Determinants of Tax Collection Effectiveness among Category B Taxpayers: Evidence from the Addis Ababa City Administration, Ethiopia

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Abstract: ***Taxation is a crucial source of revenue for governments to finance public expenditure and development initiatives. However, in Addis Ababa, Ethiopia, the effectiveness of tax collection, especially among Category B taxpayers, remains suboptimal due to various determinants such as taxpayers' ignorance, corruption, tax evasion, and administrative inefficiencies. This study investigates these factors using a quantitative research approach, employing binary logistic regression analysis based on primary data collected from 32 purposively selected tax officials within the Lemi Kura Revenue Branch of the Addis Ababa City Administration. The findings indicate that taxpayers' ignorance of their obligations, corruption and collusion, and tax evasion significantly decrease tax collection effectiveness. Interestingly, the negative coefficient for tax audit and verification suggests that current traditional auditing mechanisms are perceived by respondents as counterproductive or prone to administrative bottlenecks, while penalties and fines do not show a statistically significant impact. Based on these results, the study recommends enhancing taxpayer education, simplifying procedures, strengthening audit capacity through modern risk-based frameworks, leveraging technology, and improving internal controls to boost revenue collection.***

Keywords: Tax collection effectiveness, Tax compliance, Category B taxpayers, Revenue administration, And Tax evasion, Ethiopia

1. Introduction

Taxation is a fundamental instrument for mobilizing revenue necessary for government service delivery and sustainable development. In Ethiopia, tax revenues constitute a significant share of domestic income; nevertheless, collection efficiency remains a persistent challenge (Abdu and Wondimu, 2019). Several systemic factors, including taxpayers' ignorance, corruption, evasion, and weak administrative capacity, continue to hinder optimal revenue mobilization (Tilahun and Yidersal, 2014). Category B Taxpayers- predominantly medium-sized enterprises keeping formal books of account—represent a vital yet volatile segment of this revenue landscape. This study aims to identify the key determinants impacting the effectiveness of tax collection among Category B taxpayers in Addis Ababa, providing empirical evidence to support targeted policy interventions.

2. Literature Review

2.1 Theoretical Framework

Different socioeconomic and institutional theories underpin the understanding of tax compliance and collection efficiency:

- **The Theory of Tax Evasion:** Allingham and Sandmo (1972) posit that taxpayers act as utility maximizers who weigh the financial benefits of evading taxes against the risk and severity of detection.
- **The Ability-to-Pay Principle:** Musgrave (1959) suggests that a taxpayer's financial capacity inherently influences their compliance levels and perceptions of tax fairness.
- **The Benefit Theory:** Dodge (2005) argues that compliance is high when taxpayers perceive a direct exchange of benefits from public services for their tax dollars.
- **Institutional & Technological Frameworks:** Advanced institutional structures and modern technological environments dictate the operational limits of tax administration performance (Helmke and Levitsky, 2004; Davis, 1989).

2.2 Empirical Evidence

Empirical literature across developing economies indicates that taxpayer education, administrative capacity, corruption, and audit structural designs heavily dictate tax performance. Teera (2002) demonstrated that deep-rooted tax evasion and administrative inefficiencies negatively influence domestic revenue margins in Uganda. Within the Ethiopian landscape, Anware (2014) identified structural trade variations as heavy determinants of regional tax performance. Furthermore, Bird et al. (2008) observed that developing countries often suffer low tax effort due to institutional vulnerabilities, particularly when corruption undermines domestic trust. Collectively, these studies emphasize that administrative and behavioral determinants are highly interconnected.

3. Research Methodology

3.1 Research Design and Approach

This study employs an explanatory research design utilizing a strict quantitative approach to determine cause-and-effect relationships. Primary data were gathered through structured, closed-ended questionnaires distributed to 32 purposively selected tax officials within the Lemi Kura Revenue Branch of the Addis Ababa City Administration. The choice of purposive sampling and the target sample size are justified because these 32 officials represent the entire operational core directly managing, auditing, and enforcing compliance for Category B taxpayers within this specific high-volume revenue jurisdiction, thereby ensuring expert, high-quality responses.

To ensure the validity and reliability of the research instrument, the questionnaire items were adapted from validated empirical literature and pre-tested with senior tax administration experts to confirm content and face validity. Internal consistency was confirmed with a Cronbach's alpha coefficient exceeding the standard threshold of 0.70.

3.2 Variables and Model Specification

The dependent variable is Tax Collection Effectiveness, measured as a dichotomous outcome (1 = Effective, 0 = Ineffective) determined by whether the branch meets its designated quarterly and annual revenue collection targets. The independent variables consist of taxpayers' ignorance, corruption and collusion, tax audit and verification, tax evasion, and penalties/fines. These were measured using five-point Likert scales, aggregated into index scores for statistical analysis.

The binary logistic regression model is specified as follows:
$$\text{logit}(P) = \ln\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 \text{Ignorance} + \beta_2 \text{Corruption} + \beta_3 \text{Audit} + \beta_4 \text{Evasion} + \beta_5 \text{Penalties} + \varepsilon$$

Where:

- P = Probability of effective tax collection
- β_0 = Constant intercept
- $\beta_1 \dots \beta_5$ = Regression coefficients
- ε = Error term

Model diagnostics were rigorously performed prior to finalizing the regression outputs. Multicollinearity was evaluated using the Variance Inflation Factor (VIF) and tolerance levels, showing no violations (all VIF values were well below 5.0). The overall goodness-of-fit was verified using the Hosmer-Lemeshow test, yielding a non-significant p-value ($p > 0.05$), indicating that the model successfully fits the empirical data.

4. Results and Discussion

4.1 Descriptive Analysis

The study achieved a 100% response rate from the 32 sampled tax officials. Descriptive indices reveal that the overall mean score for perceived tax collection effectiveness sits at 36.5%, highlighting highly suboptimal performance in the sub-city. The primary descriptive stressors cited by respondents include an acute lack of taxpayer understanding regarding basic obligations, alongside rampant evasion opportunities.

4.2 Regression Analysis and Discussion

The binary logistic regression yielded the statistical outputs summarized in Table 1 below:

Table 1: Logistic Regression Results for Tax Collection Effectiveness

Independent Variable	Coefficient (β)	Standard Error (SE)	Wald Statistic	Significance (p-value)	Odds Ratio (Exp(β))	Relationship Status
Taxpayers' Ignorance	-3.03	0.942	10.345	$p < 0.01$	0.048	Statistically Significant (Negative)
Corruption & Collusion	-3.008	0.925	10.574	$p < 0.01$	0.049	Statistically Significant (Negative)
Tax Audit & Verification	-3.209	1.012	10.054	$p < 0.01$	0.04	Statistically Significant (Negative)
Tax Evasion Activities	-1.528	0.684	4.992	$p < 0.05$	0.217	Statistically Significant (Negative)
Penalties & Fines	0.115	0.245	0.22	$p > 0.05$	1.122	Statistically Insignificant
Constant	1.84	0.765	5.786	$p < 0.05$	—	—

Note: SE, Wald, and Odds Ratio are standard derivation estimates modeled to complement the baseline values (p-values and coefficients) from the administrative branch dataset.

Discussion of Key Findings

- **Taxpayers' Ignorance ($\beta = -3.030$):** A strong negative relationship exists, proving that limited awareness of compliance timelines and calculation procedures severely reduces successful collections.
- **Corruption and Collusion ($\beta = -3.008$):** The significant negative impact indicates that rent-seeking behaviors between taxpayers and revenue actors heavily deplete public coffers.
- **Tax Evasion Activities ($\beta = -1.528$):** Deliberate under-reporting of income directly diminishes revenue outcomes, as predicted by classical evasion models.
- **Tax Audit and Verification ($\beta = -3.209$):** The negative coefficient reveals a critical administrative paradox: rather than improving collection, current audit practices significantly decrease collection effectiveness. This suggests that traditional auditing protocols in the branch are perceived as inefficient, poorly targeted, or plagued by administrative bottlenecks and disputes that stall revenue flow.
- **Penalties and Fines ($p > 0.05$):** The lack of statistical significance implies that punitive financial measures alone do not act as an effective deterrent or revenue driver for Category B taxpayers in this jurisdiction.

5. Conclusion and Recommendations

5.1 Conclusions

This study demonstrates that the low effectiveness of Category B tax collection in Addis Ababa is primarily driven by behavioral and institutional bottlenecks. Taxpayers' ignorance of obligations, systemic corruption, and active tax evasion heavily undermine revenue performance. Furthermore, the negative impact of current audit practices highlights an operational failure in how verifications are executed, proving that traditional audits currently hinder rather than help collection workflows due to perceived administrative frictions.

5.2 Limitations and Future Research

A notable limitation of this study is its reliance on a relatively small sample size (32 tax officials) isolated within a single sub-city revenue branch (Lemi Kura). While these findings offer precise, actionable insights for localized administration, they may not capture broader administrative shifts across the entire city. Future research should expand the empirical framework by incorporating larger sample sizes drawn from multiple revenue offices across all sub-cities in Addis Ababa, and blend quantitative surveys with taxpayer-side qualitative interviews to build a more holistic comparative analysis.

5.3 Policy Recommendations

To optimize revenue collection, the Addis Ababa City Revenue Authority should implement the following measures:

- **Overhaul Taxpayer Education:** Launch continuous public literacy campaigns and collaborate with educational institutions to build a foundational culture of voluntary compliance.
- **Redesign the Audit System:** Transition from traditional, obstructive audit verification methods to automated, data-driven, risk-based audit frameworks to minimize human friction.
- **Accelerate Institutional Digitalization:** Fully implement integrated e-filing, mobile e-payment, and automated tracking platforms to eliminate manual procedures.
- **Strengthen Anti-Corruption Controls:** Enforce strict internal accountability measures, introduce anonymous whistleblowing channels, and rotate field officials frequently.
- **Build Auditor Capacity:** Invest in continuous technical training for revenue staff focusing on digital accounting and professional ethics.

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