Analysis of Auditor Performance by Using Covariance Based Structural Equation Modeling: A Study of Public Accounting Firms in Indonesia

Yonathan Sunyoto¹,², Imam Ghozali¹, Agus Purwanto¹

Abstract:

The purpose of this study is to examine the factors that affect the performance of auditors. Factors tested were motivation, experience, and commitment as, and knowledge of regulations (the Public Accountant Act/Undang-Undang Akuntansi Publik).

The study was conducted using 213 auditors from various accounting firms in Indonesia. Surveys were done by sending emails to public accounting firms and auditors directly. Data analysis was conducted using Covariance Based Structural Equation Modeling (CB-SEM).

The results showed that motivation, experience, and commitment have a positive effect on performance. In addition, knowledge of regulations is able to strengthen the relationship between motivation, experience, and commitment to performance. This research contributes both on the practical and theoretical perspectives.

Keywords: Performance, motivation, experience, commitment, knowledge on regulations

¹ Department of Accounting, Faculty of Economics and Business, Diponegoro University, Jl. Erlangga Tengah No. 17 Semarang, 50241, Central Java, Indonesia, Telp: (024) 8452269, 8450310, Fax (024) 8450310, email: ysunyoto.stieaka.smg@gmail.com; imam.ghozali@live.undip.ac.id; agus@fe.undip.ac.id
² STIE AKA Semarang, Jl. Citarum No.44, Semarang Tengah, Semarang, 50241, Central Java, Indonesia, Tel.: +62 24 3518019
Introduction

Public accountants are individuals who work in the field of service, in the form of both attestation and non attestation services. Attestation services in the form of operational, compliance, and financial audits are the most common services (Arens, 2013). In Indonesia, public accountants are commonly called auditors. The auditor may work at the public accounting firms. The Resource Based View (RBV) theory states that in order to gain competitive advantage and be trusted by clients, accounting firms must perform resource analysis. The first resource in question is the auditor. The auditor in performing its role is guided by the Auditing Standards stipulated by the Indonesian Institute of Certified Public Accountants and the code of ethics of the accounting profession that in Indonesia is known as the Code of Ethics of Indonesian Accountants. In SA 200 paragraph 3 (IAPI, 2013) states that the purpose of the audit is to increase the user's confidence in the financial statements by issuing an opinion on the presentation of the financial statements. As a professional, the auditor should avoid omissions, dishonesty, and should be independent.

Auditors are required to perform well. Performance is the result of an evaluation of the work performed compared to the predefined criteria (Robbins, 2015). Good performance for auditors is determined based on three aspects that are audit quality, audit quantity, and timeliness in completing the audit. Good performance can result in rewards (Porter, 1994). This causes the auditors to try to show their performance in doing his job.

Auditor performance evaluation will measure the success of auditors in conducting audits based on established procedures. In fact, not all auditors perform their duties in accordance with auditing standards. In America, the case of irregularities by very reputable auditors takes place in the Enron corporation involving accounting firm of Arthur Andersen, through fraudulent financial condition that is planned creatively (Semendawai et al., 2011). In Canada, cases of irregularities occur in Nortel companies involving Deloitte and Touche. The distorted practice that occurred was the improper suggestion of distributing corporate bonuses to 43 top managers. In Indonesia, the case that happened was profit manipulation in PT Kereta Api Indonesia. The manipulation is done by stating that the company experienced a profit of IDR 9.9 billion (742,500 USD) while the fact is a loss of IDR 63 billion (4,72,500 USD). This case involves accounting firm of S. Manan. There are still many cases that occur both in Indonesia and other countries. This problem is the basis for many researchers to test on factors that cause auditors to perform deviantacts.

There are several factors that affect the auditor's performance. These factors include the ability, knowledge, motivation, and experience (Ashton and Robbert, 2011; Ferris, 1977; Owhoso and Weickgenannt, 2009), professional commitment (Siders 2001; Ketchand and Strawser, 1998; Ferrish, 1981; Andrea, 2007), affiliation, power,
and achievement needs (Adrian, 1986). However, the results of research using the above variables are still not consistent. Therefore, this study attempts to re-examine the variables that affect the auditor's performance of motivation, experience, commitment, and understanding on the regulation of the Public Accountant Act (Undang-Undang Akuntansi Publik).

Motivation is the incentive of individuals to act in a certain way to achieve goals (Douglas, 1960). Auditors have motivation in performing their role. Armstrong (2003) mentions that motivational strategies are needed to increase effective contribution in achieving goals. Therefore, it is important to understand the motivation in determining auditor behavior. In addition to motivation, experience is one of the factors that determines auditor behavior. Experiences can be formed from educational background and working hours (Kvalsaughen, 2009). Libby and Luft (1993) mentioned that competent auditors will perform better. Work experience is an inseparable part of the individual in building his/her psychology in the work, thus affecting performance. In addition to experience, auditors need commitment in performing its role. Professional commitment refers to a loyal attitude to work or profession (Lee, 2000). This can reduce turnover and improve better performance at the organizational and professional level (Bline, 1992; Harrell and Hardin, 2001).

The motivational factors, experiences, and commitments in influencing performance are determined by the knowledge possessed by the auditor. Professional knowledge consists of practical wisdom or insight and understanding to achieve educational and moral goals in practice (Elliott, 1991). The auditor's knowledge can be used in solving the problems found in the audit. The knowledge in question is the regulation of Public Accountant Act. This regulation was chosen because in carrying out its role the auditor has a government regulation which is applied to auditors working in accounting firms namely Act No. 5 of 2011 on Public Accountant. The regulation is believed to have a positive and negative impact on public accountants in Indonesia. The positive impact is the legal certainty of the public accountant, and the negative impact is related to what written in the articles 55 and 56 of the Act, that explain the sanctions received by public accountants in the event of a violation. With the sanction, the auditor will be supposedly to try to perform its duties in accordance with auditing standards. Therefore, motivation, experience, and commitment depend on knowledge of the regulation in producing good performance. This is supported by Brahmasesne and Whitten (2001), that found that knowledge is the determinant of performance.

Based on several cases described above and previous studies that have not been consistent, it can be concluded that there are still auditors whose performance is not in accordance with its role. Therefore, further research on how the auditor's motivation, experience, and commitment affects the auditor's performance with regulation knowledge as a moderating variable. This research contributes theoretically and practically, that is expected to be able to lead to the inferences of previous studies that have not been consistent and reinforce the theory of Resource
Based View (RBV). Practically, the results of this study can provide guidance to accounting firms to gain sustainable competitive advantage through resource analysis that is at the core of the design and implementation of appropriate strategies.

**Literature Review and Hypothesis Development**

**Theory of Resource Based View (RBV)**
The theory of Resource Based View (RBV) was developed by Pencrose (1959) and Barney (1991). This theory explains that resource ownership is a success factor in gaining competitive advantage. Accounting firms in running the services are highly influenced by the resources owned. The auditor is a resource owned by firms (Pfeffer and Salancik, 1978). Therefore, the auditor's knowledge and experience need to be developed in order that the firms becomes superior and competitive, that eventually make the firm to be trusted by clients and stakeholders. The auditor shall ensure that the financial statements should be free of material misstatements. Therefore, it is necessary to understand the factors that support good auditor performance.

**Performance**
Performance is the impact of individual behavior. Robbins (2015) mentions that performance is the result of an evaluation of the work done compared to the criteria that have been previously set. Furthermore, Eliza and Mary (1992) define performance as a pattern of actions implemented to achieve goals, measured by comparison with standards. Similarly, the auditor's performance is the result of an evaluation of the auditor's work in conducting the examination as measured by the applicable audit standards. Assessment of the performance of individual auditors can be seen from the professionalism of an auditor in carrying out the work according to auditing standards. Many factors affect performance, including ability, motivation / support, existence of work done, and relationships with the organization (Mathis and Jacksen, 2006). Research related factors that affect the performance of auditors is needed to help auditors perform its functions with the truth.

**Motivation**
Motivation is largely explained by Maslow's hierarchy theory that was developed in 1943 (Tikkanen, 2007). Robbin (2015) defines motivation as a process that explains one's strength, direction, and perseverance in an effort to achieve goals. Motivation is an important factor in the long-term success of any organization. Auditor performance is highly dependent on the motivation it has. Previous research has shown different results. Ferris (1977) conducted a study of accountants finds that motivation is less likely to have a significant effect on performance. This is supported by Owhoso and Weickgenannnt (2009), Miller and O'Learly (2006), Adrian (1986), Ferris, (1981). Different results are shown by Asthon and Roberts (2011), Andrea (2007), Ketchand and Strawser (1998), and Elliotott (1991), demonstrated that motivation has a significant effect on performance. Differences in
these results become the basis for researchers to re-examine the influence of motivation on performance. Based on Maslow's hierarchy theory and the results of previous research the hypothesis is formulated as follows:

**H1. There is a positive influence of auditor's motivation on auditor performance.**

**Experience**
Experience is an ability possessed by individuals in the form of expertise. Professional expertise evolves from work experience (Lee, 2000). This is supported by Kvalsaughen (2009), revealing that experience is formed from educational background and working hours. Libby (1993) mentions that competent auditors will perform better. Arens et al. (2013) states that the auditor should have sufficient work experience to conduct auditing. Ferris (1977) conducted a study of accountants, showing that experience has a significant effect on performance. These results were supported by Libby and Luft (1993) and Kvalsaughen (2009). Different results are shown by Mathis (2006), Miller and O'Leary (2006), and Ashton (1991), revealing that experience has a negative effect on performance. Based on the results of previous research, the hypothesis is formulated as follows:

**H2. There is a positive influence of auditor's experience on auditor performance.**

**Commitment**
Mathis and Jackson (2006) define professional commitment as the degree to which individuals are convinced and accept the goals of the organization, and wish to stay with the organization. Working commitments arise not only characterized as passive loyalty, but also involving an active relationship with the organization (Steers and Porter, 1983). Characteristics of the accounting profession, such as the high level of technical knowledge, training, and significant financial rewards, can have an impact on the relative importance of each dimension of the professional commitment of the accountant. Previous research has shown that professional commitment has a positive effect on performance (Ketchand and Strawser, 1998 and Siders, 2001). Research conducted by Ferris (1981) distinguishes the performance of junior auditors and senior auditors. The results show that senior auditors have a higher commitment than those of junior. Based on the results of previous research, the hypothesis is formulated as follows:

**H3. There is a positive influence of auditor's commitment on auditor performance.**

**Regulation knowledge**
Knowledge can be defined as a reality, feeling, or experience of what a person or group knows (Beckman, 1999). This understanding shows that motivation, experience, and commitment are influenced by the knowledge they have. Alvesson and Karreman (2001) state that knowledge is the most important organizational resource. Previous research related to motivation, experience, and professional commitment still show different results. Contingency approach can be used as a
solution to the differences of research results. This can be done by incorporating other variables that influence the relationship between motivation, experience, and professional commitment with performance that is by using knowledge (Govindarajan, 1986; Suryanto and Ridwansyah, 2016; Tcvetkov et al., 2015).

Peecher et al. (2007) explained that the substantial focus of regulation in the last decade is to regulate how to reduce fraudulent financial statements and clarify the auditor’s responsibility for fraudulent financial statements. In Indonesia, the government regulation applied to auditors working in public accounting firms is the Public Accountant Act No. 5 of 2011. Scott (2012) put forward the theory of economic consequences, by explaining the point of view of the economic consequences of financial statements. Regulations govern the disclosure and reliability of the audit report so as to have economic consequences on stakeholder decision making. Based on the above explanation, the hypothesis is formulated as follows:

H4a. There is a positive influence of regulation knowledge on auditor performance.

H4b. Regulation knowledge moderates the influence of auditor experience on auditor performance.

H4c. Regulation knowledge moderates the influence of auditor’s commitment on auditor performance.

Figure 1. Research Model
Methodology

This research is explanatory research that try to explain the influence of some variable to the other. The sample in this research was 213 auditors in accounting firms in Indonesia selected using purposive sampling. Methods of data collection was done by a combination of two ways, that are through email / online and directly distributed to the respondents. The items of motivation was measured using instruments developed by Ganesan, Shankar and Barton (1996). The items of auditor's experience was measured using an instrument developed by Libby (1993). The items of professional commitment was measured using instruments from Aranya et al. (1981) and Ferris (1981). The items of auditor performance was measured using instruments from Kalbers and Timothy (1995). The items of regulation knowledge was measured using instruments developed by researchers referring to standard set by Public Accounting Act. Each variable was measured using a seven point Likert scale (1 for Strongly disagree –7 for strongly agree).

Data analysis was performed using Covariance Based Structural Equation Modeling (CB-SEM). Structural Equation Modelling (SEM) was chosen because this statistical analysis is a multivariate technique to estimate a series of interdependence relations simultaneously (Hair, 1998). Validity and reliability tests of the instrument are performed before hypotheses was tested. The next step is to estimate the structural model to explain the effect of (a) the direct influence of motivation, experience and professional commitment to performance, (b) the effect of moderation of regulation knowledge on the relationship between motivation, experience, professional commitment and performance (Thalassinos and Politis, 2012; Thalassinos et al., 2012; 2013; Hapsoro and Suryanto, 2017).

Results and Discussion

Validity and Reliability Testing

Testing the validity and reliability of constructs was used to reduce the invalid indicator on the research variables. The indicators used to measure the research variables are indicators that have a loading factor> 0.5 and p-value <0.05, whereas the indicator that has the loading factor <0.5 and p-value > 0.05 will be eliminated from the model. Reliability test was conducted by measuring composite reliability with rule of thumb> 0.7 and AVE <0.5. Testing was done by using Confirmatory Factor Analysis (CFA). The following is the result of the validity and reliability test of the construct.

Table 1. Validity and Reliability Testing

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Estimate</th>
<th>S.E</th>
<th>C.R</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOT1</td>
<td>.942</td>
<td>.257</td>
<td>3.666</td>
<td>***</td>
</tr>
<tr>
<td>MOT3</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOT4</td>
<td>.467</td>
<td>.184</td>
<td>2.539</td>
<td>.011</td>
</tr>
</tbody>
</table>
Based on table 1 above, the results show that the indicator in the motivation construct has a loading factor value > 0.5 and p value <0.05, indicating that the indicator in the constructs of motivation, experience, commitment, regulation knowledge, and performance can be said to be valid to measure the variables.

**Table 2. Reliability and average variance extracted**

<table>
<thead>
<tr>
<th>Variable</th>
<th>C.R</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>0.530</td>
<td>0.229</td>
</tr>
<tr>
<td>Experience</td>
<td>0.800</td>
<td>0.299</td>
</tr>
<tr>
<td>Commitment</td>
<td>0.566</td>
<td>0.179</td>
</tr>
<tr>
<td>Regulation knowledge</td>
<td>0.562</td>
<td>0.391</td>
</tr>
<tr>
<td>Performance</td>
<td>0.763</td>
<td>0.245</td>
</tr>
</tbody>
</table>

Based on table 2 above, the results show that there are some C.R values that are still <0.7 and AVE <0.5. But according to Ghozali (2013) the reliability figure ≤ 0.70 is sometimes acceptable. That is, if the research undertaken is exploratory, then the
value <0.70 is still acceptable along with the empirical reasons seen in the exploration process. Therefore, these indicators can be used to measure the variables in the study.

**Estimation of Structural Model**

The structural model estimation was used to test the hypothesis by looking at the value of p-value for significance and S.E value to see the relationship direction (positive or negative).

**Table 3. Estimation of Structural Model**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimate</th>
<th>S.E</th>
<th>C.R</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>.306</td>
<td>.148</td>
<td>2.067</td>
<td>.039</td>
</tr>
<tr>
<td>Experience</td>
<td>.204</td>
<td>.072</td>
<td>2.851</td>
<td>.004</td>
</tr>
<tr>
<td>Commitment</td>
<td>1.574</td>
<td>.374</td>
<td>4.215</td>
<td>***</td>
</tr>
<tr>
<td>Regulation knowledge</td>
<td>.089</td>
<td>.039</td>
<td>2.296</td>
<td>.022</td>
</tr>
<tr>
<td>MOD_MOT</td>
<td>.005</td>
<td>.002</td>
<td>2.312</td>
<td>.021</td>
</tr>
<tr>
<td>MOD_COMM</td>
<td>-.009</td>
<td>.003</td>
<td>-3.652</td>
<td>***</td>
</tr>
<tr>
<td>MOD_EXP</td>
<td>.004</td>
<td>.001</td>
<td>4.012</td>
<td>***</td>
</tr>
</tbody>
</table>

*** close to 0.000 so it is assumed <0.05

Berdasarkan tabel 3 dan 4 di atas, maka dapat disimpulkan bahwa hipotesispengaruh langsung dan pengaruh moderasi terdukung signifikan karena memiliki nilai p-value<0,05 dan memiliki hubungan pistif karena SE memiliki nilai positif.

**Table 4. Hypothesis Testing**

<table>
<thead>
<tr>
<th>Hipotesis</th>
<th>p-Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>0.039</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>***</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>0.022</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4a</td>
<td>0.021</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4b</td>
<td>***</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4c</td>
<td>***</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

*** close to 0.000 so it is assumed <0.05

**Discussion**

**The influence of motivation on the performance**

The results show that motivation has a positive effect on performance. This happens because the motivation and performance are directly related to the auditor's job so that the auditor with high motivation will be able to work better. The findings support the results of Asthon's research (2011), Andrea (2007), Ketchand (1998), and Ellioott (1991), highlighting that motivation has a significant effect on auditor performance. Kaplan and Norton, (1996) add that auditor motivation is a long-term success in the organization. Motivation is formed by the encouragement of internal and external aspects. Barrick (1991) mentions in his research that situational
motivation reflects external motivations specifically designed to improve performance in certain criteria. Conversely, dispositional motivation reflects internal motivations that have stable attributes or personality trends such as toward awareness, perseverance, and achievement. Both types of motivation is a determining factor of performance. Auditors feel motivated in performing their duties so as to enhance the greater organizational effectiveness of performance improvement (Kohlberg, 1969).

The influence of experience on performance
The results show that experience has a positive effect on performance. Performance is formed from experiences that form competencies to solve problems. Kvalsaughen (2009) reveals that experience is formed from educational background and working hours as it will form a broad knowledge that helps in solving problems more accurately. Libby and Luft (1993) show that competent auditors will perform better. These results support research conducted by Ferris (1977), and Kvalsaughen (2009) which states that experience has a significant effect on performance. The auditor must have sufficient work experience to audit the Arens et al. (2013).

The influence of commitment to performance
Auditor professional commitment has an immediate effect on auditor performance. Auditors with high professional commitment will work professionally and will perform their work in accordance with audit standards so that it will impact on improving its performance. A high professional commitment will shape good loyalty, high integrity and high independence. These results support the Ketchand and Strawser’s (1998) research that examines the various dimensions of professional commitment and shows the relationship between professional commitment and performance. Siders et al. (2001) provides the same conclusion that professional commitment has a positive effect on performance. High professional commitment can reduce turnover rates, improve motivation and performance. This is more likely to happen because the normative commitment reflects behaviors such as personal sacrifice for the organization, not dependent on punishment, and indication of personal preoccupation with the organization (Weiner, 1989). Some of these characteristics become benchmarks of auditor performance in conducting audits. The more committed the auditor on his duty to, the more responsible the auditor is to complete the task.

The influence of moderating variable of regulation knowledge on the relationship of motivation, experience, and commitment and performance
The regulation of the public accountant act facilitates the conduct of the audit. This act provides a clear legal certainty about the standard of work to be done and sanctions against violation. Auditors are greatly assisted by guidelines and rules in conducting audits. Auditors who perform their tasks based on this regulation will increasingly show good performance. Knowledge will strengthen internal aspects of the auditor such as motivation, experience, and commitment. Alvesson and Karreman (2001) state that knowledge is the most important organizational resource.
The results show that knowledge of this regulation is able to strengthen the positive relationship between motivation, experience, professional commitment and performance.

The auditor should be responsible for his performance beyond ensuring that the financial statements are in compliance with GAAP and are technically consistent with auditing standards. Hence, the auditor is very dependent on his knowledge on the regulation so that his internal aspect in terms of motivation, experience, and commitment is able to drive performance improvement more optimally. Nathalie et al. (2013) states that after the Enron and WordCom fraud cases involving auditors of "The Big Five" members, public concerns and heightens regulatory regarding the auditor's performance, the integrity of the financial statements, and the effectiveness of the audit committee in overseeing the financial reporting and external audit functions. Paecher et al. (2007) explains that the regulatory substantial focus is to regulate how to reduce fraudulent financial statements and clarify the auditor's responsibility for fraudulent financial statements. Hence, motivation, experience, and commitment will be increasingly able to improve performance if the auditor has knowledge about the regulation that become guidelines in conducting the audit.

Conclusions, Limitations, and Suggestions

Conclusions
Based on the analysis described above, it is known that there is a significant positive relationship between motivation, experience, auditor commitment and performance. Thus, the higher the level of motivation, experience, and commitment the auditor has, the better the performance will increase. This supports the research conducted by Aston (2011), Sprinkle (2000), and Gibbs (2004) which mentions that motivation significantly affects the auditor's performance. In addition, supports was also provided by Ferris (1977), Libby and Luft (1993), and Kvalsaughen (2009) demonstrated that experience has a significant effect on performance. Ketchand and Strawser (1998) and Siders et al. (2001) find that professional commitment has a positive effect on performance. The results of moderation testing indicate that the positive influence of motivation, experience, commitment on performance is reinforced by knowledge on regulation. The more understanding of auditors in the regulation, the clearer and easier the auditor performs the audit assignment. This will optimize the internal aspects of motivation, experience, and commitment.

This research contributes theoretically and practically. Theoretically, the results of this study can lead to the inferences of previous studies that have not been consistent and reinforce the theory of Resource Based View (RBV). In this context, the most important accounting firm resources i.e. auditors must have a high competence to be able to produce good performance. Practically, the results of this study provide guidance to public accounting firms to gain sustainable competitive advantage through resource analysis that is central to the design and implementation of appropriate strategies. Resource analysis is done by measuring the auditor's
motivation, experience, and commitment to predict their performance at the time of the audit.

Limitations and Suggestions for Further Research
This study has several limitations. First, the questionnaire was sent via firm's official e-mail that allows only some auditors to access the e-mail. Therefore, further research can send a questionnaire directly to the auditor to make it easier to monitor the response. Second, the auditor involved in the sample is mostly auditors who work for more than 10 years, that may make this demographic factor have an impact on the result of variables measured. Therefore, further research can use different samples and perform sub-group analysis to analyse whether there are differences in outcomes caused by long working variables. Third, the indicators for measuring knowledge on the regulation regulations are still new, so there is still a need for repetitive testing to ensure the use of the Public Accounting Act as the variable.

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