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Pre-Election Tax Enforcement in Sub-Saharan Africa

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Abstract

Using the literature on the political business cycle as a point of departure, this paper investigates whether incumbent politicians manipulate the enforcement of tax collection prior to elections, in order to win votes. Whereas previous literature has focused on macro level measurement, this paper turns the attention to the micro level, and introduces a novel measurement for the enforcement of tax regulations on an individual level. The paper investigates this question using 70 country-rounds of survey data from Sub-Saharan Africa combined with data on the timing of elections. There is no clear-cut evidence for such policy manipulations on an aggregate level, but findings indicate that this might differ depending on the incumbent's level of political support. These findings are relevant to everyone working on how to strengthen tax administrations in developing countries in order to increase public revenue and improve quality of government.

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Introduction

This paper asks whether tax collection is manipulated in developing countries prior to elections. The point of departure is the literature on the Political Business Cycle (PBC), which claims that incumbent politicians implement expansionary policies prior to elections, in order to increase their chances of re-election (Nordhaus, 1975). Previous literature on the Political Business Cycle has mostly focused on the expenditure side of the Political Business Cycle, demonstrating an increase in “voter-friendly” spending prior to elections, both on an aggregate level (Block, 2002; Block et al., 2003), but also when investigating more targeted spending such as on infrastructure (Drazen & Eslava, 2010), and wages and subsidies (Vergne, 2009).

A smaller strand of research has turned the attention to the other side of the equation, which is the revenue-side. Acknowledging that paying less taxes also would be favourable to voters, researchers have tried to shed light on the role of taxation in the Political Business Cycle. However, findings here are more ambiguous. One study, Block (2002) finds no relationship between taxation and elections. Another study finds evidence of policy manipulation only for indirect taxes, (Ehrhart, 2013), another study finds that this is highly dependent on the degree of competitiveness of the election (Prichard, 2016), a third study find no evidence on an aggregate level, but find that tax benefits are granted in order to target narrow interest groups (Khemani, 2004). What these previous studies have in common is that they focus on macro-level measurements of tax revenue, i.e. tax-to-GDP ratio¹

However, the main argument behind the political business cycle is that these policy manipulations are introduced in order to influence voters. Thus, voters should themselves experience the tax reduction, which macro level measurements are not able to capture. I argue that in order to fully investigate the existence of the Political Business Cycle, one must also take into account a micro level perspective, and investigate whether voters actually do experience changes in tax enforcement prior to elections. The aim of this paper is to investigate the following research question: *Is tax collection reduced prior to elections in Sub-Saharan Africa?* In order to do so, I introduce a novel measurement based on survey data from Afrobarometer, and examines this question across 24 countries and 4 survey waves from Sub-Saharan Africa. In doing so, this paper contributes to the literature on the Political Business Cycle by turning (i) the attention towards *tax collection* as opposed to government *spending*, and (ii) focusing on the voter’s own experience of tax collection.

Using taxation as an element of policy manipulation, and a way to win over voters, is problematic, not only from an economic perspective, but also in terms of political accountability more generally. Taxation is also a symbol of the linkages between the state and its society (Bräutigam et al., 2008). When citizens are taxed, they have an increased interest in paying attention to *how* the state spend its money, and an increased interest in deciding *how* the state spend the tax revenue (Brennan & Buchanan, 1980). Taxation is closely linked to state building (Bräutigam, 2008), and a large strand of research supports the claim that increased taxation is associated with several aspects related to higher levels of government quality and democracy (Altunbas & Thornton, 2011; Baskaran, 2014; Broms, 2015; Prichard et al., 2018). If governments use reduced tax enforcement in order to win votes in the short-term, it might also cause more

¹ State-level tax revenue in the study by Khemani (2004), which only focuses on India.

severe problems in terms of government accountability in the long run. Strengthening the tax administrations in Sub-Saharan Africa is a long-term goal, and major reforms are being implemented across the region. Despite these efforts, performance is still low when taking all these efforts into consideration (Moore, 2020). Thus, investigating underlying political dynamics that might influence tax collection will be of relevance also for policy makers working to increase tax revenue in the region.

The paper proceeds as follows: First, the theoretical framework of the political business cycle is presented, along with earlier research of the taxation-side of the PBC in developing countries. Here, I also nuance the argument about tax enforcement as a part of the Political Business Cycle. Next, I present the data material thoroughly, followed by the analysis which investigates the effect of electoral proximity on tax collection. In sum, I do not find any evidence of the Political Business Cycle measured at the individual level, but some indication that this depends on the political climate that the incumbent operates in.

Theory and Previous Research

A large strand of literature suggests that incumbent politicians manipulate fiscal and monetary policies prior to elections, in order to increase their chance of being re-elected. Formally, this is known as the Political Business Cycle (PBC), a concept introduced by Nordhaus (1975). In an attempt to increase chances for re-election, governments implement expansionary fiscal or monetary politics in periods prior to elections, and compensate for the losses by implementing contractionary policies after the elections.

This “opportunistic” approach to the Political Business Cycle was followed up by a more “partisan” approach advocated by Hibbs (1977), whose model predicts that, in an attempt to speak to the interest of their core voters, right-wing governments pursue policies that ensures low inflation (and risk higher unemployment), whereas left-wing government aims for low unemployment (and are less concerned with the inflation rate). Subsequent empirical studies were mostly concerned with developed countries and democracies in particular, but development countries have received increased attention. And, as political parties in most developing countries do not follow the left-right scale with the attached ideological choices in fiscal and monetary policies, the opportunistic “Nordhaus model” is best suited to explain political business cycles in developing countries (Schuknecht, 2000), which is also in line with most studies on PBCs in developing countries.

More recent literature introduced the concept of ‘conditional budget cycles’ (de Haan & Klomp, 2013) and found that political business cycles are in fact more prevalent in countries with low institutional quality (Shi & Svensson, 2006) and in new democracies (Brender & Drazen, 2005), which is often the situation in many developing countries. Adding to the studies by Shi and Svensson (2006) and Brender and Drazen (2005), Vergne (2009) uses panel data from 42 developing countries to demonstrate that the spending on visible expenditures, such as wages and subsidies, increases during election-years. Similarly, using panel data from 24 developing countries, Schuknecht (2000) finds that public expenditure increases prior to elections. Several case-studies also confirms the existence of PBC. Labonne (2016) studies municipal elections in the Phillippines, and finds a sharp increase in employment levels prior to elections, followed by a reduction in employment levels after the elections. Drazen and Eslava (2010) study Colombian municipal elections, and finds evidence for what they call “voter friendly spending”, i.e. that Colombian municipalities increases spending on infrastructure, which is particularly important to voters, and reduces spending on areas that are of less importance for voters.

Sub-Saharan Africa has been largely ignored in this literature, with the notable exceptions of Block (2002) and Block et al. (2003), both studies examining the existence of political business cycles across several countries in Sub-Saharan Africa. Block (2002) finds clear evidence of pre-election government manipulation of both fiscal and monetary policies, and concludes that “political business cycles are alive and well in the developing world, and that nascent democracies are especially vulnerable” (p.205). This includes increased money supply during election years, reduction in nominal lending rates, mixed pre-election effect on inflation rate but increased inflation rate after the elections, increased spending on public goods during election year, and an increased fiscal deficit, all in order to gain the support of the rational voter.

The lion’s part of the research on PBC in developing countries have focused on the expenditure side of the political business cycle, with less attention to the role of taxation (Prichard, 2016). Prichard (2016) argues that this “in part reflects greater ambiguity about the expected impact of elections on tax collection” (p.430): On the one hand, reduced tax collection might appeal to voters along the same line as increased government spending. On the other hand, reduced tax collection might be comparably less visible to most voters, and it might also be more costly for the government and - importantly - will imply reduced revenue and less room for increased government spending, particularly if the government already is limited in terms of running with fiscal deficits.

Still, some notable cross-country findings confirm - with some caveats - the existence of PBCs with regards to taxation in developing countries. Studying political budget cycles in developing countries using data from 98 developing countries over the period 1980-2010, Prichard (2016) finds that while elections in general have no effect on pre-election tax collection, *competitive elections* have a negative impact on pre-election tax collection. The strongest effect is prior to elections that have been competitive, *and* where the incumbent lost the election. Using panel data from 56 developing countries during the period 1980-2006, Ehrhart (2013) distinguishes between indirect and direct taxes, and finds that the former is decreased prior to elections, but no evidence of the same with regards to direct tax revenue. On the other hand, Block (2002), however finds no effect of elections (neither pre nor post election year) on tax revenue as share of GDP, using data exclusively on Africa. Finally, Khemani (2004) studies local level elections in India, and finds no evidence of a taxation-based political business cycle, but finds that there is a relationship on the disaggregated level, as the incumbent manipulates tax policies to target specific interest groups.

Reducing tax collection prior to elections is not easily done. Increased spending can to a certain extent be financed by loans, but reducing tax collection will automatically result in reduced income. In fact, Prichard (2016) suggests that one of the reasons the PBC literature has been somewhat silent on the role of tax collection, is because the role of tax collection is somewhat ambiguous. On the one hand, reduced tax collection will surely be popular among voters. On the other hand, it might not be *visible* to all voters, which is particularly the case in many developing countries, which usually rely on indirect taxes. Reduced tax collection might, generally, be implemented either through changes in tax policy, or through changes in enforcement. The fact that reducing tax collection is costly in terms of revenue loss, and that it might not be easily detected by an un-informed voter, might make it implausible that tax collection should be a part of the political business cycle.

However, we can also think about tax regulations not only as regulations put in place in order to generate revenue for the government. Taxation is also a strong symbol of the relationship between the state and it’s citizens (Bräutigam et al., 2008), and tax collection is also a strong a symbol (sometimes even used as a proxy for) state capacity. However, more than anything, taxation is a strong symbol of the state’s power,

and paying taxes is more than anything the same as complying with the law. Drawing on what Holland (2016) calls *forbearance*, defined as “intentional and revocable government leniency toward violations of the law” (p. 233), being more lenient on tax regulations prior to elections might be a way of winning over voters.

This *forbearance* requires “a bureaucracy with sufficient strength to execute politicians’ desires, but imperfect autonomy so that executives can intervene in enforcement” (Holland, 2016, p. 234). Numerous countries in Sub-Saharan Africa have established Semi-Autonomous Revenue Authorities (SARA) (Fjeldstad & Moore, 2009)². However, these agencies are not free from political influence, and there are several examples of close connections between the political leadership and the leadership of tax administrations (Fjeldstad & Moore, 2009).

The past two decades have also seen a considerably increase in the capacity and sophistication of the tax administrations in the region. Tax officials are more educated than ever before, and there is a higher degree of professional specialisation. In fact, tax administrations in Sub-Saharan Africa are now - on average - more efficient compared to tax administrations in other low-income regions. Still, there is a huge discrepancy between the reforms undertaken to modernise the tax administrations and the amount of revenue that is collected, which in part is due to organisational challenges (Moore, 2020). Despite a considerable modernisation and digitalisation, Moore (2020) has found that a large part of the organisational capacity of staff at tax administrations across the regions is spent on trying to tax small-scale business owners, which requires face-to-face interaction and tax collectors who are “street smart and mobile” (p.9). The question is whether the combination of centralised tax administrations and the fact that a large part of tax collection from individuals still depend on face-to-face interactions, give room for the phenomenon of *forbearance*, where politicians knowingly reduce efforts to tax individuals prior to elections in order to increase their chances of re-election.

Research Question

The aim of this paper is to investigate the following research question: *Is tax collection reduced prior to elections in Sub-Saharan Africa?* In sum, taxation is a strong symbol of state-society linkages. However, when mixed up with elections, arguably *the strongest symbol* of state-society linkages, the dynamics of taxation is unclear, and the findings are ambiguous. Drawing on literature on the Political Business Cycle, taxation should be reduced, as a part of expansionary fiscal policies. Thus, I hypothesise that elections will have a negative impact on the enforcement of tax regulations. In an attempt to win over voters, the incumbent government reduces the enforcement of tax regulation as elections are coming closer.

² Revenue Authorities generally have more autonomy than other civil service agencies, but less autonomy than Central Banks, which is why they are referred to as "Semi-Autonomous" (Fjeldstad & Heggstad, 2011)

Data and Measurement

The main source of data is from Afrobarometer (2016), a survey conducted across multiple African countries. This survey uses a standardized questionnaire which allows for cross-country comparisons. Nationally representative samples are drawn using a clustered, stratified, multi-stage, area probability sample.³ Thus, the data is nationally representative, but not representative for the *region* of Sub-Saharan Africa. The dependent variable of interest is provided in round 3 through 6 of the survey. Furthermore, as the research design requires that more than one survey round is available, Gabon and Sao Tome & Principe are excluded from the sample, as they are only included in Round 6. The final sample consists of 70 country-rounds: 10 from Round 3 (2005), 16 from Round 4 (2008), 23 from Round 5 (2011-2015) and 21 from Round 6 (2016).

Dependent Variable: Measuring Tax Enforcement

Previous studies on the taxation-side of PBC have largely, if not solely, relied on total tax revenue as share of GDP as the operationalisation of their dependent variable. The measurement has been nuanced, such as by excluding natural resources (Prichard, 2016) and separating between direct and indirect tax collection (Ehrhart, 2013; Prichard, 2016). One important limitation with this operationalisation, as pointed out by Prichard (2016), is that it cannot distinguish between policy changes and changes in the enforcement of tax regulations.

However, and more importantly, this measurement does not take into account the individual's own experience (and/ or knowledge) regarding pre-election tax reductions. The whole rationale - from the incumbent government's side - behind pre-election policy changes is to sway voters. It is not given that changes in total tax revenue (measured as share of GDP) will influence voters. This depends on the visibility of the taxes. If the aim is to overturn voters, it is crucial that the policy manipulations are in fact visible to the voters. To my knowledge, no-one has tried to capture the individual's own experience of the enforcement of tax regulations, in relation to elections.

The outcome variable is the enforcement of tax regulation. The ideal operationalisation of *tax regulation enforcement* would be to ask individual about their perceived level of tax collection, but this does not exist for all of the survey rounds in the available data material. However, one survey question in Afrobarometer asks the respondents about their perceived level of corruption amongst tax officials: *How many of the following people do you think are involved in corruption, or haven't you heard enough about them to say: Tax Officials (e.g. Ministry of Finance officials or Local Government tax collectors).*⁴ The respondent can choose between the following answers: *None, Some of them, Most of them, All of them, and Don't know/ have not heard enough*. I propose to use the answer option of *Don't know/ have not heard enough* to measure the level of enforcement of tax regulation. I suggest that respondents who answer *Don't know* are less exposed to tax collectors compared to respondents who answer one of the other options. From this, I construct a binary outcome variable

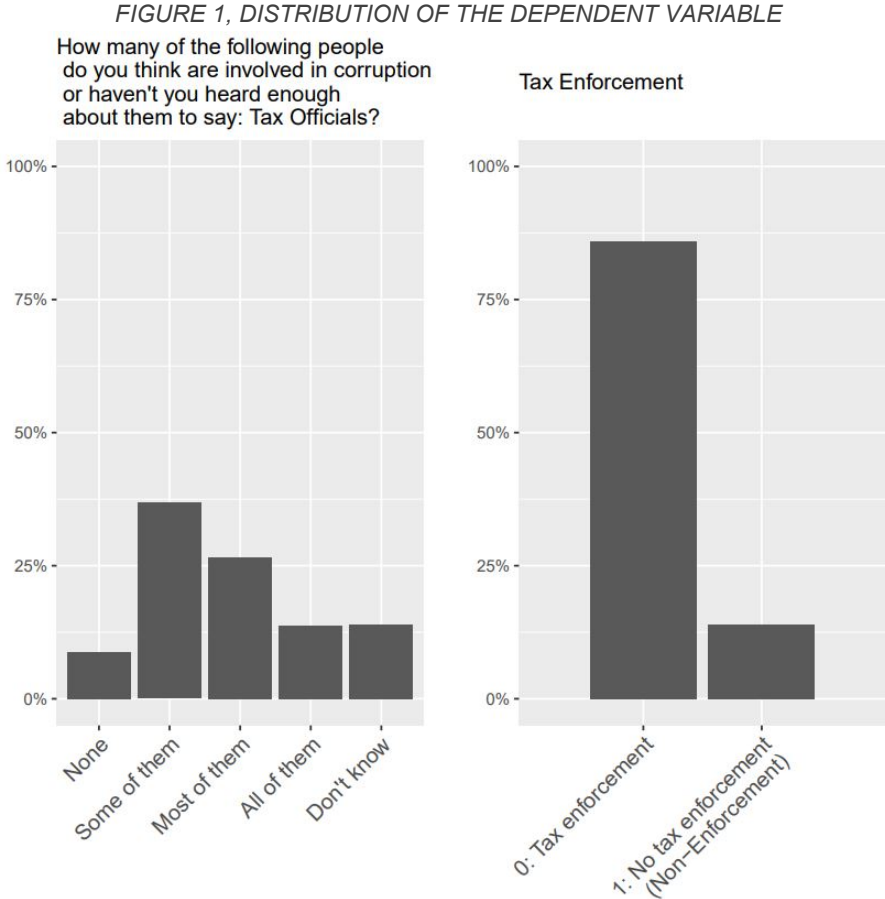
³ More information about the survey methodology is available in section 5 of the Afrobarometer Round 7 Survey Manual and on <https://www.afrobarometer.org/surveys-and-methods/sampling-principles>.

⁴ In Round 3, the question is slightly different as it gives the example of VATS/IRS officials instead of Ministry of Finance officials or Local Government tax collectors: *How many of the following people do you think are involved in corruption, or haven't you heard enough about them to say: Tax Officials (e.g. VATS/IRS officials).*

that measures *Non-enforcement*, which takes the value 1 if the respondent answered *Don't know*, and the value 0 if the respondent answered any of the other options (i.e. *None*, *Some of them*, *Most of them*, *All of them*).

Thus, I assume that if proximity to elections have a positive effect on this variable measuring *Non-Enforcement*, it implies more respondents answering *Don't know*, i.e. less people are exposed to tax collectors, and that elections have a negative impact on tax collection. Thus, in line with the literature on the political business cycle, I hypothesise that *electoral proximity* has a *positive* effect on *Non-Enforcement*.

Figure 1 below shows the distribution of the outcome variable. The histogram on the left-hand side shows the original variable, with the five different response-options for the original survey question. In the histogram on the right-hand side, the four first answers are collapsed into one variable measuring "Tax Enforcement", whereas the option "Don't know" in the histogram to the left is thought to measure "Non-Enforcement", as presented in the histogram to the right. This dichotomous variable will be used for the analysis. The figures show that 14% of the sample has answered "Don't know" to the question about perceived level of corruption among tax officials, which is roughly the same amount as "All of them", and slightly more than "None" with 9%.

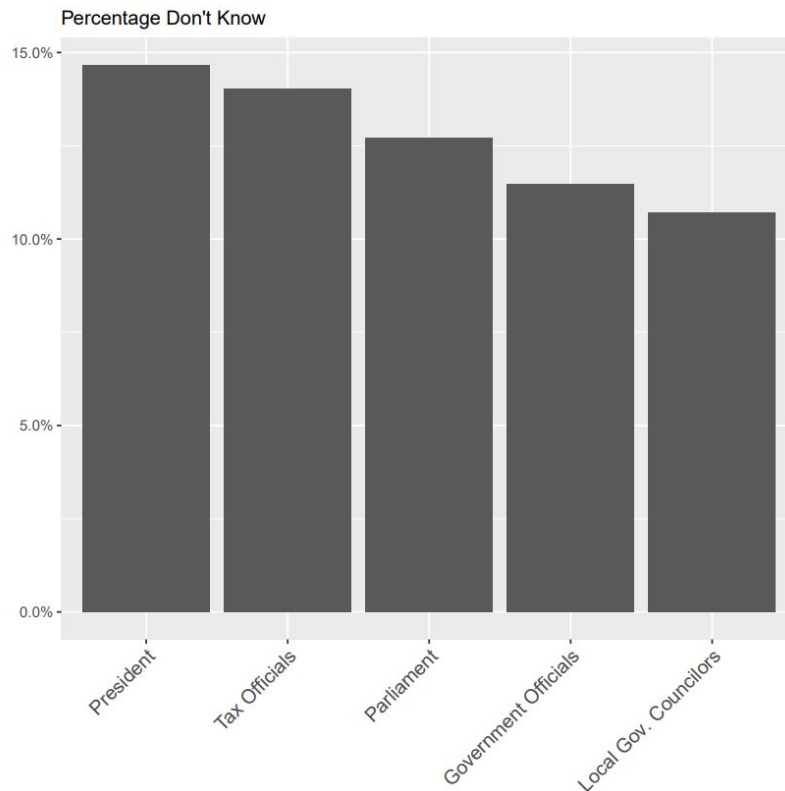


The validity of this measurement merits some further evaluation. Using self-reported measures as in the survey data, gives room for bias. Both corruption and taxation are sensitive issues, and the respondent might be unwilling to reveal true experiences. Thus, as this analysis relies on the "Don't know" answer, it might be that I am simply measuring the unwillingness to reveal own attitudes towards corruption. Corruption being a sensitive issue, respondents might feel uncomfortable revealing their opinion on this subject. The risk for bias in answers to sensitive survey questions might be reduced by the fact that Afrobarometer is a survey not primarily about corruption or even political attitudes; The questionnaire includes around 100 questions on a wide range of topics, which reduces this risk. However, as much as half of the sample believes that the survey enumerator was sent by the president or a governmental agency, which is why I, in the analysis, I also run the regressions excluding these respondents.

Comparison with level of knowledge of other political actors

Afrobarometer also provides similarly phrased questions about corruption among the President, Parliament, Government Officials, as well as Local Government Councillors, and Figure 2 below shows the percentage who answers "Don't know" to the these question, and we see that the highest percentage of "Don't know" is for the president, followed by Tax Officials. "Local Government Councillors" have the lowest percentage of respondents answering "Don't know". This could imply that people are more likely to have an opinion about the actors that they interact with, as presumably more people interact on a daily basis with local government councillors and government officials, compared to with the president. Thus, it seems that this variable captures some of the aspect of "presence", i.e. that individuals have more opinions about the actors that are close to them, which strengthens the case for the chosen dependent variable, i.e. using this variable to estimate *No Tax Enforcement*.

FIGURE 2, PERCENTAGE "DON'T KNOW" FOR OTHER VARIABLES



Predicting knowledge about tax requirements

Another way to evaluate the validity of the dependent variable is to compare it with taxation variables from Afrobarometer Round 5, which is the round that contains the most detailed questions about tax payment, including questions about payment of various taxes. More specifically, it asks whether the respondent are required to pay the tax, regardless of whether the respondent is able to pay or has paid. Moreover, Round 5 includes a question asking about how difficult it is to find out what taxes and fees one is supposed to pay to the government. Particularly the latter question should reflect enforcement rather than a strategic policy choice from the government; if it was reflecting a policy choice, people would still have information about tax payment, it would just be information about a different tax rate than before. Thus, I first check how well the "No Tax Enforcement" variable predicts knowledge about these taxes, and about how difficult it is to find information about tax requirements in general. The results, presented in Table 6 in the Appendix, shows that this can only predict lack of knowledge about VAT and employment tax. That is, answering "Don't know" to the question about level of corruption amongst tax officials implies a reduced likelihood of having knowledge about the requirement to pay VAT, and to pay employment tax. I also model the same relationship using the categories of "President - don't know" and "Government officials - don't know" to estimate the probability of having knowledge about the same types of taxes, reported in Table 7 and Table 8 respectively. Here, we see that also answering "Don't know" to the question regarding how corrupt the president is, signifies a reduced probability of having knowledge about requirement to pay employment tax.

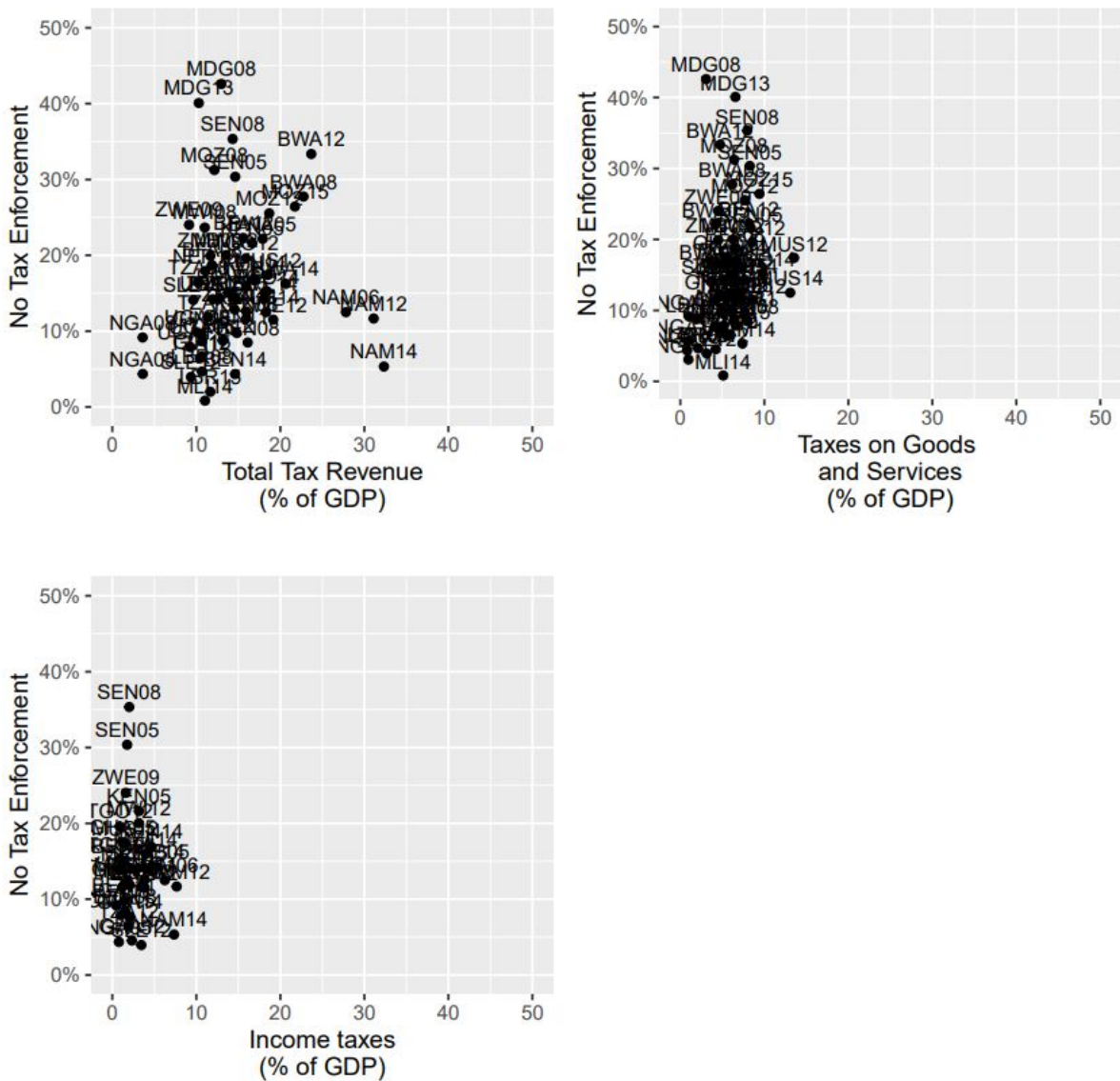
Comparison with Tax-to-GDP ratio

Finally, I also compare this with macro-level estimates of tax revenue from ICTD/UNU-WIDER (2020), prepared by Teorell et al. (2020). In Figure 3, the average level of "No Tax Enforcement" is plotted against various measurements of Tax-to-GDP ratio, for each year that correspond to a round in the survey.⁵ All measurements are excluding taxation from natural resources, and I use both the measurement for total tax revenue, and investigate the relationship with more fine-grained data on taxes on goods and services, and income taxes respectively. Ideally, to strengthen the case for the use of this dependent variable "No Tax Enforcement", lower levels of "No Tax Enforcement" should correlate with higher levels of Tax-to-GDP ratio. I.e., the more taxes a country collects, the more people are experiencing tax enforcement. Based on these figures, it does not seem to be such clear-cut relationship, perhaps with the exception of Namibia in the first figure, which has seen a small increase in the level of tax-to-GDP ratio, and a considerable reduction in the average level of "No Tax Enforcement". However, one should be careful with comparing these individual-level experiences with macro-level measurements, as the taxes collected on an individual level are proportionally very small compared to what is collected on a central level, mostly from a small number of large companies (Moore, 2020).

This proposed measurement - "No Tax Enforcement" based on a question regarding corruption amongst tax officials - is far from perfect. However, individual-level data on tax payments is notoriously difficult to obtain, particularly for large samples. Moreover, asking respondents directly about their tax payments is also not ideal, as this would imply asking respondents about their compliance with the law, which respondents might be reluctant to admit to in a survey (Kinsey, 1992). Attempting to capture *knowledge* about taxation instead, is a way to circumvent this problem, while at the same time staying closer to the theory, as the aim is to measure the experience of enforcement, not necessarily each individual's own tax payment.

⁵ Some of the survey rounds are undertaken across different years, e.g. from December to January. In these cases, I use the Tax-to-GDP measurement from the year where the survey first started (i.e. for December in this case).

FIGURE 3, COMPARISON WITH MACRO TAX DATA



Independent Variable: Electoral Proximity

In order to measure electoral proximity, I follow Eifert et al. (2010) and measure this as the time between the respondent answered the Afrobarometer survey, and the earliest election in the respondent’s country.⁶ I follow Prichard (2016), and use the elections where the head of the state will be elected.⁷ Afrobarometer provides data on the exact date the survey was conducted for each respondent. Dates for the elections are

⁶ Eifert et al. (2010) investigates the effect of presidential elections on ethnic identification in Sub-Saharan Africa, using data from Afrobarometer rounds 1, 1.5, and 2.

⁷ In Botswana, Lesotho, South Africa, and Swaziland I use general elections.

mainly taken from the National Elections Across Democracy and Autocracy Dataset (NELDA), which provides dates for elections up until 2015 (Hyde & Marinov, 2012, 2019). I gathered additional data on elections later than 2015. I thus calculate the number of days between the exact day the respondent answered the survey, and the nearest upcoming election. For ease of interpretation, I code *electoral proximity* as $-1 \cdot$ (days to nearest election), so that higher values (i.e. "less negative") signifies increased proximity to election. Figure 4 below shows the distribution of electoral proximity, which ranges from -2197 to -23, meaning that the closest a survey was conducted was as close as 23 days before an election. The earliest was as much as 2030 days, i.e. around 5.5 years previous to an election. On average, the surveys were conducted 804 days, i.e. around 2.2 years previous to an election. Figure 5 shows the distribution of electoral proximity within each survey round. Due to this large variation in the independent variable, the independent variable is log-transformed in the analysis.

FIGURE 4, DISTRIBUTION OF THE INDEPENDENT VARIABLE

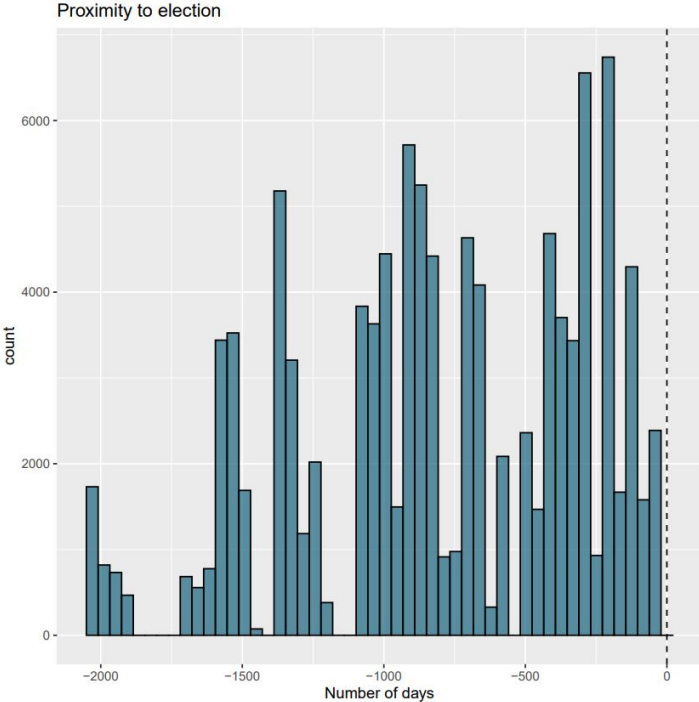
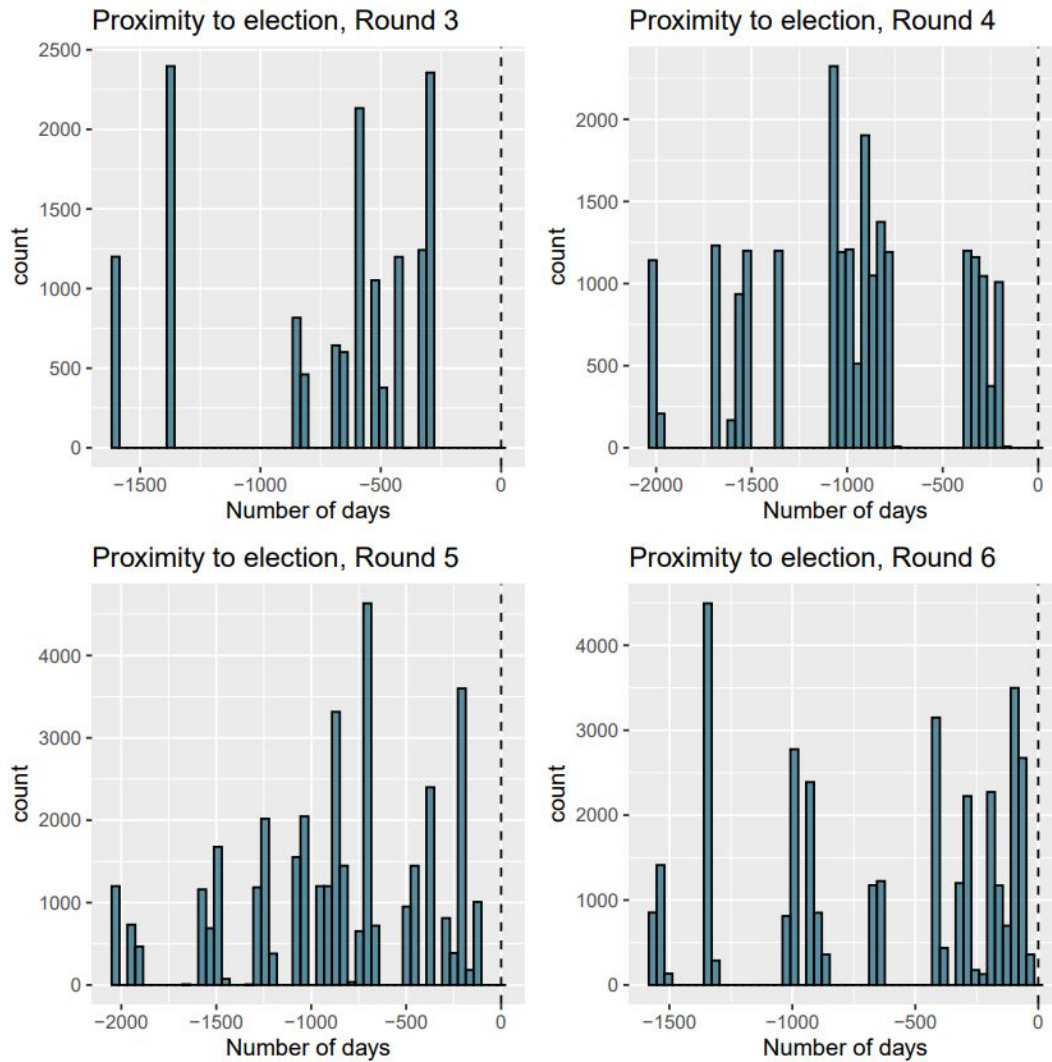


FIGURE 5. DISTRIBUTION OF THE INDEPENDENT VARIABLE ACROSS SURVEY ROUNDS



Control Variabels

Previous literature, such as Prichard (2016) and Block et al. (2003) stress the importance of multiparty, competitive elections, for the workings of the political business cycle. Thus, in order to control for this, I include a dummy variable taking the value 1 if the incumbent lost the election, and the value 0 if this was not the case, using data from the National Elections Across Democracy and Autocracy Dataset (NELDA) (Hyde & Marinov, 2012, 2019). As individual level control variables, I follow the literature on tax payment in Sub-Saharan Africa, such as Ali et al. (2014), and add the following individual characteristics as control variables: Gender, age, job, level of education, urban/ rural, and wealth (index regarding the respondent's ownership of tv, radio, and motor vehicle, this is the best and most widely used measurement of wealth from Afrobarometer), as well as political trust (index consisting of trust in president/ political leader, Parliament/ National Assembly, and Local Councillors).

Visualisation of the full data material

Figure 6 visualises the data material at hand. The y-axis measures the mean value for the dependent variable for each country, for each survey round. Years are measured along the x-axis, and the vertical lines represent election dates. There is substantial within-country variation in average levels of exposure to tax collection, which is visualised also in Figure 7, in relation to each country's election.

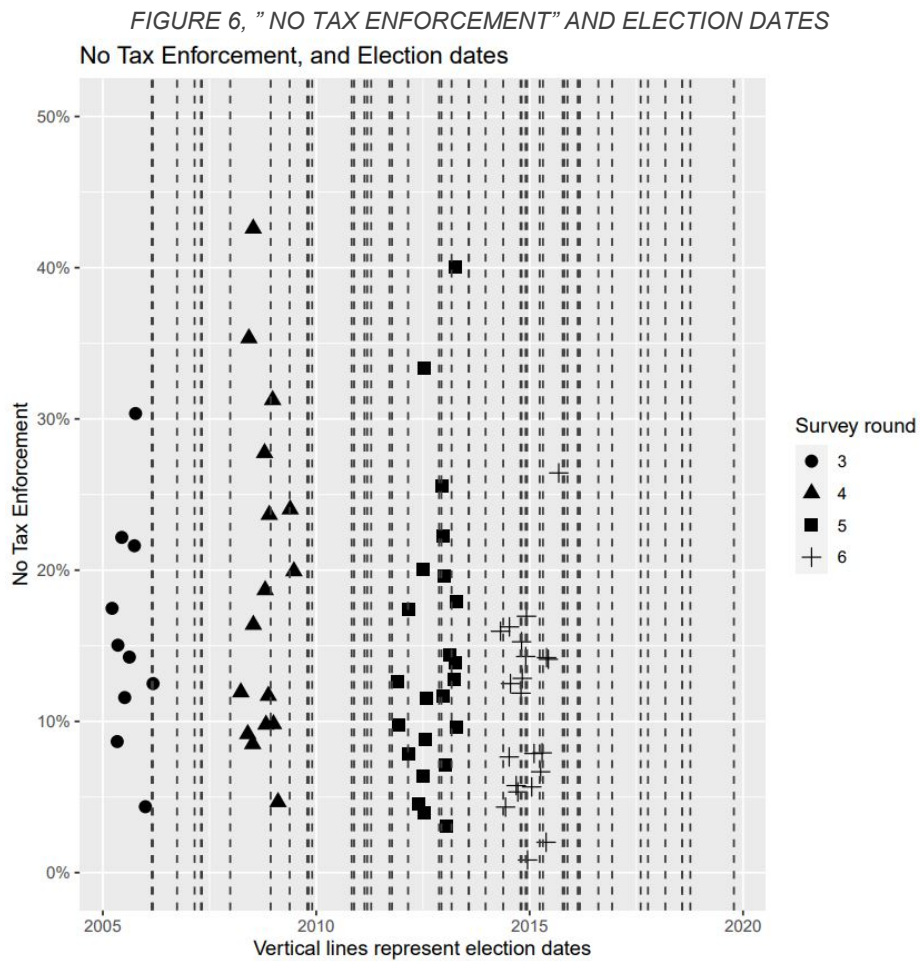
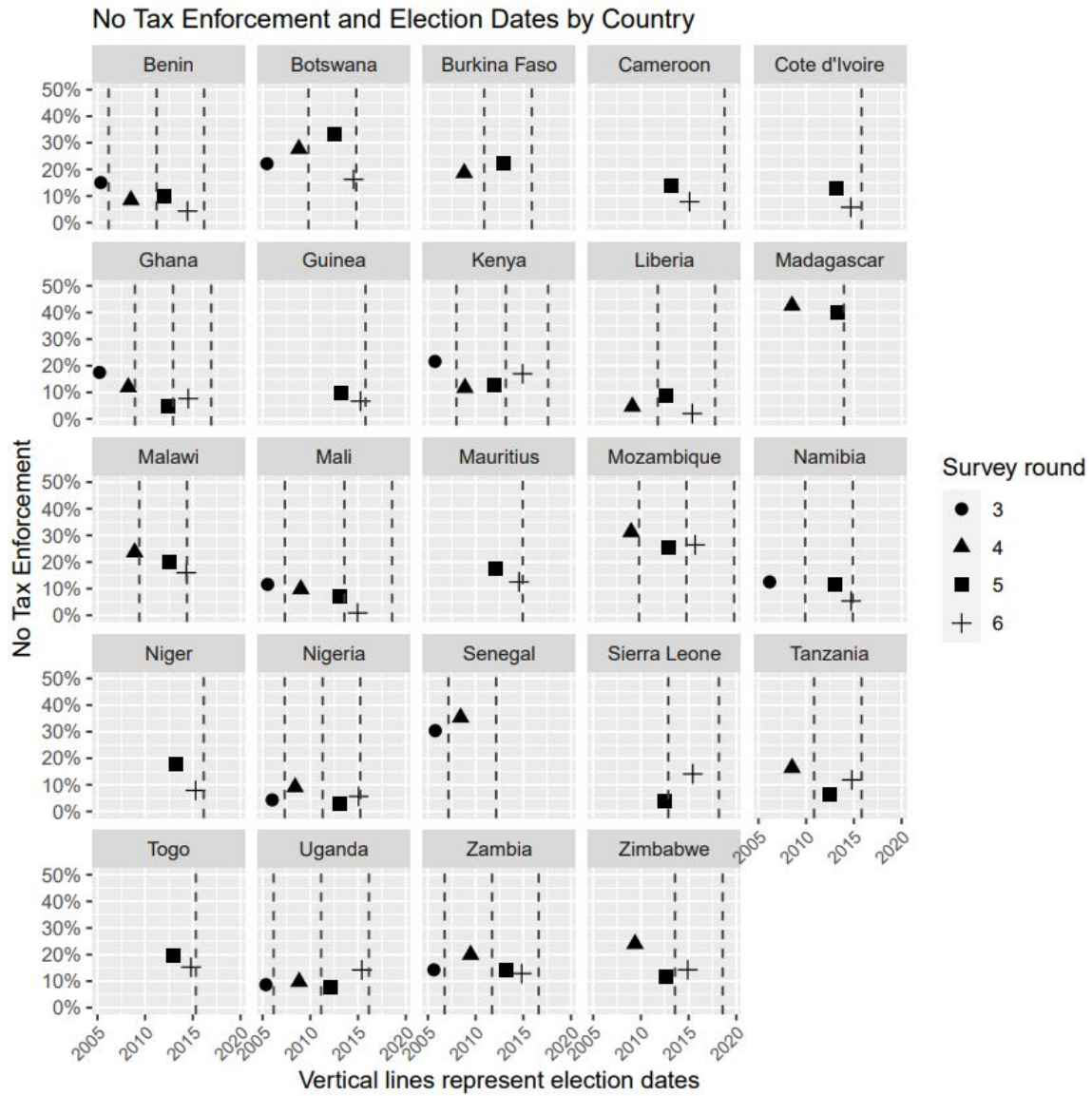


FIGURE 7, "NO TAX ENFORCEMENT" AND ELECTION DATES ACROSS COUNTRIES



Descriptive statistics

Firstly, descriptive statistics of the variables is presented in Table 1.

TABLE 1, DESCRIPTIVE STATISTICS

	Mean	SD	Min	Max	N
No Tax Enforcement	.1403562	.3473579	0	1	108018
Proximity to election	-804.3608	505.3522	-2030	-23	108075
Proximity to election (ln)	-6.40829	.8561886	-7.615791	-3.135494	108075
Incumbent lost	.2159533	.4114849	0	1	71960
Age	36.40374	14.23001	18	130	107058
Female	.5015036	.5000001	0	1	108075
Education	3.184944	2.097059	0	9	107811
Job	1.408309	3.361319	-1	998	108075
Wealth	.4129349	.3159406	0	1	107992
Political Trust	2.694036	.9145473	1	4	106505

Identification Strategy

As previously mentioned, this study contributes to the literature on political business cycle by turning the attention to the individual taxpayers. This is reflected in the use of individual level survey data from Afrobarometer, which is a repeated cross-sectional survey (pseudo-panel). The survey does not follow the same individuals over time, but recruits a new populations sample for each survey round. The survey questions of interest remain the same across all survey rounds⁸ Thus, the data has been gathered from individuals across multiple countries and across multiple points in time. This allows me to compare levels of tax collection in each country over time, sometimes measured close to an election, and other times measured more distant from an election, while the country's baseline level of tax collection will be hold constant over time.

As previously mentioned, only countries for which more than one survey round is available are included in the analysis, to allow for the inclusion of country fixed effects, that will control for country specific factors such as economic development, history, and regime type. There is considerable variation in the independent variable, where the earliest interview was conducted more than 3 years prior to an election, and the closest interview was conducted as close as 23 days prior to an election. The theoretical framework concerns the time prior to an election, suggesting that the effect of electoral proximity on tax exposure should be larger the closer to an election one gets. In other words, a hypothetical change from 2 years to 1.5 years should have a much smaller effect on tax exposure than a change from e.g. 6 weeks to 3 weeks, as the electoral campaigning is expected to intensify the closer to an election one gets. In order to capture this non-linear relationship between electoral proximity and tax exposure, I log-transform the electoral proximity variable.

⁸ With the exception of the small change in formulation, already mentioned in the data section.

The standard errors are clustered at the country-survey-round level (i.e. for each country-round) in order to control for the dependency of the independent variables for respondents in the same country and survey round. I also include a trend variable, taking the value 1 to 9 for each individual year represented in the data sample.⁹ Finally, a binary dependent variable speaks to a logit model.

Results

Firstly, bivariate regression models (presented in Table 5 in the Appendix) show no relationship between proximity to elections on tax enforcement when electoral proximity is measured in number of days. However, when log transformed, there is an unexpected negative relationship between electoral proximity and non-enforcement, indicating that the closer to an election, the *more* like an individual was of experiencing tax enforcement (i.e. less likely to experience non-enforcement). However, when adding the control variables as shown in model 1-4 in Table 2, this relationship is less robust. The relationship is not significant when controlling for electoral competitiveness in Model 1. Based on previous literature that stresses the importance of electoral competitiveness, most prominently Prichard (2016) and Block et al. (2003), I also test for an interaction effect between electoral proximity and electoral competitiveness in Model 2, which also does not show a significant relationship with non-enforcement. When adding the individual-level control variables in Model 3 however, we do see a significant impact on the interaction between electoral proximity and competitiveness of the election on non-enforcement. In Figure 8, this interaction effect is visualised, with the probability of non-enforcement measured on the Y-axis, and proximity to election on the X-axis. Here, we see that for the elections where the incumbent government won (the blue line), electoral proximity is negatively associated with the probability of non-enforcement. In other words, when the incumbent was popular, there was a higher level of tax collection prior to elections. However, for the elections when the incumbent lost, and presumably was unpopular, there is a very small but positive relationship between electoral proximity and non-enforcement, which is in line with the theory regarding the Political Business Cycle. However, these results are not particularly robust. Also, as previously mentioned, as much as half of the sample believed that the Afrobarometer survey was organised by the President or a governmental agency. Thus, when re-running Model 3 and 4 from Table 2, results are shown in Table 9 in the Appendix, this relationship is also not significant.

As previously mentioned, Afrobarometer round 5 includes a range of relevant questions concerning tax payment. Thus, using the same control variables as specified above, I model the relationship between Electoral Proximity and knowledge about the requirement to pay (i) VAT, (ii) government fee, (iii) property tax, (iv) income tax and (v) employment tax, as well as the (vi) perceived level of difficulty of finding out which taxes one is required to pay. The first five analyses do not support my hypothesis that there is a relationship between electoral proximity and tax enforcement, but I do find a very small and significant positive effect of electoral proximity and the perceived level of difficulty of finding out which taxes to find, as shown in Model 1 in Table 3. However, this is not significant when log-transforming Electoral Proximity (Model 2), nor when controlling for electoral competitiveness (Model 3), or testing for an interaction effect (Model 4). Controlling for electoral competitiveness reduces the sample size significantly (from 23 countries to 15

⁹ 2005, 2006, 2008, 2009, 2011, 2012, 2013, 2014 and 2015.

countries), and when re-running Model 1 on the sample from Model 3, which is done in Model 5, there is no longer any effect of electoral proximity on tax enforcement.

In sum, some of the analyses, notably Model 3 in Table 2 and Model 1 in Table 3, demonstrate some support for the hypothesis that voters experience reduced level of tax collection prior to elections. Importantly, this seems to depend on the incumbent's political situation. However, these results are not particularly robust, and most of the evidence point towards no relationship between electoral proximity and tax collection. On the one hand, this is in fact in line with previous literature, such as Ehrhart (2013) and Prichard (2016) who found no *clear-cut* evidence of taxation as a part of the Political Business Cycle in developing countries. On the other hand, it is worth remembering that the measurement I use to capture Non-Enforcement is far from ideal, and similar analyses should be undertaken using more precise measurements of tax collection on an individual level.

It might be that in the case of a Political Business Cycle, not all voters are actually supposed to benefit from reduced tax collection. As Holland (2015) argues, in the case of *forbearance*, it is only a specific group of voters who benefit from this "intentional leniency" towards law violations, i.e. the group of voters on which the incumbent depend on in order to win the election. Similarly - as previously mentioned - Khemani (2004) only found evidence of tax manipulations prior to an election on the disaggregate level, where tax manipulations were used in order to target specific interest groups. Thus, it might be that my study is capturing a similar dynamic; there is no effect of elections on an aggregate level, but taxation might be manipulated only to favour certain group. One benefit measuring tax enforcement on the individual level is that it paves the way for further disaggregated studies that can nuance the literature on the political business cycle, and investigate whether there are evidence of similar dynamics in Sub-Saharan Africa.

TABLE 2, LOGISTIC REGRESSION: NON-ENFORCEMENT

	(1)	(2)	(3)	(4)
	b/se	b/se	b/se	b/se
Proximity to election (ln)	-0.1139	-0.1679	-0.1898 *	-0.1734
	0.0829	0.0935	0.0939	0.0942
Incumbent lost	-0.0520			
	0.1628			
Incumbent lost		0.8323	1.0763 *	0.8503
		0.4684	0.4548	0.4710
Incumbent lost x Proximity to election (ln)		0.1444	0.1953 **	0.1508 *
		0.0746	0.0711	0.0745
Age			0.0087 ***	0.0095 ***
			0.0014	0.0014
Female			0.3785 ***	0.3999 ***
			0.0293	0.0306
Education			-0.1650 ***	-0.1781 ***
			0.0129	0.0135
Job			-0.0074	-0.0129
			0.0153	0.0152
Wealth			-0.6300 ***	-0.6655 ***
			0.0699	0.0743
Political Trust			0.2348 ***	
			0.0240	
Constant	-2.9720 ***	-3.3314 ***	-4.3509 ***	-3.3955 ***
	0.5462	0.6010	0.6335	0.6165
Observations	71928	71928	70155	71061
Adjusted R2		0.0497301	0.0915877	.0879384

All models include country-level and survey-round FE, controlling for time trend, SE clustered on country-round-level.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

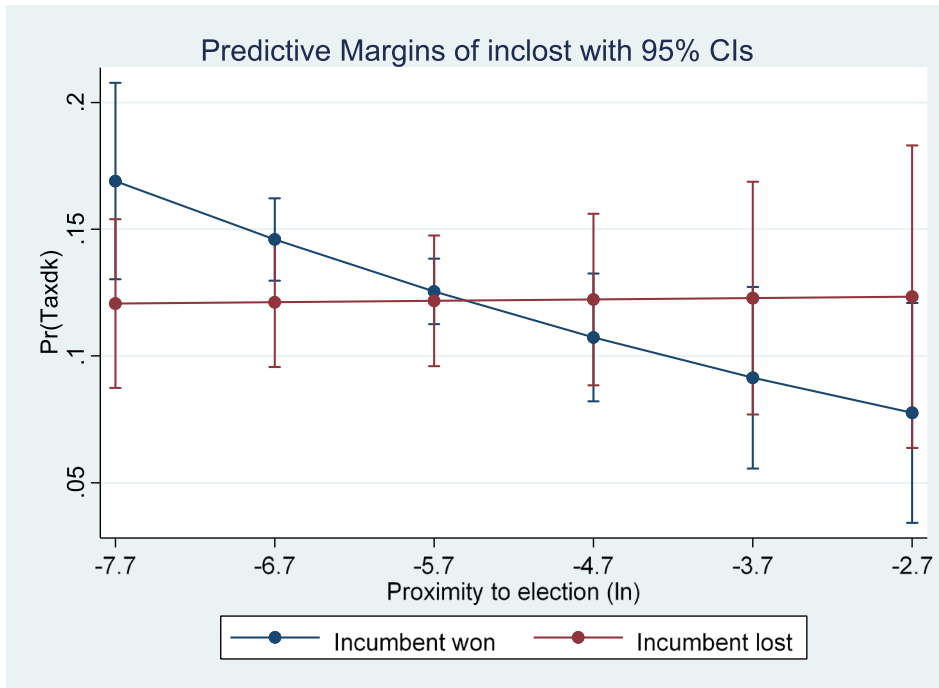
TABLE 3, OLS-REGRESSION: DIFFICULT TO FIND INFORMATION ABOUT TAXATION

	(1)	(2)	(3)	(4)	(5)
	b/se	b/se	b/se	b/se	b/se
Proximity to election	0.0022 *				0.0023
	0.0008				0.0023
Age	-0.0011	-0.0011	-0.0015	-0.0015	-0.0015
	0.0006	0.0006	0.0008	0.0008	0.0008
Female	0.0271 *	0.0272 *	0.0342 **	0.0341 **	0.0342 **
	0.0115	0.0115	0.0093	0.0093	0.0094
Education	-0.0394 ***	-0.0395 ***	-0.0385 ***	-0.0385 ***	-0.0386 ***
	0.005	0.0051	0.0067	0.0068	0.0066
Job	-0.0243 *	-0.0242 *	-0.0213	-0.0214	-0.0213
	0.0092	0.0092	0.0117	0.0117	0.0118
Wealth	-0.1217 **	-0.1213 ***	-0.1203 **	-0.1204 **	-0.1196 *
	0.0322	0.0318	0.0391	0.0391	0.0402
Proximity to election (ln)		0.5743	0.107	0.4804	
		0.7528	0.8321	1.1082	
Incumbent lost			-0.1741		
			0.1878		
Incumbent lost				-10.3812	
				11.583	
Incumbent lost x Proximity to election (ln)				-1.4792	
				1.6879	
Constant	6.8268 ***	7.685	3.7019	6.2166	4.9208 *
	1.2332	5.5442	5.6196	7.4737	1.953
Observations	32427	32427	22112	22112	22112
R2	0.0660748	0.0656495	0.0758711	0.0760017	0.0761337

All models include country-level FE, SE clustered on country-round-level

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

FIGURE 8, MARGINS PLOT



Concluding Remarks

This paper set out to investigate the following research question: *Is tax collection reduced prior to elections in Sub-Saharan Africa?* The well-established theory regarding the Political Business Cycle argues that incumbent presidents manipulate macro level policies close to elections in order to win voters (Nordhaus, 1975). Most of the literature has focused on the spending-side of such expansionary policies, i.e. increased public spending to finance e.g. public goods or to increase employment, but attention has also been given towards the income-part of the equation, i.e. taxation, where it is argued that governments reduce tax rates prior to elections, which was the focus of this paper. Following on the footsteps of Ehrhart (2013) and particularly

Prichard (2016), I set out to investigate this relationship on an individual level. If tax manipulations should have an effect on voters, they must also be *visible* to voters. However, using a novel measurement constructed based on data from Afrobarometer, I could find no apparent effect of proximity to elections on the enforcement of tax regulations. However, some results points in the direction that this might depend on the political climate in which the incumbent operate. Thus, more work should be done on nuance the role of competitive and multiparty elections. Moreover, it is worth examining whether these results differ between different groups of voters. At a time when strengthening tax administrations and increasing tax enforcement is on the top of the development agenda, more research should be done on examining also how taxation potentially could be a tool used by incumbent governments to gain political support. Understanding this dynamic is important in order to build tax administrations and tax policies that are not influenced by short-term political goals, but rather contribute to increased public revenue as well as long term quality of government.

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Appendix

Appendix 1: Sample

TABLE 4, COUNTRIES AND SURVEY ROUNDS IN THE SAMPLE

Country	Round 3	Round 4	Round 5	Round 6
Benin	x	x	x	x
Botswana	x	x	x	x
Burkina Faso		x	x	
Cameroon			x	x
Cote d'Ivoire			x	x
Ghana	x	x	x	x
Guinea			x	x
Kenya	x	x	x	x
Liberia		x	x	x
Madagascar		x	x	
Malawi		x	x	x
Mali	x	x	x	x
Mauritius			x	x
Mozambique		x	x	x
Namibia	x		x	x
Niger			x	x
Nigeria	x	x	x	x
Senegal	x	x		
Sierra Leone			x	x
Tanzania		x	x	x
Togo			x	x
Uganda	x	x	x	x
Zambia	x	x	x	x
Zimbabwe		x	x	x

Appendix 2: Bivariate Logistic Regression Models

TABLE 5, BIVARIATE LOGISTIC REGRESSION: NON-ENFORCEMENT

	(1)	(2)
	b/se	b/se
Proximity to election	-0.0001	
	0.0001	
Proximity to election (ln)		-0.0803*
		0.0409
Constant	-2.4504***	-2.8954***
	0.2357	0.3504
Observations	108018	108018
R2	.0609673	.0611673

All models include country-level and survey round FE, SE clustered on country-round-level

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix 3: Predicted Knowledge about Tax, Afrobarometer Round 5

TABLE 6, TAX "DON'T KNOW" AS PREDICTOR (I.E. "NO TAX ENFORCEMENT")

	(1)	(2)	(3)	(4)	(5)	(6)
	VAT	Fee	Property Tax	Income Tax	Employment tax	Difficult tax
	b/se	b/se	b/se	b/se	b/se	b/se
No Tax Enforcement	-0.2174*	-0.126	-0.1642	-0.0042	-0.2585*	0.04
	0.092	0.0953	0.0977	0.0781	0.115	0.0322
Age	0.0018	0.0039**	0.0066***	0.0098***	0.0049***	-0.0009
	0.001	0.0014	0.0015	0.002	0.0014	0.0006
Female	-0.0113	-0.0850**	-0.0462	-0.0129	-0.0812	0.0144
	0.0266	0.0315	0.0365	0.0485	0.0465	0.0119
Education	0.0880***	0.0847***	0.1082***	0.1296***	0.1019***	-0.0399***
	0.0151	0.0146	0.0141	0.0235	0.0154	0.0056
Job	0.0347	0.0527*	0.0475	0.0758**	-0.0031	-0.0242*
	0.0262	0.0266	0.028	0.0293	0.0268	0.009
Political trust	0.1471***	0.1069***	0.0707*	0.1323**	0.1088*	-0.0619***
	0.0408	0.0286	0.0338	0.0477	0.0447	0.0117
Political Interest	0.0210*	0.0186*	0.0208**	0.0478***	0.0315***	-0.0101**
	0.0091	0.0082	0.008	0.0105	0.0084	0.0035
Wealth	0.3423***	0.5841***	0.5388***	0.6272***	0.4894***	-0.1189***
	0.0629	0.1073	0.1177	0.1498	0.086	0.031
Constant	-0.8053***	-0.3524**	-0.5443***	-0.8767***	-0.0104	3.6821***
	0.1407	0.1177	0.1036	0.184	0.1621	0.0344
Observations	32844	33302	32276	13251	18061	32070
Adjusted R2	0.1272146	0.1122327	0.1565585	0.11372	0.1177565	
R2						0.0706088

All models include country-level FE, SE clustered on country-round-level

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE 7, PRESIDENT "DON'T KNOW" AS PREDICTOR

	(1)	(2)	(3)	(4)	(5)	(6)
	VAT	Fee	Property Tax	Income Tax	Employment tax	Difficult tax
	b/se	b/se	b/se	b/se	b/se	b/se
President - Don't Know	-0.0891	0.0027	0.0081	0.0892	-0.1991*	-0.0049
	0.0612	0.0723	0.077	0.0857	0.1015	0.0245
Age	0.0017	0.0038**	0.0064***	0.0098***	0.0049***	-0.0008
	0.001	0.0014	0.0015	0.002	0.0014	0.0006
Female	-0.0136	-0.0867**	-0.0491	-0.013	-0.0806	0.015
	0.0265	0.0304	0.0357	0.0476	0.048	0.0119
Education	0.0901***	0.0865***	0.1105***	0.1303***	0.1036***	-0.0403***
	0.0154	0.0147	0.0145	0.0236	0.0154	0.0055
Job	0.0355	0.0528*	0.0478	0.0761**	-0.0018	-0.0239*
	0.0261	0.0266	0.028	0.0294	0.0268	0.0091
Political trust	0.1444***	0.1041***	0.0676	0.1320**	0.1089*	-0.0610***
	0.0412	0.0297	0.0348	0.0482	0.0443	0.0115
Political Interest	0.0220*	0.0197*	0.0220**	0.0482***	0.0317***	-0.0104**
	0.0093	0.0085	0.0083	0.0104	0.0081	0.0035
Wealth	0.3487***	0.5890***	0.5453***	0.6263***	0.4960***	-0.1207***
	0.0626	0.1069	0.1184	0.1498	0.0859	0.0315
Constant	-0.8215***	-0.3639**	-0.5589***	-0.8969***	-0.0304	3.6829***
	0.1419	0.1167	0.1033	0.1797	0.1574	0.0345
Observations	32856	33316	32289	13256	18068	32082
Adjusted R2	0.1268308	0.1120414	0.1563144	0.1136066	0.1174598	
R2						0.0703953

All models include country-level FE, SE clustered on country-round-level

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE 8, GOVERNMENT OFFICIALS "DON'T KNOW" AS PREDICTOR

	(1)	(2)	(3)	(4)	(5)	(6)
	VAT	Fee	Property Tax	Income Tax	Employment tax	Difficult tax
	b/se	b/se	b/se	b/se	b/se	b/se
Gov. officials - Don't Know	-0.1224	-0.0038	-0.0059	-0.0758	-0.2388	0.0007
	0.0747	0.0971	0.0769	0.1192	0.1598	0.0276
Age	0.0017	0.0038**	0.0064***	0.0100***	0.0048***	-0.0008
	0.001	0.0014	0.0016	0.002	0.0015	0.0006
Female	-0.0134	-0.0865**	-0.049	-0.0097	-0.0802	0.0149
	0.0267	0.0305	0.0358	0.048	0.0481	0.0118
Education	0.0897***	0.0863***	0.1101***	0.1289***	0.1032***	-0.0404***
	0.0154	0.0146	0.0144	0.0235	0.0155	0.0055
Job	0.035	0.0527*	0.0476	0.0761**	-0.0039	-0.0240*
	0.0264	0.0265	0.028	0.0294	0.0273	0.0091
Political trust	0.1450***	0.1041***	0.0676	0.1363**	0.1095*	-0.0611***
	0.0409	0.0292	0.0348	0.0469	0.0441	0.0118
Political Interest	0.0220*	0.0197*	0.0221**	0.0474***	0.0317***	-0.0103**
	0.0091	0.0086	0.0084	0.0106	0.0083	0.0035
Wealth	0.3479***	0.5898***	0.5457***	0.6276***	0.4966***	-0.1203***
	0.0627	0.1065	0.1181	0.1508	0.0856	0.0316
Constant	-0.8208***	-0.3623**	-0.5564***	-0.8775***	-0.027	3.6833***
	0.1422	0.1182	0.103	0.1867	0.1577	0.0348
Observations	32844	33302	32275	13248	18058	32069
Adjusted R2	0.1267342	0.1118997	0.1561504	0.1138448	0.1173838	
R2						0.0703594

All models include country-level FE, SE clustered on country-round-level

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix 4: Excluding Those Who Thought the Government Sponsored the Survey

TABLE 9, LOGIT MODELS, EXCLUDING RESPONDENTS WHO THOUGHT THE GOVERNMENT SPONSORED THE SURVEY

	(1)	(2)
	b/se	b/se
Proximity to election (ln)	-0.0939	-0.0703
	0.0938	0.0928
Incumbent lost	1.3852*	1.1024
	0.5966	0.5913
Incumbent lost \times Proximity to election (ln)	0.2681**	0.2249*
	0.0982	0.0972
Age	0.0074***	0.0078***
	0.0022	0.0022
Female	0.3512***	0.3498***
	0.0511	0.0519
Education	-0.1484***	-0.1611***
	0.0166	0.0164
Job	-0.0226	-0.0208
	0.0204	0.0195
Wealth	-0.6061***	-0.6768***
	0.1244	0.1335
Political trust	0.2821***	
	0.0305	
Constant	-3.7788***	-2.7106***
	0.6	0.5691
Observations	26033	26232
Adjusted R2	0.0838099	0.0780577

All models include country-level and survey-round FE, controlling for time trend, SE clustered on country-round-level

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$