Estimating Tax Gaps in Zambia

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Background

- Public revenue mobilization through taxes is an important tool for developing economies.
- Revenue mobilization faces many challenges that hamper efficiency and effectiveness.
- The challenges include tax evasion and non-compliance.
- These challenges are more severe in economies with high informality.

Motivation

- Tax gap estimation is one way of calculating inefficiencies in the tax system.

- Tax gap is simply the difference between the potential and actual taxes collected.

Methodology

Two ways to estimate the tax gap

1. Top-down approach using Macro data

2. Bottom-up approach using Micro data

Data

- The study uses information from audited firms to predict audit outcomes of unaudited firms in the period 2014 to 2020.
- We calculate the extent to which a firm can be audited
- Based on the audit prediction, the study calculates the evasion of the non-audited firms.

Benefits of Audit data

Audit outcomes are one of the few sources of information on tax evasion.

Audit data exists usually only for a small subset of firms as audits are costly to implement.

Audit outcomes & firm characteristics make it possible to estimate the evasion rates for non-audited firms.

Evasion rates for all firms are then aggregated to calculate the tax gap.

Results

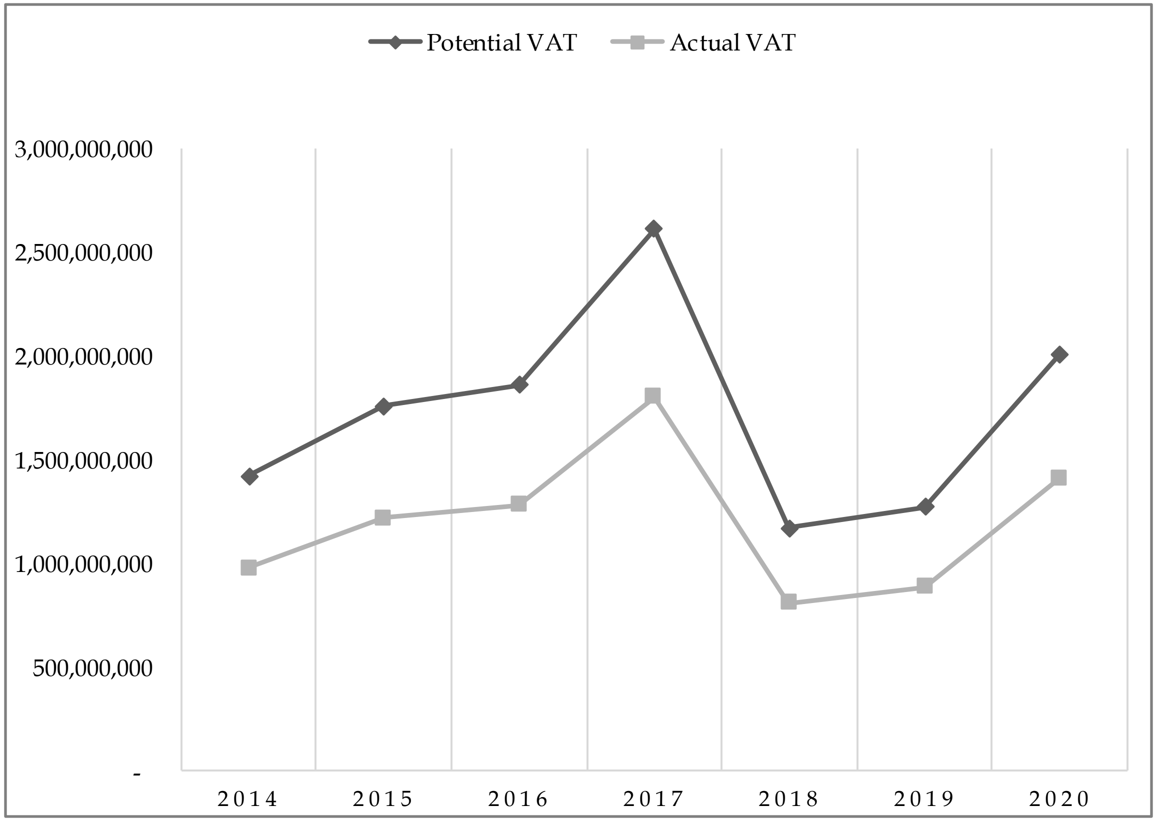
For the period 2014 to 2020, estimated total tax gap is

47-56%

We use this estimate to calculate potential VAT and CIT returns for key sectors in Zambia.

Result 1 – VAT Gap

Figure 1: Total Actual vs. Potential VAT in ZMW



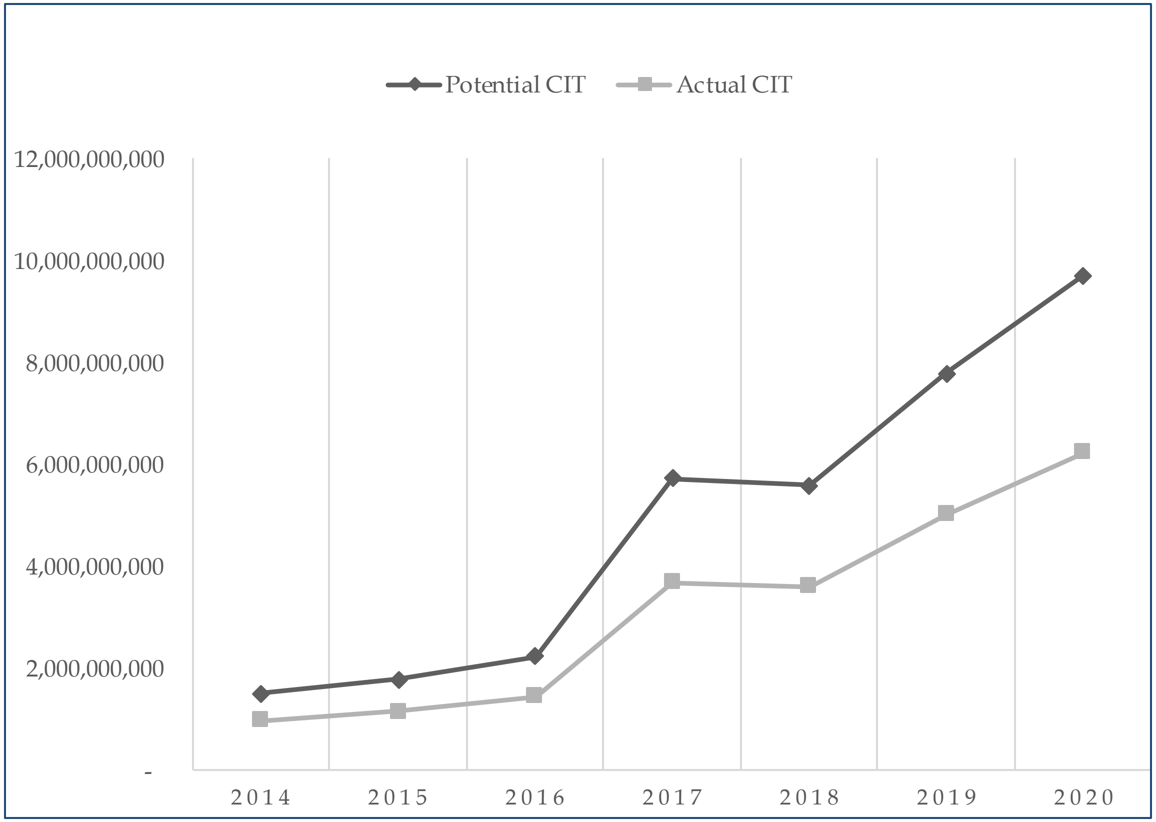
Largest gap in 2017. Potential VAT of ZMW 2.6 billion and actual VAT of ZMW 1.8 billion = VAT gap of ZMW 0.8 billion.

Smallest gap in 2018. VAT gap amounting to ZMW 0.4 billion

The VAT gap increase again and was found to be ZMW 0.6 billion in 2020

Result 2 – Corporate Income Tax Gap

Figure 2: Total Actual vs. Potential CIT in ZMW

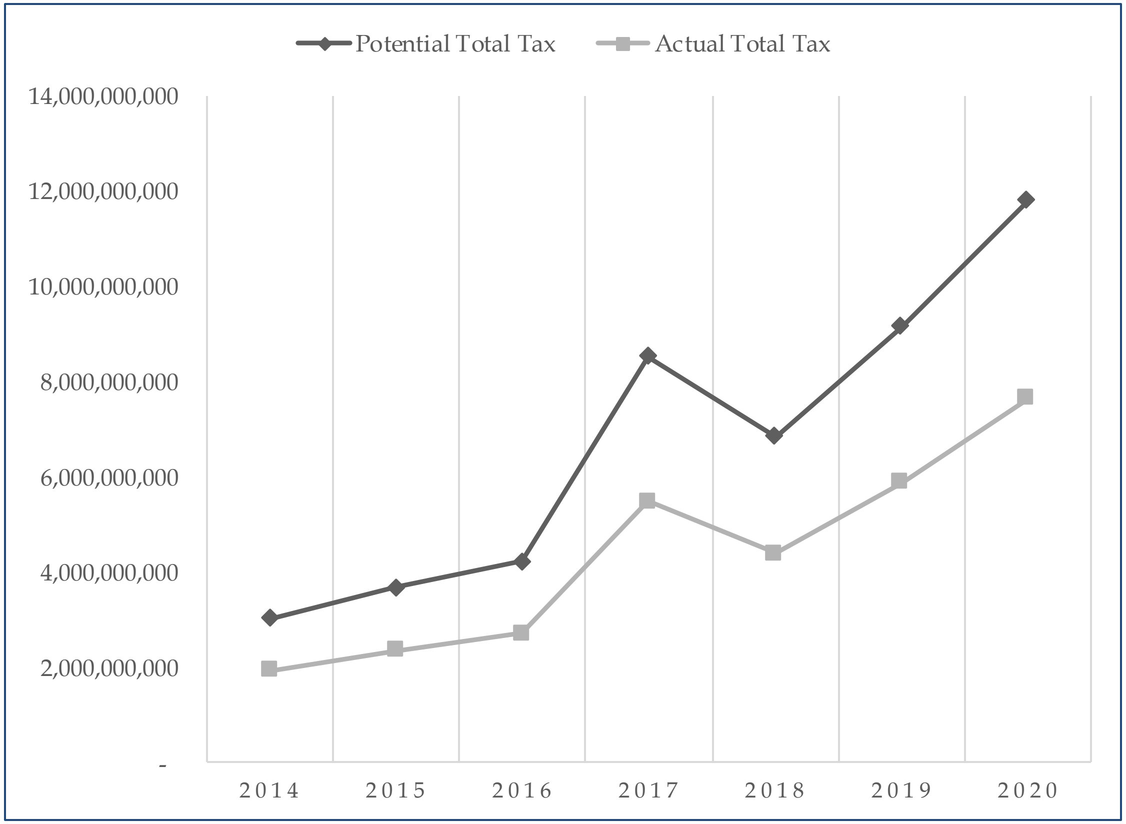


The highest potential CIT return is ZMW 9.7 billion compared to actual return of ZMW 6.2 billion resulting in a CIT gap of ZMW 3.5 billion in 2020

The CIT gap has increased over time. The lowest CIT gap was found in 2014

Result 3 – Total tax gap

Figure 3: Total Actual vs. Potential CIT in ZMW

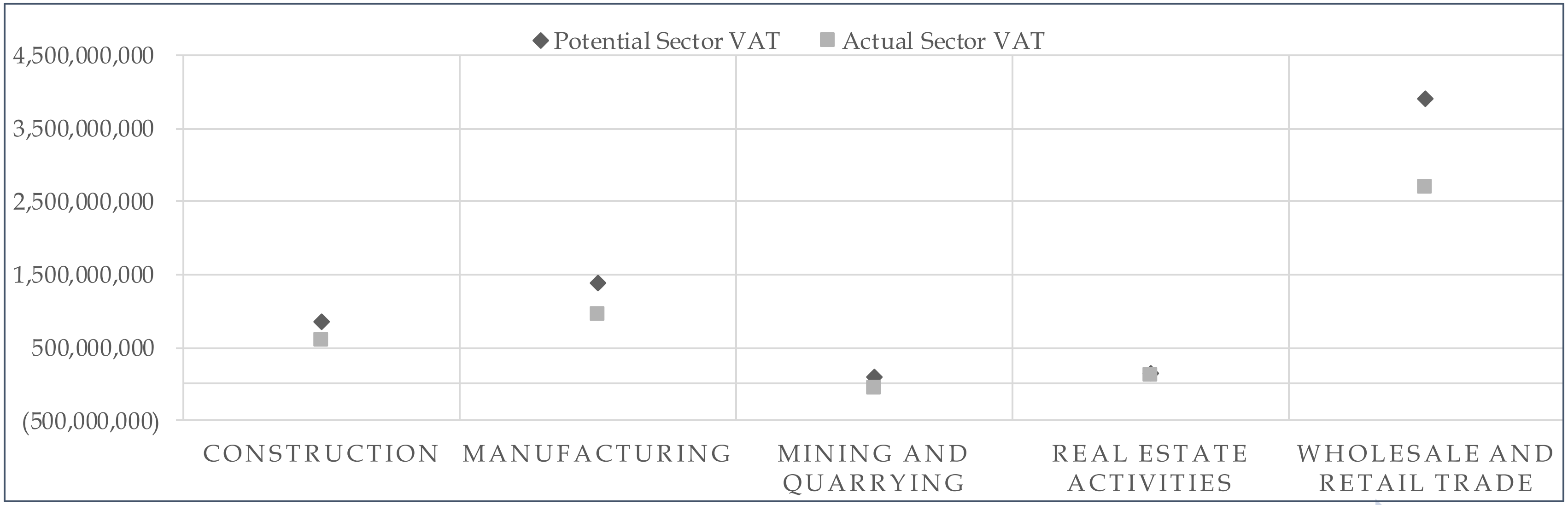


Comparing the two tax types: CIT is the main driver of tax revenue as compared to VAT

Using the 56% tax gap estimate, the country could have collected potentially ZMW 17 billion additional domestic revenue from VAT and CIT.

Result 4 – VAT gap in key Sectors

Figure 4: Total Actual vs. Potential VAT by key sector in ZMW



Wholesale & retail sector records large VAT gaps mainly due to high number of firms recorded in the data for that sector affecting the actual value of transactions.

VAT gaps for Mining & Quarrying and Real Estate sectors are low compared to other key sectors. Output from extractive sector is zero-rated (exports).

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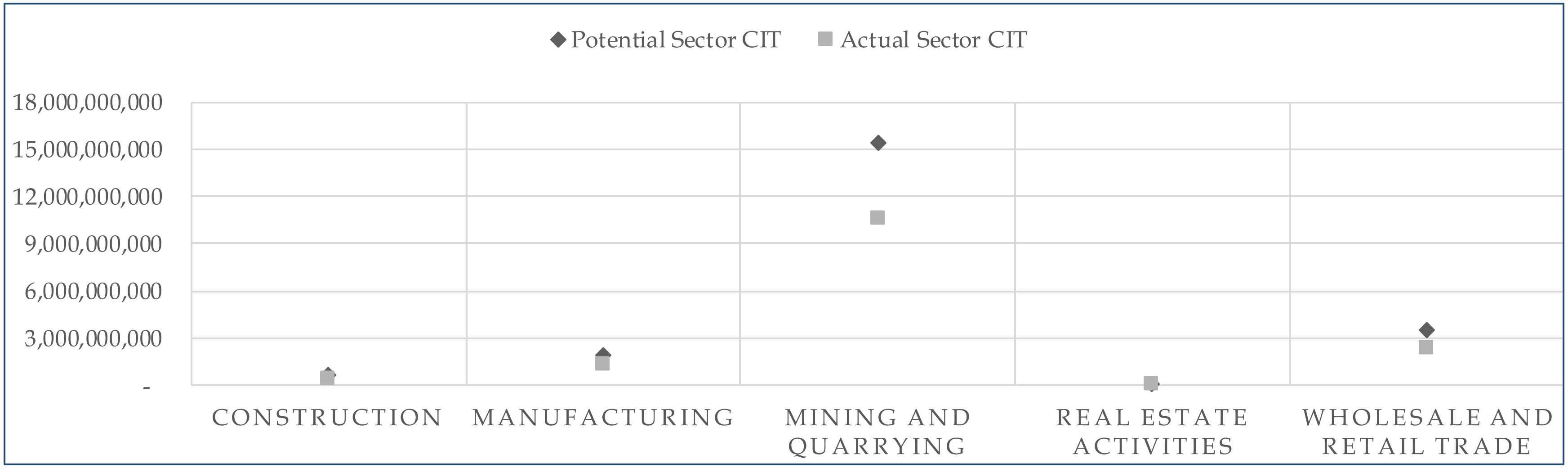
Result 5 – CIT gap in key Sectors

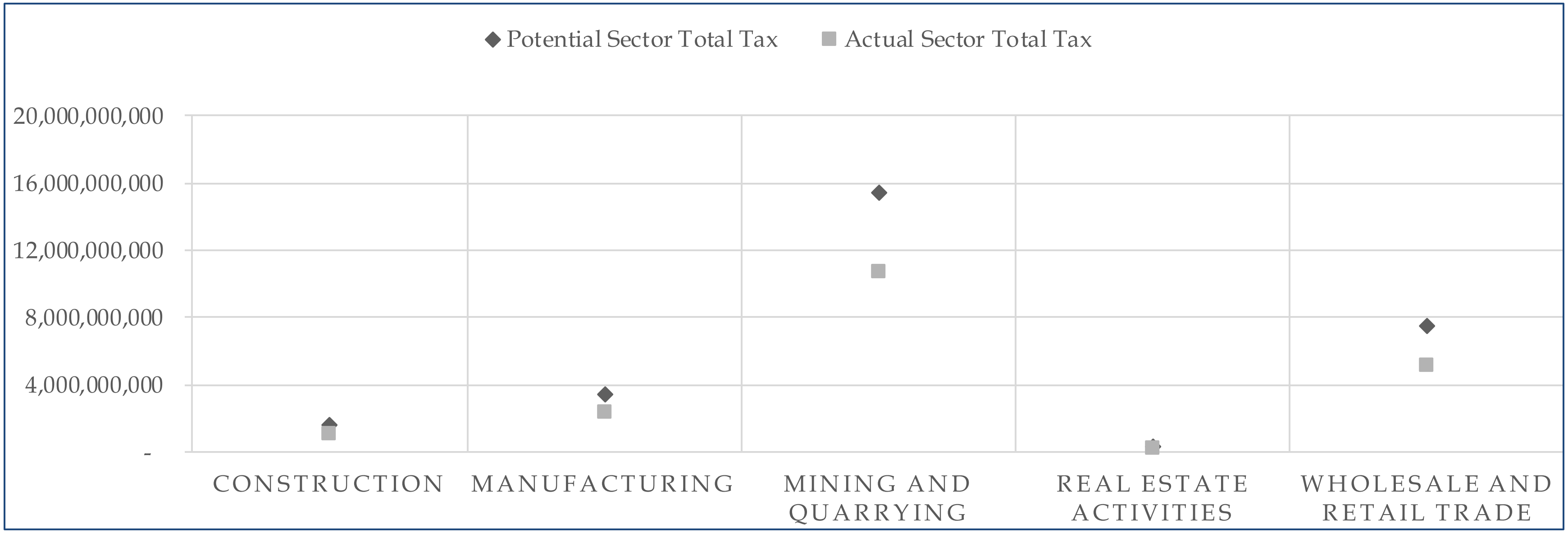
Figure 5: Total Actual vs. Potential CIT by key sector in ZMW



The extractives sector records a high CIT gap compared to the other key sectors.

Results 6 – Total tax gap in key Sectors

Figure 6: Total Actual vs. Potential Sector Returns by key sector in ZMW



The Extractives sector recorded the highest tax gap followed by the Wholesale & retail sector.

The Real estate sector recorded the lowest tax gap among the six key sectors

Tax gap and GDP

Table 1: Tax Gap GDP nexus in millions of kwacha

	2014	2015	2016	2017	2018	2019	2020
GDP (ZMW)	167,053	183,381	216,098	246,252	275,174	300,448	332,223
Total Tax gap	864	1,050	1,210	2,440	1,960	2,630	3,400
% of GDP	0.52	0.57	0.56	0.99	0.71	0.88	1.02

- We compare our gap estimates to GDP
- The highest tax gap to GDP was observed at 1.02% in 2020 while the lowest was at 0.52 % in 2014.

Conclusion

- Using different methods the study finds the total tax gaps is 47-56%
- Total tax gap is driven by corporate income taxes.
- The Wholesale and Retail sector records the highest potential VAT while the Extractives sector records the highest potential CIT.

Recommendations

- Audits for VAT should be targeted at firms in Wholesale & retail sector while CIT audits should be targeted at the Extractives industries or firms that export most of their output.

- ZRA should continue to enhance more in technological modernization for verifying declarations and appropriate compliance actions.

- ZRA can improve taxpayer information reporting by making key fields in the VAT and CIT returns mandatory to ensure adequate data capture.

Interventions for tax evasion

- The Authority recognizes that tax evasion and the informal sector pose a challenge to our revenue mobilization efforts.

- To this end, ZRA has established structures and adopted various initiatives to manage these challenges.

Interventions for tax evasion

Established ZRA units that curtail tax evasion and capture the informal sector, include:

- ***The Investigations Unit*** which investigates all allegations of tax evasion and other tax offenses.
- ***The Enforcement Unit*** which conducts Customs enforcement activities to curtail smuggling and provide intelligence information to facilitate investigations, prosecutions and enforcement activities.
- ***Tax Audit Units*** which routinely conduct audits based on a risk-based approach.
- ***Data Analytics Units*** which analyse internal and external data aimed at improving tax compliance.

Thank you

Working paper available here
Research brief here
More info about our collaboration here