INTERDEPENDENCY GROUP MODERATION AND THE RELATIONSHIP
BETWEEN PROCEDURAL FAIRNESS AND AUDIT PERFORMANCE

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ABSTRACT
This study is an experiment analyzing the subjects of the audit assignment group. This study focus on the dynamics in the aspects of behavior, especially the behavior which is related to the relationship between the procedural fairness felt by the assignment group and the audit performance. The method used is the basis of goal setting theory and valence instrumentality expectancy theory. Besides that, this study also tests the effect of the interdependence moderation on the relationship between group fairness and audit performance. By using defense test with ANOVA, it provides result that interdependency moderation in the relationship between fairness and audit performance is high. This shows that procedural fairness felt by the team influences the audit performance. The degree of the fairness effect on the audit performance is also proved to be significantly influenced by the degree or level of interdependency among the groups.

Key words: Audit Assignment Group, Procedural Fairness, Interdependency, Audit Performance.

EFEK MODERASI SALING KETERGANTUNGAN KELOMPOK PADA
HUBUNGAN ANTARA KEADILAN PROSEDURAL
DENGAN KINERJA AUDIT

ABSTRAK
Penelitian ini merupakan pengujian eksperimen dengan subjek (subject) kelompok penugasan audit. Fokus penelitian adalah mengkaji dinamika dalam aspek keperilakuan, khususnya terkait hubungan antara keadilan prosedural yang dirasakan oleh kelompok penugasan audit dengan kinerja auditnya. Menggunakan basis Goal Setting Theory dan Valence Instrumentality Expectancy Theory, peneliti juga menguji efek moderasi saling ketergantungan terhadap hubungan antara keadilan kelompok dengan kinerja audit. Dengan menggunakan uji beda ANOVA didapatkan bahwa tingkat saling ketergantungan memoderasi hubungan antara keadilan dengan kinerja audit. Hasil penelitian ini menunjukkan bahwa keadilan prosedural yang dirasakan oleh tim audit dapat mempengaruhi kinerja audit mereka. Besarnya efek keadilan terhadap kinerja audit juga terbukti dipengaruhi oleh tingkat saling ketergantungan di antara anggota kelompok.

Kata Kunci: Kelompok Penugasan Audit, Keadilan Prosedural, Saling Ketergantungan, Kinerja Audit.
INTRODUCTION
Recently, the auditor turnover in Public Accountant Offices in Indonesia is considered high. This is due to the high degree of auditor turnover which has been found in the previous researches. Some studies suggest that organizational commitment and job satisfaction are the dominant factors for such turnover (Pasewark & Strawser 1996).

For example, job satisfaction can be triggered by a variety of things including auditors’ reward. For that reason, the reward system has its implication for the auditors’ job satisfaction. As such, it is an important factor for consideration. On the basis of this phenomenon the researcher conduct a study to find the extent to which perceptions towards the fairness of the mechanisms of reward system for the auditors.

The members of organization can react differently toward their performance, depending on their perceptions of fairness in the performance assessment (Pichler 2009). Besides that, conflict within the members can, finally, affect the performance of the team (Huang 2012).

Audit assignment is a group assignment consisting of several interacting individuals. The success of the group (team work) in achieving the performance of audit is influenced by the effectiveness of cooperation in teams to achieve the objectives. The following research also examined the presence of moderating effects of members’ interdependence in audit team in relation to fairness and audit performance. This study focuses on the testing the fairness felt by the group (audit team) towards the reward they receive and its impact on the audit performance assigned to the. Another more systematic research on fairness has been observed in a variety of contexts. In the area of management accounting, fairness has been elaborated as a variable through various dimensions (Kennedy et al. 2009; Rae and Subramaniam 2008; Lau and Lim 2002; Lau and Tan 2005; Lau CM et al. 2008).

The next factor is organizational commitment, as Herda and Lavelle (2011) stated that the relationship between fairness and organizational commitment, whereas Colquitt (2011) showed a reciprocal relationship between fairness and trust. In connection with the performance appraisal, Lau and Berry (2010), there is a relationship between the non-financial measures and their impact on the fairness of the performance appraisal procedure.

In the field of taxation, fairness was examined by Farrar (2009). From various studies generally, fairness has been distinguished into distributive fairness and procedural fairness. Miller et al. (2010) stated that procedural fairness produces quality better relationships between auditors and supervisors.

The concept of fairness is an important factor in a study because the clarification can determine the construct of fairness concept for the research. In this research, fairness is defined operationally as procedural fairness. Interdependence is tested by researchers as a moderating variable because when the group level consists of high interdependence among members, the individual ego in the group will be distorted or decreased.

The hypothesis is that such high ego level can affect individual’s intentions towards the achievement of a goal. Based on the theory of motivation, as based on goal setting theory, it is stated that the intention becomes a decisive factor in explaining someone’s behavior (Ryan 1970). Testing such moderation is more based more on the testing of the theory than the phenomenon of difference in the results of previous studies.

This study attempts to answer three research questions. First, whether there is a relationship between fairness felt by the auditors and their performance audit. Secondly, whether the difference is in the level of interdependence in the group audit engagement will lead to differences in the strength of the relationship between fairness and the audit performance. Third, what kind of design is appropriate for the audit assignment so as to produce optimal audit performance?
This research is intended to provide evidence of the influence of perceived fairness on the audit performance in audit team. It also provides evidence of the degree of mutual dependence as a moderating effect on the relationship between fairness and the audit performance. The results of this study tests the theory of intentional behavior stating that the perception of the intermediate situation will affect the intention to act and ultimately affect the behavior of a person(s) who is assigned to do assignment.

Li and Butler (2004) use procedural fairness as a moderating variable, but they couldn’t prove the moderating effect of these variables on the relationship between rational goal and goal commitment (Li and Butler 2004). Different premises asserted by Li and Butler (2004), tested the existence of interdependence as a moderating variable on the relationship between procedural fairness and the audit performance.

Practically, this research will contribute to public accounting firms, that they can use it as a basis for improving the quality of the audit team. It is therefore, empowering the audit team is more necessary. Beside, the assessment of behavioral aspects in an audit team can also be used to provide an overview of effective audit team formation. This study also contributes to methodological basis for experimental research in more advanced one.

THEORETICAL FRAMEWORK AND HYPOTHESES
There are some important concepts related to the variables measured in this study.

The Concept of Fairness
The concept of fairness can be distinguished into procedural fairness and distributive fairness. First, distributive fairness is manifested through a process called outcome-based, namely through fairness of outcomes (distributive fairness). Second, procedural fairness is known as the benefits of the individual's involvement in the decision making process. Thus, according to the instrumental theory of procedural fairness by Lind and Tyler (1988), procedural fairness will lead to a more fair decision. If the process is perceived being fair, the most likely outcome resulting from the process will be fair as well.

Relationships between Fairness and Group Performance
There are some studies related to fairness concept which has been done. For example, Lau et al. (2008) argued that the fairness of performance evaluation procedures affect job satisfaction in two different ways. First, it is through a process called outcome-based, namely through fairness of outcomes that is distributive fairness. Second, it is non-outcome based that is through the trust in superior and organizational commitment. Unlike Lau et al., Porter and Lawler (1968) provided a reverse correlation between satisfaction and performance. On the basis of these two concepts above, this study is trying to relate performance with fairness.

The concept of fairness used in this study is the fairness related to the process of emotional subject that is the procedural fairness. The subject is the procedure which depends on the perception of the reward being received. In the instrumental theory of procedural fairness (Lind and Tyler 1988) procedural fairness can lead to a more fair decision or outcome. If the process is perceived to be fair, the most likely outcome will result in the process to be fair as well. All variables in this study are viewed on the basis of such concept of procedural fairness.

In connection with the performance audit, the researcher refers to Porter Lawler revised model that suggests a link back from the satisfaction which ultimately can increase performance. Porter and Lawler (1968) developed a theoretical model and it has been tested with a sample of managers and they revise the cycle model showing the relationship among the value of reward, effort, performance, and satisfaction. The above argument, researchers raises the hypothesis as the following.
Hypothesis 1: The audit performance audits in the group with a higher fairness are better than the audits’ performance in the group with low fairness among the members.

Moderation of Interdependence within the Group
Theoretical argument for the second hypothesis is based among other things on the goal setting theory. The theoretical model of the theory of goal setting is as follows.

Existence $\rightarrow$ cognition $\rightarrow$ emotional $\rightarrow$ goal setting $\rightarrow$ action

Emotional reaction comes after a person cognitively evaluates the relevant values. Among the most important determinants is the individual goal. Individual goal will trigger an individual to perform a certain action. Individuals in the group will be motivated when they know the extent of his efforts that will pay off.

For example, Hackman and Oldham (1980) state that a person will get the internal motivation (similar to the concept of intrinsic motivation) of the job when the job is categorized as the following.

1. It is believed by the worker that he has a personal responsibility for the results to be achieved.
2. It is believed that the work has a meaning (meaningful), which means that efforts are taken into account by the party or individual to another.
3. The workers have knowledge of the extent to which the effectiveness of its efforts to achieve the desired performance. Knowledge of the actual results of the efforts of these individuals also refer to the VIE theory.

Based on the above three points, the researchers suspect that interdependencies can affect the level of knowledge of the individual within the group as the results to be achieved. It increasingly depends on the individual and another, causing the lower knowledge of the result of individual effort.

Hartmann and Slapnicar (2011) state that the effect of procedural fairness, but not directly, depends on the number one task with uncertainty. Being lack of knowledge of the results of the individual causes the emotion change, which may be reduced in the individual ego. Based on the theory of goal setting, it changes to a person's emotions and this can influence a person's actions.

The researchers argue based on those theories that interdependence in a group can change a person's emotional orientation and it can decrease consequently to influence the performance of the group's fairness. Thus, further hypothesized is as the following.

Hypothesis 2: There is a moderating effect of the level of interdependence between members of the group and the relationship between fairness to the audit performance.

The research model can be described in Figure 1.

RESEARCH METHOD
This is an experimental research design with a 2 x 2 between subjects of control group design-post test only. The researchers used an equivalent control group and performed randomized subjects. The only difference was the treatment given to each treatment group. The selection of design of experiments carried out is on the basis that the use
of this design can provide causal explanations stronger among variables tested. Experimental design can provide the level of confidence and relatively high efficiency for look for evidence of a causal relationship (Nahartyo 2012).

Subject of the Research
The subject is the final semester accounting students who took auditing subject. There were 40 students involved in this experiment. The unit of analysis in the experiment is pairs of students who formed an audit team. Students are chosen for the studied variables are behavioral variables that may appear on any individual or group of individuals. All receive the same treatment. Feeling happy, sad, unfair, unjust and so can be manipulated in any individual else though different professions (student vs. practitioner).

The students majoring in accounting are chosen because they are related to audit. Thus, they at least understand the basic auditing. This study did not analyze the aspects of audit experience, audit experience even be precisely controlled in this study. The audits’ performance is measured but based on audit judgment that requires experience. Rather it is based on the accuracy of the calculation of a technical nature. Audit case is provided in the form of a relatively simple case (simple task).

The subject as a whole will be differentiated based on the perception of the fairness of the process of the reward system and the degree of interdependence between individuals in a group.

Perceptions of the procedure of the reward will generate a subject with a sense of fairness which is either high or low.

Operational Definition and Variable Measurement

Sense of Fairness
Fairness is defined as a psychological response as shown by the respondents with the belief that the process of determining the procedures in the assessment of their performance is quite fair. This is done through an action in which they are directed according to the study.

Interdependence within the Group
Interdependence is a condition in which individual feels and believes that in order to achieve certain goals they cannot achieve individually, but must work together. In this study, the researchers manipulate the conditions of interdependence which is done by distinguishing the group task completion mechanisms. For the group with a high dependence, the mechanism of the reward is given by the final results collectively. Medium to low dependency, reward mechanism is given to individuals based on individual right, although they are in one group.

Performance Audit
Performance is measured by the number of audit findings appropriately. Performance is determined by the number of errors found by the subject. The case used is the auditing of the revenue in the case of audit of various departments in a hospital. The respondents are asked to perform tracing, footing and cross footing the recap of revenues and supporting data. The performance is calculated by adding up the points of right answers and giving particular weight to each correct answer.

Stages of the Research
Prior to the implementation of the experiment, there are some phases done as the following.

1. Prepare the experimental instruments including the audit cases which are done in group. Make sure that the problem does not contain elements of bias of the performance measurement be biased. The researcher conducted the audit in consultation with practitioners in order to arrange the material about the audit. The use of near-real case is made to obtain an appropriate case for the purpose of research.

2. Conduct a pilot test to ensure that the treatment of the respondents has achieved the purpose of research. The pilot test was
conducted to test the instrument before it was tested on real experiments. The result of the pilot test is used for refining the research instruments and protocols. Pilot test is used to improve and format the answer sheet to the instrument of assignment which may not be standardized. In the next testing, the researcher fixes the answer sheet format for the subject to be more standardized, so that it not bias.

3. Checking was conducted to ensure that the subject has a condition as to be achieved by the research instruments. Manipulation checks done by giving the questionnaire that will record whether the subject has experienced conditions as designed in the research instrument. The questionnaire was also designed to determine whether the subject has understood the instruction in this experiment. Score the answer to the question in the subject of manipulation is checked to get the passing criteria for the use of this research instrument.

The results of the manipulation checking indicate that the subject has been able to understand commands and therefore it can be judged as the good research instrument.

Variable Formation
The dependent variable is the audit performance. The performance measurement is used to assess the response of the case done by the subjects about the given audit. The case is dealt with audit assignments to do footing and cross footing and searches to sub-ledger (tracing to subsidiaries).

The main variable is fairness which is manipulated to determine two categories: fair vs. unfair.

The first group was given the freedom to determine the mechanisms that are considered fair by the subject. The results of treatment is produced by the perception that performance assessments will be used to judge whether he is fair. The first group will use the appropriate choice of performance appraisal.

On the contrary, the second group is the subjects that received unfair treatment that is a subject that has been suited to his choice, but the researchers will be forced to use a unilateral assessment mechanism that is not his choice.

The moderating variable is the degree of mutual dependency of the group and this is constructed by means of distinguishing the resolution mechanisms by the group tasks. The group with a high level of interdependence is raised by giving assignments that require completion of cooperation among group members.

The group with a low level of interdependence is raised by assignment of the solution which can be directly done by individuals without depending on other group members. Although there are differences in the mechanism of assignment completion, the quality and quantity of assignments between the groups were tested for being the same.

To ensure this treatment to be used in the experiment and can properly support the achievement of the experiment, the researcher carried out the manipulation check prior to the experiment. The steps taken in the manipulation check is by giving questionnaires to ensure that the subject has understood the command in the experiment.

Implementation of the Experiment
The detailed steps in the experiment are described as follows.

1. The subjects were asked to choose two options of reward mechanism in the audit engagement. This is to determine whether their perceptions of the procedure are fair or unfair.
2. The group with the perception of fairness is established by giving orders to the subjects chosen to complete the task of auditing mechanisms in accordance with their choice.
3. The groups with unfair perceptions is formed by giving instructions to the subject to complete the task of auditing mechanism which is not their own choice.
4. The group with high dependency is formed by instructing the work completed together in teams. The reward is given col-
lectively. They will be given reward points based on the truth of the answers collectively. The end result will collectively determine the reward points they will receive together.

5. The group with low dependence is formed by providing individual treatment by reward system. Although the subject is a group, each individual is given reward points based on the truth of the individual answer.

The next is grouping the subject into four treatment groups as the following.

Group I. Subject to fair treatment is grouped by mutual interdependence which is high. (Fair subject with high interdependency)

Group II. Subject to unfair treatment is grouped by mutual interdependence which is high. (Unfair subject with high interdependency)

Group III. Subject to fair treatment is grouped by mutual interdependence which is low. (Subjects with low interdependency Fair)

Group IV. Subject to unfair treatment is grouped by mutual interdependence which is low. (Unfair subject with low interdependency)

Each group is given the task of completing the audit case with the same level of difficulty, and experiencing all the same conditions. The changes which occur in the experiment is only the action given to each group related to the purpose of the study. Instrument in the form of an alternative explanation is for the mechanism of audit work in the process. These are as the following.

MECHANISM I:
The treatment is as the following. Each individual in each pair (audit team) is given reward points based on the correct answer. Therefore, even though the end result is a product group, the reward is determined to the extent of which the truth of the answers given by individual in the couple. In this case, each individual correct answer can get 10 points. These points are awarded to individuals who find the correct answers only.
MECHANISM II:
Their reward Points are collectively based on the correct answers in each pair. The reward points are awarded based on the number of correct results being completed in groups. In this case, each correct answer in groups gets 10 points. The points are awarded to the pair collectively. The distribution of the point is done individually with the same ratio that is 50% each.

Experimental Design
The design for test of moderating effect levels of interdependence on the relationship between fairness and the performance audit is presented in Table 1. The Figure 2 is a summary of treatment execution procedure.

DATA ANALYSIS AND DISCUSSION
The number of subjects was tested on each factor as presented in Table 2. Each of them consists of two individuals who are paired as the audit team that is assigned. Of the 20 subjects, it was obtained by grouping such as the fair and unfair group coincidently in which they are the same. For example, each consists of 10 members. For the variable interdependence, it was found the interdependence group with low and high interdependence, which are 9 and 11 subjects of the experiment.

The grouping of the subjects on each group of treatment is represented in Table 3.

The Experiment Results
The experimental data were processed by ANOVA test and the results were as shown in Table 4.

As presented, Table 4 provides evidence on the level of fairness that affects the audit performance. It is proved to be significant at the error score level of 0.043. The statistical test also shows the effect of the interaction between the level of fairness and interdependence significantly at the error score of 0.093.

To find audit performance rating for each treatment group, it can be seen in the results of the data plot in Figure 3. This shows the treatment that conditions the pres-
ence of fairness is accompanied by interdependence among group members which is high. This resulted in the best performance of the audit. The lowest performance conditions in the group with low equity and mutual interdependence is low.

Discussion

It is obvious that fairness affects the audit performance. It is indicated through the results of statistical tests that shows the significance level of 0.043. By using an error level of 10%, the first research hypothesis is supported. The results of this study support the instrumental theory of procedural fairness (Lind and Tyler 1988) which states that procedural fairness will lead to a more fair decision (outcome). If the process is perceived as being fair, the most likely outcome resulting from the process will be fair as well.

The next is that the subject satisfaction over the outcome leads to job satisfaction and ultimately improves their performance. The results of this study also support the revised Porter Lawler model suggest a link back from the satisfaction which ultimately can improve performance (Porter and Lawler 1968). This indicates a positive relationship between fairness and the audit performance. Therefore, the result is still consistent with previous studies such as Taylor et al. 1995, Konovsky 2000, Colquitt et al. 2001) who also analyzed the relationship between perceptions of fairness and the outcome.

The above evidence provides more support for the importance of understanding the procedural fairness and practical application to improve audit performance. The hypothesis about the moderating effects degree of interdependence among the members of the group on the relationship between fairness and audit performance is also supported. The statistical tests show the effect of the interaction between the fairness and the level of interdependence in the significance of 0.093.

By using $\alpha$ by 10% the research hypothesis, which states that there is a moderating effect of group interdependence on the relationship between fairness and audit performance is supported as well. The differences of interdependence can significantly affect the psychology of the subject. Inter-
dependence among the members of the audit team affects the strength of the relationship between the sense of fairness and the audit performance.

As based on the experimental data plot in Figure 3, it shows that the design group that conditions the existence of fairness along with the existence of interdependence among group members is resulted in the best performance of the audit. The lowest performance conditions as in the group with low equity and mutual interdependence is proved to be low.

Based on the results, it can be drawn that the design of the audit assignment can be maximal whenever the group has a sense being fair for the rewards that are given in the assignment. Besides that, the interdependence in the group is also good for better performance. The condition of low interdependence reduces conflicts so it can focus on the completion of the work.

CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

In general, it can be concluded that there is a moderating effect of interdependence level among members of the group on the relationship between fairness and performance audits. Some generalizations can be asserted as the following.

1. In giving the reward to the audit team, the company needs to consider the dynamics within the teams. Interdependence among the team members can influence the effect of fairness established to audit the group performance.
2. The group with high interdependence, the fairness effect on the performance is not as high as in that with low interdependence.
3. On the contrary, the group with low interdependence, the fairness effect on performance is found higher than in the high interdependence.
4. Due to such findings, this study provides additional insight into the importance of designing the audit assignment by taking into account behavioral aspects (in this case fairness and interdependence among the groups) associated with the design of appropriate compensation.

It appears that the audit performance of the group with a high interdependence is higher than the performance in the group with low interdependence. This evidence can be explained that in the group with low interdependence of individuals in a group tend to be time consuming in completing the work and they seek to get the job done without considering the group members. Therefore, in the process of completing the tasks they tend to overlap with other individuals in a group who can lead to a waste of time.

The implications can be stated as the following.

1. Public accountants are requested to systematically collect information on what the audit staffs want from their work such as reward value or valence and the perception of the possibility of achievement relative to giving reward for their efforts. This is useful for designing the reward system.
2. Public accounting firms believe that auditor staff must understand that their jobs are not misdirected.
3. Public accounting firm need to pay attention to the work of their staff so as to obtain an optimal effect of the interaction among the members of the audit team. This is intended to achieve the best performance of the audit.
4. It is necessary to measure and monitor an on-going basis to believe how to design the best assignment that can be suitable for their staff.

It is imperative for the firms that they should consider the aspect of fairness in the team. This is due to the fact that the influence of fairness is higher toward the performance on the condition of interdependence among team members. This needs to get attention in designing the group assignment. The regulation among to the organization and fairness should be pursued in harmony, though generally makes any conflict between regulation and fairness, as predicted by Mc Kennan (2007).

The researchers still use a 10% as an ac-
ceptable error rate so that characteristic of experimental research here has limitations in terms of external validity. However, in generalizing experimental research, it can be conducted by repetition or replication performed on a more varied areas or different environments.

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