistencies as the spread of values were found to be close to the aggregate mean.

Inferential Analysis

The study used the Pearson correlation coefficients and a two-tailed test of significance towards the determination of the variables' associative directions and strengths (significance level=0.05). Online tax payment (Pearson correlation=0.201, 2-tailed sig=0.022). The results demonstrated a weak significant associative impact of online tax payment on tax compliance among large taxpayers in the North Rift.

The regression results in table 5 established positive and significant relationships between online tax payment and tax compliance among large tax payers in the North Rift.

Table 5: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	.084	.235		.355	.723
Online Tax Payment	.108	.050	.074	2.175	.032

Online tax payment (Coeff=0.108, Sig=0.032) had a slightly strong significant impact on tax compliance among large taxpayers in the North Rift. Online tax payment was considered as a modernization tool of the treasury role of the government with the enhanced efficiency of online

systems (Stafford & Turan, 2011; Wasao, 2014). The study's results were in coherence with the study conducted by Gwaro et al. (2016) which found out that high digital literacy levels improved online payment outcomes, which was a positive score on tax compliance. The large taxpayers in the North Rift relied on learned and skilled workforce according to the demographics analysis with the capability to utilize online tax payment schemes that guarantee process efficiency.

5. Conclusions

The first objective of the study was to determine the impact of online tax payments on tax compliance of large taxpayers in the North Rift region of Kenya. The study findings established that online tax payment (filing tax revenue online and registering for online filing) had a significant and positive influence on large taxpayers' tax compliance in the North Rift. However, the associative impact of online tax payment on tax compliance was found to be considerably weak (Coeff=0.108, Sig=0.032) when compared to other variables of interest. The study inferences regarding online tax payment meant that the large taxpayers' perceptions towards this predictor variable did not have much of an impact on their follow-up activities that would demonstrate enhanced tax compliance including voluntary tax filing without much enforcement measures from the government. Nevertheless, the large taxpayers consider online tax payment as a means for reducing compliance costs and enhancing managerial benefits in the long-term. The study found enough evidence to reject the first null hypothesis H01 and state that online tax payments have a significant effect on the tax compliance of large taxpayers in the North-Rift.

6. Recommendations

The findings provided a strong basis for the KRA to continue reinforcing its automated tax system infrastructure including tax applications, middleware, enterprise systems, and reporting dashboards to augment its management of large taxpayer base in the North Rift and countrywide. The reinforcement of the automated tax system is also considered advantageous for the large taxpayers in the North Rift who have improved in their compliance to the tax laws, more especially with the intensified program for automated taxpayer reports and statistics that was established to have the strongest impact on tax compliance. As a result, the study recommends the KRA to actively involve the large taxpayers in the North Rift as it reinforces its automated tax systems to ensure it captures every of their needs and concerns which is also a form of sensitization capable of enhancing sustainable tax compliance.

7. Suggestions For Future Research

Future research should replicate the study to other contexts, including large and small taxpayers in different geographical regions. Researchers interested in this field should also consider increasing the sample size to enhance the generalizability of the findings.

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