
Influence of Excise Duty on Tax Revenue Collection in Tanzania

Heriel E. Nguvava¹ and Lyafufifye Anyambilile²

¹Senior Lecturer, Institute of Tax Administration (ITA), Tanzania

²Scholar, University of Dar es salaam, Tanzania

*Corresponding author

doi.org/10.51505/IJEBMR.2024.81212 URL: <https://doi.org/10.51505/IJEBMR.2024.81212>

Received: Nov 28, 2024

Accepted: Dec 12, 2024

Online Published: Dec 22, 2024

Abstract

This study assessed influence of excise duty on tax revenue collection in Tanzania. Specifically established relationship between excise duty and tax revenue collection and determine the causality of excise duty on tax revenue collection in Tanzania. The study employed quantitative descriptive design whereby a quantitative approach and longitudinal research strategy were used. Only secondary data was collected from Tanzania Revenue Authority (TRA) for the period of 2010/2011 to 2020/2021. This study used descriptive statistics and inferential statistics (OLS and Pearson Correlation) to analyze the first, and second objectives. The findings revealed that, there is strong positive relationship between excise duty and revenue collection in Tanzania. Further findings from the OLS revealed excise duty to have a significant influence on the total tax revenue whereby a unit increase in excise duty resulted into increase in total tax revenue collection by 0.732 unit. The study recommends that there should be a continuous review of the fiscal policies governing excise duty so as to address challenges brought by changing circumstances and enhance its contribution to the revenue collection. It also recommended, the government to amend the Excise Act to include a schedule for charging excise duty on services and provides clarity on point tax of excise duty on services like telecommunication and money transfer hence avoiding current confusion among tax payers. To raise excise duty and overall tax collection in Tanzania, TRA must emphasize on tax education and awareness sessions through multiple medias to promote voluntary tax compliance to all categories of taxpayers.

Key words: Excise Duty, Tax revenue

1.1 Introduction

Globally, excise duty continues to be an area of focus due to its important role of controlling harmful behavior but also its remarkable contribution on government revenue. In 2020 excise duty contributed about 30% of the total tax revenue from consumption taxes, in Organization for Economic Co-operation and Development (OECD) countries contributing an average of 9.9% of their Gross Domestic Product (GDP) (Maganya,2020). While an approximately one third of the revenue was contributed by taxes from specific goods and services (i.e excise duty), two third of the revenue was collected from other consumption taxes such as Value Added Tax (VAT) and sales taxes (Kisanga et al, 2021). This shows how excise duty is very important contributor to the

tax revenue collection. Between year 2018 and 2020 the consumption taxes ratio to GDP in the OECD countries saw a decline dropping from 10.2% to 9.9%. During this period 28 countries faced a decline, 9 countries which are Australia, Japan, Mexico, Netherlands, Lithuania, Norway, the Slovak Republic and Turkey faced an increase while one country United States remained unchanged (Hoffer, 2023).

In Tanzania, revenue from excise duty has increased from TZS 449 Billion in the fiscal year 2011/2012 to TZS 1,423 Billion in the fiscal year 2020/2021 in an increasing rate (NBS,2022). The increase in the revenue collected was a result of expanding the tax base to include some services (i.e. electronic communication services, financial services and pay-to-view services) where before excise duty was charged on locally manufactured goods only. Also introduction of Electronic tax stamp (ETS) in the year 2018 by the government in order to increase taxpayer compliance in declaration and payment of excise duty on the local manufactured and imported drinks has been an important aspect for revenue increase (Mapesa et al).

Regardless of government reforms and effort to increase revenue collection from excise duty, Tanzania Revenue Authority (TRA) in the period of 2010/2011 to 2020/2021 has only managed to meet the collection target set once (Khatibu et al 2022). There are still challenges that face TRA in collection of excise duty such as high duty rates, for example excise duty in telecommunication services which increased from 5% to 17% in 2013. Also a question of legislation where the current legislation was first introduced in 1954 designed to administer locally manufactured goods is the same used now after introduction of services in the excise duty scope. This result in various challenges of application and interpretation of the law. Taxpayer's high level of non-compliance to include fake ETS, not filling returns and false returns are major set back toward achieving the collection goals in most East African Counties (Kahunde et al 2019).

Most scholars have assessed the relationship of excise duty and economic growth. Mapesa et al (2020) analyzed the influence of excise duty on economic growth in Tanzania. Omido & Kasibo (2021) conducted study on excise duty yet they focused on the effect of system operational efficiency on revenue collection at Mabala boarder in Kenya. Hoffer (2023) published his research on excise duty however, he paid attention to the relationship between tax rates and customs revenue evasion through misclassification of imports. The contribution of excise duty to total tax revenue collection in Tanzania is not well explored and analyzed, this study provides insight into the influence of Excise duty on Tax Revenue Collection in Tanzania.

1.2 Literature Review

1.2.1 Empirical evidence

Excise duty in Tanzania is imposed on specific goods and services weather imported or locally produced charged at varying rates. Imposition of excise duty has a primary objective of protecting local industries, preventing the country to be dumping for substandard goods and control of a certain harmful behaviors such as smoking. The rates are categorized into two main

types, specific and ad valorem rates. Ad valorem rates ranges from 10%, 15%,17%, 20%, 25% and 50% imposed on items imported furniture, automobiles, and shopping plastic bags. Specific rates are charged on Wine, fruit juices, spirits, beers, soft drinks, tobacco, cigarettes, petroleum products, natural gas, recorded CD, DVD, VCD and audio tapes (NBS, 2022).

With recent amendments excise duty is also imposed on certain services such as pay to view television system such as DSTV, money transfers services and electronic communication at ad valorem rates. The administration of Excise duty in Tanzania is governed by the Excise (Management and Tariff) Act, which outlines the regulation of excisable goods in manufacturing, denaturing of the spirit, collection, payments, exemptions and other related matters (GSM and Deloitte 2016).

Over the past half century excise duty emerged as among crucial source of domestic funding for government expenditure in Tanzania. Apart from its contribution to the Government expenditure, the Government also uses excise duty as a tool to influence consumers' behaviors patterns. Introduction of excise duty in telecommunication services in the year 2014 also backs up the importance of this particular tax to the government revenue. Like many countries, in Tanzania excise duty target a specific group of goods and services however, this leads to tax base limitation hence the capacity for tax collection is often constrained. Nevertheless, this focus on specific goods makes excise duty a key element in the country's revenue system, especially in comparison to more generalized tax approaches (Kamau & Odongo, 2020).

On the other hand, this focus on specific goods makes excise duty a key element in the country's revenue system especially in comparison to more generalized tax approaches like VAT. Targeting a specific good like imported furniture also plays a major role in protecting local industries which in turn has a multiplayer effect in the economy (Kamau & Odongo, 2020).

The continual reliance on excise duty in Tanzania reflects a broader trend in many developing countries, where indirect taxes form a significant portion of fiscal revenues. These duties are pivotal in generating revenue, stabilizing tax receipts and aiding in budget balancing (Kipilimba, 2018). The administration and enforcement of excise duty have therefore become important topics in the policy discussion of lawmakers and international organization like International Monetary Fund (IMF) (Kipilimba, 2018). It is important for the country to have polices in place that will ensure stable collection of Excise duty such as widening of tax base, rates that will not discourage consumption of excisable products and means to ensure compliance in payment of excise duty.

Despite excise duty contribution to revenue collection and its importance in the stabilization of the economy, Tanzania still faces challenges in administration of excise duty. Challenges with noncompliance in the area of excise duty leading to less tax revenue collection. Most commonly noncompliance has been observed in areas such as false declaration in the tax returns, timing of payment and counterfeit products. In order to contest against noncompliance Tanzania has introduced Electronic Tax Stamps (ETS) as a measure control of these challenges and to increase

revenue collected from excise duty. However, ETS standing alone cannot be effective in addressing these challenges in tax collection. Ensuring compliance with excise duty regulation is vital for maintaining revenue Streams and addressing fiscal needs (Mapesa et al, 2020). Introduction of ETS is among the Government measure to enhance compliance among local producers and importers of dutiable items. It has also been an important element in boosting excise duty collection. However, implementation and adherence to regulation of ETS can be burdensome and expensive for small and medium sized enterprises in turn it may discourage introduction and growth of local small industries.

GSM and Deloitte (2016) found that reducing excise duty on mobile services lowers prices and encourages more consumption in return encourages operators to invest in network expansion and upgrades. As a result, consumers and businesses demand more mobile services and the economy grows. Higher mobile penetration boots productivity, as a result GDP, household incomes employments and investment increases though out the economy. Government revenue is expected to rise as the telecommunication sector expands leading to general economic growth. This study focuses on the contribution of excise duty in revenue collection in Tanzania. The study aims at analyzing the significant role of excise duty in the country's total tax revenue collection, understanding trends of the revenue collection and excise duty, their relationship and the causality between the two variables.

1.2.2 Guiding theory

Fiscal Sociology Theory

Fiscal Sociology Theory is primarily attributed by the work of Joseph A. Schumpeter, an Austrian-born economist and political scientist. He advocated this theory in his 1918 essay "The Crisis of the Tax State," laying the groundwork for understanding the sociological implications of taxation (Chindengwike, 2022).

Fiscal Sociology Theory proposes that taxation and public finance are central to understanding the development of a state and its social institutions (Chindengwike, 2022). It suggests that the way a government imposes taxes, the types of taxes it levies, and how it spends revenue are connected with social structures, cultural norms, and the historical context of a society. This theory views taxation not just as an economic tool but as a sociopolitical phenomenon that reflects and influences the relationships between the state and its citizens.

Fiscal Sociology Theory is highly relevant and thus a guiding theory for this study; *reflection of social values*, the categories of goods and services which are subject to excise duty in Tanzania such as alcohol, tobacco and luxury goods can reflect societal values and priorities. The theory helps understand how these choices might align with social norms and public health objectives. Historical and Social Context; applying Fiscal Sociology Theory can provide insights into how Tanzania's historical and social context has shaped its current excise duty policies. Impact on Social Behavior; the theory can be used to analyze how excise duty on certain products might be

used as a tool for social engineering, potentially influencing consumer behavior towards these goods.

3.0 Methodology

3.1 Research Philosophy

The study adopted positivism paradigm which leads to capturing and analysis of quantitative data, testing of hypotheses and arrive to specific conclusion that can be generalized.

3.2 Research design

This study employed a quantitative descriptive design. A quantitative approach for data analysis and hypothesis testing by establishing causality and correlation between variables so as to draw specific conclusion that can be generalized to the population was adopted. This study also applied longitudinal strategy since the data were time series in nature.

3.3 Research Area

The study was conducted in Tanzania Mainland. The revenue collection data (excise duty and total tax revenue collection) was obtained from TRA headquarters for the period of 2010/2011-2020/2021 and suffice the need of study.

3.4 Data collection methods

This study used secondary data only. The data was obtained through documentary review. Data was extracted from TRA revenue reports for the study period and the National tax statistics published in TRA website on year basis. Therefore, the data collected is time series in nature.

3.5 Data Analysis

Data was coded and analyzed inferentially and descriptively by using STATA software. The first and second specific objectives for testing relationship and establishing the causality of excise duty on tax revenue collection were analyzed through Pearson correlation and ordinary least square methods. Tables and figures were used to present the research findings.

The study used simple linear regression analysis to determine the cause and effect relationship between independent and dependent and dependent variables. The model estimated as;

$$Y = \beta_0 + \beta_1 X_1 + \epsilon$$

Where;

Y = Total tax revenue collections

X₁ = Excise duty collections

β₀ = Co-efficient of the model

ε = Stochastic Error Term

3.6 Reliability and validity analysis

This study employed the unit root test (ADF test) to measure and ensure stationarity of data. Cronbach’s Alpha coefficients were calculated for the study variables. Normally a reliable data collection instrument should have Cronbach’s Alpha values above 0.7. The overall result of 0.79 suggests that the data employed in the study demonstrated a high degree of internal consistency.

4.0 Findings and Discussion

4.1 Descriptive Statistics

This section offers a descriptive statistics of the variables used in the study. It provides valuable insight into the essential attributes of the study variables that’s include distribution, mean and standard deviation. The summary of the result is shown in the Table 1 below;

Table 1: Descriptive statistics results

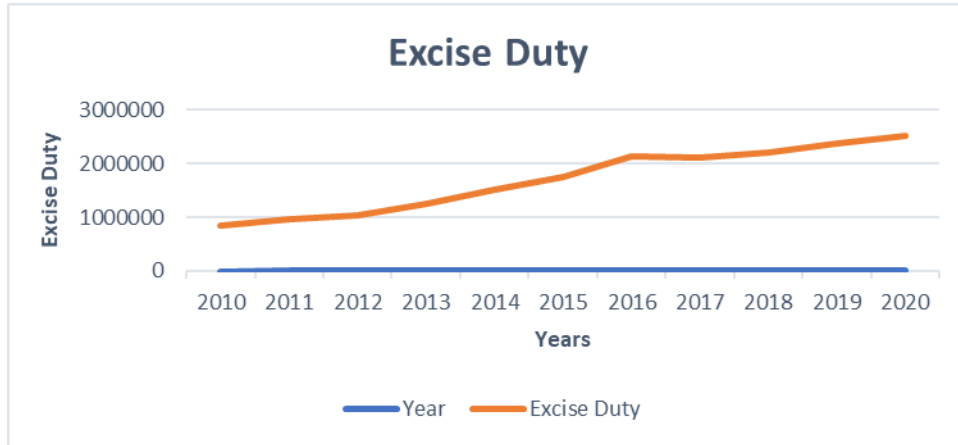
Variable	Obser vation	Mean (TZS)	Standard Deviation (TZS)	Min.	Max.	Skew ness	Kurtosis
Revenue collection	11	12,765,107	4,495,216	5,391,503	17,965,307	-521	-.364
Excise duty	11	1,699,204	608,710	837,621	2,512,423	-787	-.219

Source: Author (2024)

The results show that, the return on revenue collection in Tanzania for the study period ranges from a minimum of TZS 5,391,503 to a maximum of TZS 17,965,307 and standard deviation of TZS 4,495,216 for the period of 2010/2011 up to 2020/2021. The descriptive analysis shows that excise duty has a mean and standard deviation of TZS 1,699,204 and TZS 608,710 respectively which ranges from TZS 837,621.9 to TZS 2,512,423. This indicates that there was high variation of excise duty for the sampled period.

4.2 Trend of excise duty in Tanzania

According to the findings from the study period (2010/2011-2020/2021) excise duty revenue has been increasing over the years. This suggests that there has been a continuous growth in revenue collected from excisable goods manufactured or imported and services consumed. It further suggests growth on the manufacturing sector in the country. Excise duty revenue increase may also suggest that, there have been government efforts to attract investments in manufacturing sectors, and growth on the usage of telecommunication and banking services. The increase may also be a result of reforms which were well implemented by TRA such as introduction of ETS and expansion of the tax base to include services, generally implying that there was a proper design and implementation of the polices governing excise duty.



Source: Author (2024)

Figure 1: Trends of excise duty

4.3 Correlation Analysis

Pearson’s correlation (r) was used to establish the relationship between excise duty and tax revenue collection. Analyzing the correlation matrix provides insight in the existence and strength of relationship. The result from the analysis shows that there is a positive and significant relationship between excise duty and revenue collection, suggesting an increase in excise duty results to higher total tax revenue collection. These findings align with Hoffer (2023) who explored the relationship between tax rates and customs revenue evasions also identifying a positive correlation between excise duty and total tax revenue collection. He noted that while certain taxes have not yet fully achieved their potential in terms of revenue generation and equitable distribution of income, excise duties on imported consumer goods contribute significantly to the revenue of the recipient country. The summary of the result for correlation analysis is shown in the Table 4.2 below.

Table 2: Correlation Matrix

Variables	Revenue Collection	Excise duty
Revenue Collection	1.000	
Excise duty	0.4976*	1.000

P values 0.000

Source: Author (2024)

4.4 Statistical Assumption

Prior to applying the model for testing the significance of the slope and analyzing the regressed result, unit root test was made to identify misspecification of data if any so as to ensure reliability of the study findings.

4.4.1 Unit root test

This is a test that determine whether a time series variable is non stationery. Stationary means that a variable's measure of central tendency (Mean), Variability (standard deviation), variance and auto correlation remains constant over time. In this study, stationarity of the data was tested by using an ADF type unit root test for unbalanced panels. In this test a p-value greater than 5% suggests presence of unit root which indicates non stationarity while a p value less than 5% indicates stationarity. The result of the test revealed variable are stationary at lag 2 as shown in the table 3 below;

Table 3: Unit root test

Variable	P Value	Remarks
Excise duty	0.000	Stationary

Source: Author (2024)

4.4.2 Cronbach's Alpha Test

This test was conducted so as to ensure the internal consistency of the variables of study. Cronbach's Alpha test results portrayed a scale reliability coefficient greater than 0.65 which means the variables were consistent and reliable to be used for further statistical predictions.

Table 4: Reliability test

Item	Value
Average interitem covariance	.0007149
Number of items in the scale	2
Scale reliability coefficient	0.795

Source: Author (2024)

4.5 Regression Analysis

This analysis was used to examine the influence of the independent variable on dependent variables. In this study the cause and effect relationship between excise duty and revenue collection was examined using simple linear regression analysis. The coefficient under regression analysis offers the information required for researcher to predict dependency of dependent variables on independent variables also to determine whether independent variable have a statistical significance on the model. The summary of regression result is shown in the table 5 below;

Table 5: Regression result

Variable	Coefficient.	Standard Error	T	P Value
Excise duty	0.7305	7.3173298	23.08	0.000
Cons	307,150.2	569,793.9	0.54	0.034
Prob> F = 0.0000				
R-squared = 0.7834				
Adj R- squared = 0.6137				

In this study, the R-square was found to be 0.7834 which represents that the independent variable (Excise Duty) can account for 78.34% of the variance in the dependent variable which is revenue collection *ceteris paribus*. The result further suggests that, change in one unit of excise duty causes the total tax revenue collection to increase by 0.7305 units. Therefore, excise duty has a significant influence over total tax revenue collection. In addition, the results revealed that Prob > F=0.0000, which is less than 0.05 which indicates that, the overall model statistically and significantly predicts the outcome variable.

These result are supported by Hoffer (2023) in his study based on excise tax rates and tax evasion who found that there is a positive relationship between excise duty and revenue collection. This finding implies that since excise duty is levied on a certain consumer goods on locally produced or imported goods, the revenue collected from excise duty is entirely retained in the country where service is consumed as a result increase amount of tax revenue of a that particular country. On the other hand, the study found that low collection of excise duty may result to deficient of revenue and vice versa. These findings support the findings by Mapesa et al (2020) and Chindengwinke (2022), both scholars suggested that, in developing countries like Tanzania, all taxes imposed by governments with an intention of protecting the society from consumption of harmful goods or with an intention of protecting the locally manufactured goods and services, such taxes normally have positive and significant relationship with the total tax revenue collection. Excise duty in Tanzania has demonstrated similar behavior, it positively and significantly influences the total tax revenue collection as suggested by preceding scholars.

These results differ with the findings in the study conducted by Kipilimba (2018) who found a negative relationship between excise duty and revenue collection. In his study it was suggested that government revenue increases with reduced excise duty rates. It was further argued, reduced excise duty rates encourages service providers to invest in network expansion and upgrades, for instance, higher mobile penetration boosts productivity leading to an increase in investment, employment, household income and GDP at large.

5.0 Conclusion

The study assessed influence of excise duty on total tax revenue collection in Tanzania. Specifically examined the relationship between excise duty and revenue collection and established the causality of excise duty on tax revenue collection. Based on the findings, the

study concludes that, there is a positive and strong relationship between excise duty and total tax revenue collection in Tanzania. This study further concludes, change in total tax revenue collection in Tanzania is accurately explained by change in excise duty for about 78.34% where by, increase in one unit of excise duty lead to 0.7305-unit increase in total tax revenue collection and these results are statistically significant at p-values less than 0.05.

5.1 Recommendations

This study recommends, in order to increase tax revenue collection in Tanzania through excise duty, there should be policy review and improvements from time to time. A continual review of the polices governing excise duty to adapt the current changes would result into simplified administration process which in turn will lead to increased total tax revenue collection. The study also urges TRA to prepare tax reforms to change the existing tax law that governs the administration and collection of excise duty in Tanzania. The existing law was first introduced in the year 1974 designed to administer manufactured goods only. With the inclusion of services, the laws become irrelevant and results into conflicts among taxpayers and tax administrators in interpretation of the laws to accommodate excisable services. Conflicts in the law interpretation result into tax objections hence leading to delayed tax revenue collection or completely lost of government revenue. The outdated law also results into high cost of administration of tax and also become costly for the taxpayer to adhere.

This study further recommends to TRA to increase tax education and awareness programs through various means such as TV and radio programs, uses of social media too might be useful to penetrate the message on tax importance to the general public. It is advised that taxation should be included as a subject from primary schools, this will facilitate building of a generation that is knowledgeable on relevance of tax matters and improve tax compliance.

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