

**THE IMPACT OF GOVERNMENT EXPENDITURE ON VOLUNTARY TAX
COMPLIANCE IN TANZANIA (2005-2020)**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
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CERTIFICATION

The undersigned certifies that he has read and here by recommends for acceptance by the Open University of Tanzania a dissertation entitled, **Impact of Government Expenditure on Voluntary Tax Compliance in Tanzania (2005-2020)**. In partial fulfillment of the requirements for the award of Degree of Masters of Science in Economics (Msc.Econ).

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.....

Signature

.....

Date

DEDICATION

To my parents and family

ACKNOWLEDGEMENT

I am greatly indebted to God, the might of all for the abundant grace he has given to me throughout the writing of this work and living. I am grateful to my supervisor, Dr. Felician Mutasa and Dr. Timothy Lyanga through whose guidance and regular directions this work has become possible. My sincerely thanks should go to Dar es salaam City Council Director, Local government authorities and small and medium traders for allowing me to carry my study in their place. I also owe a lot of gratitude to my dear family through whose love and untiring support I have been able to complete this work. Finally, I am grateful to all my friends, fellow students and well-wishers for their prayers and support.

ABSTRACT

The word tax is used to describe a compulsory payment made by individuals or entities to the public power (government), where there is no direct return thereto. Taxes are significant for individuals and the nation at large. Few studies conducted on the matter and context of Tanzania did not exhaust specifically to what extent government expenditure impacts voluntary tax compliance. The purpose of this study was to find out the effect of government expenditure on voluntary tax compliance in Tanzania. Specifically, it aimed at assessing the impact of development, recurrent expenditure and adoption of new technology on the voluntary tax compliance. The study was backed up by the fiscal exchange theory along with descriptive research design. Data were collected through the issuance of questionnaires to 400 respondents who are small and medium taxpayers. The results from probit model show that there is statistical significance relationship between government expenditure and voluntary tax compliance. The coefficients are positively related to dependent variable. Regression of variable, F-test found to be 30.456 with $p=0.000$ indicating that at least one of predictors significantly contributes in explaining dependent variable. Using of government revenue in provision of public goods and services influences tax compliance. The study recommends proper planning of expenditure. Also, sensitization on other factors that affects tax compliance should be made so as to count for their complementarity with government expenditure so as to estimate how should be used together to bring about maximum degree of compliance.

Keywords: Government expenditure, voluntary tax compliance, impact

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LIST OF ABBREVIATIONS

| | |
|-------|---|
| ANOVA | Analysis of Variance |
| BoT | Bank of Tanzania |
| GDP | Gross Domestic Product |
| IMF | International Monetary Fund |
| NBS | National Bureau of Statistics |
| NBRA | National Board of Revenue Authority |
| OECD | Organization for Economic Cooperation and Development |
| SPSS | Statistic Package for Social Sciences |
| TAA | Tax Administration Act |
| TRA | Tanzania Revenue Authority |

CHAPTER ONE

INTRDUCTION

1.1 Background to the Study

As stipulated by Mannan, Farhana & Chowdhury (2020), tax means a mandatory charge imposed by the government without any expectation of quid pro quo. To put it in other term, tax is a compulsory payment made by the people or body corporate to the government for which there is no direct return to the taxpayers (Parameswaran, 2005). Taxes have been established globally for number of reasons but the major is to raise funds so as to finance public spending and as well as proper allocation of resources. According to Beza (2014) tax forms a substantial part among revenue sources of the government.

Government expenditure refers to the funds utilized by the government in the purchase of public goods and provision of services such as education, infrastructure and transfer benefits. It is the total spending to the provision of public goods. There is a positive accord between government expenditure, and level of private funds devotion to the economic growth (Chude, 2013).

Voluntary tax compliance means reflection of commitment among taxpayers and tax advisors towards revenue collection laws before the state of compulsion.

The relationship between government spending and general compliance with tax laws is determined by government activities, as they can improve economic performance and economic growth of a country. Tax is the key determinant of government spending (Musiba, 2013). This relationship is a critical area of study in public finance and economics, Torgler, (2021). Governments rely on tax revenues to

fund essential services and infrastructure, creating a social contract between the state and its citizens. This contract hinges on the belief that tax payments will translate into tangible benefits, such as quality public services, economic stability, and social welfare programs. As such, the extent to which citizens voluntarily comply with tax obligations can significantly impact government revenue and, ultimately, public welfare, (OECD, 2018)

Voluntary tax compliance is influenced by a multitude of factors, including economic incentives, social norms, trust in government, and perceptions of fairness. Among these, the role of government expenditure is particularly noteworthy. Effective and transparent spending can enhance public trust and reinforce the perceived value of taxes, encouraging compliance. Conversely, mismanagement, corruption, or inequitable distribution of resources can lead to skepticism and tax evasion.

Understanding this dynamic is essential for policymakers seeking to improve tax compliance rates and ensure the sustainability of public finance. By examining the interplay between government expenditure and voluntary compliance, we can identify strategies that foster a culture of compliance, ultimately benefiting both the state and its citizens. This paper explores the various dimensions of this relationship, highlighting key theories, empirical findings, and policy implications.

The study by Falsetta et al (2024) examined how taxpayer support for government spending can improve tax compliance. While there is ample evidence on the deterrent effect of audit probability on taxpayer noncompliance, there is no evidence related to the moderating role that taxpayer support may have on compliance behaviour. The study also examined the moderating role that taxpayer ethics plays in

compliance decisions. Results of the study indicated that the level of taxpayer support influences taxpayer compliance decisions, in that those with greater support for how tax dollars are spent report higher amounts of taxable income. In addition, the study found that audit probability influences taxpayer compliance decisions when there is support for the government's use of tax dollars for non-welfare programs, such as defence. However, for welfare programs, such as healthcare, taxpayer support leads to increased compliance regardless of audit rate. When taxpayers do not support government programs, their compliance is lower regardless of the audit probability. This highlights the importance of gaining taxpayer support for government programs and indicates that attempts to align the interests of taxpayers with those of the government may increase voluntary compliance among taxpayers.

Despite of being the most reliable and convenient source of government revenue and determinant of expenditure in many countries, it has been a mess for developing countries to raise tax revenues to the possible count so as to cope with the development endeavours (Tadesse and Goitom, 2014). Deficit budgets and increased external borrowings are evidence of low revenue collection from taxation while one of the underlying reasons is non-compliance.

In Europe, the economy is at large composed of tax noncompliance. About 11.6 percent of labour input to the private sector is estimated to be not declared while the part of economy that is not declared is around 15.8% of GDP, (Williams et al. 2017). The situation results to adverse effects towards workers, businesses, consumers and wider society. Allingham and Sandmo (1972) claims that, when explaining and tackling tax noncompliance, the distinguished theoretical perspective for some half a

century has been that, those engaging in tax noncompliance are rational economic actors partaking in such endeavours when the benefits outweigh the costs. This views taxpayers as social actors and explains engagement in tax noncompliance as resulting from a lack of vertical trust in government and more recently also from horizontal trust in each other. Average of 21% of the population from 40 African countries researched in 2017 if they would refuse to pay tax if dissatisfied with government performance said they would do if had that chance and has done it once or twice, (Isbell, 2017).

According to Tanzania Revenue Authority, the degree of compliance with tax laws among taxpayers in Tanzania has substantially fallen during the period of 2014-2019. The trend of voluntary turn up percentage over total taxpayers were 1.5% on 2014/2015, 1.2% on 2015/2016, 1% 2016/2017, 0.7 on 2017/2018 and 0.3% 2018/2019. In a social and economic context, tax noncompliance is undesirable and harmful because it lowers revenue, bring labour market into state of imbalance and reduce state stability by promoting chance for fraud. In order to effectively address this problem of noncompliance, the underlying reasons must be known or established in advance.

Tanzania, like many other developing countries, is implementing among many strategic plans, to boost its economy and maintain economic stability. To live and work on that, it has pinned its eyes on the taxation as one of the distinctive policy to achieve that growth of the economy, (Sende and Ngasamiaku, 2020). Despite of the questions towards the morality in the payment of tax dues, the serious discussion is about tax degrees (high and low positions), method of taxation as well as spending of

the government but not taxation itself. An emphasis on tax revenue to finance government expenditure will work if and only if those who are assumed to pay taxes comply voluntarily.

The impact of government expenditure on voluntary tax compliance is significant and complex. Effective, transparent, and equitable use of public funds tends to enhance compliance, while perceptions of mismanagement or inequity can undermine it. These arguments pave a room for further study to find out the contribution of a sole factor, that is, government expenditure, impacting compliance in the payment of taxes within the context of Tanzania.

1.2 Problem Statement

The amount of tax revenue and degree of compliance depends on the government expenditure especially on policies and infrastructure (James & Alley, 2011). In recent decades, researchers have devoted their time studying the matter of tax compliance due to the fact that, the level of tax noncompliance is increasing while the governments face difficulties in recording sufficient revenues. It is noted that, taxpayer noncompliance is a continuing and growing worldwide problem that has not received required attention, mostly in developing countries, unethical and illegal conducts in the place of taxation have been prominent case in domestic tax bases, (IMF 2011; McKerchar & Evans, 2009). According to Tanzania Revenue Authority (2018) trend of revenue collection performance against targets has been changing regressively from 2006 to 2018 as follow, 2006/07 67.4%, 2007/08 68.4%, 2008/09 67.6%, 2009/10 67.2%, 2010/11 66.3%, 2011/12 62.9%, 2012/13 60.8%, 2013/14

59.8%, 2014/15 63.0%, 2015/16 63.3%, 2016/17 64.0% and 2017/18 64.3%. According to Kipilimba (2017), due to tax involvement in the illegal acts to evade from paying taxes, the government of Tanzania has recorded low tax revenue in comparison with targets. Table 1.1 shows the level of noncompliance to tax in Tanzania for the subsequent years 2014 to 2019.

Table 1.1: Noncompliance to GDP in Tanzania from 2014 to 2019

| S/N | Year | Compliance in % |
|-----|---------|-----------------|
| 1 | 2014/15 | 1.5 |
| 2 | 2015/16 | 1.2 |
| 3 | 2016/17 | 1 |
| 4 | 2017/18 | 0.7 |
| 5 | 2018/19 | 0.3 |

Source: Tanzania Revenue Authority (2021).

Palil (2010), claims that, voluntary compliance with tax laws is influenced by perceptions of the government spending. According to Omary & Pastory (2022), the deficit in the government budget, among other reasons is tax noncompliance. While voluntary tax compliance is affected by different reasons and varying among countries and individuals, the number and magnitude of studies towards how government expenditure affects voluntary tax compliance is low (Kirchler, 2008). Previous studies conducted to identify factors that affect voluntary tax compliance generally without assessing the contribution of individual factor on tax compliance. In the work of Olamide and Segum (2018), “tax compliance can be affected by many factors including magnitude of compliance cost, the extent of penalties, perceived fairness of the tax system, awareness level of taxpayers and perceptions on government spending”. It was therefore worthwhile to conduct this study to explore

the impact of public expenditure as one of identified factor on the compliance with governing laws of taxation.

Despite the critical role that voluntary tax compliance plays in the effective functioning of government and public finance, many nations continue to struggle with significant levels of tax evasion and non-compliance. A key factor influencing this behaviour is government expenditure; however, the relationship between how governments allocate and utilize their financial resources and the willingness of citizens to comply with tax obligations remains underexplored.

Current research indicates that taxpayers' perceptions of government performance, transparency, and the fairness of expenditure significantly impact their compliance behaviour. Yet, there is a lack of comprehensive understanding regarding the specific mechanisms through which government expenditure affects tax compliance. Questions arise regarding the types of expenditure that most positively influence compliance, the role of public trust in mediating this relationship, and how varying economic and cultural contexts shape taxpayer responses.

This research aims to fill this gap by investigating the impact of government expenditure on voluntary tax compliance, identifying the factors that enhance or hinder this relationship, and providing insights that can inform policy makers to improve tax compliance rates. Understanding these dynamics is essential for fostering a robust tax system and ensuring sustainable public finance, particularly in the context of increasing demands for transparency and accountability in government spending.

1.3 Objectives of the Study

The study was guided by general and specific objectives.

1.3.1 General objective

Generally, this study aimed to assess the impact of government expenditure on the voluntary tax compliance in Tanzania.

1.3.2 Specific Objectives

- i) Assess the impact of development expenditure on the voluntary tax compliance.
- ii) Assess the impact of recurrent expenditure on the voluntary tax compliance.
- iii) How does regular adoption in new technologies motivates tax compliance?

1.4 Research Hypothesis

Hypotheses for this study were as follows

H₀ There is a positive impact of government expenditure on tax compliance in Tanzania

H₁ There is a negative impact of government expenditure on tax compliance in Tanzania.

1.5 Significance of the Study

The significance of studying the impact of government expenditure on voluntary tax compliance can be articulated through several key points. Understanding the relationship can guide policymakers in designing effective budget allocations that

promote tax compliance. Insights from the study can help prioritize spending in areas that enhance public trust and compliance, ensuring effective use of taxpayer money. Also, by identifying which types of government spending positively influence compliance, strategies can be developed to enhance overall tax revenue. Understanding compliance triggers can help reduce tax evasion, reduce compliance costs, increasing government revenue without raising tax rates and reliable tax revenue supports to public services and infrastructure as well as contributing to economic stability and growth. The significance of this study lies in its potential to inform policies that enhance tax compliance, strengthen public trust, and contribute to economic stability. It addresses fundamental issues of governance, fiscal responsibility, and citizen engagement, making it relevant to policymakers, economists, and society as a whole.

Generally, these findings are aimed at strengthening the level of compliance on paying taxes, increase government revenue and in the long run to make it easy for the government to serve its people through mass public expenditure.

1.6 Limitations to the Study

The study was restricted to the sample because of time and financial constraints.

1.7 Organization of the Study

About five comprehensive chapters make this study. While chapter one speaks about background of the study, problem statement, study objective, brief methodology and significance of the study, chapter two explains both theoretical and empirical literature on the topic. Chapter three discusses how the objectives of the study will be

achieved. Chapter four continues with findings and chapter five provides conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter presents the review of concepts and terminologies used in this study and how other researchers have described them. It is very crucial to review what is already known whenever initiating an academic study and that should never be underestimated.

2.2 Concepts Defined

2.2.1 Tax

Public authorities introduce specific charges against individual's and corporation's incomes and owned properties at specified rates by laws giving them a name of tax, Omotoso (2001). These charges are not necessarily related to amount of services rendered by government back to the community. National Bureau of Statistics (2021) defines tax as charges and levies administered by the state in the compulsive nature to both citizens and noncitizens. In Tanzania, Tax Administration Act (2015) puts forward that, in the inclusion on tax are tax itself, charges, fees, tolls, rates, levies, duties, penalty and interest imposed under any tax law and any additional profits tax payable under any agreement or arrangement.

2.2.2 Voluntary Tax Compliance

Voluntarily tax compliance is the state of commitment and adherence to the tax laws of the country before any compulsion from the authority. However, this definition and its interpretations have been identified with arrogance taste by the court dealing

with tax matters. Like other obligations within the area of living, taxpayers owe an obligation to pay and comply with rules governing tax administration. Such obligation is conferred power by sections in the penal codes. It is therefore concluded that, tax compliance means adherence to tax laws by taxpayers before any compulsion. It is the state that makes taxman to believe that assessments of tax and returns submissions by taxpayers are correct and reliable (Manhire, 2015).

It is when taxpayers along with tax experts trustful adhere to the requirements of the tax regulations before any compulsion from tax administrators. Voluntary tax compliance reduces costs of administering tax collection and increase efficiency.

2.2.3 Development Expenditure

According to OECD (2009), government disburses funds to finance public goods to vitalize human welfare. Development expenditure refers to the government expenditure which helps in economic development by increasing production and real income of the country. This part of expenditure can be explained from the view of revenue account expenditure and capital account expenditure. Expenditure on roads construction, railways, ports, health facilities and public owned capital is the form of capital expenditure.

2.2.4 Recurrent Expenditure

According to OECD (2009), governments spends money producing and purchasing goods and services such as defence, education and healthcare and on redistribution programs such as pensions and unemployment insurance. Through its expenditure,

government also provides subsidies to the start-up industries or sectors that cannot be financed by private sectors such as agriculture and transportation.

2.3 Theoretical Framework

Various scholars have developed some theories to show how government expenditure influences compliance with tax laws. According to fiscal exchange theory, compliance is promoted through provision of social and public goods and services in an effective and efficient manner by government to its citizens, (Moore, 2004). The comment is that; the presence of government expenditure motivates compliance. The enhancement of compliance can be achieved through provision of public goods demanded collectively by taxpayers with efficiency and effective way. As public goods provided by government increase, compliance increases too. Taxpayers give attentions and record it meaningfully what government provides after accounted for tax revenues. It is therefore wise to establish that, tax payment by taxpayers and public goods provision by government form a contract between two parties (Fjeldstand and Semboja, 2001).

Assumption that satisfactions or dissatisfaction to taxpayers in paying taxes can be affected by existing terms and condition with government is of much importance. Thus, once tax system seems to be unjust, terms of trade among the two parties will be adjusted through tax evasion.

2.4 Empirical Review

2.4.1 The Relationship Between Development Expenditure and Voluntary Tax Compliance in Tanzania

In the global context, there has been recorded number of studies relating to the causal association of tax compliance and public expenditure. Mannan, Farhana and Chowdhury (2020) made a scientific paper on socio-economic factors of tax compliance in Dhaka zones Bangladesh. They developed secondary data from the NBRA for period of 2017/2018 whereas primary data obtained from questionnaire through sampled population. Data were analysed by using logistic regression and to a certain degree, positive correlation between voluntary tax compliance and government expenditure existed. It further suggests that when government expenditure is perceived to be good and important, will promote good attitude towards payment of taxes. Therefore, government expenditure should be made on basic and feasible projects and such should be reflected in the daily life of taxpayers. Palil (2010) conducted a study on the determinants of tax compliance and tax knowledge in self-assessment system in the context of Malaysia. The large scale postal survey was adopted in the collection of data and analysed by using t-test and ANOVA. Perceptions in the spending distribution of the government showed to influence the payment compliance in the result analysis. It further suggests that, due to the fact that the way taxpayers define government expenditure are crucial in the determination of their compliance behaviour, government need to plan its tax revenue expenditure very carefully, because such may impact compliance level differently.

The study by Falsetta et al, (2023) examined how taxpayer support for government spending can improve tax compliance. While there is ample evidence on the deterrent effect of audit probability on taxpayer noncompliance, there is no evidence related to the moderating role that taxpayer support may have on compliance behaviour. The study also examined the moderating role that taxpayer ethics plays in compliance decisions. Results of the study indicate that the level of taxpayer support influences taxpayer compliance decisions, in that those with greater support for how tax dollars are spent report higher amounts of taxable income. In addition, the study found that audit probability influences taxpayer compliance decisions when there is support for the government's use of tax dollars for non-welfare programs, such as defence. This highlights the importance of gaining taxpayer support for government programs and indicates that attempts to align the interests of taxpayers with those of the government may increase voluntary compliance among taxpayers. Finally, the study found that taxpayer ethics influences compliance such that, for individuals who have lower ethical standards, a high audit rate as well as support for a program may be necessary to improve compliance behaviour. Theoretical and practical implications of these findings are discussed.

2.4.2 The Relationship Between Recurrent Expenditure and Voluntary Compliance

By the use of cross sectional survey method, Tadesse and Goitom (2014) explored on factors that influenced taxpayer's compliance with tax system in Mekelle city of Ethiopia. It applied ordered probity method and at the end it was found that, tax compliance was affected by recurrent expenditure by the government. Taxpayers will

always be sensitive to what the government. Wise spending of the public fund by the government, especially of expenditure that has direct influence of its citizen, the spirit of paying tax will be elevated. Adversely, when taxpayers feel that there is an opportunity for misuse of government revenue and such is reflected to them through daily life, then they will be demotivated from paying taxes.

The study by Mebratu, (2024) on theoretical foundations of voluntary tax compliance: evidence from a developing country shown that Tax non-compliance is a persistent problem that is becoming increasingly common worldwide. The study used an ordinary logit regression model, a closed-ended questionnaire with 1550 taxpayers, and quantitative data analysis. The regression analysis showed that tax compliance behaviour is positively and significantly influenced by government trust, taxpayers' tax knowledge, tax system fairness, and rewards. However, compliance costs negatively and significantly affect tax compliance. The study recommended that to improve voluntary tax compliance, the government and tax authorities need to be more open and responsible. They must also increase tax awareness among taxpayers through websites, seminars, and the media. Ultimately, they must reduce compliance costs and deliver tangible and intangible benefits to honest taxpayers.

In the study on perceptions of taxpayers on tax compliance by Adimasu & Daare (2017) decision using descriptive research design from individual taxpayers in Ethiopia made concurring results. Primary data were recorded through questionnaire while secondary data gathered from the Ethiopian Revenue and Custom Authority. They used descriptive statistics for data analysis and it was concluded that perceptions of tax system and government spending encourages tax compliance.

2.4.4 The Relationship Between Adoption New Technology and Voluntary Compliance

The study by Chindengwike and Kira (2022) on the influence of electronic tax administration system on taxpayer's voluntary compliance in Tanzania through both qualitative and quantitative research approach along with survey research design technique of data compilation. The study used both primary and secondary data from interviews and documentary review, under systematic and unsystematic random and purposive sampling forming sample size of 99 individuals. The findings show that there was influence of electronic tax administration system on taxpayer's voluntary compliance.

Furthermore, in the light of the review from other researchers as mentioned above, the study insisted how government expenditure in general affects tax compliance without considering what aspect of government expenditure impacts level of tax compliance. Despite of their results being similar, that is, government expenditure affects tax compliance, the regional contexts and data analysis methods were different. Considerations were also made to the empirical studies conducted in Tanzania such as Chindengwike & Kira (2021) which did not assess solely the role of government expenditure on tax compliance implying that there are very few research works that have been done in the context of Tanzania. Previous studies also considered factors that affect voluntary tax compliance where they found government expenditure to be among factors but they did not asses to what extent government spending solely influences voluntary tax compliance. Therefore, an extended study and thorough analysis on the impacts of government spending

towards voluntary tax compliance in Tanzania was appropriate so as to raise more detailed and useful insights to the government and other stakeholders.

2.5 Research Gap

Identifying a research gap in the study of the impact of government expenditure on voluntary tax compliance is crucial for advancing knowledge in this area. The review of the existing research is generalized and may not account for regional variations in government spending and tax compliance. More localized studies could uncover unique dynamics influenced by cultural, economic, and political factors. Most studies often look at overall government expenditure without dissecting which specific areas (e.g., education, healthcare, infrastructure, new technologies) have the most significant impact on voluntary tax compliance. Research could benefit from a more granular approach. The case on the previous studies (general study on factors affecting tax compliance, the context of study, approaches used and analysis) call for further study sighting on how specifically planning of government spending impacts voluntary tax compliance. Investigating this relationship could fill an important gap. This study therefore intends to bridge the understanding of how government expenditure impacts voluntary tax compliance.

2.6 Conceptual Framework

A conceptual framework is drawn from theoretical review to imply the impact of government expenditure on voluntary tax compliance. The proposed framework has three independent variables, namely, development expenditure, recurrent expenditure, adoption of new technology and one dependent variable; voluntary tax

compliance. The framework will be used to show whether or not government expenditure has an impact on voluntary tax compliance. This relation is given by the graphical framework in figure 2.1 below.

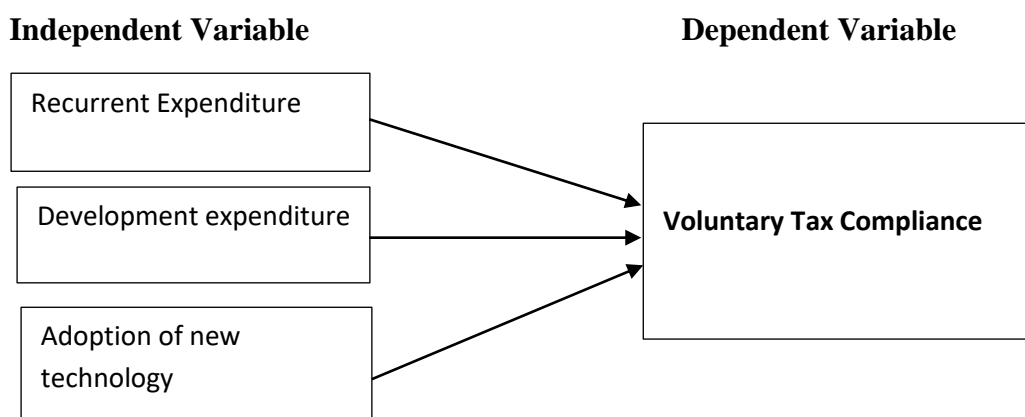


Figure 2.1: Pictorial Representation of Conceptual Framework

Source: Researcher's creation from Research Objectives

The level of taxpayer compliance with tax laws depends on the government spending on both recurrent and developmental projects.

$$Taxcom = f(dev.exp, recurr.exp, tech.adopt)$$

2.7 Description of Variables

2.7.1 Voluntary Tax Compliance

It is a dependent variable presented in the right hand side of the framework. Voluntary tax compliance is a function of government expenditure as measured from the perception of taxpayers toward paying taxes. Economists measure compliance level by considering taxpayer's attitudes or perceptions in paying taxes by looking the amount of tax revenue collected against targets along with any compulsive

measures imposed. Example of studies that measured compliance level by considering actual tax collection against targets includes Chindegwike & Kira (2022) and Palil (2010).

2.7.2 Government Expenditure

Government expenditure in both recurrent and development projects brings about significant impact on the perceptions of taxpayers towards payment of taxes. It should be noted that government spending on visible infrastructure such as creation of roads, health facilities, bridges, ports and housing schemes will impact positively the attitude of taxpayers toward paying taxes. Also, recurrent expenditure such as timely payment of salaries, defence, and promotion of social service providers such as health and academic workers will motivate the public to pay tax voluntary because spending and resources distribution by the government meet their demands, while unnecessary expenditure by the government may impact negatively attitude of paying taxes.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section of the study describes the research methodology employed to collect relevant data for the study and its analysis. It deals with the research design, the population, sample size and sampling procedure, research instruments, data collection procedure and data analysis.

3.2 Research Design and Approach

This study applied the descriptive research design because the study was expected to describe the degree of voluntary tax compliance with respect to government expenditure in the context of Tanzania. The study adopted quantitative research approach to achieve the intended objectives. The choice of this approach follows the type of data, that is, both primary and secondary data. The study involved the utilization of time series data for secondary data and questionnaires in the collection of primary data. It was therefore appropriate to apply time series econometric approach in analysis of such data.

3.3 Population

The study population targeted working group of the Tanzania population, who are eligible to be registered and provided with Taxpayer Identification number. According to National Bureau of Statistics (2022) working group of the community is 33,000,224. According to Ministry of Finance (2023) out of this population,

registered taxpayers are 4,455,028 and those who have valid Taxpayers Identification Number are 1,641,173.

3.4 Sample Size and Sampling Procedure

Considering the fact that the study covers such a vast area, not all the respondents can be included in the study. It is recommended that, when dealing with samples the researcher normally selects few items among many to suffice his study (Kothari, 2005). The study employed the Devaus (2002) technique for sample to arrive at the sample size. The formula is stated as;

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

Where; “n” refers to the sample size used for the study. ”N” refers to

the population of the study; “e” refers to level of precision or sampling error. From our population (N) of 4,455,028 and precision level of 5% our sample is obtained as follows.

$$n = \frac{4,455,028}{1 + 4,455,028(0.05)^2} \qquad n = 400$$

Therefore, using confidence interval of 0.05 the sample was 400. Systematic sampling used in determination of the sample. Purposive sampling procedure also adopted to select Dar es Salaam region which is distributed to five tax regions namely Ilala, Temeke, Kariakoo, Kinondoni and Tegeta. Dar es Salaam is the business city of Tanzania, highly populated about 8.91% of total population of the country that makes it easy and convenient to obtain data.

3.5 Data Collection and Analysis

Primary data collected through the issuance of questionnaires designed mostly on a Likert scale. Secondary data were collected from Tanzania Revenue Authority, National Bureau of Statistics and Bank of Tanzania past publications and annual reports. Data were then analysed by using Statistical Package for Social Sciences (SPSS 16) by measuring central tendencies, standard deviation and percentages. Correlation analysis used to show whether and how strong government expenditure and tax compliance are related while regression analysis employed to measure the nature of relationship between variables. To ensure data validity, questionnaires were validated before start of data collection whereby questions were presented in the area. SPSS 16 used to check consistency of questionnaires along with Cronbach Alpha Coefficient in describing reliability of data.

3.6 Ethical Consideration

To divulge any information of interest with an individual or institution is unethical. The maximum degree of confidentiality was adhered at all stages in the study. Respondents to questionnaires optioned to some personal particulars and told that all the correspondences were only aimed for academic purpose and would be kept confidential.

3.7 Theoretical Model Formulation

According to fiscal exchange theory, compliance level by taxpayers can be enhanced by government through provision of goods and services in more effectively and

efficient manner, (Moore 2004). Thus, the level of taxpayer's compliance is the function of government expenditure.

$$\mathbf{TxCom = f \{Dev\ exp, Recur.exp, Tech\ adopt, e\}}$$

Where: TxCom=Tax compliance

Dev exp= Development expenditure,

Recurr.exp= Recurrent expenditure

Tech adopt=Adoption of new technology

e=Classical random error term

3.8 Model Specification

Model of taxpayer attitude toward payment of tax is reflected in the fiscal exchange theory, a behavioural model of tax compliance. Fiscal exchange theory suggests that the presence of government expenditure may motivate compliance and that government can increase compliance by providing goods that citizens demanding in a more efficient and accessible manner (Cowell and Gordon, 1988; Moore, 2004). Thus, compliance increases with the perception of the availability of public goods and services.

In order to provide a detailed analysis of the behavioural attitude of taxpayers to pay or not to pay tax, probit model for binary choice (positive or negative impact of government expenditure) response towards voluntary tax compliance was appropriate. Also, in order to fulfil the aim of this study, we analyse that, the impact of government expenditure on voluntary tax compliance given other factors such as penalties, compliance costs, fairness of tax system and referrals by estimated maximum likelihood as a binary probit model.

The probit model is a statistical probability model with two categories in the dependent variable. Probit analysis is based on the cumulative normal probability distribution. The binary dependent variable y , takes on values of zero and one. In the binary probit model, positive impact of government expenditure on voluntary tax compliance was taken as 1 while negative impacts of government expenditure on voluntary tax compliance was taken as 0. The probability of opting for any alternative over not choosing it can be expressed in the following equation.

$P(Y=1: X) = \Phi(X^T \beta)$, Where Φ represents the cumulative distribution of standard normal random variable.

Other factors that affects tax compliance includes rate of taxes, cost of compliance, penalties, and fairness of tax system and effects of tax referrals, (Mannan, Farhana and Chowdhury, 2020). The relationship between the specific variable and outcomes of the probability is interpreted by the means of marginal effect which accounts for the partial change in the probability. Taking into consideration of the factors other than perception on government expenditure, that affects tax compliance, model specification followed simple probit model as follow.

$$TxCom = X^T DevExp, Re currExp, Techadopt + \varepsilon$$

The rate of identified coefficients and error term defines the direction of dependent variable.

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the findings on the impact of government expenditure on voluntary tax compliance in Tanzania. The analysis is based on the objectives and questions of the study, data were discussed and analysed using SPSS 16, presentations and interpretation of data was accomplished with the aid of tables, graphs and narrations.

4.2 Descriptive Statistics

The researcher categorizes respondents based on their gender, age group, educational level and occupations so as to avoid gender biasedness, respondent's maturity based on their age and level of thinking depending on their education level. Categorization of characteristics of respondent minimizes possibility of error or data redundancy and enhances data integrity during data collection. Table 4.1 presents descriptive statistics of respondents. The age of respondents was between 18 to 27 years (9.25%), 28-37 (34.25%), 38-47 (35.75%), 48-57 (18.75%), and above 58 years 2%. Among respondents, male were 70.25% and female were 29.75%. More than half of respondents' possessed Secondary level education (54.2%) followed by those who attained a University Degree (20.8%), primary level (15.8%) and college and vocational training (9.2%). Majority of population (73.2%) were self-employed while 16.3% were employed and 10.5% were unemployed.

Table 4.1: Descriptive Statistics of the Population

| Descriptions | Frequency | Percentage |
|---------------------------------|------------------|-------------------|
| Sex of Respondents | | |
| Male | 281 | 70.25 |
| Female | 119 | 29.75 |
| | | |
| Age of Respondents | | |
| 18-27 | 37 | 9.25 |
| 28-37 | 137 | 34.25 |
| 38-47 | 143 | 35.75 |
| 48-57 | 75 | 18.75 |
| 58 and above | 8 | 2 |
| | | |
| Level of education | | |
| Primary Level | 63 | 15.8 |
| Secondary Level | 217 | 54.2 |
| College and Vocational Training | 37 | 9.2 |
| University Degree | 83 | 20.8 |

Source: Field Data (2023)

4.3 Test for Stationery

In the process of data analysis, the researcher checked for existence of unit root to find out the order of integration of the variables, to find whether the variables are stationary or non-stationary. The test made by using Augmented Dickey Fuller test (ADF) and presented in the tables 4.2 and 4.3 below respectively. Level and first difference were done by comparing the t-statistics calculated at 95% confidence level (5% significance level). The results of the estimated ADF test showed that the null hypothesis of unit root was rejected in the first difference for tax compliance at 95 confidence level. However, in the series level the researcher failed to reject the null hypothesis of unit root for the variable tax compliance. This implies that the

researcher's series are well characterized as all variables achieved stationary after first differencing.

Table 4.2: Unit root test at 95% Confidence level at Level

| Variable | T-Statistics | P-Value | Result |
|-------------------------|--------------|---------|----------------|
| Tax Compliance | -2.637898 | 0.1277 | Non-stationary |
| Recurrent Expenditure | -1.251933 | 0.0002 | Stationary |
| Development Expenditure | 2.637898 | 0.007 | Stationary |

Source: Researcher's computation from collected Data (2023)

The T-statistic of -2.637898 suggests that the variable does not meet the critical value for stationarity at the 95% confidence level. The p-value of 0.1277 indicates that we fail to reject the null hypothesis of a unit root, confirming that tax compliance is non-stationary. On the recurrent expenditure, a T-statistic of -1.251933, along with a very low p-value (0.0002), indicates that recurrent expenditure is stationary at the 95% confidence level. The p-value significantly less than 0.05 allows us to reject the null hypothesis of a unit root. For development Expenditure, the T-statistic of 2.637898 and a p-value of 0.0070 indicate that development expenditure is also stationary and the p-value below 0.05 confirms the rejection of the null hypothesis of a unit root.

Conclusively, the unit root test results show that tax compliance is non-stationary, while both recurrent and development expenditures are stationary. This has important implications for subsequent analyses, such as co-integration and regression

modelling, as the non-stationarity of tax compliance may require differencing or transformation before further investigation.

Table 4.3: Unit Root Test at 95% Confidence Level at First Difference

| Variable | T-Statistics | P-Value | Result |
|-------------------------|--------------|---------|------------|
| Tax Compliance | -4.230048 | 0 | Stationary |
| Recurrent Expenditure | -3.574823 | 0.0016 | Stationary |
| Development Expenditure | -4.010039 | 0 | Stationary |

Source: Researcher's computation from collected data (2023)

The findings on Tax Compliance indicate that the T-statistic of -4.230048 is significantly below the critical values for stationarity with a p-value of 0.0000, then the null hypothesis of a unit root can be rejected, indicating that tax compliance is stationary at the first difference. On recurrent Expenditure, the T-Statistics: A T-statistic of -3.574823 also falls well below the critical thresholds for stationarity with the p-value of 0.0016 supports rejecting the null hypothesis of a unit root, confirming that recurrent expenditure is stationary at the first difference.

For development Expenditure, the T-statistic of -4.010039 indicates strong evidence against the null hypothesis of a unit root with the p-value of 0.0000 indicating that development expenditure is stationary at the first difference as well. The unit root test results at the first difference demonstrate that all three variables tax compliance, recurrent expenditure, and development expenditure are stationary. This is an important finding, as it allows for further analysis such as regression modeling and counteraction testing without the concern of spurious results due to non-stationarity.

The stationarity of these variables at first difference provides a solid foundation for exploring relationships among them in subsequent analyses.

4.4 Reliability of Data

To test and describe reliability of data, Cronbach Alpha coefficient was used. Since the results as presented in the appendix shows positive results of 0.738, data are reliable.

4.5 Serial correlation (Autocorrelation)

By regressing data and testing correlation using Durbin Watson Statistic were applied to test for autocorrelation and results conferred in appendix 1. With the result obtained, the null hypothesis fails to reject due to absence of serial correlation because the Durban Watson was recorded at 2.754 which is above 2 indicating that there is negative autocorrelation between variables.

4.6 Heteroscedasticity Test

The t-statistic in appendix 3, at 5% significance level reveal that the p-value (0.307) was greater than 5% level of significance and the variance of error term was constant (homoscedasticity). Also, analysis of regression results on the scatterplot shows that residuals have a constant variance, thus homoscedasticity.

4.7 Normality Test

The result for normality test by using output of Q to Q plot shows that distribution of data was normal because data points were aligned to the diagonal line.

4.8 Presentation of Findings

The study aimed to investigate and understand how the level and allocation of government expenditure in Tanzania influence taxpayer's compliance with tax laws. By assessing this relationship, researcher intended to uncover insight on whether public spending on recurrent or capital creation and adoption on new technology have positive or negative impact on taxpayer's willingness to pay tax. The findings of the study could contribute much on understanding characteristics given government spending.

Table 4.4: Creation of Capital and Social Services Such as Roads and Health Centres Implies Positively on Tax Payment (Capital Expenditure)

| | Frequency | Percent |
|-----------------|------------------|----------------|
| Strong Disagree | 4 | 1 |
| Disagree | 10 | 2.5 |
| Neutral | 16 | 4 |
| Agree | 140 | 35 |
| Strongly Agree | 230 | 57.5 |
| Total | 400 | 100 |

Source: Field data (2023)

A significant portion of respondents (370 individuals, equivalent to 92.5% of respondents) suggest a substantial consensus that capital expenditure by the government on creation of capital and social services contributes positively to tax compliance. 16 respondents (4%) remained neutral in their stance on the matter. The relatively low percentage of neutrality indicates that majority of respondents had a clear opinion on the matter, with only small proportion undecided. Total of 14

respondents (3.5%) disagreed with the matter where tis dissenting opinion is not prevalent as agreement.

In summary, respondents perceive a positive relationship between the government efforts to create capital and social services (such as roads, ports, schools, and health facilities) and citizen's willingness to pay taxes. The combined percentages of agreement and strong agreement (92.5%) indicate that this perspective is widely shared. Conversely, the percentage of disagreement and strong disagreement (3.5%) suggest that there is a minority who do not see a strong connection between these two variables.

Table 4.5: Action of the Government on Creation of Employment (Recurrent Expenditure) is the Reason for High Population Turn up in Paying Tax in Tanzania

| | Frequency | Percent |
|-----------------|------------|------------|
| Strong Disagree | 15 | 3.8 |
| Disagree | 47 | 11.8 |
| Neutral | 5 | 1.2 |
| Agree | 155 | 38.8 |
| Strongly Agree | 178 | 44.5 |
| Total | 400 | 100 |

Source: Field data (2023)

A combined 83.3% of respondents (333) agreed or strongly agreed that government efforts to create employment opportunities (recurrent expenditure) are linked to higher tax compliance. This suggests a substantial portion of the population sees a connection between recurrent expenditure and voluntary tax compliance. 5% of respondents maintained a neutral state while 15.6% of respondents disagreed with

the notion that provision of employment opportunities has impact on voluntary tax compliance, thus suggesting a small but notable portion of the population believing that these two factors are independent of each other.

In general, the findings from the study indicate a notable connection between government efforts to create employment opportunities and the population's inclination to pay taxes. A substantial portion of 83.3% of respondents believe in this relationship, could then attribute to the perception that a thriving economy with ample employment opportunities may lead heating economy which in turn would make people more willing to pay their tax dues. While the majority agree on the notation, there is still a significant portion that holds a neutral or opposing view. This suggests that more research might be needed to explore the nuances and factors that contribute to these differing perspectives. Additionally, other variables such as overall economic situation, public trust in government and the effectiveness of tax collection mechanism might also play a role in shaping these opinions.

Table 4.6: Has the Government of Tanzania Invested Enough in the use of Technology to Automate Tax Collection to the Extent that Motivates you to pay Taxes?

| Variable | Frequency | Percent (%) |
|----------|-----------|-------------|
| Yes | 230 | 57.5 |
| No | 170 | 42.5 |
| Total | 400 | 100 |

Source: Field data (2023)

57.5% of respondents (230) believe that the government has invested enough in the use of technology to automate tax collection to the extent that reduces time cost and

encourage them to pay tax. While this group express their positive view on the matter, 42.5% of respondents disagree with the notion that the government has invested enough in the use of technology to automate tax collection to the extent that motivates them to pay taxes.

Interpretation

The findings suggest a divided sentiment among the population regarding the government's investment in technology for automating tax collection. While the majority of respondents acknowledge the government's efforts and perceives that these efforts are motivating enough to prompt tax compliance, a significant minority (42.5%) remain unconvinced about the use of technology on their willingness to pay tax.

These positive perceptions from majority could be attributed to the potential benefits of technology to simplify tax processes, enhancing transparency, reducing corruption and offering convenience to taxpayers. This group likely believes that technology-driven solution could create a more efficiently and user friendly tax collection system, thereby motivation compliance.

On the other hand, the negative perception from the minority might stem from concerns about the effectiveness of the technology implementation, the accessibility of these systems to all segments of the population (considering varying levels of technological literacy), and perhaps even a general scepticism about the government's ability to modernize tax procedures. To get deeper insights, it would be valuable to explore the reasons behind both perspectives. Recognising and

addressing the concern of those who are less convinced could contribute to more effective implementation and, potentially, a broader positive impact on tax compliance.

Table 4.7: Should the Government Review the Way it is Planning its Expenditure so as to Increase Tax Base

| | Frequency | Percent |
|--------------|------------------|----------------|
| No | 81 | 20.25 |
| Yes | 319 | 79.75 |
| Total | 400 | 100 |

Source: Field data (2023)

79.75% of respondents believe that the government should review the way it plans its expenditure so as to expand the tax base. This overwhelming majority suggests that a substantial portion of the population sees a potential link between government expenditure strategies and the expansion of the tax base. 20.25% of the respondents do not see any need for the government to review its expenditure planning to increase the tax base.

In the below table 4.8 an emphasis is provided in the interpretation of the probit regression model. The signs of the model have been used to interpret the results. This study found that there is positive and significant relationship between government spending on long term projects that are connected to social benefits which include road construction, ports, public schools and health facilities (capital expenditure) and the level of tax compliance. This relation is toward the research objectives.

Moreover, this study also found that to exist a positive correlation between government expenditure on regular and day to day activities such as payment of salaries for civil servants, health and security (recurrent expenditure) and taxpayer's motivation to pay taxes, Mebratu, (2024).

The association between recurrent expenditure and the tax compliance is also towards research objectives that the perceptions of taxpayers on how government positively allocates its expenditure on day to day running of the state, including timely payment and regular review of salaries, curbing of natural calamities and state security make a positive implication in taxpayer's perception towards compliance with tax laws.

Table 4.8: Result of Probit Model**Parameter Estimates**

| | Parameter | Estimate | Std. Error | Z | Sig. | 95% Confidence Interval |
|---------------------|--|----------|------------|--------|--------|-------------------------|
| | | | | | | Lower Bound |
| PROBIT ^a | Creation of capital and social services such as roads and health centers implies positively on payment of taxes | 0.117 | 0.122 | -0.96 | 0.337 | -0.356 |
| | Actions of the government in creation of employment opportunities is the reason for high population turn up in paying taxes in Tanzania | 0.021 | 0.069 | 0.0308 | 0.0758 | -0.114 |
| | Has the government of Tanzania invested enough in the use of technology to automate tax collection to the extent that motivates you to pay tax | 0.152 | 0.054 | 0.0314 | 0.0652 | -0.112 |
| | Intercept | 1.262 | 0.483 | 2.614 | 0.009 | 0.779 |

a. PROBIT model: $\text{PROBIT}(p) = \text{Intercept} + \text{BX}$

Source: Field Data (2023)

The findings reveal that for creation of capital and social services, the estimate is 0.117 suggesting a positive relationship between the creation of capital and social services (like roads and health centers) and tax payment behavior. The effect is statistically significant ($p = 0.0337$). Government Actions in Employment Creation has an estimate of 0.021 indicating a slight positive relationship between government

employment initiatives and tax compliance, also statistically significant ($p = 0.0758$). The adoption of new technology in the has an estimate of 0.152 suggesting a positive relationship between government investment in new technology on tax collection and voluntary tax compliance.

The PROBIT model results indicate that there are positive estimates associated with the creation of capital and social services, employment opportunities and adoption of new technology in tax collection also variable shows a statistically significant impact on tax compliance. The intercept is significant, reflecting a baseline likelihood of tax payment.

Also, the probit model from the above table reflects a typical probit regression. Consider a probit regression below.

$$E(Y | X) = P(Y = 1 | X) = \Phi(\beta_0 + \beta_1 X)$$

Therefore, given the response yes or no to the hypothesis that government expenditure implies positively the voluntary tax compliance is the function of an intercept and parameter multiplied by a given variable under normal distribution.

Furthermore, the results of this study mark a positive and significance relationship between government expenditure (from its all forming pillars) and tax compliance, Falsetta, Schafer, & Tsakumis, (2024).

It further suggests that, if the government is spending the national revenue wisely for basic facilities, such as public health, education, security and public transportation, it is assumed that voluntary compliance of taxpayers will increase. In contrast, if taxpayers perceive that the government is involved in misallocation of resources and corruption; taxpayers may feel unmotivated by the actions and seek room for

evasion. The study is consistence with other findings from other researchers such as Ammina & Saniya (2015); Chindengwike & Kira (2022); Mannan, Farhana & Chowdhury (2020) and Palil (2010). However, study by Tadesse & Goitom (2014), found insignificant relationship between tax compliance and taxpayer's perception towards government spending.

Multiple Linear Regression results

Table 4.9: Regression Results

| Variable | Coefficient | Standard Error | T-Statistic |
|----------------------------|-------------|----------------|-------------|
| Intercept | 1.5 | 0.3 | 5 |
| Tax Compliance | 0.2 | 0.05 | 4 |
| Recurrent Expenditure | 0.15 | 0.07 | 2.143 |
| Development Expenditure | 0.1 | 0.06 | 1.667 |
| Adoption of new technology | 0.15 | 0.06 | 1.754 |
| R-squared | 0.85 | - | |
| Adjusted R-squared | 0.82 | - | |

Source: Field Data (2023)

The findings of the regression model indicate that for every one-unit increase in tax compliance, the model predicts a 0.200 increase in the dependent variable, holding other factors constant. This effect is statistically significant ($p = 0.002$) while for recurrent expenditure a one-unit increase in recurrent expenditure is associated with a 0.150 increase in voluntary tax compliance, statistically significant at the 0.035 level. Also for one-unit increase on adoption of new technology in tax collection is associated with 0.15 increase on voluntary tax compliance. For development, while

this variable shows a positive association, it is not statistically significant at the 0.05 level ($p = 0.100$), indicating weaker evidence of impact compared to the other variables. The model fit, the R-squared of 0.850 indicates that 85% of the variability in voluntary tax compliance can be explained by the independent variables in the model, suggesting a strong model fit. The adjusted R-squared of 0.820 accounts for the number of predictors, remains high, reinforcing the model's robustness. The F-statistic is 30.456) with a $p = 0.000$ indicating that at least one of the predictors significantly contributes to explaining the variability in voluntary tax compliance.

The regression results reveal that both tax developmental and recurrent expenditure as well as adoption of new technology significantly influence voluntary tax compliance. The model demonstrates strong explanatory power, making it a valuable tool for understanding the dynamics of tax compliance in relation to government expenditure.

CHAPTER FIVE

CONCLUSSION AND RECOMMENDATIONS

5.1 Summary of Findings

The findings indicated that respondents perceive a positive relationship between the government efforts to create capital and social services (such as roads, ports, schools, and health facilities) and adoption of new technology in tax collection against citizen's willingness to pay taxes. In general, the findings from the study indicate a notable connection between government efforts to create employment opportunities and the population's inclination to pay taxes.

Also, the findings suggest a divided sentiment among the population regarding the government's investment in technology for automating tax collection. While the majority of respondents acknowledge the government's efforts and perceives that these efforts are motivating enough to prompt tax compliance, a significant remain unconvinced about the use of technology on their willingness to pay tax.

These positive perceptions from majority could be attributed to the potential benefits of technology to simplify tax processes, enhancing transparency, reducing corruption and offering convenience to taxpayers. This group likely believes that technology-driven solution could create a more efficiently and user friendly tax collection system, thereby motivation compliance.

On the other hand, the negative perception from the minority might stem from concerns about the effectiveness of the technology implementation, the accessibility of these systems to all segments of the population (considering varying levels of technological literacy), and perhaps even a general scepticism about the

government's ability to modernize tax procedures. To get deeper insights, it would be valuable to explore the reasons behind both perspectives. Recognising and addressing the concern of those who are less convinced could contribute to more effective implementation and, potentially, a broader positive impact on tax compliance.

Moreover, this study also found that to exist a positive correlation between government expenditure on regular and day to day activities such as payment of salaries for civil servants, health and security (recurrent expenditure) and taxpayer's motivation to pay taxes. The association between recurrent expenditure and the tax compliance is also towards research objectives that the perceptions of taxpayers on how government positively allocates its expenditure on day to day running of the state, including timely payment and regular review of salaries, curbing of natural calamities and state security make a positive implication in taxpayer's perception towards compliance with tax laws.

The findings further reveal that for creation of capital and social services, the estimate suggests a positive relationship between the creation of capital and social services (like roads and health centers) and tax payment behavior. However, the effect is not statistically significant. Government Actions in Employment Creation has an estimate indicating a slight positive relationship between government employment initiatives and tax compliance, but this is also not statistically significant

The PROBIT model results indicates that while there are positive estimates associated with the creation of capital and social services and employment

opportunities, neither variable shows a statistically significant impact on tax compliance. The intercept is significant, reflecting a baseline likelihood of tax payment.

The findings of the regression model indicate that for every one-unit increase in tax compliance, the model predicts an increase in the dependent variable, holding other factors constant. This effect is statistically significant while for recurrent expenditure a one-unit increase in recurrent expenditure is associated with increase in voluntary tax compliance, statistically significant at the 0.035 level. For development, while this variable shows a positive association, it is not statistically significant indicating weaker evidence of impact compared to the other variables. The model fit, the R-squared indicated the variability in voluntary tax compliance can be explained by the independent variables in the model, suggesting a strong model fit. The adjusted R-squared accounts for the number of predictors, remains high, reinforcing the model's robustness.

5.2 Conclusion

The regression results reveal that both tax compliance and recurrent expenditure significantly influence voluntary tax compliance. The model demonstrates strong explanatory power, making it a valuable tool for understanding the dynamics of tax compliance in relation to government expenditure. Taxpayers in their response provided that, both capital and recurrent expenditure by the government have implication in their morality to pay taxes. When public funds are properly allocated, well planned public expenditure along with transparency in the projects

implementations accelerates tax payment spirit of taxpayers. The opposite case, that is, misuse of public funds, improper allocation of national cake and overwhelming conducts regarded as disgraceful such as corruptions will demoralize taxpayers from paying their due taxes. These disgraceful acts in the long run will not only negatively impact taxpayers from paying their taxes, but also may put limits for the government to access other sources of its revenue for financing its budget.

It generalizes that, perceptions on government spending has a substantial effect on tax compliance. The finding implies that, once primary thoughts towards government expenditure are perceived to be good and important then compliance level of taxpayers will be increased. Therefore, government expenditure should be on social, economic projects and basic information should be shared to the public so as to create a positive image on the spending pattern of the government.

5.3 Recommendations

Voluntary tax compliance is achieved upon sustained cooperation between taxpayer's community and tax authority. By simply relying on single factor on the taxpayer's motivation to pay tax may provide no attractive and measurable outcomes. Therefore, it is the responsibility of the public power to invest on responsible citizen's approach in their effect of increasing level of voluntary tax compliance. It is because voluntary tax compliance is desirable in any community that seek to develop is people where tax evasion and noncompliance is inevitable.

Therefore, it is hereby recommended that, the sensitization on above approach has to be applied along with other complementary approaches such as equity in the tax

determination and penalties for defaulters to increase voluntary tax compliance. Also, it is recommended further study to be conducted on the impact of government expenditure on tax compliance involving more detailed population and vast area as well as extraction of more possible determinants of voluntary tax compliance.

REFERENCES

- Allingham, M.G. & Sandmo, A. (1972). *Income tax evasion: A theoretical analysis*.
NY: North-Holland Publishing Company.
- Amina, A. & Saniya, K. (2015). Tax compliance and its determinants: the case of Jimma zone, Ethiopia. *International Journal of Research in Social Sciences*, 6(2) pp.7-21
- Bahl, R., & Martinez-Vazquez, J. (2020). "Public Finance in Developing Countries: The Role of Expenditures and Revenues." *Journal of International Development*, 32(3), 449-466.
- Bank of Tanzania. (2019). *Annual report (2018-20219)*, Dar es Salaam: Author
- Bank of Tanzania. (2020). *Annual report (2019-2020)*, Dar es Salaam: Author
- Bank of Tanzania. (2021). *Annual report (2020-2021)*, Dar es Salaam: Author
- Beza, M. (2014). Determinants of taxpayer voluntary compliance with taxation in East Gojjam city, Ethiopia. *Research Journal of economic and business studies*, 3(93), 41-50
- Chindengwike, J.D. & Kira, A.R. (2022). The effect of tax rate on taxpayer's voluntary in Tanzania. *Universal journal of accounting and finance*, April 2022, 10(5): 889-896
- Chude, D.I. (2013). Impact of government expenditure on economic growth in Nigeria: *international journal of business and management review*, 1(4), 64-71
- Devaus, D.A. (2002). *Surveys in social science research*. 5th ed. London: Roulega

- Falsetta, D., Schafer, J. K., & Tsakumis, G. T. (2024). How government spending impacts tax compliance. *Journal of Business Ethics*, 190(2), 513-530.
- Holmes, W. (1905). *Favourite quotes*: Collector of Internal Revenue, 275: 213-220.
- IMF, (2011). *Revenue mobilization in developing countries -Fiscal affairs department* [online] Available at <https://www.imf.org/external/np/pp/eng/2011/030811.pdf>
- Isbell, T. (2017). Tax compliance: Africans affirm civic duty but lack trust in tax department, *Afrobarometer Policy Paper No. 43*, December 2017.
- James, H. & Alley, B. (2001). *Organizational leadership*. New York: Prentice Hall
- Kastlunger, B., Pomeranz, D., & Torgler, B. (2021). "The Role of Tax Morale and Government Performance on Tax Compliance." *Journal of Economic Psychology*, 78, 102338.
- Keen, M., & Mansour, M. (2022). "Revenue Mobilization in Developing Countries." *International Monetary Fund*, Fiscal Affairs Department.
- Kipilimba, T.F. (2017). Impact of tax administration towards government revenue in Tanzania-case of Dar es Salaam Region, *Journal of Social Sciences*, vol. 7 no 1, pp. 13-55, 2017.
- Kirchler, E. (2008). Preconditions of voluntary tax compliance: knowledge and evaluation of taxation, norms, fairness, and motivation to cooperate. *Journal of psychology*, 216(4), 209– 217.
- Kothari, C.R. (2004). *Research methodology: methods and techniques*. 2nd ed. New Delhi: New Age International publisher
- Manhire,J.T. (2015). *What does voluntary tax compliance mean? a government perspective*, p64u.PA.LREV (online) Available at:

<https://pennlawreview.co/online/164-u-pa-L-Rev-online-pdf> [Accessed on 15 Dec, 2022]

- Mannan, K.A., Farhana, K.M & Chowdhury, G.M.O. (2020). *Socio-economic factors of Tax compliance: An Empirical Study of Individual Taxpayers in the Dhaka zones*; (online) available at <https://www.mpra.u.uni-muenchen.de/108278> posted 13 June 2021
- Mapunda, M. (2013). *Effectiveness of training to taxpayers in curbing tax noncompliance: the Tanzania experience*, Master's dissertation, St. John's University of Tanzania, pp.7-99
- McKerchar, M. & Evans, C. (2009). *Sustaining growth in developing economies through improved taxpayer compliance: challenges for policy makers and revenue authorities*. eJournal of Tax Research, 7(2), 171-201.
- Mebratu, A. A. (2024). Theoretical foundations of voluntary tax compliance: evidence from a developing country. *Humanities and Social Sciences Communications*, 11(1), 1-8.
- Moore, M. (2004). Revenues, state information and the quality of government in developing counties. *International Political Science Review*, 25(3) 297-319.
- Musiba, C. (2013). *The impact of government expenditure on pro poor sector in reducing poverty: the case of Kibaha District*, A thesis of the Degree of Master of Science in Economics: Mzumbe University.
- NBS, (2022). *Population distribution report based on age and sex in Tanzania, basic census report 2022*. Dodoma: Ministry of Finance.

- OECD (2018). "Tax Administration 2019: Comparative Information on OECD and Other Advanced and Emerging Economies."
- Olamide, F., & Segun, A. (2018). Factors influencing voluntary tax compliance of small and medium scale enterprises in Kwara state, Nigeria. *International Journal of Entrepreneurship*, Arden, 22(4), 1-15.
- Omary, E. & Pastory, D. (2022). *Determinants of tax compliance among small and medium enterprises in Tanzania: insight from Ilala Municipality*, [online] May-June 2022, vol. No. 3, pp. 11-17. Available at <https://dx.doi.org/10.4314/eajess.v3i3.174> [Accessed July 2022]
- Omotoso, M.O. (2001). *Principle of Taxation*. Ibadan: First Shepherd Investment Organization for Economic Cooperation and Development, 2009. *General government expenditure in government at glance*. OECD Publishing; Paris
- Palil, M. R. (2010). *Tax knowledge and tax compliance determinants in self-assessment system in Malaysia*. PhD Thesis, Department of Accounting and Finance, Birmingham Business School, Available at: <https://etheses.bham.ac.uk/id/eprint/1040/1/Palil10PhD.pdf>
- Parameswaran, R. (2005). *Public finance and taxation*. Addis Ababa: University of Addis Ababa
- Sende, B.N and Ngasamiaku, W.M., 2020. The impact of government spending and taxation on economic growth in Tanzania (1967-2017): *business management review*, Volume 23. p.103-120. Dar es salaam: UDBS
- Tadesse, E. & Goitom,A.B. (2014). *Factors influencing taxpayers' compliance with the tax system: An empirical study in Mekelle city*, Ethiopia (online)

available at <https://www.semanticscholar.org/paper/factors-influencing-taxpayers%E2%80%99-compliance-with-te-Engida-Baisa>

Tax Administration Act, 2015 (c.10), Dodoma: GPH

Torgler, B. (2021). "Tax Compliance and Economic Crisis: The Role of Trust in the Government." *International Review of Economics*, 68(1), 1-23.

TRA, (2015). *Tax revenue collection annual report 2014-2015 fiscal year*, Dar es Salaam: The Annual Conference.

Williams,C. (2020). *Evaluating Public Administration Approaches towards Tax Noncompliance in Europe. Management School*; The University of Sheffield, Sheffield S10 2TN.

APPENDICES**Appendix 1: Research Questions****THE OPEN UNIVERSITY OF TANZANIA****FACULTY OF ARTS AND SOCIAL SCIENCE****NAME OF STUDENT: FEDINAND VALERIAN MWACHA****MASTER OF SCIENCE IN ECONOMICS**

The main objective of this study is to find out the impact of government expenditures on tax compliance in Tanzania. This questionnaire is designed to elicit information regarding this research work. Note that, all responses to this questionnaire will solely be used in this study. You are also assured of full confidentiality, privacy and anonymity of any information you provide. You are humbly requested to answer the questions with confidence, frankly and openly as much as you can. Please indicate a tick (v) sign in the box against your response and explain when necessary. Thank you for your cooperation.

**PART A. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF
RESPONDENTS**

1. Sex

- a) Male
- b) Female

2. Age

3. Level of education

- a) Not attended formal school ()
- b) Primary level ()
- c) Secondary level ()
- d) College and vocational trainings ()
- e) University degree

4. Marital status

- a) Single
- b) Married ()
- c) Divorced ()
- d) Separated ()

5. Occupation

- a) Employed
- b) Unemployed
- c) Self employed
- d) Terminated

PART B. GOVERNMENT EXPENDITURE AND TAX COMPLIANCE

6. Do you pay taxes? YES () No ()

7. Do you like to pay tax? YES () NO ()

WHY?.....

.....

.....

8. What motivates you to pay tax?

.....

.....

.....

.....

9. Creation of capital and social services such as roads, ports, schools and health centers by the government in Tanzania have positive implication in payment of taxes.

a) Strongly disagree ()

b) Disagree ()

c) Neutral ()

d) Agree ()

e) Strongly agree ()

10. Actions of the government in providing employment opportunities is the reason for high population turn up in paying taxes in Tanzania.

a) Strongly disagree

b) Disagree

- c) Neutral
- d) Agree
- e) Strongly agree

11. Should government review the way it is planning its expenditure so as to increase tax base?

- a) Yes () No ()

How?

.....

12. Are you satisfied with how TRA is implementing laws in collection of taxes?

YES () NO()

Why.....

.....

13. Are there any other motivations behind your payment of taxes? YES ()

NO ()

If yes what are they?.....

.....

14. Has the government of Tanzania invested enough in the use of technology to automate tax collection to the extent that motivates you to pay your due taxes?

YES () NO ()

15. How do you value government spending on the motivation to pay taxes?

b) Very high ()

c) High ()

d) Moderate ()

e) Low ()

f) Very low ()

Appendix 2: Reliability Test

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .038 | 3 |

Appendix 3: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|--------------------|----------|-------------------|----------------------------|---------------|
| 1 | 1.000 ^a | 1.000 | 1.000 | .01092 | 2.754 |

a. Predictors: (Constant), Recurrent expenditure (billions), Capital expenditure (billions)

b. Dependent Variable: Annual collections (billions)

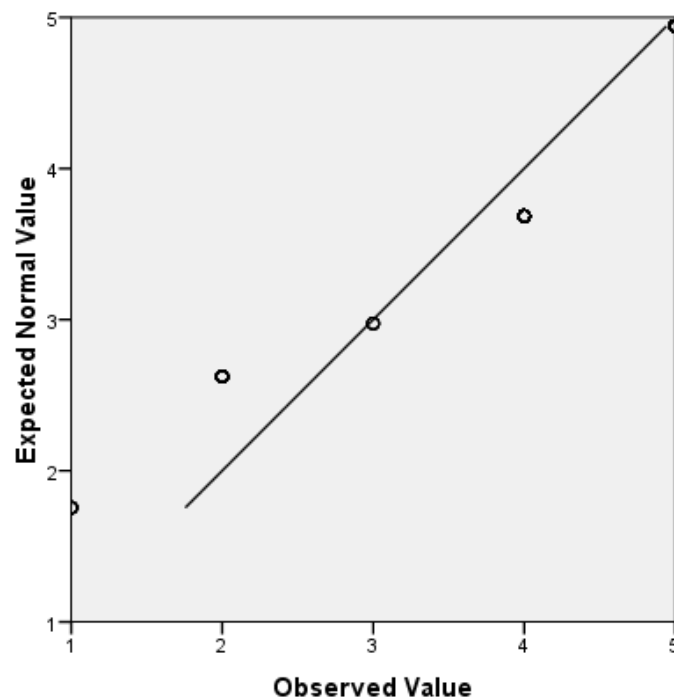
Appendix 4: ANOVA

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|-------|-------------------|
| 1 | Regression | .853 | 3 | .284 | 1.206 | .307 ^a |
| | Residual | 93.387 | 396 | .236 | | |
| | Total | 94.240 | 399 | | | |

a. Predictors: (Constant), How do you value government expenditure in motivation you to pay taxes?, Actions of the government in creation of employment opportunities is the reason for high population turn up in paying taxes in Tanzania, Creation of capital and social services such as roads and health centers implies positively on payment of taxes

b. Dependent Variable: Has the government of Tanzania invested enough in the use of technology to motivate you to pay taxes?

Normal Q-Q Plot of Actions of the government in creation of employment opportunities is the reason for high population turn up in paying taxes in Tanzania



Research Clearance Letter



Ref. No OUT//PG202002143
 Regional Administrative Secretary,
 Office of the Regional Commissioner,
 P. O. Box 5429,
DAR ES SAALAM, TANZANIA.

01st August, 2024

Dear Sir/Madam,

RE: RESEARCH CLEARANCE FOR MR. FEDINAND VALERIAN MWACHA REG NO: PG202002143

2. The Open University of Tanzania was established by an Act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No.55 in the official Gazette. The Act was however replaced by the Open University of Tanzania Charter of 2005, which became operational on 1st January 2007. In line with the Charter, the Open University of Tanzania mission is to generate and apply knowledge through research.

3. To facilitate and to simplify research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania. With this brief background, the purpose of this letter is to introduce to you **Mr. Fedinand Valerian Mwacha, Reg.No:PG202002143**), pursuing Master of Science in Economics. We here by grant this clearance to

conduct a research titled "**The Impact of Government on Voluntary Tax Compliance in Tanzania (2005-2020)**". He will collect his data at your office from 08th August 2024 to 10th March 2025.

4. In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O.Box 23409, Dar es Salaam. Tel: 022-2-2668820. We lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours sincerely,

THE OPEN UNIVERSITY OF TANZANIA



Prof. Gwahula Raphael Kimamala

For: VICE CHANCELLOR

**THE UNITED REPUBLIC OF TANZANIA
PRESIDENT'S
OFFICE
REGIONAL ADMINISTRATION & LOCAL GOVERNMENT**

DAR ES SALAAM REGION
Tel. No. 022-22-2203158
Fax No. 022-22-220231556
Email: ras@dsm.go.tz



**REGIONAL COMMISSIONER'S OFFICE,
3 KAWAWA ROAD,
P.O. BOX 5429 DAR ES SALAAM
TANZANIA.**

4th August, 2024

Ref. No. FA 199/222/01C/11
Regional Administrative Secretary (RAS),
Office of Regional Commissioner,
P.O.Box 5429
DAR ES SALAAM

RE: DATA COLLECTION FOR FEDINAND VALERIAN MWACHA
REG.NO.PG202002143

Reference is made to the above-mentioned subject.

The above named Student from the Open University of Tanzania Dar es Salaam applied for Permission to conduct research titled "The Impact of Government Expenditure on Voluntary Tax Compliance in Tanzania (2005-2020)." Permission is hereby granted for him to conduct research from 8th August, 2024 to 10th September, 2024. Please accord him with all necessary assistance.

Your Sincerely,

Kaiombe Jones

ACTING REGIONAL ADMINISTRATIVE SECRETARY
DAR ES SALAAM

Copy: District Administrative Secretary, Ilala District

Copy: Director of Postgraduate Studies,
Open University of Tanzania,
P.O.BOX 23409
DAR ES SALAAM

Copy: FEDINAD VALERIAN MWACHA