

The Role of Information Technology as Mediating Variable of Professionalism and Competence in Auditor Performance

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Abstract

Large-Scale Social Restrictions (PSBB) in Indonesia have changed how all professions work, including auditors. PSBB situation has led to auditors needing to identify relevant changes to auditors' ability to obtain sufficient and appropriate audit evidence during the pandemic. Information technology is beneficial for auditors during the completion of audit work. This research aims to determine the influence of information technology in mediating professionalism and competence on auditor performance during the Covid-19 pandemic at the Public Accounting Firm in Semarang City. This study used primary data from questionnaires. One hundred and nineteen questionnaires were distributed to seventeen public accounting firms in Semarang, and ninety-one questionnaires can be processed. This study used SEM PLS 3.0 for calculating and analyzing data. The validity and reliability test results show that the indicator is worth using. The results showed that information technology and professionalism significantly affected auditor performance during the Covid-19 pandemic, while competence did not affect auditor performance during the Covid-19 pandemic. Information technology mediates in a complementary manner the influence of professionalism on the performance of auditors. Information technology fully mediates the influence of competence on auditor performance.

Keywords: Information Technology; Professionalism; Competence; Auditor Performance; Covid-19 Pandemic.

1. Introduction

Large-Scale Social Restrictions (PSBB) during the Covid-19 pandemic significantly changed how organizations work. The organization enforces work-from-home (WFH) for its employees. If the job requires employees to come to the office, the organization applies a picket/turnover work system. All organizations are adjusting to the pandemic conditions, including the Public Accounting Firm (KAP). Limited space for movement and direct access makes it difficult for auditors to carry out their audits. The auditor faces the risk of audit failure if he/she is not careful in choosing audit procedures to obtain competent and sufficient audit evidence to provide an audit opinion (Satyawan et al., 2021). Timeliness, accuracy, and efficiency in completing audits are challenges for auditors while completing their audit work.

Under normal circumstances, the auditor may perform various audit procedures to obtain audit evidence. Interviews, direct observations, and inspections are some of the audit procedures that are often and efficiently carried out, but not during the pandemic. Auditors tend to rely on explanations from clients rather than finding their own regarding audit findings. Professionalism and competence are two critical factors for auditors in maintaining audit quality (Saputro & Mappanyukki, 2022; Indra et al., 2021; Simanjuntak et al., 2015)

Arens & Loebbecke (2011) stated that professional auditors carry out audits carefully and thoroughly. Professionalism is a description of the performance of an auditor. Hastuti et al., 2003 formulate professionalism into five dimensions: devotion to the profession, social obligations, independence, confidence in the profession, and relationships with professional colleagues. In addition to being a professional who has a professional attitude, the auditor must also have adequate knowledge of his profession to support his work in conducting each examination. Research results by Wulandari & Prasetya, 2020; Prabayanthi & Widhiyani, 2018 show that professionalism improves auditor performance. Competence in auditing refers to the ability, expertise, and experience to understand the criteria and determine the evidence needed to support the conclusions (Rahayu & Suhayati, 2013). Research results from Indra et al. (2021); Simanjuntak et al., (2015) demonstrate that competence can improve the performance of auditors.

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Auditors' efforts to maintain professionalism and competence during a pandemic can be helped by utilizing information technology. The utilization of information technology can overcome the limitations of access and space. Information technology helps the auditor in obtaining competent and sufficient audit evidence. Wulandari & Prasetya (2020); Zaleha & Novita, (2020) state that information technology improves auditor performance. Satyawan et al., (2021) even revealed that auditors use information technology at the planning stage, implementing audit procedures, and testing.

This research contributes mainly to the achievement of auditor performance during the Covid-19 pandemic, which is full of limitations. This study also seeks to make an empirical contribution by developing a research model in which information technology mediates professionalism and competence in achieving auditor performance.

2. Literature Review

2.1. Auditor Performance

Performance is the result of the work of a task that describes an individual's responsibility. It can be either quantitative or qualitative that can be used to measure individual and organizational work performance. Auditor performance refers to the auditor's ability to complete the audit work within a particular time Zaleha & Novita (2020); Rengganis & Isgiyarta, (2015); Marganingsih & Martani, (2010) Meanwhile, auditors have specific qualifications to audit a company or organization's financial statements and activities. Auditor performance can be measured through specific measurements (standards), which include quality, quantity, and timeliness. Quality is related to the quality of the work produced. At the same time, quantity is the amount of work produced within a certain period, and timeliness is the suitability of the planned time. According to Ersa (2008) in (Wulandari & Prasetya, 2020), auditor performance can be measured through work results, discipline, loyalty, cooperation, and initiative.

2.2. Auditor Professionalism and Performance

Hastuti et al. (2003) state that professionalism is the main requirement for people who work as public accountants. Professional auditors carry out their audit duties properly and correctly under the Professional Standards of Public Accountants (SPAP). The Indonesian Institute of Certified Public Accountants (IAPI) states that an auditor is said to be professional if (1) has the expertise to carry out tasks according to his field; (2) carries out the task by using the standard according to the professional field, and (3) carry out the profession by complying with the established professional code of ethics. Auditor performance is achieved well if the auditor carries out his duties professionally. The more professional an auditor is, the more the auditor's performance will increase. Research results from Wulandari & Prasetya (2020); Prabayanthi & Widhiyani (2018) showing professionalism improves auditor performance.

H1: Professionalism has a significant positive effect on auditor performance

2.3. Auditor Competence and Performance

Competence is the ability to carry out work based on formal education, knowledge, experience, and expertise (Kurniawan et al., 2020; Akbar & Suraida, 2017). Supriadi et al. (2019) emphasize that competence involves technical and non-technical factors, including knowledge, expertise, ability, and personal auditor suitability in conducting and producing excellent and objective performance.

Auditor competence can be obtained through education at universities in the field of accounting, professional development, and training activities in the workplace, which is then proven through practical work experience. Professional certification is a form of IAPI's recognition of the competence of auditors. The competence of an auditor is tested on the knowledge and experience possessed. The better the competence of an auditor, the better the auditor's performance. The research of Indra et al., (2021); Priogandi et al.,(2021) and Kurniawan et al. (2020) show that competence has a significant effect on auditor performance.

H2: Competence has a significant positive effect on auditor performance

2.4. Information Technology and Auditor Performance

The extraordinary development of information technology provides many changes in the organization. KAP is one of the organizations that has changed along with the development of audit technology. Mastery and utilization of technology are vital for auditors. In addition to information technology assisting in the assignment process, auditors need to understand information technology because auditees also apply information technology in their business. The

utilization of information technology in the audit process helps auditors understand the client's business, perform tests with the help of software, and make audit work more paperless (Akbar & Suraida, 2017). The use of information technology during the pandemic automatically increases. The use of google meet, zoom to conduct interviews with top management and the use of drones and CCTV to assess the client's internal control system are some examples of the use of information technology during a pandemic (Satyawan et al., 2021). Research result Saputro & Mappanyukki, (2022); Satyawan et al., (2021); Wulandari & Prasetya, (2020) shows that information technology improves auditor performance.

H3: Information technology has a significant positive effect on auditor performance.

2.5. Professionalism, Information Technology, and Auditor Performance

Professionalism is the foundation where the client believes he will get a quality audit review. Information technology helps auditors to perform audit procedures and analyses appropriately and accurately. Information technology also assists auditors in analyzing large amounts of transactions. The more professional the auditor is, the auditor will be able to take advantage of information technology properly and impact increasing auditor performance.

H4a: Professionalism has a significant positive effect on information technology.

H4b: Information technology mediates the effect of professionalism on auditor performance.

2.6. Competence, Information Technology, and Auditor Performance

Supriadi et al., (2019) emphasize that competence involves technical and non-technical factors. The auditor's understanding of information technology is one of the technical factors that the auditor needs to master. Agoes & Hoesada (2012) suggested that at least the auditor has competence in information technology, such as (1) basic knowledge of computers and their functions in general; (2) Basic knowledge of operating systems and software; (3) ability to work with audit tools, (4) able to review documentation system; (5) basic knowledge of information control systems, (6) sufficient knowledge in the development of audit plans and supervision in the information technology environment; and (7) understand the dynamic development of auditee systems and programs. With competent auditors and master information technology, the auditor's performance will also increase.

H5a: Competence has a significant positive effect on auditor performance.

H5b: Information technology mediates the effect of competence on auditor performance.

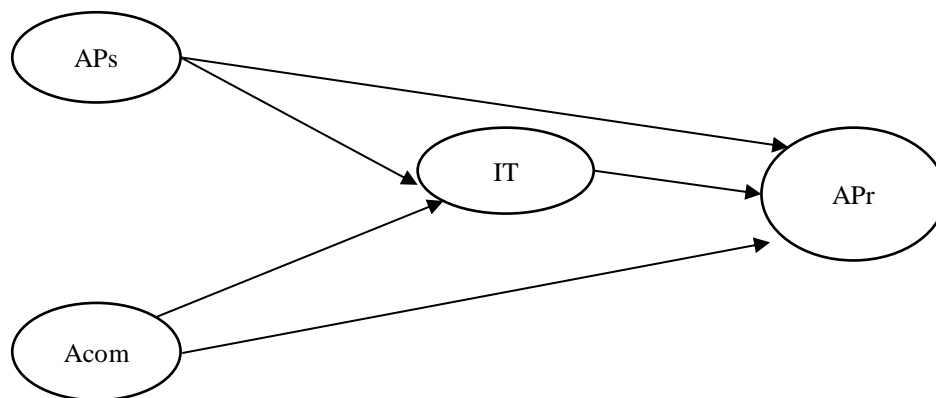


Figure 1. Research framework

Information:

- APs : auditor professionalism
- Acom : auditor competence
- IT : information technology
- Apr : auditor performance

3. Methods

This research is a quantitative study using survey methods. The survey method is used because this research requires individual opinion data to see reality in the field (Groves, Fowler, Couper, Lepkowski, Singer & Tourangeau, 2009; Jogyanto, 2008). The survey was conducted by giving a questionnaire to auditors working at KAP Semarang City. The time for distributing the questionnaire is mid-May 2022 to June 2022 by visiting the KAP and sharing the google form after obtaining permission from the related KAP. Questionnaire items were developed by Kurniawan et al., (2020) and Wulandari & Prasetya, (2020)

The sampling technique uses a purposive sampling technique with the following criteria: (1) the respondent is an auditor at a Public Accounting Firm, and (2) the auditor has worked at least one (1) year at the KAP. Data analysis using PLS-SEM to get a predictive explanation of the construct (Hair et al., 2017)

4. Results

One hundred and eighteen questionnaires were distributed to seventeen KAPs in Semarang City. One hundred and three questionnaires were returned from fourteen KAPs. The initial stage before testing the data is data screening. Screening data can be in the form of non-statistical and statistical. Screening of non-statistical data focuses on the completeness of filling out the questionnaire and the consistency of the answers—the statistical data screening using the boxplot test. Based on the results of data screening, there were ninety-one data that passed the data testing stage. The first stage of PLS-SEM testing is to test the validity and reliability. PLS-SEM test was conducted in SmartPLS3. The validity value of each variable can be seen from the outer loading value, where the outer loading value is 0.5-0.6 can still be accepted (Chin, 1998). The reliability value can be seen from the composite reliability value. If the constructed value > 0.7, it can be said to have good reliability (Hair, Sarstedt, Hopkins & Kuppelwieser, 2014). This study refers to each indicator's outer loading value to run the validity test. The result of outer loading and composite reliability values are shown in table 1. The results of the outer loading test output can be seen in Figure 2. After passing the validity and reliability test, the next step is testing the hypothesis. The test results appear in table 2.

Table 1. Measurement models

Variable	Outer loading	Composite reliability
Professionalism (1=strongly not agree, 5=strongly agree)		0.936
Pr1- adhere to professional standards	0.850	
Pr 2- never withdraw from assignments	0.889	
Pr 3- using all knowledge, skills, and experience during the audit process	0.876	
Pr 4- provide audit results according to facts	0.907	
PR 5- satisfied with the results of the audit conducted	0.743	
Competence (1=strongly not agree, 5=strongly agree)		0.927
Com1- formal education is beneficial during the audit process	0.865	
Com2- performs the audit process according to accounting and auditing standards	0.876	
Com3- audit expertise increases with years of service	0.896	
Com4- within one year of attending audit training organized by the KAP where you work	0.884	
Com 5-by own initiative improves audit capability	0.795	
IT (1=strongly not agree, 5=strongly agree)		0.915
IT1- Utilization of IT (vid conf, zoom, etc.) helps in communication with clients	0.909	
IT 2- Utilization of IT (CCTV, drones) assists auditors in assessing the adequacy of SPI	0.862	
IT 3- Utilization of IT assists auditors in gathering audit evidence	0.866	
IT 4- the use of audit software (Atlas, ACL, IDEA, SQL server) helps auditors assess the accuracy of the auditee's financial statements	0.828	
IT 5- use of more than three applications (drive/cloud computing, application by data, etc.) helps remote audit activities more efficiently	0.847	

Variable	Outer loading	Composite reliability
Auditor Performance (1=strongly not agree, 5=strongly agree)		0.915
AP1- complete the audit with high precision	0.883	
AP2- has the best solution initiative	0.895	
AP3- examination is not following established audit standards and procedures (reverse question)	0.910	
AP4- complete the assignment with all the knowledge possessed in order to obtain optimal results	0.848	
AP5- unable to prepare audit planning and procedures, so it is not timely (reverse question)	0.788	
AP6- achieve optimal performance with time and cost efficiency	0.850	

Source: Raw Data Processed Using Smartpls3

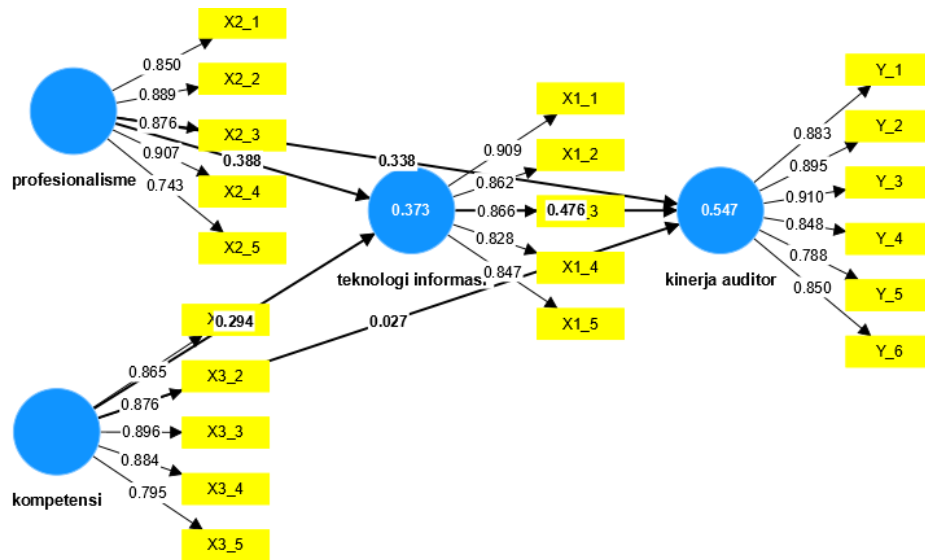


Figure 2. Outer Loading Output (in Indonesia)

Table 2. Structural models

	Path	Sign	pvalue	Result
H1	pr→AP	(+)	0.004***	supported
H2	Kom→AP	(+)	0.804	not supported
H3	IT→AP	(+)	0.000***	supported
H4a	pr→IT	(+)	0.001***	supported
H4b	Kom→IT	(+)	0.007***	supported
H5a	pr→IT→AP	(+)	0.017**	supported
H5b	Kom→IT→AP	(+)	0.025**	supported
Adj R Square (half model)		0.360		
Adj R Square (overall model)		0.532		

*** significance level at .0

** significance level at .05

Referring to Hair et al. (2017) then related to the mediation test can be concluded as follows.

Table 3. Mediating result conclusion

Variable	p1 x p2	p3	Conclusion
pr→AP		(0.004)***	Complementary Mediation
pr→IT→AP	(0.017)**		
Kom→AP		0.804	Indirect only mediation
Kom→IT→AP	0.025**		

5. Discussion

5.1. The effect of professionalism on auditor performance

Professionalism refers to the auditor's ability to carry out audits under SPAP. Auditors in positions as partners, supervisors, and senior and junior auditors carry out audits based on SPAP. The results showed that professionalism had a significant positive effect on auditor performance. These results indicate that increasing professionalism will improve auditor performance. The research data supports this result, where the statement indicator "provides audit results based on facts in the field" has the highest indicator value. The indicator "using all knowledge, abilities, skills in the audit process is the second highest indicator. This respondent's answer shows that the respondent upholds and implements professionalism in carrying out audit assignments (Wulandari & Prasetya, 2020;Prabayanthi & Widhiyani, 2018).

The influence of competence on auditor performance

Competence is the ability to carry out work based on formal education, knowledge, experience, and expertise (Kurniawan et al., 2020; Akbar & Suraida, 2017). Supriadi et al., 2019 emphasize that competence involves technical and non-technical factors. The results of the study show that competence does not affect auditor performance. This result contradicts the hypothesis. The indicator "with its initiative to increase auditing mastery" is the indicator with the lowest score. The indicator "auditing expertise increases with years of service" is the indicator that gets the highest score. These results suggest that competence will increase along with tenure, where auditors do not need personal initiative to improve their abilities. The majority of respondent groups are junior auditors can trigger this. Junior auditors who work in KAPs are usually involved in fieldwork and other time-consuming technical work. KAP leaders need to address and pay attention to these findings. KAP leaders can send or organize audit training to improve the competence of their auditors, especially junior auditors.

5.2. Information Technology and Auditor Performance

The utilization of information technology in KAP is beneficial for auditors in completing the audit process. This utilization is more pronounced during pandemic conditions where there is limited space for movement and access while an audit must be completed. The study's results indicate that information technology significantly positively affects auditor performance. The indicator "utilization of information technology (zoom, teams, google meet) helps the auditor establish communication with the auditee" is the indicator with the highest score. The second highest indicator is "the use of information technology to assist auditors in gathering audit evidence". These results strengthen previous studies, especially research conducted during a pandemic, where the study stated that information technology helps auditors carry out their audit assignments (Satyawan et al., 2021); (Wulandari & Prasetya, 2020).

Information Technology as a mediating variable in the relationship between professionalism and competence on auditor performance.

Professionalism and competence are the two main foundations for auditors. Auditing standards, especially general standards, have clearly stated the importance of auditors having a professional and competent attitude. The audit report based on the facts shows that the auditor has and maintains independence and objectivity while completing the audit. Gathering facts in the field during a pandemic will be easier to achieve if it is not assisted by information technology. As clearly stated in the research Satyawan et al., 2021, information technology is used in the audit's planning, implementation, and completion stages. The results of this study support where information technology is proven to mediate the effect of professionalism on auditor performance. In this case, the mediation relationship is complementary (Hair et al., 2017)

Competence is an inherent ability of the auditor. Competence involves both technical and non-technical abilities. Competence is not enough only with experience based on years of service but competence also means that the auditor has high curiosity, broad views, and can overcome uncertainty (Furiady & Kurnia, 2015). During a pandemic, auditors are one of the professions that face significant challenges. Audit services are based on trust, where users of financial statements put their trust in the financial information presented in the audited financial statements. Auditors face two significant challenges when conducting audits during the pandemic. First, auditors face high uncertainty over the continuity of the client's business. Second, the auditor has the risk of audit failure. Auditors need to have high confidence when providing an opinion on financial statements. The auditor obtains a high confidence when gathering competent and sufficient audit evidence. Collecting audit evidence is challenging during a pandemic due to limited space and access to auditees. In this condition, the role of information technology helps auditors to gather audit evidence. The auditor's competence can play a leading role when the auditor uses information technology while completing his audit task. The results of this study indicate that information technology fully mediates the effect of competence on auditor performance.

6. Conclusions

The results showed that information technology could mediate the effect of professionalism and competence on auditor performance. Even for the competency variable, information technology fully mediates the effect of competence on auditor performance. This indicates that competence can improve auditor performance if the auditor utilizes information technology. The results of this study do not necessarily state that competence cannot improve the performance of auditors, but that in the conditions of the covid-19 pandemic, where auditors experience limited space and access to auditees is greatly helped by the existence of information technology. Based on the research results related to this competency variable, the researcher proposes suggestions to KAP to organize training or send auditors (especially junior auditors) to attend audit training. KAP leaders also need to motivate auditors to develop their capabilities because auditing will constantly develop along with the development of the business world.

This research cannot be separated from several weaknesses. First, most respondents are junior auditors, so the research results tend to represent the perceptions of junior auditors. Second, the waiting time for the questionnaire was around one and a half months. Questionnaires via google Forms are less effective, so researchers send them back directly to KAP. Third, the value of adjusted r square for the overall model is 53.2% and is in the moderate category. Further research can overcome the weaknesses in this study, among others, by (1) limiting the research respondents to a minimum of senior auditors; (2) paying attention to the distribution time of the questionnaire; and (3) adding independent variables such as professional ethics or others.

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