The Influence of the Perception of Environmental Uncertainty, Role Ambiguity and Role Conflict towards the Integrity and its’ Implications: A Study on Improving the Insurance Program and Quality of Internal Audit.

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The purpose of this study is to examine the influence of the perception of environmental uncertainty, the role of ambiguity, and the role of conflict on the integrity; as well as their implications for the program of insurance and improving the quality of internal audit. The internal auditor will always be faced with ethical dilemmas involving choices between conflicting values. The integrity of internal auditors in completing the audit process will produce a good performance. Program insurance and improving the quality of internal audit may decrease the perception of environmental uncertainty, ambiguity, and role conflict. This study included explanatory research. Data was collected by survey method using questionnaires from 80 respondents. Hypothesis testing using SEM analysis was used. The calculation results are carried out using the LISREL program. The results showed that the influence of the perception of environmental uncertainty, role ambiguity and role conflict negatively affect the integrity of the internal auditor. The influence of the perception of environmental uncertainty, role ambiguity and role conflict affect the program of the insurance and improvement of the quality of internal audit. The integrity of internal auditors has a positive effect on the program of the insurance and improvement of the quality of the internal audit.

\textbf{Key words:} Influence of the perception of environment uncertainty, role ambiguity, role conflict, integrity, program of the insurance and improvement of the quality of internal audit.
Introduction

Background

Professional standards of internal auditors is a provision that must be met to maintain the quality of performance of internal auditors. The code of ethics regulates the basic principles of the behaviour of internal auditors. The internal auditors must uphold and adhere to the code of ethics that adds a high level of integrity to the profession of internal auditing. The internal auditor will always be faced with ethical dilemmas involving choices between conflicting values. A dilemma which often occurs, for example, is when the auditor and the client do not agree to some aspects of the function and purpose of the inspection. In this state, the client can affect the process and audit performed by the auditor. The Auditee can press the auditor to take actions that can violate the standards of the profession of the auditor. Auditors should maintain the professional ethics and standards of the profession, and then the auditor will be able to resolve a situation of conflict. Auditors must maintain the integrity that is adequate to carry out their work. Integrity is a quality that underlies the public trust and is a benchmark for the members of the auditor profession.

One case of integrity concerned two auditors who were alleged to have been bribed. These auditors from the supreme Audit Agency (BPK), were charged under article 12 letter b and or article 11 of Law Number 31 Year 1999 on Eradication of Corruption as amended with Law Number 20. One auditor was alleged to have received a Harley Davidson from the General Manager (GM) PT Jasa Marga Purbaleunyi branch, Setia Budi. (Tribunnews.com, Jakarta)

Standard 1310 of the requirements of the Program of insurance and improving the Quality of internal audit outlined that the program should include both internal assessment and external assessment (International Standards of Internal Audit Professional Practices, 2016). The assessment process consists of the continuous monitoring of the performance of the internal audit activity, and assessment periodically for self-assessment of others in the organization that have sufficient knowledge about internal audit practices. Continuous monitoring is covered in the practices and policies of the routine in managing the internal audit activity and in the use of process, tools, and information considered important in evaluating conformance to the code of ethics and standards. Internal auditors are supposed to be able to maintain integrity under any conditions, so that opinions, conclusions, considerations, and recommendations from the results of the inspection can be carried out impartially against any party.

Lack of integrity of internal auditors in its activity can be caused by: (1) The environmental component of the change will quickly impact on the environmental uncertainty. Environmental uncertainty of an internal audit happens because they do not have sufficient
information about environmental factors to understand and predict the needs and changes in the environment needed by the internal auditors. (2) The internal Auditors will face an increased likelihood of the occurrence of ambiguity (vagueness). It is driven by the presence of the complex conditions and changes in the operational environment of the internal auditor, including the complexity and changes in regulations and technology. (3) Role conflict includes the contradictions between the role of the audit and the role of management, the potential difference between instructions of a professional organization, and the demands of management.

**Literature Review**

*Program of insurance and improving the quality of internal audit*

The Program of insurance and improving the quality of internal audit are designed to allow the internal auditor to evaluate the appropriateness of an internal audit activity against the standards, and the evaluation of the application of the code of ethics. The Program also assesses the efficiency and effectiveness of the internal audit as well as identifies improvement opportunities.

The head of internal audit should encourage the supervision of the board of the program of the insurance and improvement of quality (International Standards for The Professional Practice of Internal Auditing, Revision 2016). The program process of the insurance and improvement of the quality of the internal audit conducted by, or under the direct supervision of the head of internal audit. The head of internal audit needs to establish the functionality of the program, formally led by an executive of the internal audit and the integrity of the audit activities and consultations are regularly carried out in the internal audit. It also includes the measurement and analysis of continuous performance indicators (e.g: achievement of work plan of internal audit, the cycle time of the audit, recommendations accepted, and customer satisfaction). If the results of the assessment show certain areas in need of repair, the head of internal audit should immediately implement a program improving the quality of internal audit. The assessment process is designed to evaluate and provide conclusions on the quality of the internal audit activity and will generate recommendations for necessary repairs (Hussain, Sallehuddin, Shamsudin, & Jabarullah, 2018).

*The perception of environmental uncertainty*

Environmental uncertainty is a situation where the organization (or its leaders) does not have enough information about the state of the environment to be able to understand and estimate the needs and changes in the environment (Richard L. Daft, 2010). The uncertainty of the environment leads to:

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(1) The emergence of difficulty in estimating the environmental changes that will occur, this uncertainty leads to action taken by the organization which has a higher risk of failure (Akhmad and M. Jauhar, 2013).

(2) Uncertainty as a sense of the inability of the individual to predict something accurately. A person is experiencing uncertainty because they feel that they do not have enough information to predict accurately, or because the individual did not feel able to distinguish between relevant data and irrelevant data (Miliken, 1987).

(3) The inability to predict the influence of the environment in the future against the organization. Activity planning faces problems because of the inability (top management) to predict events in the future (Miliken, 1987).

(4) The activity of control is also strongly influenced by the uncertainty, for example the sub-units of the organization are not able to predict the changes and assume that the static budget is not effective as a control tool because often the standards are out of date (Miliken, 1987).

(5) The inability to predict the consequences of decisions. Efforts to understand what response options are available to the organization and the benefits of each response that will be made. Thus, response uncertainty is defined as the lack of knowledge about responding choices and the inability to predict the consequences that may arise as a result of responding choices and attempts to understand what response options are available to the organization and the benefits of each response that will occur arise as a result of response choices. (Miliken, 1987).

(6) Specific Environment includes external forces that directly affect the manager's decisions and are relevant to the achievement of the objectives of the organization. The general powers that shape the specific environment are customers, suppliers, competitors, and interest groups of the community (Stephen and Mary, 2010).

(7) The General environment, including economic conditions, political/legal, socio-cultural, demographic, technological, and global extensively (Stephen and Mary, 2010).

(8) The uncertainty of the environment is perceived as a factor of contingency that is most important, because the uncertainty of the environment is perceived to make the process of planning and control more difficult (Chenhall and Morris, 1986).
The influence of the perception of environmental uncertainty on the integrity of the internal audit

Environmental uncertainty is the perception of members of the internal auditors in anticipation of the influence of environmental factors on the organization. Commitment of internal auditors in this case relates to the integrity of the internal auditor in the internal audit process and is more demanding than mere compliance initiatives over the law or regulations. Integrity and compliance with laws and regulations will be realized when it is followed by the commitment of the auditee. The inability in predicting social and physical factors as well as disharmony between the monitoring strategies that are created by the existence of change will lead to less effective audit. This shows that an internal auditor is required to be able to predict things in the future to identify opportunities for improvement and enhancement as well as obtain information relevant for decision-making. Organization that undertake an internal audit should strive to reduce environmental uncertainty to be effective.

Role ambiguity

Role ambiguity is a situation in which information related to a specific role is lacking or not clear. Role ambiguity can lead an internal auditor to experience pressure and decreased job satisfaction. The position of the internal auditor's role can create a challenge for maintaining the integrity.

(1) Role ambiguity - due to the many demands of the job, time pressure in the task, and the uncertainty of the supervision by the supervisor which resulted in employees having to guess and predict his actions (Bamber, et al, 1989)

(2) Sawyer and Dittenhofer (in Ahmad and Taylor, 2009) also explained the causes of the occurrence of role ambiguity in the environment of the internal auditor is that the internal auditors may conduct an internal investigation with the conditions of the operational process that is not yet recognizable, complex, and increasingly widespread, as well as with individuals that are in the object of inspection.

(3) Role ambiguity is “the absence of information feedback the results of evaluation of supervisors about the results of one's work, about the opportunities to rise in career, scope of responsibility, and hope-the hope of the transmitter of the role” (Katz and Kahn, 1978).
The influence of role ambiguity against the integrity of internal auditors

Role ambiguity can reduce the ability of internal auditors to maintain their integrity. Problems relating to the ambiguity are:

1. The auditor feels the presence of pressure from the work, so that the auditors feel that his or her skills are limited.
2. The auditor does not work according to professional standards, but works according to the wishes of a party.

The presence of complex conditions and changes in the operational environment of the internal auditor, including the complexity and changes in regulations and technologies, can increase the likelihood of the occurrence of role ambiguity (Ahmad and Taylor, 2009); the role as a state in which information related to a specific role is lacking or is not clear (Beauchamp et al., 2004). Role ambiguity can also occur in the internal auditor if the organization is experiencing changes in the structure of and changes in civil service regulations, which leads to the onset of problems such as the demands and pressures of the job (Ameen, et al, 1995). Role ambiguity reduces the level of certainty of whether the information obtained in the examination is objective and relevant (Schuller et al. in Koustelios, 2004) and can lead to a decrease in job satisfaction. It can be concluded that, the ambiguity of the role can also reduce the ability of internal auditors to maintain their integrity.

Role conflict

Role conflict can cause discomfort in the work and workers can lose the motivation. Role conflict is conflict that occurs because there is a clash of opinions between parties involved in performing the role. Role conflict is a form of the existence of a dispute between the expectations associated with a role. Role conflict is the result of inconsistent expectations of various parties or the perception of a person because of individual values; the difference between what the role demands and needs and what the other party expects. As a result of experiencing role conflict, a person can be erratic, pinched, and avry. Role conflict can make individuals not able to make decisions. Role conflict occurs with the emergence of conflicting roles to be performed by the parties as members in an organization (Koo and Sim, 1999). Each role refers to an identity that defines who and how the employee should act in certain situations (Siegel and Marconi, 1989). Role conflict is also associated with the presence of two demands which are mutually contradictory. Luthans (1998) found that role conflict can cause increases in anxiety for the parties involved.
Role conflict can include the contradictions between the role of the audit and the role of management, the potential difference between the professional and management demands of the organization. Auditors tend to maintain professionalism and the audited party tends to defend the institution. Role conflict in an environment of internal auditors can be derived from the antagonism that comes from the role in the conduct of an audit and the role in providing consulting services, namely:

1. Role conflict encountered by the internal auditors related to the position of the internal auditor. Thus, the role conflict experienced by the internal auditor may result in the auditor being vulnerable to the pressure of the examination object. This results in the destruction of the independence of the internal auditor (Koo and Sim, 1999).
2. The internal auditor must maintain independence by not basing the consideration of the audit on the examination object. But in a consulting role, internal auditors should work together and help the object of inspection (Ahmad and Taylor, 2009).
3. Problems arise where the auditor cannot differentiate between the professional task at hand and the demands of the audited party. Internal auditors perform two roles in the organization, namely: the role of audit and the role of consulting services. This can cause the occurrence of intra-sender role conflict (Ahmad and Taylor, 2009).

Program of insurance and improving the quality of internal audit, session 1310 includes an evaluation of:

1. Internal and external assessment;
2. Conformity with International Standards for the Professional Practice of Internal Auditing (Standards);
3. Disclosure of the discrepancy. Internal assessments should include:
   a. Continuous monitoring of the performance of the internal audit activity; and
   b. Periodic self-assessment or other parties within the organization who have adequate knowledge of internal audit practices. Whereas external assessments must discuss with the supervisory board:
      - The form and frequency of external assessments; and
      - The qualifications and independence of the (team) external assessors, including the possible occurrence of a conflict of interest.

The head of internal audit must disclose the non-conformance and the impact to senior management and the board (International Practice of Professional Internal Auditing Standard,
Revision, 2016). The head of internal audit should be aware that monitoring to develop and maintain a program of insurance and improving the quality of internal audit will ultimately reduce the perception of environmental uncertainty, role ambiguity and role conflict.

**The integrity of internal auditor**

Integrity requires an auditor to be honest and transparent, brave, wise and responsible in carrying out the audit. Honesty is a fusion of consistency of character and moral principles (Mustakim, Andi Wawo, 2017); the nature of loving the truth (not cheating), being sincere (sincere) as well upholding the ethics and justice of the profession. A professional should not be intimidated by others and is not subject to the pressure to influence attitude and/or opinion. To be Wise be is to always weigh the problems following the consequences carefully. Responsibility is an attitude that is not evasive or that blames others. Pressure from the boss will impact on the inspection process and will degrade the quality of the audit. The principle of the Integrity of internal auditors according to the Institute of Internal Auditors (IIA) in Amin Widjaja (2013) is as follows:

1. Internal auditors should carry out their work with honesty;
2. Craft/persistence despite failing to carry out the examination adequately;
3. The responsibility of providing for them a variety of analysis, appraisal, recommendations, counsel, and information in connection with the activity being examined;
4. The internal Auditor must observe the law and make disclosures expected of the law and the profession;
5. Not knowingly be a party involved in an activity that is illegal or performing actions that violate the profession of internal auditing or the organization;
6. Must respect or contribute to the legitimate and ethical goals of the organization.

**The influence of the integrity of the auditors on the program of the insurance and improvement of the quality of internal audit**

Audit quality that is good in principle can be achieved if auditors apply the standards of audit. Integrity is the compliance without compromise on the moral values (code of ethics), and avoidance of deception, expediency, artificiality, or shallowness of any kind. Improvement of the quality of the internal audit is carried out in the program of the insurance and improvement of the quality of internal audit. Program of insurance and improving the quality of internal audits are designed to allow the internal auditor to evaluate the appropriateness of internal audit activity against the standards, and the evaluation of the application of the code of ethics. Integrity requires an auditor to be honest and transparent, brave, wise and responsible in carrying out the audit. The four elements are needed to build trust and provide a basis for reliable decision making.
Framework

Monitoring to develop and maintain a program of insurance and improving the quality of internal audit will ultimately reduce the perception of environmental uncertainty, ambiguity, and role conflict. The integrity of internal auditors in completing the audit process will produce a good performance. Internal auditor is responsible to be able to maintain integrity under any conditions, so that opinions, conclusions, considerations, and recommendations from the results of the inspection carried out are impartial (Saudi, Sinaga, Roespinoedji, & Razimi, 2019). A lack of integrity of internal auditors can be caused by:

1. The environmental component of the change will quickly impact on the environmental uncertainty. Environmental uncertainty happens because the auditor does not have sufficient information about environmental factors to understand and predict the needs and changes in the environment required by the internal auditor;
2. The internal auditors will face an increased likelihood of the occurrence of role ambiguity (vagueness). It is driven by the presence of the complex conditions and changes in the operational environment of the internal auditor, including the complexity and changes in regulations and technology. The ambiguity of these roles can create tension at work and can weaken the ability of internal auditors to maintain the commitment and integrity of the profession;
3. Inherent role conflicts, including potential contradictions between the role of audit and the role of management consulting services, potential differences between the direction of their professional organization, and the demands of organizational management. Role conflicts can occur between auditors who tend to maintain their professionalism and the audited party, who tends to maintain loyalty to the institution. Attitudes and beliefs related to the environment of members of the profession are often shaped by bureaucratic conditions (Sinaga, Saudi, Roespinoedji, & Razimi, 2019).
The object of research

The object under study in this research is the perception of environmental uncertainty, role ambiguity and role conflict and integrity as the independent variables, while the program of insurance and improving the quality of internal audit is the dependent variable. The subject of this study is 4 (four) Limited Liability Companies (PT), State-owned enterprises in the city of Bandung.

The design of the study

The research method used in research is the survey approach; census and non-experimental. While the type of research conducted is explanation research.
Table 3.1: Operation of variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>The concept of variable</th>
<th>Indicator</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>The perception of environmental uncertainty (X&lt;sub&gt;1&lt;/sub&gt;)</td>
<td>Environmental uncertainty is a situation where the organization (or its leaders) do not have enough information about the state of the environment to be able to understand and estimate the needs and environmental changes (Richard L. Daft, 2010)</td>
<td>(X&lt;sub&gt;1.1&lt;/sub&gt;) Difficulty in estimating the change-environmental changes that will occur, so that actions will be taken by the organization have a risk of high failure. (X&lt;sub&gt;1.2&lt;/sub&gt;) Individuals do not feel able to distinguish between relevant data with data that is not relevant. (X&lt;sub&gt;1.3&lt;/sub&gt;) Activity planning faces problems because of the inability of top management to predict events in the future will come. (X&lt;sub&gt;1.4&lt;/sub&gt;) Often the standards that have been set can not be used (out of date). (X&lt;sub&gt;1.5&lt;/sub&gt;) The inability to predict the consequences of the choices the decision to respond to the environment. (X&lt;sub&gt;1.6&lt;/sub&gt;) Specific environment, includes external forces that directly affect the manager's decision and are relevant to the achievement of the objectives of the organization. (X&lt;sub&gt;1.7&lt;/sub&gt;) The general environment, includes external forces that directly affect the manager's decision and are relevant to the achievement of the objectives of the organization. (X&lt;sub&gt;1.8&lt;/sub&gt;) The uncertainty of the environment that are perceived to make the process of planning and control more difficult.</td>
<td>Ordinal</td>
</tr>
</tbody>
</table>
| Role ambiguity (X₂) | Role ambiguity as a situation in which information related to a specific role is lacking or not clear. Role ambiguity can cause internal auditors to experience pressure (Schuller et al. in Koustelios, 2004) | \(X₂.1\) The number of the demands of the job, time pressure in the task, and the uncertainty of the supervision by the supervisor which resulted in employees have to guess and predict own any of his actions.  
\(X₂.2\) Auditors internal may conduct an internal investigation with the conditions of the operational process that is not yet recognizable, complex, and increasingly widespread, as well as individuals that are in the object of inspection.  
\(X₂.3\) The absence of information feedback the results of evaluation of supervisors about the results of one's work, about the opportunities to rise in career, scope of responsibility, and hope-the hope of the deliverer role. | Ordinal |
| Role conflict (X₃) | Role conflict occurs when the emergence of the role-conflicting roles to be performed by the individual as a member in an organization (Koo dan Sim, 1998). | \(X₃.1\) Auditors are susceptible to the pressure of the examination object.  
\(X₃.2\) The internal auditor must maintain independence, but in a consulting role, internal auditor should work together and help the object of inspection.  
\(X₃.3\) The internal auditor perform two roles in the organization, namely: the role of audit and the role of the consulting services. | Ordinal |
| The integrity of internal auditor (Y) | Integrity is the attitude of honest, valuable, wise and responsibility of the auditor in conducting the audit. Integrity is a quality that underlies the public trust and is a benchmark for members to test his decision (Sukriah, 2009). | \(Y₁\) The internal auditor should carry out his job with honesty or freedom of speech  
\(Y₂\) Craft/persistence despite failing in carrying out the examination adequately.  
\(Y₃\) The responsibility of providing for them a variety of analysis, appraisal, recommendations, counsel, and information in connection with the activity being examined  
\(Y₄\) The internal auditor must observe the law and make disclosure expected of the law and the profession;  
\(Y₅\) Not knowingly be a party involved in an activity that is illegal or performing actions that violate the profession of internal | Ordinal |
The Results of Research and Discussion

The results of the research

Overview the unit of observation

The Subject of this study is 4 (four) Limited Liability Company (PT). State-owned enterprises in the city of Bandung:

1) PT. Diragantara Indonesia (Persero),
2) PT. PLN (Persero),
3) PT. Inti (Persero), and
4) PT. Telkom

The respondents in this research are the managers, supervisors, internal auditors, and users of internal audit services; a total of 115 personnel.

| Program of insurance and improving the quality of internal audit (Z) | Program of insurance and improving the quality of internal audit are designed to allow the internal auditor to evaluate the appropriateness of internal audit activity against the standards, and the evaluation of the application of the code of ethics. (International Professional Practice Of Auditing Internal Standards, 2016). | (Z₁) Includes both the assessment of the internal and external conformity with the International Standards Professional Practice Internal Audit (Z₂) The Disclosure of a discrepancy. | Ordinal |
Table: 4.1: The number of answers of questionnaires returned

<table>
<thead>
<tr>
<th>The post</th>
<th>PT.DI</th>
<th>PT. PLN</th>
<th>PT.Inti</th>
<th>PT.Telkom</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Supervisor</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Other employees</td>
<td>23</td>
<td>18</td>
<td>12</td>
<td>9</td>
<td>62</td>
</tr>
<tr>
<td>The number of</td>
<td>29</td>
<td>22</td>
<td>18</td>
<td>11</td>
<td>80</td>
</tr>
<tr>
<td>Number (%)</td>
<td>36,25</td>
<td>27,50</td>
<td>22,25</td>
<td>13,75</td>
<td>100,00</td>
</tr>
</tbody>
</table>

Thus, the return rate of the questionnaire (responses rate) is 80 or 72.52%, which is pretty good based on the criteria of Cooper and Schindler (2001).

The results of the deployment of research instruments

The overall results of the respondents' answers in the number and percentage is as follows:

Table 4.2:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Numb of question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>5</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Program of insurance and improving the quality of internal audit.</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>22</td>
<td>9,2</td>
</tr>
<tr>
<td>The perception of environmental uncertainty.</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>49</td>
<td>7,7</td>
</tr>
<tr>
<td>Role ambiguity</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>61</td>
<td>25,4</td>
</tr>
<tr>
<td>Role conflict</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>24</td>
<td>10,0</td>
</tr>
<tr>
<td>The integrity of internal auditor.</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>4,4</td>
</tr>
</tbody>
</table>

Program insurance and improving the quality of internal audit

The results of the data collection through the questionnaire for each indicator can be seen in table 4.2. The above asked seven questions of 115 respondents. The overall results of the data collection through the questionnaire shows a score of answers: 'strongly agree' amounted to 50.0%. and 'agree' amounted to 40.8% while 'undecided' was 9.2%
The perception of environmental uncertainty in the internal audit

The results of the data collection through the questionnaire for each indicator can be seen in table 4.2. The perception of environmental uncertainty in the internal audit mentioned above asked four item questions of 115 respondents. The overall results of the data collection shows: ‘strongly agree’ was 70.5%, and ‘agree’ was 21.8%, while 7.7% were undecided.

Role ambiguity in the internal audit

The results of the data collection through the questionnaire for each indicator can be seen in table 4.2. Role ambiguity shows a score of answers: ‘strongly agree’ 40.0% and ‘agree’ 34.6% while 25.4% of respondents were undecided.

Role conflict in the internal audit

The results of the data collection through the questionnaire for each indicator can be seen in table 4.2. Role conflict overall results shows a score of answers: strongly agree 51.7%, agree 38.3%, while 10% of respondents were undecided.

The integrity of internal auditor

The results of the data collection through the questionnaire for each indicator can be seen in table 4.2. The integrity of the internal auditor the overall results of the data collection through the questionnaire show a score of answers: strongly agree amounted to 70.6% and ‘agree’ 25%, while 4.4% of respondents were undecided.

Hypothesis testing

Hypothesis testing is done with a system as follows:
(1) The perception of environment uncertainty, role ambiguity, and role conflict negatively affects the integrity of the internal auditor;
(2) The integrity of internal auditors has a positive effect on the program of the insurance and improvement of the quality of internal audit; and
(3) The perception of environment uncertainty, role ambiguity, and role conflict affects the program of the insurance and improvement of the quality of internal audit.

Before the hypothesis test, we first test the following assumptions:
(1) Multikolaritas, at the output coefficient seen that the value of the tolerance of 0.959 so the VIF value is 1/0.959 = 1.042. the value VIF is less than 5, then there is no problem of multicollinearity.

(2) Autocorrelation, the Durbin-Watson obtained is 1.927 or close to 2, then there is no problem of autocorrelation.

(3) Linearity, point-to-point plots scattered around 0, which shows there is linearity. Hypothesis testing using analysis of Structural Equation Modelling (SEM). The results of calculations performed using the program LISREL (Linear Structural Relationship): figure 4.1 and figure 4.2.

**Figure 4.1.** The results of testing the influence: the perception of environmental uncertainty (ξ1), role ambiguity (ξ2), and role conflict (ξ3) to: the integrity of internal auditor (η1)
**Figure 4.2.** The results of the testing variable of integrity of the internal auditor on the variable of the program of insurance and improving the quality of internal audit

\[ \text{IA} \rightarrow Y_1 \rightarrow Y_2 \rightarrow Y_3 \rightarrow Y_4 \rightarrow Y_5 \rightarrow Y_6 \rightarrow Y_7 \rightarrow \epsilon \]

\[ \text{PA} \rightarrow Z_1 \rightarrow Z_2 \rightarrow Z_3 \]

**The results of the estimation of the indicator**

**The results of the estimation of indicators for perception of environmental uncertainty**

The results of the estimation of the parameters of each indicator for the perception of environmental uncertainty by using the program LISREL is presented in figure 4.1. This explanation is necessary because environmental uncertainty is the variable that is measured indirectly, but is formed by a number of indicators that need to be explored in order to gauge its contribution to variable perception of the uncertainty of the environment.

**Table 4.3:** The estimation results of LISREL for the Perception of environmental uncertainty.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Parameter Estimation</th>
<th>$R^2$</th>
<th>Error Variant</th>
</tr>
</thead>
<tbody>
<tr>
<td>The difficulty in estimating the change-environmental changes that will occur, so that actions will be taken by the organization have the risks of failure are high.</td>
<td>$X_{1.1}$</td>
<td>0,88</td>
<td>0,73</td>
<td>0,27</td>
</tr>
<tr>
<td>Individual feel are not able to distinguish between relevant data with data that is not relevant.</td>
<td>$X_{1.2}$</td>
<td>0,40</td>
<td>0,15</td>
<td>0,85</td>
</tr>
<tr>
<td>Activity planning faces problems because of the inability of top management to predict events in the future.</td>
<td>$X_{1.3}$</td>
<td>0,47</td>
<td>0,21</td>
<td>0,79</td>
</tr>
<tr>
<td>Often the standards that have been set cannot be used.</td>
<td>$X_{1.4}$</td>
<td>0,38</td>
<td>0,14</td>
<td>0,86</td>
</tr>
</tbody>
</table>
The inability to predict the consequences of the choices the decision to respond to the environment

Specific environment, includes external forces that directly affect the manager's decision and are relevant to the achievement of the objectives of the organization. Such as: customers, suppliers, competitors, and interest groups of the community.

The general environment, includes external forces that directly affect the manager's decision and are relevant to the achievement of the objectives of the organization. Such as: economic conditions, political/legal, socio-cultural, demographic, technological, and global widely.

The uncertainty of the environment that are perceived to make the process of planning and control more difficult.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Parameter Estimation</th>
<th>R²</th>
<th>Error Variant</th>
</tr>
</thead>
<tbody>
<tr>
<td>The many demands of the job, time pressure in the task, and the uncertainty of the supervision by the supervisor which resulted in employees have to guess and predict own any of his actions.</td>
<td>X₂,₁</td>
<td>0,95</td>
<td>0,92</td>
<td>0,08</td>
</tr>
<tr>
<td>Internal auditors may conduct an internal investigation with the conditions of the operational process that is not yet recognizable, complex, and increasingly widespread, as well as individuals that are in the object of inspection.</td>
<td>X₂,₂</td>
<td>0,87</td>
<td>0,77</td>
<td>0,23</td>
</tr>
</tbody>
</table>

The results of the estimation of the indicators for role ambiguity

The results of the estimation of the parameters of each indicator, to the ambiguity of the role by using the program LISREL, is presented in figure 4.1. This explanation is necessary because role ambiguity is a variable that is indirectly measured, but is formed by a number of indicators that need to be explored.

Table 4.4: The results of the Estimation of LISREL to the ambiguity of the role
evaluation of supervisors about the results of one's work.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Parameter Estimation</th>
<th>$R^2$</th>
<th>Error Variant $s$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditors are vulnerable to the pressure of the examination object. This resulted in the destruction of the integrity of the internal auditors.</td>
<td>X$_{3.1}$</td>
<td>0,91</td>
<td>0,81</td>
<td>0,19</td>
</tr>
<tr>
<td>Internal auditors should maintain integrity but in a consulting role, internal auditors should work together and help the object of inspection.</td>
<td>X$_{3.2}$</td>
<td>0,90</td>
<td>0,78</td>
<td>0,21</td>
</tr>
<tr>
<td>Internal auditors perform two roles in the organization, namely: the role of audit and the role of the consulting services. This can cause the occurrence of intra-sender role conflict.</td>
<td>X$_{3.3}$</td>
<td>0,93</td>
<td>0,85</td>
<td>0,15</td>
</tr>
</tbody>
</table>

The results of the estimation of the indicators for role conflict

The results of the estimation of the parameters of each indicator for role conflict using the program LISREL is presented in figure 4.1. This explanation is necessary because role conflict is a variable that is indirectly measured, but is formed by a number of indicators that need to be explored.

### Table 4.5: The results of the estimation of LISREL to role conflict

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Parameter Estimation</th>
<th>$R^2$</th>
<th>Error Variant $s$</th>
</tr>
</thead>
<tbody>
<tr>
<td>The internal Auditor should carry out his job with honesty or freedom of speech.</td>
<td>Y$_{1.}$</td>
<td>0,81</td>
<td>0,60</td>
<td>0,40</td>
</tr>
</tbody>
</table>
Crafting/diligence despite failing in carrying out the examination adequately. | Y2 | 0.55 | 0.28 | 0.72
---|---|---|---
The responsibility of providing for them a variety of analysis, appraisal, recommendations, counsel, and information in connection with the activity being examined. | Y3 | 0.57 | 0.30 | 0.70
---|---|---|---
The internal auditor must observe the law and make disclosure expected of the law and the profession. | Y4 | 0.84 | 0.65 | 0.35
---|---|---|---
Not knowingly be a party involved in an activity that is illegal or performing actions that violate the profession of internal auditing or the organization. | Y5 | 0.69 | 0.44 | 0.56
---|---|---|---
Have to respect or contribute to the objectives of the organization's legitimate and ethical. | Y6 | 0.80 | 0.59 | 0.41
---|---|---|---

From the six indicators of integrity, there are three indicators that are able to explain less than 50% of integrity, while there are three indicators are able to explain integrity at a rate of more than 50%.

**The results of estimation indicators program of the insurance and improvement of the quality of internal audit.**

The results of the estimation of the parameters of each indicator for the program of insurance and improving the quality of internal audit, by using the program LISREL, is presented in figure 4.2. This explanation is necessary because the program of insurance and improving the quality of audit internal is a variable that is indirectly measured, but is formed by a number of indicators that need to be explored.

**Table 4.7:** The results of LISREL for the program of insurance and improving the quality of internal audit

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Parameter Estimation</th>
<th>R2</th>
<th>Error Variants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Include a better assessment of the internal and external</td>
<td>Z1.</td>
<td>0.59</td>
<td>0.34</td>
<td>0.66</td>
</tr>
<tr>
<td>Conformity with the International Standards Professional Practice of Internal Audit.</td>
<td>Z2</td>
<td>0.94</td>
<td>0.88</td>
<td>0.12</td>
</tr>
<tr>
<td>Disclosure of the discrepancy.</td>
<td>Z3</td>
<td>0.63</td>
<td>0.39</td>
<td>0.61</td>
</tr>
</tbody>
</table>
Discussion

The calculation results of testing direct effect: the perception of environment uncertainty, role ambiguity, and role conflict to variable: integrity.

Table 4.8: Path coefficient, direct effect: the Perception of environmental uncertainty ($\xi_1$), role Ambiguity ($\xi_2$), and role Conflict ($\xi_3$) to the variable: Integrity ($\eta_1$):

<table>
<thead>
<tr>
<th>Variable</th>
<th>Path Coefficient</th>
<th>Direct Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception of environmental uncertainty</td>
<td>0.47</td>
<td>0.2209</td>
</tr>
<tr>
<td>Role ambiguity</td>
<td>0.54</td>
<td>0.2916</td>
</tr>
<tr>
<td>Role conflict</td>
<td>0.45</td>
<td>0.2025</td>
</tr>
<tr>
<td>The number of</td>
<td></td>
<td>0.715</td>
</tr>
</tbody>
</table>

Rounded to 72%

Thus the influence of the other $\xi_1$ is 28%.

The influence of the perception of environmental uncertainty to the integrity of the internal auditor

Based on the results of calculations using the LISREL program, the calculation results obtained are described in Figure 4.1. Table 4.3, namely the magnitude of the influence of perceptions of environmental uncertainty on integrity is $(0.47)^2 = 0.2209$ (22.09%). This means that the perception of environmental uncertainty has a negative effect on integrity. Based on table 4.3, the difficulties in estimating the environmental changes that will occur, so that actions will be taken by the organization have a high risk of failure, is the most powerful to explain about the perception of environmental uncertainty, namely 88%, while the activity indicator of control, because often the standards that have been set cannot be used (out of date) is very weak.

The influence of role ambiguity on the integrity of internal auditor

Based on the results of calculations using the LISREL program results are obtained as illustrated in figure 4.1 and table 4.4, namely the magnitude of the influence of role ambiguity on integrity is $(0.54)^2 = 0.2916$ (29.16%). This means that role ambiguity has a negative effect on integrity. Based on table 4.4:

1) The demands of the job, time pressure in the task, and the uncertainty of the supervision accounts for 95% of role ambiguity.
2) The internal auditors may conduct an internal investigation with the conditions of the operational process that is not yet recognizable, complex, and increasingly
widespread, as well as individuals that are in the object of inspection - explained 87%; and
3) Indicator of the absence of information feedback and scope of responsibility explained 91%.

**The influence of role conflict on the integrity of internal auditors**

Based on the results of calculations using the LISREL program results are obtained as illustrated in figure 4.1 and table 4.5, namely the magnitude of the influence of role conflict on integrity is \((0.45)^2 = 0.2025\) (20.25%). This means that role conflict has a negative effect on integrity.

Based On Table 4.5, auditors are susceptible to the pressure of the examination object. This resulted in the destruction of the integrity of internal auditors of 91%, the internal auditor should maintain integrity, but in a consulting role, internal auditors should work together and help the object of inspection describes the role conflict by 90%, and the internal auditors run two roles in the organization, namely: the role of audit and the role of the consulting services. This can cause the occurrence of intra-sender role conflict - 93%.

**The influence of the perception of environment uncertainty, role ambiguity, and role conflict affect the program insurance and improving the quality of internal audit**

The results of calculations testing the influence of perception of environment uncertainty, role ambiguity, and role conflict on the variable of program of insurance and improvement of the quality of the internal audit, are as follows:

**Table 4.8:** The path coefficient, the Influence of the Perception of environmental uncertainty \((\xi_1)\), role Ambiguity \((\xi_2)\), and role Conflict \((\xi_3)\), as well as Integrity \((\eta_1)\) to Program of insurance and improvement of the quality of the internal audit \((\eta_2)\).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Path Coefficient</th>
<th>Direct Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception of environmental uncertainty</td>
<td>0.20</td>
<td>0.04</td>
</tr>
<tr>
<td>Role ambiguity</td>
<td>0.35</td>
<td>0.1225</td>
</tr>
<tr>
<td>Role conflict</td>
<td>0.40</td>
<td>0.16</td>
</tr>
<tr>
<td>Integrity</td>
<td>0.60</td>
<td>0.36</td>
</tr>
<tr>
<td>The number of</td>
<td></td>
<td>0.715</td>
</tr>
<tr>
<td>Rounded to 72%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thus the influence of the other \(\xi_2\) is 31%.
The influence of the perception of environmental uncertainty to the program of Insurance and improving the quality of internal audit.

The results of calculations using the LISREL program, the calculation results are obtained as illustrated in Figure 4.2 and table 4.8, namely the magnitude of the influence of perceptions of environmental uncertainty on the insurance program and an increase in internal audit quality is $(0.20)^2 = 0.04$ (4%). This means that perceptions of environmental uncertainty negatively affect the program of internal audit.

The influence of role ambiguity on program of insurance and improving the quality of internal audit.

Based on the results of calculations using the LISREL program results are obtained as illustrated in figure 4.2 and table 4.8, namely the magnitude of the influence of role ambiguity on the insurance program and the increase in internal audit quality is $(0.35)^2 = 0.1225$ (12.25%). This means that role ambiguity negatively affects program and increases of internal audit.

The influence of role conflict to the Program insurance and improving the quality of internal audit.

Based on the results of calculations using the LISREL program results are obtained as illustrated in figure 4.2 and table 4.8, namely the magnitude of the influence of role conflict on the insurance program and the increase in internal audit quality is $(0.40)^2 = 0.16$ (16%). This means that role conflict negatively affects the program of internal audit.

The influence of the integrity of the program of insurance and improving the quality of internal audit.

Based on the results of calculations using the LISREL program results are obtained as illustrated in figure 4.2 and table 4.8, namely the magnitude of the influence of integrity on insurance programs and the increase in internal audit quality is $(0.60)^2 = 0.36$ (36%). This means that the integrity of internal auditors has a positive effect on insurance programs and an increases the quality of internal audits. Based on table 4.5, internal auditors must observe the law and make expected legal and professional disclosures - 84%, internal auditors must carry out their work with honesty or freedom of opinion - 81%, and must respect or make contributions to legitimate and ethical organizational goals – 93%.
Conclusion and Advice

Conclusion

Based on the analysis and the results of the research that has been done, conclusions can be drawn as follows:

1. The perception of environmental uncertainty negatively affects integrity. This happens because of the difficulty in estimating the environmental changes that will occur, so that actions will be taken by the organization that have high risks of failure; and often the standard that has been set cannot be used (out of date).

2. Role ambiguity negatively affects integrity. This happens because of the many demands of the job, time pressures in the task, and the uncertainty of the supervision which resulted in employees having to guess and predict their own actions.

3. Role conflict negatively affects integrity. This happens because the auditors are susceptible to the pressure of the examination object.

4. The perception of environmental uncertainty negatively affects the program of the ‘insurance and improvement of the quality of internal audit’.

5. Role ambiguity negatively affects the program of the ‘insurance and improvement of the quality of internal audit’.

6. Role conflict negatively affects the Program of the ‘insurance and improvement of the quality of internal audit’.

7. Integrity has a positive effect on the program.

Advice

1. Under the conditions of pressure of an uncertain environment, strategic planning can be changed and can be as flexible as possible. The company should be able to cope with and adjust to changes in the uncertain condition and the environment which is turbulent.

2. To respond to uncertainties by adjusting the objective, this is supported by the ability and knowledge. The reduction of uncertainty through strategic flexibility and strategic planning.

3. The Top management of the organization can experience three types of environmental uncertainty, they can try to understand, feel, and respond to the conditions of the external environment. Therefore the measurement of uncertainty of the environment that is most appropriate is by using the perception of top management about the environmental uncertainty faced by the company.

4. In an uncertain environment, the company can effectively use the control system that is less formal. While in an environment that is certain the company can effectively use the formal mechanistic control system. Role ambiguity can be eliminated, among others, by (1) estimating results (outcomes) or responses arising out of an action behaviour. (2)
Clarity on the terms of the behaviour that can help become a code of conduct. In addition, one function of the mentor is to provide information for the protégé to clarify the expectations of the role. The information conveyed by mentors has the potential to reduce role ambiguity. Factors related to the ambiguity of the role include coordinating the flow of work, breach in the chain of command, job descriptions, and adequacy of communication flows.

5. Role conflict can be eliminated by conducting training and improving the education of the employees, so that the employees can be more competent in carrying out their duties.


