A study on tax compliance in tax amnesty policy

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Abstract

The Indonesian Government implemented the tax amnesty policy in 2016 with several objectives, among others, to achieve tax revenue targets in the short-term, while in the long term it is to improve tax compliance, especially for the wealthier Indonesian citizens, while also accelerating tax reforms to increase tax participation's rate. This paper examines the effects of factors (wealth, tariff period system, tax fines, audit probability, and taxpayers' expectation of future tax amnesty) on tax compliance. Tax compliance is measured by the percentage of assets unit, the percentage of assets value reported by taxpayers, and the taxpayer participation rate in tax amnesty policy. This behavioral economics study uses an experimental approach because it is impossible to use conventional methods. The result showed that the taxpayers with higher wealth have lower compliance and prefer to participate in tax amnesty programs at the lowest tariff rate. The government's effort to impose fines and audits shows a greater effect on tax compliance. The tax amnesty policy should only be implemented once because if people expect a similar policy to be applied in the future, they will wait for the policy so that tax compliance is low. A tax amnesty policy—while it can increase tax revenues in the short term—could reduce tax compliance, especially if the government imposes a second tax amnesty in the future.

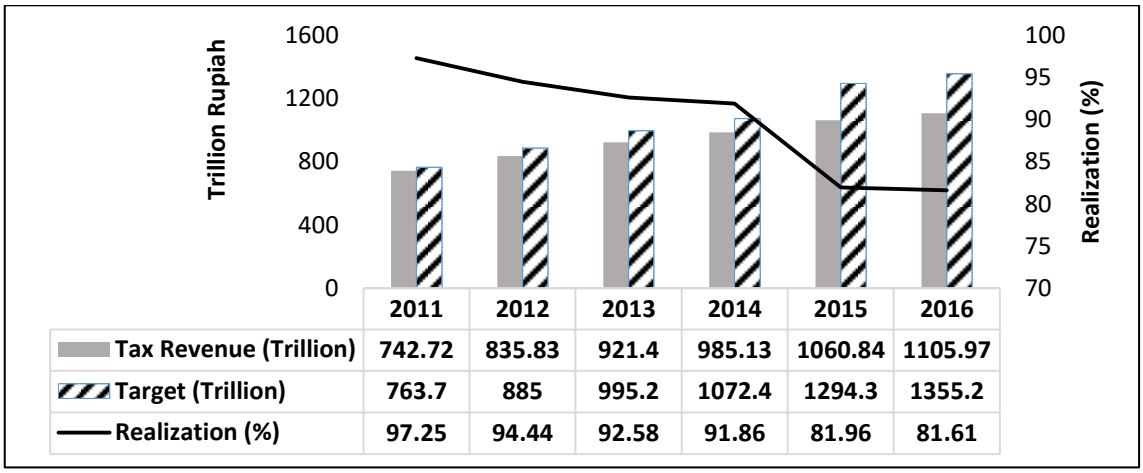
Keywords: *Experimental approach, Tax amnesty, Tax Compliance*

JEL Classification: C91, E62, H26

INTRODUCTION

One of the programs in the era of President Joko Widodo's administration is national infrastructure development as an effort to strengthen inter-regional connectivity and reduce inequality and social inequality to improve people's welfare. Therefore, to support infrastructure development nationally, the government needs to prepare large funds so that development can proceed according to a predetermined plan. The government determination can be seen in 2017, when they revised its budget state (APBN) to IDR 1,736.1 trillion of state revenue, 84.8% of which comes from the tax revenues; in line with that, the government needs to set a target for tax revenue in the same year. However, the tax revenue realization data from the ministry of finance (2016) showed a declining rate; in 2016, the amount of tax realization only reached 82%

of the target (Figure 1). The situation urged the government to find an alternative way to obtain substantial funds from the tax sector.



	2011	2012	2013	2014	2015	2016
Tax Revenue (Trillion)	742.72	835.83	921.4	985.13	1060.84	1105.97
Target (Trillion)	763.7	885	995.2	1072.4	1294.3	1355.2
Realization (%)	97.25	94.44	92.58	91.86	81.96	81.61

Source: Ministry of Finance (2016), processed

Figure 1. Target and realization of Indonesia tax revenue in 2011-2016

The problem faced by the Government of Indonesia regarding tax collection is that many taxpayers (WP) are still unaware of their tax obligations. This is indicated by the low level of Annual Tax Return (SPT), which only reached 60.27% in 2015. In addition, there are still a lot of workers who have not obtained a Tax Identification Number (NPWP). Based on the data from Statistics of Indonesia (BPS), in 2021, there were approximately 131.05 million people in the working population, while the number of registered taxpayers in 2021 was around 49.8 million people, which means that only around 38.0% of them are registered in the tax system (Directorate General of Taxes/DGT, 2016).

Table 1. The reflection of tax compliance

Year	Taxpayer registered	Taxpayers are required to report SPT	Taxpayer reported SPT	SPT Compliance (%)
2006	4,083,536	3,871,823	1,240,571	32.04
2007	4,478,032	4,231,117	1,278,290	30.21
2008	6,776,241	6,341,828	2,097,849	33.08
2009	10,289,590	9,996,620	5,413,114	54.15
2010	15,469,590	14,101,933	8,202,309	58.16
2011	18,640,757	17,694,317	9,332,626	52.74
2012	22,030,583	17,659,278	9,482,480	53.70
2013	24,347,763	17,731,736	9,416,457	53.11
2014	27,945,570	18,357,833	10,828,808	58.99
2015	30,044,103	18,159,840	10,945,173	60.27
2016	32,769,255	20,165,718	12,269,290	60.84
2017	36,510,000	16,598,887	12,047,967	72.58
2018	39,150,000	17,653,046	12,551,444	71.10
2019	42,510,000	18,334,683	13,394,502	73.06
2020	46,380,000	19,006,794	14,755,255	77.63
2021	49,821,000	19,000,000	15,971,000	84.00

Source: Ministry of Finance (2021)

According to Law Number 11 of 2016 concerning Tax Amnesty, tax amnesty is the elimination of taxes that should be owed, not subject to administrative sanctions and

criminal sanctions in the field of taxation, by disclosing previously unreported assets and paying a ransom. The benefit of implementing the tax amnesty is the increase in tax revenue in the short term through ransom. In the long term, the state will also receive repatriated funds that can stimulate the economy. The most important goal of tax amnesty is to improve the attitude or behavior of non-compliant taxpayers to become obedient taxpayers in the future, increasing long-term tax compliance and income (Lerman, 1986; Leonard and Zeckhausher, 1987).

Implementing the tax amnesty policy in Indonesia is considered an appropriate step because the country currently requires large funds for development. In addition, Indonesia will be involved in the disclosure of tax information, or the Automatic Exchange of Information (AEoI) conducted in 2018, where countries can exchange financial information. In the long run, taxpayers will no longer be able to hide their assets from the tax authorities. Therefore, implementing the tax amnesty program can force non-compliant taxpayers to follow the 2016/2017 tax amnesty policy.

Tax amnesty policies have been implemented in many countries around the world. Some countries have implemented this policy, but many have failed. Successful countries such as Ireland, South Africa, and Italy implemented tax amnesty policies accompanied by strict law enforcement efforts. Meanwhile, the failure of several countries was due to too many policies being implemented in those countries, such as India (11 times), Bangladesh (18 times), and Sri Lanka (11 times) (Ibrahim et al., 2017). Indonesia has carried out this policy twice, in 1964 and 1984, which were deemed to have failed.

Taxpayer compliance is closely related to the success of the tax amnesty policy. Some researchers linked the behavior or psychology of the community to taxpayers' compliance with paying taxes. According to Nar (2015), taxpayer compliance is determined by psychological factors. Andreoni et al. (1998) also argued that researchers need to examine the psychological, moral, and social influences on compliance more deeply and include these factors in an economic compliance model.

Several studies use many methods to examine the factors influencing compliance with tax amnesty policies. The methods that can be used are economic experiments (Alm et al., 1990; Rechberger et al., 2010), surveys (Ritsema et al., 2003; Saracoglu and Caskurlu, 2011), and using available taxation data (Alm et al., 2010). al., 2009). The experimental method is starting to be widely used in the field of economics because this method has many advantages. Some of the advantages that can be obtained are that researchers can control other factors outside of the factors studied so that the influence of the factors studied can be clearly identified. In addition, the absence of data in the field can be generated through an experiment. This experimental approach can not only be used to develop an economic theory but also help provide policy makers' considerations (Juanda, 2021).

Because the policy's success is related to the behavior or psychology of the community as taxpayers in their compliance in paying taxes, an experimental economic approach is used by making the community an experimental subject. Several researchers who researched taxpayer compliance in tax amnesty policies using experiments concluded that the important factors that could affect compliance were fines, audit opportunities, and opportunities for tax amnesty to occur in the future (Alm et al., 1990; Rechberger et al., 2010; Juanda et al., 2010). In addition to these three factors that can affect tax compliance with tax amnesty, the appropriate tax amnesty rate period can increase tax revenue. The obedient taxpayers are likely to experience injustice because they consider the government to give special treatment to tax evaders so that in the long-term obedient taxpayers can become disobedient and will reduce the level of long-term tax compliance (Alm et al., 1990). The government must be credible and firm so

that the tax amnesty policy will not be applied repeatedly. Governments that carry out policies repeatedly will raise public expectations of tax amnesty in the future and impact the unsuccessful implementation of current policies.

Indonesia is currently implementing a pull and push strategy. This strategy was successful when applied to the tax amnesty policy in South Africa (Ragimun, 2014). The pull mechanism is that the government provides incentives by providing debt relief and penalties for non-compliant taxpayers. The government requires the government to pay a ransom, of course, with a low amnesty rate. Indonesia set the amnesty rate (tariffs) in stages in 1916. For example, the tariff imposed for disclosure of domestic assets is subject to a tariff of 2% in the period I (July–September 2016), 3% in period II (October–December 2016), and in period III (January–March 2017) of 5 %. Compared to the tax that should be borne, this low fine is expected to increase the declaration of property that taxpayers previously hid.

In addition to the pull mechanism, the government also implements a push mechanism, namely providing high fines if the taxpayer does not comply and does not want to follow the tax amnesty policy. In the 2016 tax amnesty, the penalty applied in Indonesia is 200%. According to Alm et al. (1990), although the level of tax compliance will decline in the long run, tax amnesty followed by firm measures from the government can increase long-term tax compliance. For example, by increasing tax audits or by increasing tax penalties.

The government has prepared the concept of implementing the second tax amnesty. This will begin to be discussed in July and is expected to take effect next year. In terms of tariffs, the government proposes a final income tax of 15% of the asset value for taxpayers who have participated in the first tax amnesty. Then, if the assets are placed on the state bond market, they will be subject to a 12.5% rate. The tariff is higher than the 2016 program. Another suggestion is that assets acquired from 2016 to 2019 will be subject to a final income tax of 30% and 20% for assets invested in the state bond market.

The behavior of people who will register for tax amnesty at the end of each period shows that people think rationally by maximizing low amnesty rates. This is because, in the next period, the tariff will increase. Based on a public response like this, implementing the strategy of determining the right tariff period system can increase the ransom's income. For example, the period with a 2% tariff is extended to December, and the tariff is immediately enlarged to 5%. Thus, the public will take advantage of the low tariff of 2% for a longer period so that more asset declarations or ransoms can be accepted, considering the tariff for the next period will increase to 5%.

There are different impacts due to the implementation of the tax amnesty policy on tax compliance in a country, so research is needed that examines what factors can determine the success of this policy. In the tax amnesty policy itself, tax compliance can be seen from the taxpayer's participation and the unit and value of the taxpayer's assets reported in the tax amnesty. For analysis purposes, the tax compliance response is measured by the percentage of assets unit and the percentage of property value reported by the taxpayer in the tax amnesty policy. The percentage of assets units reported by the taxpayer is calculated by the ratio of the number of assets units that are actually reported to the number of assets units that must be reported.

For this reason, this study aims to (1) examine how the influence of wealth, expectations, tariff periods, fines, and audits on taxpayer participation in tax amnesty policies; (2) examine how the effect of wealth, expectations, tariff periods, fines, and inspections on property units reported by taxpayers on the tax amnesty policy; and (3) examine how the effect of expectations, tariff periods, fines, and inspections on the value of assets reported by taxpayers on the tax amnesty policy.

METHODS

Sample

The type of data used in this study is the primary data. The primary data obtained are derived from economic experiments because the data required for this study is not yet available in Indonesia, so it needs to be generated through economic experiments. There are five factors, each having two or three levels, as seen in Table 2. The impact of these five factors on taxpayer compliance will be seen as illustrated by the percentage of taxpayers participating in the tax amnesty, as well as the percentage of reported property units and the percentage of reported assets value (compared) to the total unit and the total asset value that should be reported.

Table 2. Factors and levels in the tax amnesty economic experiment

Factor	Level	Explanation
Wealth (W)	Wealthy(W_1)	12 units property
	Less Wealthy(W_2)	6 units property
Expectation (E)	No expectation of future tax amnesty (E_1)	Probability 0%
	The expectation of future tax amnesty (E_2)	Probability 75%
Tariff periods (T)	3 periods (T_1)	(2%, 3%, 5%)
	2 periods (T_2)	(2%, 5%)
	2 periods (T_3)	(2%, 8%)
Tax Penalty (D)	No tax penalty (D_1)	0%
	Lower tax penalty (D_2)	200%
	Higher tax penalty ($D_{3)}$	400%
Audit (P)	Loose audit (P_1)	Probability 25%
	Tighter audit (P_2)	Probability 75%

As is common in laboratory economic experiments, experimental subjects are students who, in this case, represent taxpayers who have different characteristics. For this reason, the right reward media is used to eliminate innate characteristics according to the induced-value theory (Smith, 1976). Based on the 5 factors examined, the experiment can be simulated into 2x2x3x3x2= 54 treatment combinations. Each treatment is assigned to 3 students. Therefore, this experiment requires 54x3= 162 students. For efficiency, each student experimented 3 times. The 162 students were randomly assigned to the 54 treatments in every replication.

When the tax amnesty policy is implemented, the taxpayers know very well the consequences of their actions to decide whether to participate and report all or part of their assets. When taxpayers participate or report all their assets, they lose money to pay the tariffs, but they feel safe because they will not be subject to a 200% fine after an examination after the tax amnesty period ends. It is different if they do not participate in the tax amnesty or do not report all their assets. They are lucky because they do not pay the ransom, but after the tax amnesty period ends, there is a possibility that they will be subject to a 200% fine when investigated.

Experimental subjects will be rewarded for the decisions taken. The reward that each subject will receive, as explained above, is a function of (cash + assets – ransom – fine). Each subject will pay attention to this reward in his decision to participate in tax amnesty and honestly report the results of his experiments on his decision sheet. If each subject behaves in his decision-making based on this incentive structure, then the environmental control principle in the experiment has been fulfilled so that its innate characteristics can be controlled according to the induced-value theory (Juanda, 2021).

Before the experiment was carried out, the researcher had provided information that was spread to all IPB students that an experiment on tax amnesty would be conducted using an experiment in a classroom based on a predetermined time and place.

For this reason, the respondents selected in the experiment can apply to all IPB students from various majors from semesters 1 to 8. In addition, respondents were given socialization beforehand until the respondents really understood the experiment to be carried out.

Model

The experimental design used in this study is a Factorial Randomized Block Design (RAKF) with five factors incorporating replication components. The RAKF model used is as follows:

$$Y_{ijklmn} = \mu + \alpha_i + \beta_j + \delta_k + \gamma_l + \theta_m + \Phi_n + (\alpha\delta)_{ik} + (\alpha\gamma)_{il} + (\alpha\theta)_{im} + (\alpha\beta)_{ij} + (\delta\gamma)_{kl} + (\delta\theta)_{km} + (\delta\beta)_{kj} + (\gamma\theta)_{lm} + (\gamma\beta)_{lj} + (\theta\beta)_{mj} + (\alpha\beta\delta)_{ijk} + \cdots + (\alpha\beta\delta\gamma\theta)_{ijklm} + \varepsilon_{ijklmn}$$

where $i = 1, 2$; $j = 1, 2$; $k = 1, 2, 3$; $l = 1, 2, 3$; $m = 1, 2$; $n = 1, 2, 3$,
with,

Y_{ijklmn} 1. Percentage of assets unit declared for the factor of the *i*-th wealth, *j*-th expectation in the future, *k*-th tariff periods, *l*-th tax penalty, and *m*-th audit at the *n*-th replication.
2. Percentage of assets value declared for the factor of the *i*-th wealth, *j*-th expectation in the future, *k*-th tariff periods, *l*-th tax penalty, and *m*-th audit at the *n*-th replication.

μ Overall average percentage of reported assets unit (regardless of 5 factors)

α_i Effect of the *i*-th wealth factor (*i* = 1 for low wealth, *i* = 2 for high wealth)

β_j Effect of the *j*-th expectation factor (*j* = 1 for probability 0%, *j* = 2 for probability 75%)

δ_k Effect of the *k*-th tariff period factor, (*k* = 1 for the tariff of 3 periods, k = 2 for the tariff of 2 periods, k = 3 for the tariff of other 2 periods)

γ_l Effect of the *l*-th tax penalty factor (*l* = 1 for a 0% penalty, *l* = 2 for a 200% penalty, *l* = 3 for a 400% penalty)

θ_m Effect of the *m*-th audit factor, (*m* = 1 for probability 25%, *m* = 2 for probability 75%

Φ_n Effect of the *n*-th replication or block, (*n* = 1, 2, 3)

$(\alpha\beta)_{ij}$ Effect of the interaction between the *i*-th wealth factor and the *j*-th expectation factor

ε_{ijklmn} Error term for the factor of the *i*-th wealth, *j*-th expectation in the future, *k*-th tariff periods, *l*-th tax penalty, and *m*-th audit at the *n*-th replication

The model will be analyzed using variance analysis (ANOVA) using SPSS software. If the F-test statistic shows the tested factors and their interactions have a significant effect on the response, and then Least Significant Different (LSD) tests will follow (Juanda, 2021).

Experiment procedure

The experimental design here uses experimental subjects (students) who are motivated to get cash rewards (induced value theory), which represent the incentives obtained by taxpayers in reality when making decisions, so that their innate characteristics can be controlled (Friedman & Sunder, 1994; Juanda, 2009, 2021). The population of this research is all the tax evaders who should have joined tax amnesty with the understanding of the consequences if they decide to join tax amnesty programs

where they have to pay tax based on the level of tariff or if they decide not to join amnesty programs which may be charged with a tax penalty. The sample of students used as experimental subjects here has the same understanding as the taxpayers who should have joined tax amnesty programs.

In this experiment, the student acts as a taxpayer with a given unit of assets and cash. Each asset represents high wealth and low wealth. The taxpayers with low wealth were given a total of six units with a value ranging from 10 million rupiahs to 500 million rupiahs, and cash held of IDR 7 million, while the taxpayers with high wealth were given a total of twelve units with the value range from 550 million rupiahs until 6 billion rupiahs and cash owned by IDR 982.5 million. Some of the assets owned have been paid taxes, and others have not been paid, so the taxpayers here are non-compliant and have the right to follow the tax amnesty policy.

The enumerator or researcher will then act as a government by conducting a tax amnesty program. For this research, there are two types of tariff periods and the 2 tariff period is where the lowest rate 2%, is extended for six months, while the 3 tariff period is following with the 2016 tax amnesty programs. At the end of the period, the taxpayer will be audited with a given probability for each taxpayer; taxpayers who get the opportunity checked and are found not reporting all their assets will be given a tax penalty. So the taxpayers could choose whether to fully report their assets in exchange for paying for tax ransoms or avoid participating in tax amnesty programs with the probability of being given a tax penalty for the number of hidden assets. At the end of the experiment, the student will be given an incentive converted into a rupiah according to how much of the wealth is left. Each subject's incentive, as explained above, is a function of (cash + assets – ransom – fine).

In addition to the pull mechanism, the government also implements a push mechanism, namely providing high fines if the taxpayer does not comply and does not want to follow the tax amnesty policy. In the 2016 tax amnesty, the penalty applied in Indonesia was 200%. According to Alm et al. (1990), although the level of tax compliance will decline in the long run, tax amnesty followed by firm measures from the government can increase long-term tax compliance. For example, by increasing tax audits or by increasing tax penalties. This research was conducted to study the effects of 5 factors (wealth, expectation of future tax amnesty, tariff periods, tax penalties, and audit probability) on tax compliance.

RESULT AND DISCUSSION

The flow of discussion in this study will be divided based on the response of this study, namely declared assets units, the value of reported assets, and taxpayer participation. Each discussion in the section will analyze the primary factor along with the interaction between elements in each response. Analysis of variance (ANOVA) will be used since it fulfilled normal distribution and homogeneity assumptions; after that, a simple bar chart graphics will follow the study to see the means between the level of each factor.

The first response is assets units declared. In this response, the only amount of assets units is focused on determining whether the factors will influence the decision of units stated. The analysis used was ANOVA using the model above. Low wealth taxpayers are given six asset units, while high wealth taxpayers are given 12 asset units. The result of ANOVA in Table 3 found that the factor of wealth, expectation, tax penalty, and audit were significant.

Table 3. ANOVA of the percentage of assets unit declared by 5 factors (wealth, expectation, tariff periods, tax penalty, and audit probability)

Dependent Variable: Unit_Declaration					
Source	Type III Sum of Squares	df	Mean Square	F	P-value
Corrected Model	107879.490[a]	73	1477.801	3.539	0.000
Intercept	1009816.002	1	1009816.002	2418.543	0.000
Wealth	3411.593	1	3411.593	8.171	0.005
Expectation	10303.98	1	10303.980	24.678	0.000
Tariff	1650.694	2	825.347	1.977	0.142
Tax Penalty	35426.137	2	17713.069	42.423	0.000
Audit	2090.241	1	2090.241	5.006	0.027
Replication	2555.036	2	1277.518	3.060	0.050
Wealth * Tariff	4458.915	2	2229.458	5.340	0.006
Wealth * Tax Penalty	1713.076	2	856.538	2.051	0.132
Wealth * Audit	1216.433	1	1216.433	2.913	0.090
Wealth * Expectation	162.717	1	162.717	0.390	0.533
Tariff * Tax Penalty	1337.554	4	334.389	0.801	0.527
Tariff * Audit	1614.108	2	807.054	1.933	0.149
Tariff * Expectation	125.107	2	62.554	0.150	0.861
Tax Penalty * Audit	6610.28	2	3305.140	7.916	0.001
Tax Penalty * Expectation	1338.785	2	669.393	1.603	0.205
Audit * Expectation	5290.203	1	5290.203	12.670	0.001
Interaction of 3,4, and 5 factors	28574.633	45	634.992	1.521	0.034
Error	59289.356	142	417.531		
Total	1176984.848	216			
Corrected Total	167168.846	215			
a. R Squared = .645 (Adjusted R Squared = .463)					

Significant at 5% and 10% (red color) levels of significance

This means that the difference in a taxpayer's wealth affects the taxpayer's willingness to report the unit of his assets. As seen in Figure 2, taxpayers with lower wealth tend to include their assets to be reported in the tax amnesty program. This data is convenient with the finding in the current condition in Indonesia, where high wealth or higher income taxpayers tend to avoid paying their taxes.

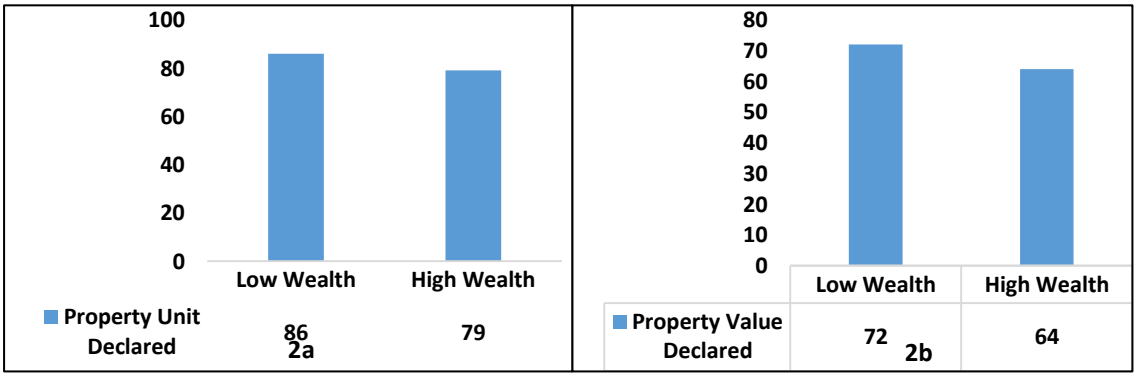


Figure 2. The difference between high wealth and low wealth in assets

The cause, first of all, is depicted above, where the higher wealth taxpayers feel unfair towards the progressive tax system, where they should pay the same rates without considering the amount of their wealth. Second, in this program, both taxpayers with high and low wealth are imposed the same amount of tax penalty, which is 200% (or 400%), so this will put a great deal on lower wealth should they be found being dishonest towards their reports. The amount of penalty charged to taxpayers with lower wealth is unusually high—they may have some wealth valuable enough to keep from

reporting them, but the idea of being charged 200% (or 400%) will undo their intention, so they likely choose to comply.

Conversely, taxpayers with higher wealth have 7% fewer units declared in the program than those with low wealth (Figure 2a). In this experiment, the top wealth gave assets with very high value. So, the tendency for high wealth to avoid participating in tax amnesty programs is quite high. They have the incentives to keep the wealth from being reported. Because if they can avoid being audited, the wealth will belong to them entirely without being charged by paying tax ransoms in tax amnesty programs. This thought is what most high-wealth taxpayers will choose, so the likelihood of compliance of them indeed is low.

This is consistent with the response of **assets value declared** (Figure 2b). The ANOVA of **assets value declared** can be seen in Table 4, which shows that the factor of wealth, expectation, tax penalty and audit were also significant. This means that the difference in a taxpayer's wealth affects the taxpayer's willingness to report the value of his assets. Taxpayers with lower wealth tend to include their assets to be reported in the tax amnesty program.

The tax penalty factor is also statistically significant, according to Table 3. The high tax penalties on the tax amnesty program affect the taxpayer's willingness to report the unit of his assets. As seen in Figure 3, when taxpayers are faced with a twice as high tax penalty, their compliance will rise for about 10% more units reported. Indonesia applied a 200% tax penalty at the end of tax amnesty programs—according to this experiment, the higher the tax rate, the higher the tax penalties encourage the taxpayer to be more compliant. So, if Indonesia set up the tax penalty higher, it would result in higher compliance. Although practically speaking, the current value of the tax penalty is already high enough to push some taxpayers to report their taxes. This finding is in line with Juanda et al. (2010) study that the higher the rate of tax penalties, the higher the level of tax compliance is.

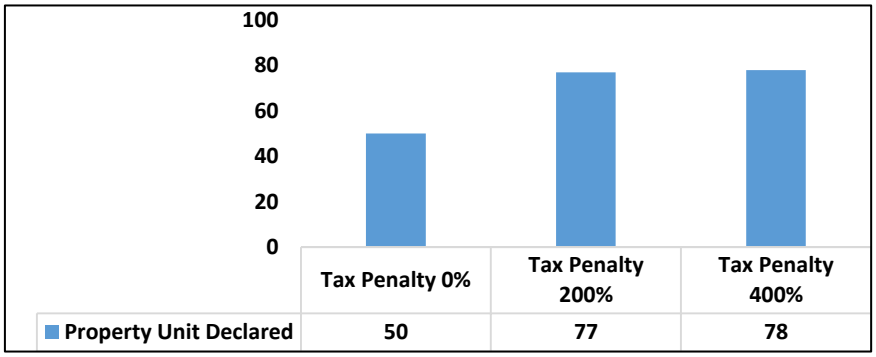


Figure 3. The difference between a tax penalty of 200% and a tax penalty of 400% in assets unit

Commonly, taxpayers will choose the lowest rate possible for paying their tax rates in the tax amnesty programs. In the 2016 tax amnesty, the lowest rates are in the first three months—and according to data collected from DJP—the most assets declared are in the first period. For this experiment, we tried to extend the lowest tariff period of 2% for six months (July-December 2016), so the tax amnesty only had two periods of tariff (2% and 8%).

Figure 4 shows a significant difference in the response in 2 tariff periods between low and high-wealth taxpayers. However, from Figure 4 the amount of assets unit declared from low wealth taxpayers is still higher than those declared from high wealth—no matter how the periods are regulated—the lowest rate tariff would always be the favorite.

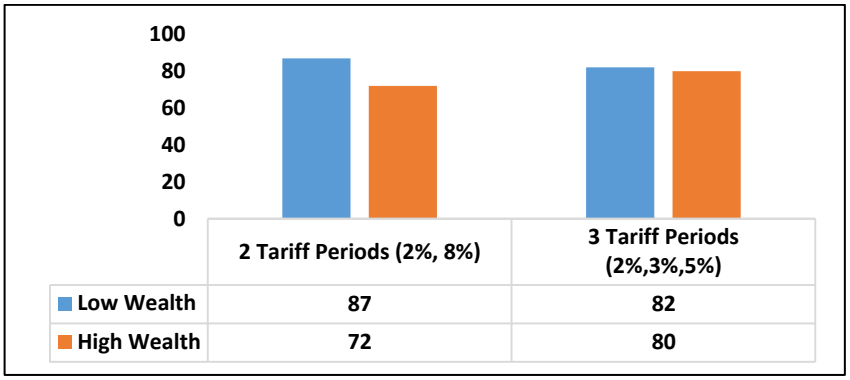


Figure 4. The interaction between wealth and tariff periods in assets unit declared

A more detailed picture of each asset unit reported in 2 tariff periods can be seen in Figure 5—and as in the 2016 tax amnesty—the lowest rate in the first period is the favorite, especially for lower-class taxpayers. Still, in the last period, more high-wealthy taxpayers have participated. So the effect of wealth depends on the tariff period applied, or there is an interaction between the two factors

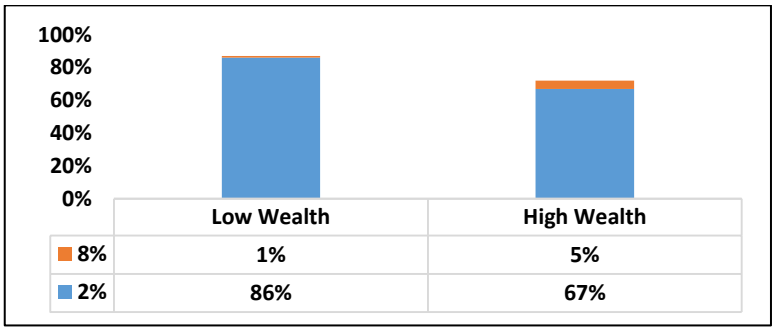


Figure 5. Detailed assets unit declared during 2 tariff periods

The probability of a tax audit also has a significant role in determining tax compliance, especially when a lower tax penalty is applied. The effect of tax audit and its interaction with the tax penalty factor was statistically significant according to ANOVA in Table 3, so the audit effect will be substantial. As shown in Figure 6, when taxpayers are faced with loose audit probability and lower tax penalty, the number of units declared is much smaller when compared to the units declared in the condition of stricter audit probability and higher tax penalty. If viewed from a lower tax penalty, the reported units increased by 11% when the taxpayer was faced with a more stringent audit probability. Taxpayers will be charged with a 200% tax penalty on their assets if dishonesty is found during the tax amnesty programs—moreover, with more rigorous audit probability—the chance of being audited rose. This condition is enough to push the taxpayers to report their assets unit when faced with more stringent probability.

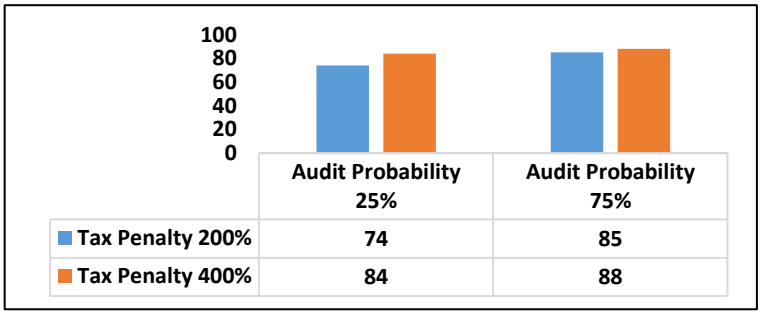


Figure 6. The interaction between tax penalty and audit probability in assets unit declared

Taxpayers would think twice before deciding to avoid paying their taxes in higher audits, so the level of compliance is high in this condition. However, in the conditions of 400% tax sanction—even though the audit was increased—the response of reported units did not increase much. The reason is that—although there is a rise of units reported in audit chance of 75%—the level of tax penalty of 400% is already high enough so the taxpayers would not find any difference between a lower audit and a higher audit. They focus on how high the penalty will be if they were to avoid paying taxes. The difference in response depends on the tax penalty. If a condition of a high penalty and high audit were met, taxpayers would have no reason to avoid their taxes. So, they will comply. This result is in line with the result of Alm et al. (1990) that a good tax amnesty should be followed by government enforcement in the form of an audit to increase tax compliance.

Table 4. ANOVA of the percentage of assets value declared by 5 factors (wealth, expectation, tariff periods, tax penalty, and audit probability): tests of between-subjects effects

Dependent Variable: Value_Declaration					
Source	Type III Sum of Squares	df	Mean Square	F	P-Value
Corrected Model	107456.721[a]	73	1472.01	3.137	0.000
Intercept	1106559.542	1	1106559.542	2358.142	0.000
Wealth	1330.165	1	1330.165	2.835	0.094
Tariff	2300.524	2	1150.262	2.451	0.090
Tax penalty	39106.748	2	19553.374	41.669	0.000
Audit	3682.87	1	3682.870	7.848	0.006
Expectation	5655.701	1	5655.701	12.053	0.001
Replication	4485.801	2	2242.901	4.780	0.010
Wealth * Tariff	4044.58	2	2022.290	4.310	0.015
Wealth * Tax penalty	2292.301	2	1146.151	2.443	0.091
Wealth * Audit	1376.323	1	1376.323	2.933	0.089
Wealth * Expectation	1072.795	1	1072.795	2.286	0.133
Tariff * Tax penalty	860.804	4	215.201	0.459	0.766
Tariff * Audit	1021.069	2	510.535	1.088	0.340
Tariff * Expectation	336.888	2	168.444	0.359	0.699
Tax penalty * Audit	6431.537	2	3215.769	6.853	0.001
Tax penalty * Expectation	1625.894	2	812.947	1.732	0.181
Audit * Expectation	3920.757	1	3920.757	8.355	0.004
Interaction of 3,4, and 5 factors	27911.966	45	620.266	1.322	0.112
Error	66633.578	142	469.251		
Total	1280649.841	216			
Corrected Total	174090.299	215			

a. R Squared = .617 (Adjusted R Squared = .420)

Significant at 5% and 10% (red color) levels of significance

Assets values and taxpayer participation are discussed together in this section. The asset value—referred to in this study—is the number of assets owned by each taxpayer; between low and high-wealth taxpayers, there is a very significant difference in asset value. As explained in the experiment procedure, for low-wealth taxpayers, the range of assets value is 10 million rupiahs to 500 million rupiahs. While for high-wealth taxpayers, the range for assets value is 550 million rupiahs to 6 billion rupiahs. Taxpayer participation is measured by whether the taxpayer participates (as in reporting his assets) or not in the tax amnesty program.

As shown in Figure 7, the higher tax penalty will increase assets value stated in the response of assets value declared. There is 1% more asset value declared when taxpayers face a higher penalty. This is calculated as a percentage of the value of billions of rupiah.

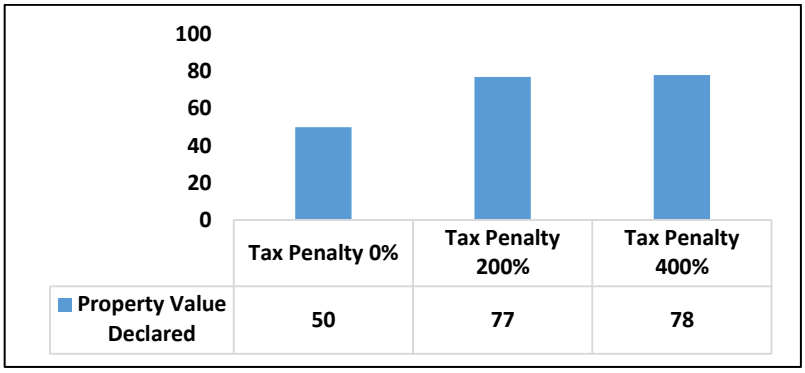


Figure 7. The difference between a tax penalty of 200% and a tax penalty of 400% in assets value declared

This suggests that a tax amnesty program with a higher tax penalty rate will improve compliance, as seen in the previous response of declared asset units. High tax penalties force the taxpayer to report his assets; when the rate of tax penalties is increased to 400%, the amount of assets value indicated by the taxpayer increases by 1%. The tax penalty rate undoubtedly will affect the taxpayer's decision in this program; they are forced to think how much they will be charged if they are dishonest. If they are found dishonest at the end of the program, they will be charged 200% of their valuable assets. Juanda et al. (2010) conducted research with an experimental setting—the tax penalty of 200% and audit probability of 75%—and found that the higher the tax penalty rate is, the higher the level of compliance will. The same also happens with the factor of audit probability, where the higher the chance of being audited, the higher the value reported will be (See Figure 8).

The tax amnesty programs in Indonesia are followed by a type of audit as stated in Financial Openness in PMK Number 70/PMK.03.2017, where every bank has to report to tax officers about the information of taxpayers with more than IDR 1 million assets in their accounts. This rule is a way for the government to ensure that no tax evaders will be exempt from paying taxes. The amount of IDR 1 million is primarily to target the higher wealth taxpayers because they are more likely to disobey, as proven in this experiment. Government enforcement by doing an audit of tax amnesty programs will raise compliance. The higher The probability for tax evaders to be audited, the more compliant they will be—thus increasing tax compliance in general, thereby increasing tax compliance in general. As stated by Alm et al. (1990) that the tax amnesty programs needs to be followed by government efforts to improve tax compliance.

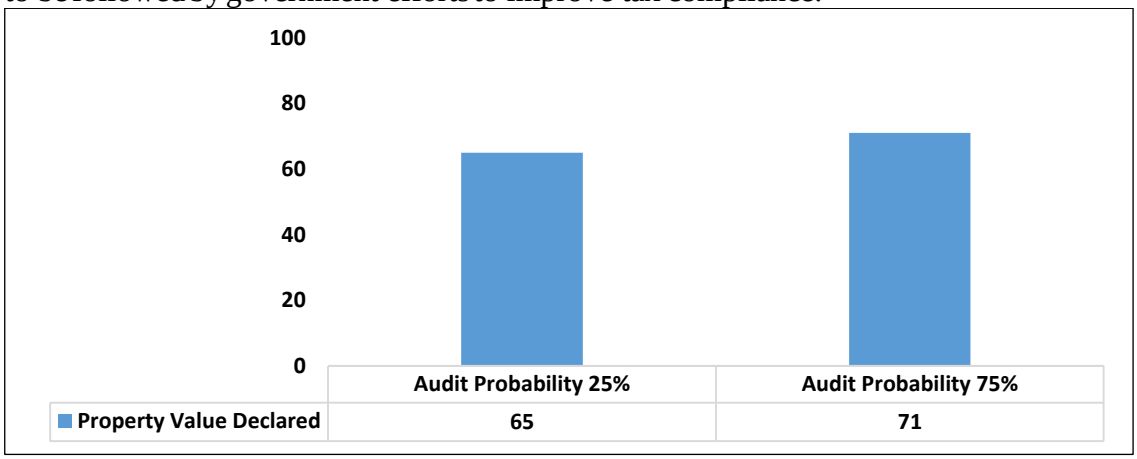


Figure 8. The difference between audit probability of 25% and audit probability of 75% in assets value declared

As shown in Table 4, there is an interaction between tax penalty and audit probability effects. Figure 9 shows a 200% tax penalty; there is a difference in response when the taxpayer is faced with a higher audit probability—when the audit probability opportunity increases to the stricter chance of being audited—the number of reported assets value increases by 14%. While at a tax penalty of 400%, both did not experience significant differences in response, indicating that increasing audit probability opportunities will improve taxpayer compliance. However, in a tax penalty of 400% — because the tax penalty rate is high—there is no difference in response when taxpayers are faced with higher audit probability. At each audit probability level, the higher the tax penalty, the higher the amount of reported assets value. This fact is consistent with several studies that the tax amnesty program accompanied by government efforts in the form of tax penalties and inspection opportunities will increase taxpayer compliance (Juanda et al., 2010; Alm et al., 1990).

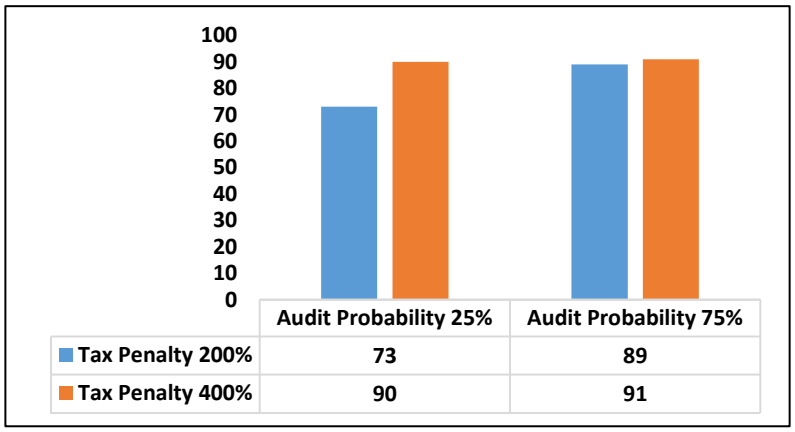


Figure 9. Interaction between tax penalty and audit probability

From ANOVA in Tables 3 and 4, there are interactions between wealth and tariff period factors in both responses. Similar to Figure 4, Figure 10 also shows a significant difference in the response in 2 tariff periods between low and high-wealth taxpayers. However, from Figure 10 the amount of assets value declared from low wealth taxpayers is always higher than those declared from high wealth—no matter how the periods are regulated—the lowest rate tariff would always be the favorite.

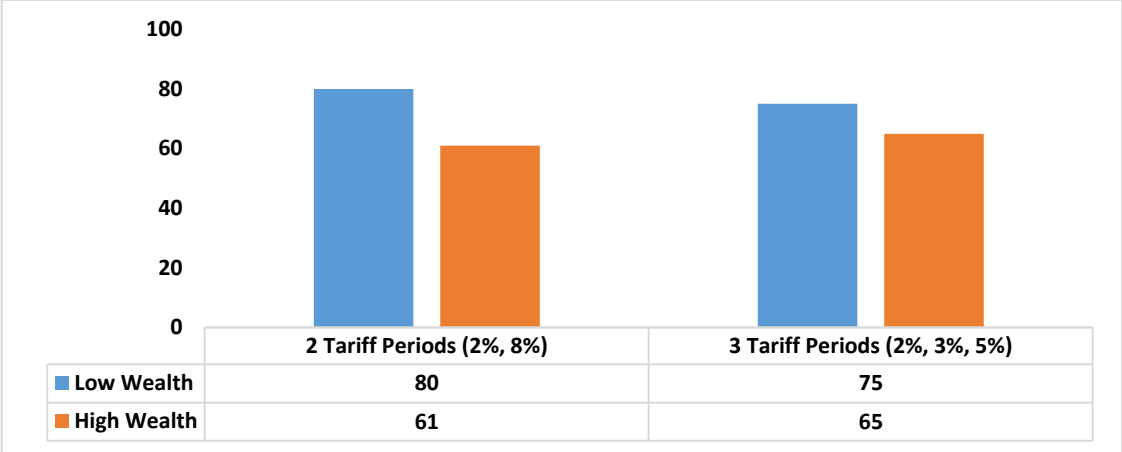


Figure 10. The interaction between wealth and tariff periods in assets value declared

A more detailed picture of each asset's value reported in 2 and 3 tariff periods can be seen in Figure 11—and as in the 2016 tax amnesty—the lowest rate in the first period is the favorite. The taxpayers who want to join the tax amnesty programs will consider

paying them in the first period because having the lowest tariff—to pay with their previously avoided tax—is considered profitable for them. The number of valuable assets each taxpayer has decides to comply. Taxpayers need to consider which periods they need to join in paying the smallest possible tariff value. Therefore the first period with the lowest tariff of 2% has the most significant amount of assets value declared.

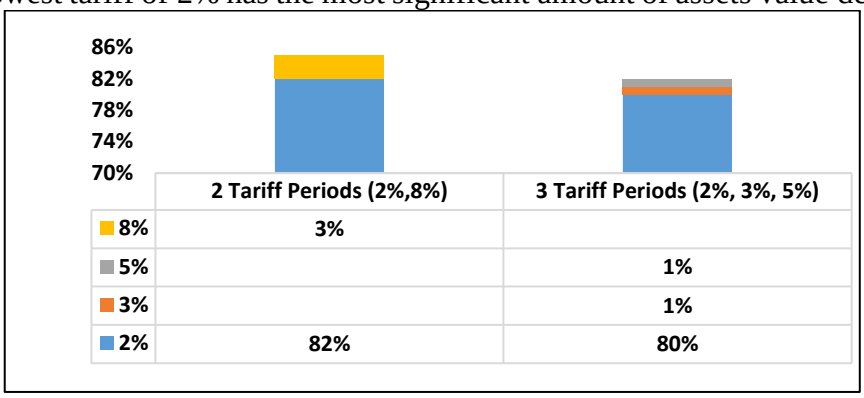


Figure 11. Detailed participation between 2 tariff periods and 3 tariff periods on property value declared

The 2016 tax amnesty program in Indonesia is divided into three periods, each for three months. The first period has the lowest tariff of 2%. Therefore, if the tax evaders decided to join tax amnesty in the first period, they only needed to pay 2% of their wealth. This fact is the best tariff for tax evaders who reason because once they pay their share of 2% of their wealth, they will be free from their previous tax evasions, so the participation in the first three months is the highest. The dishonest taxpayers who seek forgiveness will join the first period, where the rate is the lowest. This taxpayer is indeed in line with the fact that most of the tax collected in the tax amnesty programs are mostly from the first period; taxpayers use the first three months with the lowest rates to pay the taxes. In one of the experimental treatments, the optimal lowest tariff is 2% extended to six months period. Suppose the government wants to get more tax revenue in the tax amnesty program. In that case, the lowest tariff period needs to be extended so that more taxpayers can participate in the program.

As seen in Figure 11, the two tariff periods make no difference in increasing the amount of tax collected or the number of people participating. In the two tariff periods, the tariff increased drastically to 8%, with only 3% of taxpayers participating. The huge gap between the first and second periods affects the taxpayers to join tax amnesty in the first period. However, looking at the two tariff periods, the lowest tariff of 2% is still the favorite where most taxpayers participate. After all, the taxpayers still want to join mostly in the period where the tariff is the lowest.

In addition to fines and tax audits that can be used as tools in the tax amnesty policy to make taxpayers comply, the government must be firm in committing that this policy is the last one. Expectations can arise when the government is unable to keep these commitments. The results of this experiment can also be seen that when the tax amnesty policy has the opportunity to reoccur, taxpayers will become disobedient by not reporting their large assets to the current tax amnesty and reporting these assets at a second opportunity. It can be seen in Figure 12 that the value of the property is greater if the tax policy is carried out twice. This happens because taxpayers wait and report their assets at a second opportunity. The commitment to make the tax amnesty policy the last and most comprehensive socialization for all people can make this policy obtain previously hidden tax revenues.

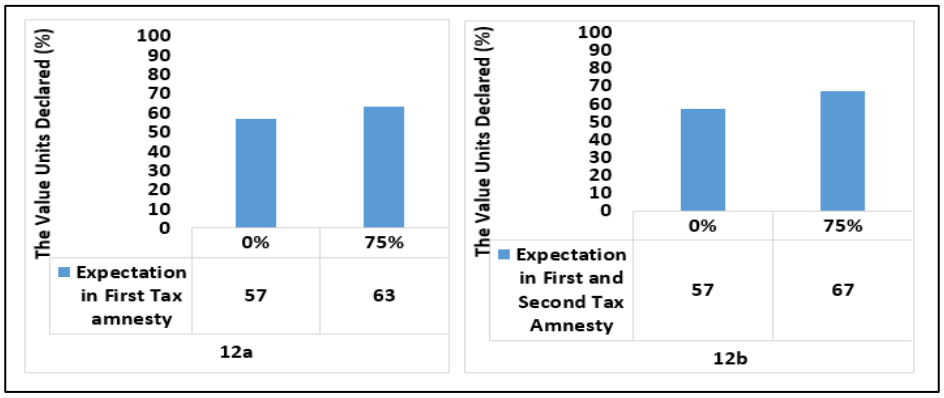


Figure 12. Probability of tax amnesty in future

Figure 12a is the response of the property value reported in the first tax amnesty. It can be seen that the response on property reported by taxpayers is relatively the same or not statistically significant difference—between those who may have tax amnesty in the future and those who have no opportunity of the tax amnesty in the future. However, when there is a second tax amnesty policy—shown in Figure 12b—there is an additional percentage of the reported property value of 4%. The results of this experiment imply that taxpayers become disobedient when there is an opportunity for tax amnesty in the future.

CONCLUSION AND RECOMMENDATION

Conclusion

The level of taxpayer wealth affects tax compliance—proven by the three responses observed in this experiment—that the higher wealth taxpayers tend to disobey. The tax penalty affects tax compliance: the higher the tax penalty, the higher the compliance will be. There is an interaction between the tax penalty and audit probability effects. There is a significant increase in tax compliance at a 200% tax penalty when taxpayers face a higher possibility of auditing.

The government's effort to impose fines and audits shows a greater effect on tax compliance. The tax amnesty policy should only be implemented once because if people expect a similar policy to be applied in the future, they will wait for the policy so that tax compliance is low. A tax amnesty policy—while it can increase tax revenues in the short term—could reduce tax compliance, especially if the government imposes a second tax amnesty in the future.

Recommendation

Indonesia should focus on taxpayers with high wealth to create stronger law enforcement to increase taxpayer compliance. A stricter tax system is a must as a follow-up to the tax amnesty program to improve tax compliance, specifically for wealthy taxpayers. However, it is also necessary to look at the impact of this policy on other possible problems, such as capital flight. It needs further and in-depth research before making a policy.

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