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THE IMPACT OF AUDIT RATE, PERCEIVED PROBABILITY OF AUDIT ON TAX COMPLIANCE DECISION: [1] A Laboratory Experiment Study)

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ABSTRACT

This study aims to provide empirical evidence that audit rate and perceived probability of audit have impact on tax compliance. This study used a laboratory experiment to test the impact of economic factor (audit rate) and psychology factor (perceived probability of audit) on tax compliance decision. 78 participants were involved in this experiment from the master of science and doctoral program and accounting magister of FEB UGM Yogyakarta. This experiment used multilevel treatment experiment design and standard of fieldwork media for software. The results provide empirical evidence that audit rate and perceived probability of audit have significant relationship with tax compliance decision. Audit rate has indirectly related to tax compliance decisions by perceived probability of audit. We propose a model that is intended to clarify the mechanism through perceived probability of audit impact to tax compliance decisions. The result highlights the importance of obtaining a proper understanding of these factors for developing effective policies with the aim of increasing the level of compliance, and indicate that audit rate should be implemented to improve tax accuration report using perceived probability of audit by tax payer.

Keywords: *audit rate, perceived probability of audit and tax compliance decisions*

INTRODUCTION

Tax compliance decision has always been an interesting topic to discuss, as it is one of the many ethical decisions related to taxpayers' behavior. It is correlated to one's willingness to observe or not to observe a regulation that is put into practice. The commonly used approach to clarify the taxpayers' behavior has been associated with regulation factor.

The most recent development of research issues in relevance to tax compliance has started to consider social and psychological factor aside from regulation factor. This is based on the supposition that tax compliance decision is like a moral contract between the taxpayers and the government, which serves as a cost to be paid for having utilized public facilities, therefore social and psychological approach becomes necessary to put into account upon the implementation of tax regulation.

The tax regulation reform (of year 2000), which was implemented gradually by the government, has showed an evidence of the neces-

[1] The paper is presented in National Doctoral Colloquium: Measurement Issue and Contemporer Research in Business and Economics Science Doctoral Research, cooperation Master of Science and Doctoral Program Faculty of Economics and Business and Formadegama, in Yogyakarta, 2009.

sity of considering the factor of individual's behavior apart from that of economy in the implementation of tax regulation and has brought about the increase of taxpayers' compliance to pay tax. It was indicated by the fact that out of 11.7 millions of taxpayers with Nomor Pokok Wajib Pajak (NPWP), 88% of them, or fewer than 10 millions owned personal NPWP. Such number of personal taxpayers should have given quite significant contribution to the increase of tax income compared to other taxpayers. Somehow, the role of personal tax income turns out to reach 22.89% of the total tax income, compared to other sector's tax income in the National Revenue Budgeting and Expense (APBN). Of the total income tax revenue, 40% of them derive from the personal income tax, and 60% of which come from institutional income tax. The ideal comparison between the personal income tax and the institutional income tax is 80% and 20%[2].

There are some reasons why the government's personal income tax (PPh) revenue has low percentage. First, the government focuses on the personal income taxpayers so much that the potentials of medium and low taxpayers are ignored. Second, the government's policy to increase the number of personal income taxpayers through tax extensiveness (primarily the policy on civil servant's compulsory ownership for NPWP) could only give impact on the increasing number of NPWP holders, not on the higher level of tax compliance and tax ratio.

The tax reform that the government has made into practice should not only amend several tax laws but also cover two important things namely the improvement of tax administration and the strategy of raising the taxpayers' compliance by changing their perception of tax. The higher level of compliance implies the increase of tax compliance ratio that will give impact on the increase of tax revenue and finally will help the government to finance the national development and to pay off its debt.

Dubin, *et al*. (1990) used *state-level aggregate data* and found out that audit rate positively influences the level of compliance. Other researches use survey-produced data to estimate the impact of audit rate on tax compliance (Kinsey, 1992; Sheffrin & Triest, 1992). Their research result shows that tax compliance rises upon the rising audit rate and influences the perceived probability of audit.

This research aims to provide evidence that the implementation of various regulations concerning with tax policy, akin to audit rate is part of administration affair. It is closely related to taxpayers' compliance in carrying out *self-assessment.* The effect of audit on tax compliance still requires further observation since several empirical research outcomes indicate audit's direct and indirect impact on tax compliance.

In line with the condition of Indonesian taxpayers' incompliance, this research gives a bigger stress on the effect of the audit rate and the perceived probability of audit on tax compliance decision especially the personal income taxpayers. While the reason why personal income tax is preferable is that, the personal income taxpayer's compliance decision is more based on the process of cognitive behavior controlled by the very individual.

HYPOTHETICAL THEORIES AND DEVELOPMENT

Tax Compliance Decision

Theories that clarify tax compliance are mostly associated with the traditional economic approach that is based on agency and utility theories. The preliminary researches concerning with the embezzlement of tax were examined by Becker (1968) and were anchored in criminal economy theory. The re-

[2] The welcoming speech of the Republic of Indonesia's Minister of Finance in the 39th Asia-Pacific Institutional Tax Summit in Bali – Nov. 2009

search result shows that the amount of income embezzled depend upon the probability of being detected and upon the amount of fine the taxpayers must pay.

The research of Becker (1966) was further developed by Allingham & Sandmo (1972). Apart from criminal economic theory, this research also stresses on agency theory affirming that there is a contract of tax payment between the society and the government. The psychological tax contract is influenced by the government's policy, the behavior of the tax institution and officials (Feld, 2005).

Fundamentally, the society has never signed any contract concerning with the tax payment but those who have earned salary or income are obliged to pay tax[3]. On the other hand, the government should provide good public services as a return of the tax paid by the society.

This matter of psychological tax contract then encourages *moral hazard* and *adverse selection* as a result of asymmetrical information between taxpayers and tax institution and differences of objectives between the two parties. The taxpayers would prefer to do "*quasi-voluntary"* with stresses on their *self-interest* (Levi, 1988). On the contrary, tax institution would prefer an optimal method of compromising with taxpayers in a sense that external intervention in a form of sanction and award can encourage taxpayers' motivation to pay their tax.

Regarding the gaps between theories and facts of tax compliance, there are two arguments (Andreoni, *et al*., 1998; Slemrod & Yitzhaki, 2002; and Togler, 2003). The first argue that the probability of being detected is subjective; implying that individual perception to sense the signal of tax detection is higher than the objectivity of the probability of being detected. This argument indicates a psychological impact related to tax compliance decision. The second argument represents the traditional tax compliance model that focuses on economic arguments. This argument emphasizes solely the influence of economic factors on tax compliance decision. However, empirical evidences are found to prove that *standard economic model* is not adequate to clarify the scope of tax compliance better (Feld, 2002).

Various explanations above show that the contractual relationship in tax compliance needs further explanation from the perspective of psychological and sociological theory. Contractual relationship gives extra implication that tax policy implication can affect the taxpayers' behavior in complying or not complying with tax payment. The elaboration on why taxpayers comply or do not comply with tax regulations have been enormously given in accordance with economic perspective or using *deterrence model.* Somehow, this explanation is certainly not sufficient and comprehensive without referring to the moral condition of the taxpayers in an effort of explaining tax compliance decision, considering that the findings are still contradictory (Milliron & Toy, 1988).

Feld (2002) and Feld & Frey (2002, 2002a) give evidence that the psychological impact of audit process plays an important role in promoting tax compliance. The above finding strengthens the finding of Alm (1991), Alm & De Juan (1995) stating that the level of audit rate and audit strategy is found to give effects on tax compliance decision. Their research result indicates that random audit strategy and high level of audit can give impact on the promotion of tax compliance.

The certainty element of audit can make taxpayers more careful in making decision. Slemrod, *et al*. (2001) found out that taxpayers who receive information on them being

[3] "Tax is a contribution of the citizen, which is a debt, incurred obligatorily to an individual or institutions, based on Laws, without gaining any direct return and is used by the government for the social prosperity. ".Refer to Law 1 of Article No. 28, 2007 on the general stipulation and procedures of tax.

audited will be more careful in making tax report in the following period than those who don't receive information. Those researches above are compliant with the research findings of Friedland, *et al*. (1978); Becker, *et al*. (1987); Webly, *et al*. (1991).

However, some researches come up with different findings that no significant impact is found from audit on tax compliance (Reiganum & Wilde, 1985; Cowell, 1990; Erad & Feinstein, 1994). Their research shows that tax compliance is based not only on the audit but also on the probability of audit perceived by taxpayers. Tax compliance increases when taxpayers think of having chance for being audited.

The interesting finding related to the contradiction of probability of audit in clarifying tax compliance decision can be explained through utility theory. Some research findings on tax compliance decision using utility theory are still inconsistent (Allais, 1953; Ellsberg, 1961). Subsequently, researches on tax compliance started to employ utility theory by responding to some alternative models like *the rank-dependent expected utility model*, which was developed by Quiggin (1982), and Yaari (1987), *the decision-weighting model* from Kahn & Sarin (1988), and *cumulative prospect theory advanced* by Tversky & Kahneman (1992).

Their research result shows that basically, no one wants to pay tax, and upon being obliged to pay tax, their first choice will be maximizing their utilities first. One's (taxpayers') decision to maximize their own utilities depend only on the amount of information they received about the certainty of audit, but also the level of tax efficiency can be done. Taxpayers who are *risk averse* will avoid loss due to penalty after being audited but those who are *risk taker* will calculate the amount of tax efficiency that can be afforded if what is reported is not audited.

Audit Rate

Most researches on tax compliance are based on the research outcome of Alllingham & Sandmo (1972). An individual is assumed to have confirmed about the amount of income that will be specified from his/her income. Then, the very individual will have an authority to decide on the amount of income that will be reported as tax-incurred income at the aim of maximizing its utility.

The report of non-tax-incurred income will decrease if the taxpayers are exposed to higher audit rate or in other words, tax compliance will increase if the audit rate rises. Because the higher the audit rate, the larger possibility for taxpayers for being examined so that the certainty level will also be higher accordingly and it will give impact on the more conservative behavior that the taxpayers will develop.

Friedland, *et al*. (1978) found out that any decrease of audit rate upon an audit random would give impact on the probability of the increase of *under reporting* on the tax-incurred income report. Other researches also came up with the same outcome that is; the higher the audit rate upon an audit random will lead to the enhancement of tax compliance like those carried out by Beck (1991), Alm (1991), and Alm, *et al*. (1992a, 1993).

Other findings of Alm, *et al*. (1992b) are different from the previous researches. They found out that the impact of audit rate is very small and nonlinear, so the effect of tax avoidance from high audit rate can slowly disappear. However, they also asserted that taxpayers will comply more with tax payment upon the greater possibility of being audited (the feeling of being audited). In other words, tax compliance can be predicted better by perceived probability of audit than clarified by utility theory.

The findings of Alm, *et al*. (1992b) reinforce the finding of Spicer & Hero (1985), and Robben (1987) that concludes that an individual whose report is audited will report his/her income more honestly after being audited than an individual whose report is not audited. Research done by Dubin, *et al*. (1990) estimated the impact of high audit rate on the tax compliance behavior and gave evidence that the decrease of audit rate significantly gives impact on the decrease of income tax revenue.

The research outcome by Dubin (2004) strengthens the previous research outcome affirming that the decrease of audit rate will give impact on the decrease of tax compliance decision. Efforts to examine directly the *deterrence* effect from audit were also made by Slemrod, *et al*. (2001) by employing as many as 2000 sampling taxpayers. But the result did not give actual information on individual tax compliance because their experiment did not use reported tax data and fake tax data.

The research of Dubin (2004) and Slemrod, *et al*. (2001) concluded that the investigation of the tax-incurred income reported by taxpayers is an indirect measurement of tax compliance because it can be predicted through the high probability of audit rate that will be imposed.

Some explanation above leads to a hypothesis that will be tested in this research:

H1a. Audit rate has significant, positive influence on tax compliance decision.

H1b. The increase of audit rate percentage has positive influence on tax compliance decision.

Perceived Probability of Audit

Some research evidences clarify that there is impact of probability of audit received on tax compliance. Alm & Vazquez (2001) used two approaches to examine the taxpayer's compliance, the first by assuming that all taxpayers are potentially criminal in which it will give implication on the frequency of audit and on the penalty imposed on any effort of tax incompliance. Second approach is by conducting a test of the role of social institution to clarify tax compliance. This approach will give implication on social norms and the government's tax administration.

Incompliance can be known by several ways, one of which is intentionally subtract the amount of tax obligation (Hyman, 1993). This method can be done by manipulating financial report that will be used for tax purposes. In other words, taxpayers are inclined to give fake information upon filling out tax administration form rather than their factual tax information. Asymmetrical information between taxpayers and the Directorate General of Tax triggers fraud upon filling out tax administration form.

The conflicting interests among taxpayers and tax institution provoke the taxpayers or tax (*agent*) and the tax institution (principal) to interact with each other in a game. From the game, the tax institution will learn how taxpayers determine the amount of tax that will be paid through *self-assessment*, from which taxpayers will learn the tendency between probability of audit they perceive and the possibility of being audited of their tax report.

Milliron & Toy (1988) show that there are seven factors of tax compliance. They are deduction permitted, IRS information services, withholding and information reporting, the probability of audit, preparer responsibilities, tax rates and taxpayer penalties. Then, those seven factors are classified into two approaches; that is, economic deterrence model and psychology paradigm. Their research result concludes that probability of audit is one of the determining factors of tax compliance decision.

The research of Alm (1988) indicates that perceived probability of audit is anchored in the relationship model between *principal* (tax institution) and *agent* (taxpayers). This relationship gives stronger stress on the regula-

tions relevant to audit selection. If taxpayers report a lower received income than the minimum limit or *"cutoff level"*, they will have greater possibility of being audited and the other way around.

Kahneman & Tversky (1979) gave an insight into how an individual accepts a probability of what is possibly going to happen. They give evidence psychologically that the individual has been aware that their probability of being audited is low so that systematically the individual can possibly get a higher perceived probability of audit than the actual probability.

Therefore, it can be inferred that an individual will make a report of income tax, which allows him to avoid being audited by considering how big his possibility of being audited is. Taxpayers will assume conservative attitude upon the high uncertainty of audit but they are prone to have high-perceived audit.

Ghosh & Crain (1996) gave evidence that the higher probability of audit, the lower level of tax compliance will be. The analysis made by the research of Beck and Jung (1991) also indicates that the reported income experiences increase upon the increase of the received probability and the penalty tariff. Jackson and Milliron (1986) and Beck, *et al*. (1989) also gave the same findings. They found out that taxpayers under uncertain condition of perceived probability of audit would tend to be conservative and keep away from incompliance.

Some explanations above a hypothesis can be tested in this research as follows:

H2a. Perceived probability of audit has positive correlation with tax compliance decision.

H2b. Through perceived probability of audit, audit rate has positive influence on tax compliance decision.

RESEARCH METHOD

Participants Participants in this experimental research are those who voluntarily enrolled themselves to be the participants a week before the experiment was conducted. The aim is to keep the participants' emotion and seriousness stable in joining the experiment, because their participation is voluntary not compulsory. This method was done at the aim of producing maturation effect during the ongoing process of experiment.

Participants for eligibility test of experimental media are students of Accounting Department of International Undergraduate Program Faculty of Economics and Business UGM, Accounting Department of Undergraduate Program Cendrawasih University, and Master of Science of Economics Faculty of Cendrawasih University. The eligibility test of experimental media was aimed at observing the reliability of the experimental media that would be employed in the experiment as well as examining if the media had been eligible to be used in the actual experiment.

The amount of participants in this research was 78 participants. They consisted of S2 and S3 program students of Faculty of Economics and Business (FEB) UGM from the field of economics (management, accounting, and economics). The participants' characteristics are expected to come close to the phenomena of actual reality because on average, they had worked and had engaged in tax payment directly or indirectly.

The experiment was conducted in the computer laboratory of M.Si and Doctoral Program, FEB UGM with the capacity of 30 participants each experiment. The data collection in this research was conducted on three stages of experiment in accordance with the condition and the capacity of the laboratory. The experiment was undertaken every Saturday for around 2 hours, from 10.00 WIB until 12.00 WIB and it took 30 minutes for each preparation.

Several previous researches employed students as the participants/the subjects with the design of tax experimental research, among others were conducted by Alm (1998), Milliron (1985), as well as Jackson & Milliron (1986).

Measurement The whole instruments and measurements used in this research have been through preliminary test process (*pilot test*), at the aim of ensuring if the instruments were really valid.

The measurement of audit rate or audit level employs five items of questions referred from Alm and McKee (2006). Treatment was given in the form of the increase of audit level (level of observation possibility) starting from unspecified audit level, 10% audit level, 20%, up to 30%.

Perceived Probability of Audit is a condition that describes the emotion of participants upon the observation. The instrument employed in this research was developed from that of Milliron & Toy (1988).

Tax Compliance Decision was developed using comparative ratio between the amount of the reported income and the actual tax-incurred income as well as some question item instruments, which were developed and referred to the research of Alm (1998).

The Experimental Data Collection The data collection through experiment primarily for behavioral researches have been much conducted. The data collection through experiment usually involves researcher as an individual whose duty is arranging scenario with various treatments to see the responses of the observed variables.

This experiment-based data collection technique has some strong points such as strengthening internal validity and clarifying as well as giving analytic evidences of causality correlation between dependent and independent variables. Besides that, in this technique, the researcher can control variables more easily so it can avoid influence outside the observed variables. However, this technique has several shortcomings such as having limitation on the experimental object. It means the scenario setting that is carried out along with the object of tax compliance decision cannot be used for examining individual behavior for other kinds of decisions like the decision of buying, business or others apart from tax decision.

Experiment Design The design used in this experiment is *multiple treatment experiment design* (see table 1) or a design with more than two treatments for each independent variable. This design is compliant with solving the research problem being examined/tested, that is, to measure the change of participants' behavior resulting from the change of audit rate/level.

This research uses some tests with several stages of experiment at the aim of examining the behavioral aspect of taxpayers towards the tax compliance decision. Besides, in order to investigate and to show evidence of the presence of causal relationship among various in-

Table 1. Multiple Treatment Experiment Design

Subjeck	78 People		
Treatment			
Audit level	Without mentioning the percentage of audit level		
	10 %	20 %	30 %
	Each participant obtain a gradual treatment of audit level *(within subject).*		
Perceived probability of audit	Participant determine how many percent of perceived audit		

dependent variables with dependent variables tested previously in the survey research. This experimental test is expected to be able to strengthen internal validity of the test of tax compliance decision and to be able to clarify the comprehension of compliance theories or literatures, primarily the case of tax compliance in Indonesia.

Research design using experiment has strength of internal validity. Internal validity is a minimum prerequisite of an experiment to ensure that the outcome of an experiment can be interpreted (Nahartyo, 2010). That is why this research has done efforts to enhance the quality of internal validity by identifying threats and source of threat against internal validity like history, maturation, testing, instrumentation, mortality, regression, statistic, selection, diffusion, manipulation equalization, rivalry, among groups and demoralization (Cook, 1979). Experiment design can be seen on the following table 1.

Experiment Stages. Experiment in this research is classified into four (4) stages, which are aimed at making the participants at ease in comprehending the tasks that should be done in the experiment.

The first stage

This session was when the participants enrolled and took experiment manual book that contains the number of computer, the name of the user, password code, *couch* (ticket) as well as the experiment manual book on the tasks that should be done.

The second stage

This session was the primary session of the experiment. Participants sat in front of each computer and acquired some preliminary explanation relevant to the stages of experiment that should be proceeded to allow the participants to know every task and step that must be taken. Each participant would face a unit of computer that contains program specially designed for this experiment.

Experiment scenario was made in order to be able to observe responses to the amount of tax-incurred income report and to the received actual income related to any treatment given, namely audit rate and perceived probability audit.

To make the experiment interesting, the participant chosen in the audit treatment and after being examined, proven to have done tax incompliance will be imposed a sanction of losing 1 (one) *voucher* for every incompliance s/he did. To maintain a comfortable atmosphere and to avoid maturation during the ongoing experiment, the process of experiment was made into nothing more than 2(two) hours.

The third stage

The third stage was a stage of test experiment (*post-test* experiment). This test was aimed at knowing if all participants understood well the whole process and procedure of the experiment. On this chance, 9 participants was chosen to get a 2 GB USB and 9 participants to get experiment book. The lucky draw was done randomly through computer for participants with *voucher,* and in contrast to that, participants without *voucher* was not be allowed to participate in the process of lucky draw. The announcement about the interesting presents and *voucher* lucky draw had been informed in the manual book of experiment.

The fourth stage

The last stage of this research was a stage for the participants' refreshing through which participants got explanation about the experiment objectives and accepted gratitude for their participation in the experiment. Besides that, participants were also asked not to talk about various things related to this experiment to other parties. The aim of this explanation is to turn the participants' situation and emotion back to their previous condition before they

got the treatment. The last stage of this experiment was distributing souvenirs and presents as well as having lunch together.

The Design of Experiment Media. Two technicians from Techno Gama were entrusted to make the software, called SOLyog, using the language of programming php and mysal database. The software contains treatment of audit rate/level and perceived probability audit as well as the measurement and manipulation check items, related to tax compliance decision. Participants were then asked to answer some questions in relevance to the participants' demographic data.

Other than that, this system facilitates the researcher to obtain and store the data directly (into a data bank) so that it will smoothen the process of data management. Furthermore, the utilization of *web system design* with *intranet* basis provides a typical strong point as it was not influenced by the busy internet network, so that the participants can go through the experiment well without any network trouble.

Control Variables. Internal validity is related to the quality of experiment conducted and to the level of reliability of the experiment outcome. The quality of experiment refers to the accuracy of research design used, the elaborated manipulation, randomization, etc. The reliability of the research outcome is determined by the capability of the researcher to put aside the effects of disturbing variables related to the research carried out (Nahartyo, 2010).

Several previous researches identified some variables detected to affect tax compliance decision (Jackson & Milliron, 1986; Long & Swingen, 1991; Alm & McKee, 1988; Reckers, *et al*., 1994). This research uses control over several disturbing variables that require control, that is: income, tax tariff, and penalty tariff.

The Data Analysis Instrument. The examination for direct and indirect relation in this research will use path analysis model. To estimate the relations among the hypothetic variables, it uses Partial Least Square (PLS). This research model is still predictive so the utilization of PLS which is a reliable instrument to examine prediction model is very proper, besides that PLS can use small sample size with formative and reflective construct (Tenenhaus, *et al*., 2005).

THE DATA ANALYSIS

1. Participant Demography and *Manipulation check*

The number of participants was 78 people who have had taken taxation subject through their undergraduate program years. The participants consists of three discipline of science namely accounting involves 47 participants (60,26%), management 26 participants (33,33%) and economics 5 participants (6,41%), the whole participants were amidst their higher education namely for S2 program,65 participants (83%) and for S3 program 13 participants (17%). Out of the 78 participants, 31participants (40%) work as lecturers, 14 participants (18%) and 2 participants (2,5%) were entrepreneurs, while 31 participants (40%) have not worked yet. The average of working experience is 53,38 months, with maximum age of 50 years and minimum age of 21 years with the average age of 31,3 years old. Other than that, participants who took part in this research have a balanced gender (39 male participants and 39 female participants).

The description of participants' condition above is compliant with the researcher's expectation that those required to be the participants are taxpayers, potential taxpayers, so is the age of the participants was various and did not belong to certain age bracket.

The examination of manipulation check was done twice, the first was to check whether the given treatment have an accurate impact in the experiment. It was done before and after

the treatment was given. While the second manipulation check was given when the experiment was over. The second manipulation check was given to identify if participants really understand the procedure of experiment given during the ongoing experiment.

The manipulation check test indicate that significant differences were found before and after the experiment was conducted, that is, *audit rate of t-statistic 18,389, sig 0.000, perceived probability of audit of t-statistic 18,212, sig 0,000.* This result indicates that the treatment give can describe that the condition of behavioral change is in accordance with the expectation of this research. For the second manipulation check, the participants answer correctly the questions related to the experiment procedure (among others are the percentage of audit rate imposed on this experiment).

2. The Quality of Measurement

The aim of measurement test is to ensure that all measurements or instruments used in this research have met the expected standard of quality like validity and reliability construct. One of the strong points of experimental research is on the internal validity. To increase internal validity quality, this research design has considered some threats inherent in internal validity, like history, maturation, mortality, statistic regression, selection, diffusion, manipulation equalization, rivalry among groups and demoralization (Cook, 1979).

The result of *discriminating validity* as can be seen from the Table 2 shows that the comparison of root AVE with correlation of every construct showing that discriminating validity is achieved because all constructs on the estimated model meet the criteria (value of root AVE for each construct shows a bigger value than inter-construct correlation). Therefore, all indicators used are accurate measurement for every construct used in this research.

Convergent validity test can also indicate that all constructs used meet the criteria of convergent validity. This can be seen from the value of communality and value AVE, which is bigger than 0,5. The reliability construct tests for the whole variables refer to two criteria, namely, based on *composite reliability* and *cronbach alpha* from indicator block that measures construct. The whole constructs used in this research meet the required reliability as it has *composite reliability* and *cronbach alpha* value, which is above 0.7. So it can be concluded that all indicators used in this research are reliable (Chin, 1998).

HYPOTHETIC TEST AND DISCUSSION

This research examines the analysis of tax compliance decision in the perspective of audit rate and perceived probability of audit. This experiment uses *multiple treatment design* with *within subject* in which each participants obtained more than treatment gradually. They obtained treatment of audit rate from unspecified audit rate (participants were only informed that they would be audited for every

Table 2 The result of Validity and Reliability Construct

	Discriminating validity		Convergent Validity		Reliability	
Construct	Correlations	Root AVE	AVE	Communality	Cronbachs Alpha	Composite Reliability
KKP	0,0000	0,88335*	0,694741	0,694741	0,88959	0,919043
PAC	0,497321	0,8088*	0,654186	0,654186	0,824799	0,882737
TA	0,339285	0,6380*	0,638047	0,638047	0,858172	0,858172

Source: analyzed data, KKP=Tax Compliance Decision, PAC: perceived probability of audit, TA: Audit Rate

report of tax without mentioning the percentage of probability of being audited), then gradually, they would get treatment of audit rate 10%, 20% and 30%. Before proceeding to the next treatment of audit rate, they would be asked about how much perceived probability of audited predicted by them that they would be audited.

Table 3 indicates that audit rate has influence on tax compliance decision for every audit rate namely upon the unspecified audit rate, audit rate of 10%, 20% and 30% (sign. t > 1, 94). The outcome of analysis shows that high audit rate has significant influence on tax compliance decision. Indirect influence through perceived probability of audit, shows significance at all audit rate. This shows that taxpayers will increase tax compliance decision upon perceiving the high possibility of being audited. In other words, a low audit rate does not always make the perceived probability of audit low and the other around, but the uncertainty condition of audit will give impact on the perceived probability of audit.

The analysis outcome shows that Hypothesis (H1a and H1b) proposed can be supported by the significance of t account > 1,94, and so can the hypothetic test (H2a and H2b), which shows significance at the percentage of audit rate 10%, 20% and 30% with t account > 1,94 and shows insignificance at the percentage of unspecified audit rate.

The analysis outcome shows that the higher percentage of audit rate has significant influence on tax compliance decision. The significance outcome is also indicated by the direct effect of the perceived probability of audit on tax compliance decision upon the audit rate of 10%, 20% and 30%, while upon unspecified audit rate, the perceived probability of audit is insignificant. This can happen because when the participants know that there is a certain possibility of being audited, they will be more careful in deciding the amount of tax-incurred income without considering how big the probability of being audited is.

This finding is compliant with the research of Jackson and Milliron (1986) Beck, *et al*. (1989) that found out that taxpayers who are in uncertain condition of audit probability received will be prone to be more conservative and to keep away from incompliance. Friedland, *et al*. (1978) also found that each decrease of audit rate would give impact on the probability of the increase of *under reporting* in the tax-incurred income report.

Other researches that have the same findings are those of Beck (1991), Alm (1991), Alm, *et al*. (1992a), Alm, *et al*. (1993), and Dubin, *et al*. (1990, 2004). Their findings show that the higher percentage of audit rate upon random audit strategy will lead to the increase of tax compliance. This shows that upon the increasing percentage of audit rate, taxpayers will be more careful but remain engaged in learning process and in evaluating the decision of tax-incurred income.

The research of Alm (1988) is related to the perceived probability of audit based on the relation between the principal (tax institution) and agency (taxpayers). His research (2000) also shows that taxpayers can decrease his report of tax-incurred income upon sensing a smaller probability of being audited than the actual probability of audit through their tax report. Taxpayers will afford to manipulate their tax report in such a way that allows them to be unaudited.

Table 3. The Effect of Audit Rate and Perceived Probability of Audit on Tax Compliance Decision

	Original Sample (O)				Sample Mean (M)				Standard Deviation (STDEV)				Standard Error (STERR)				T Statistics (|O/STERR|)			
Audit rate	Without % TA**	10%	20%	30%	Without % TA**	10%	20%	30%	Without % TA**	10%	20%	30%	Without % TA**	10%	20%	30%	Without % TA**	10%	20%	30%
PAC -> KKP	0,17	0,31	0,46	0,38	0,16	0,32	0,46	0,37	0,119	0,10	0,10	0,13	0,119	0,10	0,10	0,13	1,389	3,193*	5,027*	3,009*
TA -> KKP	0,60	0,48	0,34	0,44	0,61	0,48	0,35	0,44	0,045	0,06	0,08	0,06	0,045	0,06	0,08	0,06	13,25*	8,318*	4,389*	7,904*
TA -> PAC	0,66	0,68	0,61	0,72	0,67	0,68	0,62	0,72	0,042	0,04	0,07	0,03	0,042	0,04	0,07	0,03	15,66*	19,57*	9,109*	26,06*

Source: Analyzed data * Significance of T account >1,94. TA (audit rate), PAC (perceived probability of audit), and KKP (tax compliance decision)
** the percentage of unspecified audit rate.

Ghosh & Crain (1996) also gave evidence that the higher perceived probability of audit, the lower the tax incompliance level will be. Analysis conducted by Beck & Jung (1991) also proved that the reported income will increase upon the presence of the perceived probability and penalty tariff .

Several research outcomes above support the research finding, affirming that audit rate and perceived probability of audit is an important variable in tax compliance decision. This is probably because each taxpayer has a tendency to be conservative in order not to face law when having high certainty of perceived audit. So that she/he will be more careful in determining the tax-incurred income. This research also gives evidence that perceived probability of audit is an influential variable on the increase of tax compliance either as independent variable or as mediator variable.

The certainty of audit, which is described through the higher percentage of audit turns out to be an accurate stimuli to trigger the perceived audit that the taxpayer feel. Therefore, to increase tax compliance, it is urgent that the government afford an audit system that applies audit strategy that can psychologically trigger the taxpayers to the certainty of audit, so that tax compliance can be enhanced.

CONCLUSION AND IMPLICATION

The audit rate provided in the four stages of audit rate, that is, unspecified audit rate, audit rate of 10%, 20%, and 30% shows a significant influence on the increase of tax compliance. The higher percentage of audit rate allows the taxpayers better to be able to predict or ensure whether they will be audited or not so that they will be more conservative in determining the tax-incurred income.

Perceived probability of audit proves to be influential on the increase of tax compliance decision. It is not only a dependent variable but also proven to be mediator variable for the correlation of audit rate and tax compliance. Those two variables are proven to be important variables in the process of increasing tax compliance decision.

This research finding is expected to be able to give some important implications for the increase of tax compliance in Indonesia. The first implication is for the government policies. The government's effort to enhance tax compliance had better be started from observing audit policy that has been practiced. The taxpayers' verification that so far has been conducted arouses suspicion of taxpayers against the tax auditor. The currently practiced audit system should have put into consideration the psychological effect of the taxpayers to increase tax compliance, not the other way around.

The limited audit budget of the government in auditing taxpayers should lead to considering *cost* and *benefit/effective* in the process of auditing. The government should consider an accurate method or strategy to find out the number of taxpayers that should be audited so it will give a maximum result. One of them is by making range of taxpayers' income that will be audited if the government has limited budget/finance to carry out audit process. The benefit of tax audit would only be beneficial if the audit strategy and the audit rate applied are accurate.

This research has some shortcomings. First not all extraneous variables can be controlled in the research setting. In this research only two extraneous variables are controlled, that is, income and tax tariff as well as penalty. While the other extraneous variables like uncertainty of fiscal and complexity of regulation, taxpayers' expectation, penalty/sanction have not yet been included in the design of experiment.

Another limitation is the effect of audit as a result of the gradual treatment, can be brought in for the next treatment. Despite the effort of avoidance ever done through time

break, the certainty of the previous effect is not brought in, making it uneasy to predict. Therefore, the next research should put the above research limitations into consideration in order to improve the quality of the following research design.

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