An Analysis of the Value Added Tax (VAT) Gap in Zambia

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ABSTRACT

The aim of this study was to empirically examine the effect of the Zambian VAT administrationon tax revenue by analyzing the VAT gap in Zambia. The study attempted to assess from empirical evidence if there is room for the revenue authorities to enhance VAT revenue collection without increasing the rate. The data used in this study was time series data sourced from the Zambia Revenue Authority database of 2020. The research used a data collection guide that sought to collect data on VAT and any other relevant information regarding VAT gaps and VAT administration. This study used a population of the totality of the Zambian economy which included all the existent revenue streams of the Zambian government. The study employed the multiple regression model and used descriptive statistics and correlation analysis. Data collected was reviewed for a period of over 10 years (2009 to 2019).The study concludes that deferring VAT and Penalties on VAT for non-compliance had no effect on the VAT collected under the period of review. Indicating that low willingness by taxpayers to pay correct taxes on time. Additionally, the study concludes that the VAT policy gap has no effect on VAT revenue in the period under review. Indicating that ZRA should improve measures of VAT enforcement. Thus, the study recommends that ZRA should make deliberate efforts to improve its enforcement by having a dedicated Enforcement Unit for Domestic taxes just like the one assigned to customs. Further, since the payer of VAT is the final consumer, ZRA should encourage voluntary tax compliance among final consumers by intensifying the demand a receipt campaign as well as increasing the education on the benefits of tax compliance to the nation's development. Further, ZRA should expedite the process of fiscalization i.e. the mandatory issuance of fiscal receipts by all VAT registered suppliers.

INTRODUCTION

A tax system is not only an important instrument for generating revenue to the government; but also, a tool of national economic policy. Taxation measures can be used to redistribute income, correct market failures, encourage consumption of merit goods, discourage consumption of demerit goods, and internalize externalities. At macro level, taxation can be applied to bring desirable macro-economic effects (such as full employment, price stability and balance of payment equilibrium) and avoid undesirable macro-economic effects (such as inflation, unemployment etc.) in an economy. An efficient tax system ensures intergenerational equity, by forcing the present generation to pay for non-durable public products consumed, without passing the burden to the next generation. Issues of taxes are thus of great relevance and importance to every government world over. This is due to the fact that the success or failure of every government depends on its ability to finance development projects which are meant to improve the wellbeing or livelihood of its citizens. Therefore, the need for governments to raise adequate revenue to fulfil such obligations is cardinal.

The primary purpose of taxing individuals or firms is to collect revenue to finance government expenditure. One such form of tax is Value Added Tax. Ebril et al (2002) highlight that Value Added Tax (VAT) can be defined as a tax applied on the value which is added to goods and services at each stage in the production and distribution process. According to him the defining feature of VAT is that it sets off taxes paid by enterprises on their material inputs against the taxes they must levy on their own sales. Despite the

widespread use of VAT for revenue mobilization, there is no uniformity in the administration of VAT system across countries. For example, while some countries use a uniform rate for VAT across all sectors, others have use different rates for different sectors and products.

Mwila, M. et al, (2011), state that Zambia has four categories of tax; income taxes, consumption taxes, trade taxes and property taxes. Value Added Tax is one of the consumption taxes levied in Zambia. Today, VAT exist in more than 160 countries, including in many developing countries that have modernized their tax systems in the past decades. Eighty percent of countries in sub-Saharan Africa have adopted the VAT, and it is now responsible for typically raising around one-quarter of all tax revenue (Keen, 2016). Moreover, countries continue to adapt and reform their VAT systems, sometimes substantially, such as India and Ghana did in 2017.Zambia was the 15th Country in Africa to migrate from a traditional sales tax to VAT on 1st July, 1995.

Ideally, the advantages of VAT are that: it is a neutral tax; it is a more equitable indirect tax; it is an easier indirect tax to administer; it provides a higher revenue return than most indirect taxes; it has no cascading effects – no tax on tax; it is broad based; it increases the revenue yield compared to Sales Tax; it is invoice driven as such less prone to tax evasion than Sales Tax and finally it is used as a cash cow where it is properly administered. However, In the 2019 Budget Address by Honourable Margaret D. Mwanakatwe, MP, Minister of Finance, which was delivered to the National Assembly on Friday 28[th]September, 2018, a proposal was made to reintroduce of Sales. The minister stated that the need to **enhance domestic revenue mobilization** could not be over emphasized and Government had, therefore, undertaken a review of the various taxes that were being implemented with a view to improve their contribution and minimize revenue leakages. To that end, Government proposed to **abolish** the Value Added Tax and replace it with a simpler and non-refundable Sales Tax. Additionally, the ZRA database revealed that deferred VAT between the years 2009 and 2019 is an estimated K40 billion. The minister's proposal and the deferred VAT acts as a clear indicator that VATis not performing as expected in Zambia.

Despite gaining a lot of popularity in many economies,like any other tax type, it has been characterized by many issues, which have led to the existence of a gap between potential VAT Revenue of an economy and the actual VAT revenue generated by the economy, within a particular accounting period. **The existence of a VAT gap is a major concern for tax administrators and policy makers.** This is due to the fact that low levels of tax collection mean less public investment, less contracts issued to private businesses, lower employment all of which entail less economic growth. Warren and McManus (2007), state that estimation of the extent of tax fraud and tax evasion as well as identifying the main causes or loopholes in a tax system which enable people to evade, is crucial for the development of an appropriate tax policy. For Zambia, the many issues surrounding VAT have been alluded to: the accumulation of huge refunds as a result of zero-rating of exports particularly minerals that are capital intensive in nature; the dwindling contribution to GDP due to many exemptions and zero-ratings and the existence of the cash economy which has led to poor compliance levels.

According to Nerudova and Dobransch (2019), Tax gap measurement is worthwhile policy wise because it could provide essential information for a better understanding of tax compliance and its implications on tax policy. Moreover, tax gap estimation provides clues regarding a tax agency's efficiency in collecting tax revenues and the needed resource allocation in order to address tax gap occurrence. Precise determination of VAT gap is a fundamental step in assessing the VAT efficiency and uncovering the true size of tax evasion and tax avoidance. The accuracy of the VAT gap represents a major issue for tax compliance analysis. The VAT gap is also critical for shaping policymakers' strategy regarding the needed reforms to decrease tax evasion and tax avoidance. Additionally, CSERCB (2013), affirmed the importance of studying VAT Gap, because it helps to assess informal economy, tax consciousness of citizens and tax morale. Zidkova (2014), states that quantifying and analyzing VAT gaps has become important issue for tax administrations in the

European Union in recent years due to increasing tax evasion and tax fraud with respect to VAT. Zidkova (2014), further stated that VAT gap study is useful in realizing the size and trend of potential VAT evasion. Also, the higher VAT gap could also arise when the tax authorities do not work efficiently. Therefore, the VAT gap is sometimes also used as a measure of the effectiveness of tax collection by the financial authorities, which is not affected by economic changes or changes to VAT rates. The growing size of VAT gap may indicate either a VAT evasion or a low effectiveness of tax collection or both together. Hutton (2017) posited that Tax gap analysis provides tax administrators and policy makers, and their stakeholders, with a measure of the amount of tax revenues lost through noncompliance, avoidance, and the impact of policy choices.

PURPOSE OF THE STUDY

The purpose of the study was to identify the statistical and analytical evidence of the Zambian VAT administration on tax revenue by analyzing the VAT gap in Zambia. Further, identifying which actions or measures are to be taken to promote enhanced revenue collection. Thus, this research study may: serve as input to government policy to enhance the collection of tax revenue; encourage other academic researchers who have an interest in the topic under study to use this study as reference material for further studies and contribute to professional development in as far as improving tax revenue collection where public expenditure is concerned.

RESEARCH OBJECTIVE

To examine the effect of the Zambian VAT administration on tax revenue by analyzing the VAT gap in Zambia.

RESEARCH QUESTIONS

- How does the VAT compliance gap affect tax revenue in Zambia?
- What is the effect of VAT policy Gap on tax revenue in Zambia?

LITERATURE REVIEW

Theoretical Literature review

Neo-Keynesian Taxation Theory

The Neo-Keynesian taxation theory discussed below best describes the facets of a consumption tax which VAT is. Francis (2011), states that taxation problems also constitute an important element of the neo-Keynesian theory. Fisher and Caldor considered necessary the division of taxation objects in accordance with consumption, by taxing the final cost of the consumed product and by taxing savings only as a % of the deposit. This led to the idea of a consumption tax, which is simultaneously a method for promoting savings and a tool for fighting inflation. The money assigned earlier for the purchase of consumer goods could now be used either for investments or for savings, which are transformed in capital investments with the help of the same budget policy "the subtraction of the surplus savings." Long-term savings in themselves serve as a factor for future economic growth. Caldor considered that the consumption tax introduced through progressive rates with the use of exemptions and tax allowances for separate types of goods (for example, for objects of everyday use), is more just for people with low incomes than a fixed sales tax. In addition, in comparison to the income tax, the consumption tax does not cover savings that are necessary for future investments, thus stimulating their growth.

Adam Smith's Principles of Taxation

Furthermore, VAT is a type of tax used by government for revenue mobilization in economies. Cox et al (2019) states that the 18th-century economist and philosopher Adam Smith attempted to systematize the rules that should govern a rational system of taxation. The Wealth of Nations he set down the following four general canons:

1. The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state;
2. The tax which each individual is bound to pay ought to be certain, and not arbitrary. The time of payment, the manner of payment, the quantity to be paid, ought all to be clear and plain to the contributor, and to every other person;
3. Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it;
4. Every tax ought to be so contrived as both to take out and keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state.

Although they need to be reinterpreted from time to time, these principles retain remarkable relevance. From the first can be derived some leading views about what is fair in the distribution of tax burdens among taxpayers. These are: (1) the belief that taxes should be based on the individual's ability to pay, known as the ability-to-pay principle, and (2) the benefit principle, the idea that there should be some equivalence between what the individual pays and the benefits he subsequently receives from governmental activities. The fourth of Smith's canons can be interpreted to underlie the emphasis many economists place on a tax system that does not interfere with market decision making, as well as the more obvious need to avoid complexity and corruption (Cox et al 2019).

Ability to pay principle

The ability to pay theory indicates that, every person should pay taxes to the government depending upon his or her ability to pay (Zolt & Bird, 2003).

As per Adam Smith's canons discussed earlier, unless the citizens of the nation contribute toward their government, the government cannot afford to offer basic security, education and health services which citizens need to be able to earn and enjoy an income.

The benefit principle

Under the benefit principle, taxes are seen as serving a function similar to that of prices in private transactions; that is, they help determine what activities the government will undertake and who will pay for them. If this principle could be implemented, the allocation of resources through the public sector would respond directly to consumer wishes.

In fact, it is difficult to implement the benefit principle for most public services because citizens generally are not inclined to pay for a publicly provided service such as a police department unless they can be excluded from the benefits of the service. The benefit principle is utilized most successfully in the financing of roads and highways through levies on motor fuels and road-user fees (tolls).

Payroll taxes used to finance social security may also reflect a link between benefits and "contributions," but

this link is commonly weak, because contributions do not go into accounts held for individual contributors.

Laffer curve

This study employed the Laffer curve as its theoretical framework, the theory provides a powerful insight into the relationship between tax rate and tax revenue/compliance. Laffer (2004), admitted that the Laffer curve was not invented by himself, because a similar idea was found in Ibn Khaldun, a 14th century Muslim philosophers works called Muqaddimah. That was why Sen, Cevik, and Kaya, (2017), called the curve "Khaldun-Laffer curve". The main idea behind the curve is that, it is not always increasing tax rate will lead to an increase in tax revenue, the outcome of any tax rate increase will depend on the elasticity of tax compliance of the economy.

This is applied when the low tax revenue was principally caused by high rate of tax non-compliance that may be as a result of loopholes in tax laws, inefficient tax policy or weak tax administration. The choice of what to do is not an easy one, it has generated a lot of debate and conflict among tax experts and stakeholders. Sometimes circumstances may permit revenue authorities to employ a combination of any two or all the above-mentioned strategies to curb a problem of low tax revenue.

According to the Laffer curve an increase in tax rate will only lead to an increase in tax revenue if the rate of the tax is below the optimum tax rate, from the figure I, the optimum tax rate is T. Any increase in tax rate above T will have a negative impact on tax revenue. The optimum tax rate is determined by the rate of tax compliance, strength of tax enforcement, competence and integrity of tax administrator, soundness of tax policies and tax laws of the economy and public perception on the integrity of political authority. If a low tax revenue was caused by a low tax compliance rate, especially in an economy associated with corruption and a weak tax enforcement; the increase will lead to a decrease in tax compliance rate and consequently fall in tax revenue. In such an environment, an increase in tax rate will affect the tax compliance behaviors of the tax payers and will increase the set of taxpayers that will be manipulating the tax system in a negative manner. While, in a relatively tax compliant environment, with a high propensity to comply with the tax law, an increase in tax rate could lead to an increase in tax revenue and possibly tax compliance.

Therefore, a choice of what an economy should do to improve tax revenue, will depend on the causes of the low tax revenue in the economy. Todaro and Smith (2011), state that taxation performance of any economy will largely depend on endogenous variables of the economy. Thus, taxation potentials of a country depend on: level of per capita real income, degree of income inequality, industrial structure of the economy, social, political and institutional settings of the economy, and lastly the administrative competence, honesty and integrity of the tax revenue generating agency of the country.

Empirical Literature review

A lot of literatures were reviewed during the course of this study. Ebril et al (2002), highlight that Value Added Tax (VAT) can be defined as a tax applied on the value which is added to goods and services at each stage in the production and distribution process.

Lakuma and Sserunjogi (2018), who carried on a study to analyze Value Added Tax gap in Uganda, using a top down approach. The empirical study makes the following findings: The compliance gap is estimated to be between 39 percent and 30 percent of potential VAT revenues during the period 2009/10–2016/17, and peaking in 2010/11. The estimated gap is higher than the typically observed levels in Sub Saharan countries and near to the levels in Latin American countries. The estimated compliance gap increased to 64 percent of the potential VAT revenue in 2010/11. The VAT policy gap and the part of the gap explained by the policy gap was due to tax expenditures such as exemptions and reduced rates is lower than the VAT compliance gap in Uganda. The VAT c-efficiency ratio in Uganda had been on an increasing trend from 25.9 percent in

2009/10 to 31.9 percent in 2016/17 and this was due to the decrease of both compliance and policy gap.

Malik, Mihm and Timme (2018), conducted a laboratory experiment with a view to analyze the impact of Anti-Avoidance Tax Rules on overall tax compliance. The study employed statistical techniques to analyze the data. The empirical result found that the adoption of Anti-Avoidance Tax Rules to increase tax compliance leads to a substitution effect between tax avoidance and tax evasion. While Anti-Avoidance Tax Rules do achieve some reduction in tax avoidance, and tax evasion tends to increase in that regard. The result further indicated that the substitution effect does decrease the effectiveness of Anti-Avoidance Tax Rules in lowering the tax gap. Even if Anti-Avoidance Tax Rules decrease aggressive tax planning practices, the potential increase in tax revenues is offset by the increase in tax evasion as a response to Anti-Avoidance Tax Rules introduction.

Houssa, Megersa and Nikiema (2017), conducted a study with a view to analyze the performance of the Value-Added Tax (VAT) in Benin and Burkina Faso. The study analysed the sources of VAT gaps using data on the activities of twenty key sectors in each country (based on national input-output tables) over the 1999-2014 period. The empirical result revealed that Benin's VAT gap is mainly explained by inefficiencies in the following sectors: agriculture, sales, agro-food industries, transport, post offices, telecommunication, construction, public administration and other service sectors (including accommodation and restaurants). In Burkina Faso, the study found similar sectorial contributions to VAT gap but public administration played a much dominant role as compared to Benin. The study also found that compliance gap was increasing overtime in Burkina Faso and in recent years explains a larger part of the overall VAT gap, there is a reverse trend in Benin, and that the sectorial sources of VAT gap are similar in the two countries.

Stavja?ová (2014), conducted a study to estimate the level of tax evasion of value added tax in the Czech Republic during 2006–2012. The study used Top-down approach to estimate the VAT gap. The result obtained showed that the VAT gap in the Czech Republic gradually increased during the observed period and it is more than CZK 100 billion in the last three years. The most significant growth of VAT gap occurred between the years 2007 and 2008 and between 2011 and 2012 when the reduced VAT rate was increased by 4 percentage points.

Barbone, Bird, and Vázquez-Caro (2012), carried on a study to examine the relationship between VAT evasion and the administrative cost of VAT compliance in EU member countries. The study relied on secondary data, and econometric model was employed to analyze the variables. The empirical result obtained revealed a statistically significant correlation between the tax gap in the EU Member States and VAT administrative costs.

Conikalp, Unlukapan, and Celik, (2016), conducted a study to estimate Value Added Tax gap in Turkey. Top down approach was utilized to estimate VAT Gap in Turkey from 2000 to 2013. The study makes the following revelations: Policy gap is greater than the compliance gap in all the periods, state forgone tax collections resulted from exemptions, deductions and rate differentiations are greater than the loss caused by the informal economy and increasing VAT rate to 17% caused a rise in the policy gap.

Another study was conducted by D'agosto, Marigliani and Pisani (2014), to determine factors influencing the VAT gap in 20 regions of Italy, for the period 2007 to 2010. The indirect Top down approach was applied and panel regression model was used to analyse the variables. The explanatory variables public administration (as value added in public sector) used are: activities of revenue agency (e.g. tax assessed during tax audits), social and economic condition of the area (e.g. number of thefts, murders) and finally the spending capacity of households and firms (e.g. amount of bank deposits and energy consumption). The empirical result obtained revealed that between 2007 and 2010 the VAT Gap was almost 231 billion Euro, of which 77% constituted household final uses and 23% enterprises final uses. The result further found out that VAT gap is positively correlated with: economic condition, the business cycle and the tax moral of a

region.

Zidkova and Pavel (2017), carried on a study to determine possible factors influencing the value added tax (VAT) gap in EU countries. Panel data from 2000 to 2011 were utilized and 21 variables were considered. Panel regression and pooled regression models were used to analyze the impact of the variables on VAT gap in EU countries. From 21 variables, only four proved to be statistically significant. The result revealed that the increase in the ratio of VAT revenues to GDP causes a reduction in the VAT gap. Further findings were that if the standard VAT rate and the difference between the standard and reduced VAT rate are increasing, the VAT gap grows. Finally, the control variable – share of household consumption in GDP increased the VAT gap. The study focused mainly on the causes of the VAT gap rather than the impact of the gap on VAT revenue.

METHODOLOGY

This study adopted quantitative research methods only. According to Kothari (2004), a quantitative approach is one in which the researcher primarily uses postpositive claims for developing knowledge (i.e. cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation), employs strategies of inquiry such as experiments and surveys, and collect data on predetermined instruments that yield statistics data.

The data used in this study was secondary data sourced from the Zambia Revenue Authority database of 2020. The department of Research and Cooperate Strategy of the Zambia Revenue Authority maintains a database of the performances of all tax types administered by the ZRA including VAT. For the purposes of this study, the VAT gaps analysis were measured by the use of annual data for the period 2009 to 2019. As the administrator of the taxes VAT inclusive, the ZRA database was chosen for the purposes of this study as the source of the data. The research used a data collection guide that sought to collect data on VAT and any other relevant information regarding VAT gaps and VAT administration.

Given that this study is based on secondary data which is compiled by the Zambia Revenue Authority, the sample of this study was the revenue collected by the ZRA (the tax database), covering the period 2009 to 2019 and examining annual data. Thus, the study looked at ten (10) years over the period under review.

Model Specification

The study employed Auto Regressive Distributed Lag (ARDL) Model and Vector Error Correction Model (VECM) to analyse the variables. The ARDL was very efficient when the variables under study were integrated at order, I (0), I (1) or combination of both. Nkoro and Uko (2016), ARDL integration technique is preferable when dealing with variables that are integrated of different order, I (0), I (1) or combination of both. Similarly Aliha, et al (2017), said that ARDL has become popular because: It is able to estimate the long and short-run parameters of a model simultaneously, it avoid the problems posed by non-stationary data, there is no need to determine the order of the integration amongst the variables in advance, and it is statistically much more significant approach for the determination of the co-integration relationship in small samples, while allowing different optimal lags of variables.

$$\Delta y_t = -\sum_{i=1}^{p-1} \gamma_i^* \Delta y_{t-1} + \sum_{j=1}^{k} \sum_{i=0}^{q_j-1} \Delta X'_{j,t-i} \beta_{j,i}^* - \rho y_{t-1} - \alpha - \sum_{j=1}^{k} X'_{j,t-1} \delta_j + \epsilon_t$$

To avoid misleading characteristics of time series macroeconomic variables which in most cases are non-stationary, the study examined the time series properties of all the variables under investigation using the Augmented Dickey-Fuller (ADF) and Philips Perron (PP) Test to confirm the stationarity level of each of the variables.

$$\Delta y_t = \beta_1 + \beta_2 t + \theta y_{t-1} + \sum_{i-1}^{n} \varphi \Delta y_{t-1} + \epsilon_t$$; where represents the relevant variables under investigation and is a random term. The study also employed Bounds co-integration test technique to ascertain whether the variables are co-integrated that is, if there is long run equilibrium relationship among the variables.

Thus, the model was specified as:

VATR = f (CONT, CGAP, PGAP)

Where:

VATR = Value Added Tax revenue generated,

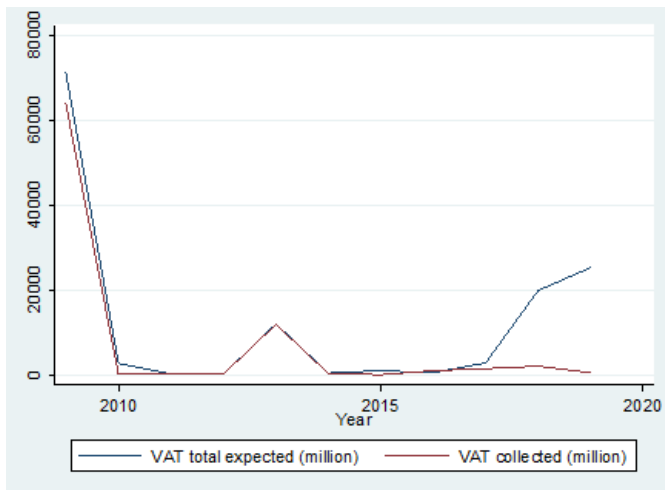CONT = final aggregate consumption,

CGAP = VAT compliance gap

PGAP = VAT policy gap, and expenditure on agriculture, health and education will be taken as proxy.

Ect = error correction term, and   ei= error term in i per quarter

RESULT ANALYSIS, PRESENTATION AND DISCUSSION

Figure 2: Vat Gap

Source: Developed for the study

The figure above shows that the expected VAT revenue and the actual VAT revenue collected are for the most part of the period under review been closely related. However, after 2015 there has been a wide-gap.

Regression Model based on Logs of Penalties, Expected VAT, Deferred VAT and VAT collected

Source	SS	df	MS	Number of obs.	=	11
				F(3, 7)	=	3.43
Model	43.9815273	3	14.6605091	Prob > F	=	0.0814
Residual	29.9510282	7	4.27871832	R-squared	=	0.5949
				Adj R-squared	=	0.4213
Total	73.9325556	10	7.39325556	Root MSE	=	2.0685

Invatrevenue	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Invatdeferred	-.522572	.3752621	-1.39	0.206	-1.409926	.3647819
Invatpenalties	.1664704	.1733651	0.96	0.369	-.243473	.5764138
Invatexpected	1.235446	.5001455	2.47	0.043	.0527903	2.418103
_cons	-.9857803	2.465869	-0.40	0.701	-6.816634	4.845073

Durbin-Watson d-statistic (4, 11) = 2.112727

The P value is less than 0.05 with regard to deferred VAT (-1.4099) and Penalties (-0.2434). With regards to penalties, the study rejects the null hypothesis that VAT revenue is influenced by the policy gap or that the policy gap has any effect on the VAT revenue collected. However, the regression results indicate that there exists a significant relationship between collected and expected VAT revenue.

The study showed that deferring VAT and Penalties on VAT for non-compliance has had no effect on the VAT collected under the period of review.

With regards to the VAT compliance gap, this implies that the compliance gap on VAT did not affect VAT tax revenue. These findings are supported by a study that was conducted by Houssa, Megersa and, Nikiema, (2017), with a view to analyse the performance of the Value-Added Tax (VAT) in Benin and Burkina Faso. The study analysed the sources of VAT gaps using data on the activities of twenty key sectors in each country (based on national input-output tables) over the 1999-2014 period. The empirical result revealed that Benin's VAT gap is mainly explained by inefficiencies in the following sectors: agriculture, sales, agro-food industries, transport, post offices, telecommunication, construction, public administration and other service sectors (including accommodation and restaurants).

Further, in Figure 4.2 the study revealed a widening of the VAT gap from the period 2015 to 2020. This, indicates a reduction in the willingness by taxpayers to pay correct taxes on time and an increase in tax evasion as well as avoidance from the period 2015 onwards. These findings are supported a study by CSERCB (2013), that affirmed the importance of studying VAT Gap, as the VAT gap indicated the tax consciousness of citizens and tax morale. Zidkova (2014), further stated that VAT gap study is useful in realizing the size and trend of potential VAT evasion. Indicating that a growing size of VAT gap may indicate either a VAT evasion or a low effectiveness of tax collection or both together. Hutton (2017) further posited that Tax gap analysis provides a measure of the amount of tax revenues lost through noncompliance and tax avoidance.

In discussing the VAT policy gap, this study used penalties associated with VAT compliance. The VAT policy gap showed that penalties had no effect on tax revenue from VAT this in turn indicated that VAT policy gap had no effect VAT revenue. The VAT compliance gap and the part of the gap explained by the policy gap due to tax expenditures such as exemptions and reduced rates is lower than the VAT compliance gap in Zambia. These findings are supported by a study conducted by Malik, Mihm and Timme (2018), conducted a laboratory experiment with a view to analyse the impact of Anti-Avoidance Tax Rules on overall tax compliance. The study employed statistical techniques to analyse the data. The empirical result found that the adoption of Anti-Avoidance Tax Rules to increase tax compliance leads to a substitution effect between tax avoidance and tax evasion. While Anti-Avoidance Tax Rules do achieve some reduction in tax avoidance, and tax evasion tends to increase in that regards. The result further said that the substitution effect does decrease the effectiveness of Anti-Avoidance Tax Rules in lowering the tax gap. Even if Anti-Avoidance Tax Rules decrease aggressive tax planning practices, the potential increase in tax revenues is offset by the increase in tax evasion as a response to Anti-Avoidance Tax Rules introduction.

CONCLUSIONS

Thus, the study concludes that deferring VAT and Penalties on VAT for non-compliance had no effect on the VAT collected under the period of review. This implies that the compliance gap on VAT did not affect VAT tax revenue. Although expected VAT had a significant effect on the VAT collected annually its effect was only based on expectations of VAT revenues not on the actual value of VAT collected. Further ZRA would eventually collect the difference in the subsequent year as seen from the rising values of VAT revenue for the period under review. Tax revenue from VAT still faces a number of challenges as it is shown by the number of VAT penalties that were charged by ZRA.

Additionally, the study concludes that on the Influence of the VAT policy gap on tax revenue in Zambia showed no effect on tax revenue from VAT. The VAT policy gap is estimated to be between 39 per cent and 30 per cent of potential VAT revenues during the period 2009/10–2016/17, and peaking in 2010/11. This is supported by the findings from the estimated gap is higher than the typically observed.

Further, the study concludes that increasing the VAT rate will not enhance VAT revenue. This can be seen from the widening gap between expected and actual VAT collected between 2015 and 2020 periods where the VAT standard rate remained unchanged at 16%.

With regards to penalties, the study rejects the null hypothesis that VAT revenue is influenced by the policy gap or that the policy gap has any effect on the VAT revenue collected. However, the regression results of the study indicate that there exists a significant relationship between collected and expected VAT revenue.

In a nutshell, the findings of this study indicate that there exists significant revenue loss due to noncompliance which maybe as a result of poor tax consciousness by citizens and low tax morale. As well as fraud, evasion, tax avoidance, bankruptcies, financial insolvencies and miscalculations of taxes.

RECOMMENDATIONS

The Zambia Revenue Authority has taken several strides in a bid to increase compliance. Notably, the introduction of Tax On App an application that taxpayers can use to file and pay for taxes using mobile phones. This has eased how business is conducted. Other initiatives include the increase in number of payment platforms for taxes to include mobile money payments apart from cash and bank payments.

Despite all these initiatives, the continued existence of the tax gap shown in this study indicates that there is room for more to be done by the Tax Administrator. Thus, this study presents the following recommendations drawn from the conclusions outlined: because the payer of VAT is the final consumer, ZRA should encourage voluntary tax compliance among final consumers by intensifying the demand a receipt campaign as well as increasing the education of final consumers on the benefits of tax compliance to the nation's development. Further, ZRA should expedite the process of **fully** implementing the fiscalization process (i.e. the mandatory issuance of fiscal receipts by all VAT registered suppliers) which has been ongoing since 2017.

Given that the VAT policy Gap measures the effectiveness of VAT enforcement and compliance measures as it provides an estimate of revenue loss due to fraud and evasion, tax avoidance, bankruptcies, financial insolvencies as well as miscalculations. Quantifying the scale of the VAT Gap can help to develop well-targeted measures and monitor their effectiveness. There has been a widening of expected VAT and actual VAT collected beyond 2015. It is recommended that ZRA considers evaluating what happened during that time period that might have led to widening gap.

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