Ghana

POLICY BRIEF

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# Income Tax Collection and Noncompliance in Ghana


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## Low Level of Income Tax Collection in Ghana

Developing countries often collect too little tax and Ghana is not an exception. Figure 1 shows tax collection as a percentage of gross domestic product (GDP) in selected lower-middle-income African countries in 2012. As seen in Figure 1, Ghana's tax collection is low compared with other lower-middle-income African countries. Ghana lies below the trend lines for all major taxes, that is, value added tax (VAT), corporate tax, and income tax. Income tax revenue is particularly low in Ghana. It was only 2.5 percent of GDP in 2012. Raising tax revenue is an urgent issue in Ghana, as the government has been suffering from a widening fiscal deficit and a rising debt burden.

Besley and Persson (2014) attribute low tax collection in developing countries to their inadequate administrative capacity, the presence of a large informal sector, weak checks and balances, and the lack of social norms for tax compliance. They discuss how collecting income tax is harder than collecting other taxes, such as trade taxes, because income tax collection requires a much more elaborate system of monitoring, enforcement, and compliance. In Pakistan, the evasion of income tax is estimated to be around 60 percent of potential revenues, which is much higher than the estimated evasion of indirect taxes.[1]

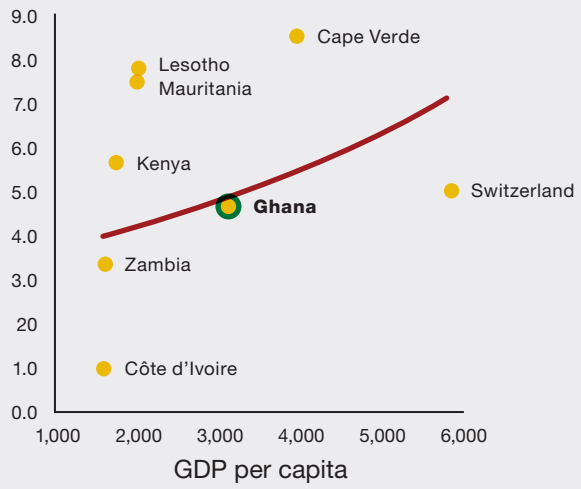
Figure 2 shows a substantial increase in income tax revenue between 2011 and 2014 in Ghana. The increase in income tax collection came predominantly from the private sector. The income tax revenue from the private sector rose by 267 percent during that period. In contrast, income tax revenue from the public sector hardly improved between 2011 and 2014. In 2016, however, the tax revenue from the private sector declined, while it improved in the public sector. This policy brief examines the scale of income tax noncompliance in Ghana in 2014, and discusses potential reasons of changes in tax revenues in 2016.

1 Ahmed, R. A., and M. Rider. 2013. "Using Microdata to Estimate Pakistan's Tax Gap by Type of Tax." *Public Finance Review* 41 (3): 334–359.

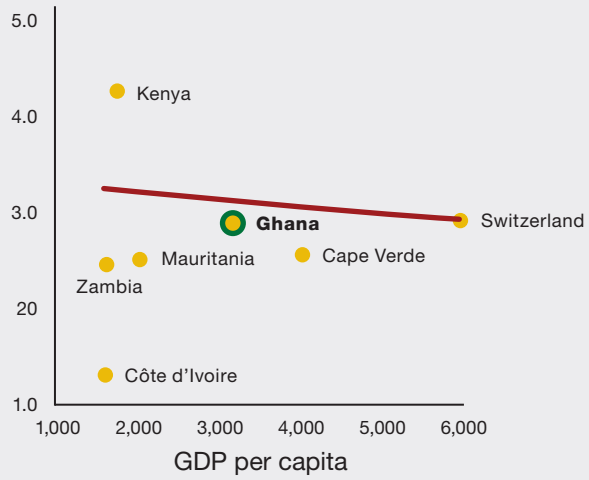
FIGURE 1

**TAX COLLECTION AS A PERCENTAGE OF GDP IN LOW-MIDDLE-INCOME AFRICAN COUNTRIES IN 2012**

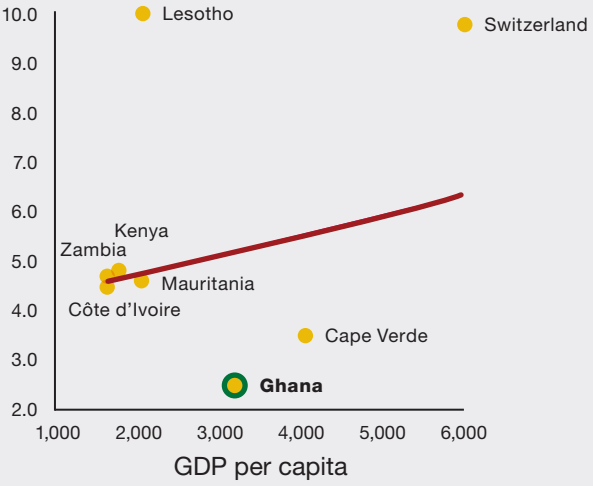
VAT




Corporate tax




Income tax




*Source: USAID Collecting Taxes Database*

> Income tax revenue is particularly low in Ghana.

## Estimating the Scale of Income Tax Noncompliance

Just as in many other countries, the vast majority of income taxes are paid as Pay As You Earn (PAYE) in Ghana. The PAYE contributions are withholdings from the salaries of employees. The PAYE system requires that employers remit the deducted amount to the Ghana Revenue Authority (GRA). There are primarily three forms of nonpayments or underpayments of income tax.

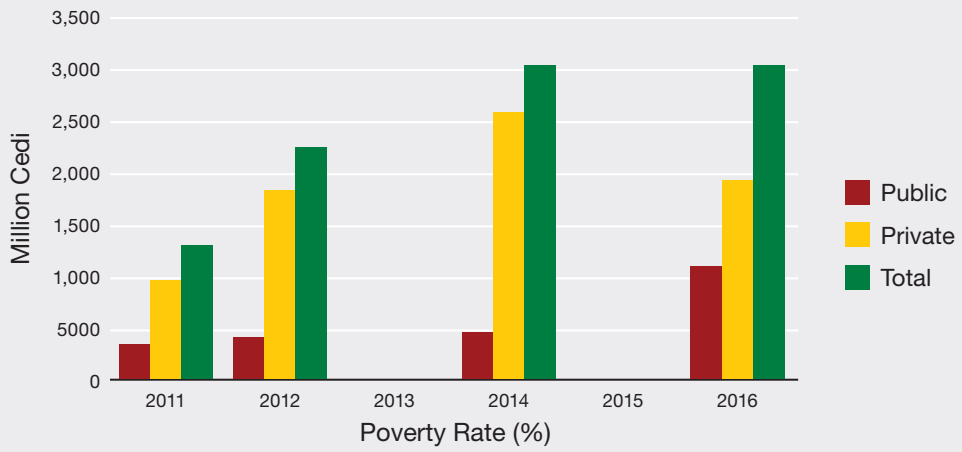
First, not all firms are registered with the GRA. Figure 3 presents the percentage of firms which are registered with the GRA by region and industry in 2014. On average, 33 percent of firms were registered with the GRA. The highest rate of registration is observed in Greater Accra where 43 percent of firms are registered with the GRA. In contrast, only 15 percent and 18 percent of firms are registered with the GRA in Northern and Volta regions, respectively. The rates of registration also vary widely between industries. In the construction, mining, and quarrying industries, over 80 percent of firms are registered with the GRA. On the other hand, less than 30 percent of firms are registered with the GRA in arts, entertainment, recreation, manufacturing, accommodation, food service, and other service sectors. Getting firms to register with the GRA in these industries can vastly boost income tax revenue.

Second, not all firms and organizations which remit PAYE to the GRA send the full amount of income tax due. This problem is particularly serious in the public sector. The magnitude of underpayment of PAYE in the public sector is illustrated here. The GRA provided the aggregated tax collection data by income brackets of wage workers. Information on the number of workers and the total amount of income tax collected was provided by income brackets for both the public and private sectors. The actual tax revenues were compared with projected tax revenues under the assumptions that all workers within each income bracket earned the minimum (or maximum) income of that bracket. Theoretically, it is expected that the actual tax revenue will be between the two projected revenues. Figure 4 shows the actual tax revenue and the projected tax revenues at minimum and maximum wages for the given brackets in 2014. The areas between

> Getting firms to register with the GRA can boost income tax revenue.

INCOME TAX REVENUE FROM PUBLIC AND PRIVATE SECTORS IN GHANA

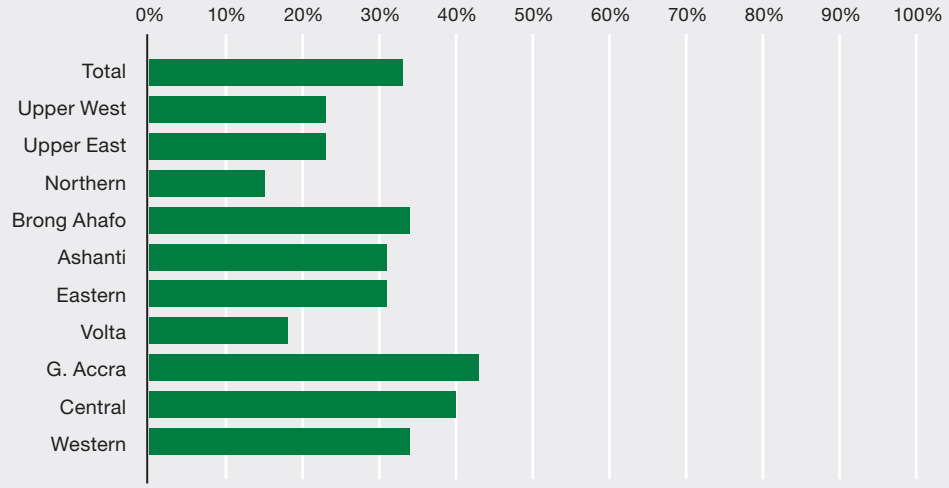
FIGURE 2



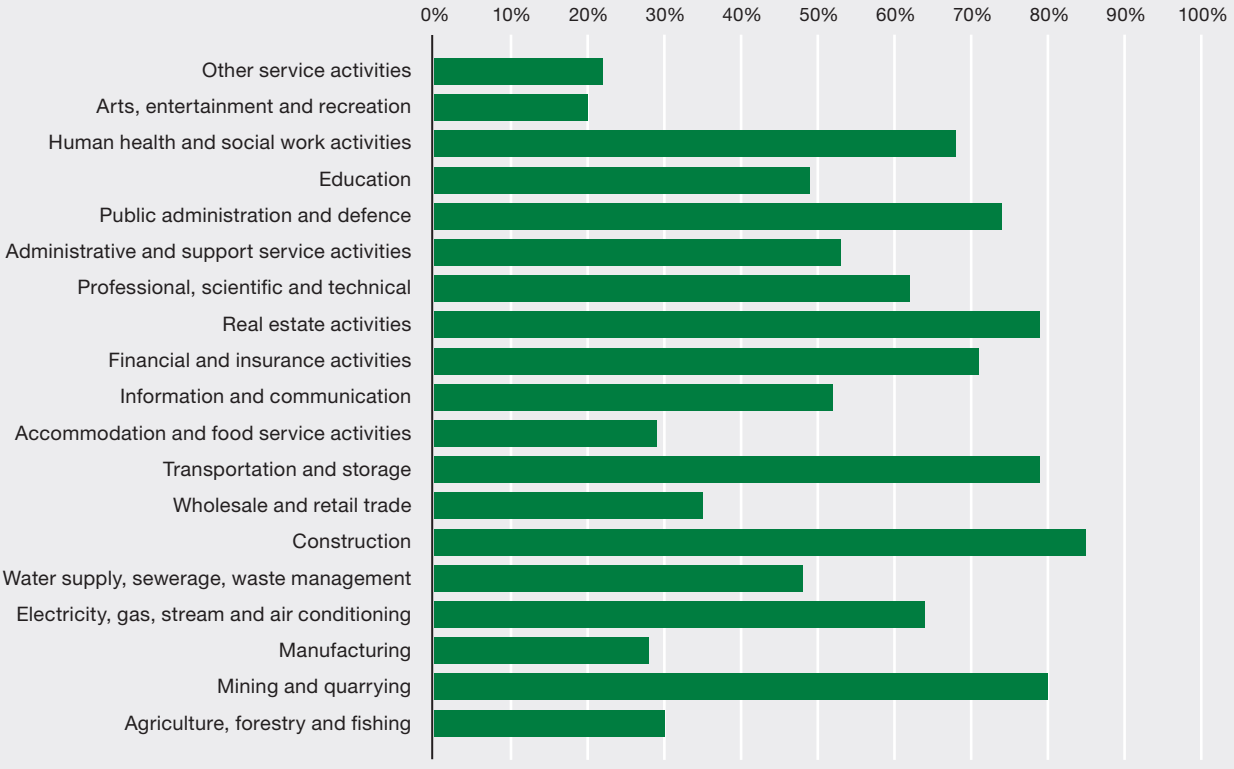

*Source: GRA*

FIGURE 3 **PERCENTAGE OF FIRMS REGISTERED WITH THE GRA BY REGION AND SECTOR IN 2014**

Percentage of Firms Registered with GRA by Region




Percentage of Firms Registered with GRA by Industry




*Source: IBES I.*

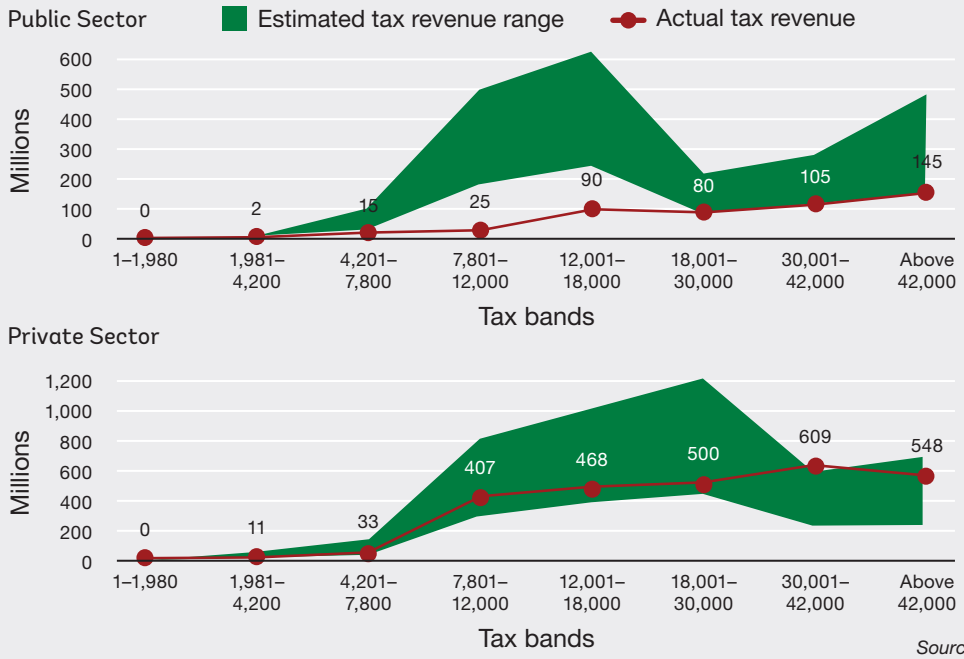
the two projected revenues are highlighted in green. For all income brackets between the annual wage of GHS 4,201 and GHS 30,000, actual tax revenues in the public sector are lower than the projected tax revenues, under the assumption that all workers in these brackets earned the minimum wage of the corresponding brackets. This indicates that income tax was not fully remitted to the GRA for workers in these brackets. In 2014, the total tax revenue in the public sector was only GHS 461 million. It was much lower than the projected total tax revenue under the assumption that all workers earned the minimum income in all brackets (GHS 743 million). Thus, there was at least GHS 282 million of underpayments of income tax in the public sector in 2014. In the private sector, there are no significant underpayments of income tax among firms which filed PAYE.

Third, not all firms, which are registered with the GRA file PAYE. This problem is expected to arise in the private sector, where the GRA does not have records of firms, which have not filed PAYE in the past. In 2014, PAYE was filed for 1.1 million wage earners by private sector firms, while the business census (Integrated Business Establishment Survey [IBES] I) suggests that there are 1.4 million workers who work for private sector firms registered with the GRA. Hence, PAYE was not filed for about 19 percent of wage earners in the country, even though they were working for firms that are registered with the GRA. To estimate the magnitude of tax noncompliance, this study conducts simulations under the assumption that workers who did not file PAYE were uniformly distributed across all income brackets. This is a rather strong assumption, because the simulation results greatly depend on the assumption of the distribution of missing taxpayers. However, it can be a simple and useful example to illustrate how one can conduct simulations to estimate tax noncompliance. Alternative simulations can be performed under other assumptions such as noncompliance being concentrated in low- or high-income brackets.

> There was at least GHS 282 million of underpayments of income tax in the public sector in 2014.

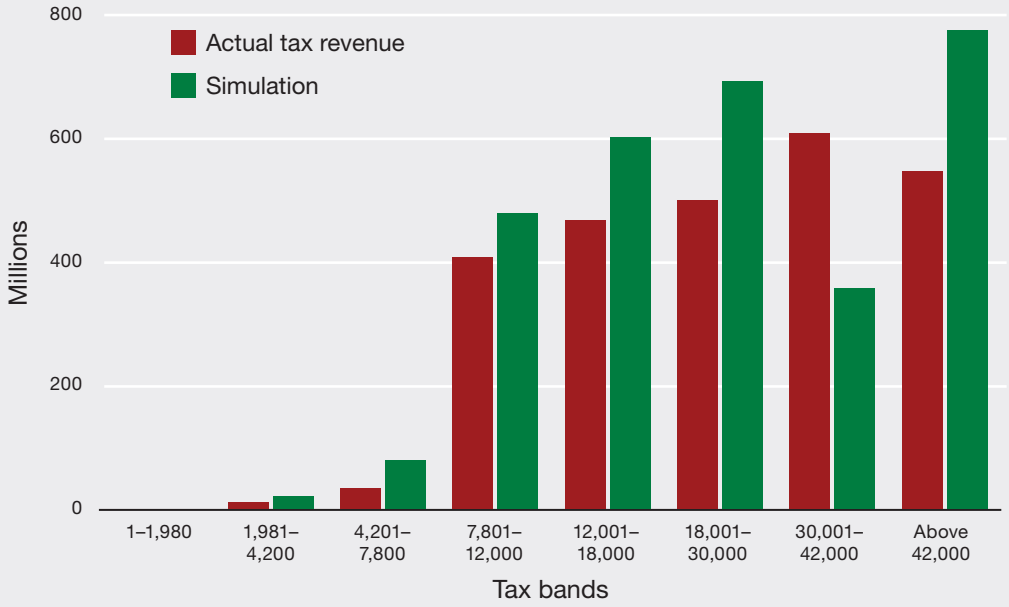
FIGURE 4

**COMPARISON OF ACTUAL REVENUE AND ESTIMATED REVENUES UNDER THE ASSUMPTION OF MINIMUM AND MAXIMUM INCOME WITHIN BRACKETS IN 2014**




*Source: GRA*

FIGURE 5 ■ COMPARISON OF ACTUAL REVENUE AND ESTIMATED REVENUE FROM THE PRIVATE SECTOR IN 2014




*Source: GRA and authors' estimation*

> Income tax revenue from the private sector could improve if all firms registered with the GRA file PAYE.

WID.WORLD's website (http://wid.world/gpinter/) was used to conduct the simulations. The algorithm was developed by Fournier (2015) and Blanchet, Fournier, and Piketty (2017). Figure 5 illustrates the simulation results. It suggests that the total income tax revenue from the private sector could have been higher by GHS 432 million in 2014 if all firms registered with the GRA filed PAYE and paid the full amount of income tax due.

## Changes in Tax Revenue in 2016

The income tax revenue slightly declined from 2014 to 2016, because the tax collection from the private sector declined substantially. The low income tax revenue in the private sector in 2016 can be attributed to three factors: changes in the tax rates, the election cycle, and electricity shortages.

**(a)** To encourage firms to file income taxes for their employees, the Government of Ghana raised the minimum taxable income from GHS 1,584 to GHS 2,592, and shifted the income tax bands upward. This change in tax rates could have lowered the total amount of tax collection.[2]

**(b)** Ghana had a presidential election at the end of 2016. Between 1992 and 2008, the fiscal deficit was higher by an average of 1.5 percentage points of GDP in election years (World Bank 2011). In 2016, the fiscal slippage was even higher than in the previous election years. It is likely that tax collection significantly reduced because of the election in 2016.

**(c)** In 2016, many parts of the country were experiencing energy rationing due to the shortage of electricity.

## Conclusion and Policy Recommendations

This policy brief examines the scale of tax noncompliance and potential revenue gains from the enforcement of tax compliance in Ghana. Income tax has a great redistributive effect in developing countries because it is usually paid only by wage earners, who are often the richest segment of the society.

The results of this study suggest that there is a large scale of underpayments of income tax in the public sector in Ghana. The underperformance of tax collection in the public sector can be largely attributed to the difference between the reporting system to the GRA between the private and public sectors. In the private sector, firms list all the workers and their wage incomes and report how much they withhold from each worker. In the public sector, the Controller and Accountant Generals Department sends one check to the GRA for all public sector workers. Thus, the GRA cannot verify how much each public sector worker earns and how much income tax is withheld from them. However, the accounting system was simplified for the public sector in 2016, and it may have reduced underpayments of PAYE to the GRA in the public sector.

It is probable that the underpayment of PAYE in the public sector results not only from the lack of transparency, but also the existence of ghost workers in the public sector. The government has recently removed 50,000 'ghost names' from its payroll.[3] It is likely that these ghost workers were counted as wage earners in the public sector. The government needs to improve both the recording and reporting systems of wage information to resolve this problem.

How can the tax collection system be improved in the private sector? Hallsworth (2014) reviews the results of recent impact evaluations on tax compliances. He separates interventions into two: deterrence and non-deterrence approach. The deterrence approach includes the use of audits and the introduction of fines. The non-deterrence approach includes the use of norms and fairness. He finds most deterrence interventions increased tax compliance. For example, Kahn, Silva, and Ziliak (2001) demonstrate an increase in fines that improves tax compliance in Brazil. On the other hand, interventions that use non-deterrence have mixed results. Del Carpio (2013) tests the effect of norms on tax compliance by giving taxpayers the information on average compliance rates and finds positive effects of the interventions in Peru. Blumenthal et al. (2001) evaluate the effect of a letter that uses normative appeals to taxpayers in the United States. They find no behavioral change in tax compliance.

It is important to evaluate whether interventions that work in developed countries also work in developing countries. Developing countries face additional challenges such as weak institutions, corruption, and an informal economy. The deterrence approach seems to work well where there is rigid law enforcement. In countries with weak institutions, such an approach might be less effective. More empirical evidences are needed from developing countries to make sound policy recommendations for developing countries.

> "The recording and reporting systems of tax payments needs to be improved."

2 Experiences from other countries suggest the reduction in tax rates may reduce tax noncompliance. Fisman and Wei (2004) show that a 1 percentage point decrease in the tax rate is associated with a 3 percent reduction in corporate tax evasion in China.

3 Source: https://www.ghanabusinessnews.com/2017/04/14/ghana-government-removes-50000-ghost-names-from-payroll-imf/

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