FACTORS AFFECTING PRESUMPTIVE TAX COLLECTION IN ETHIOPIA: EVIDENCE FROM CATEGORY "C" TAXPAYERS IN BAHIR DAR CITY

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Abstract

The Ethiopian government has set itself long-term goals of eradicating poverty, ensuring sustainable economic growth, and becoming a middle-income country by 2025. These goals are impossible to achieve without tackling tax challenges, improving the tax administration, and generating sufficient revenue. This paper attempts to reveal major factors that influence presumptive tax collection in Ethiopia. To achieve this objective, the researcher used a cross-sectional survey design. As a result, the quantitative research approach was employed. A total of 391 self-administered, closed-ended questionnaires were distributed to category "C" taxpayers found in Bahir Dar City Administration. Given the dichotomous nature of the dependent variable (presumptive tax collection), the study employed a binary logistic regression model. As part of the process, the Statistical Package for Social Science (SPSS) Version 20 was used. The descriptive statistics reveal that the following issues were major challenges for presumptive tax collection in Ethiopia: lack of equity and fairness in presumptive tax assessment; complexity of tax rules; taxpayers' poor perceptions of tax evasion; the existence of unethical and corrupt tax officials; taxpayers' negative attitudes toward the government; and poor social norms between taxpayers and the Ethiopian Revenues and Customs Authority (ERCA). The binary logistic regression results show the following to be significantly associated with presumptive income tax collection in Ethiopia: the equity and fairness of the tax system; corrupt behavior of tax officials; the organizational strength of the tax authority; the participatory tax system; taxpayers' knowledge of tax rules and regulations; and the attitudes of taxpayers toward the government. However, social norms, mode of tax payment, and perception of tax evasion had positive but insignificant relationships with presumptive tax collection. The findings of this paper will help policymakers and other stakeholders to identify determinants of presumptive tax collection, and thereby to design and implement appropriate presumptive tax systems for small and medium-sized businesses in Ethiopia. In addition, this paper contributes to the tax literature on determinants of presumptive tax collection issues in developing countries.

Keywords: Binary Logistic Regression, Category "C" Taxpayers, Ethiopia, Presumptive Tax, Tax collection.

1. INTRODUCTION

Presumptive tax is a system for ascertaining the tax liabilities of businesses using an indirect method of assessment that differs from the regular tax assessment mechanism based on the taxpayer's account. In plain English, it computes the income tax liabilities of small businesses based on easily verifiable external factors, rather than relying on those businesses to self-report their income. Presumptive tax is applied in economies where it is difficult to tax a specific group of taxpayers in the regular tax system and tax administrative resources are limited. Thuronyi (2003) asserted that the reasons that these taxpayers are hard to tax are: there are a

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large number of small businesses operating; their business income is low; they are not obliged to keep proper accounting records according to tax rules and proclamations; they sell largely for cash, so that application of tax withholding to collect their income is not practicable; and tax systems can be complicated and administratively burdensome. These scenarios have led many developing countries, including Ethiopia, to employ presumptive income tax systems with a view to increasing the tax base, and mitigating tax evasion and avoidance.

Taxation is considered to be the most reliable way of financing government expenditure in both developed and emerging economies. In order to avoid excessive foreign debt financing and strengthen domestic revenue mobilization, developing countries were expected to broaden their tax bases and improve their tax administration systems. However, many of them, including Ethiopia, experience a chronic gap between actual and desirable levels of tax revenue (International Monetary Fund [IMF], 2015). In terms of tax-to-GDP ratio, Ethiopia's tax revenue performance is poor, at approximately 13%; that is even lower than the average for low-income countries (Yesegat & Fjeldstad, 2016). Possible reasons for low levels of tax revenue collection are inefficiency of the tax administration in implementing the tax rules and regulations, and non-compliant behavior of the taxpayers.

Currently, Ethiopia employs the standard assessment method in respect of category "C" taxpayers, with the aim of collecting an adequate amount of tax revenue. According to the current Federal Income Tax Proclamation No. 979/2016, taxpayers are divided into three categories, namely "A", "B", and "C", based on their sales volumes and the ways in which their businesses are set up. Category "A" includes any company incorporated under the tax law of Ethiopia or in a foreign country and other entities with an annual turnover of 1,000,000 Ethiopian birr or more. Category "B" includes enterprises with an annual turnover of more than 500,000 birr but less than 1,000,000 birr. Category "C" includes taxpayers whose annual turnover is estimated to be less than 500,000 birr by the tax authority. Category "A" and "B" taxpayers must submit profit and loss statements to the revenue authority at the end of each year.

Like most developing countries, Ethiopia has a very large number of taxpayers in category "C" (small and medium-sized taxpayers). When compared to the other taxpayer categories, Category "C" is an important source of revenue for the government (Megnaka & Devi, 2014). However, this category is the most problematic one in terms of levying and collecting taxes in Ethiopia. Research conducted by Gezahegn, Desta and Adane (2014), and Mengesha and Ashebir (2013) indicated that frequent frictions and controversies are observed between taxpayers and tax administrators, which causes widespread complaints about unfairness and overstated tax by the majority of category "C" taxpayers. Recently, presumptive income taxpayers across Ethiopia contended that the tax authority had violated the existing standard assessment procedures with its practical application of them, and that the revenue offices did not conduct sufficient and appropriate tax research into category "C" taxpayers in order to levy taxes. As a result, many small and medium-sized businesses closed in protest against the tax authority's assessment and collection procedures (Getachew, 2019).

As found in various tax studies, some of the factors associated with tax assessment and collection are: the perception of equity and fairness of taxation; taxpayers' perceptions of tax evasion; the corrupt behavior of tax officials; taxpayers' attitudes toward the government; taxpayers' knowledge of tax rules and proclamations; the organizational strength of the tax authority; participatory tax systems; the mode of tax collection; and social norms etc. (Megnaka & Devi, 2014; Fjeldstad, 2003; Kebede & Tegegn, 2016; Simiyu, 2010; Umar & Tusubira,

2017; Oladipupo & Obazee, 2016; Ohaka & Zukbee, 2015; Fjeldstad, Chambas & Brun, 2014; Engida & Baisa, 2014).

However, empirical research studies on factors that influence presumptive income tax collection are scant globally and, to the best of the researcher's knowledge, there has not been any empirical evidence in Ethiopia on the issue. Therefore, examining determinant factors of presumptive income tax collection is of paramount importance in order to bridge the literature gap that exists in developing countries, and to modernize the tax administration and collection process of presumptive taxpayers in Ethiopia in particular and in developing countries in general.

1.2 Objective of the study

1.2.1 General objective

The general objective of this study is to determine the major factors affecting the presumptive income tax collection system in Ethiopia.

1.2.2 Specific objectives

- To determine the major determinants of presumptive income tax collection in Ethiopia.
- To identify major challenges encountered by taxpayers within the presumptive income tax assessment and collection processes.
- To assess taxpayers' perceptions about the current presumptive income tax assessment and collection systems and procedures.
- To suggest possible courses of action that can help policymakers and implementers to improve the presumptive income tax system.

1.2.3 Basic research questions

- What are the determinant factors that influence presumptive income tax collection in Ethiopia?
- What are the major problems encountered by taxpayers during the presumptive tax assessment and payment process in Ethiopia?
- Is the current presumptive income tax assessment and collection system in Ethiopia fair and efficient?

2. THEORETICAL AND EMPIRICAL LITERATURE REVIEW

2.1 Introduction

It has long been acknowledged in previous literature that small and medium-sized businesses have played, and continue to play, significant roles in poverty reduction, economic development, and the industrialization of developing countries. Taxing the hard-to-tax (small and medium-sized business) group has been, and is, very difficult for developing countries. Although taxes which are collected from presumptive taxpayers are significant sources of revenue for the government, the sector's performance is still poor when compared to its potential to generate higher taxes; this is partly due to taxpayers' non-compliant behavior and

the inefficiency of the tax administration in Ethiopia (The Federal Democratic Republic of Ethiopia, National Planning Commission, 2016).

Presumptive income tax is one of the oldest types of tax and dates back to the 18th century. The term refers to a system in which tax liability is computed using indirect indicators as it is difficult to implement regular tax methods (Pashev, 2005). Despite the existence of differences of opinion among scholars regarding the initiation of, and justification for, the introduction of presumptive taxes across countries, Thuronyi (2003) elaborated that the main rationales for its implementation are: improving the efficiency of tax collection through the reduction of taxpayers' administrative and compliance costs; reducing the tax authority's administrative costs in respect of compliance and enforcement management; and bridging the way from informal activities to formal activities, and from assessment based on indirect indicators to self-assessment based on actual income. However, presumptive tax regimes employed in developing countries, including Ethiopia, have always been at the center of arguments and controversies between taxpayers and tax administrators. Theoretically, there are different methods of presumptive income taxation. One of the methods of presumptive taxation currently applied in Ethiopia is the standard assessment method. Thuronyi (2003) and Pashev (2015) elaborated that the standard assessment method applies and assigns a fixed amount of tax liability on presumptive taxpayers on the basis of business activity or occupation. According to this method, tax liability is determined by calculating the average yearly sales coupled with consideration of business type, location, number of employees, total assets, and so on.

2.2 Empirical studies

Nabaweesi (2009) has conducted a study that examines the relationship between social norms, taxpayers' morale, and tax compliance among small business taxpayers in Uganda. He found that social norms have significantly affected the tax compliance behavior of taxpayers. In a similar fashion, of the findings of Mtasiwa (2013) and Masarirambi (2013) revealed that tax evasion, social norms, tax avoidance, the complex nature of tax rules and regulation, and corrupt behavior of tax officials were the determinant factors that accounted for inefficient collection of tax revenues from taxpayers in Tanzania and Zimbabwe respectively. On the other hand, the corrupt behavior of tax officials becomes a headache for many developing countries, including Ethiopia. By its nature, presumptive income tax is introduced to minimize the cost of tax administration and to reduce the frequency of contact between tax officials and taxpayers. However, presumptive taxation in Ethiopia is riddled with corruption and collusion among tax administrators. Many other studies have pointed out that corruption is a major challenge and is one of the most negative factors in the tax administration system, basically hampering countries from collecting sufficient tax revenues and causing them to fail to fulfil their tax-generating potential (Tjen & Evans, 2017; Vadde & Gundarapu, 2012; Imam & Jacobs, 2007). By the same token, research conducted by Kasimbazi (2004) found that incorrect and inappropriate assessment methods employed by tax authorities, lack of training and experience on the part of both taxpayers and tax assessors, corruption and fraud by tax collectors in the registration, assessment, and payment of tax liabilities, tax evasion, and poverty were the significant factors that negatively affect tax collection efficiency.

Another important variable that affects tax collection from micro, small and medium-sized businesses is whether or not the tax system is participatory. Allowing the participation of taxpayers in presumptive tax systems and making them stakeholders in the process from initiation through to implementation could improve taxpayers' tax compliance behavior and thereby increase the amount of tax collected. In this regard, Simiyu's (2013) study revealed

that, in Kenya, failure to take taxpayers' opinions into account when drafting and implementing the tax system resulted in tax non-compliance and hence negatively affected the tax collection process. Adimasu & Daare's (2017) study of taxpayers' awareness of tax rules and attitudes toward the government and the impact of participatory tax on tax compliance on southern African nations and Ethiopian nationals confirmed the above findings, showing that engaging taxpayers in the tax assessment and collection process helps tax authorities to increase tax compliance. However, in most developing countries, the tax authority initiates, drafts, and implements tax regimes alone, without enough discussion and consultation with the stakeholders (taxpayers) which, in turn, results in tax non-compliance.

Taxpayers' knowledge about the existing tax rules and regulations is of paramount importance when it comes to efficient tax collection. As a result, many countries in the world place great emphasis on, and invest large amounts of money into, the education of taxpayers, with the intention of collecting more taxes. Tax literature supports the idea that there is a positive relationship between taxpayers' knowledge of tax rules and regulations and tax collection efficiency. This assertion is evidenced by various empirical studies (Oladipupo & Obazee, 2016; Legesse & Shaik, 2017; Kasimbazi, 2004; Vadde & Gundarapu, 2012; Yesegat & Fjeldstad, 2016) which show that when taxpayers' knowledge and understanding of tax rules increases, the tax revenue collected from those taxpayers also increases, and vice versa. On the other hand, a study by Babu and Bayu Charie (2015) on the effect of taxpayers' attitudes toward the government on tax morale in Ethiopia found that when taxpayers have positive attitudes toward the government, both their tax morale and tax compliance levels are enhanced. Similarly, Nghaamwa's (2011) empirical study's findings revealed that the majority of respondents felt that the tax money they contributed to the government was not being utilized to improve public services and infrastructure as they had expected. As a result, they had developed a view that they would refuse to pay their taxes unless the government improved the infrastructural facilities of the country. When we come to the case of Ethiopia, the tax money collected from taxpayers has been invested primarily in political activities rather than building basic infrastructural facilities, with the intention of increasing the life span of the existing ruling regime. Generally, it can be inferred from the above findings that positive attitude of taxpayers toward the government is an indispensable ingredient for efficient tax collection.

The issue of equity and fairness in a tax system is always controversial, complex, and argumentative. According to the Association of Certified Professional Accountants (2001), the principles of equity and fairness in the tax system can be summarized as the idea that similarly situated taxpayers should be taxed similarly and differently situated taxpayers should be taxed differently. However, the presumptive tax system in Ethiopia violates the principles of fairness and equity. A study conducted by Bekele and Devi (2014), which evaluated whether the presumptive income tax system fulfills the principles of good taxation, demonstrated that the presumptive tax system in Ethiopia violates and lacks the principles of fairness and equity. This is not an unexpected result given the presence of corruption in Ethiopian tax system. Taxpayers' attitudes toward the fairness of the tax system play a significant role in efficient tax collection. When taxpayers believe that the tax system is fair, they will comply and meet their tax obligations. In contrast, if they believe it is unfair, it is difficult to make them pay their taxes. To this end, Adimasu and Daare (2017) and Kebede and Tegegn (2016) revealed that there is a relationship between taxpayers' attitudes toward the fairness and equity of the tax system and tax compliance in Ethiopia.

On the other hand, tax authorities' strength in terms of law enforcement abilities, use of the latest accounting information system technologies, and competent staff determines the tax

collection efficiency of the country. However, Ethiopia lags behind its fellow African countries in its use of accounting information systems (Abate, 2018). The Ethiopian Revenues and Customs Authority (ERCA) is not exceptional in respect of this country-level problem. According to Kebede, and Tegegn (2016) and Bekele and Devi (2014), the organizational strength of the tax authority was found to be one of the determinants of tax collection in Ethiopia.

The mode of tax payment in many developing countries is time-consuming and tedious, since both tax assessment and tax payment depend on face-to-face interaction and automated means. Simiyu (2013) found that the mode of tax payment in Kenya made things difficult for taxpayers. Enabling taxpayers to make tax payments through banks and use other types of payment technology facilitates and increases tax collection.

2.3 Summary and gaps in the existing literature

A presumptive tax system is a fiscal tool used to collect taxes from the hard-to-tax and small business group, and involves simplifying the tax system as well as minimizing the cost of tax administration. The determinants of tax collection are identified as: corruption; the organizational strength of tax authorities; the mode of tax collection; social norms; tax evasion; taxpayers' attitudes toward the government; taxpayers' knowledge about tax rules; a participatory tax system; and taxpayers' perceptions about fairness and equity. However, research in the area of factors affecting presumptive income tax collection are scanty globally. Therefore, this paper is intended to fill the research vacuums observed regarding the determinants of presumptive income tax collection.

2.4 Author's own constructed conceptual framework of the study (Figure 1)
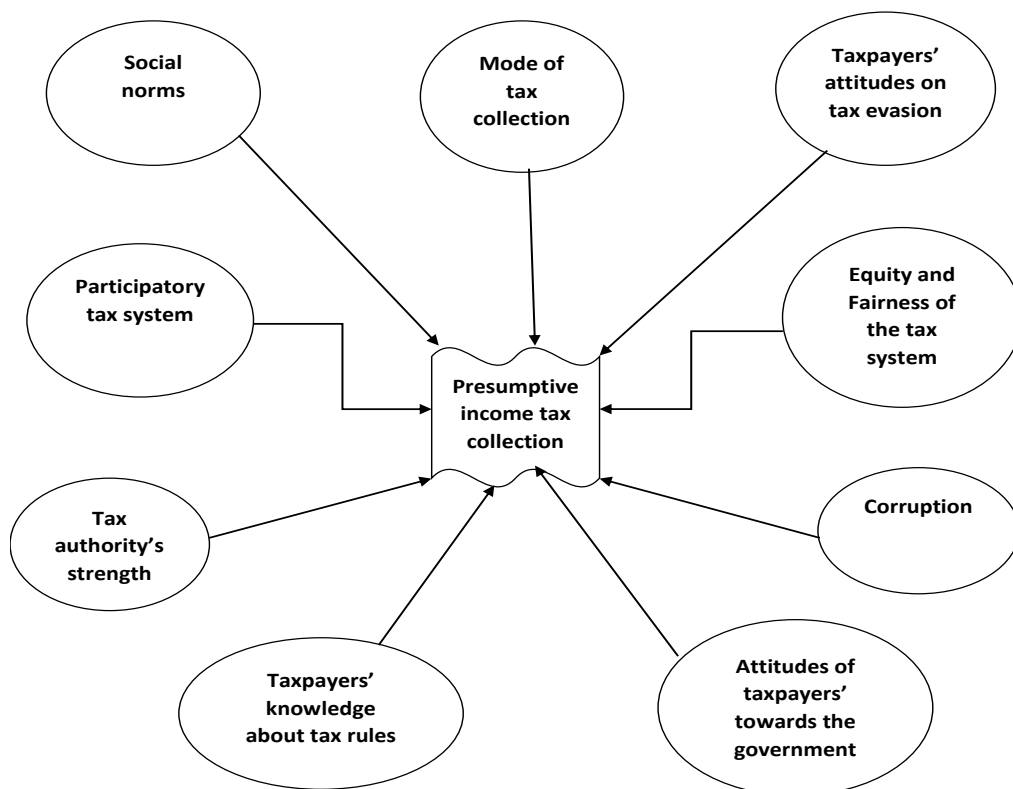
3. RESEARCH DESIGN AND METHODOLOGY

For this study, a cross-sectional survey design was found to be appropriate in order to gather information about the determinants of presumptive income tax collection in respect of category "C" taxpayers in Ethiopia. According to Creswell (2014), this survey method allows for the collection of quantitative data from a large population, which can be used to suggest possible reasons for specific relationships between variables of interest. This study also uses quantitative methods. Saunders, Lewis, and Thornhill (2009) asserted that the quantitative research approach is used for testing objective theories by examining the relationships between variables. The objectives of quantitative research are to answer the proposed pre-determined research questions/hypotheses and to produce general results about a given population in a given academic research area.

3.1 Data source and method of data collection

The primary data for this study was collected by surveying category "C" taxpayers in Bahir Dar City Administration. In this regard, a self-administered structured questionnaire was used. The questionnaire was divided into two sections: the first section contained questions pertaining to the respondents' businesses and demographic information, while the second section comprised closed-ended questions regarding the taxpayers' perceptions of factors influencing presumptive income tax collection in respect of category "C" taxpayers. With regard to this study's independent variables, respondents were asked to indicate their level of agreement on five-point Likert scale, as follows: 1 = Strongly disagree; 2 = Disagree;, 3 = Neutral; 4 = Agree; 5 = Strongly agree. The data collection instrument was prepared in the Amharic language first and then translated into English.

3.2 Target population

The target population considered in this study was category "C" taxpayers in Bahir Dar City Administration. According to the current income tax proclamation number 979/2016, category "C" taxpayers are small businesses with an annual turnover of less than 500,000 Birr (equivalent to $19,231).

3.3 Sample size and sampling design

According to the Bahir Dar City Administration Revenue Authority's annual report (2017), 16,567 category "C" taxpayers were actively operating in the area as of June 2017. To determine the sample size in this study, the Yamane (1967) formula was used. The formula to calculate the sample size is:

$$n = \frac{N}{1+N(e)^2}$$ Where: n = Sample size
$$N = \text{Total population size}$$
$$e = \text{Level of precision.}$$

Hence, the sample size is equal to: $n \ = \ \dfrac{16,567}{(1+16,567(.05)^2)}$

$$= 390.57 \approx 391$$

Thus, for this study, 391 taxpayers were selected. The questionnaire respondents were owners/mangers of small and medium-sized businesses (category "C" taxpayers). A simple random sampling technique was used to select them.

3.4 Methods of data analysis

In this study, both descriptive and econometric analyses were used to analyze the survey data. Although there is considerable debate in literature on the issue of whether Likert scale data should be analyzed as an ordinal or interval measurement scale, the author of this research is convinced that it should be analyzed as an interval measurement scale. A similar descriptive analysis method was employed by Megnaka and Devi (2014) and Abate (2018). Moreover, a binary logistic regression model was used in order to discover whether direct relationships exist between the determinant factors proposed as independent variables and the likelihood of presumptive tax collection. The dependent variable (i.e., presumptive tax collection efficiency) is a dummy variable which is coded as 1 = Good, 0 = Poor. A similar data analysis technique was utilized by Gezahegn et al. (2014). As part of due process, the Statistical Package for Social Science (SPSS) Version 20 was used.

3.5 Model specification

Logistic regression is ideal when the nature of the dependent variable is categorical and when the independent variables are either continuous or categorical in nature. Since presumptive income tax collection is a discrete condition (i.e. the performance of tax collection can be either good or poor), the ordinary least squares (OLS) method of estimation is too biased and inefficient to be able to predict the likelihood of presumptive tax collection in Ethiopia (Gujarati, 2003). As a result, a binary logistic regression model was developed and utilized in this study.

Hence, using a binomial logistic regression, this study estimates the probability of a dichotomous response (i.e. good/poor presumptive tax collection efficiency) for various values of explanatory variables. Accordingly, the logistic regression function is given by:

$$P(Y) = \log \frac{P}{1-P} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots \beta_n X_n + \varepsilon_i \text{ and this results in:}$$

$$P(Y) = \frac{e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots \beta_n X_n + \varepsilon_i}}{1 + e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots \beta_n X_n + \varepsilon_i}}$$

Where:
P = Probability of the occurrence of success
Y = Binary response dependent variable
X_n = Explanatory/independent variables that influence the probabilities of the outcome of the dependent variable
e = Natural logarithm base
β_0 = Interception at the Y-axis
β_n = Coefficients of the explanatory variables
ε_i = Stochastic disturbance or error term

In the above logistic function, the relationship between P(Y) and X is non-linear. According to Field (2009), when the outcome (dependent) variable is categorical, the linearity assumption is violated. Hair, Black, Babin and Anderson (2010) and Field (2009) noted that one way of

solving the linearity problem in logistic regression is to transform the data using the logarithmic transformation. Therefore, for this study, the binomial logistic regression is written as follows:

$$P(Y) = \ln(\frac{P}{1-P}) = \beta 0 + \beta 1 PEF + \beta 2 PTE + \beta 3 CBTO + \beta 4 ATG + \beta 5 KTR + \beta 6 OSTA +$$

$$\beta 7 PTS + \beta 8 MTC + \beta 9 SN + \varepsilon i$$

Where:
P = Probability of tax collection efficiency
Y = Tax collection efficiency (1 if tax collection efficiency is good, 0 otherwise)
B_0 = Constant of the binary logistic regression equation
PEF = Taxpayers' perceptions of equity and fairness of the tax system
PTE = Taxpayer's perceptions of tax evasion
CBTO = Corrupt behavior of tax officials
ATG = Taxpayers' attitudes toward the government
KTR = Taxpayers' knowledge of tax rules and proclamations
OSTA = Organizational strength of the tax authority
PTS = Participatory tax system
MTC = Mode of tax collection
SN = Social norms
εi = Random error term

3.6 The Reliability of the questionnaire items

In this research, Cronbach's alpha has been used to test the reliability of the items included in the questionnaire. Hair et al. (2010) suggested that coefficients of Cronbach's alpha greater than 0.70 are considered to be reliable indicators of the constructs under study. Therefore, using SPSS Version 20, the reliability test of all items used to measure the independent variables in this study were above the minimum threshold of 0.70.

Table 1: Cronbach's alpha coefficient of the research items

Constructs	Cronbach's alpha	No of Items
Taxpayers' perceptions of tax equity and fairness	.848	4
Taxpayers' perceptions of tax evasion	.801	4
Corrupt behavior of tax officials	.846	4
Taxpayers' attitudes toward the government	.835	4
Taxpayers' knowledge of tax rules and proclamations	.828	4
Organizational strength of the tax authority	.771	5
Participatory tax system	.911	4
Mode of tax collection	.767	4
Social norms	.732	4
General reliability	.848	37

Source: Survey questionnaire (2017)

3.7 Validity of the questionnaire items

In order to check validity of the questionnaire being used in this study, a pilot test was conducted with 15 category "C" taxpayers found in Addis Ababa City Administration. After the pilot test had been carried out, the researcher made minor corrections based on the respondents' feedback. The questionnaire was also assessed for content validity by one psychology expert and two accounting and finance lecturers who are currently teaching at Gondar University.

3.8 Operational definitions of variables used in the study

Presumptive tax collection efficiency – the right amount of tax liability paid by taxpayers (i.e., it is **good** if taxpayers pay the right amount of tax to the tax authority; otherwise it is poor). Similar research studies were carried out using this variable (Vadde & Gundarapu, 2012; Gezahegn et al., 2014).

Participatory tax system – the active engagement of taxpayers in the initiation, drafting, and implementation of the presumptive tax system. This variable has been adopted from Kebede and Tegegn (2016) but with major modifications.

Social norms – accepted taxpayers' ways of thinking about what they should or should not believe about tax authority and their tax obligations. This variable has been adopted from Nabaweesi (2009) but major modifications have been made to suit this study.

Taxpayers' knowledge about tax rules – the extent to which taxpayers understand and apply tax rules and proclamations in presumptive taxation. This variable was taken from Simiyu (2010) but major modifications have been made to suit this study.

Taxpayers' attitudes toward the government – taxpayers' evaluations of where and how the government spends tax monies. This construct has been adopted from Legesse and Shaik (2017) but major modifications have been made to suit presumptive taxation.

Taxpayers' perceptions of tax evasion – the level of awareness that taxpayers have about tax evasion and its consequences. This construct has been adopted from Masarirambi (2013).

Organizational strength of the tax authority – the capacity of the tax authority to equip itself with competent staff, technology, and work procedures in respect of tax collection. This variable has been taken from Kebede and Tegegn (2016) but major modifications have been made.

Tax fairness and equity – taxpayers' evaluations of the fairness of the current presumptive tax system in Ethiopia. This variable has been adopted from Megnaka and Devi (2014).

Mode of tax collection –the process of collecting tax revenues from taxpayers using the backward manual system or using sophisticated technologies. This variable has been adopted from Simiyu (2010) but major modifications have been made.

4. RESULTS AND DISCUSSION

Of the 391 questionnaires distributed to category "C" taxpayers, 111 questionnaires were not returned for various reasons. In addition, 12 questionnaires were not appropriately completed by the respondents. Therefore, 268 questionnaires were analyzed, which accounted for a response rate of 68.54%.

4.1 The respondents' demographic and business information

Table 2: Demographic and business profile

Variables	Frequency	Percentage	Variables	Frequency	Percentage
Gender			**Level of education**		
Male	160	59.7	Illiterate	67	25
Female	108	40.3	Primary education	125	46.6
Total	268	100	Secondary education	60	22.43
			Diploma and above	16	5.97
Age			Total	268	100
18 – 30	56	20.9	**Presumptive tax experience**		
31 – 40	126	47.01	Below 5 years	52	19.41
41 – 50	34	12.69	From 5 – 10 years	147	54.85
Over 50	52	19.4	From 10 – 15 years	62	23.13
Total	268	100	More than 15 years	7	2.61
Types of business			Total	268	100
Manufacturing	24	8.96			
Merchandizing	56	20.89			
Service providers	188	70.15			
Total	268	100			

Source: Own survey data (2017)

Table 2 (above) shows that the gender distribution of the respondents was comparable, with 59.7% male respondents and 40.3% female respondents. The dominant age group of the respondents was 31–40 years (47.01%), with the next largest number of respondents being aged 18–30 (20.9%). The rest fell into the 41–50 and over 50 categories (12.69% and 19.4% respectively). Regarding their levels of education, the majority (46.6%) of respondents had received primary education, with 25% being illiterate and 22.43% having completed secondary education. The remaining (5.97%) respondents had diplomas or higher qualifications. The majority (70.15%) of businesses were service providers. Most of the respondents (54.85%) had

between 5 and10 years of presumptive tax experience. This result indicated that the taxpayers included in this study were fairly experienced with regard to presumptive income taxation issues.

4.2 Descriptive analysis of factors affecting presumptive income tax collection in Ethiopia

Table 3: The presumptive tax collection efficiency of the tax authority

		Frequency	**Percentage**
How do you evaluate the presumptive tax collection efficiency of the Bahir Dar branch of the ERCA (tax authority)?	Good	117	43.7
	Poor	151	56.3
	Total	268	100

Source: Own survey data (2017)

As seen in Table 3 (above), the majority (56.3%) of respondents evaluated the presumptive tax collection efficiency of the ERCA's Bahir Dar branch as poor, while 117 (43.7%) of respondents rated it as good. This result indicates that ERCA needs to improve its tax collection efficiency by modernizing its mode of tax collection, and increasing its human and technological resources.

Table 4: Descriptive statistics result for the determinants of presumptive tax collection

No	Parameters	Grand Mean	Grand Std. Deviation
1	Taxpayers' perceptions of the equity and fairness of taxation	2.12	1.04
2	Taxpayers' perceptions about tax evasion	2.07	1.26
3	Corrupt behavior of tax officials	2.16	1.35
4	Taxpayers' knowledge regarding tax rules	1.85	1.18
5	Organizational strength of the tax authority	3.64	1.37
6	Participatory tax system	3.34	1.10
7	Mode of tax collection	2.92	1.09
8	Social norms	2.13	1.44
9	Taxpayers' attitudes toward the government	2.27	1.03

Source: Own survey data (2017)

Respondents were asked to indicate their level of agreement with the factors that influence presumptive tax collection using a five-point Likert scale, where 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly agree. When respondents rated items as 1 or 2, it was assumed that they disagreed with the statement, while when they rated them as 4 or 5, it was assumed that they agreed with the statement. Furthermore, when respondents rated

items as 3, it was taken to indicate that they were unsure about the effect of a factor on presumptive tax collection. The results in Table 4 (above) show that most respondents disagreed that equity and fairness were present in either the assessment or collection of presumptive taxation with a grand mean and standard deviation of 2.12 and 1.04 respectively. This means that the Ethiopian presumptive tax system lacks equity and fairness when implemented with category "C" taxpayers which, in turn, affects tax collection negatively. The standard deviation was high (>1), indicating that there was a disparity of ideas about the fairness and equity of the tax system among the respondents. The total mean for taxpayers' perceptions of tax evasion was 2.07, demonstrating that most respondents had poor attitudes toward tax evasion. This result showed that category "C" taxpayers were ready to evade tax if the tax system had been unjust. Most respondents also disagreed with the idea that there was an absence of corrupt behavior of tax officials during the assessment and collection processes for presumptive taxation, with the total mean being 2.16. Given the high level of corruption, it is likely that tax officials will demand and accept bribes while they determine presumptive tax liability. Respondents also disagreed, with a mean value of 1.85, that tax rules and proclamations were simple enough for category "C" taxpayers to understand. However, in Ethiopia, even tax officials find it difficult to understand the tax rules because of their detailed and complex nature.

This result indicated that the complex nature of tax rules prevents taxpayers from understanding and complying with the tax system, which could, in turn, affect presumptive tax collection negatively. Respondents were agreed, with a mean value of 3.64 and a standard deviation of 1.37, that the ERCA was strong enough in terms of human and technological resources, adequate complaints resolution mechanisms, and the provision of quality tax services for presumptive tax collection. This result is surprising given the poor capacity of the ERCA to levy and collect taxes from all categories of taxpayers in Ethiopia. Social norms is another important variable, with respondents disagreeing, with a mean value of 2.13 and a standard deviation of 1.44, that social norms in Ethiopia did not increase presumptive tax collection. Respondents also disagreed, with a mean value of 2.27 and a standard deviation of 1.03, that the government spends the tax revenue on things related to the socio-economic development of the society. This result indicated that taxpayers did not trust the Ethiopian government with regard to how and where it invests their tax monies. They felt that their money is wasted on unnecessary expenditures, like corruption. Respondents were unsure about the effects of the mode of tax collection and the participatory tax system with grand means of 2.92 and 3.34 respectively.

4.3 Binary logistic regression result and discussion

Goodness-of-fit test of the binary logistic regression model

Table 5: Omnibus test of model coefficients

		Chi-square	Df	Significant level
Step 1	Step	258.980	9	0.000[a]
	Block	258.980	9	0.000
	Model	258.980	9	0.000

Source: SPSS result (2017)

In order to examine the goodness-of-fit, the study used the omnibus test of model coefficients. As seen in Table 5 (above), it shows a chi-square of 258.980, which is also significant (P-value <0.0005). Since the omnibus test is significant, we can conclude that adding predictors to the model has significantly increased our ability to predict presumptive income tax collection in Ethiopia.

Table 6: Model summary

Step	-2 Log Likelihood	Cox & Snell R-Square	Nagelkerke R-Square
1	108.222[a]	0.620	0.831

Source: SPSS result (2017)

The most commonly used technique for measuring goodness-of-fit is the likelihood ratio test, which is simply the chi-square difference between the null model (i.e. the model that only includes the constant) and the model that contains predictors. The -2 log likelihood ratio statistics is 108.222. Although the SPSS does not provide statistics for the model that only contains the constant, we know it to be 367.2 (108.222 + 258.980). As seen in the Table 6 (above), the results indicated that the value of Nagelkerke R^2 is 0.831, which shows that 83.1% of the dependent variable (i.e., presumptive income tax collection) is explained by explanatory variables included in the study.

Table 7: The Hosmer-Lemeshow test

Step	Chi-square value	Df	Significance level
1	8.331	9	0.402

Source: SPSS result (2017)

As shown in Table 7 (above), the Hosmer-Lemeshow test was insignificant (P-value = 0.402). Hair et al. (2010) argued that if the significant value in the Hosmer-Lemeshow test is greater than 0.05, then the model used can feasibly be used for further analysis. In addition, the Wald test was used to measure the statistical significance of each predictor in explaining the dependent variable (i.e., presumptive tax collection). The Wald test shows whether the β − coefficient in a logistic regression for the predictor variable is significantly different from zero. If so, then the predictor is assumed to make a significant contribution to the outcome variable.

Table 8: Binary logistic regression result

Step[a] Variables	B	S. E	Wald	Df	Sig.	EXP (B)	95% C.I for EXP (B)	
							Lower	Upper
Taxpayers' knowledge about tax rules	1.063	.361	8.776	1	.003	.343	.169	.697
Taxpayers' perceptions of tax evasion	-0.391	.293	1.786	1	.181	.676	.381	1.200
Mode of tax collection	-0.026	.405	.004	1	.949	.974	.440	2.157
Taxpayers' attitudes toward the government	1.718	.483	12.637	1	.000	.179	.070	.463
Perceptions of equity and fairness	2.879	.552	27.166	1	.000	17.739	6.027	52.529
Participatory tax system	3.249	.529	37.738	1	.000	25.774	9.140	72.680
Corrupt behavior of tax officials	-1.504	.244	4.263	1	0.039	.604	0.375	.975
Organizational strength	0.794	.327	5.881	1	0.015	2.212	1.164	4.201
Social norms	0.510	.293	3.043		0.81	1.666	.939	2.955
Constant	-8.123	2.283	12.890	1	.000	.000		

[a]Variable(s) entered on Step 1: taxpayers' knowledge about tax rules; taxpayers' perceptions of tax evasion; mode of tax collection; taxpayers' attitudes toward the government; perceptions of equity and fairness of taxation; participatory tax system; corrupt behavior of tax officials; organizational strength; and social norms.

The binary logistic result shown in Table 8 (above) revealed that presumptive income tax collection was influenced by taxpayer's knowledge of tax rules and proclamations (**β** =1.063, P <0.05). The result indicated that taxpayers' understanding of tax rules increases the tax collection efficiency of the tax authority by 34.3%. Furthermore, the research exposed that when taxpayers know their rights and obligations in a given tax system, it is very easy to levy and collect taxes without additional costs. This result is in line with the findings of Oladipupo and Obazee (2016).

Another significant variable that showed a greater tendency to influence presumptive income tax collection was taxpayers' attitudes toward the government (**β** =1.718, P <0.05). From Table 8, it can be observed that when taxpayers have positive attitudes toward the government's activity, tax collection efficiency increases by 17.9%. It is obvious that taxpayers are sensitive to "how" and "where" the government spends their money. If they perceive that the government spends the tax revenue in solving socio-economic challenges, they are more likely to pay their tax liabilities properly. In contrast, if they believe that the government is spending tax revenue on unnecessary activities, and that the money is being wasted due to corruption and embezzlement, then tax non-compliance will prevail and, hence, tax collection rates will be low. These findings are similar to those of Babu and Bayu Charie (2015), and Engida and Baisa (2014).

The results also revealed that presumptive income tax is influenced by taxpayers' perceptions of the equity and fairness of the tax system (β =2.879, P <0.05). The results demonstrated that when taxpayers perceive that there is equity and fairness within the tax system, it is 17.74 times more likely to increase tax collection efficiency than when taxpayers perceive that the tax system is unfair and inequitable. One of important pillars of a good tax system is the application of equity and fairness principles in the levying and collection of tax liabilities. The presumptive tax assessment method should treat small businesses within the same category equally, regardless of their revenues. However, in Ethiopia, frequent violation of this principle by the tax authority is observed. This result is in line with the findings of Megnaka and Devi (2014), who revealed that having a presumptive tax system that lacks equity and fairness would lead to tax collection inefficiencies in Ethiopia.

A participatory tax system is another important variable that affects presumptive income tax collection (β =3.249, P <0.05). The results clearly show that a having tax system that allows for the participation of taxpayers from inception to implementation is 25.78 times more likely to increase tax collection efficiency than having one that is non-participatory. Having a tax system that does not take taxpayers' opinions into account will cause controversies and non-compliant behaviors which, in turn, hurts the tax assessment and collection process. One way of preventing such negative consequences from arising is to make the tax system participatory for all stakeholders. However, in developing countries, including Ethiopia, the tax system is vertical (i.e., the government imposes tax rules without consulting stakeholders), and taxpayers' opinions and concerns are not incorporated at any stage, from the drafting of the tax system to its implementation.

The above logistic regression shows that presumptive income tax collection is negatively influenced by the corrupt behavior of tax officials (β = -1.504, P <0.05). Given the huge presence of corruption in Ethiopia, the result is not surprising. It is clear that corruption negatively affects countries' revenue-generating capacities. Presumptive taxation is susceptible to corruption since it requires frequent interaction between the tax officials and taxpayers. This finding is similar to those of Ohaka and Zukbee (2015), and Fjeldstad (2003).

The final variable that positively influenced presumptive income tax collection was the organizational strength of the tax authority (β = 0.794, P <0.05). Possessing organizational strength, in terms of having adequate human and technological resources, delivering quality tax services to taxpayers, possessing strong law enforcement potential, and having transparent complaints resolution procedures, is ideal for increasing tax revenue. However, Ethiopia lacks the human and technological resources necessary to be able to appropriately implement the tax system and the service quality provided to the taxpayers by the tax authority is not satisfactory. Besides, the complaints handling procedures applied by the tax authority create additional complaints because of their ineffectiveness in solving tax-related problems. This finding is in line with the results of Engida and Baisa (2014).

Mode of tax collection (β = -0.026, P >0.05), taxpayers' perceptions about tax evasion (β = -0.391, P >0.05), and social norms (β = 0.510, P >0.05) were not found to be significant at 5% probability in determining presumptive income tax collection in Ethiopia.

5. CONCLUSION AND RECOMMENDATIONS

An attempt has been made to identify the major factors that influence presumptive tax collection in Ethiopia with a view to contributing toward policy recommendations and the

improvement of the tax system. It has been established that category "C" (i.e., small and medium-sized businesses) taxpayers play an indispensable role in poverty reduction, employment creation, and economic development within low-income countries. Research has revealed that having a just tax system in place is one of the determinants of small and medium-sized firms' growth in both developed and emerging economies. However, in developing countries, including Ethiopia, the overall tax system is the source of controversies and disputes between taxpayers and the tax authority which, in turn, has resulted in inefficient tax collection. Accordingly, descriptive statistics of the study showed that lack of equity and fairness in presumptive tax assessment, the complexity of the tax rules, taxpayers' poor perceptions of tax evasion, the existence of unethical and corrupt tax officials, taxpayers' negative attitudes toward the government, and poor social norms between taxpayers and the (ERCA) were major challenges for presumptive tax collection in Ethiopia. In addition, the binary logistic regression result revealed that taxpayers' perceptions of the equity and fairness of the tax system, the corrupt behavior of tax officials, the organizational strength of the tax authority, the participatory tax system, taxpayers' knowledge of tax rules and regulations, and taxpayers' attitudes toward the government were significantly associated with presumptive tax collection in Ethiopia. However, social norms, mode of tax payment, and taxpayers' perceptions of tax evasion were not found to be significantly related to presumptive tax collection. Based on the findings of the study, the following recommendations were made.

The study found that the current presumptive taxation system is neither generating the expected revenue for the government nor contributing to the growth of small and medium-sized businesses in Ethiopia. Therefore, the ERCA should deeply analyze the presumptive tax system and make the revisions necessary in order to make it more inclusive and transparent. The study also found that the corrupt behavior of tax officials was associated with presumptive tax collection. As a result, the ERCA should set up a special anti-tax corruption department which is assigned the tasks of preventing and minimizing tax corruption practices by creating awareness about the negative impact of corruption of tax officials, and putting stricter legal and administrative measures in place in order to deal with those officials who commit tax corruption. In doing so, the ERCA could build its image positively and regain the trust of taxpayers in long run. The organizational strength of the tax authority was another significant variable that affected presumptive tax collection in Ethiopia. Thus, the ERCA should adjust itself according to the current tax administration trends that demand the deployment of adequate human and technological resources, modernized complaints resolution mechanisms, the delivery of quality tax services, strong law enforcement abilities, and the application of a fair and transparent presumptive tax system.

Taxpayers' knowledge of tax rules and proclamations was found to be an important factor when it comes to increasing presumptive tax collection. In cooperation with concerned legal entities, the ERCA should reduce the complex nature of the tax rules and organize regular awareness creation programs, such as seminars, workshops and conferences, and use either electronic or print media in order to educate taxpayers about the tax rules. This will increase tax compliance behavior and, hence, improve tax collection rates. Furthermore, the owners and managers of small and medium-sized businesses should also strive to advance their tax knowledge for their own benefit. Finally, taxpayers' attitudes toward the government seems to be one of the determinant factors of presumptive tax collection in Ethiopia. Consequently, the Ethiopian government is called upon to create and maintain taxpayers' confidence via spending their tax monies on socio-economic development programs that produce tangible benefits, showing that it is free from corruption when spending taxpayers' money, and delivering its promises to the general public as often as possible.

6. LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

A study without limitation(s) is unthinkable. The limitations of this study were the lack of domestic and international literature about the factors affecting presumptive taxation, the lack of openness among respondents, and lack of finance. Additionally, the data analysis for this study was based on cross-sectional data, which is assumed to be static rather than dynamic in nature. Therefore, future researchers could consider carrying out longitudinal studies in order to provide a better understanding of the determinants of presumptive taxation over time. In addition, the study was focused on taxpayers found in Bahir Dar City, which may harm the generalization of the findings at country level. Hence, future researchers should focus on other taxpayer categories and cover wider geographical areas in order to produce meaningful and inclusive papers.

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APPENDIX

Presumptive questionnaire used in the survey

Demographic information:

Gender:

Male ☐   Female ☐

Age:

18-30 ☐   31-40 ☐   41-50 ☐   Above 50 ☐

Level of education:

Illiterate ☐   Primary education ☐   Secondary education ☐   Diploma and above ☐

Types of business engaged:

Manufacturing ☐   Merchandizing ☐   Service giving ☐

Presumptive tax experience:

Below 5 years ☐   5 – 10 years ☐   10 -15 years ☐   Above 15 years ☐

How do you evaluate the presumptive tax collection efficiency of ERCA (Tax authority) Bahir Dar branch?

   A. Good ☐   B. Poor ☐

The following questions are related with factors affecting presumptive tax collection in Ethiopia. Please circle the box that represent your agreement or disagreement with each statement. Your information is important to me.

1 = Strongly disagree (SD)   2 = Disagree (DA)   3 = Neutral (N)   4 = Agree (A)
5 = Strongly agree (SA)

Mode of tax collection

Attributes	SD	D	N	A	SA
The tax authority process tax collection using automation					
The mode of payment is time consuming and tedious					
The payment process is simple and suitable					
The authority tax collection is manual					

Taxpayer's knowledge about tax rules

Attributes	SD	D	N	A	SA
As a taxpayer, I understand presumptive tax rules					
Presumptive tax rules are difficult to understand					
The tax officials provide adequate advice on presumptive tax					
Presumptive tax rules are easy to understand					

Corruption behavior of tax officials

Attributes	SD	D	N	A	SA
Tax officials demand bribes when they assess presumptive tax					
Tax officials accept bribes when they assess presumptive tax					
Tax officials accept bribes when they collect presumptive tax					
Tax officials accept bribes when they offered to reduce presumptive tax liability					

Participatory tax system

Attributes	SD	D	N	A	SA
Government involves taxpayers in drafting tax policies					
Government values feedback about how the tax system is run					
Government considers taxpayers opinion when applying tax policies					
Taxpayers have representative in the tax authority					

Equity and fairness of the presumptive tax system

Attributes	SD	D	N	A	SA
The presumptive income tax in Ethiopia considers ability to pay					
The tax liability based on presumptive income tax is certain					
The presumptive income tax is based on equity principle					
The presumptive income tax assessment is fair					

Perception of taxpayers on tax evasion

Attributes	SD	D	N	A	SA
I think taxpayers frequently evade taxes					
Other taxpayers conceal their actual income while assessed					
Other presumptive taxpayers do not provide sufficient information for the tax authority					
I think taxpayers are late to pay taxes					

Social norms

Attributes	SD	D	N	A	SA
As taxpayers, we are always loyal to the tax authority					
In case of mistakes of the tax authority, we are patients					
We are committed to paying our tax liability to the authority					
The tax authority values our businesses					

Organizational strength of the tax authority

Attributes	SD	D	N	A	SA
The authority has adequate human and technological resources					
The authority provides awareness creation trainings to taxpayers					
The authority delivers quality tax services to taxpayers					
The law enforcement potential of the authority is strong					
The authority has transparent complain resolving procedures					

Taxpayers' attitude toward the government

Attributes	SD	D	N	A	SA
We receive good services for the tax money we pay					
The government is using the tax money to provide infrastructures					
The current government utilizes the tax money free of corruption					
Corruption is observed in using the tax money by the government					