Assessment on Factors that Affect Tax Collection in Tepi Town Merchant's Yeki Woreda, Sheka Zone, South West Ethiopia

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ABSTRACT

Background: Taxation is a system of raising money to finance government. Without taxes funds and government services could not exist. In most developing countries, like Ethiopia, the revenue generated by the government is quite less than the expenditures spent. This low revenue yield of taxation can only be attributed to the fact that tax provisions are not properly enforced. Thus the main objective of this study is to investigate factors of tax problems in taxpayers in Tepi town.

Methods: The community based cross-sectional study design was conducted on 118 merchants that randomly selected from Tepi Town. All the vital information was gathered from selected tax payers by structured questionnaire. The data was organized and analyzed by IBM SPSS 20. Moreover, a Binary logistic regression was used to identify the potential determinants of tax collection problem.

Results: Out of 118 tax payers 14.4% were said that they had not faced tax collection problems and 85.6% were said that they have tax collection problems. From the total, 36 female tax payers 5(4.2%) of them were reported that they had not tax payment problem while 31(26.3%) of them were had faced tax payment problem. Similarly, from the total 82 male tax payers 12 (10.2%) of them were said they had not faced tax collection problem but 70(59.3%) of them were said they had faced tax collection problem. The result of Chi-square of independence revealed, service satisfaction, cash register machine use, pay amount, and duration of time liability had p-value 0.001, 0.045, 0.001 and 0.000 respectively which is less than level of significance 0.05. So this indicated the significant relationship that found between these variables and tax gathering system. The logistic regression revealed that service satisfaction, pay amount and time liability were the major factor that affects tax collection system in Tepi town.

Conclusions: Based on results, about 85.6% of merchants in Tepi town were had complain on their taxation. The identified significant factors of these merchants are service satisfaction, pay amount estimate and time liable to pay the taxes. The study suggested to Tepi town Economic developmental office must adopt a comprehensive strategy that satisfy the tax payers and adequate pay estimate that depend on profit of the merchants.

Keywords: Tax payment; Tepi town; Logistic regression; Factors of taxation; Problem of taxation

INTRODUCTION

In most developing countries, it is a common phenomenon to notice serious problems in developing adequate tax systems that permits a government to sufficiently finance its expenditures. Ethiopia, like any other developing countries, faces difficulty in raising revenue to the level required for the promotion of economic growth. Taxation has increased in importance not only as a tool of raising revenue for the traditional roles but also for accelerating the economic growth and ensuring social justice. Along with the growth in the overall Ethiopian economy, it observes that there are an increasing government spending and deficit financing. The major revenue of the government to do infrastructure is tax and if the problem in tax collection was solved the life standard of the people is improved.

A tax is defined as a "a compulsory contribution payable by an economic unit to a government without expectation of direct and equivalent return from the government for the contribution made" [1]. Tax administration refers to the identification of tax liability based on the existing tax law, the assessment of this liability, and the collection, prosecution and penalties imposed

on recalcitrant taxpayers. Tax administration, covers a wide area of study, encompassing aspects such as registration of taxpayers, assessments, returns processing, collection, and audits [2]. Tax administration therefore, should aim at improving on laws regarding the registration, assessment, collection revenue, and exploiting fully taxation potential of a country [3].

In most developing countries, like Ethiopia, the revenue generated by the government is quite less than the expenditures spent. This low revenue yield of taxation can only be attributed to the fact that tax provisions are not properly enforced either on account of the inability of administration or on account of straight forward collusion between the tax administration and taxpayers. In Ethiopia, tax is administered at federal or central and regional levels. The constitution of Federal Democratic Republic of Ethiopia (FRDE) has separated the tax revenue to be collected by federal government, state or regional government and jointly by the federal and state government (Proclamation No33/1992).

The revenue of the Ethiopian government comes from different sources such as tax public borrowing, sales of public assets, and transfer payments. The main purpose of generating revenue from these various sources is to finance government expenditure. These public expenditures are meant for public goods and services that are very essential for the development and wellbeing of the society. Ethiopian Revenue and Customs Authority (ERCA) focuses on those people and vehicles that may involve in the act of bringing into or taking out of goods, which customs duty and taxes are not paid and whose importation or exportation are prohibited by law. Taxes levied by central and regional government consist of direct and indirect taxes. Direct taxes are taxes including employment income taxes, business income tax while indirect taxes are mainly composed of value added tax (VAT) and excise taxes. The law has classified the business income tax payers on business profit on to three major categories with respect to their legal personality and annual turnover as category A, B and C. Category "A", category "B" and category "C" taxpayers are classified as follows [5]. Category "A" taxpayers are composed of two groups. The first group comprises of those taxpayers whose annual turnover for a single tax year is 500,000 or more. In addition, any company incorporated under the laws of Ethiopia is a category "A" taxpayer irrespective of their annual turnover. Category "B" taxpayers are those taxpayers with annual turnover greater than 100,000 but less than 500,000 Ethiopian. All taxpayers with annual turnover income less than 100,000 Ethiopian Birr are grouped as category C taxpayers Birr.

According to Mekonnen, A., Deneke, Z. and Reda E, tax assessment and collection problems on taxpayers were problem for system connection due to this many taxpayers does not get the service as they came to the tax office and there is lack of tax knowledge by taxpayers. Due to this, delay in tax payment, do not pay the proper amount they should pay and negligence are taken by taxpayers as solution to escape from payment of taxes. Hence, proper assessment and collection of tax is one of the factors that enable the government to achieve its goals programs. Besides, it reduces the country's dependability on the foreign loan and donations. This study is focus on tax collection problem in Tepi Town.

The findings of this study will contribute in enhancing the taxation or revenue of the town and the government at large by uncovering the core problems on the tax assessment and collection activities so as to enabling them to put their effort to trump over the observed problems. Thus, the government would be able to adopt a comprehensive strategy, and minimize the observed tax administration problems to increase tax revenue. Similar approach can be replicate in identifying the problems in tax assessment and collection procedures of revenue administrations in other towns.

MATERIALS AND METHODS

Description of the study area

The study was conducted in Tepi town which is located in the Yeki Woreda, Sheka Zone, Southern Nation Nationality and People's (SNNPR) Region at 611 km distance from Addis Ababa (the capital city of Ethiopia) toward south west direction of the country and this study will conduct to tax payer merchants in case of Tepi town.

Study population: In this study the target population is merchants those who have financial account in the in Tepi town revenue office. The total populations are 1706 and the sample was selected from these taxpayers.

Sampling techniques: The cross-sectional study design conducted on 118 tax payer merchants that selected with simple random sampling from 1706 sample frame. Because each individual is chosen entirely by chance and each member of the populations have an equal chance of being included in the sample.

Study variables: The interest variable is the tax collection problem that categorized as the tax payer faced problem or did not faced any problem on tax collection. The independent variables were: education level of merchant, income of merchant, satisfaction level of the merchant, tax use awareness, willing to pay tax, Cash register machine use, business type, tax category, pay amount annually, and duration to pay tax.

METHODS OF DATA ANALYSIS

Descriptive statistics

Descriptive statistics is a part of statistics that deal with methods and techniques of organizing, summarizing, presenting, reporting and arranging the data without making generalization beyond the data. It summarizes mass of the numerical data in to meaningful form by using various statistical techniques such as tables, charts, graphs, and so on.

Chi-square Test

The test is used to test the association between two variables. Test of association we apply to know the relationship between dependent and independent variables [6]. The Chi-square is given by:

$$\chi^2 = \sum_{i=1}^{n} \sum_{j}^{m} \frac{\left(O_{ij} - E_{ij}\right)^2}{E_{ij}} \qquad (1)$$

Where: m = number of column

O^{ij} = *number of occurrence in the cell*

E^{ij} = *expected value of ith =row and jth =column*

n = number of row

$X^2{}_{cal}$ = *chi-square test of statistics*

P-value is the smallest level of the test for which the null hypothesis (Ho) is rejected. That is when p-value greater than the significance level, Ho is not rejected.

The test X²cal with X^2_a(c-1) (r-1).... tabulated value.

Binary logistic regression

Logistic regression describes the relationship between a categorical response variable and any set of explanatory variables. Binary logistic regressions were used to perform logistic regression on a binary response variable. A binary variable has only two possible values, such as presence or absence of a particular event. Models with one or more predictors we fitted using an iterative-reweighed least squares algorithm to obtain maximum likelihood estimates of the parameters. Binary logistic regression has also used to classify observations into one of two categories, and it may give fewer classification errors than discriminates analysis for some cases [4].

The response variable in the study is tax problem faced or not faced.

$$Y = \begin{cases} 1 - \text{if the tax payer faced atleast any problem} \\ 0 - \text{if the tax payer has not raise any problem} \end{cases}$$

As stated the model binary logistic regression as

$$\pi(x) = \frac{exp(\beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \cdots + \beta_k X_{ki})}{1 + exp(\beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \cdots + \beta_k X_{ki})} \qquad (2)$$

Where, X_{ki} =independent variables in the model

π = probability of success; $1-\pi$ = the probability of failure

β_0 = intercept; β_k= the coefficients of independent variable

The general model is simplified to:

$$Logit(\pi_i) = log\left(\frac{\pi}{1-\pi}\right) = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \cdots + \beta_k X_{ki}$$

Where, πi = y = 1 is the probability of success and $1-\pi i$ = probability of failure

Odds Ratio: Logistic regressions work with odds so it is necessary to define both odds and odds ratio. The odds are simply $odd = \frac{\pi i}{1-\pi i}$

In 2 × 2 tables, within row 1 the odds of success are $Odds_1 = \frac{\pi_1}{1-\pi_1}$, and

Within row 2 the odds of success equals $Odds_2 = \frac{\pi_2}{1-\pi_2}$

The ratio of the odds from the two rows, $\Pi_i = \frac{odds_1}{oods_2} = \frac{\frac{\pi_1}{1-\pi 1}}{\frac{\pi_2}{1-\pi_2}}$

Π_i (Odds ratio) is the ratio of two odds; whereas the relative risk is a ratio of two probabilities

Model adequacy check

The Hosmer-Lemeshow goodness of fit statistic measures the correspondence between the actual and predicted values of the dependent variable [4]. It also commonly used to assess the goodness of fit of a model and allows for any number of explanatory variables, which may be continuous or categorical. It is given by:

$$\hat{C} = \sum_{i=1}^{n} \frac{(O_i - E_i)^2}{m_i * \hat{\pi}_i (1-\hat{\pi}_i)}$$

Where, Oi =observed value; Ei =Expected value; mi = number of observation and π= average predicted risk for ith group

Hypothesis: H_0: The model is good fit Or H_1: The model is poor fit

Decision rule: do not reject H_0 if p-value is greater than ɑ-value

commonly used 0.05. That is the large p-value indicates good fit.

Maximum Likelihood:

The overall significance of the binary logistic regression model is checked by using maximum likelihood test. This is given by:

$$G^2 = -2log\left[\frac{L_0}{L_1}\right] = -2log(L_0 - L_1)$$

Hypothesis:

Ho: B_0=B_1=.....= B_k=0   vs.

H1: At least one of the coefficients is different from the other.

Decision: Reject H_0 if p-value is less than ɑ-value commonly used 0.05

Wald Test

The significance of the coefficient of individual variable in the binary logistic regression model is tested by using Wald test statistic. Which is given by:-

$$\left[Z^2 = (\frac{\beta - \beta_0}{SE(\beta)})^2\right]$$

Hypothesis Test: Ho: $[\beta_j = 0]$ vs. H$_1$: $\beta_j \neq 0$

Decision: Reject Ho if $Z^2 \geq Z^2\alpha$ (v) or the corresponding P-value of each variables less than significance level ɑ.

RESULTS

Descriptive statistics Results

The main purpose of this section is to interpret the results on tax collection problem of tax payers. The descriptive statistics was employed to describe the tax collection problem of tax payers.

From Table 1, out of 36 female respondent 5(4.2%) of them were reported that they had no tax payment problem while 31(26.3%) of them were had faced tax collection problem. Similarly, from the total 82 male respondents 12 (10.2%) of them were said they had no faced tax collection problem but 70(59.3%) of them were said they had faced tax collection problem.

Out of 8 total number age group less than 20 respondent 1(0.9%) of them were said they had not faced tax collection problem and 7(5.9%) of them were said that they had faced tax collection problem, from 15 total number of age group between 21-30 respondents 3(2.5%) of them were said that they had not faced tax collection problem and 12(10.2%) of them were said that they had faced tax collection problem, from 38 total number of age group between 31-40 respondents 7(5.9%) of them were said that they had not faced tax collection problem and 31(26.3%) of them were said that they had faced tax collection problem, from 29 total number of age group between 41-50 respondents 2(1.7%) of them were said they had not faced tax collection problem and 27(22.9%) of them were said that they had faced tax collection problem and out of the total 28 age group above 50 respondents 4(3.4%) of them were said they had not faced tax collection problem and 24(20.3%) of them were said that they had faced tax collection problem.

Out of 16 total number of illiterate education level respondents 3(2.6%) of them were said they had not faced tax collection problem and 13(11%) of them were said that they had faced tax

collection problem, from 25 total number of elementary school respondents 5(4.2%) of them were said they had not faced tax collection problem and 20(17%) of them were said that they had faced tax collection problem, from 23 total number of high school completed respondents 3(2.5%) of them were said they had not faced tax collection problem and 20(17%) of them were said that they had faced tax collection problem, from 20 total number of vocational certificate and Diploma respondents 3(2.5%) of them were said they had not faced tax collection problem and 17(14.4%) of them were said that they had faced tax collection problem, and out of 34 degree and above respondents 3(2.5%) of them were said they had not faced tax collection and 31(26.3%) of them were said that they had faced tax collection problem.

out of 29 total number of average income level less than 50,000 respondents 5(4.2%) of them were said they had not faced tax collection problem and 24(20.4%) of them were said that they had faced tax collection problem, from 41 total number of average income level between 50,000-250,000 respondents 5(4.2%) of them were said they had not faced tax collection problem and 36(30.5%) of them were said that they had faced tax collection problem, from 17 total number of income level between 250,000-500,000 respondents 4(3.4%) of them were said they had not faced tax collection problem and 13(11%) of them were said that they had faced tax collection problem, from 22 total number of income level between 500,000-1,000,000 respondents 1(0.9%) of them were said they had not faced tax collection problem and 21(17.7%) of them were said that they had faced tax collection problem and out of 9 total number of income level above million respondents 2(1.7%) of them were said they had not faced tax collection problem and 7(5.9%) of them were said that they had faced tax collection problem.

From total of 15 not pay tax annually respondents 4(3.4%) of them were said they had not faced tax collection problem and 11(9.3%) of them were said that they had faced tax collection problem and out of 103 total pay tax annually 13(11%) of them were said they had not faced tax collection problem and 90(76.3%) of them were said that they had faced tax collection problem.

From the above table 4.1 business types such as hotel and restaurant, clinic, trader, games and others is 1.7%, 0%, 5.9%, 1.7% and 5.1% of them were said they had not faced tax collection problem respectively. The remaining respondents of business type such as hotel and restaurant, clinic, trader, games and others is 5.8%, 9.3%, 26.3%, 14.4% and 28.8% of them were said that they had faced tax collection problem respectively.

Out of 118 tax payer respondents 93(78.8%) of them were not satisfied to tax collection service, from those 93 respondents 8(6.8%) of them were said they had not faced tax collection problem and 85(72%) of them were said that they had faced tax collection problem. The remaining, 25 respondents were says satisfied to the service, from those 25 respondents 9(7.6%) of them were said they had not faced tax collection problem and 16(13.6%) of them were said that they had faced tax collection problem.

The percentage of level of service satisfaction such as very satisfied, moderately satisfied and low satisfaction categories is 2.5%, 1.7% and 3.4% of them were said they had not faced tax collection problem respectively. The remaining respondents level of service satisfaction such as very satisfied, moderately satisfied and low is 1.7%, 7.6% and 4.2% of them were said they had faced tax collection problem respectively. Out of 18 tax awareness no group

respondents 4(3.4%) of them were said that they had not faced tax collection problem, and 14(11.9%) of them were said that they had faced tax collection problem. The remaining 100 respondents of tax awareness are yes group and from those 13(11%) of them were said that they had not faced tax collection problem and 87(73.7%) of them were said that they had faced tax collection problem.

Out of total 118 cash register machine respondents of 16(13.6%) of them are no group and 1(0.9%) of yes group were said that they had not faced tax collection problem. The remaining respondents of cash register machine 72(61%) of no group and 29(24.5%) of them were said that they had faced tax collection problem.

The percentage of get adequate training about the machine respondents of 0% and 0.9% were said that they had not faced tax collection problem. The remaining of get adequate training about the machine respondents 10.2% and 14.4% were said that they had faced tax collection problem.

The percentage of signature to tax identification respondents of 2.5% and 11.9% of them were said that they had not faced tax collection problem. The remaining respondents of signature to tax identification 4.2% and 81.3% of them were said that they had faced tax collection problem.

Out of 118 total respondents for their category 25.4% of them are category A, 26.3% of them are category B and 48.3% of them are category C tax payers and from those categories 2.5%, 3.4% and 8.2% of them were said that they had not faced tax collection problem respectively. The remaining respondents of tax categories such as category A, category B and category C of tax payers 22.9%, 22.9% and 39.8% of them were said that they had faced tax collection problem respectively.

The percentage of payment amount they should respondents of 59.3% of them were not pay and 40.7% were says pay amount they should, from not pay amount they should group 3.4% and from those pay amount they should group 11% of them were said that they had not faced tax problem. The remaining respondents of not pay amount they should 55.9% and pay amount they should group 29.7% of them were said that they had faced tax collection problem.

The percentage of duration of time liability respondents of 4.2% and 10.2% of them were said that they had not faced tax collection problem. The remaining respondents of duration of time liability for 66.9% and 18.6% of them were said that they had faced tax collection problem (Table 1).

Chi square test of association for tax payers

From Table 2, we seen the independent variables (service satisfaction, cash register machine, pay amount you should, and duration of time liability) have p-value (0.001, 0.045, 0.001 and 0.000) respectively which is less than level of significance (0.05 respectively). So we conclude that there is strong relationship between the independent variables and tax collection problem of tax payers (dependent variable) (Table 2).

Binary Logistic Regression

From the Table 3, the sig value=0.00 is less than the test statistics α=0.05 we reject the null hypothesis and conclude as the overall model is significantly different from zero. This means that at least not one of the explanatory variable are excluded from the model, the response variable is equal to 0.000 which is constant (Table 3).

Table 1: Table of descriptive statistics on tax payment data, 2019.

Variable	Categories	Status Tax payers on Tax collection problems		Total
		No	Yes	
Gender	Female	5(4.2%)	31(26.3%)	36(30.5%)
	Male	12(10.2%)	70(59.3%)	82(69.5%)
Age category	Less than 20	1(0.9%)	7(5.9%)	8(6.8%)
	21-30	3(2.5%)	12(10.2%0	15(12.7%)
	31-40	7(5.9%)	31(26.3%)	38(32.2%)
	41-50	2(1.7%)	27(22.9%)	29(24.6%)
	Above 50	4(3.4%)	24(20.3%)	28(23.7%)
Education Level	Illiterate	3(2.5%)	13(11.1%)	16(13.6%)
	elementary school	5(4.2%)	20(17%)	25(21.2%)
	High school	3(2.5%)	20(17%)	23(19.5%)
	Certificate & Diploma	3(2.5%)	17(14.4%)	20(16.9%)
	Degree & above	3(2.5%)	31(26.3%)	34(28.8%)
Average annual income	Less than 50,000	5(4.2%)	24(20.4%)	29(24.6%)
	50,000-250,000	5(4.2%)	36(30.5%)	41(34.7%)
	250,000-500,000	4(3.4%)	13(11%)	17(14.4%)
	500,000-1,000,000	1(0.9%)	21(17.7%)	22(18.6%)
	More 1 million	2(1.7%)	7(5.9%)	9(7.6%)
Pay tax annually	No	4(3.4)	11(9.3)	15(12.7%)
	Yes	13(11.1%)	90(76.2)	103(87.3%)
Business type	Hotel and restaurant	2(1.7%)	7(5.8%)	10(8.5%)
	Clinic	0(0%)	11(9.3%)	11(9.3%)
	Trader	7(5.9%)	31(26.3%)	38(32.2%)
	Games	2(1.7%)	17(14.4%)	19(16.1%)
	Others	6(5.1%)	34(28.8%)	40(33.9%)
Satisfaction	No	8(6.8%)	85(72%)	93(78.8%)
	Yes	9(7.6%)	16(13.6%)	25(21.2%)
Level of satisfaction	Very satisfied	3(2.5%)	2(1.7%)	5(4.2%)
	Moderately satisfied	4(3.4%)	9(7.6%)	13(11%)
	Low satisfied	2(1.7%)	5(4.2%)	7(5.9%)
Tax awareness	No	4(3.4%	14(11.9%)	18(15.3%)
	Yes	13(11%)	87(73.7%)	100(84.7%)
Cash register machine	No	16(13.6%)	72(61%)	88(74.6%)
	Yes	1(0.9%)	29(24.5%)	30(25.4%)
Adequate training	No	0(0%)	12(10.2%)	12(10.2%)
	yes	1(0.9%)	17(14.4%)	18(15.3%)
Signature to tax identification	No	3(2.5%)	5(4.3%)	8(6.8%)
	Yes	14(11.9%)	96(81.3%)	110(93.2%)
Category of tax payers	Category A	3(2.5%)	27(22.9%)	30(25.4%)
	Category B	4(3.4%)	27(22.9%)	31(26.3%)
	Category C	10(8.5%)	47(39.8%)	57(48.3%)
Pay Amount	No	4(3.4%)	66(55.9%)	70(59.3%)
	Yes	13(11%)	35(29.7%)	48(40.7%)
Duration time liability	No	5(4.3%)	79(66.9%)	84(71.2%)
	Yes	12(10.2%)	22(18.6%)	34(28.8%)

From Table 4 , the result of Omnibus tests of model confidents had a chi-square value of 57.029 at 26 degrees of freedom, which was highly significant at alpha =0.05. Meaning, model coefficients of chi-square test is highly significant, which shows that the independent variables predict the dependent variables well and the model was a good fit (Table 4).

From table 5, Cox & Snell R^2 indicated that 38.3% of the effectiveness of tax collection problem tax payers is explained by the independent variables. In addition to this, Nagelkerke's R^2 indicated that 68.2% of the dependent variable is explained by the independent variables (Table 5). From the above table of 6, Hosmer and Lemeshow Test p value 0.599 is greater than 0.05, therefore we concluded that the model is good fit the data (Table 6).

Table 2: Chi square test of association between the problem and explanatory variables, 2019.

Variables	Chi square Value	Degree of freedom	Asymp.sig(2-sided)
Level of education	1.779	4	.776
Average annual income	3.680	4	.451
Pay tax annually	2.095	1	.148
Business type	2.845	4	.584
Service satisfaction	11.994	1	.001
Level of satisfaction	1.572	2	.456
Tax awareness	1.052	1	.305
Cash register machine	4.000	1	.045
Adequate training	.690	1	.406
Signature to tax Identification	3.711	1	.054
Category of tax payers	.984	2	.611
Pay amount you	10.544	1	.001
Duration of time liability	16.898	1	.000

Table 3: Variables in the equation for tax payers, 2019.

Model	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	-1.782	.262	46.202	1	.000	.168

Table 4: Omnibus Tests of Model Coefficients.

Model		Chi-square	df	Sig.
Step 1	Step	57.029	26	.000
	Block	57.029	26	.000
	Model	57.029	26	.000

Table 5: General model summary of regression model for tax payers.

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	40.269[a]	.383	.682

Table 6: Hosmer and Lemeshow test of binary logistic regression model for tax payers.

Step	Chi-square	df	Sig.
1	6.435	8	.599

Table7: Classification of response variable in the data, 2019.

Observed			Predicted		
			Problem Faced		Percentage Correct
			yes	no	
Step 1	problem Faced	yes	98	3	97.0
		no	7	10	58.8
	Overall Percentage				91.5

From Table 7, showed that allows to correctly classifying 58.8% of the subjects where the predicted event (tax collection problem) was observed. This is known as the sensitivity of prediction, the P (correct/ event did occur), that is, the percentage of occurrences correctly predicted. We also see that this rule allows us to correctly classify 97.0% of the subjects where the predicted event was not observed. This is known as the specificity of prediction, the P (correct event did not occur). Overall Percentage- This gives the overall percent of cases that are correctly predicted by the full model. Overall, our predictions were correct for an overall success rate of 91.5 (Table 7).

The Table 8, showed, the coefficient, standard error, Wald's statistics, df, level of SIG, odds & CI for individual odds. It is important to test the significance of individual variables by using Wald's statistics and p-value (0.05) correspondently. The level of education, satisfaction level, machine use, type of tax and amount of tax pay are significant factors (Table 8).

Interpretations

The estimated odds of tax service satisfaction (satisfied group) e^β =2.032 times more likely than the estimated odds of tax satisfaction (not satisfied) for tax collection problem on tax payers.

The estimated odds of pay amount you should (pay amount they

Table 8: Results from Binary Logistic Regression Analysis for tax payer's data, 2019.

Variables	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
gender(1)	1.334	1.378	.937	1	.333	3.796	.255	56.509
Age(<20)			1.782	4	.776			
age(21-30)	2.347	3.527	.443	1	.506	10.451	.010	10498.292
age(31-40)	2.184	2.226	.962	1	.327	8.880	.113	697.487
age(41-50)	.459	1.907	.058	1	.810	1.582	.038	66.447
age(>50)	.535	2.172	.061	1	.805	1.708	.024	120.538
Edu. (illiterate)			3.074	4	.546			
Edu(elementary)	-1.652	2.110	.613	1	.434	.192	.003	11.980
Edu(high school)	1.007	1.345	.560	1	.454	2.736	.196	38.185
Edu(certificate & diploma)	-1.513	2.048	.546	1	.460	.220	.004	12.196
Edu (degree & above)	-2.198	2.293	.919	1	.338	.111	.001	9.935
Avarageicome(<50000)			1.741	4	.783			
avanincome(50000-250000)	-4.998	41054.571	.000	1	1.000	.007	.000	.
avanincome(250000-500000)	-2.606	41054.571	.000	1	1.000	.074	.000	.
avanincome(500000-1000000)	16.157	40193.020	.000	1	1.000	1.310	.000	.
avanincome(above 1000000)	-.031	2.992	.000	1	.992	.970	.003	341.419
Besinestype(hotel&restorant)			2.191	4	.701			
besinestype(clinic)	2.465	2.499	.972	1	.324	11.758	.088	1576.661
besinestype(trader)	-19.348	8531.841	.000	1	.998	.000	.000	.
besinestype(games)	.713	1.152	.383	1	.536	2.041	.213	19.519
besinestype(others)	-.658	1.772	.138	1	.710	.518	.016	16.694
paytaxannualy(1)	3.218	1.866	2.973	1	.085	24.975	.644	968.249
Category tax(catA)			.000	2	1.000			
category tax(catB)	-4.424	41054.571	.000	1	1.000	.012	.000	.
categorytax(catC)	-17.821	8366.519	.000	1	.998	.000	.000	.
satisfaction(1)	4.956	1.692	8.578	1	.003	2.032	5.153	3915.093
awareness tax(1)	-3.135	1.996	2.465	1	.116	.044	.001	2.178
cashregmachine(1)	-4.591	2.654	2.992	1	.084	.010	.000	1.842
signtident(1)	-3.534	2.191	2.602	1	.107	.029	.000	2.138
payamountyoushould(1)	2.777	1.789	2.409	1	.121	16.074	.482	536.210
timeliabilityadequate(1)	4.378	1.544	8.038	1	.005	9.650	3.863	1642.429
Constant	-1.769	41054.571	.000	1	1.000	.171		

should group) is e^{β} = 16.074 times more likely than the estimated odds of pay amount you should (not pay amount they should) for tax collection problem on tax payers.

The estimated odds of time liability adequate is e^{β} =9.650 times more likely than the estimated odds of not time liability adequate for tax collection problem on tax payers.

The estimated odds using cash register machine is e^{β} =0.010 times less likely than the estimated odds of not using cash register machine for tax collection problem on tax payers.

The general binary logistic regression model is.

$$Log\,it\left(\frac{\pi}{1-\pi}\right)=\beta 1x1+\beta 2x2+\beta 3x3+\beta 4x4$$

Where x1, x2, x3 and x4 are the fitted independent variables such as (service satisfaction, pay amount they should and time-liability adequate respectively)

$Logit\,(\frac{\pi}{1-\pi}=4.956(service\,satisfaction)+2.777(\,pay\,amount\,they\,should)+$
$4.374(time\,liability\,adequate\,respectively)-4.591(cash\,register\,machine).$

DISCUSSIONS

Under this section the discussion is made. According to Tumescent, factors that affect tax collection problem on tax payers in Debre Tabor town were; level education, business sector, tax knowledge, cash register machine, level of support from tax officers, sufficient number and qualified tax officer personnel, any training relevant to duty and responsibility of tax officer and tax officers provide regular information to tax payers. In this research paper the service satisfaction, pay amount, cash register machine and time liability adequate were the significant factors to tax collection challenge. The education level is similar to the study by Tumescent.

Another study done by Mekonnen, A., Deneke, Z. and Reda E, on tax assessment and collection problems on taxpayers in Addis Ababa city were point out that, system connection due to this many taxpayers does not get the service as they came to the tax office and there is lack of tax knowledge by taxpayers. Due to this, delay in tax payment, do not pay the proper amount they should pay and negligence are taken by taxpayers as solution to escape from payment of taxes. The paper is not confirmed this result because

knowledge is not factor in the paper.

CONCLUSION

The main objectives of this study have been to investigate factors that affect tax collection problems in respect to taxpayers found in Tepi town.

About 85.6% of the tax payers in the town were had faced tax collection problem and it is necessary to identify the sources of problems. The significant source of problems were: lower level education in tax payer, cash machine use, service satisfaction of revenue office, estimate large pay amount and time liability to pay tax are the main factors that lead tax payment problem. Another variables such as average annual income, gender, age, business type, get adequate training about the cash register machine, signature to tax identification, level of satisfaction, tax awareness and category of tax payers indicate that they are not significant to tax collection problem. Thus this study suggested Tepi town revenue office to facilitate its service and give adequate time on payment of tax. Additionally the tax payer must increase their education and knowledge on Cash register machine use.

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