A Study of the Factors Affecting Rental Income Tax Administration Effectiveness in Zambia

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Abstract:

Even the largest tax plan in the world is useless if it is not implemented well. Efficient tax administration ensures a high level of tax compliance. However, measuring the effectiveness of tax administration based solely on the amount of taxes collected is overly simplistic. Instead, a much stronger criterion for assessing the effectiveness of tax administration is taking into account the size of the compliance gap. The goal of this study is to determine the effectiveness of rental income tax administration by examining the characteristics of the tax system that influence it, such as diversity, equality, convenience, simplicity, and security. Both primary and secondary data were used in this study. Primary data was collected from taxpayers in Kabulonga Main, Lusaka, while secondary data was collected from various sources including the Zambia Revenue Authority, State Valuation Department, Lusaka City Council, and selected real estate agencies. Descriptive statistics were used to analyze the data. The study aimed to determine whether taxpayers’ perceptions of the characteristics of the tax system, as identified in the theoretical and empirical literature, could influence the effectiveness of the administration of the rental income tax. The Zambia Revenue Authority was found to have perpetuated phenomena that encourage non-compliance behavior among aggrieved taxpayers, which was indirectly used as a measure of tax administration effectiveness in this study. The results showed that the characteristics of the tax system, particularly equality, diversity, convenience, simplicity, and security, have a positive impact on the effectiveness of tax administration. Based on these findings, the study recommends that the Zambia Revenue Authority work more closely with all stakeholders, incorporate user-friendly features into its tax filing website to promote inclusivity and compliance, improve the authority’s ethical profile, increase taxpayer trust in the system, and reduce the tax rate on rental income to alleviate the tax burden. Additionally, active taxpayer education and enforcement of tax laws and policies should be implemented to reduce tax evasion and improve tax compliance.

Keywords: Effective Tax Administration, Revenue Generation, Tax Compliance

1. Introduction

Tax is a compulsory imposition by the government on its subjects or their property with the aim of achieving specific objectives (Ariwodola 2015). These objectives typically focus on enhancing the overall standard of living within the nation. Arnold and McIntyre...
(2002) similarly define tax as a mandatory charge on income, consumption, and the production of goods and services as stipulated by relevant legislation. Governments require financial resources to support developmental initiatives and social services, hence they levy various taxes on individuals, assets, and businesses falling under the tax bracket.

The efficacy of the best tax policy globally holds little value if it cannot be effectively put into practice, as noted by Bird and Zolt (2008), emphasizing that tax policy design should consider the administrative aspect of taxation. Bird (2003) highlights three distinct levels at which tax policy and administration intersect: (1) policy formation and legislative drafting; (2) the administrative mechanisms and institutions necessary for legislative implementation; and (3) the actual execution of the tax system. It is further suggested that certain crucial policy decisions may not adequately consider their administrative implications, potentially hindering the implementation of a sound tax policy.

Tax administration encompasses the oversight, management, supervision, and execution of internal revenue laws, statutes, and tax treaties. In many developing nations, tax administration stands out as a critical and pivotal element in ensuring adequate government revenue. The government’s capacity to administer taxes dictates the revenue available through taxation for governance activities (Bird, 2015; Pantamee & Mansor, 2016). Consequently, tax administration serves as a crucial instrument for enhancing revenue generation in any economy. Undoubtedly, the impact of tax administration on revenue generation is significant, playing a key role in providing quality services to taxpayers, promoting voluntary compliance with tax laws, and identifying and penalizing non-compliance. A robust tax administration system not only helps curb tax evasion and avoidance but also facilitates the development and monitoring of strategies to enhance revenue collection across government levels.

The significance of effective tax administration has long been a focal point for various stakeholders. The issue of tax administration is of paramount importance to those interested in the pivotal role that increased tax revenues can play in restoring macroeconomic equilibrium, as well as those concerned with tax policy and its broader economic implications (Bird and Casanegra de Jantscher, 1992). Given the critical role of tax administration, it is imperative to ensure the system functions effectively and achieves its established objectives. One approach to assessing the effectiveness of tax administration in meeting its goals is through evaluating the revenue collected.

Klun (2004) suggests that in order to guarantee the existence of a fair and economically viable taxation system, tax administration must operate effectively and
efficiently. According to Gill (2003), "the actual amount of taxes flowing into the government Treasury, to a large extent, depends on the efficiency and effectiveness of the revenue administration," even though "tax policy and tax laws create potential for raising tax revenues." This highlights the significance of an efficient and effective tax administration. According to Gill (2003), inadequacies in revenue administration result in insufficient tax collections, which reduces the available budgetary resources and hinders the government’s capacity to carry out policy and program initiatives and deliver public services.

Despite the importance of ensuring successful revenue administration, there is a lack of universally agreed-upon metrics for evaluating the effectiveness of a tax administration. Klun (2004) pointed out that the literature lacks a consistent definition for assessing the performance of tax administration systems. In fact, there is no universally accepted set of performance indicators for evaluating either the revenue performance or the overall efficiency of a tax administration system. Because there are no standardized systems for performance evaluation, previous research has proposed different approaches to assessing the effectiveness of tax administration systems. Some scholars have suggested evaluating tax office performance in terms of productive efficiency (Farrell, 1957). Others (Goode 1981; Tanzi and Pellechio 1995; Silvani and Baer 1997; Casanegra de Jantscher 1997) have categorized specific factors under tax administration performance, focusing on efficiency and effectiveness. Frampton (1993) emphasized efficiency, responsiveness, and motivation as key components of tax administration. Silvani and Baer (1997) proposed that analyzing the tax collection process and taxpayer non-compliance, such as the tax gap, is the best way to assess the efficiency and effectiveness of a tax administration system. The OECD (2001) evaluated tax administration performance in member countries by emphasizing efficiency, service quality, and effectiveness. Essentially, existing literature indicates that evaluation should encompass aspects such as input, output, productivity, quality, taxpayer satisfaction, as well as revenue and compliance outcomes.

The World Bank (2003) suggested that tax administration performance evaluation should consider effectiveness, efficiency, and equity. Teera (n.d) recommended focusing on increasing tax revenue when evaluating tax performance. Serra (2003) identified the number of audits conducted by each tax inspector as an example of an output of a tax administration system, while outcomes typically include taxpayer satisfaction, service quality, and compliance rates. The OECD (2003) outlined outputs such as processed inquiries and resolved audit and debt cases, with outcomes potentially resulting in changes...
in taxpayer compliance. Despite the lack of standardized systems for evaluating tax administration performance, scholars have used various criteria, measures, and indicators to assess performance, aiming to address challenges within tax administration and propose solutions.

1.2 Statement of the Problem

Property tax is a significant source of local revenue that is often overlooked when it comes to financing local expenses. According to Kelly (2003), property taxes typically make up 40-80% of local government revenues, with the exception of developing countries where it may only contribute up to 40%. For instance, in Ghana, property tax accounts for approximately 14% of total local assembly revenues, around 6% in Sierra Leone's local councils, and less than 10% in The Gambia (Fjeldstad and Goodfellow, 2017). These figures demonstrate that the actual amount generated from property tax is quite small compared to its potential. Despite its significant potential, property tax faces challenges of ineffectiveness and unreliability, severely limiting its ability to generate sufficient revenue. Weak administration and technical limitations hinder local governments from fully utilizing an expanding tax base and enforcing compliance with property taxation. In developing countries, property tax is widely regarded as the primary source of local government tax revenue. The attention it has received from public policy and the interest it has garnered from scholars and public finance experts further emphasizes its importance (Bahl and Roy, 1979). External donors and national governments have invested efforts in improving its administration. However, despite these endeavors to create more efficient property tax structures and administrations, property tax revenues in developing countries still account for less than 1% of GDP and less than 4% of all tax revenues.

A number of studies have been conducted in Zambia and revealed that administration of rental income taxes have indeed been weak and ineffective leading to low revenue collection. According to a study conducted by Di John (2010), Zambia had property taxes that made up an average of 32% of local government revenues between 2001 and 2005. However, this percentage is quite small considering that local revenues as a percentage of GDP only average 0.4%. Therefore, property taxes only accounted for a mere 0.13% of the country's GDP. The Zambia Institute of Policy and Research (2018) has pointed out that the withholding tax on rental income, now known as Rental Income Tax, was highly evaded and avoided. Out of approximately 600,000 households
nationwide, only 32,719 households, which is equivalent to 5%, were registered for this tax. The study noted that compliance was low and potential revenue could have been raised by the treasury had the majority of taxpayers been compliant to the tax. Further studies were done by Mushinge and Shilengwe et al (2021) of Kitwe Town and Mwela (2020) of Livingstone Town and their studies revealed that there has been low rental income tax compliance amongst taxpayers. Their studies concluded that the size of rental income tax base and revenue could increase if all tax payers would be captured, registered and were compliant. Most of the local studies have placed concentration on other forms of taxes other than property tax, hence exposing a research gap that this research intends to fill up by examining how perceptions of tax by tenants affects rental income tax administration effectiveness.

1.3 Research Questions
1. How do tax equality perceptions affect rental income tax administration effectiveness in Zambia?
2. How do tax simplicity perceptions affect rental income tax administration effectiveness in Zambia?
3. How do tax convenience perceptions affect rental income tax administration effectiveness in Zambia?
4. How do tax diversity perceptions affect rental income tax administration effectiveness in Zambia?
5. How do tax certainty perceptions affect rental income tax administration effectiveness in Zambia?

2. Literature Review and Hypothesis Development

2.1 Zambia’s Tax System
Income taxes, consumption taxes, and trade taxes make up a significant portion, up to 70 percent, of the Zambian national budget. The government also mobilizes additional revenue from external assistance, Foreign Direct Investment (FDI), and debt allocation. However, there are other potential sources of income, such as local government revenues and alternative tax mechanisms like wealth taxes, that have not been fully utilized. These alternative revenue streams present challenges that need to be resolved for them to become reliable sources of income (JCTR, 2011). Improving the taxation of wealth transactions could broaden the tax base and reduce the burden on formally employed individuals, which
is both unfair and contributes to economic imbalances. According to JCTR (2011), the property tax in Zambia is similar to a tax on wealth transactions. However, the effectiveness of this tax is hindered by undervaluation of properties, which reduces the tax revenue generated. The lack of skilled tax assessors in property assessment worsens the problem, leading to widespread tax evasion. The tax administration framework faces various obstacles, including a significant informal cash economy, low taxpayer compliance, complexities in international transaction taxation, difficulties in tracing taxpayers, smuggling, and insufficient funding for the Zambia Revenue Authority (ZRA) to improve infrastructure and technology.

The Zambian tax structure includes a wide range of tax categories and rates, which can result in a high effective tax burden. The multitude of taxes and rates can complicate the tax system, increasing compliance costs and encouraging non-compliance. Furthermore, the tax system in Zambia is well-established and has undergone multiple administrative and policy reforms. The process of formulating tax policies involves both government and private sector stakeholders, but it faces certain challenges. Taxpayers' compliance with the tax system has garnered significant attention from revenue authorities worldwide, especially in developing nations like Zambia. However, there is an ongoing debate about the focus of studying taxpayer behavior in these countries. Research efforts tend to prioritize enhancing revenue collection and enforcement measures instead of understanding taxpayer behavior, which could potentially increase tax revenue and enforcement effectiveness (Nhekairo, 2014).

Paying taxes is a mandatory obligation for all citizens, whether they are individuals or corporate entities. Despite being a civic duty, it is expected that citizens will willingly comply with this obligation. However, some individuals fail to do so (Carnaahan, 2015). In Zambia, the Ministry of Finance and National Planning is responsible for developing tax policies, while the Zambia Revenue Authority (ZRA) is responsible for implementing them. The legislative framework governing taxation regulation and administration is outlined in the Income Tax Act of 1966, as amended. Under the Zambian tax system, liability for taxation is determined based on income source and residency status. According to the Income Tax Act, any entity or individual receiving taxable income must inform the ZRA in writing within thirty (30) days from the first receipt of such income. Failure to comply with this requirement carries penalties. The tax year in Zambia runs from April 1st to March 31st of the following year, with taxpayers generally expected to use March 31st as their accounting date, subject to ZRA approval for any changes. Annual tax returns, accounts, and supporting documents must be submitted by September 30th for the tax year ending on March 31st of the same year. Late filing incurs penalties. The main taxes levied
in Zambia include direct taxes (such as corporate tax, Pay-As-You-Earn, and other personal income taxes), Customs and Excise duties, Value Added Tax (VAT), property transfer tax, and mineral royalty as per the Mines and Minerals Act of 1995.

2.2 Empirical Studies on Tax System Attributes and Compliance

An efficient tax system is expected to alleviate the burden of compliance while simultaneously enhancing compliance rates. Tax authorities must have the capacity to identify, register, monitor, detect, and penalize instances of non-compliance by taxpayers. Moreover, they should offer support to taxpayers through the dissemination of pertinent literature and articles aimed at educating them. Optimal tax compliance depends on the selection of effective administrative procedures, sound audit methodologies, suitable technology employment, enforcement measures, as well as the utilization of threats of heightened penalties against non-compliant individuals, thereby reducing complexity (Lusgraves, 1989). Failure to sensitize societies about their rights and responsibilities within the tax framework may result in various repercussions. According to Willis (2006), the implementation of an efficient tax compliance system may appear practical but can give rise to other challenges. While processing costs might decline, thereby lessening the compliance burden on taxpayers, enforcement expenses could escalate due to the diminished reliance on withholding and information returns for enforcement purposes. The manner in which the tax system is managed can significantly influence tax compliance. A well-designed tax system should strive to avoid inefficiencies and ensure that the compliance expenses for taxpayers remain reasonable (Ndatira, 1999). Efficiency can be assessed in terms of tax administration and the impact of tax distortions on economic decision-making (Teera, 1994). For tax administration to be deemed efficient, it must steer clear of wasteful practices and prevent imposing unnecessarily high compliance costs on taxpayers. Essentially, the aim is to offer a high level of service quality at minimal costs. The efficacy of revenue collection procedures directly correlates with the level of taxpayer compliance (Stlitz, 1985). The effectiveness of these procedures is evaluated based on the observed compliance levels. Given the prevalent weak administration in developing nations, tax evasion and avoidance are rampant, highlighting the imperative need to fortify tax administration by enhancing collection procedures to bolster compliance. Kakembo (2007) uncovered in his research that there is a significant positive association between tax compliance and revenue collection.

The interest in how the attributes of a tax system affect compliance behavior dates back to Adam Smith's treatise on "Canons of a Good Tax System." Since then, subsequent tax system theories, including Comparative Treatment Theory and Economic-Based
Theories, have expanded on Smith’s ideas. Comparative Treatment Theory predicts that people are more likely to comply with the law if they perceive the process leading to the law as fair (Murphy, 2008; McKerchar & Evans, 2009). On the other hand, Economic Based theories suggest that taxpayers are driven by economic motives such as profit maximization and the probability of detection (Carnahan, 2015). They analyze different compliance paths, such as tax evasion, considering factors like the likelihood of being detected and the resulting consequences, and choose the option that maximizes their expected after-tax returns while accounting for risk. Therefore, attributes of tax systems, such as perceptions of fairness, economic efficiency, administrative simplicity, equity, flexibility, and certainty, can influence taxpayer compliance behavior (Muleya, et al., 2018). These theoretical positions have not only inspired empirical research, but also influenced tax reform agendas in many countries.

Alm (1991) asserted that adherence to tax regulations entails accurate disclosure of the tax base, precise calculation of tax liabilities, prompt submission of tax returns, and timely settlement of the tax amount owed. Any conduct by the taxpayer that deviates from the aforementioned constitutes non-compliance. Despite the mechanisms established within the tax framework to ensure compliance with tax statutes, society continues to grapple with numerous instances of tax non-compliance. Thus, as noted by Freire-Serén & i Martí (2013), the issue of tax non-compliance is inherent in current tax systems. Tax non-compliance is defined as the taxpayer’s failure to fulfill tax responsibilities, whether done deliberately or inadvertently (James & Alley, 2004). Nonetheless, Kirchler (2007) contended that given the varying levels of compliance, certain instances of non-compliance may not necessarily breach the law. According to Roth, et al (1989), tax non-compliance arises from the failure to file returns, misrepresentation of income, or incorrect reporting of deductible items from taxable income or tax obligations (e.g., exemptions, deductions, adjustments, tax credits, etc.). Bird & de Jantscher (1992) broadly categorized non-compliance into four groups: failure to submit a tax return, underreporting taxable income, overstating tax deductions like exemptions and expenses, and missing the deadline for tax payment. Non-compliance with tax regulations manifests in diverse forms, including intentional non-compliance where the taxpayer deliberately violates tax laws for personal benefit. Alternatively, unintentional non-compliance may result from ignorance, oversight, or misinterpretation of tax statutes. Any act of non-compliance by a taxpayer that leads to failure to declare or underreport taxable income, resulting in non-payment or underpayment of tax, constitutes tax evasion. Anyanwu (1993) defined tax evasion as the failure to meet tax obligations through illicit means, such as failure to report income or profits. Gorodnichenko, et al (2009), Tanzi and Shome (1993), indicated that tax evasion
is a prevalent and escalating occurrence. Research findings demonstrate that tax evasion issues are present worldwide, spanning developing and developed nations. For example, Embaye (2007) highlighted significant evasion rates in the U.S., with an overall non-compliance rate of approximately 16% for individual income tax. Tax avoidance, a concept related to tax evasion, is characterized as strategic compliance (McBarnett, 2003). Nevertheless, some scholars argue that there exists a conceptual differentiation between tax evasion and tax avoidance (Arogundade, 2005; Sandmo, 2005). The disparity between these two concepts pivots on the legality of the taxpayer’s actions.

Arogundade (2005) states that both concepts lead to a loss of tax revenue. Sandmo (2005) distinguishes the two concepts from a legal perspective, arguing that tax evasion is illegal as it violates the law, while tax avoidance is legal as it operates within the boundaries of tax laws to reduce one’s tax liability. Devos (2010) indicates in the tax compliance literature that various factors, such as economic, social, psychological, and demographic influences, affect taxpayers’ compliance behavior. The factors contributing to late filing and payment of taxes include high tax rates, the likelihood of detection, the complexity of tax laws, and the methods employed for tax collection (Kasipillai & Abdul-Jabbar, 2006). Moreover, citizens often express concern about the perceived fairness of the tax system (Rawlings & Braithwaite, 2003; Taylor, 2003). Psychology studies have also found that the fairness and equity of a tax system impact taxpayers’ filing and payment of taxes (Güzel et al., 2019).

### 2.3 Factors of Tax Compliance in Zambia

Langmead et al. (2006) argue that taxation has been introduced to smaller businesses and self-employed individuals in contemporary Zambia. This includes various economic activities such as trading goods, operating restaurants, bars, guest houses, and renting out properties. Additionally, there is an emergence of small-scale manufacturing enterprises that produce wood and metal products, leather goods, consultancy services, and other service providers. All of these contribute to increased economic activity and subsequent tax obligations across different sectors. Despite the economic growth in Zambia, there is a prevailing negative perception among taxpayers towards tax compliance. Namangala (2004), in a study on Zambian tax laws perceptions, attributes this attitude to taxpayers themselves, noting their reluctance to seek information from tax authorities, which leads to delays and non-payment of taxes. It is crucial to highlight that failure to remit tax returns significantly hampers revenue collections, as tax officers rely on these returns to track payments. This underscores the critical importance of timely tax return submissions.
Similar concerns are echoed by Berenson (2007), who warns that non-compliance in tax return remittance can result in unpredictable revenue collections, impeding the government’s ability to effectively provide for the nation’s welfare and security. Mushinge and Shilengwe et al. (2021) emphasize that the government primarily generates domestic revenue through various taxes, including income tax, value-added tax, customs, and excise duty. Residential rental income tax forms part of the income tax framework. Nonetheless, Zambia faces challenges in collecting rental income tax due to low compliance levels among taxpayers. Moyo (2009) contends that enhancing tax compliance can improve local revenue mobilization, thereby reducing Zambia’s reliance on conditional donor aid. Moreover, tax regulations can distort investment capital allocation, with the current system exhibiting a bias towards housing investments over other forms of investment. This potentially leads to excessive investment in housing, diminishing economic output, and societal well-being.

2.4 Variables and Hypotheses

For purposes of the present study, the dependent variable was Rental Income Tax Administration Effectiveness. Explanatory variables were perceptions of tax system attributes (i.e., Tax Equality, Tax Certainty, Tax Convenience, Tax Simplicity and Tax Diversity). The relevant hypotheses were, stated in terms of perceptions of tax attributes on probability of tax compliance as measured by rental income tax administration.

**Hypothesis 1:** Perceptions of tax equality positively affects rental income tax administration effectiveness.

**Hypothesis 2:** Perceptions of tax simplicity positively affects rental income tax administration effectiveness.

**Hypothesis 3:** Perceptions of tax convenience positively affects rental income tax administration effectiveness.

**Hypothesis 4:** Perceptions of tax diversity positively affects rental income tax administration effectiveness.

**Hypothesis 5:** Perceptions of tax certainty positively affects rental income tax administration effectiveness.

3. Research Methodology

3.1 Population, Sample Size, and Data Collection

The target population of this study was Lusaka city, Kabulonga Main specifically. In order to examine the effectiveness of property tax administration through tax compliance, a sample size of the 124 households was surveyed of tenants occupying rental houses within
Kabulonga Main. In addition, secondary data was collected from Lusaka City Council (LCC), the Ministry of Local Government (MLG), and the Zambian Revenue Authority (ZRA). Kothari (2008) defines the population as the entire group of participants, whether hypothetical or real, that the researcher uses to analyze the results of the study.

In order to ensure the validity of the findings, the study employed an appropriate sample size. The researcher aimed for a 5% sampling error and wanted to have 95% confidence in the study's findings. The determination of the sample size was based on previous studies by Glenn D. & Israel (2013) and Ilukena et al. (2023).

The Population of Kabulonga Main was determined from data gotten from Lusaka City Council – Department of Valuation and Real Estate Management and the Zambia Statistics Agency. However, it should be noted that the data was gotten from the last Valuation Roll of 2014 as the most recent being that of 2022 is underway and has not been finalized. Out of the 914 Properties captured in Kabulonga; Kabulonga Extension and Kabulonga Twin Palm were excluded as were owner occupied properties and Institutions exempt from paying withholding tax. This left a population of approximately 179. The equation to determine sample size for the purpose of this study the formula was developed Slovin by (1960) is:

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

Where:
- ‘n’ is the required sample size
- ‘N’ is the total Population,
- ‘e’ is the level of precision/allowable level of error.

Since taxpayers in Kabulonga Main (Residential Properties) are 179

\[ n = \frac{179}{1+179 (0.05)^2} = 123.66 \]

Total sample = 124

Primary data was, collected by self-administered questionnaire interviews.

3.2 Data Analysis

The data that was obtained was in different types including nominal, categorical and ordinal types. For data analysis began with coding of responses obtained accordingly in order to input the values into the Statistical Package for Social Sciences (SPSS) version 26 as well as Stata 16. The data was then subjected to frequency analysis using relevant charts and tables generated by the software. Qualitative data from open ended questions included in the self-administered questionnaires was analyzed using content analysis which is defined as the study of human communications that may be in textual or pictorial form.
The qualitative or non-numeric unstructured data was subjected to a thematic analysis to establish the main themes underlying respondent experiences in relation to knowledge and awareness of tax compliance as well as the tenants’ perceptions of tax administration. Data from interviews in text form was analyzed through hierarchical coding frames. Hierarchical concept driven or deductive coding was applied to identify the most important themes in the qualitative data that was collected. The method is based on the notion that coding will be in the form of quality where the lowest tier contains the least information for intelligibility or policy response purposes (Myers, 2008). Coding is the process of analyzing qualitative text data by taking them apart to see what they yield before putting the data back together in a meaningful way (Cresswell, 2014).

Quantitative data from Likert scale type questions was used to estimate PROBIT regression models to help arrive at empirical models for the probability of timely remittance of tax returns based on the perceptions of the factors identified from the literature. In statistics, a Probit model is a regression model used when the dependent variable can only have two values, such as married or not married. The term "Probit" is a combination of the words "probability" + "unit." The main objective of this model is to estimate the probability of an observation with specific characteristics falling into a particular category. Additionally, classifying observations based on their predicted probabilities is a form of binary classification (Brooks, 2002). The mixed methods strategy applied in this study involved analysis of quantitative and qualitative data separately, the former to help establish quantitative relationships between variables and the latter to investigate the experiential aspects of the small businesses as taxpayers (Cresswell, 2014; Novikov & Novikov, 2013; Myers, 2008; Yin, 2012; Olsen, 2004).

4. Results and Discussion

4.1 Summary Statistics for Variables in Main PROBIT Model

The five factors investigated in terms of their impact on effectiveness of tax administration were perceptions of Tax Diversity, Tax Equality, Tax Convenience, Tax Simplicity and Tax Certainty; each measured on a 5-point Likert scale with 1=Strongly disagree, 5=Strongly agree. The binary dependent variable, rental income tax administration effectiveness had 0 for positively enhances as opposed to 1, negative impacts.

The dependent variable in the model had a mean of 0.509, signifying slightly higher than even odds of taxpayers being tax compliant. The standard deviation of the distribution was 0.501 indicating that there was a high level of dispersion amongst the sample of 124
in terms of tax compliance or otherwise. The skewness measure for the distribution shows an approximately symmetrical though slightly negatively skewed pattern. The kurtosis value suggests a flat peak about the center of the distribution.

In relation to the factors adopted to predict the probability of rental income tax administration effectiveness, perceptions of tax simplicity had a mean score of 3.031. Other factors with mean scores above the median value of 3 were certainty (3.126). On the other hand, tax diversity with mean 2.874, tax equality 2.855, and tax convenience 2.975, all had mean scores slightly below 3.

The factors all had distributions that were approximately symmetrical given the skewness measures ranging from -0.067 to +0.097. Kurtosis measures for the distributions for all the five factors provided indications of relatively flat peaks about the center of the distributions.

Table 1: Summary Statistics for Variables in Main PROBIT Model

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rental Income Tax Admin</td>
<td>124</td>
<td>0.509</td>
<td>0.501</td>
<td>-0.038</td>
<td>-2.024</td>
</tr>
<tr>
<td>istration Effectiveness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0=Ineffective(no), 1=Effective(yes))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tax Diversity (1=Strongly disagree, 5=Strongly agree)</td>
<td>124</td>
<td>2.874</td>
<td>1.343</td>
<td>0.052</td>
<td>-1.174</td>
</tr>
<tr>
<td>Tax Equality (1=Strongly disagree, 5=Strongly agree)</td>
<td>124</td>
<td>2.855</td>
<td>1.444</td>
<td>0.095</td>
<td>-1.336</td>
</tr>
<tr>
<td>Tax Convenience (1=Strongly disagree, 5=Strongly agree)</td>
<td>124</td>
<td>2.975</td>
<td>1.359</td>
<td>0.097</td>
<td>-1.198</td>
</tr>
<tr>
<td>Tax Simplicity (1=Strongly disagree, 5=Strongly agree)</td>
<td>124</td>
<td>3.031</td>
<td>1.401</td>
<td>-0.067</td>
<td>-1.305</td>
</tr>
<tr>
<td>Tax Certainty (1=Strongly disagree, 5=Strongly agree)</td>
<td>124</td>
<td>3.126</td>
<td>1.456</td>
<td>0.007</td>
<td>-1.359</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>124</td>
<td></td>
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</tr>
</tbody>
</table>

4.2 PROBIT Empirical Model

The table below shows the Probit Model regression results for rental income tax administration effectiveness (dependent variable) based on the five factors within the tax system adopted for the study. As distinguished in the methodology chapter, the statistical software package Stata 16.0 was, used to perform the Probit Regression Analysis. The software generated the maximum likelihood estimation process in 4 iterations to establish the results below;
Table 2: PROBIT Empirical Model

| Iteration 0: log likelihood= -110.1821 |
| Iteration 1: log likelihood= -58.04762 |
| Iteration 2: log likelihood= -57.478244 |
| Iteration 3: log likelihood= -57.478001 |
| Iteration 4: log likelihood= -57.478001 |
| Probit regression |

Number of obs = 124
LR chi2 (6) = 105.41
Pro > chi2 = 0.0000
Pseudo R2 = 0.4783

Log likelihood = -57.478001

| Rental_Income_Tax_Administration_Effectiveness | Coef. | Std. Err. | Z   | P>|z|   | [95% Conf. Interval] |
|-----------------------------------------------|-------|-----------|-----|-------|----------------------|
| tax_diversity                                | 0.2049| 0.0988    | 2.074| 0.0381| 0.0113               |
| tax_equality                                 | 0.4118| 0.0971    | 4.241| 0.0000| 0.2215               |
| tax_convenience                              | 0.0069| 0.1071    | 0.064| 0.0058| -0.2029              |
| tax_simplicity                               | 0.7312| 0.1185    | 6.170| 0.0000| 0.4989               |
| tax_certainty                                | 0.0614| 0.0944    | 0.650| 0.0155| -0.1237              |
| _cons                                        | -4.4812| 0.7892    | -5.678| 0.0000| -6.0280              |

There are multiple ways to interpret the individual regression coefficients. A positive coefficient signifies that as the predictor variable increases, the predicted probability of rental income tax effectiveness also increases. Conversely, a negative coefficient indicates that as the predictor variable increases, the predicted probability decreases. In this particular case, all coefficients for the factors were positive.

The coefficient for tax diversity perception was 0.2049. This coefficient had a standard error of 0.0988 and a 95% confidence interval from 0.0133 to 0.3985. In other words, a rise in the perception of tax diversity of the tax system would lead to higher likelihood of rental income tax administration effectiveness. Tax equality factor had a coefficient of 0.4118, standard error of 0.0971 and 95% confidence interval from 0.2215 to 0.6021. The coefficient for perceptions of convenience of the tax system amongst sampled tenants in Kabulonga Main was 0.0069, standard error of 0.1071, and 95% confidence interval from -0.2029 to 0.2167. Simplicity of the tax system had an estimated coefficient of 0.7312 with a standard error of 0.1185, and 95% confidence interval from 0.4989 to 0.9635. Finally, in the main Probit Model, perceptions of certainty of the system retained a point coefficient estimate of 0.0614 with standard error 0.0944.

The positive point coefficient estimates for all the factors suggest that increasing each factor, holding the others constant, would lead to positive increase in the probability of rental income tax administration effectiveness.
### Table 3: Main Hypothesis Test Results

<table>
<thead>
<tr>
<th>Hypotheses 1-5: Perceived Tax System Attributes</th>
<th>Probit Model Coeff</th>
<th>p-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived diversity of the tax system positively affects the probability of rental income tax administration effectiveness.</td>
<td>0.2049</td>
<td>0.0381</td>
<td>Reject Ho at 5% level</td>
</tr>
<tr>
<td>Perceived equality of the tax system positively affects the probability of rental income tax administration effectiveness.</td>
<td>0.4118</td>
<td>0.0000</td>
<td>Reject Ho at 5% level</td>
</tr>
<tr>
<td>Perceived convenience of the tax system positively affects the probability of rental income tax administration effectiveness.</td>
<td>0.0069</td>
<td>0.0058</td>
<td>Reject Ho at 5% level</td>
</tr>
<tr>
<td>Perceived simplicity of the tax system positively affects the probability of rental income tax administration effectiveness.</td>
<td>0.7312</td>
<td>0.0000</td>
<td>Reject Ho at 5% level</td>
</tr>
<tr>
<td>Perceived certainty of the tax system positively affects the probability of rental income tax administration effectiveness.</td>
<td>0.0614</td>
<td>0.0155</td>
<td>Reject Ho at 5% level</td>
</tr>
</tbody>
</table>

### 4.3 RQ1-RQ5 Perceptions of Tax System Attributes

Research questions and objectives one through five (1-5) sought to comprehend how perceptions of taxpayers’ attributes of Zambia’s tax system affect rental income tax administration effectiveness amongst tenants in Kabulonga Main of Lusaka Province. The study used a mixed methods research approach in addressing this research question. The qualitative aspects of the study was based on data from categorical and open-ended questions included in the data collection instrument. The qualitative analysis revealed that a larger proportion of study participants (34.7%) disagreed that perceptions of diversity of the tax system affects rental income tax administration effectiveness, compared with those who agreed (12.1%) that they did. The study found that a larger proportion of study participants (33.1%) disagreed that perceptions of equality of the tax system affects rental income tax administration effectiveness compared with those (12.1%) who agreed that they did. In a sense, this is a reasonable outcome as most private respondents do not typically evaluate issues relating to tax system attributes (diversity, equality, convenience, simplicity and certainty) of the entire tax system nor would there be reliable information at their fingertips to make a fair assessment either way. As suggested by past scholars such as Alm (2018) have noted, the motivations and factors behind compliance or non-compliance are difficult to establish as data to validate particular propositions are typically difficult to find. Results of the quantitative analysis using the estimated empirical Probit model showed greater clarity with coefficient for perceptions of diversity of Zambia’s tax system amongst taxpayers in Kabulonga Main, being statistically significant at the 5% level with a p-value of 0.0381. The result therefore supports the...
alternative hypothesis of a positive effect of economic efficiency of the tax system on the probability of rental income tax administration effectiveness. The findings are consistent with those of past studies that had components investigating the effects of diversity of tax systems on taxpayer compliance behavior patterns such as Alm (2018) as well as Cagala et al (2017). Diverse tax administration should be, in other words, be expected to improve compliance behavior as operationalized by rental income tax administration. However, the study does not explore the link between improved tax diversity and costs faced by both taxpayers and the collection authority in explaining this link as is the case in other studies such as Chatama (2013).

Equality of Zambia’s tax system affects rental income tax administration effectiveness amongst taxpayers in Kabulonga Main was the second aspect of tax system attributes that was investigated by this study. Results in the table show that the Probit Model coefficient for perceptions of equality of Zambia’s tax system amongst taxpayers in Kabulonga Main, was statistically significant at the 5% level with a p-value of 0.0000. The result therefore supports the alternative hypothesis of a positive effect of equality of the tax system on the probability of rental income tax administration effectiveness. Other past studies also provide evidence to this effect (Bodea & LeBas, 2014). The duty to pay applicable taxes is absolute in other words and does not rely on the whims of individual taxpayers (Muleya, et al., 2018). The results obtained generally agree with past studies and expectations that greater equality perceptions of the tax system improves compliance behavior (Fuest & Zodrow, 2013; Gale & Holtzblatt, 2000).

How perceptions of convenience of Zambia’s tax system affects rental income tax administration effectiveness amongst taxpayers in Lusaka’s Kabulonga. The quantitative analysis based on the Probit Model show that the perceptions of convenience of Zambia’s tax system was positively and statistically significant at the 5% level with a p-value of 0.0058. The result therefore rejects the null hypothesis of no effect of convenience of the tax system on the probability of rental income tax administration effectiveness. The result therefore supports the alternative hypothesis of a positive effect of convenience of the tax system on the probability of rental income tax administration effectiveness. The findings are consistent with Muleya, et al (2018) as well as Chatama (2013). They are also consistent with other recent past studies from the developing country context such as Night & Bananuka (2019) as well as (Sifile, Kotsai, Mabvure, & Chavunduka, 2018) relating to convenience of tax systems operationalized by adoption of e-filing systems and improvements in overall taxpayer compliance behavior. The results are also consistent with expectations that convenient and dynamic enough systems keep pace with technology and commercial development. It is important that a tax system is dynamic and convenient.
enough to meet the current revenue needs of governments while adapting to changing on an ongoing basis (Adam & O’Connell, 1998).

The study also sought to establish how simplicity of Zambia’s tax system rental income tax administration effectiveness amongst taxpayers in Lusaka’s Kabulonga Main. In the Probit regression analysis, findings are that the coefficient for perceptions of simplicity of Zambia’s tax system amongst taxpayers in Kabulonga Main, was statistically significant at the 5% level with a p-value of 0.0000. These findings are generally consistent with the findings of other studies on the issue of compliance behavior. For example, Picur & Riahi-Belkaoui (2006) find that excessive bureaucracy of the tax system discourages compliance but the association is not a straightforward affair. Similarly Gale & Holtzblatt (2000), argue that administrative simplicity often involves tradeoffs with other objectives of the tax system so that resultant compliance behavior is not easy to predict. A simple tax system makes it easier for individuals and businesses to understand their obligations and entitlements. Complexity also favors aggressive tax planning, which may trigger deadweight losses for the economy (Fuest & Zodrow, 2013).

The fifth aspect of this research question focused on establishing how certainty of Zambia’s tax system affects rental income tax administration effectiveness amongst taxpayers in Lusaka’s Kabulonga Main. Findings of the Probit Model coefficient for perceptions of certainty of Zambia’s tax system, show that it was statistically significant at the 5% level with a p-value of 0.0155. The result therefore rejects the null hypothesis of no effect of certainty of the tax system on the probability of rental income tax administration effectiveness. The findings in this regard agree with the views of Adam Smith that Adam Smith argues that “the tax which each individual is bound to pay ought to be certain, and not arbitrary” (Bodea & LeBas, 2014). A predictable tax system is – among other reasons – essential for planning. A predictable tax system is an important ingredient in enticing investment in an economy. Although a tax system changes overtime due to alterations in the local economy, these changes in the tax system should be timely and inclusive (Fuest & Zodrow, 2013).

4.4 Discussion and Implications

Factors affecting rental income tax administration effectiveness

The study sought to ascertain the effectiveness of rental income tax administration by Zambia Revenue Authority. The results analysed supported the alternative hypothesis of a positive effect of diversity, equality, convenience, simplicity and certainty of the tax system on the probability of effective tax administration. This revealed that perceptions of the tax system attributes above all increased the probability of effectiveness of tax
administration positively. They are also consistent with other recent past studies from the developing country context such as Night & Bananuka (2019) relating to tax systems attributes operationalized by adoption of e-filing systems and improvements in overall taxpayer compliance behavior. The results are also consistent with expectations that simple, diverse and convenient enough systems keep pace with technology and commercial development. It is important that a tax system is simple and convenient enough to meet the current revenue needs of governments while adapting to changing on an ongoing basis (Adam & O'Connell, 1998).

The findings also revealed that from a total of 124 respondents captured in the study 87 (70.2%) indicated that they had information about the tax system in Zambia from ZRA, 35 (28.2%) said they did not have information on the tax system in Zambia while 2 (1.6%) never gave a position whether or not they had information about the tax system in Zambia. In terms of remittance of taxes, a total of 66 respondents who answered this question, 18 (27.3%) said they faced challenges in remitting rental income tax while 48 (72.7%) said they did not face challenges in remitting rental income tax. For a system to run effectively and efficiently sufficient information surrounding the system must be made available as well as ensuring the system is user friendly for all.

The findings above are in line with Farzbod, (2000) who indicated that the tax system in developing countries imposes high expenses of the society due to ineffective administration. Low efficiency, high collection charges, waste of time for taxpayers and the staff, and the low compliance rates and the deviation of optimum allocation of resources are some of the features of such systems.

**Level of rental income tax compliance among tax payers in Zambia**

The study sought to determine the level of income tax compliance among tax payers in Zambia. The benchmark of administrative effectiveness has been set on how compliant taxpayers are. This is in agreement with the views of IV Lusgraves (1989) who stated that an effective tax system should reduce the compliance burden and increase the compliance rates. Study findings revealed that out of a total 95 respondents who answered this question, 53 (55.8%) felt burdened by the taxes they paid while 42 (44.2%) did not feel burdened by the taxes they paid.

The results support Kirchler’s (2007) argument that different levels of compliance can result in instances of noncompliance that do not necessarily violate the law. Roth, Scholz, and Dryden-Witte (1989) identified three potential causes of tax noncompliance: failure to submit tax returns, inaccurate reporting of income, and misrepresentation of allowable deductions. Soos (1991) further categorized noncompliance into four main
types: failure to file tax returns, underreporting of income, overstating deductions, and delayed payment of taxes. Noncompliance with tax regulations can occur intentionally, when taxpayers knowingly violate tax laws for personal gain, or unintentionally, due to ignorance, oversight, or errors in applying tax statutes. Any act of noncompliance that results in the omission or underreporting of taxable income and leads to non-payment or underpayment of taxes is considered tax evasion. Anyanwu (1993) defined tax evasion as the evasion of tax responsibilities through illicit means, such as not disclosing income or profits.

5. Conclusion

This study explored whether taxpayer perceptions about the attributes of the tax system as identified in the theoretical and empirical literature could be contributing factors to rental income tax administration effectiveness. In relation to perceptions of fairness of the tax system, the study finds respondents with the view that the laws are not fair. These perceptions could then explain patterns of noncompliance of the said tax. The study concludes that questions relating to fairness or otherwise of tax systems will always be there but that taxpayer responsibility and compliance can be assured through appropriate levels of education and enforcement.

Another attribute of the tax system as perceived from its impact or otherwise by study participants was explored for this study related to tax diversity. The study concludes that most taxpayers do not typically evaluate issues relating to diversity of the entire tax system nor would they be expected to have the information at their fingertips to make a fair assessment either way. In relation to perceptions of tax simplicity or otherwise of the tax system and whether these perceptions affect rental income tax administration effectiveness, the study finds evidence that there could be a link. These findings are generally consistent with the findings of other studies on the issue of compliance behavior. For example, Picur & Riahi-Belkaoui (2006) find that excessive bureaucracy of the tax system discourages compliance but the association is not a straightforward affair. Similarly Gale & Holzbblatt (2000) argue that tax simplicity often involves tradeoffs with other objectives of the tax system so that resultant compliance behavior is not easy to predict. Perceptions of convenience or otherwise of the tax system and whether they affect rental income tax administration were, also investigated as a possible factor amongst respondents in Kabulonga Main study. This was particularly important considering recent measures by ZRA to exploit online platforms to not only ease processes related to taxpayer access to information and returns filing but also to improve compliance behavior including the timely filing of returns. A larger proportion of study participants agreed that perceptions...
of convenience or otherwise positively affected rental income tax administration effectiveness compared with those who disagreed. The perceptions of certainty or otherwise of the tax system; and whether these perceptions affect timely remittance of tax was also of interest in exploring amongst respondents in Kabulonga Main study. More study participants agreed that perceptions of certainty of the tax system positively influence rental income tax effectiveness tax compared with those who disagreed. The results appeared to support the probability that the tax system attributes (factors – equality, diversity, convenience, simplicity and certainty) have a positive effect on tax administration effectiveness.

6. Recommendations, Limitations and Future Research

6.1 Recommendations

The present study has considered a wide range of issues relating to the subject factors affecting rental income tax administration effectiveness as a critical first step in the taxpayer compliance matrix. Arising from the key findings of the study the following is recommended for the ZRA:

a) Greater engagement with all stakeholders in this case tenants and landlords in the collection of rental income tax revenues. Such engagement must be aimed at understanding the challenges they face in meeting obligations such as the remittance of tax returns.

b) Installation of user-friendly features on the filing websites as to increase the taxpayers’ interest of use of the system.

c) A country wide sensitization of the e-filing system and increase on both print and electronic adverts about the use of the system.

d) Should provide e-tax clinics around the country. This can help reduce on the time a busy taxpayer can spend in a conference or seminar.

e) Adoption of a wide range of measures including advocating reforms to tax laws to remove monetary penalties and replacing them with other forms of service to the public such as delivering tax education to fellow taxpayers.

f) Raise the ethical profile of the authority and strengthen taxpayer belief in the value of paying taxes by strategic partnerships with tax funded government operations.

g) Reduce the rental income tax rate to ensure that taxpayers do not feel burdened by the tax and thus reduce noncompliance by way of avoidance and evasion.

6.2 Limitations of the Study
The study was adversely affected by different factors. Busy schedules of respondents may have resulted in late receipt of questionnaires and some of the respondents may in turn have failed to provide forthright responses to the questions posed. Further, the sample of taxpayers under study (small taxpayers) belong to a cluster that is not well organized and information request in form of questionnaires may be a problem for this group. Finally, as with all studies on tax compliance, possibility of bias towards respondents casting themselves in a more favourable light than was obtaining could not be mitigated by the researcher.

6.3 Directions for Future Research

The broad range of issues covered in the present study provide a useful basis for future directions for research in the property tax compliance area. Future research should consider the challenges faced in rollout of e-filing to inform interventions that will increase the usage of the platforms and reduce costs associated with brick-and-mortar operations of the authority. Also, future studies should investigate impact of e-tax on tax evasion and avoidance.

References


Myers, M., 2008. Qualitative Research in Business & Management. s.l.:SAGE.


Yin, R., (2012). Applications of Case Study Research. s.l.: SAGE