On an Ongoing COVID-19 Pandemic: Is the Performance of Tax Collections Affected?

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Abstract

The study assessed the impact of COVID-19 pandemic on performance of tax collections in Tanzania. The study consisted of three predicting variables, namely corporate income tax, value added tax and excise duty that were tested on government revenue collections as the dependent variable. Our study employed explanatory design whereas causal relationship approach was used to foster information generation process. The study was conducted in Tanzania Revenue Authority (TRA) under Large Taxpayers Department (LTD) where secondary data were used covering the period of 24 months. Based on the hypotheses testing the study found that corporate income tax and value added tax have a statistically positive influence on performance of tax collections and excise duty have a statistically negative influence on performance of tax collections at 5% significant level. The study findings provide insights from a practical point of view on the government revenue process in developing countries like Tanzania, thus filling the gap in the literature review. The study findings serve as guidance to regulators and policymakers on what set of factors to review and incorporate into policy in order to foster collections of government revenue in Tanzania.

Keywords: COVID-19, Revenue Collections, Value Added Tax (VAT), Excise Duty and Corporate Income Tax, Tanzania

1. Introduction

COVID-19 pandemic has been a threat to human lives and economies all over the globe since it has taken the lives of several individuals, approximately 2 million people in a short period of time since its ascendancy in 2020 (Salami, 2021). This pandemic has devastated the economies of various states worldwide as a result of protective measures instituted to deal with the pandemic (Hosoda, 2020). This is the case because many states in different parts of

the world-initiated lockdowns and curfews, which severely affected the economies in those countries directly and indirectly. Businesses stagnated and collapsed as a result of lockdowns, companies and entities went bankrupt, and many suffered severe economic losses (Bloom, 2020). Most activities such as sports and entertainment, including various activities with implications for income generation, collapsed. The lockdowns and curfews brought about high retrenchment of employees in different entities and sectors, and massive salary cuts for the practitioners who remained in the services (Caroll, 2021). Furthermore, numerous sectors of the global economy have been seriously harmed, to the point of being entirely stalled. The situation has been both in developed and developing states all over the world in Africa, America, Europe, Australia, and Asia where the pandemic has greatly affected economies and sectors with implications for government revenue collections.

Tanzania in particular has been affected by the COVID-19 pandemic and the government of the fifth regime declared its spread in the country in March 2020, leading to a partial lockdown for a short period of time, where schools and universities were closed for some time. Nonetheless, sports activities were allowed to operate events attracting social gatherings were restricted, such as wedding ceremonies, mass rallies, village meetings and others. However, the situation was reversed in June 2020, when the government issued three (3) days for national prayer to seek God's mercy over the pandemic. Thereafter, the government declared the country free from the pandemic. The COVID-19 pandemic has had an effect on several entities, including those related to business, especially those in the category of largest taxpayers in various sectors such as manufacturing, telecommunication, mining, transportation, and others. This is due to the fact that most of the entities as large taxpayers originate from other countries that have been subjected to lockdowns and curfews as protective measures against the COVID-19 pandemic. This automatically affected the financial stability and performance of most of the entities. The situation within the country has caused income to decline among some actors, whereas purchasing power has also declined, causing businesses to generate slowly and many others to stagnate or collapse.

The economic effects of the pandemic in Tanzania can be measured in different sectors of the economy and in GDP, which was growing at an average of 7.2% in the pre-disease period and an average of 4.5% in the post-disease period (World Bank, 2021). Some private companies' entities issued retrenchments to minimize costs in order to survive. Financial shortcomings in business entities, especially the largest taxpayers, constitute implications for government revenue collections. This is certain because several key taxes essential for their collections are likely to decline, including corporate income tax, value added tax, excise duty, pay as you earn (PAYE), and others. It is therefore certain that value-added tax, corporate income tax, and excise duty are the taxes with massive generations than the rest, which is essential for further inquiry assessment. This is because they appear to have a greater influence in tax collection, which is critical for the study being conducted in Tanzania. In light of this strand, our study conducted to examine the impact of COVID-19 pandemic in Tanzania. Our study considers value-added tax, corporate income tax, and excise duty as independent variables to guide the study objectives.

This paper is organized according to sections. The introduction is covered in Section 1.

Section 2 contains the literature review and the development of hypotheses. Section 3 describes the methodology used to collect and analyze data. Section 4 presents the findings and results discussion. Section 5 presents the study's conclusion and recommendations.

2. Relevant Literature Review and Hypotheses

The study is mostly guided with empirical reality model, Lindal model and the optimum taxation theory. The empirical reality model entails public service delivery by the government in the manner which is effective and efficient (Freeman et al, 2014). The model suggest that the government is the one required to achieve the empirical reality to its people by assuring that public services are delivered effectively and efficiently, such as health care facilities, transportations, infrastructures, housing, education and others (Lohman 2002). These are facilitated using adequate revenue collections by the government from various taxpayers to carter for sufficient liquidity to foster public service delivery. Once collections are limited or declining the situation regarding the empirical reality becomes affected as well resulting into a crisis (Meyer, 2002). In that case, governments always strive to make sure that they increase the taxpayers' base and not reduce taxes to assure efficiency and effectiveness in the entire process of tax payment. Therefore, the focus of the government is always to be in line with the taxes to foster collections that enables the expansion of public service delivery scope and horizon as well. The theory is related to the study in the sense that with COVID-19 pandemic in Tanzania most businesses especially the largest taxpayers have been affected such that it has implications on government revenue with effect on the empirical reality. This seems to be affected with some taxes such as corporate income tax, value added tax, excise duty and others. This signifies further the need to inquire on the issue respectively.

Lindal model on the other hand suggest that efficiency in tax collections is determined by who can pay and who benefits in the process and practice. The outcome depends on the relationship between the two that the one who benefits most from taxes automatically pay more the taxes under voluntary compliance practice. However, the other perceiving less benefits through the payment of taxes is likely to be far behind in paying taxes. The theory further states that the benefits the taxpayers get from the practice depends on three components which are the extent of the government activities with regard to tax collections. Furthermore, the expenditures allocated on various goods and services; as well as allocation of the tax burden (Samuelson, 2012). Once there is efficiency in the three concerns then tax payers seem to benefit and assure compliance with vice versa on the other hand being certain as well. This is the reality that is certain in the benefits regarding tax payment.

The optimum taxation theory argues that the tax system should be set to maximize the social welfare function while taking into consideration actual collection constraints. According to this idea, the goal of tax planners was to design a tax system that maximizes taxpayer welfare, knowing that taxpayers responded to any incentives provided by the tax system. According to the principle, planners should only apply property or commodity taxes to collect a specified amount of revenue. Consumer demand for products should be inversely proportionate to taxation, such that things with inelastic demand become more taxed. Similarly, tax planners should cut tax rates during the season when the economy is elastic and raise them during the

season when the economy is inelastic. Following the COVID-19 season, the economy grew more elastic and the amount sought for items significantly altered. Many firms and companies have been provided with tax exemptions as a result of this condition. As a result, the idea suggests that efficient tax collection should focus on the equality of tax payers' economic benefits rather than on their talents or efforts. For example, tax collectors should not charge a person who lives in a nicer house than a person who lives in a run-down house, or a person who works long hours more than a person who works short hours. Rather, tax collectors should concentrate on the individual's or company's earnings. During COVID-19, the approach was heavily applied in order to save firms (mainly large-invested businesses) from collapsing due to government revenue-earning expenses. The theory is well connected with the study in the sense that the government as the sole tax collector tries best to assure benefits being generated to the taxpayers to assure the realization of the expectations. Though with COVID-19 pandemic the situation has been difficult to be attractive especially to the largest taxpayers especially in Tanzania whereas some key taxes are assessed further prior to their compliance including corporate income tax, value added tax and import duty in the customs.

Regardless of that, several studies have been conducted such that Semboja (2021) examined the effect of COVID-19 pandemic on government revenue in the extractive industry in Tanzania. The study employed survey design whereas quantitative approach was used using secondary data with the findings revealing that there has been increasing level of high perceived risk and negativity in the government revenue collections in the extractive industry and expenditure pattern. The situation is attributed by the fact that the government has focused expenditure most in the health sector to support the interventions regarding the pandemic and its aftermath. Most of the resources targeted to be collected from the mineral sector has been set to finance the mining reforms to attract investors. Regardless of that, though the study focused on extractive industry, it is still essential to conduct assessment towards government revenues on other taxes whereas the inquiry is also conducted towards value added tax, corporate income tax and excise duty.

Stanton et al., (2020) assessed the economic impact of COVID-19 on small businesses. The study conducted in various contexts using comparative approach by means of desk review. Findings revealed that economically small businesses have been greatly affected by the pandemic due to severe lockdowns and curfews leading to automatic disappearance of such businesses. In some countries in the developing world due to economic hardships among individuals for instance Kenya and South Africa, led people to invade and break small businesses such as stealing all that could be found for consumption. This culminated to the destruction of the existing business infrastructures that it has been difficult for some entrepreneurs to recover. Despite that, the pandemic resulted into loss of revenues from small businesses as many collapsed and others are in terrible conditions almost a startup phase which automatically denies revenues to the respective tax authorities. This brings the concern in Tanzania to undertake the study because the pandemic has affected the businesses including largest taxpayers with implication towards government revenues.

In light of these findings from previous empirical studies and theoretical background, the

following null hypotheses were developed and tested by the study:

H1: There is no statistically significant relationship between corporate income tax and government tax revenue collections in Tanzania

H2: There is no statistically significant relationship between value added tax and government tax revenue collections in Tanzania

H3: There is no statistically significant relationship between excise duty and government tax revenue collections in Tanzania

3. Research Methodology

The study was performed through explanatory design by means of causal relationship approach with the knowledge gathered through relationship testing between study variables. The results were gathered using secondary data which were collected from TRA on the respective variables under study both predictors and the dependent variable. The study employed secondary data because it is less expensive and easier to access, and it save time because a particularly good sample of data already exists for coverage of the study period. The information collected comprised the range of 24 months on corporate income tax, excise duty and value added tax. The study analyzed data by using E-View-13 Software where regression model employed. The relationship was described using the model which is conducted based on time series pattern stated as follows.

$$LogGR = \beta 0 + \beta 1 Log\ CIT + \beta 2\ LogED + \beta 3 Log\ VAT + \text{ц}t$$

Where;

GR=Government Revenue

CIT=Corporate Income Tax

ED=Exercise Duty

VAT=Value Added Tax

цt=Error Term

$\beta 0$ =Constant

β_1 to β_3 = Beta Coefficients indicating sensitivity of the variables

4. Findings and Discussion of Results

This section divided into two part where by first part cover descriptive statistics while second part cover regression results and discussions.

4.1 Descriptive Statistics

The study was conducted to examine the impact of COVID-19 pandemic on performance of tax collections in Tanzania. Study descriptive statistics analysis conducted to establish statistical distributions of the study variables whereby mean, median, coefficients of variation,

standard deviation, skewness, kurtosis and Jarque-Bera tests employed. Findings of the study according to table 1 indicating summary of the descriptive statistics on study variables. Findings of the study indicating the corporate income tax with a minimum value of 1.43, with an average value of 8.66 and maximum value of 16.00. Moreover, the excise duty has a minimum value of 0.72 with an average of 1.66 and maximum value of 3.10. Furthermore, the value added tax ranges from a minimum value of 0.95 to a maximum value of 1.50 with an average of 1.15. The standard deviation of Corporate income tax, value added tax and Excise duty are 1.69, 8.41 and 1.39 respectively.

Our findings indicating that corporate income tax as the predicting variable consist of stronger influence to the dependent variable since the variable has higher mean value than the rest. Apart from that, the standard deviation from our study indicate that the variance on the variables of the study is minimal signifying that the information constitutes high level of similarity. The implication of the findings is that government revenue collections in Tanzania among large tax payers has been affected mostly with the corporate income tax generation than value added tax and excise duty. This is supported with many academicians that with large taxpayers in the economy regarding revenue collections by the government the most important revenue that is being targeted is the corporate income tax since it is the tax that is expected to be generated most from the group. On top of that, the tax constitutes high collections which is essential for the government. It varies in terms of its amount since states differ whereas in Tanzania the charge is 30%.

Table 1. Descriptive statistics results

	Government Revenue	Corporate Income Tax	Excise Duty	Value Added Tax
Mean	0.50	8.66	1.66	1.15
Median	0.50	7.02	1.51	1.15
Maximum	1.00	16.00	3. 10	1.50
Minimum	0.00	1.43	0.72	0.95
Std. Dev.	0.51	1.69	8.41	1.39
Skewness	0.00	1.28	-0.57	0.27
Kurtosis	1.00	3.73	2.77	3.30
Jarque-Bera	4.00	7.07	1.33	0.37
Probability	0.01	0.03	0.04	0.03
Sum	12.00	3.99	2.08	2.76
Sum Sq. Dev.	6.00	6.59	1.63	4.48
Observations	24	24	24	24

Source. E-View 13 Analysis of Data (2022).

4.2 Regression Analysis Results

The study was conducted to examine the impact of COVID-19 pandemic on performance of tax collections in Tanzania using corporate income tax, excise duty and value added tax as independent variables, while government revenue a dependent variable. Findings of the study according to table 2 indicate the regression model is statistically significant in explaining

relationships between dependent and independent variables as indicated by R square (79%) and adjusted R square (58%), which is statistical significance at 0.05 levels. This means adjusted R-square indicates 58% of the variation in the dependent variable (government revenue) is explained by the changes in the independent variables. In other words, collectively, the changes in corporate income tax, excise duty and value added tax explain 79% of the variation in government revenue in Tanzania. In contrast, the remaining 21% of changes in government revenue are explained by other factors not included in the model of this study. Thus, it concludes that all the independent variables used in this study collectively are good explanatory variables of government revenue. The implication of the findings is that government revenue collection among large tax payers in Tanzania has been affected towards corporate income tax, value added tax and excise duty as a result of COVID-19 pandemic.

Table 2. Regression results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Corporate Income Tax	8.18	0.67	1.21	0.02
Excise Duty	-0.98	0.14	-0.66	0.01
Value Added Tax	6.28	0.09	0.68	0.03
C	0.49	1.23	0.39	0.04
Robust Statistics				
R-squared	0.79	Adjusted R-squared	0.58	
Akaike info criterion	1.70	Schwarz criterion	1.89	
Deviance	0.10	Scale	0.09	
Rn-squared statistic	4241.26	Prob (Rn-squared stat.)	0.00	
Non-robust Statistics				
Mean dependent var	0.50	S.D. dependent var	0.51	
S.E. of regression	0.53	Sum squared resid	5.52	

Source. E-View-13 Data Analysis (2022).

Table 2 above represents the regression results and the results indicates that corporate income tax collection as the predictor has positive with significant effect statistically on the dependent variable ($P<0.05$) at 5% significance level. The coefficient and p-value of the corporate income tax are 8.18 and 0.02 respectively. Salami (2021) suggest that corporate income tax collection is the revenue that is targeted by governments on large tax payers among many others. Therefore, with the pandemic many entities collapsed and suffered economically which was difficult for governments to gather enough corporate income tax revenues. This caused decline in revenue collections pertaining to income tax in various countries all over the globe both developed and developing states. Since the study indicates that corporate income tax as the predictor is positive with significant effect statistically on the dependent variable ($P<0.05$) at 5% significance level, suggesting that the modal is statistically significant. The empirical results are consistent with the empirical reality modal; therefore, we reject the null hypothesis H1 that there is no statistically significant relationship between corporate income tax and government tax revenue collections in Tanzania during the

COVID-19 pandemic.

Table 2 indicate that value added tax as the predicting variable has been generated positive with significant effect on the dependent variable with P<0.05 at 5% significance level. The coefficient and p-value of the value added tax are 6.28 and 0.03 respectively. The implication of the results is that government revenues collections among large taxpayers has been affected through value added tax collections in Tanzania. The outbreak of COVID-19 in Tanzania has led the government issues partial lockdown leading to closure of schools and universities and issued some restrictions such as social gatherings, sports activities and others. This affected most of the large taxpayers especially those engaged in the production and manufacturing of various goods and services that the situation caused the decline in the businesses whereas the value added tax has been depleted as well as a result of the situation. Apart from that, Milton (2020) also suggested that the outbreak of COVID-19 pandemic affected the value added tax collection from the large taxpayers because they reduce production to a great scale since the situation became tense which automatically had implications on the collection of the tax in particular. The empirical results are consistent with the empirical reality modal; therefore, we reject the null hypothesis H3 that that there is no statistically significant relationship between value added tax and government tax revenue collections in Tanzania during the COVID-19 pandemic.

Furthermore, table 2 above reveal that excise duty as the predicting variable is negative with significant outcome on the dependent variable with P<0.05 at 5% significance level. The coefficient and p-value of the excise duty are -0.98 and 0.01 respectively. The reason for the excise duty to be negatively inversely with the government revenue performance it might be during the COVID-19 some of the excisable industries were having enough stocks of raw materials that continued with production process. As we know the excise duty is paid on goods produced rather than goods sold. Moreover, many countries in different parts of the world-initiated lockdowns and curfews, which severely affected importation of raw materials for the production process. Businesses stagnated and collapsed as a result of lockdowns, many companies and entities suffered severe economic losses. The implication of the results is that government revenue collection among large taxpayers in Tanzania through COVID-19 pandemic has been affected with excise duty collections. The assertion is complemented with Semboja (2021) suggesting that the pandemic indeed culminated into lockdowns and curfews among many nations which brought about restrictions towards importations. Despite that, production of several goods which are luxurious was reduced by the manufacturers as a result of the situation since it had implications to the finances of the users as customers. This in turn affected excise duty collections as well whereas the situation later became culm and the trading activities. The study indicates that excise duty as the predictor is negative with significant effect statistically on the dependent variable (P<0.05) at 5% significance level, suggesting that the modal is statistically significant. The empirical results are consistent with the empirical reality modal; therefore, we reject the null hypothesis H3 that there is no statistically significant relationship between exercise duty and government tax revenue collections in Tanzania during the COVID-19 pandemic.

5. Conclusion and Recommendations

The study was conducted to examine the impact of COVID-19 pandemic on performance of tax collections in Tanzania. Indeed, COVID-19 pandemic has affected tax revenue collections on large taxpayers because most of them in reality are multinational companies which operate from other countries. The COVID-19 pandemic in most countries caused curfew and lockdowns which affected the prosperity of most entities. This has had effect on collections as imports declined which affected the excise duty and value added tax. Moreover, companies reduced most of their operations whereas the corporate income taxes depleted in most cases which affect tax revenue collections. The situation has been difficult towards regaining by the government whereas it is essential for some measures to be undertaken for clarity. With the case of Tanzania though it is certain that the government did not institute curfews and lockdowns in the country as most jurisdictions all over the globe, still with revenue collections pertaining to value added tax, corporate income tax and excise duty collections seems to decline in the manner that has been disadvantageous to the government. This has been caused by the nature of the large entities in most cases that are multinationals that the fall of their entities elsewhere implies the effect on the operations within the entities operating in the country as well.

Our study recommends that the government through tax authority should harmonize the situation pertaining to the taxpayers concerns that it should attract them through either tax amnesty or any other for short period at least to recover economically and continue with tax collections. The study also recommend that tax authority should emphasize on the means and negotiations which may foster the cooperation between taxpayers and the government for the purpose of restoring their position in the collection process. This is useful because more businesses are encouraged without losing taxpayers. The study was limited on the ground that the secondary information consisted of multiple actors including the current and many new entities after the overcome of the pandemic. In that case, a thorough data cleaning was performed to ensure that the reliable data for the study to generate adequate results was gathered and taken for testing to generate the outcome that has been displayed. The research used large taxpayers' department as the case study, therefore our empirical results might not be generalized to other departments such as domestic revenue department and customs and excise department. Furthermore, the study examined the effect of COVID-19 pandemic on performance of tax revenue collection in Tanzania for corporate income tax, value added tax and excise duty. There is a need for further studies to carry out similar tests for other taxes such as PAYE, withholding taxes, service development levy (SDL) and import's duty. A similar study should also be carried out on other departments such as domestic revenue department (DRD) and customs and excise department (CED) within Tanzania Revenue Authority (TRA).

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