

Tax Morale and Willingness to Pay Vehicles Taxpayers

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Abstract—This study aims to determine the tax morale of taxpayers and the amount of Willingness to Pay (WTP) motor vehicle tax. In addition, this study will also analyze the factors that influence tax morale and WTP. This research is quantitative. The population used in this study is the motor vehicle taxpayer of West Nusa Tenggara (NTB). Sample selection was made by a simple random sampling method. The analysis tool used in this study is the successive interval method to calculate tax morale and multiple regression analysis to determine the factors that influence tax morale and WTP. The results obtained from 100 samples show that taxpayers' average tax morale is still relatively low, namely 3,288. Age, gender, satisfaction, knowledge and ability to pay affect tax morale with a total effect of 52.2%. Statistically, tax morality does not affect WTP. Factors that affect WTP is knowledge. The value of taxes that are willing to be paid by motorized vehicle taxpayers is an average of Rp. 216,504 with a total WTP of Rp. 17,727,665,822,344,-.

Index Terms—tax morale, willingness to pay, taxpayers, PKB

I. INTRODUCTION

Regional development is a process of managing regional resources by the government and the community to build a partnership pattern with the private sector to create jobs and stimulate economic activity in the region [1]. Decentralization is one strategy to facilitate the wheels of government to accelerate regional development [3]. Implementing decentralization requires the delegation of authority from the central government to the regional apparatus [2]. One of the local government authorities granted by the central government is managing provincial revenues [3]. One of the regional revenues in question is Original Local Governments Revenue (PAD).

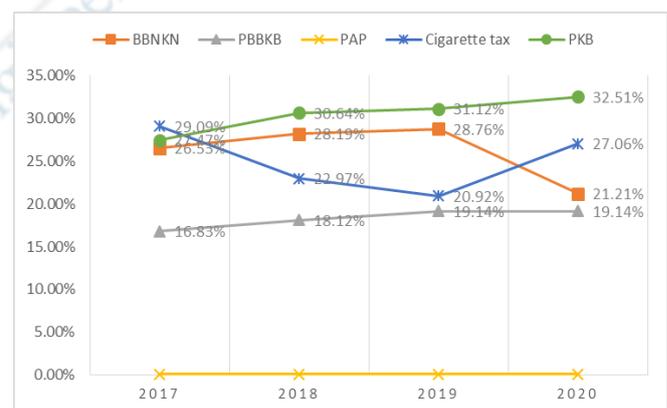
Local taxes are one source of PAD. Local taxes are one of the regional revenues that have a large contribution to PAD. NTB Province is one of the provinces with the largest source of PAD coming from local taxes. The data on the contribution of Regional Taxes to PAD can be seen in Table 1.

From 2008 to 2020, the average contribution of local taxes to NTB's PAD was 76%. NTB regional taxes have several sources, namely Motor Vehicle Tax (PKB), Motor Vehicle Transfer Fee (BBNKB), Motor Vehicle Fuel Tax (PBBKB), Surface Water Tax (PAP) and cigarette tax [5]. Local tax revenues sourced from PKB have an average contribution of 30.44% to local taxes. This revenue is the highest value from other local tax sources, as shown in Figure 1.

Table 1. Contribution of Regional Taxes to NTB's PAD

Year	PAD	Local taxes	%
2008	413,161,193,105	348,568,544,102	84%
2009	471,526,319,516	369,172,468,753	78%
2010	515,340,956,846	391,690,341,968	76%
2011	741,291,174,995	506,909,925,653	68%
2012	745,979,866,411	580,615,755,680	78%
2013	858,154,094,987	697,834,322,423	81%
2014	1,115,060,397,173	904,783,591,014	81%
2015	1,372,661,567,125	1,010,655,242,476	74%
2016	1,359,844,019,438	1,003,260,953,668	74%
2017	1,684,468,709,593	1,180,802,224,047	70%
2018	1,660,417,707,373	1,269,688,670,076	76%
2019	1,807,482,745,855	1,404,964,803,251	78%
2020	1,815,808,348,901	1,328,307,081,373	73%

Source: NTB Bappenda data processed



Source: NTB Bappenda data processed

Fig. 1 Contribution of NTB Regional Tax Sources

Based on data from the NTB Regional Revenue Agency (Bappenda), PKB revenue in 2020 only comes from approximately 50% of taxpayers (WP). The level of payment by taxpayers has decreased, which in 2017 came from 57% of taxpayers, even though the number of taxpayers has always increased every year. This contradicts the estimation statement made by the International Monetary Fund (IMF), which states that increasing the number of taxpayers will

increase the level of compliance [4].

Optimization of PKB payments by motorized vehicle taxpayers is carried out by the NTB government with various strategies ranging from enforcement of regulations to the ease of facilities offered in tax payments. Some of the strategies carried out by the NTB Regional Government are the availability of e-Samsat applications, Samsat Delivery, Samsat On Call, e-Samsat Auto debit for civil servants, submission of SP2T to taxpayers before the due time, or warning letters after maturity by empowering Samsat agents, operations combination and the provision of incentives/tax relief as regulated in Governor Regulation Number 21 of 2021 concerning the Granting of Relief and Exemption of PKB Administrative Fines. The exemption of fines in question is the exemption of administrative sanctions / PKB fines, reduction of PKB principal for arrears of 1 - 5 years, exemption of PKB principal for waiting more than five years, reduction of PKB principal on re-registration (active vehicles) for the current year.

Problems in the level of tax payment compliance by taxpayers have become a necessity in the tax administration system [16]. The same is stated through a statement, "As long as there are taxes, there will be non-compliance[1]". The avoidance of taxpayers in paying taxes is influenced by several factors such as the opportunity, rates and willingness of taxpayers, known as tax morale [16].

Research states that if taxpayers have good tax morale, the level of compliance will also be high so that, in the end, it will have an impact on optimizing tax revenues (Benno Torgler, 2007). Another study conducted in Europe stated that tax morale is shaped by socio-demographic characteristics, personal financial experience and political attitudes [9]. For this reason, in this study, the tax morale [15] of PKB NTB taxpayers will be analyzed as one of the potentials that can increase PAD. Through this research, will be analyzed the factors that influence tax morale and willingness to pay taxpayers in paying vehicle taxes.

II. LITERATURE REVIEW

Provincial tax is a tax levy determined by the governor as the head of the Level I region as part of the provincial income (Aryadi et al., 2019). Vehicle tax (PKB) is one of the sources of provincial taxes. According to the law, PKB is a tax on ownership and or control over ownership of motorized vehicles. The owner or subject of this tax is then known as the taxpayer.

Tax morale is an intrinsic motivation to comply, then pay taxes voluntarily so that it has a contribution to the provision of public goods [18]. This concept begins with the implementation of the tax system to find out the factors that cause people to pay and not pay taxes [16]. There are two theories related to this, namely economic theory and non-economic theory. Economic theory argues that taxpayers pay taxes based on economic calculations, namely the calculation of the benefits received when paying taxes, while non-economic theory explains that a person's decision to fulfil the obligation to pay taxes is based on income, tax rates, the possibility of being examined and the penalty[2].

This theory about taxpayer compliance states that there are other factors to cause taxpayers to comply, namely factors within the taxpayers themselves [12]. The intrinsic factor for paying taxes is called tax morale. (Torgler & Murphy, 2004). Another term for tax morale is tax mentality [14]. The basic motivation of a person's tax morale in complying with taxes is intrinsic motivation, namely personal satisfaction or feelings of pride when obeying and vice versa, the reciprocal relationship of citizens and their government, the influence of people around, cross-generational environmental values and lack of information [10].

Willingness to pay (WTP) is an approach to a person's willingness to pay for goods and services that are the result of the environment and natural resources [14] owned in an area, which aims to pay for quality improvements as a result of environmental damage done [7]. One of the methods used in calculating WTP in this study is the Contingent Valuation Method (CVM). The estimated average WTP value is calculated using the following formula.

$$EWTP = \frac{\sum_{i=1}^n W_i}{n}$$

with:

EWTP : Average WTP value of service users

W_i : the amount of WTP that is willing to be paid

i : Respondents who are willing to pay

n : Number of respondents.

We are estimating the total value of WTP using the following formula.

$$TWTP = \sum_{i=1}^n WTP_i \left(\frac{n_i}{N} \right) P$$

N is the total sample, and *P* is the total population for the last three years.

III. RESEARCH METHODS

The method used in this study is a quantitative method. The population of this study is motorized vehicle taxpayers in the Province of NTB as many as 1,644,206 taxpayers. The sample calculation was carried out using the Slovin formula with an error rate of 10% so that 100 samples of motor vehicle taxpayers were obtained. The method used in the selection of the sample is simple random sampling. In this case, the demographics of the region are assumed to be homogeneous. The data used in this study is secondary data obtained online with the research instrument is a questionnaire. The instrument used in this study has been tested for validity and reliability to 30 taxpayers with the result that the question is valid with a significant value < 0.05 and reliable with an average value of cronbach alpha > 0.6.

This study was conducted with the aim of knowing the tax morale of motorized vehicle taxpayers in the Province of NTB and the amount of Willingness to Pay (WTP) for motorized vehicle tax in NTB. Tax morality is measured by using the tax morale score, which is calculated using the successive interval method, while the WTP is an open question given to respondents. The stages in this research are

as follows.

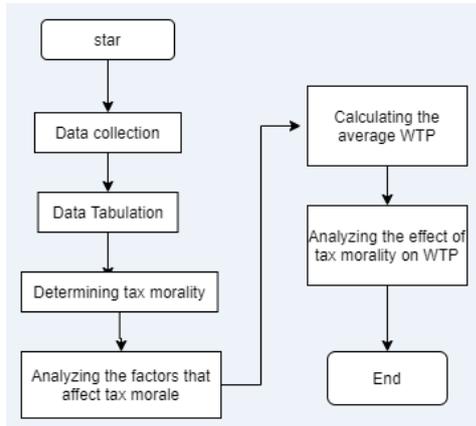


Fig. 2 Research Flow

Analysis of factors that affect tax morale is carried out using multiple linear regression, while the effect of tax morale on WTP is carried out using correlation analysis. The variables used in this study are as follows.

Table 2. Research Variables

Variable	Indicators	Pengukuran
Tax morale	<ul style="list-style-type: none"> Attitude towards tax payment consistency Attitude towards the allocation of funds Attitude on tax sanctions Attitude towards the effort made in paying taxes if financial conditions are difficult 	Likert scale 1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree
Satisfaction	<ul style="list-style-type: none"> Satisfaction with the alertness of tax officers while providing services Satisfaction with the information and answers provided by officers during the service process Satisfaction with the current tax payment facilities and infrastructure Satisfaction with the handling by tax officials of the problems faced by taxpayers. Satisfaction with the friendliness and courtesy of tax officers. 	Satisfied/ Unsatisfied
Knowledge	<ul style="list-style-type: none"> Knowledge of the tax function Knowledge of tax policy Knowledge of the purpose of paying taxes Knowledge of motor vehicle tax payment procedures Knowledge of tax administration sanctions 	Likert scale 1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Ability to Pay (ATP)	<ul style="list-style-type: none"> Knowledge of the location and method of payment of PKB Ability to pay taxes on time	Likert scale 1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree
Demography	<ul style="list-style-type: none"> Age Sex 	Ratio Men/ woman
WTP	Nominal willingness to pay taxes	Ratio

Multiple linear regression analysis to determine the factors that influence tax morale is done by modelling tax morale as a variable, while satisfaction, knowledge, ability to pay and demographics (age and gender) are independent. Analysis of the influence of tax morals on WTP, the variable used is WTP, while the independent variable is tax morale.

IV. RESULTS AND DISCUSSION

Tax Morale

Based on the study results, it was found that the average tax morale of West Nusa Tenggara motor vehicle taxpayers was 3,288. This value is still relatively low compared to the effects of research conducted by Susila (2016). In detail, the scores are presented in Table 3. Tax morale based on age, gender, satisfaction, knowledge and ability to pay, respectively, is shown in Table 4, Table 5, Table 6, Table 7 and Table 8.

Table 3. Tax Morale Score

Tax morale indicator	Score
Attitude towards tax payment consistency	2,554
Attitude towards the allocation of funds	3,268
Attitude on tax sanctions	3,063
Attitude towards the effort made in paying taxes if financial conditions are difficult	4,268

Table 4. Tax Morale Score by Age

Age	Number of Observations	Score
Under 25	40	3,293
Between 26 - 35	33	3,270
Between 36 - 45	17	3,273
Between 46 - 55	6	3,264
Over 55	4	3,281

Table 5. Tax Morale Score by Gender

Sex	Number of Observations	Skor
Woman	39	3,275
Men	61	3,288

Table 6. Tax Morale Score Based on Satisfaction

Indicators	Satisfaction	Number of Observations	Score
Satisfaction with the alertness of tax officers while providing services	Yes	86	3,288
	No	14	3,303
Satisfaction with the information and answers provided by officers during the service process	Yes	89	3,288
	No	11	3,329
Satisfaction with the current tax payment facilities and infrastructure	Yes	85	3,288
	No	15	3,289
Satisfaction with the handling by tax officials of the problems faced by taxpayers	Yes	84	3,288
	No	16	3,289
Satisfaction with the friendliness and courtesy of tax officers	Yes	85	3,288
	No	15	3,288

Table 7. Tax Morale Score Based on Knowledge

Indicators	Number of Observations	Score
Low (knowledge score < 19.71)	22	3,276
Medium (19.71 knowledge score < 25.05)	57	3,283
High (knowledge score 25.05)	21	3,291

Table 8. Tax Morale Score Based on Ability to Pay

Ability to Pay	Number of Observations	Score
Strongly disagree	3	3,342
Disagree	4	3,276
Netral	26	3,269
Agree	42	3,273
Strongly Agree	25	3,288

The tax morale score is in the interval from 1 to 5, with a score of 1 meaning the tax morale is very good, while a score of 5 means having the worst tax morale. Based on the study results, it was found that when viewed from the age demographic factor (Table 4), it was found that the younger generation tended to have better tax morale than other ages. This is in line with research conducted by Tekeli (2011) [17]. However, in another study conducted by Susila (2016), it was stated that the older a person gets, the lower the tax morale.

Therefore, the correlation between age and tax morale cannot be concluded.

Other demographic variables are detailed in Table 5, related to the relationship between sex and tax morality. Based on the results of the study, it can be seen that women's tax morale is better than men's. This is in line with research conducted by Susila (2016) and OECD (2013) [11]. A positive correlation between satisfaction and tax morale also occurs in this study. In Table 6, it can be seen that the more satisfied a person is with the behaviour of the officers and the facilities provided, the better the tax morale [13]. The background of an institution that respects the desire of citizens to give the best service can affect tax morale (Benno Torgler, 2007). The research results conducted by Basri (2017) [6] also show that satisfaction is positively correlated with tax morale.

The relationship of knowledge to tax morale has a negative correlation, as shown in Table 7. This relationship is closely related to the theory that many factors affect a person's confidence. The elements are environment and religion [8]. Tax morality is not associated with the ability to pay. In table 8, someone who has a high capacity to pay does not necessarily have good tax morale. In theory, Torgler (2007) [19] states that it is difficult to assess the relationship between income levels and a person's obedient attitude in paying taxes.

Determinants of Tax Morale

The null hypothesis built in this study is a relationship between age, gender, knowledge, satisfaction and ability to pay on tax morale. This analysis was performed using multiple linear regression. The results of the classical assumption test are obtained that the residuals are normally distributed with a value of Prob > z, which is worth 0.1901. The results of the multicollinearity test showed that there was no correlation between the independent variables stated that the VIF value was < 10. The average value of the VIF was 1.17. Likewise, with the results of other classical assumptions, there is no heteroscedasticity with a value of Prob > chi2 = 0.390 using the Breusch Pagan method.

The multiple linear regression test results stated that 52.2% of tax morale could be explained by age, gender, satisfaction, knowledge, and ability to pay. In comparison, 47.8% is influenced by other factors outside the model. However, these factors have a significant effect on tax morale. The results are presented in Table 9.

Table 9. Results of Regression Analysis

Source	SS	df	MS	Number of obs = 100		
Model	20.9936887	5	4.19873775	F(5, 94) =	22.89	
Residual	17.2436269	94	.18344284	Prob > F =	0.0000	
Total	38.2373157	99	.386235512	R-squared =	0.5490	
				Adj R-squared =	0.5250	
				Root MSE =	.4283	

taxmorale	Coeff.	Std. Err.	t	P> t	[95% Conf. Interval]
Age	.0103571	.0043633	2.37	0.020	-.0016935 .0190206
Sex	.0895543	.0307262	0.93	0.326	-.0305847 .2496932
Knowledge	-.0343026	.0136188	-2.52	0.013	-.0072621 .0613431
Satisfaction	-.235551	.1278457	-1.84	0.069	-.4893916 .0182896
atp	.3986341	.052137	7.65	0.000	.2951148 .5021534
_cons	.991031	.390442	2.54	0.013	.2157991 1.766263

Based on these results, the model of the influence of age, gender, satisfaction, knowledge and ability to pay on tax morale is as follows.

$$Y = 0,99 + 0,1X_1 + 0,09X_2 + 0,03X_3 - 0,24X_4 + 0,4X_5,$$

where Y is tax morale, X1 is age, X2 is gender, X3 is knowledge, X4 is satisfaction, and X5 is the ability to pay. Based on Table 9, it is also known that the statistically significant influences are age, knowledge and ability to pay.

Willingness to Pay and its Determinants

The average amount of motorized vehicle tax WTP obtained from 100 respondents is

$$EWTP = \frac{\sum_{i=1}^n W_i}{n} = \frac{21650380}{100} = 216503,8 \approx Rp. 216.504.$$

Based on the results of this study, using the Contingent Valuation Method (CVM), it is estimated that the total WTP is

$$TWTP = \sum_{i=1}^n WTP_i \left(\frac{n_i}{N}\right) P = Rp. 17.727.665.822.344.$$

Willingness to pay motor vehicle tax is not significantly affected by tax morale, which is indicated by the p-value = 0.138 (Table 10). The correlation value between tax morale and WTP is also very small, namely 0.1494.

Table 10. Tax morale regression results on WTP

Source	SS	df	MS	Number of obs = 100
Model	.853900032	1	.853900032	F(1, 98) = 2.24
Residual	37.3834156	98	.381463425	Prob > F = 0.1378
				R-squared = 0.0223
				Adj R-squared = 0.0124
				Root MSE = .61763

taxmorale	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
wtp	4.93e-07	3.30e-07	1.50	0.138	-1.61e-07 1.15e-06
_cons	3.181518	.0943888	33.71	0.000	2.994207 3.36883

The determinants of WTP, when viewed from other factors, are presented in Table 11.

Table 11. Determinants of WTP

Variables	P-value	Significance
Age	0,973	Not significant
Sex	0,846	Not significant
Knowledge	0,034	Significant
Satisfaction	0,372	Not significant
Ability to pay	0,133	Not significant
Tax morale	0,138	Not significant

Willingness to pay of taxpayers, statistically only influenced by knowledge, while other variables have no significant effect.

V. CONCLUSION

Based on the study results, it was found that the tax morale of motorized vehicle taxpayers was statistically influenced by

age, knowledge and ability to pay with a total effect of 52.2%. The tax morale of motor vehicle taxpayers on average is 3,288. This value is still relatively low compared to the results of research conducted by Susila (2016). Based on the age factor, it is found that the younger generation tends to have better tax morale than other ages. In terms of gender, women tend to have better tax morale than men.

Tax morale is also known to be positively correlated with satisfaction. The more satisfied someone is with the behaviour of the officers and the facilities provided, the better the tax morale. The relationship of knowledge to tax morale negatively correlates, which may be caused by other factors such as environment and religion. Another relationship is that tax morale does not have a relationship with the ability to pay. Someone who has a high ability to pay does not necessarily have good tax morale.

Tax morale statistically also does not affect willingness to pay. Based on the study results, it is known that only knowledge has a significant effect on PAP. The study results indicate that the amount of tax that is willing to be paid by motorized vehicle taxpayers is an average of Rp. 216,504 with a total WTP of Rp. 17,727,665.822,344,-.

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