Tax Administration in Ghana: Perceived Institutional Challenges

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Introduction

The capacity of a country to provide for the welfare and security of its citizens, as well as to develop and consolidate representative democracy,[1] is determined by its ability to raise enough resources. Democracies are not only built on periodic elections, but also on a social contract between governments and citizenry regarding the collection and spending of public revenue.[2] As in other African countries, public revenues in Ghana depend on taxation. Many and varied factors underpin a country's ability to collect enough tax revenue from domestic sources. Paramount among these is citizens' level of compliance, often influenced by the efficiency of the institution responsible for tax administration, the structure and magnitude of tax rates, and the ability and willingness of citizens to pay. These factors call into sharp focus the need for tax reforms.

Indeed, Ghana has undertaken series of tax reforms since the commencement of the Fourth Republic in 1992. Controversially, a Value Added Tax (VAT) was introduced in 1995, withdrawn as a result of widespread protests, and reintroduced in 1998 after comprehensive education of citizens. Besides, direct taxes (corporate and personal income) have also undergone various reforms to restructure thresholds and widen the tax base through measures that encourage tax payment by small-scale self-employed businesspersons. A major reform in recent times (2009) is the integration of the three major tax revenue institutions - Internal Revenue Service (IRS), the VAT Service and the Customs, Excise and Preventive Service (CEPS) - into a single agency - The Ghana Revenue Authority (GRA). The GRA aims to modernize tax revenue collection and administration as well as improve customer service.

These reforms notwithstanding, questions remain about the country's tax system and administration. Using Ghana Round 5 Afrobarometer survey data from 2012, this paper seeks to examine Ghanaians' knowledge of tax obligations to the state, their opinions on the tax system, and attitudes towards the payment of taxes. Furthermore, the paper explores factors that fuel tax evasion or the readiness to dodge tax obligations among citizens.

Afrobarometer Surveys

The Afrobarometer (AB) is a comparative series of public attitude surveys, now covering 35 African countries in Round 5 (2011-2013). It measures public attitudes on democracy and its alternatives, evaluations of the quality of governance, and economic performance. In addition, the survey assesses the views of the electorate on critical political issues in the surveyed countries. The Afrobarometer's main goal is to produce scientifically reliable data on public opinion in Africa while strengthening institutional capacities for survey research,

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[1] Historically, the origins of the state and representative governments in especially Europe and America are linked to the need for taxation. For a detail account see Tilly, Charles. (1992) Coercion, Capital, and European States, AD 990- 1992. Cambridge MA and Oxford, UK. Blackwell. See also, Brautigam, Deborah (2008) 'Taxation and Governance in Africa: Take a Second Look'. *Development Policy Outlook No.1*. American Enterprise Institute for Public Policy Research.

[2] Brautigam Deborah (2008b) 'Introduction: taxation and state building in developing countries', in Deborah Brautigam, Odd-Helge Fjeldstad, and Mick Moore [ed] Taxation and State-Building in Developing Countries. Cambridge: Cambridge University Press

and research findings to inform policy and practice. The Afrobarometer also provides comparisons over time, as five rounds of surveys have taken place from 1999 to 2012.

During Round 5, Afrobarometer surveys were conducted in 35 African countries using a common survey instrument and methodology. The instrument asks a standard set of questions that permits systematic comparison in public attitudes across countries over time. The methodology was based on nationally representative samples of citizens of voting age drawn randomly based on Probability Proportionate to Population Size (PPPS), using a stratified multi-stage sampling technique.[3] Fieldwork for the Ghana Round 5 Afrobarometer survey was conducted between May 9 and June 1, 2012 with a sample size of 2400. The findings presented in this paper are therefore representative of the views of Ghanaians with an error margin of ±2.0 percent given a 95 percent confidence level.

Social Characteristics of Survey Respondents and Localities
The table below displays some basic social characteristics of survey respondents and the localities where the survey was conducted.

Table 1: Social characteristics of survey respondents and areas

		No	Yes
Gender of respondents	Male		50 percent
	Female		50 percent
Respondents' level of education	None/Informal		21 percent
	Primary		37 percent
	Secondary		32 percent
	Tertiary		10 percent
Age of respondents	Mean Age		37 years
	Youngest Respondent		18 years
	Oldest Respondent		100 years
	18 - 30 years		45 percent
	31 - 45 years		30 percent
	46 - 60 years		16 percent
	60 years and above		9 percent
Regional distribution of respondents	Western		9.5 percent
	Central		8.7 percent
	Greater Accra		18.6 percent
	Volta		8.6 percent
	Eastern		10.6 percent
	Ashanti		19.5 percent
	Brong-Ahafo		9.0 percent
	Northern		8.9 percent
	Upper East		4.0 percent
	Upper west		2.6 percent
Settlement location of respondents	Urban		54 percent
	Rural		46 percent
Presence of public services in survey EAs	Electricity grid	18 percent	82 percent
	Pipe water system	44 percent	56 percent
	Sewage system	49 percent	52 percent
	Post Office	77 percent	23 percent
	Public school	13 percent	87 percent
	Police station	70 percent	30 percent
	Health clinic	49 percent	51 percent
	Market stalls	43 percent	57 percent
	Tarred roads	43 percent	57 percent

Note: EAs mean Enumeration Areas. Some primary and some secondary education constitute 15percent of the total for primary and secondary education respectively.

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[3] AB sample sizes are large enough to yield results with a margin of error of ±2.8 percent for 1200 respondents (or ±2.0 percent for 2400 respondents) at a 95% confidence level.

Popular Knowledge of Tax Obligations

The government of Ghana through legal instruments imposes various taxes on income and property, domestic goods and services, and international trade. In addition, citizens must pay Value Added Tax (VAT), including the VAT flat rate scheme and the National Health Insurance Levy (NHIL). Besides, there are other indirect taxes such as the petroleum tax and communication taxes, as well as other local taxes and fees (e.g. property rates, business registration fee, per head tax, market tolls, etc.) levied by local government bodies.

But do citizens' know about the varied taxes the state expects them to honor as their civic responsibility? ***Regardless of whether they are able to pay or not, most Ghanaians know about specific taxes they are required to pay by law***.

In general, seven in every ten Ghanaians know that they are obligated to pay property rates or taxes (79 percent), license fees, for example for a bicycle, cart, business or market stall to local government (77 percent) and Value Added Tax on items bought from shops or traders (72 percent). Also, a small majority of those interviewed (56 percent) know they are expected to pay taxes on earnings from their businesses or jobs (though 29 percent are not self-employed).

Another 48 percent know they have an obligation to pay income taxes, which employers normally deduct from wages or salaries (43 percent do not have paid employment). It is worth noting, however, that sizeable minorities (from 7 percent to 24 percent) say that they do not know that the law requires them to pay these taxes (see Figure 1).

Figure 1: Ghanaian knowledge of their tax obligations to government (percent)
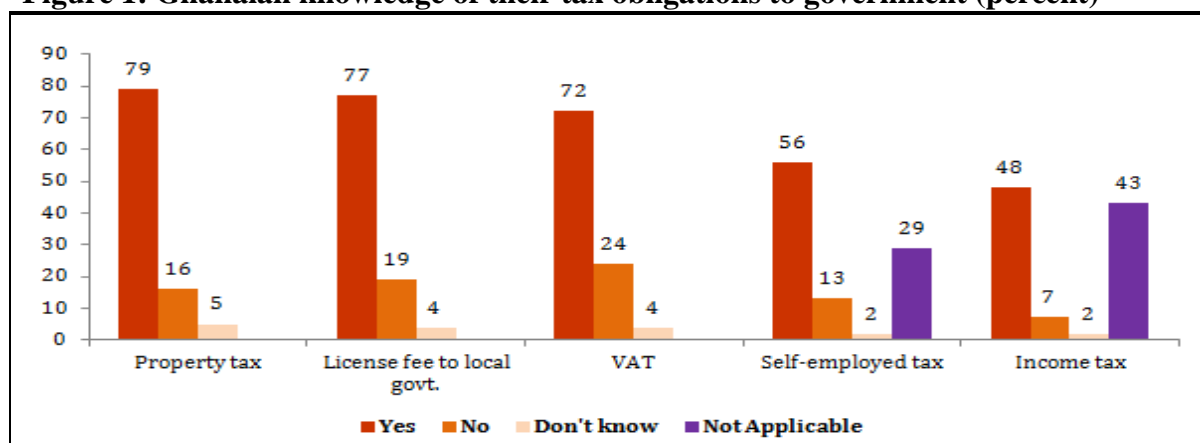
Source: Ghana Afrobarometer survey 2012

Opinions on the Tax System

A tax system consists of tax policy, tax laws and tax administration. Any good tax system should have some fundamental characteristics, among which are equity and fairness, certainty, convenience, and efficiency in administration. A tax system is said to equitable and fair if taxpayers with equal abilities to pay are made to pay the same amount of tax. There is certainty in the tax system if the tax rules specify when the tax is to be paid, how it is to be paid, and how the amount to be paid is to be determined. Furthermore, the element of convenience demands that taxes should be due at a time or in a manner that is most likely to be convenient to the taxpayer. Moreover, the tax system should be simple and easy to administer and be understood by both tax officials and payers to ensure efficiency in tax administration. Together, these attributes are expected to encourage high levels of compliance on the part of taxpayers.

Do Ghanaians think the country's tax system possesses or lacks these positive attributes? If these attributes are lacking does the country experience problems of tax compliance?

In general, Ghanaians perceive inherent challenges with the country's tax system. It is quite disturbing to discover that a strong majority (68 percent) claims that it is *"very difficult or difficult"* to find out what taxes or fees one is supposed to pay to the government. About a fifth (19 percent), however, expressed a contrary opinion. Thus, to Ghanaians, the principle of certainty is lacking in the country's tax system and law abiding citizens who desire to honor their tax obligations may have to contend with the high transaction costs (e.g. time and money) involved in searching for information about the taxes they are expected to pay.

This inconvenience could affect citizens' commitment to their tax obligations and consequently discourage compliance. Equally disturbing is the perceived lack of transparency in the use of tax revenues as well as the perceived lack of integrity among tax officials. Three-quarters of Ghanaians (74 percent) claim it is *"very difficult or difficult"* to find out how government applies revenues from taxes and fees. Just a little over a tenth (14 percent) hold a contrasting opinion.

The integrity of Ghana Revenue Authority officials is very low in the eyes of Ghanaians. Half of Ghanaians (50 percent) perceive *"some"* tax officials to be involved in corruption. Another 41 percent also consider *"most or all"* of these officials to be corrupt. Thus, to the ordinary Ghanaian, the country's tax administration stinks with graft. It is not surprising therefore to find that 58 percent have little or no trust at all in the GRA; just 40 percent trust the institution. One glimmer of hope for the GRA and its officials however is the finding that most people (90 percent) still accept the institution's legal mandate to demand taxes from citizens.

Though an appreciable minority (19 percent) think it is *"very easy or easy"* to evade income and property taxes, the majority (64 percent) claimed it is *"very difficult or difficult"* to engage in such criminal conduct. Indeed, the same percentage (64 percent) said fellow citizens *"never or rarely"* avoid paying the taxes that they owe the government, while about a third (30 percent) however think otherwise (see Table 2).

Table 2: Ghanaian opinions on tax system and administration

	Response option	Percent
Find out what taxes/fees to pay	Very Difficult + Difficult	68
	Very Easy + Easy	19
	Don't know	13
Find out how govt. uses money from taxes/fees	Very Difficult + Difficult	74
	Very Easy + Easy	14
	Don't know	12
Tax officials corrupt	Some	50
	Most + All of them	41
	None	5
	Don't know	4
Tax authority always right in demanding taxes	Strongly Agree + Agree	90
	Strongly Disagree + Disagree	5
	Neither Agree Nor Disagree	3
	Don't know	1
Evading income/property taxes owed	Very Difficult + Difficult	64
	Very Easy + Easy	19
	Don't have to pay taxes	2
	Don't know	14
How often people evade taxes	Never or Rarely	64
	Often or Always	30
	Don't know	6

Source: Ghana Afrobarometer survey 2012

Ghanaian Attitudes toward Taxation

Willingness to pay taxes: Notwithstanding the perceived problems in the country's tax system and administration, Ghanaians appear to have accepted with little difficulty the civic responsibility of tax payment to the state. ***Generally, Ghanaians are favorably disposed towards paying taxes and more so, paying taxes in return for public services.***

When presented with two statements *"Statement 1: Citizens must pay their taxes to the government in order for our country to develop and Statement 2: The government can find enough resources for development from other sources without having to tax the people"*, an overwhelming majority of Ghanaians (84 percent) *"strongly agree or agree"* that citizens ought to pay taxes to support government development efforts (i.e. Statement 1). Less than a fifth (15 percent) think government should look to other sources for funds for development rather than demanding taxes from citizens (i.e. Statement 2).

Indeed, an economy with *high taxes and more development* appears more attractive to Ghanaians than one with *lower taxes and less development*. A small majority (58 percent) believes it is better to pay higher taxes in order to produce more government services. In contrast, and quite disturbingly so, a sizeable minority (35 percent) prefer lower taxes, even if government services will decline as a result (see Table 3).

Table 3: Ghanaian attitudes toward civic responsibility of paying taxes

	Response option	Percent
Taxes or other resources for development	Pay taxes for development	84
	Govt. finds resources elsewhere for development	15
	Agree with neither	1
Taxes for government services	Higher taxes, more government services	58
	Lower taxes, fewer government services	35
	Agree with neither	6
	Don't know	1

Source: Ghana Afrobarometer survey 2012

Non-compliance with tax obligations and willingness to evade taxes: In spite of the general willingness to pay taxes, ***some Ghanaians either evaded or were willing to evade taxes owed the state in the past year***. While 8 percent of Ghanaians said they actually evaded taxes or fees owed the state in the past year, 15 percent said they did not but would do so if they got the opportunity. The majority (75 percent) however said they would never refuse paying taxes or fees they owed to the state. One possible reason for high self-reported levels of tax compliance is the recognition on the part of Ghanaians that tax evasion is morally wrong. Some 63 percent believe such conduct is *"wrong and punishable"*. Note, however that one third (35 percent) claimed tax evasion is either *"not wrong at all"* or *"wrong but understandable."*

Table 4: Compliance (or non-compliance) with tax obligations and readiness to evade taxes

	Response option	Percent
Refused paying tax/fee to govt. in the past year	No, would never do this	75
	No, but would do if had the chance	15
	Yes, once or twice	3
	Yes, several times	3
	Yes, often	2
	Don't know	1
Not paying the taxes they owe on their income	Not wrong at all	6
	Wrong but understandable	29
	Wrong and punishable	63
	Don't know	2

Source: Ghana Afrobarometer survey 2012

The next section of this paper seeks to explain why some people avoid paying taxes and fees that they owe the state. Among the reasons given by respondents are the following taxes are too high (25 percent); people cannot afford to pay (21 percent); poor government service delivery (14 percent); wasteful use of tax money by government (10 percent); unfair tax system (9 percent); stealing of tax money by government officials (4 percent); and offenders being sure they will not be caught (3 percent).

Explaining Tax Evasion[4]

We have shown above that some Ghanaians admit to evading taxes in the past year (i.e. actual tax evaders) while others express readiness to evade taxes should they get the opportunity (i.e. prospective tax evaders). To explain tax evasion, we estimate a binary logistic regression model. The object of explanation is measured by merging actual and prospective tax evasion into a composite dichotomous variable. This procedure was informed by the knowledge that individuals interviewed in tax studies often tend to over-state their degree of tax compliance (see Andreoni, Erard and Feinstein, 1998).[5] Thus, the dependent variable represented a single group of citizens who, on the one hand, evade or are ready to evade taxes, and those, who on the other hand did not or would never engage in this conduct. The estimates of the model are shown in Table 5 below.

First, we observed that our explanation of tax evasion performed well[6], indicating that together, the independent variables listed in the first column of Table 5, especially those that were statistically significant, reliably distinguished between persons who are inclined to evade taxes from those who would never engage in this practice.

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[4] All the variables in the model were re-coded. Four variables regarding the reasons for tax evasion were created out of the single variable in the dataset by re-coding as follows: (a) *Taxes high/unaffordable = 1*; (b) *Tax system unfair = 1*; (c) *Poor government services = 1*; and (d) *Government waste tax money = 1*. Each of these variables had the counterpart relating to other reasons recoded 0. The other variables were re-coded as follows: Perceived tax official corruption *(Most or All corrupt = 1; None/Some corrupt = 0)*; Gender *(Male = 1; Female = 0)*; Urban population *(Urban = 1; Rural = 0)*; Level of education *(None/Informal = 0; Primary = 1; Secondary = 2; Tertiary = 3)*; and Presence of government services *(Government services available = 1; Government services unavailable = 0)*. The government service factor was developed from contextual questions regarding the availability of public services in the Enumeration Areas (EAs) surveyed which were answered by fieldworkers. This was used as a proxy to capture variations in attitudes towards tax evasion occasioned by diversities in government services availability at the local level because information on central government's spending on infrastructure for each region was difficult to come by to test for regional variations.

[5] Andreoni, J., Erard, B., & Feinstein, J. (1998) "Tax Compliance", *Journal of Economic Literature, 36*, 818-860. To confirm the validity of this construct, we estimated separate logistic regression models with actual and prospective tax evasion respectively as dependent variables. The results revealed a common pattern of explanation. The results of the ***actual tax evasion model*** revealed the following: (1) an increase in the perception that the tax system is unfair increases the odds of actual tax evasion when other factors are controlled; (2) the odds of actual tax evasion tend to be higher amongst urbanized populations than their rural compatriots; (3) the attainment of tertiary or basic education lowers the odds of actual tax evasion much more than not having formal education; and (4) the decline in the odds of actual tax evasion in survey areas with government services is much lower than what pertains in areas lacking these services. On the other hand, estimates of the ***prospective tax evasion model*** showed that (1) an increase in citizens' perception that taxes are high/unaffordable or tax officials are corrupt increases the odds of readiness to evade taxes; (2) tertiary education attainment reduced the odds of readiness to engage in tax evasion much more than no education; and (3) the reduction in the odds of prospective tax evasion is relatively higher in survey areas were government services are present than those without these services.

[6] The likelihood ratio test based on the model's Chi-square statistic is highly significant (i.e. Chi-square statistic value = 117.235; p-value = 0.000. The Hosmer and Lemeshow goodness-of-fit test Chi-square statistic (9.937) which turned out to be insignificant (i.e. p-value = 0.269) as expected of a well-fitted model thereby confirming the finding of the likelihood ratio test.

Table 5: Logistic regression estimates of the tax evasion and readiness to evade tax model

	Coefficients (B)	Standard Error (SE)	Wald Statistic	p-value	Odds Ratio Exp(B)	95percent C.I. for EXP(B)	
						Lower	Upper
Constant	-1.115	0.185	36.149	0.000	0.328	--	--
High and unaffordable taxes	**0.441**	0.165	7.135	**0.008**	**1.554**	1.125	2.147
Unfair tax system	**0.700**	0.211	11.008	**0.001**	**2.014**	1.332	3.046
Poor government services	0.058	0.208	0.078	0.780	1.060	0.705	1.593
Government waste taxes	0.132	0.223	0.349	0.555	1.141	.737	1.767
Perceived corruption by tax officials	**0.465**	0.106	19.179	**0.000**	**1.593**	1.293	1.961
Male gender	0.073	0.106	0.481	0.488	1.076	0.874	1.324
Education (overall)	--	--	23.031	0.000	--	--	--
Education (primary)	**-0.453**	0.151	9.017	**0.003**	**0.636**	0.473	0.855
Education (secondary)	-0.059	0.150	0.155	0.694	0.943	0.702	1.265
Education (tertiary)	**-0.818**	0.229	12.752	**0.000**	**0.441**	0.282	0.691
Urban residents	**0.304**	0.116	6.844	**0.009**	**1.355**	1.079	1.701
Presence of government services	**-0.792**	0.117	45.926	**0.000**	**0.453**	0.360	0.570

Note: Constant only model -2 Log likelihood = 2342.114; Full model -2 Log likelihood = 2224.879; Full model Chi-square = 117.235; Chi-square p-value = 0.000; Hosmer and Lemeshow goodness-of-fit test Chi-square = 9.937; Hosmer and Lemeshow goodness-of-fit test Chi-square p-value = 0.269.

The estimates[7] showed that the odds of tax evasion significantly increase with rising perception that taxes are high or unaffordable, that the tax system is unfair, that tax officials are corrupt, and residence in urban settlements. The odds of tax evasion increase by 1.554 of a unit with a unit increase in the perception that taxes are high or unaffordable after controlling for the other factors.[8] Similarly, a unit rise in perception that the tax system is unfair significantly raises the odds of tax evasion by 2.014 of a unit.[9]

The finding regarding tax unfairness or taxes being high and unaffordable is not surprising. Since 2008, government has pursued efforts aimed at improving tax revenue mobilization. As a result, some previously untaxed products and services (communication service tax; 20% tax rate on local gin and purified water in 2010 which eventually failed when implemented; and 10% windfall profit tax on mining firms proposed in 2012 budget etc) are now being taxed while the rates on others have been varied (e.g. the 100% increase in road tolls in 2010; increase in corporate tax rate from 25% to 35% etc). Somehow, citizens and corporate bodies generally view the introduction of new taxes or changes in tax rates as social punishment and an increase in economic woes. In sum, taxes are considered unfair and unaffordable and therefore their introduction or revision of rates upwards has always been met with resistance from either the general public or interest groups.[10] For instance, in the recent past, labor unions have spoken against the imposition on taxes on petroleum products, some private transport unions and their members have describe the Vehicle Income Tax (VIT) as unfair[11] while mining firms and their umbrella organization - Chamber of Mines - have gone on the offensive, indicating that the mining sector is already over-taxed and as such the 10% windfall profit tax will be inimical to their operations and could end up driving investors

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[7] **Note:** In this paper, we used the exponentiated coefficients [Exp(B$_s$)] which are measured in odds ratios for our interpretation. The odds ratios are calculated as e$^{(B)}$ where "e" is a constant with an approximate value of 2.71. If the value of the exponentiated coefficient is greater than one (> 1) it indicates that as the predictor increases, the odds of the outcome occuring increases. On the flip side, a value less than one (< 1) implies the odds of the outcome occuring reduces as the predictor increases.

[8] In his work on "Tax Evasion and Tax Rates: An Analysis of Individual Returns" (see Review of Economics and Statistic, 65:363-373), Clotfelter, Charles T. (1983) tobit model estimates based on United States' Taxpayer Compliance Measurement Program (TCMP) data showed that noncompliance is strongly and positively related to the marginal tax rate, with the elasticity ranging from 0.5 to over 3.0.

[9] Writing on "Taxation: Principle and Practice in Malaysia," Barjoyai, B. (1987) also concluded that tax compliance is less likely if the tax system is perceived to be unfair.

[10] See Rebecca, D. (2010) "Taxation in Ghana: social contract or social punishment?" *Christian Aid Ghana*; and Osei, R. D., and Quartey, P. (2005) "*Tax reforms in Ghana*" (http://www.oecd.org/tax/administration/1907918.pdf).

[11] See Koranteng, Y. (2011) *Vehicle Income Tax (VIT) in Ghana, challenges and prospects, A case study of Kumasi metropolis* (http://dspace.knust.edu.gh:8080/jspui/bitstream/123456789/4438/1/YEBOAH%20KORANTENG.pdf).

away from Ghana's mining sector. In addition, the present tax burden does not appear to be fairly distributed. For instance, an estimated 13.7% of the workforce in the formal sector personal income tax contribution constitutes about 13% of domestic revenue while the informal sector which has about 86% of the workforce contributes a paltry 1.3%.[12] The informal sector keeps growing but the tax authorities have still not been able to widen the tax net to cover this category of income earners. Thus, the tax burden is still borne by the few formal sector workers. This virtually lends support to the perceived unfairness of the tax system, which makes taxes unaffordable to the few whose only option out of the burden is to evade.

A unit increase in public perception of corruption amongst tax officials also increased significantly, the odds of tax evasion by 1.593 of a unit.[13] That is to say, when taxpayers observe corruption among public officials and also see many citizens to be evading taxes, they are likely to think that their intrinsic motivation to comply with their tax obligations is not recognized. Consequently, they also become opportunistic and the moral costs of evading taxes to them decrease.

The finding that tax official corruption fuels tax evasion cannot be denied easily. Many tax officials, particularly those at entry and exit points of the county engage in various corrupt practices. In fact, some of these practices have become the norm rather than exception. For instance, traders bringing in goods from other countries always complain that transparency is lacking at the country's borders and corruption have become the norm at these places compelling them to bribe their way through to get their goods cleared. Indeed, in the recent past, a media person who doubles as an undercover media investigator unearth corrupt practices by Customs, Excise and Preventive Services (CEPS) officials at the main seaport. The appalling situation where officials were seen negotiating illegal payments with clients was published by various print and electronic media houses.[14]

Tax evasion is much higher among urban residents than their rural compatriots. That is, the odds of tax evasion/readiness to evade taxes is 1.355 higher in urban than rural settlements after controlling for the effects of all other predictors. Probably, the high population density in most urban centers in the country makes it difficult for tax officials to identify and bring all potential tax payers into the tax net (i.e. high rate of anonymity). Consequently, such individuals have developed low loyalty (by way of tax payments) towards the state.[15] Also compounding this problem is the fact that more of the urban workers are mainly found in the non-agricultural informal sector - a sector that is difficult to track and tax.[16]

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[12] See Ghana Aid Effectiveness Forum press release titled "Improving Domestic Revenue Mobilization for Accelerated Development" on the following link: (http://www.aefgh.org/website/index.php?option=com_content&view=article&id=102:press-release-on-improving-domestic-revenue-mobilisation-for-accelerated-development&catid=1:latest-news&Itemid=2)

[13] Alon, A. and Hageman, A. (2012) study - "Impact of Corruption on Organizational Tax Compliance in Transition Economies" (see Journal of Business Ethics) which analyzed data on over 5,000 firms in 22 transition economies of the former Soviet bloc found that higher levels of corruption by way of unofficial payments are associated with lower levels of tax compliance. Torgler, Benno (2004) paper on "Tax Morale, Trust and Corruption: Empirical Evidence from Transition Countries" (see Center for Research in Economics, Management and the Arts, Working Paper No. 2004 – 05) using 1990 to 2000 World Values Survey (WVS) data on Former Soviet Union as well as Central and Eastern European countries also established significant negative correlation between tax morale and the perceived size of corruption. He explained this to mean that a higher level of perceived corruption crowds out tax morale.

[14] See story "Enemies of the State" and other related exposes of the investigative journalist on the following site: http://thechronicle.com.gh/the-archbishop-and-the-anas-tape/

[15] Writing on local autonomy, tax morale, and the shadow economy, Torgler et. al. found that urbanization in most of the analyses correlated positively with shadow economy activities. However, the coefficients were not statistically significant (see Torgler, Benno and Schneider, Friedrich and Schaltegger, Christoph A. (2009) "local autonomy, tax morale, and the shadow economy" Public Choice, 144(1-2). pp. 293-321).

[16] In rural Ghana, informal sector work mainly involves agriculture (75%) (GSS, 2008), fishing and fish processing, agro-based processing. In contrast, more urban workers (43%) are engaged in non-agricultural activities (see Friedrich Ebert Stiftung October 2011 publication titled "*The Informal Sector in Ghana*").

In contrast, formal education and availability of government services lower the odds of tax evasion. In general, a person with formal educated is less likely to evade taxes.[17] Compared to the reference category (i.e. no/informal education), the odds for persons with primary education evading taxes are 0.636 times lower than that for those "without formal or with informal education" after controlling for other variables.[18] The odds for persons with tertiary education engaging in tax evasion are 0.441 times lower than that for persons with no or just informal education. Comparing the estimated odds ratios for primary and tertiary education, we found that the former lowers the inclination to evade tax much more than the latter. We therefore conjectured that individuals need not attain the highest level of education before becoming tax compliant. At least, primary level of education is enough to instill the sense of tax compliance as a civic responsibility of citizens.

Moreover, tax evasion amongst citizens in areas with government services is comparatively lower than in areas lacking these services. The odds for tax evasion are 0.570 times lower in settlements with government services than in areas without such services. Rather than the quality of public services (measured as "poor" services), citizens' decision to evade tax seems to be more influenced by the availability of public services regardless of quality. People probably believe that the availability of service is an important element in public satisfaction and must precede quality of service.[19]

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[17] **Note:** There is no coefficient listed for Education (overall) variable because it is not a variable in the model. Rather, the coefficients and significance of the different levels of education are reported.The education (overall) variable simply shows the statistical significance of all the various levels of education when taken together.

[18] **Note:** Where the values of odds ratios are lower than one (i.e. <1), they indicate reduction in the likelihood of the outcome occurring.

[19] **Note:** This finding contrasts another finding of the Afrobarometer policy brief "*What People Want from Government: Basic Services Performance Ratings, 34 Countries by Joseph Asunka in 2013*" that the physical presence of service infrastructure has little or no effect on government performance assessments but rather, ease of access to public services.