The Optimum Level of Tax Compliance Based on Power of Authority and Trust in an Antagonistic Climate

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Abstract:

This study aims to determine the optimum level of tax compliance. The optimum level is used for evaluation of tax compliance at one time period. Power of authority and trust in authority are applied to explain tax compliance based on Slippery slope framework.

This research used tax report that presented in the financial statements. All data processed from 105 companies listed in the Indonesian capital market during 2007 - 2015. Power of authority is measured by probability audit and fines, while appeal to the tax court for trust in authority, and ratio tax burden to income before tax for tax compliance.

The optimum point is performed by first differential function of Tax compliance on Power of Authority and Trust in Authority. The result tax compliance is below the optimum level, power of authority and trust in authority are above the optimum level.

Increased tax compliance is conducted through inspection procedures effectively, the determination of fair fines, and the use of administrative systems based on technology that can be accessed by taxpayers. Tax authority should be able to change from antagonistic climate into synergetic climate.

Keywords: Tax compliance, Tax authority, Antagonistic climate, Power of authority, Trust in authority.


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1. Introduction

Tax revenues by the government require a special tax administration system, which can accommodate public livelihood in paying taxes. One such system is the Self Assessment System (James and Alley, 2004). In this system the taxpayer has an obligation to calculate, pay, and report the amount of tax on income or economic benefits received. The system also requires taxpayers to take responsibility for tax returns document submitted to the tax authorities (Kaur, 2016; Udin and Wahab, 2013). The amount of authority given by the tax authority to the taxpayer makes the taxpayer compliance level becomes very important. This authority may raise the risk of taxpayers to avoid their obligations. As a counterweight, the tax authorities also have the authority to strictly enforce the rules so as to coerce taxpayers to abide by the tax regulation (James and Alley, 2004; Mahboud, 2017).

The level of tax compliance in the tax environment can be in a series between antagonistic climate and synergic climate. In antagonistic climate the relationship between tax authorities and taxpayers is represented as police and robbers, while synergic climate such as service and clients (Kirchler et al., 2008; Benk and Budak, 2012). This idea leads to the idea that tax compliance can be explained by two dimensions: power of tax authority and trust in authority. Dimensions and interactions both affect taxpayer compliance levels (Gangl et al., 2015). Under the assumptions used in the slippery slope framework (SSF) (Kirchler et al., 2008), power generates an antagonistic climate situation, which revitalizes the tax authority and taxpayers such as cops and robbers. In such a situation the tax authority as a police officer tries to detect the naughty taxpayer, who is represented as a robber. On the other hand these naughty taxpayers try to escape from the supervision of the tax authority, and if possible avoid taxes (Benk and Budak, 2012). Thus in antagonistic climate, the taxpayer becomes obedient only with the law and the provisions of taxation even if taxpayers consider that the tax authority has high power (Benk and Budak, 2012; Suryanto and Thalassinos, 2017).

Thus, in the concept of trust in authority, the community, both individually and in groups, has a good attitude towards the tax authorities. This good attitude creates voluntary compliance. Further voluntary tax compliance depends on trust in authority (Lisi, 2014). Taxpayers become obedient if the taxpayer feels treated well by the tax authorities (Benk and Budak, 2012). The interaction between the tax authorities and the society is positively interpreted that motivates both to keep each other (Lisi, 2014; Gangl et al., 2015; Setyawati et al., 2017).

In the concept of slippery slope framework (SSF), taxpayer compliance can be explained by power of authority and trust in authority (Gangl et al., 2015; Kogler, et al., 2013). This thought can be used to explain that the tax authorities may use the power of authority to enforce the taxpayer to be obedient. Increased power of authority will result in a forced level of compliance. With the assumption of diminishing return, when the level of compliance reaches the optimum point, the use
of power of authority will result in a sharp decrease in tax compliance. Similarly, with the trust in authority, the level of compliance generated from the trust in the tax authorities, if it has reached the optimum point, then the level of voluntary compliance of the taxpayer will drop sharply (Kirchler et al., 2008). So it is necessary for the government to know the optimum level of tax compliance.

This study aims to determine the optimum level of taxpayer compliance that can be used as a basis for evaluating compliance level performance at one time period.

2. Theory and Hypothesis

In the slippery slope framework structure, the tax compliance is built by the power of authority and trust in authority (Kirchler et al., 2013; Kogler et al., 2013). Power of authority is the behavior of tax authorities in making policies regarding audit probabilities, fines, and determination of tax rates (Andreoni et al., 1998; Misu, 2011) while trust in authority is using psychological determinants such as social norms and perception of fairness (Jimenez and Iyer, 2016). In the slippery slope framework (SSF) concepts apply a diminishing return in tax compliance (Kirchler et al., 2008). This means that if the taxpayer compliance level has reached the optimum level, the power of authority and trust in authority used by tax authority to increase taxpayer compliance will decrease sharply (Gangl et al., 2015).

2.1 Power of Authority

The results of several research reviews indicate that tax audits can play an important role and become central to improving tax compliance (Modugu and Anyaduba, 2014). The level and accuracy of tax audits may encourage taxpayers to be more careful in supplementing income tax statements and declaring the correct deductions to ensure their taxes payable. While taxpayers who have never been examined are tempted to report earnings less than actual earnings and make a false deduction in determining the amount of tax value owed.

Tax audits can also turn negative tax compliance levels into positive ones. Furthermore, fines affect slightly tax compliance, but the fines was judged to have a higher relation to taxpayer compliance level than audit probability (Kirchler et al., 2008). The effect tax rates on tax compliance shows inconsistent. Economic models of rational compliance prediction show that tax rates would affect compliance positively. Other researches state that by increasing tax rate increase tax evasion, and current phenomena impact of tax rate would depend on level of trust in authority (Kirchler et al., 2008).

2.2 Trust in Authority

The effect trust on tax compliance is higher and tax evasion is lower in society where tax authority is respected by the taxpayers (Lisi, 2014). Trust in authority can be explain with perceived of fairness. In empirical research, taxpayer compliance often refers to the discussion of fairness and justice (Kirchler et al., 2008). These
two words are often interpreted differently. But in the literal sense justice relates to legal issues, whereas fairness is used to explain a fairness value. There are three fairness areas considered as a conceptual framework of fairness. The three are distributive fairness, procedural fairness, and retributive fairness (Kirchler et al., 2008; Faizal and Palil, 2015).

Distributive fairness is a condition in which the taxpayer considers the fairness of the tax burden borne, and wants the tax burden treated in accordance with the performance achieved. If the tax burden is greater than in the other taxpayer who have the same income, then the level of compliance will be reduced (Faizal and Palil, 2015). When procedural fairness, which is an important component in perceived for fairness, is neutral, trustworthy, polite, praised, there is a respectful attitude from tax authorities (Dijke and Verboon, 2010). If the tax authorities and their staff treat taxpayers equally, in a responsible and respectful manner then trust in government and voluntary compliance will increase (Dijke and Verboon, 2010; Jimenez and Iyer, 2016). Redistributive fairness is an action performed by the tax authorities to ensure that the taxpayer has done its responsibilities in accordance with the provisions of taxation. If the tax inspection is done unreasonably and the process of examination felt disturbing by the taxpayer it will lead to a negative attitude addressed to the tax officials (Kirchler et al., 2008; Faizal and Palil, 2015; Thalassinos and Liapis, 2014). Unfavorable retributive justification can increase mis-trust and consequently can increase taxpayer non-compliance.

2.3 Antagonistic Climate
Social dilemma is an emerging conflict of interest between the taxpayer and the tax authority. In many cases, taxpayers generally want to pay the tax as little as possible. This is contrary to the interests of tax authorities who want to increase public funds as much as possible (Gangl et al., 2015). Power of authority and trust in authority are two instruments that can be used by the tax authorities to overcome the social dilemma. Theoretically, the two instruments have different, even contradictory, and mutually negate characters in giving effect to taxpayer compliance (Gangl et al., 2015). Power can strengthen trust with the cooperation between the tax authorities with the public. But too much power can damage trust (Lisi, 2014; Gangl et al., 2015). The interaction of both produces extreme conditions, namely antagonistic on one side, and synergic on the other. It depends on the climate created, whether to enforce strict rules for the community to be obedient, or to invite them to cooperate voluntarily (Kastlunger et al., 2013).

Although not being tested, (Benk and Budak, 2012) states that the influence of power of authority to tax compliance caused by investigative action. In antagonistic climate, enforcement of obedience prevents the growth of voluntary compliance. The reason is that power enforcement can undermine the social responsibility of society. This is because the asymmetrically built control mechanism is directed to the community by its forced adherence (Gangl et al., 2015). As tax authorities increase tax audits, this can be interpreted as a sign that the tax authorities position
themselves as cop against robber. This reflects the distrust of taxpayer’s honesty. It further reduces the trustworthiness of the taxpayer to the tax authorities (Kirchler et al., 2008). However, when the tax authorities respect the community, which is manifested by transparency and fairness in conducting inspection procedures, the trust and the compliance level of taxes are higher and tax avoidance becomes lower (Lisi, 2014).

3. Hypothesis Development

3.1 Optimum level of Power
In achieving tax revenue targets, the tax authorities use their power to pressure taxpayers to comply with taxation requirements, including paying taxes and penalties for negligence (Gangl et al., 2015). The desire to achieve tax revenue targets often makes the tax authorities use all efforts and does not observe that the policy issued has exceeded the optimal limit of taxpayers’ ability to pay off their tax obligations. As a result the tax policy that was originally expected to optimize taxpayer compliance did not happen. On the contrary the level of obedience is actually decreased because it has exceeded the optimal level. In the concept of SSF, this condition is called the addition of a decreasing level of compliance along with the greater use of authority by tax authorities (Kirchler et al., 2008). This means that the tax authority in using its authority has exceeded the optimum limit.

H1: The level of power authority which applied by tax authorities is above the optimum point.

3.2 Optimum level of Trust
Procedural fairness is one of the tools used by tax authorities to make decisions related to taxation provisions that affect voluntary compliance (Kirchler et al., 2008). Accurate decisions and not just self-importance can lead to public confidence on the tax authorities. Fair procedural can trigger taxpayers into obedience to decisions made by tax authorities (Dijke and Verboon, 2010; Jimenez and Iyer, 2016; Faizal and Palil, 2015). Fair procedural by the taxpayer is used as a guarantee of future outcomes of collectively social investments (Dijke and Verboon, 2010).

However, the fact that the taxpayer's voluntary trust to the tax authorities often does not arise because the decision made by the tax authorities is based more on the tax revenue target set in the State Revenue Budget. Attitudes of tax authorities that are more concerned with achieving tax revenue targets than the fair treatment felt by taxpayers affect the non-incidence of voluntary compliance. This can be used as an indication that the level of public confidence has not reached the optimum point.

H2: The level of public trust to the tax authorities is below the optimum point.
3.3 Optimum level of Tax Compliance

In SSF concept, taxpayer compliance level is influenced by power of authority and trust in authority (Kirchler et al., 2008; Lisi, 2014; Benk and Budak, 2012). This interaction is characterized by power, can contribute to trust, but excessive power destroys the level of trust (Benk and Budak, 2012; Lisi, 2014). This is because the trust is an interaction between the behavior of the taxpayer and the tax authorities. So, if the tax authority increases the inspection and the fine to lower the tax avoidance level, it will make compulsory compliance. This will affect the attitude of an honest taxpayer, then public confidence to the tax authorities is reduced (Kogler et al., 2013). The diminishing return in the SSF concept makes the increase in inspection and payments do not have the maximum impact on tax compliance. Increased inspections also add the cost of supervision. This condition makes tax compliance difficult to reach the optimum point.

H3: The level of tax compliance is below the optimum point.

4. Research methodology

This study uses data of 105 companies that have been examined by the tax authorities. All companies are listed in Indonesia Stock Exchange in 2013. Based on the financial statements of 105 companies, it is known that the tax authorities during 2007-2013 has reviewed the tax report in 358 companies. This means that for 7 years (2007-2013) there are several companies that are examined more than once.

Probability audits and fines are indicators used to measure power of authority, while trust in authority measured by perceived of fairness. If the taxpayer does not appeal after the results of audit issued by the tax authorities, the score perceived of fairness is 1. However, if the taxpayer appealed to the tax authorities the score perceived of fairness is 0. The level of tax compliance is measured by the ratio of the amount of tax paid to the earning before tax.

The models built in this research are: \( TC = a + b_1PoA + b_2TiA + b_3PoA*TiA \)
whereas:
TC = Tax Compliance
PoA = Power of Authority
TiA = Trust in Authority
\( a, b_1, b_2, b_3 \) = Parameter Model.

4.1 Determining the Optimum Point over Slippery Slope Framework Model

A function \( f \) with the origin \( S \) contains the point \( c \), then \( f(c) \) is the maximum value \( f \) on \( S \) if \( f(c) \geq f(x) \) for all \( x \) in \( S \) (Varberg et al., 2006). Usually the function we want to maximize will have a distance \( I \) as the area of origin. For example \( I = [a, b] \) contains the two end points; \( (a, b) \) contains only the left end point; \( (a, b) \) does not contain a single endpoint. The extreme value of a function defined on a closed interval often occurs at the end points. If \( c \) is a point \( f(c) = 0 \), it is called a stationary
point, because the graph \( f \) is horizontal or is said horizontal tangent. Extreme values often occur at stationary points.

Let \( f \) be defined in the first interval containing point \( c \). If \( f(c) \) is an extreme point, then \( c \) must be a critical point; i.e. \( c \) is one of the end points of \( I \), the stationary point of \( f'(c) = 0 \) and the singular point of \( f'(c) \) does not exist. To calculate the maximum value of a continuous function \( f \) on the closed interval \( I \), first find the critical points of \( f \) at \( I \), then compute \( f \) at each critical point, the largest value is the maximum value. Furthermore, the \( TC = a + b_1PoA + b_2TiA + b_3PoA \times TiA \) model reaches optimum if:

- Maximum on PoA, i.e. \( TC' = f(PoA, TiA) \frac{dPoA}{dPoA} = b_1 + b_3TiA = 0 \)
- Maximum on TiA, i.e. \( TC' = f(PoA, TiA) \frac{dTiA}{dTiA} = b_2 + b_3PoA = 0 \)

with the known optimum value of PoA and TiA, then function TC at the time of PoA and TiA can be said optimum TC.

5. Analysis

5.1 Data Processing

Power of Authority and Trust in Authority:
Power of authority is measured using Probability Audit and Fine as an indicator. Power of authority values are determined based on the model of Confirmatory Factor Analysis as shown below:

**Figure 1. Factor Analysis**

![Factor Analysis Diagram]

Chi-Square=0.00, df=0, P-value=1.00000, RMSEA=0.000

*Source: Data processing.*

Based on Figure 1 it is known that weights for Audit Probability are 0.50 and Fines 0.08. It appears that the probability audits are stronger in shaping the value of power of authority compared to fines. While trust in authority proxied by perceived of
fairness indicates that out of 105 companies examined 32 appealed, while 73 others did not file appeals, it indicates tax audits by tax authorities to enforce taxpayer compliance do not always result in forced compliance.

The Slippery Slope Framework Model:
SSF model is formed by using PoA and TiA as independent variable and TC as dependent variable. Descriptive statistics based on raw data exhibit in Table 1. Furthermore the format of the SSF model is shown in Table 2.

### Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variabel</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-Popt</td>
<td>105</td>
<td>.1488</td>
<td>.9959</td>
<td>.636137</td>
<td>.17043</td>
</tr>
<tr>
<td>T-Topt</td>
<td>105</td>
<td>.0000</td>
<td>1.0000</td>
<td>.695238</td>
<td>.46251</td>
</tr>
<tr>
<td>Tc_Tcopt</td>
<td>105</td>
<td>-.6845</td>
<td>.5538</td>
<td>.014472</td>
<td>.15976</td>
</tr>
</tbody>
</table>

Source: Data processing.

### Table 2: Coefficients (a)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>-.052</td>
<td>.097</td>
</tr>
<tr>
<td>POWER</td>
<td>.131</td>
<td>.154</td>
</tr>
<tr>
<td>TRUST</td>
<td>.096</td>
<td>.125</td>
</tr>
<tr>
<td>POWER x TRUST</td>
<td>-.183</td>
<td>.194</td>
</tr>
</tbody>
</table>

a Dependent Variable: Tax Compliance

Source: Data processing.

Table 2 above is a regression model that can be expressed by equations as follows:

TC = -0.052 + 0.131 PoA + 0.096 TiA − 0.183 PoA*TiA.

From the model, we can calculate the point where the PoA and TiA are optimum. The optimum values of the two variables are used to calculate the optimum TC.

**Optimum Point:**
Model : TC = -0, 052 + 0,131 PoA + 0,096 TiA − 0,183 PoA*TiA
The optimum TC point occurs when the PoA and TiA are optimum. The optimum point is performed by the first differential of TC function to PoA and TiA as follows:

TC* = f(PoA, TiA) dtc/dpoa = 0,131 − 0,183 TiA = 0
-0,183 TiA = -0,131
TiA = -0,131/-0,183 = 0,716
TC’ = f(PoA,TiA) \ dtc/dtia = 0,096 – 0,183 PoA 
-0,183 PoA = -0,096 
PoA = -0,096/-0,183 
PoA = 0,525

Substituting the optimum PoA and TiA values of the equation TC = -0.052 + 0.131 PoA + 0.096 TiA - 0.183 PoA * TiA , obtained the optimum value of TC 
TC = -0.052 + 0.131 (0,525) + 0.096 (0,716) – 0.183 (0,525) (0,716) = 0,0167.

a. Hypothesis Testing

Hypothesis testing is done by using a one-way test in accordance with the proposed hypothesis. Here are the hypotheses proposed in this study:

a. \( H_0: P – P_{opt} \leq 0 \) vs \( H_1: P – P_{opt} > 0 \)
b. \( H_0: T – T_{opt} \geq 0 \) vs \( H_1: T – T_{opt} < 0 \)
c. \( H_0: Tc – Tc_{opt} \geq 0 \) vs \( H_1: Tc – Tc_{opt} < 0 \)

Table 3 below explains the min, max, and mean values of power of authority, trust in authority, and tax compliance variables. The min, max and mean values are derived from the difference between the real value and the optimum value of each variable. These numbers are then used for hypothesis testing in this research. The test results as shown in Table 3.

<table>
<thead>
<tr>
<th>Variabel</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Var</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-Popt</td>
<td>105</td>
<td>-38</td>
<td>47</td>
<td>0,111</td>
<td>0,17043</td>
<td>0,029</td>
</tr>
<tr>
<td>T-Topt</td>
<td>105</td>
<td>-72</td>
<td>28</td>
<td>-0,0208</td>
<td>0,46251</td>
<td>0,214</td>
</tr>
<tr>
<td>Tc_TcTopt</td>
<td>105</td>
<td>-57</td>
<td>67</td>
<td>-0,0312</td>
<td>0,15976</td>
<td>0,026</td>
</tr>
</tbody>
</table>

\textbf{Source: Data processing.}

To test the hypotheses above, one-way t test is used, with result as follows:

<table>
<thead>
<tr>
<th>Variabel</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-Popt</td>
<td>6,682</td>
<td>104</td>
<td>0,000</td>
<td>0,111</td>
<td>0,078</td>
<td>0,144</td>
<td></td>
</tr>
<tr>
<td>T-Topt</td>
<td>-0,460</td>
<td>104</td>
<td>0,646</td>
<td>-0,021</td>
<td>-0,110</td>
<td>0,069</td>
<td></td>
</tr>
<tr>
<td>Tc_TcTopt</td>
<td>-1,999</td>
<td>104</td>
<td>0,048</td>
<td>-0,031</td>
<td>-0,062</td>
<td>0,000</td>
<td></td>
</tr>
</tbody>
</table>

\textbf{Source: Data processing.}

According to Table 3 and Table 4, the first hypothesis (H1) has significance value of 0,000, which is <0.05, so H1 is accepted. The second hypothesis H2 has significance
The hypotheses in this study state that:

\[ H1: \text{the authority level is above the optimum point of acceptance;} \]
\[ H2: \text{trust in authority is below the optimum point of rejection;} \]
\[ H3: \text{tax compliance is below the optimum point of acceptance.} \]

Based on the result of hypothesis testing H1, H2 and H3, it can be stated that power of authority and trust in authority are in position above the optimum point, while tax compliance is at the optimum point.

That is, tax authorities use tax audit approaches and fines in rational ways to maximize taxpayer compliance. Examinations made on compulsory not only of one type of tax, but on several types of taxes simultaneously with a high penalty obligation. Apparently such an approach resulted in an increasing number of tax evaders. This is reflected in the ratio of the amount of tax paid to the taxable income by getting smaller. The diminishing return assumption in SSF is also evident in this study.

Just as power of authority, trust in authority that is in the position above the optimum point, it does not make the level of compliance to be at a high point. In other words, the point of compliance is still below the optimum point. Trust in authority is measured by whether the underpaid taxpayer appeals or not to the Director General of Taxes. Apparently the result is about 70% of corporate taxpayers do not make an appeal when otherwise underpaid. This shows the impression of obedience, but in reality its compliance is simply because it avoids costly appeals, long periods of time, and the appeal opportunity received by the tax director general is relatively small.

The difference between the real value and the optimum value of power of authority variable and the tax compliance variable are similar (Table 3). Both have a relatively small variance compared to the difference between the real value and the optimum value of the trust in authority variable. Thus the data of these two variables (power of authority and tax compliance) are more homogeneous compared to trust authority. This is evident from the relatively high standard deviation value of the trust in authority variable as shown in Table 3. When associated with the data, in performing the inspection function and the imposition of tax fine, authorities shall apply equally to all taxpayers. However, in terms of trust in authority, two indicators set by the tax authorities were felt differently by the taxpayer. This can be interpreted as an indication that in carrying out the examination function, the tax authority has not yet operational standard system. It may also be indicated that the fines imposed on the taxpayer are responded differently by the taxpayer.
6. Conclusions and Recommendations

The forced power of authority and trust in authority that occurs by avoiding complicated administrative processes and consuming high costs, do not increase tax compliance. Instead it will only increase the number of tax evaders. While antagonistic climate can inhibit the increase of tax compliance.

Improvement of taxpayer compliance can be done by evaluating the standard operational procedures of tax audits that have been used. So that the process of tax audits carried out by the tax authorities felt the same by the taxpayers examined. Evaluate the amount of penalty for any sanction imposed by the rogue taxpayer. Since in antagonistic climate, power on authority and trust in authority variables are often contradictory in contributing to taxpayer compliance, so the tax authorities should be able to change from antagonistic climate to synergic climate.

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