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elections; A case study of Tanzania.**

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Joel Pastory Masomhe
(Tanzania)

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Members of the Examining Committee:

Prof. Dr. Syed Mansoob Murshed
Prof. Dr. Lorenzo Pellegrini

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Inquiries:

International Institute of Social Studies
P.O. Box 29776
2502 LT The Hague
The Netherlands

t: +31 70 426 0460
e: info@iss.nl
w: www.iss.nl
fb: <http://www.facebook.com/iss.nl>
twitter: [@issnl](https://twitter.com/issnl)

Location:

Kortenaerkade 12
2518 AX The Hague
The Netherlands

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List of Acronyms

BOT	Bank of Tanzania
CAD	Capital Account Deficit
GDP	Gross Domestic Product
IMF	International Monetary Fund
MOF	Ministry of Finance
NBS	National Bureau of Statistics
OECD	The Organization for Economic Cooperation and Development
OLS	Ordinary least Square Method
PBC	Political Budget Cycle
UK	United Kingdom
URT	United Republic of Tanzania
USA	United States of America

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Abstract

The purpose of the study is to examine relationship between fiscal deficit and democratic elections in Tanzania. This study is impacted by the fact that the country has experienced extreme deficit levels since inception of democracy, furthermore there has been a perception among individuals experiencing in money supply during pre-election and election period compared to post election period which is also supported by the study done by Therkildsen, Khisa and Msami (2022) reflecting overspending by incumbents to influence votes. The main questions to be answered are. Does political budget cycle exist in Tanzania? What is the effect of re-election by incumbent in relation to political budget cycle?

The study made use of a variety of data bases, including international data sources from the IMF data mapper and local data using information gathered from various government agencies across the country. However, because the local data set contained structural breaks for variables like fiscal deficit and gross domestic product, therefore international data sources were examined due to consistency. The key findings suggest presence of political budget cycle in Tanzania; however, it had a minimal impact due to low level of expenditure as a result of resource constraints to raise funds. This was supported by both the pre-election and election year scenarios. Although, this was not the case for incumbents running for re-election, where the electoral year variable indicated that incumbents were fiscal conservatives while the pre-election year variable indicated that there was no relationship between incumbent running for re-election and the political budget cycle.

In summary, the results suggest the presence of a political budget cycle, although its impact is relatively minor ranging from 0.5 to 1.7 percent, making policy implications unlikely. However, given the country's sustained economic growth, this will offer a dilemma because the political budget cycle will become more salient. Therefore, in order to limit the political budget cycle impact, future tracking of expenditure by evaluating the structure of spending pattern would be necessary.

Relevance to Development Studies

Political budget cycles have been a source of debate, since the beginning of democracy, particularly in the field of development. Democracy has been considered as a step forward for developing countries to achieve development and also it has proven to be successful in developed countries. Most of the developing countries like Tanzania are practicing democracy through democratic elections. However, the election process and outcomes have been marred by several irregularities, including the employment of fiscal measures in order to influence the outcome. Given the increase in the use of fiscal measures in election period and limited body of literature in Africa and developing countries. The findings of this study will encourage a dialogue on the repercussion of fiscal policies on democratic elections in the field of academia and help policymakers formulate policies that will strengthen democracy by reducing fiscal influence.

Keywords

Fiscal Deficit, Democratic Elections, Political budget cycle, Democracy, Fiscal Policy, Tanzania.

CHAPTER 1: INTRODUCTION

1.1 Nature of the study

The paper seeks to shed light on the existence of a political budget Cycle and the effect of re-election in relation to political budget Cycle in Tanzania by examining the correlation between fiscal deficit, democratic elections and prospects of re-election of an incumbent. The political budget cycle refers to the periodic increase in government expenditure or deficit levels, and reduction in government revenue as it approaches to the election or pre-election period mainly driven by political motives especially when the incumbent seeks to be re-elected. Currently, the world has been witnessing increase in political influence on important economic decisions to be made. Moreover, majority of economically realized solutions are employed for political gains. This has been primarily experienced more in developing nations as opposed to developed countries. Additionally, we are currently witnessed military coups in countries like Niger and Gabon, as well as failed coups in Sierra Leone and Sudan, just within the year 2023, despite the fact that most of these countries presently practise democracy through democratic elections.

Prior to the adoption of democracy in Tanzania, socialism was the main system of governance. During this time, the country had a minimal fiscal deficit, but the trend had shifted dramatically after democracy was adopted. Does this suggest that the fiscal deficit is associated to democratic elections or democracy in general? This study seeks to answer the above question by factoring in economic and political variables influencing fiscal deficit in the model to assess whether a political budget cycle exists in the country.

1.2 Justification of the study

There have been numerous studies that explain the relationship between fiscal deficit and other economic indicators in both developed and developing countries. However, studies on the relationship between fiscal policies and political regimes (democracy) in developing countries are limited as compared to developed countries. It should be noted that many African countries adopted democracy later than the majority of the developed countries, with the first democratic election in the United States of America (USA) taking place in 1788 and Tanzania's first democratic election taking place in 1995. Furthermore, the structure of government sizes in developing countries such as Tanzania has contributed significantly to the narrow scope of the political business cycle. In comparison to developed countries, most

low- and middle-income countries have smaller government sizes. Consequently, the political budget cycle has little effect because of the low level of spending relative to GDP. East African Community (EAC) member countries had an average expenditure to GDP ratio of more than 20 percent in 2012, owing primarily to large financial assistance received by Burundi from donors (Gupta and McHugh, 2015). As of 2021, Tanzania's expenditure to GDP ratio is 17.5 percent which is below the average for the lower middle-income country.

Despite the aforementioned, a number of studies have shown that political budget cycle is more prevalent in developing nations than in developed nations. According to Svensson (2002); and Alesina, Roubini, and Cohen (1997), there is no correlation between a budget deficit and an incumbent getting re-elected in developed countries. Additionally, it was later discovered that the United States' growth and unemployment rate did not follow political business cycle (Alesina, Roubini, and Cohen; 1997). While, Shi and Svensson (2006) observed that, in contrast to developed countries, developing countries witnessed an increase in budget deficits during election years.

Therefore, this study will add to the body of knowledge on the political budget cycle for developing countries, using Tanzania as a case study.

1.3 Background of the study

1.3.1 Tanzania overview

Tanzania came into existence in 1964 as a union of two nations, Tanganyika and Zanzibar. Through constitutional means, Tanganyika attained independence in 1961, while Zanzibar did so in 1964 through a revolution. The two nations later came together to become the United Republic of Tanzania in the same year. Since its founding, the United Republic of Tanzania has adhered to socialist ideas influenced mostly by China, Cuba, and the formerly Union of Soviet Socialist Republics (USSR). The preceding was reflected in the country's policies, including the Socialism and Self-Reliance and the Arusha Declaration of 1967 (Okoko, 1987). Tanzania suffered economic difficulties during 1970s, including the first and second global oil crises, the collapse of the East African Community (EAC), and the Uganda-Tanzania war, which led to depreciation of the Tanzanian shilling relative to the US dollar (USD). As a result, the International Monetary Fund (IMF) implemented its first structural adjustment program (SAP) in 1985. Tanzania shifted her political stances after the fall of the

USSR at the end of the 1980s, abandoning socialist ideologies and embracing democracy like the majority of African nations at the time.

1.3.2 Emergence of democracy and democratic elections.

Tanzania was one of many African nations that came under pressure to move toward democracy in 1990; as a result, the nation enacted a new constitution in 1992 that permitted a multiparty system (Tambila, 1995). Thereafter, Tanzania had her first democratic elections in 1995. Since then, the country has upheld a multiparty system and conducted general elections every five years. Tanzania, like many other African and Latin American countries, implemented presidential democracy following the successful adoption of democracy in 1990, as compared to other countries in Europe that practised parliamentary democracy, such as the United Kingdom. Whereby, the president is the leader of the government and state, there is a clear separation of power between the three branches of power (legislature, executive, and judiciary) to prevent the power struggle between the organs, and the president serves a fixed number of terms. For instance, in Tanzania, the president is limited to two terms of office, each lasting five years. Both local and general elections have been conducted in the country, with local elections taking place a year before the general election. Local elections were held all around the nation, but the candidates who would represent the voters in each location were divided into groups based on the region's economic standing. Town, municipal and city authorities are in charge of administering elections in urban areas, whilst village and township authorities are in charge of doing the same in rural regions. This only pertains to Tanzania's mainland, and not Zanzibar archipelago.

The Local Government (District and Urban Authorities) Act of 1982 (Commonwealth Local Government Forum (CLGF), 2018) and Article 145 of the constitution both state that the Ministry for Regional Administration and Local Government, which is under the prime minister's office, is responsible for overseeing the local elections. The president and members of the national assembly are chosen in the nation's general elections. The National Election Council (NEC) is in charge of overseeing these elections, and unlike the president, members of the national assembly do not have term limits. In presidential elections, the country adopts a plurality voting system as opposed to a majority voting system, with the winner determined by the number of votes received in comparison to other candidates.

Table 1: The list of Tanzania's general elections since 1995

National Elections	
Number of Elections	Election year
1 st	29.10.1995
2 nd	14.12.2000
3 rd	14.12.2005
4 th	31.10.2010
5 th	25.10.2015
6 th	28.10.2020

1.3.3 Evolution of fiscal deficit

According to the System of National Accounts (SNA), fiscal deficit is defined as the difference between government revenues and expenditure, whereas primary deficit is the same difference but excludes net interest payments (i.e., interest payments minus interest receipts) (OECD, 2017). This paper will concentrate on both the variables, when possible, to evaluate its impact.

During the early years of country's independence, the total budget deficit was generally low due to prudent spending in both recurrent and development expenditures. This was reflected by the low salaries and wages paid to government employees at the time, as well as the low number of social services and infrastructure expenditures. Additionally, the nation had embraced a socialism and self-sufficiency program, indicating a greater reliance on domestic income sources rather than external borrowing. The economic turmoil did, however, impact the country's fortunes, and the fiscal deficit started to rise.

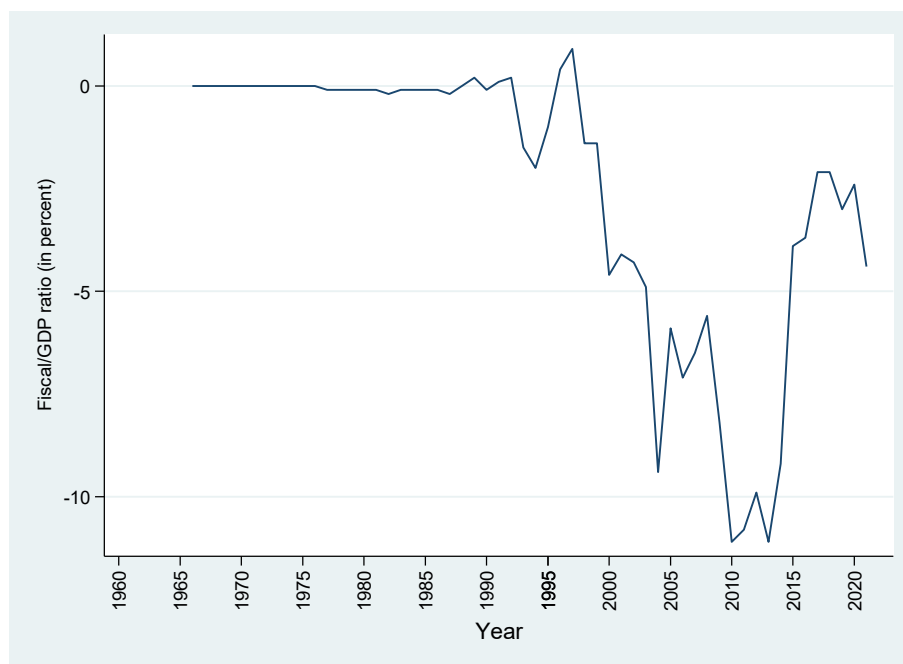
The below listed are the reasons for the country's increased fiscal deficit.

- a. The First and Second energy crisis in 1973/74 and 1978/79: Increases in energy costs caused the country's expenditures to rise while domestic revenue remained flat, resulting in an increase in the deficit. To counteract this, the country sought external support in the form of loans and aids. Additionally, the country implemented quantitative easing which had resulted in a worsening of the balance of payments and debt accumulation (URT, 1999).
- b. The collapse of East African Community (EAC) in 1977: Tanzania, Kenya, and Uganda were the countries that founded the EAC. As a result of colonial relations, these countries shared physical and economic infrastructures such as the Currency Board, communication, and transportation systems (Eken, 1979). The demise of this

community resulted in trade diversion across countries, which harmed Tanzania's economy.

- c. The Uganda Tanzania war (Kagera war): During the second energy crisis Tanzania had an armed conflict with Uganda which had resulted to a war that lasted two years 1978/79 (Roberts, 2014). This meant that most productive operations had ceased, and government spending on military supplies had increased. As a result, the country contracted loans in terms of commodities such as crude oil from countries such as Iran, Kuwait, and Libya. As of yet, these debts have not been settled in full.
- d. Bad spending by government on the nationalized public companies: From 1967 to 1970, the country began implementing her Nationalization strategy, under which numerous privately owned firms were nationalized (Dias, 1970). Following the takeover, the government invested substantially in those enterprises through subsidies and other incentives, but the results were unpleasant. These companies were unable to produce the desired results due to corruption and poor fund management. Later, in the 1990s, the country shifted its focus to privatization, with "approximately 270 public enterprises divested by 1998" (Baylis 1999, p. 153).

Figure 1: Tanzania trend ratio of Overall Fiscal Deficit to Gross Domestic Product (GDP) in Percentage from 1964 to 2021.



Source: Ministry of finance and Bank of Tanzania

1.3.4 Political budget cycle effects on democracy and election results in Tanzania

There are numerous situations in developing countries where political decisions have influenced economic policies to be pursued in various countries, and Tanzania being among the said countries therefore it is not immune to the political budget cycle. The employment of expansionary fiscal policies during election and pre-election years has some way being experienced in the country. Furthermore, presence of relatively weak institutions makes it simple for the government to implement the aforementioned policies due to a lack of effective mechanisms to promote openness and accountability on government operations. There has been a perception among the country's citizens that money supply has been higher during pre-election and election years compared to post-election times. The aforementioned has been supported by a study conducted by Therkildsen, Khisa and Msami (2022) on Tanzania and Uganda for the elections done in 2015 and 2016 respectively. It shows that the amount of funds spent by candidates vying for political office such as president and membership in general assembly had increased dramatically, and incumbent candidates (parties) spent more than the opposition. The study becomes even more intriguing given that the ruling party has consistently won the national elections for presidential candidate and also has the majority number of the members in the general assembly since the inception of democracy and therefore this may be viewed as a tactic employed by the ruling party against the oppositions. Despite the fact that the number of candidates from political parties running for presidency has increased. For instance, in the year 1995, there were only four candidates running for presidency, however in the year 2020, the number increased to fifteen (15).

1.4 Research objective

The purpose of this thesis is to investigate whether a political budget cycle exists in Tanzania. This will help us understand whether the increase in the country's fiscal deficit is primarily due to political factors such as adoption of new system of governance that is democracy or is purely on economic factors such as economic growth, inflation and debts.

1.4.1 Research questions

- a. Does political budget cycle exist in Tanzania?
- b. What is the effect of re-election by incumbent in relation to political budget cycle?

1.4.2 Risks, ethical challenges and limitation of the study

There are discrepancies in data between international organisations and local government entities. This might be the as a result of data revisions as well as difference in computation techniques used to produce the various statistics that will be used in the study. Following the revision of Tanzania's Statistical Act of 2015, the World Bank released a statement not agreeing with the reforms as they were against international standards and could jeopardize data quality and reliability. Furthermore, because high frequency data such as quarterly data could not be obtained from the local dataset, notably for the period of 1990s and early 2000s, the analysis will employ annual data.

1.5 Chapter overviews

The study will be divided into five sections: Nature, background and relevance of the study, research objectives and questions in Section 1, literature review in Section 2, methodology and data used in Section 3, estimation of the results in Section 4, and the conclusion and policy recommendation (relevance) in Section 5.

CHAPTER 2: LITERATURE REVIEW

2.1 Political Budget Deficit Models

In many developing countries, most nations started experiencing large deficits after the adoption of democratic system. Therefore, budget deficit has been considered as the practice of democratic governments since fiscal measures implemented were done to influence voters' preferences. There has been a general belief among people in developing countries that regimes in power have been using fiscal policies, to increase their chances of being into power and getting re-elected in for the next term in general elections. According to Ebeke, C., & Ölçer, D. (2013), significant government expenditure prior to elections, is usually accompanied by crippling severity in low-income nations. Years after elections are dominated by an attempt to partially restore fiscal buffers, often at a cost. This is always reflected in increased spending and deficit levels during election years, whereas post-election year expenditure decreases and affects the majority of development expenditures. Furthermore, governments have a tendency to wait until the end of an election cycle before engaging in IMF assistance programmes which regulate government expenditure and borrowing. This has also been supported by few studies which have been done mostly across the world in different countries. However, the main shortcoming in most empirical literatures, including this paper, is that the focus has been on growth in domestic revenues, expenditure and deficit levels during the pre-election and election period rather than the relationship between expansionary fiscal policies or improved performance of different economic indicators (reflected by the use of fiscal policies) and increased in the likelihood of an incumbent being re-elected. As a result of the absence of evidence for a political budget cycle, most of the researchers have largely concentrated on fiscal aggregates such as different levels in deficit, expenditure and taxes over the period under examination to demonstrate the presence of a political budget cycle.

2.1.1 Political budget cycle models

Among the early theories developed in political economy works in political budget cycle (PBC) was developed by Nordhaus (1975). This was the earliest theory, which gave rise to the present modern theories of the political budget cycle, and was solely based on human behaviour in relation to the cycle. According to Nordhaus a political party or incumbent or government was likely to employ fiscal policy to maintain power or win another term. This can be achieved by temporarily stimulating the economy through increase in government spending at or close to election times in an effort to influence citizens to vote for them.

According to this theory, voters are naïve and myopic; and don't often consider the future while casting their ballots, and tend to focus on the past events. Nordhaus' irrational stance was based on the time preference nature of the voters, where by most voters had a preference to maximize current benefits at expense of the future benefits, despite the fact that future benefits may be more advantageous than current benefits. Because voters would choose to cast their votes based more on the now than on considerations for the future, Nordhaus believed that this demonstrated the irrational nature of voters. This viewpoint is backed by Brender and Drazen (2008), who explain reasons why fiscal manipulation, particularly expansionary fiscal policy, may lead to incumbents having a high probability of re-election. First, expansionary fiscal policies are related with economic boom, which may result in the incumbent being re-elected. Second, expenditure-based targeting of a specific set of people may increase votes from that group of people. Finally, most voters focus on the government's increased spending and low taxes in order to vote for the incumbent. Also, Drazen and Eslava (2006) defined the government as a small group of people entrusted with the management of public funds. The same group of people decides to use public funds to influence voter decisions and getting re-elected through increase in public spending during pre-election and election period. Furthermore, Klomp and De Haan (2013) identified a link between increases in government spending and the likelihood of an incumbent being re-elected, demonstrating that the political budget cycle is consistent in many developing countries despite a variety of reasons for it to occur. This provided support to a previous argument by Frey and Schneider (1978a, 1978b) on an upward trend in spending levels by the government around election times, as observed in the United States and the United Kingdom.

Later, the viewpoint shifted from Nordhaus' irrational voting behaviour to rational voting behaviour which mainly focus on the competence of the candidates. The most recent models have placed a greater emphasis on the function of information asymmetry in understanding political budget cycle, as well as the significance of signalling as a driving force. As a result, the concept of moral hazard and adverse selection were incorporated into the political budget cycle. Although there has been improvement from irrational to rational voting behaviour perspective, the conventional opinion remains the same: incumbents tend to employ fiscal measures to be re-elected, and people will assess leaders' capacity based on the performance of economic indicators.

According to Rogoff and Sibert (1988), adverse selection can be explained by political candidates exhibiting a level of skill known only among peers but not among voters. As a

result, high-competence politicians may have an incentive to demonstrate their ability to voters by manipulating fiscal policies and increasing expenditures on items that can be seen by voters rather than investing in long-term projects whose effects are difficult to recognise. As a result of the candidate signalling to the voters, it creates an information asymmetry regarding the candidate's ability. However, for the adverse selection theory to hold, both politicians and voters must be rational and strategic, and fiscal policy must be manipulated through government-controlled mechanisms.

Furthermore, Shi and Svensson (2003) addressed the idea of moral hazard by assuming that each candidate possesses skills that neither his colleagues nor the voters are aware of. Voters are rational, yet they prefer to vote based on observable macroeconomic performance. As a result, in order to be elected, incumbents may use unobservable variables such as debt to improve public benefits. The main notion is that the government may employ a policy tool that is not readily apparent during that time period to serve as a substitute for the candidate's ability and expertise.

Most of the earlier studies considered political budget cycle to be a concern for developing countries as also identified by Brender and Drazen (2005). Which was also supported by studies done by Schuknecht (1996) and Block (2002) using a sample of 35 developing countries from 1975 to 1992 and 44 Sub-Saharan African countries respectively demonstrated the presence of a political budget cycle; furthermore, the later study by Block demonstrated the magnitude of the impact to worsen overall deficit by 1.2 percent in African countries during election years. Nonetheless, other studies have shown that the political budget cycle exists in both advanced and developing economies. This negated the idea that political budget cycle was a concept for developing countries only. According to Shi and Svensson (2006), a study including 85 advanced and developing nations from 1975 to 1995 revealed that the overall budget deficit rose substantially in the pre-election year. Additionally, Persson and Tabellini (2003) report involving 60 countries from 1960 to 1998 also discovered presence of political budget cycle in form of substantial reduction in taxes during the period before the election. Contrary to that, Brender and Drazen (2005a) asserts that the presence of the political budget cycle in the dataset used was due to the fact that countries with new democracies were also involved in the analysis, after excluding the countries with new democracies then presence of political budget cycle was not observed. This implies that political budget cycle has a huge impact on countries with new democracies in both developed and

developing countries. Thus, implying the cycle is stronger in the country with weaker democracy.

2.1.2 Political and Institutional models

Apart from the influence of political budget business cycle, as explained by Nordhaus' irrational voting behaviour and information asymmetry, political budget deficit models can be explained by political and institution models. According to Brender and Drazer (2004:9), the country's age of democracy affects the use of fiscal measures to influence election results. According to Brender and Drazen (2005a), countries that were late adopters of democracy political budget cycles were more common compared to early adopters of democracy, however the trend has been declining over time. It was also discovered that incumbents are more likely to use fiscal policy measures to boost their chances of re-election in countries that are late adopters than early adopters of democracy. Furthermore, Crain and Ekelund (1978) proposed that, democratic governance is more frequently linked to political budget cycle than non-democratic government. The competitive and uncertain nature of democracy in terms of re-election prospects results in democratic countries to increase their expenditure and deficit level as compared to non-democratic countries. In an undemocratic system of governance, political leaders have little incentive to act in accordance with voters' wishes or in an effort to win their favour, which minimizes the budget deficit and excessive expenditures associated with democracy practise. Furthermore, voters are not involved in the decision-making processes and choice of their political leaders, as well as distribution of goods and services to the public. Therefore, it can be said that there is a relationship between democracy and fiscal deficit.

2.2 Re-election prospects

The notions of how white elephant projects came to be are the basis for several theories relating the incumbent's prospects of getting re-elected, according to Robinson and Torvick's (2005) study. The majority of the initiatives classified as "white elephant projects" share the trait of being politically alluring but not socially desirable. The theories behind these works on the white elephant see this first and foremost as a transaction between voters and candidates, where the incumbent benefits more because he or she is still in office and has the power to influence decisions like signing contracts to complete the bargain on his side. Adverse selection plays a significant role in government policy formulation and implementation because policy and decision makers have access to knowledge that the general public does

not. Furthermore, adverse selection in the context of executing white elephant projects bound the electorate to the leader who initiated the project, compelling them to vote for the leader repeatedly because these initiatives will not be implemented if the incumbent is not voted back. As a result, electoral outcomes are manipulated through policy, particularly in Africa's white elephant initiatives. Despite of that Alesina (1988) portrayed that Politicians usually have a tendency to struggle when employing various policy tools to gain the votes, which is due to the difficulties encountered when utilising policy instruments to increase the share of votes, which in turn results into ineffective resource allocation. The aforementioned helps to partially explain why there are white elephant projects in the context of developing countries.

Unlike other political economy models, this theory's core assumptions regarding candidates and politicians are different. In doing this, we make the assumption that candidates are not exclusively partisan or opportunistic. This implies that although a candidate's actions may be influenced by both their own interests and the interests of the organisation they represent, personal interests are nevertheless likely to play a significant role in those decisions. Furthermore, it is anticipated that voters will reflect a range of political ideologies and social groups; yet, this does not guarantee that every voter will support the candidate from their particular group.

Politicians may choose to carry out white elephant projects in their stronghold or the stronghold of the opposition leader in an effort to boost the number of votes cast for the incumbent from the side where the project will be implemented. Sometimes it makes more sense to implement white elephant projects than economically feasible and efficient ones. Consequently, incumbents trade electoral successes for anticipated profits from successful projects. According to Barkan and Chege (1989) study on Kenya, analysing the expenditures made by the former Kenyan presidents in their different strongholds on road improvements between the two administrations of Kenyatta and his predecessor Moi. After Moi was elected, the percentage of investment on road construction in Kenyatta's stronghold decreased from 44 to 28 percent in one year, and then to 16 percent after six years. Expenditures in Moi's stronghold increased from 28 to 38 percent and ultimately to 67 percent. This suggests that whenever there is a shift in power, the majority of previous projects are put off and new ones are launched.

Furthermore, major infrastructure projects were constructed in Tanzania during the late President Dr. John Pombe Magufuli's first term in office. These projects, most notably

the Standard gauge and Stiegler's Gorge projects, aimed to improve the flow of imports from the port of Dar es Salaam to neighbouring landlocked countries and the supply of reliable electricity, which was a major concern when Magufuli took office. However, because to their apparent high costs, lack of economic feasibility, lack of transparency in their execution, potential impact on the environment, and relocation of the indigenous population in the area, these projects encountered strong opposition from different civil society organizations (CSOs) and opposition political parties. Harvey (2020) claims that the attempt to construct the massive project (Stiegler's Gorge) was motivated by legacy building and popularity. The project was first envisaged in 1972 but was never carried out because of the high operating costs. Even the World Bank no longer supports the construction of the large dam projects, but Magufuli chose to finance it with local resources. During the incumbent's re-election campaign, one of the primary selling points for Magufuli's re-election as president was the launch of the aforementioned projects. According to TanzaniaInvest (2023), the project's implementation leaned to connect the lake zone, which is located in the country's northern region, as well as neighbouring countries such as the Democratic Republic of the Congo, Rwanda, and Burundi. It is noteworthy that phase five of the Standard Gauge Project, which ran from Tabora to Mwanza, was chosen above Phase Six, which ran from Tabora to Kigoma. Although Phase Five would only serve lake zone and Uganda which was not financially rewarding compared to Phase six which would serve countries such as the Democratic Republic of the Congo (DRC), Rwanda and Burundi. Despite the fact that Mombasa Port in Kenya provides an alternative option to Dar es Salaam Port in Tanzania based on the distance covered to transport the imported materials to Uganda, countries such as DRC, Rwanda, and Burundi rely solely on Dar es Salaam Port. Nonetheless, execution of phase five had been chosen ahead of phase six. Political considerations played a significant influence in the choice to prioritise phase five because the region appears to be President Magufuli's birthplace and stronghold. Furthermore, the lake zone has a history of high voter turnout during elections. This type of investment may be referred to as political meddling, vote buying, patronage, or nepotism since, should the incumbent lose re-election, there may be changes in the distribution of resources and project execution. This illustrates how the execution of massive infrastructure projects in developing countries such as Tanzania ends in white elephant projects that are used for political benefit. Nugent (2018) argues that although carrying out these massive projects is essential for a country's development, there is a higher risk involved if they are not carried out properly, particularly when done for political rather than economic motives.

Apart from the idea of white elephant projects on explaining re-election prospects, there is another category of literatures done which is similar to political budget cycle and almost the same idea to that, which solely focused on re-election of an incumbent and increase of expenditures on election or pre-electoral year. However, a significant amount of research exhibits a relationship between economic performance indicators (fiscal variables) and an incumbent's re-election prospects, and none of the studies show a direct influence of expansionary fiscal policies during the elections to help incumbents get re-elected. There have been a lot of debates on whether these expenditures were beneficial for an incumbent being re-elected or not. Also, the results have been somehow not consistent on whether the practise can lead to being re-elected for both developed and developing countries. According to Peltzman (1992) United States present a scenario where by majority of the voters are against excessive expenditure during the electoral and pre-electoral period therefore for an incumbent exercising those policies is likely to be punished by being voted against. Furthermore, Brender and Drazen study in 2008 observed that there was no relationship between re-election of an incumbent and election manipulated with fiscal policy in both developed and emerging economies, which was proved by using a sample of 74 countries covering a period of 43 years starting from 1960. Furthermore, it was discovered that the likelihood of incumbents getting re-elected in the election was minimal because of the majority voters were voting against the regime which had exercised high expenditures and large deficit levels.

The same observation has also been observed in the local elections in different countries. According to Brender (2003) results from Israeli's municipality showed that majority of the voters were against excessive expenditure during the election period. Also, Drazen and Eslava (2010) conducted the same study in Colombia Municipalities and reported that increase in increase in levels of deficit resulted to the loss of popularity of an incumbent among the voters, while increase in spending towards a certain group of people will lead to increase in popularity of the incumbent to the targeted group and therefore results to the increase of votes from the voters. Others studies on the local scale have provided contradictory results compared to the above mentioned. Studies such as Akhmedov and Zhuravskaya (2004) in Russia regions has shown that increase in the use of fiscal policies to influence election has positive effects to the probability of incumbent to be re-elected. Also, Sakurai and Menezes-Filho (2008) showed the impact of increase in expenditures towards prospects of re-election of an incumbent mayor in the local elections in Brazil. Although, the said increase in expenses is not only limited during the election years but also throughout the term.

Additionally, the same has been supported by the work done Balaguer-Coll et al. (2015) focusing on local elections in Spain with the employment of Bayesian technique, implored that increase in government spending has a positive impact on probability of re-election of an incumbent.

CHAPTER 3: METHODOLOGY AND DATA USED

The purpose of this chapter is to examine the impact of fiscal policy on democratic elections and the effect of re-election prospects of incumbent in relation to political budget cycle. The study will employ a standard political budget cycle model developed by Shi and Svensson (2006) to test for two datasets namely local and international sources which will be tested separately.

The variable used from the local dataset in the study were:

- a. The outcome variables are deficit-to-GDP ratio and expenditure-to-GDP ratio;
- b. The independent variables are the lagged value of outcome variable;
- c. Inflation rate;
- d. External debt-to-GDP ratio;
- e. Political corruption index;
- f. Capital Account Deficit-to-GDP ratio;
- g. Pre-election/election year dummy and;
- h. Re-election dummy.

Additionally, the following variables were selected from the international dataset to be included in the model:

- a. The dependent variables are ratios of overall balance-to-GDP, primary balance-to-GDP, government revenues-to-GDP and government expenditure-to-GDP;
- b. The lagged value of dependent variable;
- c. Real GDP growth rate;
- d. Unemployment rate;
- e. Population growth rate across the groups of 0-14, 15-64 and 65 years and above;
- f. Inflation rate;
- g. Current account balance-to-GDP;
- h. Interest paid on debts;
- i. Political corruption index;
- j. Pre-election/election year dummy and;
- k. Re-election dummy.

The model comprises a variety of variables that were chosen based on their theoretical and empirical significance. A number of the variables were introduced based on their relationship with the dependent variable, while others were borrowed from earlier studies on the political budget cycle. Here's an overview of each type of variable used:

Dependent variables: In the local dataset, fiscal variables such as deficit-to-GDP and expenditure-to-GDP were used, while in the international dataset, fiscal variables such as overall balance-to-GDP, primary balance-to-GDP, government revenues-to-GDP, and government expenditure-to-GDP were used. The aforementioned variables are discussed and estimated in relation to the election year. Since the majority of voters cast ballots in general elections or opt to support incumbents for reelection depending on the status of the country's economy, the goal is to attempt to discover the relationship between economic performance from fiscal variables and election year. The deficit-to-GDP ratio, also known as the overall balance-to-GDP ratio, aims to evaluate a country's fiscal capacity in relation to its economy's size. The primary balance-to-GDP ratio performs the same function as the overall balance-to-GDP ratio, but it concentrates on the country's ability to satisfy its demands without taking into account debt implications and debt servicing obligations. The expenditure-to-GDP and revenue-to-GDP ratios measure a country's spending and ability to raise funds in relation to its economy's size.

Independent variables:

Lagged dependent variable: This variable is included in the model to account for the persistence of the dependent variable over time. As an alternative, it considers the likelihood that previous fiscal strategies may have an impact on current fiscal strategies. The inclusion of the lag dependent variable allows us to account for these variations and determine the impact of past fiscal policies on current policy. The lagged dependent variable in this model is the value of the dependent variable from the previous year (Chortareas, Logothetis and Papandreou, 2018). For example, if the country experienced a deficit in the previous fiscal year, the government may opt to raise taxes in the coming fiscal year. Conversely, if the country enjoyed a surplus, the government may decide to decrease taxes or boost spending in the coming fiscal year.

Electoral variable:

Election Variable: This is a dummy variable with a value of one during election years and a value of zero otherwise. This variable is intended to capture the impact of elections on fiscal

policies. The variable is used to calculate how fiscal policies differ in non-election years. The electoral variable simplifies the complex political dynamics that may affect Tanzania's fiscal policy (Chortareas, Logothetis and Papandreou, 2018). For example, the effects of sudden (snap) elections and extended (lengthy) incumbency on fiscal policies may vary across the country, but this has not been the case in Tanzania. Furthermore, instead of the election year variable, the pre-election year dummy variable was used as an electoral variable in the extension test.

Re-election (Re-candidate) Variable: This dummy variable was included to the model to account for how the presence of political budget cycles may be influenced by a president's decision to seek re-election to a second term in office. When the president campaigns for reelection, the variable dummy takes a value of one; otherwise, it takes a value of zero. This variable was also included to test various schools of thought held by scholars who claimed that incumbents who have no incentive to run for office again have an incentive to manipulate the election process in order to reap post-election benefits, whereas those who are still seeking office are less likely to use opportunistic policies in an effort to gain favor with voters. The concept of the re-election variable is similar to that of (Chortareas, Logothetis, and Papandreou, 2016), but the distinction is that this study does not test for local elections in municipalities.

Control Variables:

Economic variables such as Tanzania unemployment rate, inflation rate, Capital Account balances and real GDP growth rate were included in the model. The aforementioned variables are included because of their potential impact on country's fiscal policies. For instance, if the country has high rate of unemployment the government may be compelled to increase funding for the social welfare program to assist the unemployed. In similar manner, if the country experiences high economic growth, implies that the government has sufficient funds to spend on public goods and services. Furthermore, high levels of inflation tend to impair the country's budgetary process since excessive volatility affects both revenues and expenditures, impairing decision making. Lastly, due to the importance of capital inflows in budgetary variables, capital account balance to GDP was also included. This variable depicts the impact of the international economic setting in influencing political budget cycles through external finance and economic trade-offs.

Debt Variables such as external debt to GDP and interest paid on debts as percentage of GDP. Inclusion of these variables are due to the fact that government debt level can affect fiscal sustainability and results to budget constraints in the country. For instance, increase in interest paid on debts will limit government expenditures at large due to much resources being dedicated to debt services. Also, increase in external debt in the country can signify increase in deficit level which cannot be solved by the country's source of revenue.

Demographic variables: This includes the percentage of the population that falls into each age category in the country: those under 15, those over 65, and those between 15 and 64. The inclusion of this variable in the model is the ability of population composition to alter budgetary policies as explained by Chortareas, Logothetis, and Papandreou, (2016, 2018). For instance, countries with large ageing population tend to spend more on healthcare and pensions.

Political Institution variable: The Political Corruption Index was incorporated into the model because high levels of corruption have a significant impact on the majority of developing countries. Corruption manifests itself in a variety of ways, from bribery to embezzlement of funds. Corruption is one such element that may have an impact on resource distribution, government spending, and public policy decisions. As a result, it was included as one of the components that would most likely affect the political budget cycle and re-election process.

3.1 Model specification

The paper will employ a political budget cycle model similar model to the one which was developed by Shi and Svensson (2006), Veiga and Veiga (2007a), Sakurai and Menezes-Filho (2011) identified as follows:

$$Y_{jt} = \alpha + \beta_j Y_{ijt-1} + \gamma \text{Elect}_{it} + \delta X_{ikt} + \rho_i + U_{ijt}$$

Based on the aforementioned model, the models below were developed using the same assumptions for hypothesis testing. Since the study used two databases to test for the presence of a political budget cycle. The model specification assumed that the dependent variable is a function of political and economic independent variables. The political variables include the corruption index and electoral or pre-electoral year, while the economic variables included the fiscal indicators. The choice of variables to be included in the model was also heavily influenced by earlier work done by the researchers based on data availability. The

study conducted by Chortareas, G., Logothetis, and Papandreou, A.A., (2016) had a significant impact on the variables chosen.

The first model will test presence of Political budget Cycle as shown below:

$$Y_{jt} = \beta_0 + \beta_1 Y_{t-1} + \beta_2 \text{Elect}_{it} + \beta_3 X_{kt} + \beta_4 \Omega_i + U_{jt} \dots \dots \dots (1)$$

Also, the second model will examine the prospect of incumbent be re-elected have any effect on political budget cycle as follows:

$$Y_{jt} = \beta_0 + \beta_1 Y_{t-1} + \beta_2 \text{Elect}_{it} + \beta_3 X_{kt} + \beta_4 + \Omega_i + \beta_5 \text{ReCand}_{it} + U_{jt} \dots \dots (2)$$

Whereby;

Y_{kt} - denotes number of dependent variables to used.

Y_{t-1} - is the lag of the dependent variable which is used to capture persistence of the dependent variable.

Elect_{it} - is a dummy variable for election year, which captures the effect of election on the outcome. The dummy variable takes a value of one for election year and zero for otherwise. The decision to employ electoral year in the model is based on the fact that the majority of national elections are held in the fourth quarter of the year, with four taking place in October and two in December. This implies that the impact of spending during an election year is obvious to observe. However, in Tanzania, the pre-election year is used to hold local elections, which are also used for predicting the results of the general election based on how political parties and their candidates performed in the election.

X_{kt} - is a vector of n controls relevant to the dependent variables such as ratio of external debt to GDP, Inflation rate (CPI).

Ω_i - is a corruption (Political corruption index-VDEM dataset) which represents the level of corruption present in the country.

ReCand_{it} - is a dummy variable used to capture the effect of re-election of an incumbent president. The dummy variable takes a value of one for a president running for a second term and zero for otherwise.

U_{jt} - is independent and identical distributed error term.

Although the election year can be used to realize the political budget cycle because the government uses expansionary fiscal policies to boost its popularity, it is also possible to use a year before election year if the government anticipates the upcoming election and decides to use expansionary fiscal policies in the period immediately following the election. Furthermore, in this study pre-electoral year has been used as diagnostic/extension test for results obtained in the election year.

3.2 Source of data

The data used was gathered from a variety of sources. The local data consisted of Tanzania Bureau of Statistics (NBS), the Tanzania Ministry of Finance (MoF), and the Bank of Tanzania (BoT). Specific variables such as Gross Domestic Product (GDP) and Inflation rate were from Tanzania Bureau of Statistics (NBS), while the remaining data were from Ministry of Finance and Bank of Tanzania. However, ratios like Expenditure to GDP, Fiscal deficit-to-GDP and External debt-to-GDP were calculated from the data obtained from the sources above. The international data source was obtained from the International Monetary Fund (IMF Data mapper). There were no any computations involved since most of the ratio required were computed and available. Data used to measure and theorise democracy were also gathered from the Variety of Democracy database (V-DEM). The data to be analysed was on an annual basis and ranged from 1990 to 2022. In the study, terminologies like balance and deficit will be used interchangeably for both overall and primary deficit.

Table 2: Data Sources used in the study

Database	Variable	Source
Local Data	Fiscal Deficit, Government Expenditure, External Debt,	Tanzania's Ministry of Finance (MoF) and Bank of Tanzania (BoT)
	Capital Account Deficit (CAD)	Bank of Tanzania (BoT)
	Gross Domestic Product (GDP), Inflation Rate	Tanzania's National Bureau of Statistics (NBS)
	Election Years, Re-election Years	Tanzania's National electoral commission (NEC) and other internet sources.

International Data	Real GDP growth, Unemployment rate, Interest paid on debt as percentage of GDP, Percentage of Population across age groups (>15, 15-65, <65), Current Account-to-GDP, Government expenditure-to-GDP, Government revenue-to-GDP, Overall balance-to-GDP, Primary balance-to-GDP.	International Monetary Fund (IMF) Data Mapper
	Political Corruption Index	Variety of Democracy Dataset (V-DEM)

3.3 Descriptive Statistics

The study uses a variety of variables, including demographic, fiscal, and democratic characteristics that span the years 1990 through 2021.

3.3.1 Democracy and electoral variables

Political Corruption Index is the variable under examination in the V-DEM INDICES dataset. The Political Corruption Index shows the direction of the index from low to high level of corruption, in contrast to other indices in the VDEM dataset that run from least progressing to the most democratic level. The variable is on an interval scale ranging from zero to one. The period of time under consideration Political Corruption Index demonstrates a relatively low level of political corruption, with a maximum value of 0.48 and minimum value of 0.25. This suggests that, despite the data showing that the government does not currently face a severe threat from grand-scale corruption and theft, corruption still exists in the form of small-scale bribes.

In addition, the Election Year and Re-candidate variables in the model were allocated dummy variables with values 0 and 1. A non-election year is represented by 0 and an election year is represented by 1. The incumbent running for re-election is assigned 1 for the year of re-election and 0 for all other years.

3.3.2 Fiscal variables

The fiscal deficit-to-GDP ratio has always been negative, indicating negative balances, but also the maximum value of the said being positive, implies that the country had also experienced smaller or no deficit (positive balances) surplus at some point in time. Despite the fact that local data indicates the East African Community (EAC) divergence criteria of 3 percent has not been met based on the mean average, international data indicates that the aforementioned criterion has not been violated considering the same. However, basing on the minimum value both datasets have breached the EAC divergence criterion although the magnitude of it differs. In a nutshell compared to table 3, table 4 shows smaller deficits and less variations in deficit levels. The main difference between the two datasets is based on local data, which had a structural breakdown caused by inclusion of GDP data with different base year in a single series.

Across the two databases, the current account balance or deficit has always been negative, meaning that the country has been a net importer of goods and services. Even with the aforementioned resemblance when examining the actual figures. Local database in table contains a wider range of values, larger variability, and an average current account deficit that is comparatively higher than international database in table 3.

Furthermore, tables 3 and 4 demonstrate that the rate of inflation has been rising consistently over time, with the mean average of double digit (beyond 10 percent) surpassing the EAC convergence threshold of 8 percent headline inflation. This suggests an unstable and consistent growth in the local market's price level. The difference between the maximum value between the two datasets results to the slight difference in mean average and standard deviation between the two datasets.

Both domestic and international databases show consistence in results for expenditure-to-GDP, with the mean averages of 15 and 16 percent respectively which is complemented by the revenue-to-GDP, which has a mean average of 14 percent. The revenue-to-GDP reflects constraints in government resources, which in turn affects the government's expenditure level. Furthermore, the total revenue-to-GDP for the period observed is below the indicative criteria of tax-to-GDP of 25 percent set in EAC guidelines. Despite the fact that total revenue includes both revenue components such as tax and non-tax components. In conclusion, table 4 shows slightly higher average government expenditure as a percentage

of GDP and less variability in expenditure levels than table 3. Whereas table 4 suggests that revenue-to-GDP is always lower compared to expenditure-to-GDP ratio.

In table 3, the external debt-to-GDP ratio ranges from a minimum of 20.85 to a maximum of 102.6, indicating a growth in debt accumulation over time. This implies that the country was occasionally in debt distress, which is backed by the mean average value of the period in question being greater than the 50 percent limit imposed by the EAC guidelines. The fact that a large portion of the loan portfolio is made up of concessional loans with long terms and low interest rates, as well as the cancellation of debt agreements made by bilateral creditors, the World Bank, and the IMF, may be the cause of moderate rate of interest paid on debt as a percentage of GDP in table 4. Tanzania being one of the African countries that benefited from the debt relief program known as Heavily Indebted Poor Countries (HIPC) initiative.

Table 3: Local Dataset Summary Statistics

Variable	Observation	Mean	Standard deviation	Minimum	Maximum
Deficit/GDP	32	-4.38	3.64	-11.09	0.86
Expenditure/GDP	32	15.61	8.79	1.56	33.85
Inflation Rate	32	11.79	9.58	3.30	35.70
Political corruption Index	32	0.43	0.07	0.25	0.48
Capital Account Deficit/GDP	32	-7.02	5.57	-20.80	-0.30
Election	32	0.19	0.40	0	1
Recandidate	32	0.09	0.30	0	1
External Debt/GDP	32	58.86	27.88	20.85	102.06

Source: Bank of Tanzania, Ministry of Finance and National Bureau of Statistics.

The average real GDP growth rate has been positive, reaching a maximum of 8.5 percent. The modest standard deviation indicates that there haven't been any significant variations in growth rate. Regardless of positive growth exhibited during the period observed the overall average growth for the period is not above 7 percent real GDP growth which was the standard set by the EAC members as sustainable level to be realized among the country members in the block.

Lastly, when compared to the natural rate of unemployment, which is sometimes regarded as full employment, at 5%, the maximum unemployment rate of 3.6 percent indicated is seen as relatively low. The low level of unemployment during the observation period suggests that there is a healthy labour market since a small percentage of the labour force is unemployed.

3.3.3 Demographic variables

A comparison of population ages in various age groups reveals that the country's population of people between 15 to 64 years old comprises a sizable share of the population, followed by the group of children aged 0 to 14, while the elderly make up the smallest proportion of the overall population. This illustrates how many developing nations have a large proportion of young people relative to older people, which suggests a low level of life expectancy and potential high labour force.

Table 4: International Dataset Summary Statistics

Variable	Observation	Mean	Standard deviation	Minimum	Maximum
Real GDP growth	31	5.37	2.04	0.60	8.50
Unemployment rate	31	2.94	0.47	2.12	3.60
Interest paid on debts/GDP	31	1.44	0.68	0.64	3.20
Population ages above 65 years	31	2.91	0.13	2.76	3.13
Population ages between 15-64 years	31	52.22	0.51	50.92	53.27
Population ages between 0-14 years	31	44.87	0.53	43.61	46.14
Inflation rate (%)	31	10.96	8.76	3.30	37.90
Current account balance/GDP	31	-6.73	4.00	-17.30	-1.10
Government Revenue/GDP	31	14.15	1.33	11.50	16.39
Government Expenditure/GDP	31	16.32	2.36	11.37	19.80
Overall Balance/GDP	31	-2.17	1.61	-4.96	1.57
Primary Balance/GDP	31	-0.73	1.85	-4.07	3.98

Source: International Monetary Fund Data mapper

CHAPTER 4: ESTIMATION OF THE RESULTS

The database used was divided into two separate sources, each of which produced different findings when the aforementioned models were applied to them.

4.1 Local data source

The Ordinary Least Square regression with robust standard errors was computed to the below equations using the data variables obtained from the local sources within the country to test for two research questions identified above.

$$Y_{jt} = \beta_0 + \beta_1 Y_{t-1} + \beta_2 \text{Elect}_{it} + \beta_3 X_{kt} + \beta_4 \cap_i + U_{jt}$$

$$Y_{jt} = \beta_0 + \beta_1 Y_{t-1} + \beta_2 \text{Elect}_{it} + \beta_3 X_{nt} + \beta_4 \cap_i + \beta_5 \text{ReCand}_{it} + U_{jt}$$

4.1.1 Electoral Year Scenario

From the results in table 4 below; In both models, the lagged value of the dependent variable is statistically significant, suggesting that the current variable was impacted by the dependent variable's previous value. According to Model 1, assuming other factors in the model are constant, a percentage increase in the lagged value of the deficit-to-GDP ratio leads to an increase in the current deficit-to-GDP by 0.579 percent. On the other hand, Model 2 indicates that, assuming other factors in the model are constant, a percentage increase in the lagged value of the expenditure-to-GDP ratio causes an increase by 0.549 percent in the current expenditure-to-GDP ratio. Additionally, in model 2 CAD-to-GDP ratio was statistically significant at 10 percent, implying that, a unit increase in CAD-to-GDP ratio result to a decrease in expenditure-to-GDP ratio by 0.486 percent assuming other factors in the model to be constant.

Election year variable has a positive effect on the deficit level to GDP and negative effect on expenditure to GDP, although the effect is not statistically significant. This implies that, there is no evidence of political budget cycle existing in the country. This is contrary to Shi and Svensson (2006) study in developing countries which has evidenced increase of expenditures in electoral year for developing countries and therefore suggests the presence of political budget cycle in developing countries compared to the developed countries.

Table 5: Testing for political budget cycle using electoral year

	(1)	(2)
	Deficit/GDP ratio	Expenditure/GDP ratio
Lagged value of dependent variable	0.579*** -0.199	0.549** -0.258
Inflation (Rate %)	0.0632 -0.0546	-0.227 -0.149
External Debt/GDP	0.0134 -0.0264	-0.014 -0.034
CAD/GDP ratio	0.113 -0.0861	-0.486* -0.27
Political corruption index	-6.841 -5.278	-5.598 -8.921
Election Year	0.569 -1.119	-3.079 -2.046
Constant	0.19 -1.486	10.37 -6.39
Observations	31	31
R-squared	0.782	0.871

Note: Coefficient estimates are based on OLS regressions and robust standard errors. In election years, the elections dummy has a value of one; zero for otherwise. ***, **, and * symbolize significance at the 1, 5, and 10 percent levels respectively.

Robustness check was also done using the pre-election year to try and justify the answers obtained while using the election year. Given the same model but we decide to use Pre-election year and not election year below are the findings.

4.1.2 Pre-electoral Year Scenario

The results obtained in table 6, were precisely consistent with the results obtained in the table 5. Despite the fact that Pre-election year improved equation 1 and downgraded equation 2 in terms of goodness of fit measured by the squared. Finally, in contrast to the findings in table 5, the lag value of the dependent variable was found to be statistically significant in Model 1 alone.

Table 6: Testing for political budget cycle using Pre-electoral Year

	(1)	(2)
	Deficit/GDP ratio	Expenditure/GDP ratio
Lagged value of dependent variable	0.558** -0.204	0.454 -0.304
Inflation (Rate %)	0.0587 -0.0485	-0.249 -0.164
External Debt/GDP	0.0166 -0.0217	-0.0248 -0.0339
CAD/GDP ratio	0.111 -0.0981	-0.566* -0.313
Political corruption index	-7.279 -4.788	-6.343 -8.956
Pre-election Year	-1.024 -1.026	1.742 -1.843
Constant	0.444 -1.459	11.51 -7.091
Observations	31	31
R-squared	0.791	0.859

Note: Coefficient estimates are based on OLS regressions and robust standard errors. In pre-election years, the pre-elections dummy has a value of one; zero for otherwise. ***, **, and * symbolize significance at the 1, 5, and 10 percent levels respectively.

After testing for the presence of the budget cycle in the model, also the relationship between the re-election prospect of the incumbent and political budget cycle was tested. Then, we introduced re-candidate variable for re-election with the electoral year.

4.1.3 Addition of Re-candidate variable in electoral year scenario

Table 7 below, shows that Election year variable was statistically significant at 5 percent significance level, with a positive effect on Deficit-to-GDP and a negative effect on Expenditure-to-GDP. When compared to table 5, which did not include re-candidate variables, the election year variable had a small magnitude of the parameters, the same sign of the parameters, and was not statistically significant.

The newly introduced variable Re-candidate had a negative effect on the Deficit-to-GDP ratio and a positive impact on the Expenditure-to-GDP ratio with 1 and 5 percent

significance levels. In addition, for all models, the lagged value of the independent variable was positive and statistically significant at 1%.

To summarise, election has a negative effect on expenditure and a positive effect on deficit, but re-election has a negative effect on deficit and a positive effect on expenditure. This shows that when an incumbent is re-elected, the government is more likely to use fiscal policy to maintain power than when a first-time candidate is elected.

The results are also supported by Akhmedov and Zhuravskaya (2004) in Russia regions, Sakurai and Menezes-Filho (2008) and Balaguer-Coll et al. (2015) in Spain which shows the importance of using fiscal policy to influence re-election. However, the supporting readings were mainly done in context to re-election in local government.

Table 7: Testing for re-candidate variable with electoral year

	(1)	(2)
	Deficit/GDP ratio	Expenditure/GDP ratio
Lagged value of dependent variable	0.755*** -0.165	0.763*** -0.193
Inflation (Rate %)	0.0178 -0.0486	-0.047 -0.0888
External Debt/GDP	0.0103 -0.0253	-0.0145 -0.0251
CAD/GDP ratio	0.0345 -0.0743	-0.249 -0.216
Political corruption index	-7.436 -5.402	2.512 -7.026
Election Year	3.076** -1.184	-8.893** -3.912
Re-candidate	-4.602*** -1.407	10.32** -3.767
Constant	1.29 -1.812	3.454 -4.785
Observations	31	31
R-squared	0.848	0.926

Note: Coefficient estimates are based on OLS regressions and robust standard errors. In election years, the elections dummy has a value of one; zero for otherwise. Re-candidate dummy has a value of one; zero for otherwise. ***, **, and * symbolize significance at the 1, 5, and 10 percent levels respectively.

4.1.4 Addition of Re-candidate variable in pre-electoral scenario

According to table 8 below, even after including the re-candidate variable in the model with the pre-election year variable, the variable was still not statistically significant. As a result, the pattern in the pre-election year was still consistent with the trend in the electoral year, indicating that there was no indication of a political budget cycle. Furthermore, the re-candidate variable was consistent with the results in table 7, indicating that the incumbent used fiscal policies to stay in office.

Table 8: Testing for re-candidate variable with pre-electoral year

	(1)	(2)
	Deficit/GDP ratio	Expenditure/GDP ratio
Lagged value of dependent variable	0.572***	0.465
	-0.198	-0.306
Inflation (Rate %)	0.0355	-0.221
	-0.0494	-0.167
External Debt/GDP	0.0194	-0.0276
	-0.0221	-0.0354
CAD/GDP ratio	0.101	-0.551*
	-0.1	-0.316
Political corruption index	-8.207	-5.123
	-5.293	-8.882
Pre-election Year	-1.266	1.978
	-1.019	-1.842
Re-candidate	-1.986*	2.066*
	-0.994	-1.164
Constant	1.168	10.53
	-1.852	-7.103
Observations	31	31
R-squared	0.816	0.864

Note: Coefficient estimates are based on OLS regressions and robust standard errors. In pre-election years, the dummy has a value of one; zero for otherwise. Re-candidate dummy has a value of one; zero for otherwise. ***, **, and * symbolize significance at the 1, 5, and 10 percent levels respectively.

The following are the main conclusions to be drawn from the data produced by using the local database.

- a. The findings reveal that, although there is no clear proof of a political budget cycle, there is a substantial positive effect on government spending linked to incumbents choosing to run for re-election.
- b. The “Re-candidate” variable which represents incumbents running for re-election suggests that there is a likelihood that incumbents running for re-election may have a fiscal effect. That is the use of fiscal policies to attempt to win over the voters by an increase in fiscal aggregates such expenditure-to-GDP and worsening of fiscal-to-GDP.
- c. Given that variable “Election” shows that there is a decrease in expenditure-to-GDP and improvement of deficit-to-GDP in pre-election and elections period, which is slightly contradictory. There's a chance that variables not included in the model have an impact on the pattern of fiscal policy in this circumstance.
- d. A number of factors, including the state of the economy, popular opinion, and political strategy, may have an impact on the decision to run for re-election and how it may affect fiscal policy.

Due to missing data in the variables used for testing the local dataset, we then searched for another data set using the same model but slightly different variables and try to test the hypothesis tested above.

4.2 International data source

Following the observation of the results from the local data source, the same methodology was applied to the internationally dataset using the data variable obtained from the IMF Data Mapper. The model used is identical to the one used in the local data source, albeit the variables differ significantly due to data constraints.

4.2.1 Electoral year scenario

According to the results shown below, the election variable has a negative statistically significant influence on the overall deficit-to-GDP, which means that the overall deficit tends to be negatively impacted in the year of the election. At 10 percent, election variable was statistically significant. Election year variable had a positive and negative impact on various

variables, including primary balance-to-GDP, government revenue-to-GDP and expenditure-to-GDP, although these effects were not statistically significant.

Other parameters, such as the lagged value of independent variables, were positive and statistically significant for the ratios of government revenue-to-GDP and government expenditure-to-GDP at a 1 percent significance level. At a 1 percent significance level, real GDP growth had a positive impact on government revenue-to-GDP. At 10 percent significance level, the political corruption index had a negative influence on government revenue-to-GDP and at a 1 percent significance level on government expenditure-to-GDP. Finally, at 1 percent confidence level, the impact of interest paid on debt-to-GDP was positive on primary balance-to-GDP. However, its impact on overall balance-to-GDP and government expenditure-to-GDP was positive and negative respectively with significant level at 5 percent.

The findings are in line with research conducted on panel data including several Sub-Saharan African nations, developing nations, and advanced economies by Schuknecht (1996), Block (2002), Persson and Tabellini (2003), and Shi and Svensson (2006). These studies revealed the existence of a political budget cycle via increasing expenditures during election years for developing nations.

Table 9: Testing for political budget cycle using Election year

	(1)	(2)	(3)	(4)
	Overall balance/GDP	Primary balance/GDP	Government Revenue/GDP	Government Expenditure/GDP
Lagged variable of dependent variable	-0.117 -0.309	0.134 -0.295	0.496*** -0.141	0.683*** -0.181
Election Year	-1.208* -0.608	-0.916 -0.589	0.0863 -0.215	0.349 -0.443
Real GDP growth (%)	-0.0186 -0.301	0.154 -0.253	0.553*** -0.108	0.0256 -0.214
Unemployment rate	-0.301 -0.952	-0.282 -0.966	-0.0254 -0.513	0.363 -0.937
Population ages above 65 years	0 (.)	0 (.)	0 (.)	0 (.)
Population ages between 15-64 years	3.319 -4.447	3.305 -4.311	3.836 -2.691	1.439 -3.62
Population ages between 0-14 years	2.93 -4.444	2.596 -4.256	3.688 -2.684	2.78 -3.581
Political corruption index	10.78 -7.275	9.116 -7.62	-11.25* -5.452	-16.47*** -5.535
Inflation rate (%)	-0.0822 -0.114	-0.0593 -0.114	0.055 -0.0533	0.0309 -0.109
Current account balance/GDP	0.224 -0.168	0.116 -0.177	-0.169 -0.106	-0.0592 -0.136
Interest paid on debts/GDP	2.105** -0.749	2.924*** -0.922	-0.271 -0.548	-1.850** -0.825
Constant	-311.4 -423.2	-296.4 -406.9	-358.1 -256.7	-186.8 -341.9
Observations	30	30	30	30
R-squared	0.579	0.686	0.806	0.853

Note: Coefficient estimates are based on OLS regressions and robust standard errors. In election years, the election dummy has a value of one; zero for otherwise. ***, **, and * symbolize significance at the 1, 5, and 10 percent levels respectively.

4.2.2 Addition of re-candidate variable in the electoral year scenario

After adjusting for the Re-candidate variable, the election variable was statistically significant at 5 percent and had a negative impact on overall deficit-to-GDP and primary deficit-to-GDP. However, election variable was statistically significant at 10 percent and had a positive effect on expenditure-to-GDP. Furthermore, re-candidate variable was statistically significant at 5 percent significance level with positive effect on Primary deficit-to-GDP and negative effect on Expenditure-to-GDP respectively.

This indicates that during an election year, the overall and primary deficit are negatively affected while expenditure increases; additionally, when an incumbent seeks re-election, the primary deficit-to-GDP is positively impacted and expenditure-to-GDP is negatively influenced, implying the implementation of contractionary fiscal measures during re-election.

Other variables that were determined to be significant maintained their direction (sign) but exhibited slight changes in magnitude (size of the coefficient).

Additionally, there are two ways to interpret the "Re-candidate" variable: positively or negatively. From a positive perspective, we may state that the incumbents seeking re-election are primarily fiscal conservatives, as seen by their lower spending and more favourable deficit levels. Voters may perceive this as a responsible approach to fiscal policy. In a negative view, the incumbent would be seen as manipulating fiscal policy for political gains by deciding to reduce expenses in order to improve the economy outlook and win over more rational voters.

Table 10: Testing for re-candidate variable using electoral year

	(1)	(2)	(3)	(4)
	Overall balance/GDP	Primary balance/GDP	Government Revenue/GDP	Government Expenditure/GDP
Lagged variable of dependent variable	-0.0621 -0.303	0.207 -0.274	0.507*** -0.151	0.684*** -0.194
Election Year	-1.722** -0.599	-1.532** -0.636	-0.0636 -0.389	1.030* -0.499
Re-candidate	1.117 -0.916	1.356* -0.756	0.287 -0.503	-1.315* -0.739
Real GDP growth (%)	0.0905 -0.323	0.293 -0.233	0.571*** -0.124	-0.0604 -0.244
Unemployment rate	-0.462 -0.997	-0.473 -0.992	-0.0591 -0.519	0.555 -0.938
Population ages above 65 years	0 (.)	0 (.)	0 (.)	0 (.)
Population ages between 15-64 years	4.187 -4.367	4.366 -4.2	4.107 -2.706	0.417 -3.801
Population ages between 0-14 years	3.631 -4.35	3.458 -4.128	3.93 -2.702	1.877 -3.717
Political corruption index	11.12 -7.319	9.338 -7.544	-11.02* -5.749	-17.22*** -5.272
Inflation rate (%)	-0.0834 -0.12	-0.0608 -0.118	0.0516 -0.0552	0.0382 -0.115
Current account balance/GDP	0.166 -0.166	0.0387 -0.162	-0.178 -0.103	-0.0156 -0.138
Interest paid on debts/GDP	2.407*** -0.833	3.218*** -0.988	-0.169 -0.683	-2.217** -0.954
Constant	-389.2 -414.8	-391.7 -395.4	-383.5 -258.4	-91.96 -359.2
Observations	30	30	30	30
R-squared	0.598	0.706	0.808	0.864

Note: Coefficient estimates are based on OLS regressions and robust standard errors. In election years, the election dummy has a value of one; zero for otherwise. Re-candidate dummy has a value of one; zero for otherwise. ***, **, and * symbolize significance at the 1, 5, and 10 percent levels respectively.

4.2.3 Extension and further evidences using the pre-electoral year

We had also to do a robust test to see whether pre-election year variable will yield the same results to election year variable. The results using the Pre-election year showed that the variable had a statistically significant negative influence on total deficit-to-GDP and primary deficit-to-GDP as well as a positive effect on expenditure-to-GDP with a 5% confidence level.

Other variables mostly followed the same pattern, with a few notable exceptions for example, real GDP growth and primary balance-to-GDP lag value had a positive effect on the primary balance-to-GDP with a significance level of 5 and 10 percent. Additionally,

population growth for the group of people between the ages of 0 to 14 years and 15 to 64 had a positive impact on government revenue-to-GDP with a 10% significance level.

Table 11: Testing for political budget cycle using pre-electoral year

	(1)	(2)	(3)	(4)
	Overall balance/GDP	Primary balance/GDP	Government Revenue/GDP	Government Expenditure/GDP
Lagged variable of dependent variable	0.25 -0.234	0.411** -0.196	0.486*** -0.128	0.824*** -0.177
Pre-election Year	-1.232** -0.509	-1.238** -0.487	-0.583* -0.313	1.163** -0.481
Real GDP growth (%)	0.249 -0.216	0.370* -0.178	0.562*** -0.106	-0.097 -0.201
Unemployment rate	-1.178 -0.854	-1.14 -0.852	-0.43 -0.492	1.271 -0.958
Population ages above 65 years	0 (.)	0 (.)	0 (.)	0 (.)
Population ages between 15-64 years	4.781 -4.415	4.853 -4.26	4.603* -2.347	0.519 -3.728
Population ages between 0-14 years	3.294 -4.359	3.202 -4.186	4.160* -2.4	2.594 -3.725
Political corruption index	9.641 -7.704	8.047 -7.688	-10.57* -5.104	-16.07** -6.109
Inflation rate (%)	0.0137 -0.09	0.0204 -0.0858	0.0719 -0.044	-0.0453 -0.0965
Current account balance/GDP	0.035 -0.176	-0.0522 -0.163	-0.193* -0.0923	0.045 -0.13
Interest paid on debts/GDP	1.850** -0.717	2.473*** -0.763	-0.241 -0.501	-1.543* -0.742
Constant	-403.6 -418.5	-403.7 -402.6	-418.6* -226.8	-134 -355.5
Observations	30	30	30	30
R-squared	0.582	0.715	0.829	0.879

Note: Coefficient estimates are based on OLS regressions and robust standard errors. In pre-election years, the dummy has a value of one; zero for otherwise. ***, **, and * symbolize significance at the 1, 5, and 10 percent levels respectively.

Therefore, results obtained in electoral year are consistent with results obtained in pre-electoral year. However, pre-electoral shows to be a good measure of the political budget cycle compared to electoral year.

4.2.4 Addition of re-candidate variable in the pre-electoral year scenario

The addition of the re-candidate variable in the model did have small effect on the magnitudes but not on the direction of the coefficients when comparing to the results of pre-election year without addition of re-candidate variable. However, re-candidate variable was not statistically significant. Therefore, the results on election variable remained to be consistent.

On the other hand, the Re-candidate variable results aligned with Brender and Drazen (2008). According to study conducted in developed and emerging economies, there is no link between fiscal manipulation and an incumbent's re-election. Additionally, there was little chance that an incumbent would be re-elected because voters would oust a government that demonstrated high spending and a significant deficit level.

NB: Even when pre-election year for re-candidates was introduced, the variable had no effect on pre-election year and was not statistically significant.

Table 12: Testing for re-candidate variable using pre-electoral year

	(1)	(2)	(3)	(4)
	Overall balance/GDP	Primary balance/GDP	Government Revenue/GDP	Government Expenditure/GDP
Lagged variable of dependent variable	0.208 -0.274	0.418* -0.223	0.491*** -0.133	0.852*** -0.207
Pre-election Year	-1.215** -0.507	-1.239** -0.497	-0.573* -0.328	1.168** -0.498
Re-candidate	-0.293 -0.711	0.0447 -0.565	0.167 -0.28	-0.39 -0.519
Real GDP growth (%)	0.201 -0.285	0.378 -0.219	0.573*** -0.111	-0.144 -0.258
Unemployment rate	-1.119 -0.888	-1.147 -0.873	-0.448 -0.5	1.358 -1.001
Population ages above 65 years	0 (.)	0 (.)	0 (.)	0 (.)
Population ages between 15-64 years	4.555 -4.501	4.885 -4.318	4.721* -2.43	0.369 -3.863
Population ages between 0-14 years	3.158 -4.487	3.223 -4.267	4.265 -2.477	2.513 -3.857
Political corruption index	9.759 -7.897	8.012 -7.858	-10.51* -5.238	-15.86** -6.227
Inflation rate (%)	0.00777 -0.0953	0.0212 -0.0906	0.0725 -0.0453	-0.0552 -0.106
Current account balance/GDP	0.0616 -0.179	-0.0565 -0.162	-0.197* -0.0956	0.0686 -0.145
Interest paid on debts/GDP	1.806** -0.719	2.473*** -0.783	-0.21 -0.526	-1.543* -0.761
Constant	-385.5 -428.6	-406.4 -409	-429.7* -234.6	-122.7 -369
Observations	30	30	30	30
R-squared	0.584	0.715	0.831	0.88

Note: Coefficient estimates are based on OLS regressions and robust standard errors. In pre-election years, the dummy has a value of one; zero for otherwise. Re-candidate dummy has a value of one; zero for otherwise. ***, **, and * symbolize significance at the 1, 5, and 10 percent levels respectively.

There could be a number of reasons for the variation in the results of the "Re-election" variable between the pre-electoral and electoral years. Here are some probable explanations for this disparity:

- a. Data limitation: The analysis in the data could not have taken into account every crucial aspect of the re-election variable. For instance, political language (manifesto), secret campaign tactics, and unofficial communication between candidates and public servants might not be taken into consideration by the dataset. In the year of the election, these variables can become more significant compared to the pre-election year.
- b. Political Decision Timing: The likelihood of re-election may not have an effect on fiscal policy in the year leading up to the election, but it may have a greater effect within that year. Taking into account national election in Tanzania has always been done in the last quarter of the year. As election day draws near, political choices and campaign tactics could change, resulting in distinct fiscal policies during the electoral and pre-electoral period.
- c. Campaign approaches and techniques: Since in Tanzania there is a special period of time when campaigns are allowed to conducted promises and commitments made by the politicians always have some impacts on government spending and fiscal policies. For instance, candidates running for parliamentary seats in Tanzania have sixty (60) to ninety (90) days to prepare their campaigns (Mwanga, 2022). Therefore, pre-election year is less likely to be affected by the specific campaign-related expenditures compared to the election year.

4.3 The main findings form the results presented

- a. The same methodology was applied to both local and international data sets. But because of the availability of data, the factors considered are varied as international dataset model included many variables compared to the local dataset model;
- b. Comparing the local dataset to the international dataset revealed inconsistent results. The local dataset demonstrated absence of a political budget cycle, whereas an international dataset demonstrated its existence albeit had minimal impact; and
- c. The key distinction between local and international data sources is local data had undergone various rebasing particularly for GDP which were not spliced backward and instead were connected to form one series. The series include fourth, fifth and sixth revisions for the years 2001, 2007 and 2015 respectively. Also, fiscal deficit

figures in the 1990s and early 2000s were not rebased as there is a big increase in deficit levels from 2003 to 2004.

Therefore, when compared to local datasets, international datasets seem to be more consistent, and recommendations are based on the findings of international datasets.

CHAPTER 5: CONCLUSION AND POLICY IMPLICATION

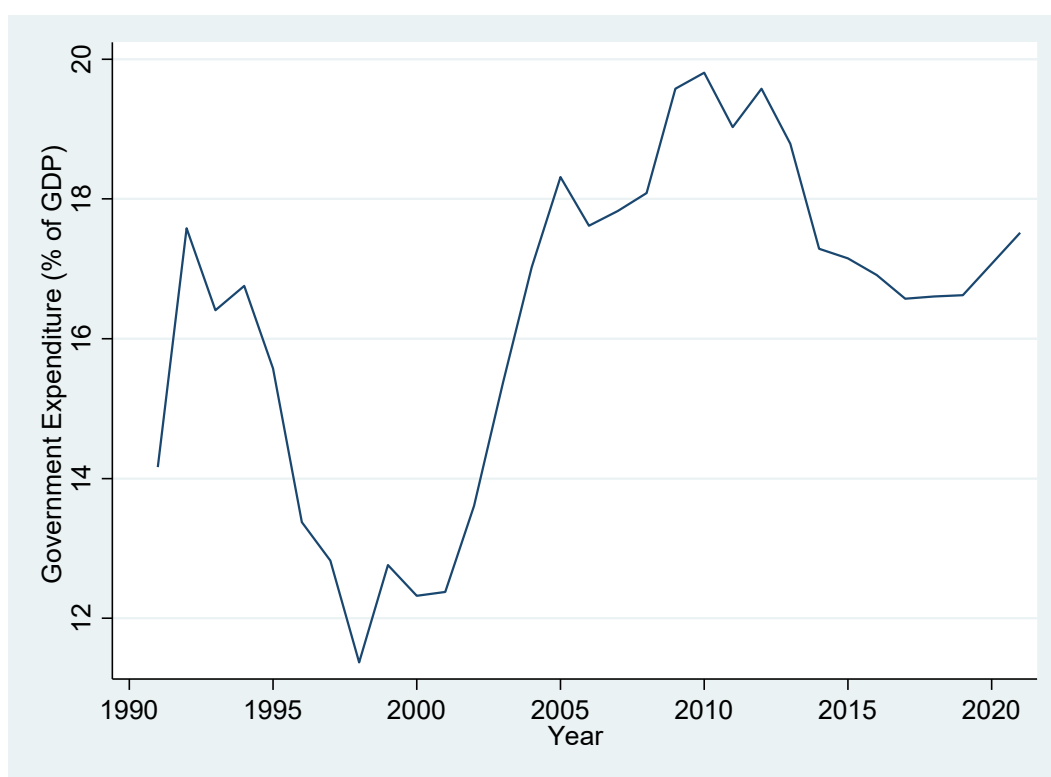
The purpose of the study was to determine whether political budget cycle existed in Tanzania and also whether the re-election of incumbent had an impact on fiscal aggregates. The local data source was inconsistent due to structural collapse, making the results of the local dataset less credible than those derived using the international dataset. According to the local data set, the results showed that neither the electoral year nor the pre-election year variables provided a definite signal of the political business cycle in the country. However, after the re-election variable was added, it was observed that there was a correlation between an incumbent seeking for re-election and an increase in deficit and expenditure levels, potentially with the intention of raising the incumbent's percentage of votes. However, there could be many potential factors affecting Re-election in the country such as the state of the economy, public opinion, ethnicity and political strategy, which also could have an impact on fiscal policy. The potential factors aforementioned were not taken into account and included in the model due to the availability of data and correct proxies to be included. It is therefore likely that changes in fiscal aggregates is not fully explained by election variable in the model.

The results of using the international data set for both the pre-election and election years suggested that the political budget cycle was present in the country. However, it had a very minimal impact, basically ranging from 0.5 to 1.7 percentage, indicating that the economy would not be much affected by either deteriorating level of deficit or increasing in level of expenditure by the specified range which occurs once after the period of five years. Despite the fact that the political budget cycle impact is minimal, it is still consistence with people's perception on the increase in money supply during electoral and pre-electoral year. Additionally, it was found that there was a tendency of fiscal conservatism after adding the re-candidate variable for incumbents running for re-election. This practise is very common in developed nations like the United States, where voters tend to punish incumbents with high levels of deficit and expenditures during the general election, as explained by Alesina, Roubini and Cohen (1997).

International data set suggests that political budget cycle exists but has minimal impact to the economy. Therefore, we tried to observe the trend of the country's total government spending compared to GDP from 1990 to the present and saw that over that time the ratio had not risen above 20 percent. According to the International Monetary Fund (IMF

Data Mapper), Tanzania had a 17.5 percent expenditure to GDP ratio in 2021, compared to The United Kingdom (UK) which had a 44.9 percent ratio in the same year, indicating that hypothetically Tanzania had a smaller government than UK backed up by low level of expenditures and its involvement to economy and society in terms of services offered by the government such as welfare programs. This suggests that the country has limited resource availability, thus impacting the role of the government which is reflected by low levels of spending, which results to the limited influence of the political budget cycles in the Tanzania.

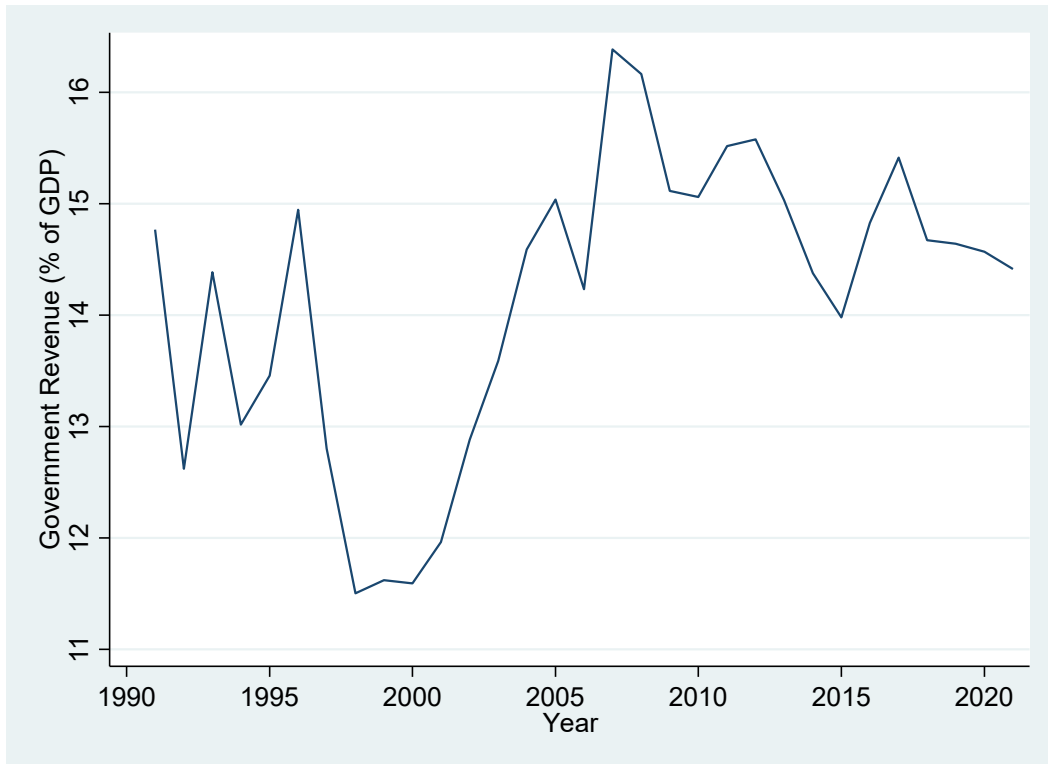
Figure 2: Tanzania trend ratio of Government expenditure to Gross Domestic Product (GDP) in Percentage from 1991 to 2021.



Source: IMF Data Mapper.

Tanzania, like most low-income countries, has limited fiscal capacity, which means that their tax base is very small and their ability to raise funds is constrained. As a result, unless subsidised by foreign aid, most governments in developing countries tend to spend less. The low tax base is primarily due to the economy's vast informal sector. Tanzania had never had a government revenue to GDP ratio higher than 17 percent. In 2021, however, the government revenue to GDP ratio was 14.4 percent, lower than the 17.5 percent government expenditure to GDP ratio. This suggests that loans and other forms of foreign assistance were essential for funding government spending.

Figure 3: Tanzania trend ratio of Government revenue to Gross Domestic Product (GDP) in Percentage from 1991 to 2021.



Source: IMF Data Mapper.

Given the existing circumstances, the findings in the international data set might not pose a cause for concern. However, Tanzania, as one of the developing countries that experienced high positive economic growth prior to the Covid-19 pandemic in 2019, and given that economy's ability to rebound and maintain a decent pace of economic growth, poses the most challenging dilemma for the future. Considering that Tanzania may have greater fiscal capacity in the future, political budget cycles may become more salient. As a result, future tracking of expenditure by assessing the structure of spending pattern will be crucial in order to reduce the country's political budget cycle trajectory.

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Appendices

Appendix A: Local data source used in the analysis

Year	Fiscal/GDP ratio	Total Expenditure	Expenditure/GDP ratio	Inflation (Rate %)	Political corruption index	CAD/GDP ratio	Election	Pre-elect	Re-candidate	External Debt/GDP
1990	(0.06)	98,429.00	1.56	35.70	0.39	(1.52)	0	0	0	102.06
1991	0.11	125,933.00	1.94	28.80	0.39	(1.39)	0	0	0	99.32
1992	0.18	161,474.00	2.44	22.00	0.41	(1.86)	0	0	0	97.68
1993	(1.50)	263,412.80	3.97	24.10	0.42	(7.70)	0	0	0	97.63
1994	(1.97)	374,962.00	5.58	35.30	0.43	(6.85)	0	1	0	96.70
1995	(0.96)	398,023.80	5.71	27.40	0.43	(7.02)	1	0	0	94.19
1996	0.38	420,522.10	5.79	21.00	0.48	(4.88)	0	0	0	90.44
1997	0.86	515,389.30	6.87	16.10	0.48	(5.67)	0	0	0	87.07
1998	(1.43)	730,336.01	9.36	12.80	0.48	(9.80)	0	0	0	83.17
1999	(1.39)	816,706.62	9.98	7.90	0.48	(10.38)	0	1	0	80.12
2000	(4.56)	1,168,778.79	13.61	5.90	0.48	(5.75)	1	0	1	76.13
2001	(4.13)	1,305,035.28	14.34	5.10	0.48	(5.61)	0	0	0	72.98
2002	(4.34)	1,466,136.87	15.03	5.30	0.48	(0.30)	0	0	0	69.03
2003	(4.95)	1,989,537.78	19.09	5.30	0.48	(1.55)	0	0	0	75.71
2004	(9.41)	2,516,943.13	22.39	4.70	0.48	(4.17)	0	1	0	70.92
2005	(5.90)	3,164,215.54	13.42	5.00	0.48	(5.23)	1	0	0	37.93
2006	(7.08)	3,873,254.77	15.69	7.30	0.47	(5.50)	0	0	0	20.85
2007	(6.48)	4,474,680.90	16.72	7.00	0.47	(7.15)	0	0	0	21.58
2008	(5.57)	5,208,995.97	18.43	10.30	0.47	(11.56)	0	0	0	29.52
2009	(8.20)	6,734,078.02	22.61	12.10	0.47	(7.88)	0	1	0	27.89
2010	(11.09)	8,173,749.28	25.80	5.50	0.47	(10.15)	1	0	1	35.39
2011	(10.83)	9,439,407.23	27.62	12.70	0.47	(20.08)	0	0	0	38.69
2012	(9.86)	10,764,528.38	29.95	16.00	0.47	(16.49)	0	0	0	43.47
2013	(11.08)	12,714,236.45	32.98	7.90	0.47	(20.43)	0	0	0	48.33
2014	(9.16)	13,958,161.87	33.85	6.10	0.47	(20.80)	0	1	0	54.37
2015	(3.86)	14,603,714.35	15.48	5.60	0.44	(5.84)	1	0	0	30.92
2016	(3.68)	17,759,598.00	17.61	5.20	0.34	(2.28)	0	0	0	32.11
2017	(2.09)	18,889,969.06	17.55	5.30	0.31	(3.08)	0	0	0	33.22
2018	(2.15)	20,445,960.24	17.76	3.50	0.28	(4.57)	0	0	0	33.15
2019	(3.03)	22,265,371.97	18.07	3.40	0.29	(2.49)	0	1	0	33.05
2020	(2.38)	24,128,140.45	18.69	3.30	0.25	(2.60)	1	0	1	35.17
2021	(4.42)	26,585,306.72	19.62	3.70	0.28	(4.08)	0	0	0	34.84

Appendix B: International data source used in the analysis

Year	Real GDP growth (%)	Inflation rate (%)	Current account balance, (% of GDP)	Government revenue (% of GDP)	Government expenditure (% of GDP)	Overall balance (% of GDP)	Primary balance (% of GDP)	Interest paid on debt (% of GDP)	Unemployment rate	Election	Year Before Election	Re-candidate	Political corruption index	Population ages 65 and above (% of total population)	Population ages 0-14 (% of total population)	
1991	2.1	25.2	-12.3	14.8	14.2	0.6	2.4	1.8	3.6	0	0	0	0.39	2.9	50.9	46.1
1992	0.6	20.7	-12.8	12.6	17.6	-5.0	-2.6	2.4	3.6	0	0	0	0.41	2.9	51.1	45.9
1993	1.2	26.1	-17.3	14.4	16.4	-2.0	0.4	2.4	3.5	0	0	0	0.42	2.9	51.3	45.7
1994	1.6	37.9	-11.6	13.0	16.8	-3.7	-0.5	3.2	3.4	0	1	0	0.43	2.9	51.5	45.6
1995	3.6	26.8	-9.2	13.5	15.6	-2.1	0.9	3.1	3.4	1	0	0	0.43	2.8	51.7	45.5
1996	4.5	21.0	-5.2	14.9	13.4	1.6	4.0	2.4	3.3	0	0	0	0.48	2.8	52.0	45.2
1997	3.5	16.1	-4.7	12.8	12.8	0.0	2.0	2.0	3.2	0	0	0	0.48	2.8	52.2	45.0
1998	3.7	12.8	-6.1	11.5	11.4	0.1	1.4	1.3	3.2	0	0	0	0.48	2.8	52.3	44.8
1999	4.8	7.9	-6.6	11.6	12.8	-1.1	0.3	1.4	3.1	0	1	0	0.48	2.8	52.5	44.7
2000	4.9	6.0	-3.2	11.6	12.3	-0.7	0.6	1.3	3.1	1	0	1	0.48	2.8	52.6	44.7
2001	6.0	5.1	-2.5	12.0	12.4	-0.4	0.7	1.1	3.0	0	0	0	0.48	2.8	52.6	44.6
2002	7.2	4.6	-1.3	12.9	13.6	-0.7	0.1	0.9	3.0	0	0	0	0.48	2.8	52.7	44.6
2003	6.9	4.4	-1.1	13.6	15.4	-1.8	-1.1	0.7	3.1	0	0	0	0.48	2.8	52.7	44.6
2004	7.8	4.1	-3.2	14.6	17.0	-2.4	-1.7	0.7	3.2	0	1	0	0.48	2.8	52.6	44.6
2005	7.4	4.4	-5.3	15.0	18.3	-3.3	-2.4	0.9	3.2	1	0	0	0.48	2.8	52.6	44.7
2006	4.7	7.3	-7.1	14.2	17.6	-3.4	-2.5	0.9	3.3	0	0	0	0.47	2.8	52.5	44.7
2007	8.5	7.0	-8.4	16.4	17.8	-1.4	-0.6	0.9	3.0	0	0	0	0.47	2.8	52.4	44.8
2008	5.6	10.3	-7.7	16.2	18.1	-1.9	-1.2	0.8	2.8	0	0	0	0.47	2.8	52.3	44.9
2009	5.4	12.1	-7.5	15.1	19.6	-4.5	-3.8	0.6	2.5	0	1	0	0.47	2.9	52.2	45.0
2010	6.4	7.2	-7.5	15.1	19.8	-4.7	-4.1	0.7	3.0	1	0	1	0.47	2.9	52.0	45.1
2011	7.9	12.7	-10.5	15.5	19.0	-3.5	-2.8	0.7	3.5	0	0	0	0.47	2.9	52.0	45.1
2012	5.1	16.0	-11.6	15.6	19.6	-4.0	-3.0	1.0	3.2	0	0	0	0.47	3.0	52.0	45.0
2013	6.8	7.9	-10.7	15.0	18.8	-3.8	-2.6	1.2	2.9	0	0	0	0.47	3.0	52.0	45.0
2014	6.7	6.1	-9.8	14.4	17.3	-2.9	-1.6	1.4	2.1	0	1	0	0.47	3.1	52.0	44.9
2015	6.2	5.6	-7.7	14.0	17.2	-3.2	-1.7	1.5	2.1	1	0	0	0.44	3.1	52.1	44.8
2016	6.9	5.2	-4.2	14.8	16.9	-2.1	-0.6	1.5	2.2	0	0	0	0.34	3.1	52.2	44.7
2017	6.8	5.3	-2.6	15.4	16.6	-1.2	0.4	1.6	2.2	0	0	0	0.31	3.1	52.3	44.6
2018	7.0	3.5	-3.0	14.7	16.6	-1.9	-0.2	1.7	2.2	0	0	0	0.28	3.1	52.5	44.4
2019	7.0	3.4	-2.6	14.6	16.6	-2.0	-0.3	1.7	2.2	0	1	0	0.29	3.1	52.7	44.1
2020	4.8	3.3	-1.9	14.6	17.1	-2.5	-0.9	1.6	2.5	1	0	1	0.25	3.1	53.0	43.9
2021	4.9	3.7	-3.4	14.4	17.5	-3.4	-1.8	1.6	2.6	0	0	0	0.28	3.1	53.3	43.6