mbr Multidisciplinary Business Review

Un journal de asfae chile

Does the number of taxpayers matter for optimum collection of Turnover tax category -B-taxpayers

Factores que afectan la recaudación del impuesto sobre el volumen de negocios de los contribuyentes de categoría "B"

Baharu Sisay Negatu[a]
Nidhi Walia[b]

Classification: Empirical paper – research
Received: April 3, 2024
Revised: April 14, 2025
Accepted: May 14, 2025

Abstract

Taxation is a fundamental tool of government fiscal policy. This study investigates the factors influencing Turnover Tax collection among category - B - taxpayers in Ethiopia, focusing on the relationships between taxpayer registration, knowledge, attitude, and tax collection. An exploratory research design using a mixed-methods approach was employed. From 797 registered taxpayers in the zone, 266 were selected through simple random sampling. Additionally, 36 employees from 18 Woreda offices were chosen purposively, and 19 managers were interviewed, yielding a total sample size of 321. Data was collected from both primary sources (questionnaires and interviews) and secondary sources (published and unpublished materials) and analysed using descriptive and inferential statistics. Findings indicate that taxpayer knowledge, payment convenience, taxpayer attitudes, and enforcement through penalties significantly affect tax collection. A strong negative correlation was found between tax collection and both taxpayer registration gaps and corruption. The study recommends government action on ICT infrastructure, taxpayer education, and anti-corruption measures. These findings offer practical insights for Ethiopian tax policymakers to identify weaknesses in registration and collection processes, improve compliance, and design more effective tax strategies. However, the study's generalisability is limited by its focus on South Gonder Zone, the sample size, and the chosen research design.

Keywords: Turnover tax, factors affecting tax collection, Ethiopian tax system, indirect tax, category - B - taxpayer.

Resumen

La tributación es una herramienta fundamental de la política fiscal del Gobierno. Este estudio investiga los factores que influyen en la recaudación del impuesto sobre ventas (Turnover Tax) entre los contribuyentes de categoría - B - en Etiopía, enfocándose en las relaciones entre el registro del contribuyente, su conocimiento, actitud y la recaudación del impuesto. Se utilizó un diseño de investigación exploratorio con un enfoque mixto. De los 797 contribuyentes registrados en la zona, se seleccionaron 266 mediante muestreo aleatorio simple. Además, se eligieron 36 empleados de 18 oficinas de Woreda mediante muestreo intencional, y se entrevistó a 19 gerentes, con un tamaño total de muestra de 321. Los datos se recopilaron de fuentes primarias (cuestionarios y entrevistas) y secundarias (materiales publicados y no publicados), y se analizaron utilizando estadísticas descriptivas e inferenciales. Los resultados indican que el conocimiento del contribuyente, la facilidad de pago, la actitud del contribuyente y la aplicación de sanciones influyen significativamente en la recaudación fiscal. Se encontró una fuerte correlación negativa entre la recaudación y tanto las deficiencias en el registro como la corrupción. El estudio recomienda acciones gubernamentales en infraestructura TIC, educación tributaria y medidas anticorrupción. Aunque ofrece información útil para los responsables de política fiscal, su aplicabilidad general está limitada por el enfoque en la Zona de Gonder Sur, el tamaño de la muestra y el diseño metodológico.

Palabras clave: impuesto sobre el volumen de negocios, factores que afectan la recaudación tributaria, sistema tributario etíope, impuesto indirecto, contribuyente de categoría - B -.

[a] Department of Applied Management, Patiala, Punjab, India. Email: baharusisay@gmail.com. https://orcid.org/0000-0001-5180-7638
[b] Department of Applied Management, Patiala, Punjab, India. Email: nidhiwalia79@gmail.com

Introduction

Turnover tax, or sales tax, differs from value-added tax (VAT) and plays a significant role in generating revenue for governments worldwide Torgler, B. (2005). In Ethiopia, Turnover Tax collection is a crucial aspect of the country's fiscal policy, contributing to its sustainable development and economic growth and removing the nation's budget deficit. However, the effective collection of Turnover Tax revenue is subject to various factors that can significantly influence its outcomes. This article aims to identify the factors affecting turnover tax collection of Category - B – Taxpayers in Ethiopia, South Gonder Zone. According to Income Tax Proclamation No 979/2016, category - B - taxpayers are business persons whose annual turnover is between 500,000 and 1,000,000 Ethiopian Birr (ETB). One of the primary factors affecting Turnover Tax collection is the level of compliance among taxpayers. Compliance behavior is affected by several sub-factors, such as tax awareness, education, and the perception of fairness in the tax system. The administrative capacity and efficiency of the tax authorities are vital factors. An efficient tax administration system with well-trained personnel, streamlined processes, and robust enforcement mechanisms can enhance tax compliance and improve Turnover Tax collection effectiveness. Conversely, administrative inefficiencies, corruption, and inadequate resources can hamper the collection process and result in revenue leakage. Broader macroeconomic environments, such as economic growth, inflation rates, and business cycles, can significantly impact turnover tax collection. Therefore, understanding macroeconomic dynamics is crucial for formulating effective tax policies and forecasting revenue collections Batrancea, et al. (2019). The structure and design of the Turnover Tax system can either facilitate or impede its collection. Tax rates, exemptions, thresholds, and compliance requirements can influence taxpayer behavior and affect the overall revenue generated Torgler, et al. (2008).

Additionally, the prevalence of informal economic activities poses a challenge to turnover tax collection in Ethiopia. The informal sector, characterised by unregistered businesses and cash-based transactions, often escapes the authorities' radars. The enormous scope of the informal economy limits the tax base and reduces potential revenue from the turnover tax. Implementing measures to formalise the informal sector and encourage voluntary compliance can help broaden the tax base and increase turnover tax collection Moore, (2023).

In conclusion, the effective collection of Turnover Tax in Ethiopia is influenced by multiple factors, including taxpayer compliance, administrative capacity, macroeconomic conditions, tax system design, and the prevalence of informal economic activities Baharu Sisay Negatu, D. N. W. (2023). Understanding these factors and their interplay is crucial for policymakers and tax authorities in order to devise strategies that promote tax compliance, enhance revenue collection, and maintain justifiable economic growth in Ethiopia. This study provides a detailed analysis of these issues, providing valuable insights and recommendations for policymakers and practitioners in the field of tax administration.

Literature review

Countries cannot close their tax deficit due to several obstacles. They range from inadequate tax administration to weak and understaffed legal frameworks. By overcoming these obstacles, the world country may be able to increase tax collection and close their tax gaps, such as lack of reform momentum, regulatory and policy restrictions, decent information, communication technology support, limited financing and investment in revenue administrations (customs and tax) by governments, and the lack of critical mass in tax administrations is also highlighted by the examination of the tax system. Other administrative restrictions include errors in tax registries, shortcomings in the administration of unfiled tax returns, and unpaid tax arrears. When considered holistically, the three aspects of tax systems that are confusing when examined separately make sense. The ongoing push to improve the number of taxpayers registered suggests that policy and

management are excessively increasing revenue collection. By placing the seeming source of revenue shortage in the purported taxation of small businesses and the impoverished, the informal sector narrative deflects criticism away from the inadequate taxation of larger companies and more affluent Africans Bautigam, D., Fjeldstad, O.H. and Moore, M. (2005) clarifies how important education is for paying taxes and demonstrates that the community's reaction to tax evaders has a more significant influence on raising tax law compliance than the fear of sentence in and of itself. Winoto, H. T. R., & Pudjolaksono, E. (2022). First, the empirical results show a long-term positive correlation between tax revenue and distance aid and governance. However, after overseas aid and governance interacted, a downward trend in tax collection was observed. Foreign aid deteriorates the governance environment, which has a detrimental knock-on effect on tax income.

Ma'sumah, S., & Hamidi, A. L. (2023) indicated that variables have a substantial impact on power and trust, while audit probabilities, tax penalties, attitudes, norms, and retributive fairness have significant and positive connections with collection. Negui (2016) studied aspects of upsetting optimal revenue collection in Kiambu and found that public participation legislation, staff competency, and technology influence optimal revenue collection in Kenya Birhan (2018) studied the "determinants of the effectiveness of Turnover Tax collection". The study identified factors such as the taxpayer's ignorance of their obligation, corruption, and collusion, taxpayer's audit and verification, taxpayer's participation in government policy formulation, continence of payment, penalty, and fines imposed on taxpayers, and tax evasion as the reasons for the poor collection of turnover tax Kibret, D. D. (2021). studied "factors affecting Turnover Tax collection performance". This study identified the following factors: findings revealed that; employee qualification and manpower, taxpayer registrations, technology and information system, management commitment level and tax knowledge affects revenue performance of turnover tax positively. In Woldemariam Birru, M. (2022) showed a substantial association between tax collection and the independent variables of bribery, party-political uncertainty, and the structural forte of the tax authority, tax justice, and forms of collection. However, other factors, including taxpayers' awareness, delay in making the statement, and starting a commercial activity without a license, do not appear to be significantly related Abate, A. A. (2019). Factors affecting presumptive tax collection in Ethiopia: Evidence from category – C - taxpayers in Bahir Dar City the study used time series data from 1996 to 2020 and found that agricultural GDP, party-political steadiness, service-to-GDP ratio, and inflation have an optimistic long-run impact on tax collection, while corruption has an adverse effect. The study also finds that the short-run effect of agricultural GDP on tax revenue is (Abate A. 2020) The category – C - income tax collection in Ethiopia is significantly influenced by the system's equity and fairness, tax officials' corrupt practices, the ability of tax administrators, awareness of tax laws and conventions, and taxpayers' assertiveness Ataro, P. O., Muturi, W., & Wandera, R. W. (2016) According to the study, staff training increases revenue collection efficiency because professionally trained employees are better equipped to carry out their duties. Mansur, Hernando, and Prasetyo (2023) demonstrate that accounting knowledge has little bearing on MSME taxpayer compliance in Jambi City's food industry. Meanwhile, taxpayer compliance in MSMEs in the culinary industry in Jambi may be directly or indirectly impacted by an awareness of tax laws and penalties.

Research hypothesis

The turnover tax collection from category –B- taxpayers is a critical aspect of revenue generation for governments, reflecting the health of the informal economy and small businesses. This research aims to investigate the various factors influencing the efficiency and effectiveness of turnover tax collection among these taxpayers. By examining elements such as tax payer knowledge,the number of taxpayers, corruption, convinence of the payment, fines and penalities and taxpayer attitude the study seeks to identify

key determinants that impact collection rates. Understanding these factors is essential for policymakers to enhance tax compliance and optimise revenue collection strategies for category –B- taxpayers.

$H0_1$ There is no relationship between taxpayer registration and the collection of turnover tax.

A reliable tax administration system should identify all taxpayers, which should also generate individual ID numbers that are inputted into a controlling folder that can be updated and consulted Palil, M. R., & Mustapha, A. F. (2011).

$H0_2$: There is a significant relationship between the attitude of the taxpayer and the collection of turnover tax.

Reddy, D. (2021) taxpayer attitude and tax obedience: found consistent optimistic association amid taxpayer's Attitude and compliance behavior.

$H0_3$: There is no relationship between taxpayer knowledge and the collection of turnover tax.

The examination showed a constructive bond between tax knowledge and compliance. Asrinanda (2018) provides evidence that tax knowledge influences insights into the justice of the tax system.

$H0_4$ There is a negative relationship between corruption and the collection of turnover tax.

Flatters, F., & MacLeod, W. B. (1995) determined that the impact of corruption on revenue was a negative collection in any city administration worldwide.

$H0_5$ There is no statistically significant relationship between the convenience of payment and the collection of turnover tax

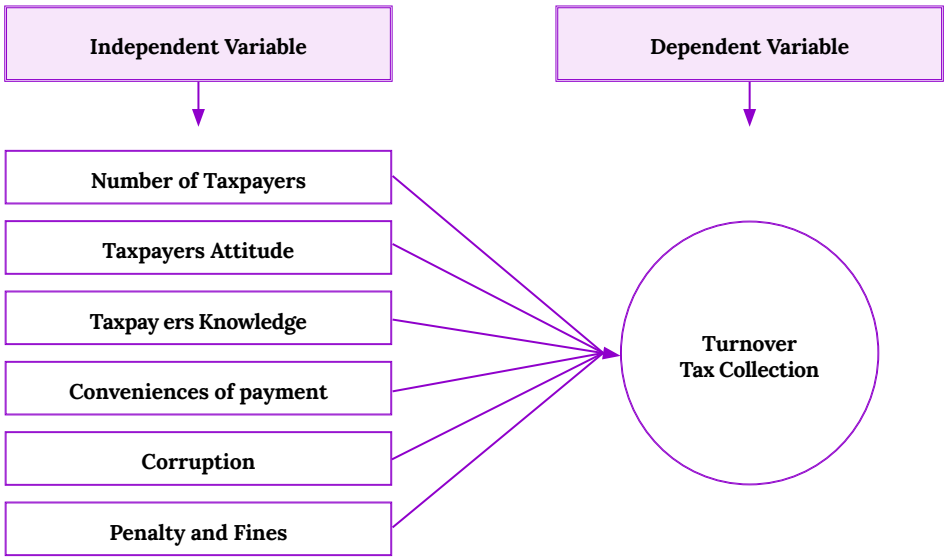
The convenience of payment advises against causing the taxpayer an undue bother; otherwise, many adverse effects may occur. From the taxpayer's perspective, a good tax should be simple. Even tax experts are frequently worried about how the law should apply to a specific transaction because income tax regulations are so complicated and change often.

$H0_6$: There is a significant relationship between penalties and fines imposed on taxpayers and the collection of turnover tax.

Penalties have a more substantial effect on amenability than the likelihood of an audit, and a more remarkable agreement implies that taxpayers report their total tax due and make their payments on time out of fear of penalties and fines. Sapiei, N. S., & Kasipillai, J. (2013).

Research model

Figure 1. Research model



Source: Researchers' sketch from literature.

Figure 1 presents the conceptual model that shows the link between dependent and independent variables of the study.

$$\text{TOT performance } Y = B_o + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + e$$

$$Y = B_o + B_1 + NOTP_1 + B_2ATT_2 + B_3TKN_3 + B_4CORR_4 + B_5CONP_5 + B_6PEFI_6 + e$$

The research model utilised in this study includes six independent variables and one dependent variable. The independent variables represent the factors or variables hypothesiseed to impact the dependent variable. These variables were selected based on their theoretical relevance and potential influence on the outcome of interest. By examining the associations flanked by the independent and dependent variables, this study aims to uncover any significant associations or effects. Including multiple independent variables allows for a comprehensive analysis of the various factors that may contribute to the outcome. The dependent variable, on the other hand, is the variable predicted or explained by the independent variables. By examining the relationship between independent and dependent variables, this study seeks to gain insights into the factors influencing the outcome of interest.

Summary of the literature (Gap)

Unlike direct taxes, indirect taxes are more challenging to cheat on because they are part of the cost of products and services (Carl, S. Shop). Again, Ethiopian turnover tax Proclamation No 308/2006 argues that turnover tax is necessary primarily for two reasons: firstly, it bridges and fills the gap between VATs registered payers and non-VAT registered payers so that it must be levied in the country; secondly, others argue that this tax is not necessary because it distorts the small and medium-sized businesses and has a cascading effect. In addition, (Carl, S. Shop). argues that there is no distinction between the general sales and turnover taxes. Thus, he said, "General sales taxes include the manufacturer's sales tax, entire sales tax, retail sales tax, and turnover tax. Debeb's (2016)finding shows a significant link between the number of taxpayer registrations and the collection of turnover tax. Therefore, the current researcher conducted a study to fill these gaps.

Method and methodology

Creswell, 2010). exploratory design is available when a problem is not well defined, little is known, and when there is a lack of previous studies in the area, the method is the best fit. Based on this, the investigator selects the research design to achieve the stated objective. Essentially, there are two sources of data, primary and secondary Sekaran, U., & Bougie, R. (2016). data from the selected representatives are collected quantitatively (numerically) and qualitatively (from open-ended interviews and other published and unpublished documents); a mixed research approach is applied. The total population of the study from the taxpayer's side is 797 category - B - registered taxpayers; out of them, 16 are female and 250 male respondents are selected using Yemane's formula, and since the population is homogeneous, a simple random probability sampling method is employed. Again, 36 office employees from 18 Woreda revenue offices, two from each office, and 19 managers for interviews were booked using the non-probability purposive sampling method. A total of 321 representatives participated in the study. The data were collected from two sources. Interviews and questionnaires were employed as primary and secondary sources, from published and unpublished sources. Bluman (2014) analysed the collected data using descriptive statistic tools (tables and charts, figures, mean, median, mode, and standard deviation) and the inferential statistics method using ANOVA, correlation, regression, and r^2 using the SPSS software. Models are depicted; the study's liner equation is Turnover Tax collection as a dependent variable and the (number of taxpayers, taxpayer attittude, knowledge, corruption, convenience of payment, and penalty and fines as the model-independent variable: turnover tax performance $Y = B_o + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6$ The model represents the impact or effect of each predictor variable on the dependent variable Y,

and it determines the magnitude and direction of the relationship between each predictor variable and the dependent variable. The taxpayers of South Gonder Zone, managers, and employees of the zone customs and revenue office of participants in the study.

$$Y = B_o + B_1 NOTP_1 + B_2 ATT_2 + B_3 TKN_3 + B_4 CORR_4 + B_5 CONP_5 + B_6 PEFI_6 + e$$

Representative samples were taken for the study

Table 2. Summary of samples researcher's computation

Representative samples were taken for the study									
	Zone			Woreda			Turnover Tax al		
	M	F	T	M	F	T	M	F	T
Managers	1	0	1	17	1	18	18	1	19
Employees	0	0	0	19	17	36	19	17	36
Taxpayer	0	0	0	250	16	266	250	16	266
Total	1	0	1	286	34	320	287	34	321

Table 2 presents the summary of the samples (321) selected for the study.

Analysis of data

Table 3 presents the respondent's responses. 321 respondents were selected. Among them majority, 287 (89.4%) were male, and the rest, 34 (10.6%) were female; from the total 321 respondents, taxpayers shared 82.8%, managers 6%, and employees 11.2%. Generally, the participation of females is low because almost all trade licenses are issued for males rather than females; actually most of the activities in the country are dominated by males.

Table 3. Respondent's gender

Gender	Taxpayers	Managers	Employee	Total	Percentage %
Male	250	18	19	287	287/321= 89.4%
Female	16	1	17	34	34/321= 10.6%
Total	266	19	36	321	100%

Figure 2. Respondent's Gender

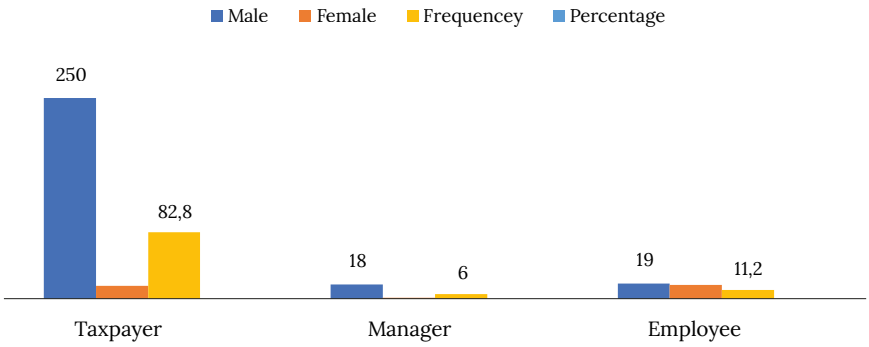


Figure 2 presents the selected respondents for the study, which are managers, category - B - taxpayers, and employees of the office; for the data collection, the researcher forwarded the questionnaire and conducted a face-to-face interview. The descriptive statistics finding of this study shows that the factors that affect Turnover Tax collection in the South Gonder zone are the fair-mindedness of the tax system, the outbreak of COVID-19, war, corruption, and collusion, the most significant number of taxpayers found in informal businesses, employee problems (knowledge, experience, motivation, technical skill, poor quality service, equity problem, technology, and poor administration), from tax payers' side: (lack of knowledge, awareness, avoidance, cheating, reducing their income and increasing their expense or manipulating the income and expense, delinquency (delay of paying on timely manner).

Table 4. Taxpayers in year

Years	No taxpayer registered	Collected Amount
2017	1021	11,264,604
2018	801	19,607,103
2019	578	18,126,253
2020	421	18,721,642
2021	797	17,199,377

Figure 3. Registered taxpayers in years

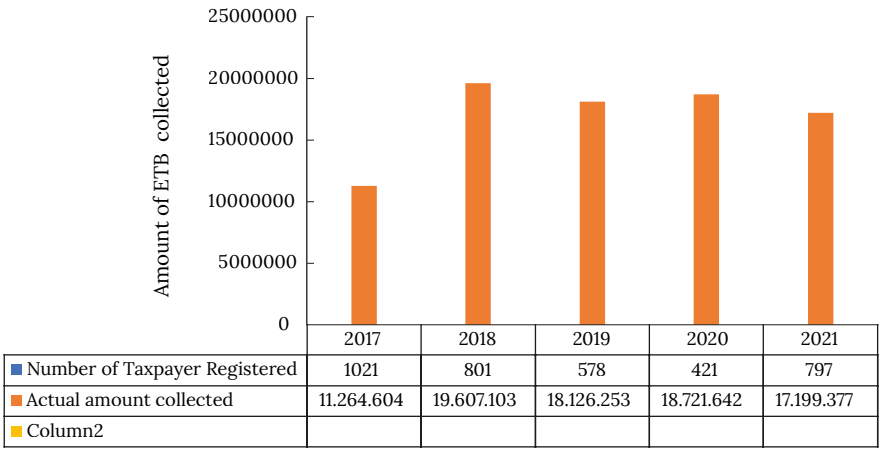


Figure 3 presents the relationship between (the number of taxpayers registered, the actual amount collected, and years in which the revenue is collected) and secondary data.

Table 4 and Figure 3 present the number of registered taxpayers per year and the collection of revenue for the successive years of 2017-2021; based on the data, it is clear that there is no relationship between turnover tax collection and taxpayer registrations.

Regression analysis

Before performing the regression analysis various tests, such as multicollinearity and other statistical examinations, is essential in this research to ensure the robustness and reliability of the findings. Multicollinearity tests help identify whether independent variables are highly correlated, which can distort the results of regression analyses and lead to incorrect conclusions about the relationships between factors affecting turnover tax collection. By detecting and addressing multicollinearity, researchers can enhance the validity of the model. Additionally, conducting tests for normality, heteroscedasticity, and autocorrelation further contribute to the integrity of the analysis. These tests help verify the assumptions required for accurate regression modelling, ensuring that the estimations of the impact of different factors on tax collection are

unbiased and statistically significant. Ultimately, these rigorous testing processes strengthen the overall credibility of the research, allowing for more informed policy recommendations to improve turnover tax collection among category - B - taxpayers.

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.8347[a]	.6968	.713	.14453	2.45

a. Predictors: (Constant), number of taxpayers, the attitude of the taxpayer, taxpayer knowledge, penalty and fines, corruption, convenience of payment

b. Dependent Variable: factors affecting turnover tax collection

If the value of the Durbin-Watson is between (1.5 and 2.5), there is no relationship between the residual and independent variables. So here, the assumption is satisfied because the value is 2.45 and based on the result the researcher fails to reject the null. Again, based on the table below, the value of Analysis Of the Variance (ANOVA) is significant (000), so the model fits well.

Table 5. Regression analysis

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.870	6	2.312	110.662	.000[b]
	Residual	5.6	259	.021		
	Turnover Total	18.470	265			

a. Dependent Variable: factors affecting turnover tax collection

b. Predictors: (Constant), number of taxpayers, the attitude of the taxpayer, taxpayer knowledge, penalty and fines, corruption, convenience of payment

So, based on the test, there is no problem with multicollinearity since the value of the Variance Inflation factor value is less than 10%

Table 6. Collinearity statistics

Model	Collinearity statistics	
	Tolerance	VIF
(constant)		
Taxpayer knowledge	.546	1.83
Corruption	.625	1.598
Penalties and fines	.741	1.349
Attitude of taxpayer	.694	1.44
Convenience of payment	.595	1.68
Number of taxpayers	.552	1.811

All the VIF column values are less than 10, and tolerance values are greater than 10%, respectively, indicating no multi collinearity influence between the explanatory variables. As a result, the researcher rejects the null hypothesis. There is a linear relationship between the dependent and independent variables. The SPSS result shows there is no problem of linearity.

Table 7. Coefficients

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	2.437	.229		10.645	.000	1.986	2.888
Taxpayer knowledge	.333	.028	.694	11.890	.000	.388	278
Convenience of payment	214	.036	.371	5.896	.000	.285	.142
Attitude of taxpayer	.515	.064	.381	8.018	.000	.389	.642
Corruption	-.092	.027	-.198	-3.376	.001	-.038	-.146
Penalty and fines	.220	.047	.241	4.679	.000	.127	.312
Number of taxpayers	-.157	.027	-.223	-5.748	.000	-.211	-.103

a. Dependent Variable: factors affecting turnover tax collection

Constant: The constant coefficient is 2.437, which represents the estimated value of the dependent variable when all independent variables are set to zero with a standard error of 0.229. The t-value of 10.645 indicates that the constant term is statistically significant ($p < 0.001$). The 95% confidence interval for the constant is between 1.986 and 2.888.

Taxpayer knowledge: The coefficient for taxpayer knowledge is 0.333 with a standard error of 0.028. The standardised coefficient (beta) is 0.694. The positive beta value suggests that an increase in taxpayer knowledge is associated with an increase in turnover tax collection. The t-value of 11.890 indicates that the coefficient is statistically significant ($p < 0.001$). The 95% confidence interval for the coefficient ranges from 0.388 to 0.278.

Convenience of payment: The coefficient for convenience of payment is 214 with a standard error of 0.036. The standardised coefficient (beta) is 0.371. The positive beta value suggests that an increase in the convenience of payment is associated with an increase in turnover tax collection. The t-value of 5.896 indicates that the coefficient is statistically significant ($p < 0.001$). The 95% confidence interval for the coefficient ranges from 0.285 to 0.142.

The attitude of the taxpayer: The coefficient for the attitude of the taxpayer is 0.515 with a standard error of 0.064. The standardised coefficient (beta) is 0.381. The positive beta value suggests that an increase in the attitude of taxpayers is associated with an increase in turnover tax collection. The t-value of 8.018 indicates that the coefficient is statistically significant ($p < 0.001$). The 95% confidence interval for the coefficient ranges from 0.389 to 0.642.

Corruption: The coefficient for corruption is -0.092 with a standard error of 0.027. The standardised coefficient (beta) is -0.198. The negative beta value suggests that an increase in corruption is associated with a decrease in turnover tax collection. The t-value of 3.376 indicates that the coefficient is statistically significant ($p = 0.001$). The 95% confidence interval for the coefficient ranges from -0.038 to -0.146.

Penalties and fines: The coefficient for penalties and fines is 0.220 with a standard error of 0.047. The standardised coefficient (beta) is 0.241.

The positive beta value suggests that an increase in penalties and fines is associated with an increase in turnover tax collection. The t-value of 4.679 indicates that the coefficient is statistically significant ($p < 0.001$). The 95% confidence interval for the coefficient ranges from 0.127 to 0.312.

Number of taxpayers: The coefficient for the number of taxpayers is -0.157 with a standard error of 0.027. The standardised coefficient (beta) is -0.223. The negative beta value suggests that an increase in the number of taxpayers is associated with a decrease in turnover tax collection. The t-value of -5.748 indicates that the coefficient is statistically significant ($p < 0.001$). The 95% confidence interval for the coefficient ranges from -0.211 to -0.103. These results suggest that taxpayer knowledge, the attitude of taxpayers, convenience of payment, and penalties and fines have positive effects on turnover tax collection, while, corruption and the number of taxpayers have negative effects on turnover tax collection. The regression function can be written as follows:

$$Y = B_o + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + \varepsilon$$

$$Y = B_o + B_1NOTP_1 + B_2ATP_2 + B_3TPK_3 + B_4COR_4 + B_5COP_5 + B_6PAF_6 + \varepsilon$$

$$Y = 2.437 + 0.515 + 0.333 - 0.92 + 0.214 + 0.22 - 0.157 + \varepsilon$$

Where:

- x1- Number of Taxpayers,
- x2 Attitude of Taxpayer,
- x3: Taxpayers Knowledge,
- x4 - Corruption,
- x5 - Convenience of Payment, and
- x6 - Penalties and Fines,
- ε-Error,
- $\beta_{0\text{-Constant term.}}$

ANOVA[a]

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	12.870	6	2.312	110.662	.000[b]
	Residual	5.6	259	.021		
	Turnover Total	18.470	265			

a. Dependent Variable: factors affecting turnover tax collection

b. Predictors: (Constant), number of taxpayers, the attitude of the taxpayer, taxpayer knowledge, penalties and fines, corruption, convenience of payment

The analysis shows that the factors create statistically significant values (high t-values, P 0.05) at a 95% confidence level, and variables have a reported favorable impact. (Attitude of taxpayers, convenience of payment, knowledge, and penalties and fines) A negative value is noted for the number of taxpayer registrations and corruption variables; a positive value of the variables means both variables are increasing or decreasing at the same time; by improving the attitude of taxpayers, the government can collect the higher turnover tax , again by improving the taxpayer's knowledge or awareness regarding the existing Turnover Tax rules, regulations, proclamations and other circulars by using different media tools as radio, television, newspapers, brochures and other means of communication government can improve the collection rate of turnover tax. at the same time, penalties. Fines have an encouraging relationship with the Turnover Tax collection. The positive reports of this mean that by amending and increasing the fines and penalties amount both in Birr and years of jail or arresting time, then, for fear of this taxpayer's meet their obligation and government can collect the turnover tax. The negative report of the variable corruption is that, as we know, the negative relationship between variables means that the increase in one variable led to a decrease in another variable and vice versa.

In this case, due to the increment of the corruption practice, the government did not collect the planned amount of revenue and even went below the minimum expected amounts. In reverse, the government can collect the planned revenue due to the firm establishment of good governance.

The ANOVA table presents the F-value of 110.662 with a corresponding p-value of .000, meaning that the likelihood of observing such a large F-value under the null hypothesis is extremely low (less than .05). Therefore, we end by disproving the predetermined proposition that the variances of the two populations are not alike. The phrase "at the .05 level of significance "means that the researcher has set the level of significance (also known as alpha) at .05, a standard threshold in hypothesis testing if the p-value is less than 0.05. So, in summary, the statement "At the .05 level of significance, the F value of 110.662 and its corresponding p-value .000 indicates the relationship is significant" means that there is a significant change between the variances of the two populations, with a very low probability of observing such a large F-value by chance. Accordingly, the researcher concludes that there is a substantial correlation between the Turnover Tax collection and the six predictor variables (taxpayer knowledge, attitude of taxpayers, convenience of payment, penalties and fines, corruption, and number of taxpayers)—a residual plot results from plotting these values along with the x values.

$$Y = \beta_0 X + e$$

The determinant coefficient (r^2) is a metric for the proportion of a dependent variable's change that the regression line and the explanatory variable can account for. Squaring r and translating the result to a percent value makes calculating the coefficient of determination reasonably simple:

Model summery

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.8347[a]	.6968	.713	.14453	2.45

a. Predictors: (Constant), number of taxpayers, the attitude of the taxpayer, taxpayer knowledge, penalties and fines, corruption, convenience of payment

b. Dependent Variable: factors affecting turnover tax collection

Therefore, r = 0.8347 then

Adjusted $r^2 = 0.8347^2$

Adjusted $r^2 = 0.6967 = 69.67\%$

The coefficient of determination, often known as Adjusted r^2, is a statistical metric castoff to conclude the grade to which one or supplementary independent variables can describe the change in a regressed variable. The dependent variable's variance may be characterised by the independent variable(s) to a degree of 69.67%, according to an r-squared value of 0.6967. These demonstrate that the model's independent variable(s) cannot explain the remaining 30.33% variation in the defined variable. It's crucial to remember that the context of the issue and the precise factors being examined affect how the r-squared value should be interpreted.

According to this finding, variation in the independent variable accounts for 69.67% of changes in the dependent variable. By deducting the coefficient of determination from 1, one can calculate the coefficient of non-determination, which accounts for the remaining variation of 0.3033 = (1-0.6967. The typical mistake alternative statistic used in correlation and regression is the expected error of the estimate, which estimates the standard deviation of the actual "y" values concerning the predicted y values. Specifically, for a given value of x, for a provided

point estimate of y of the mean of the y values, a prediction interval can be created using the estimate's standard error. The standard error of the forecast, as shown in the Model Summary table, is a measure of the average distance between the observed values of the dependent variable and the predicted values based on the regression model. In this specific case, the standard error of the estimate is 0.14453. A lower value of the standard error of the estimate indicates that the predicted values of the dependent variable are closer to the actual observed values, suggesting that the regression model has a better fit to the data.

Conversely, a higher value indicates that the predicted values are more dispersed and less accurate. It is important to note that the standard error of the estimate is influenced by the variability in the dependent variable and the quality of the regression model. It can also be used to calculate confidence intervals around the predicted values and assess the precision of the regression model's predictions. In the context of the given information, the standard error of the estimate (0.14453) suggests that, on average, the predicted values of the factors affecting turnover tax collection may deviate from the actual observed values by approximately 0.14453 units. Where *a is* the *y_* intercept and *b* is the slope of the regression line. Multiple regressions use one dependent variable and many independent variables, and the equations are

$$Y = a + b_1x_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 \bullet \bullet \bullet \_ bkxk$$

$$Y = B_o + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + \varepsilon$$

$$Y = B_o + B_1NOTP_1 + B_2ATP_2 + B_3TPK_3 + B_4COR_4 + B_5COP_5 + B_6PAF_6 + \varepsilon$$

Where X_1, X_2, X_3... Hk is the independent variable.

TURNOVER TAX collection = f(X1+X2+X3+x4+X5+X6)

Multiple relationships are also possible. In other words, there could be two or more independent variables and one dependent variable. A correlation coefficient and a regression equation can be found for many relationships, just as for straightforward relationships. Multiple regression analysis is used when a researcher thinks several independent variables impact the dependent variable's variance. Thus, this methodology can increase the precision of forecasts for the dependent variable over one independent variable.

Conclusion

The primary source of revenue for both developed and developing nations depends mainly on taxes. Therefore, for collecting the optimum amount of tax administration, well-updated policy, aggressive work on taxpayer registrations, and the creation of awareness are crucial. Unfortunately, the collection of optimum revenue is affected by various obstacles. This research aimed to identify the "Factors Affecting Turnover Tax Collection of Category - B – Taxpayers" In Ethiopia, South Gonder Zone. This study identifies COVID-19, war, especially in the northern part of Ethiopia, poor morale of employees, and other factors such as internal from the employees' sides such as inadequate knowledge, poor assessment, awareness, experience, corruption, level of education, technical issues, and from the manager's side, such as poor administration, lack of office supplies, poor ICT and the like and external from taxpayers' sides such as knowledge, awareness, informal business, level of education, age, marital status, fairness and others) as the main problems that makefor the poor collection. The regression results revealed that the independent variables (taxpayer knowledge, attitude, convenience of payment, and fines and penalties) have a statistically positive correlation, and corruption and the number of taxpayer registrations negatively correlated with turnover tax collection.

Findings of the study

The findings of the investigation are that corruption and the registrations of taxpayers establish that there is a substantial negative correspondence with the predicted variable, which is the turnover tax collection and the attitude of the taxpayer, payment convenience, penalties and fines, and

taxpayers' knowledge were positively associated with the explained variable. Other factors affect the collection rate, such as the fairness of the tax scheme, the outbreak of COVID-19, war, corruption, and collusion, and the more significant number of taxpayers found in informal businesses also affect collection.

Practical implication

These findings have important implications for policymakers and tax authorities in Ethiopia, as they highlight the need to re-evaluate strategies to improve the collection of turnover tax. It is crucial to consider additional factors that might impact tax compliance and revenue generation, such as taxpayer behavior, economic conditions, enforcement mechanisms, and the effectiveness of tax administration systems.

For further studies

Furthermore, this research underscores the importance of conducting further studies to identify the underlying factors that affect the collection of turnover taxes in the South Gonder Zone. By gaining a deeper understanding of these factors, future researchers will conduct a study on the following suggested areas to study on macro and regional levels by including samples, policy frameworks, and other external factors so that policymakers and tax authorities can develop targeted interventions and strategies to enhance tax compliance and increase revenue collection.

Acknowledgement

We want to express our sincere gratitude to all the participants of this study, including the taxpayers, employees, and managers of the South Gonder Zone revenue office, who generously contributed their time, facilitated the data collection process, provided us with the necessary support, information, and guidance throughout the study, shared their experiences and provided us with the essential and valuable insights to identify factors affecting the collection of TURNOVER TAX . Their willingness to participate in this research project is instrumental in obtaining accurate and meaningful data.

Limitation of the study

One limitation of this study is the relatively small sample size and limited scope of the research, The study relied on self-reported data obtained through questionnaires. The study focused on Category - B - taxpayers in Ethiopia, which may not represent the entire population of taxpayers or capture the diversity of factors influencing TOT collection. The findings may not be generalisable to other categories of taxpayers or different geographical regions within Ethiopia. A more extensive and more diverse sample could provide a more comprehensive understanding of the factors affecting TOT collection. Again, the model developed by the researcher did not answer the 31% of other variables that affect the tax collection. Also, the study was conducted within the specific context of Ethiopia, particularly the South Gonder Zone and has its unique institutional, economic, and cultural characteristics which limit the study.

Policy recommendation

For the effective and efficient collection of turnover tax , policymakers must work on zero corruption levels to simplify and streamline the taxpayer registration process for a Turnover Tax to encourage more businesses to register. It could involve reducing paperwork, providing online registration options, and minimising bureaucratic hurdles. A simplified registration process would make it easier for companies to comply with tax obligations. Enhancing taxpayer education and awareness, providing incentives for timely registration, strengthening enforcement measures, collaborating with relevant stakeholders, and monitoring and evaluating the effectiveness of registration efforts are essential.

Declaration

All the available documents are in the researcher's hand.

Competing interest

There is no competing interest in the study.

Funding

This study was conducted with the researcher's funds, so there is no funder.

Author's contribution

All stages and procedures taken, including collection, entering data into SPSS, analysis of the data, and interpretation of the data, were performed by the investigator.

References

Abate, A. A. (2019). Factors affecting presumptive tax collection in Ethiopia: evidence from category "C" taxpayers in Bahir Dar City. *Journal of Tax Administration*, 5(2), 74-96.

Asrinanda, Y. D. (2018). The effect of tax knowledge, self-assessment system, and tax awareness on taxpayer compliance. *International Journal of Academic Research in Business and Social Sciences*, 8(10), 539-550.

Ataro, P. O., Muturi, W., & Wandera, R. W. (2016). Factors affecting revenue collection efficiency in county governments in Kenya: A case study of Trans-Nzoia county. *International Journal of Recent Research in Commerce Economics and Management* (IJRRCEM), 3(2), 85-90.

Batrancea, L., Nichita, A., Olsen, J., Kogler, C., Kirchler, E., Hoelzl, E. ... & Zukauskas, S. (2019). Trust and power as determinants of tax compliance across 44 nations. *Journal of Economic Psychology*, 74, 102191.

Bautigam, D., Fjeldstad, O.H. and Moore, M. (2005) Taxation and State-Building in Developing Countries: Capacity and Consent. Cambridge University Press, Cambridge, 1-33.

Birhan, T. A. (2018) Determinants of Turnover Tax Collection Effectiveness: The Case of West Gojiam.

Bluman, A. (2014). *Elementary Statistics: A step-by-step approach 9e*. McGraw Hill.

Clark, V. L. P., & Creswell, J. W. (2008). *The mixed methods reader*. Sage.

Flatters, F., & MacLeod, W. B. (1995). Administrative corruption and taxation. *International Tax and Public Finance*, *2*(3), 397-417.

Kibret, D. D. (2021). Factors Affecting Turnover Tax Collection Performance: A Case of West Shoa Zone Selected Districts. *Accounting and Finance Research*, 10(1), 58.

Mansour, A. A. Z., Ahmi, A., Alkhuzaie, A. S. H., Alhmood, M. A., Popoola, O. M. J., & Altarawneh, M. (2023). State of the art in tax evasion research: A bibliometric review. *Review of Education*, 11(3), e3422.

Ma'sumah, S., & Hamidi, A. L. (2023). The Influence of Tax Rates, Tax Payment Mechanisms, Tax Knowledge, Service Quality, And Taxpayer Awareness of Taxpayer Compliance with Religiosity as Intervening Variables. *International Journal of Multidisciplinary Research and Analysis*, *5*(4), 858-868.

Moore, M. (2023). Tax obsessions: Taxpayer registration and the "informal sector" in sub-Saharan Africa. *Development Policy Review*, *41*(1), e12649.

Ngugi, J. N., & Kagiri, A. W. (2016). Factors influencing optimal revenue collection in county governments in Kenya: A case of Kiambu County Government. *International Journal of Innovations, Business and Management* (IJIBM) Vol, 10.

Palil, M. R., & Mustapha, A. F. (2011). Factors affecting tax compliance behaviour in self assessment system. *African journal of business management*, 5(33), 12864.

Reddy, D. (2021). *Taxpayer behavioural factors influencing entrenched tax gaps* (Doctoral dissertation).

Sapiei, N. S., & Kasipillai, J. (2013). Impacts of the self-assessment system for corporate taxpayers. *American Journal of Economics*, 3(2), 75-81.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. john wiley & sons.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. john wiley & sons.

Shoup, C. S. (1959). The Theory of Public Finance. *The American Economic Review*, 49(5), 1018-1029.

Shoup, C. S. (1960). I. Ricardo and Taxation. In *Ricardo on Taxation* (pp. 7-24). Columbia University Press.

Torgler, B. (2005). Tax morale in Latin America. Public Choice, 122(1-2), 133-157.

Torgler, B., Demir, I. C., Macintyre, A., & Schaffner, M. (2008). Causes and consequences of tax morale: An empirical investigation. *Economic Analysis and Policy*, 38(2), 313-339.

Winoto, H. T. R., & Pudjolaksono, E. (2022). The Effect of Registration, E-Filing, And E-Billing Applications On Tax Payer Level Satisfaction of Taxpayer Compliance at KPP Pratama Jombang 2019-2020. *UTSAHA (Journal of Entrepreneurship)*, 108-120.

Woldemariam Birru, M. (2022). Factors affecting the adoption and usage of electronic tax system in Ethiopia in the case of Addis Ababa city large taxpayers. *African Journal of Science, Technology, Innovation and Development*, 14(7), 1896-1907.