

Why don't auditors use computer-assisted audit techniques? A study at small public accounting firms

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ABSTRACT

This study aims to examine the effect of technology, organization, and environment on the use of Computer-Assisted Audit Techniques (CAATs). The study used the auditors working at Public Accounting Firms in Jakarta area as the sample taken by a purposive sampling technique. The data were collected through questionnaires and analyzed using a Partial Least Square (PLS), Structural Equation Modeling (SEM), and Parallel Least Square (PLS) approaches. The results of this study show that technology, organization, and environment (TOE) do not have a significant effect on the use of CAATs. The easy and fast access to technology systems (CAATs) has not been supported by good auditor resources. The ability and skills of users are still inadequate and there are no auditors who have certification related to the use of CAATs. The audit process does not require so many complex technological roles, but simple technology that can cover the entire audit process. Most auditors use Microsoft Excel/Word in the audit process. In this case, the auditors at least have already used audit software. Small or large clients do not matter what type of CAATs the auditor uses.

ABSTRAK

Penelitian ini bertujuan untuk menguji pengaruh teknologi, organisasi, dan lingkungan terhadap penggunaan Teknik Audit Berbantuan Komputer (TABK). Penelitian ini menggunakan auditor yang bekerja di KAP di wilayah DKI Jakarta sebagai sample yang diambil dengan menggunakan teknik purposive sampling. Data dikumpulkan melalui kuesioner dan dianalisis menggunakan pendekatan Partial Least Square (PLS,) Structural Equation Modeling (SEM), dan Parallel Least Square (PLS). Hasil penelitian ini menunjukkan bahwa teknologi, organisasi, dan lingkungan tidak memiliki pengaruh signifikan terhadap penggunaan TABK. Akses ke sistem teknologi yang mudah dan cepat (TABK) masih belum didukung oleh sumber daya auditor yang baik. Kemampuan dan keterampilan pengguna kurang memadai dan tidak adanya auditor yang memiliki sertifikasi terkait dengan penggunaan TABK. Ruang lingkup proses audit tidak membutuhkan begitu banyak peran teknologi yang kompleks, cukup dengan teknologi sederhana tetapi dapat mencakup seluruh proses audit. Sebagian besar auditor menggunakan Microsoft Excel/Word dalam proses audit, dan setidaknya auditor telah menggunakan perangkat lunak audit. Klien kecil atau besar tidak memperlumahkan jenis TABK apa yang digunakan auditor.

1. INTRODUCTION

Digitalization has affected the economic agents' behavior so significantly amidst the dynamics of industrial revolution 4.0. Industrial revolution 4.0 is the fourth phase of the history of the industrial revolution which began in the

18th century (Rosyadi, 2018). The era of the industrial revolution 4.0 is characterized by digital economy patterns, artificial intelligence, big data, robotic, and so on which are known as disruptive innovation phenomenon (Republika, 2018). Business actors claim that

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the developing economy today is the digital economy, a characteristic of the industrial revolution 4.0. This revolution, triggered by the development of digital technology, has radically succeeded in improving business performance (IAI, 2018). This condition forces all economic stakeholders to always be relevant to the digital economy and its various infrastructures.

In Indonesia, the industry 4.0 roadmap has been also suggested to anticipate the industrial revolution, called Making Indonesia 4.0 (detikFinance, 2018). This roadmap involves various parties, ranging from government institutions, industry associations, business actors, technology providers, to research and education institutions. Industry 4.0 roadmap provides clear directions and strategies for the future movement of Indonesian industry, including in the five sectors that are the focus including 10 national priorities in efforts to strengthen Indonesia's industrial structure (Ministry of Industry of the Republic of Indonesia, 2016).

The emergence of a technology revolution is followed by the emergence of new business models that emphasize using technology quickly. In Indonesia, the business model is highly developed in the form of digital payment startups (ATV FEB UI, 2018). This raises new issues related to audits, especially in Computer-Assisted Audit Techniques (CAATs). Therefore the role of auditors is increasingly important when digitization in business processes is increasingly dominant (Mukhlisin, 2017). One effort to implement the industrial revolution 4.0 in Indonesia— in accordance with the roadmap above— is by drafting regulations on the Industrial Technology Audit (BPPI, 2018). According to the Head of the BPPI of the Ministry of Industry of the Republic of Indonesia, the Industrial Technology Audit is a method for identifying the strengths and weaknesses of Tangible and Intangible Assets in the framework of implementing technology management.

Minister of Research and Technology and Higher Education (*Menristekdikti*), Mohamad Nasir, stated that, in the digital era, especially in the face of the industrial revolution 4.0 era, the role of technology control and auditing is increasingly crucial (BusinessNews, 2018). The Head of research and development agency (*Balitbang*) of the Ministry of Public Works and Human Settlements (PUPR), Danis

H. Sumadilaga also stated that technology audit is needed to ensure competitiveness in international markets and guarantee the quality of the technology produced (Bardono, 2018). The design of audit technology must be able to respond and adapt to the phenomenon of the industrial revolution 4.0. In this era, Industrial Technology Audit plays an important role as one of the tools of analysis and evaluation of the application of technology utilized by industry in Indonesia.

Technology has changed audit data processing from being manual to electronic. The data input and output are computerized and stored on electronic media. (Saputra & Dwirandra, 2015). In this case, auditors must have an ability to audit the companies' financial statements by using information systems in recording their financial statements (Kuncoro, 2017). Public Accountant Professional Standards (SPAP) Section 327 (PSA no. 57) 2011 emphasizes that auditors must understand an examination of a computer-based accounting system so that the opinions given are appropriate and there are no deviations from the computerization process (Saputra & Dwirandra, 2015).

Technologies supporting the auditors in an audit process have been developed and optimized according to procedures so as to minimize audit risk (Dias & Marques, 2018). Computer-Assisted Audit Techniques (CAATs) are used by auditors to collect audit evidence, process, and analyze data and information obtained from an entity's information system to be able to produce an opinion (Ahmi & Kent, 2013). SA Section 335 (PSA no. 57) states that, in practice, an auditor who uses a computer-based information system must have at least knowledge of Computer Information Systems to plan, direct, supervise, and review the work performed.

Previous research on the factors affecting auditors to use CAATs by Bierstaker et al., (2014) explained that the use of CAATs in the audit process was still very low. Another study was done by Janvrin et al., (2009) explained there were two factors that influenced the use of CAATs by auditors: the assessment of control risk and the size of the Public Accounting Firm. The results show that the size of Public Accounting Firm greatly affects the use of CAATs in the audit process, where Public Accounting Firms. In addition, a new evidence deals with members of Big 4 of using

CAATs more often because they have more competent resources and audit larger clients with IT complexity supports.

In 2012 Ahmi & Kent (2012) in their research found that 73% of external auditors did not use CAATs because it was considered not useful especially when auditing small entities and they experienced difficulties in using it. Research conducted by Debreceeny et al., (2005) in Singapore found that auditors in Singapore rarely use CAATs due to their lack of knowledge of CCATs. Although CAATs cannot be widely used, the audit standard explains that the use of CAATs can increase the effectiveness and efficiency of auditor performance.

From various existing literature, each of them explains the different factors in the use of Computer-Assisted Audit Techniques (CAATs) by auditors. In 2015, Saputra & Dwirandra (2015) used the Unified Theory of Acceptance and Use of Technology (UTAUT) model to find out the factors that influenced the interest in using computer-related techniques. The results of the research show that work expectations, business expectations, and social factors have a positive effect on using CAATs. Other result of the research conducted by Bierstaker et al., (2014)– using the UTAUT method– also shows that social factors and business expectations have no significant effect on the use of CAATs. Widuri et al., (2016) used Indonesia as the research object regarding the adoption of Generalized Audit Software (GAS) using the Technology, Organization and Environment (TOE) framework model. The results show that environmental factors, technology availability, auditor competence, client needs, and client company size have an effect on the adoption of Generalized Audit Software (GAS) in Indonesia.

The Public Accountant Professional Standard (SPAP) recommends the use of audit software in conducting audits. However, in this standard, there is no rule that requires auditor to use the CAATs, it is only recommendation. In Indonesia, there are problems related to the quality of audit practices, especially in middle and small level Public Accounting Firms (World Bank, 2011). The limited resources owned by the middle and small Public Accounting Firms have led to less optimal use of CAATs in the audit process.

Despite various scopes of client companies, from small scale to those that have been listed on the stock exchange, only a few

are doing audits on the company (Darmadi, 2016). The client's information system is one of the auditor's considerations to audit using the CAATs because the audit process is less effective, for example, when the the information received by the auditor is not in the form of electronic data.

An auditor must have a system and program design that will be used to suit the audit needs. In the process, the auditor is not allowed to delegate his duties to other auditors who do not have competence in the CAATs, because it will have an impact on the quality of the audit result. The auditor who has competence in the field of computer-based audit will have added value because the auditor has at least two expertises: expertise in auditing and expertise in the field of IT.

The reason for auditors to use Computer-Assisted Audit Techniques (CAATs) is to prevent an entity from loss due to human error and reduce fraud opportunities (Lin & Wang, 2011). CAATs are an effective audit tool to detect financial errors and fraud (Olasanmi, 2013). Optimizing the implementation of CAATs to the financial statements can be used as an effort to prevent fraud. One of the procedures undertaken to detect fraud is to check the availability of data to identify symptoms of fraud. Since it is impossible for the auditor to manually test every transaction that occurs, the application of audit procedures requires the auditor to consider the use of CAATs (Annisa & Harris, 2011).

2. THEORITICAL FRAMEWORK AND HYPOTHESIS

The Technology, Organization, and Environment (TOE) Framework describes the process by which companies adopt and implement technological innovations that are influenced by the technological context, organizational context, and environmental context (Tornatzky, 1990, p. 27). This study confirms that these three contexts influence the process by which organizations accept and adopt new technologies (Lippert & Govindrajulu, 2006). In various studies using TOE, the specific elements identified can vary. However, the TOE framework has shown consistent empirical support.

This theoretical framework has been the basis of many studies, such as GAS Adoption by Widuri et al., (2016), Web Services adoption by Lippert & Govindrajulu (2006), ICT Initial and Continued Adoption by Oliveira & Martins

(2011), Revisiting TEO Theory for Enriched Applicability by Awa et al., (2017), Adoption of Hospital RFID by Cao et al., (2018), Integrated TEO Taxonomies for Technology Adoption by Awa et al., (2017), and Information Technology Adoption Models at Firm Level by Oliveira & Martins, (2011). From these studies it can be concluded that the TOE model is more complete if it is used to determine the acceptance of a technology. The TOE framework also has a strong theoretical basis, consistent empirical support, and the potential to adopt technology.

CAATs are an audit process in examining financial statements using computer technology (Wedantha & Widhiyani, 2016). Furthermore, it is said that the CAATs are a device and technique used to test (either directly or indirectly) the internal logic of a computer application used to process data (Darono, 2007). Even, the application of CAATs is regulated in Public Accountant Professional Standards (SPAP), Statement of Accounting Standards (PSA) No. 59 (Accounting Standard Section 327) concerning computer-assisted audit techniques (Triyatno, 2017). This standard defines various kinds of computer use in audits, or referred to as Computer-Assisted Audit Techniques (CAATs).

The auditors are aware of using computer-based information systems in providing audit services because it can help them to improve their performance in carrying out their duties (Wedantha & Widhiyani, 2016). Auditors agree that the use of CAATs in data processing will have a significant impact on an audit process (Sumarsana & Noviari, 2013). Public Accounting Firm, as a place for public accountants in carrying out their work, uses software that helps the auditors' performance in completing their audit tasks with the help of computers (Pratiyaksa & Widhiyani, 2016), so that the auditors can carry out their duties to the maximum and produce quality audit reports.

According to Accounting Standard (SA) Section 327 (PSA No. 59) paragraph 7, the benefits of CAATs include: 1) Testing the details of a fund balance transaction; 2) Performing analytical review procedures; 3) Testing the control; 4) Testing the control over the control of computer information system applications, 5) Accessing files; 6) Grouping data based on certain criteria, 7) Organizing files; 8) Making a report; and 9) Making an equation with rational operation.

There are minimum expertises that the auditors must possess in conducting audits in the computer information system environment. According to Accounting Standard (SA) Section 335 (PSA No.57) includes: 1) Knowledge of computer basics and general computer functions; 2) Basic knowledge of the operating system and software; 3) Knowledge of file processing techniques and data structures; 4) Ability to work using audit software, 5) Ability to review the documentation system; 6) Basic knowledge of computer information system control to identify and evaluate the impact of using computer information system on entity operations; 7) Adequate knowledge in developing audit design and supervision of audit implementation within the computer information system environment; and 8) Knowledge of the dynamics of the development and change of systems and programs in an entity.

3. RESEARCH METHOD

This is a field research using a quantitative approach. As theoretically described, it is also included in associative or correlational research, described to determine the relationship between independent variables and dependent variable.

The independent variables used in this study are technological, organizational, and environmental factors taken from the TOE (Technology, Organization, Environment) framework developed by Tornatzky et al. (1990) with the aim of describing the technology adopted by users. Indicators that reflect the variable of technological factor are compatibility with the client's IT platform, language compatibility, ease of use of software, and fitness of task. The indicators for the organizational factor are company policy and support, auditor's experience in CAATs, auditor's IT skills, IT / CAATs procurement budget, CAATs training budget, accounting firm size, audit process methods, auditor behavior or attitudes, and supporting IT staff. The indicators for environmental factor are client's needs and expectations, vendor or license, audit standards, client size, availability of auditors who have IT skills in the labor market, regulator support and policies (Tornatzky et al., 1990).

The next is the dependent variable in this study is the use of CAATs with indicators of time and frequency of the use of CAATs (Kim,

Mannino, & Nieschwietz, 2009). The data scale used for these two variables is an ordinal scale which is measured by a rating scale.

The sample was taken by using a purposive sampling technique on auditors who audit sharia entities. The criteria for selecting samples in this study were as follows: 1) Auditors working at Public Accounting Firms located in the DKI Jakarta area and the Public Accounting Firms had been registered at Indonesian Institute of Certified Public Accountants (IAPI), 2) Auditors who audited sharia entities, 3) Public Accounting Firms that had been contacted and willing to be the research object.

To get the primary data, this study obtained the population data consisting of 117 auditors and a sample of 54 auditors. Of the total 69 questionnaires distributed, 66 questionnaires were returned. The number of questionnaires that were eligible to be used for data input purposes was 37. The number of questionnaires returned but did not fit the criteria was 12. The number of questionnaires that were not filled in was 17 questionnaires. And the number of questionnaires that were not returned was 3 questionnaires. The method of data collection was done by distributing questionnaires directly to respondents in accordance with predetermined sample criteria. Observations were made directly on the object of research.

The data were done to explain the research data relating to the use of CAATs by the auditor. The data processing was done using the assistance of SmartPLS 3 software and Microsoft Excel for Windows 2013. Data analysis techniques used were Structural Equation Modeling (SEM) and component-based Partial Least Squares (PLS). This was done to develop theories for the purpose of prediction in connection with factors which affected the use of CAATs by auditors who audited sharia entities. The measurement of the Partial Least Squares (PLS) model was based on the measurement of predictions which had non-parametric characteristic through:

Evaluation of Measurement Model (Outer Model)

Evaluating convergent validity can be done by determining individual item reliability (the value of loading factor > 0.5), internal consistency reliability (the value of Cronbach alpha or composite reliability > 0.7), Average

Variance Extracted (AVE) (the value of AVE > 0.5). Evaluating discriminant validity: through cross loading and comparing AVE values (Hair, Hult, Ringle, & Sarstedt, 2014).

Evaluation of Structural Model (Inner Model)

Path coefficient with t-statistic test parameters is also done such as If $t\text{-count} > t\text{-table}$, H_0 is accepted. If $t\text{ count} < t\text{ table}$, H_0 is rejected. The coefficient of determination (**R²**): If $R^2 > 0.67$, it is strong. If R^2 is $0.33 - 0.67$, it is moderate. If $R^2 < 0.19$, it is weak (Hair et al., 2014).

4. DATA ANALYSIS AND DISCUSSION **The Effect of Technology on the Use of CAATs**

As described in the previous literature, Public Accounting Firms must have competence in technology. Technology competency covers IT infrastructure and IT human resources, including the factors of technology use that are closely related to the IT platform owned by public accounting firms and their clients. This includes how audit tasks can be carried out efficiently using CAATs / GAS (Widuri, 2014).

In this study, the variable of technology is proxied by four indicators such as compatibility with client IT platforms, ease of software users, language compatibility, and fitness to task. However, only three indicators passed the evaluation stage of the measurement model (outer model), namely compatibility with the client IT platform, ease of software users, and fitness to task. Based on Table 1, the variable of technology on the use of CAATs has t-statistic value of 0.172, where the value is smaller than the t-table value of 2.026. Therefore, it can be concluded that H_0 is accepted and H_1 is rejected. These results indicate that the variable of technology has no significant effect on the use of CAATs.

In this study, the variable of technology has no significant effect on the use of CAATs because although access to technology systems is easy and fast. It is not supported by good resources and adequate ability and skill of users, in addition to the absence of auditors who have certifications related to the use Computer-Assisted Audit Techniques (CAATs). It is the same as found by Mulyani & Kurniadi (2015), as corroborated by the demographic data of the respondents as shown in Figure 1.

Figure 1, shows that there are no auditors who have certificates relating to the mastery of

Table 1
Results of Path Coefficient

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
T => The Use of CAATs	-0.035	0.017	0.204	0.172	0.864
O => The Use of CAATs	0.392	0.410	0.246	1.592	0.112
E => The Use of CAATs	0.173	0.161	0.278	0.622	0.534

Source: Processed data (2019)

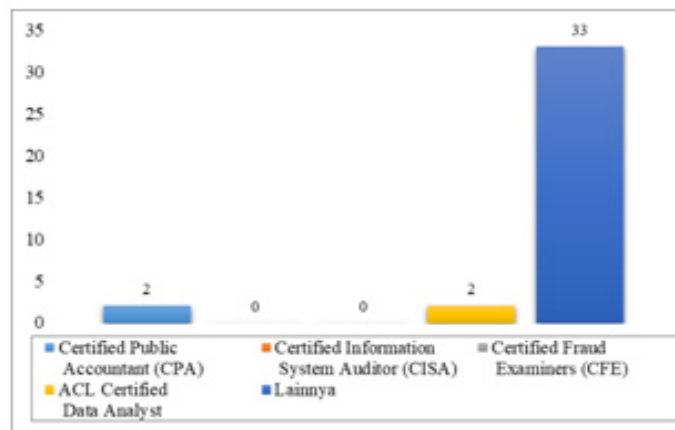


Figure 1
Auditor Certification Type
Source: Processed data (2019)

CAATs. Their certificate is only related to basic certificate as a professional auditor, namely Certified Public Accountant (CPA).

Despite the rapid technological development and the variety of existing CAATs, the use of CAATs is still low because they are not supported by the factors mentioned above. In the era of the industrial revolution 4.0, technology is increasingly sophisticated and the features or templates inherent in the technology mostly use foreign languages. Therefore, an auditor is required to be proficient in foreign languages, particularly English. Respondents' responses indicate that the type of CAAT that is often used by auditors today is features or templates in foreign languages.

From respondent data based on the type of CAATs used, auditors still use Microsoft Excel in their audit process. Microsoft Excel is the simplest type of CAATs. Therefore, it can be judged that all auditors, both juniors and seniors, and the partners are able to operate it. However, the auditors' knowledge of the CAATs is still limited to the use of Microsoft Excel only, whereas the knowledge of other

more complex types of CAATs, such as General Audit Software, is still low. Of the 37 respondents, only 40% - 60% of auditors who have attended training related to software audits. Unfortunately, it is not practiced directly in the audit process, which means that the audit software knowledge acquired by the auditor is not in accordance with the type of CAATs used. An auditor who uses CAATs in his audit process must master the science of audit and information technology, especially if the auditor is in charge of auditing his client's information technology system.

The Effect of Organization on the Use of CAATs

The variable of organization refers to the effect of the organisation's characteristics on the decision to determine the use of a new technology (Lippert & Govindrajulu, 2006). In various literatures adopting a technology, it is proposed that the scope and size of the company is the most important organizational factor. The context of organization refers to descriptive steps about organization, such

as scope, size, and managerial structure (Tornatzky et al., 1990).

In this study, the variable of organization is proxied by nine indicators: company policy and support, auditor's IT skills, auditor's experience in CAAT/ GAS, IT/ GAS procurement budget, CAAT/ GAS training budget, Accounting Firm size, audit process method, auditor behavior/ attitude, and supporting IT staff. Yet, of the nine indicators, six indicators did not pass the outer model test stage. For that reason, until the final stage of the study, the variable of organization was only proxied by three indicators. In Table 1, the variable of organization on the use of CAATs has a t-statistic value of 1.592 which is smaller than the t-table value of 2.026. Thus, it can be concluded that H0 is accepted and H1 is rejected. These results indicate that the variable of organization has no significant effect on the use of CAATs.

The variable of organization has no significant effect on the use of CAATs because the object used in this study is only middle to low level Public Accounting Firms, so that the scope of the audit process does not involve the role of complex technology, but only simple technology that can cover the entire audit process. The size of Public Accounting Firm can be seen, one of which, from how many auditors work at the Public Accounting Firm. From the demographic data contained in this study, the respondent data is based on the total auditors or professional staff who join the Public Accounting Firm.

From the Figure 2 below, it can be seen that the Public Accounting Firms that are the objects in this study are medium to lower size because the auditors owned by each Public

Accounting Firm are less than one hundred people, most of which are branch-level Public Accounting Firms. In addition, there are only two Public Accounting Firms affiliated with International Accounting Firms, namely KPS and H&R.

This study is supported by the research by Kristian & Imelda (2015). They also found that the size of Public Accounting Firm has no significant effect on information technology-based audits. This can be caused by the fact that only a few non-big four Accounting Firms (middle to lower Accounting Firms) that use information technology-based audits so that the respondents obtained are not balanced.

From the Figure 3 below, it can be identified that six of the eight Public Accounting Firms have the same responses to the indicators of company policy and support, auditor's IT skills, auditor's experience in CAAT / GAS, and CAAT / GAS training budget, where the values of the four indicators are low when compared to other indicators. This is the reason why the variable of organization has no significant influence on the use of CAATs.

Some literatures explain that auditors tend to use CAATs if there is adequate policy and support from top management of the company. It is due to the management that will facilitate auditors to use the CAATs such as preparing competent HR auditors in the field of CAATs, allocating a budget for the procurement and training of CAAT, and so forth. However, the findings in this study are not the same. The low support from the top management of Public Accounting Firm in implementing policies related to the use of CAATs has caused auditors to be less optimal in using CAATs. Top management interventions in ensuring

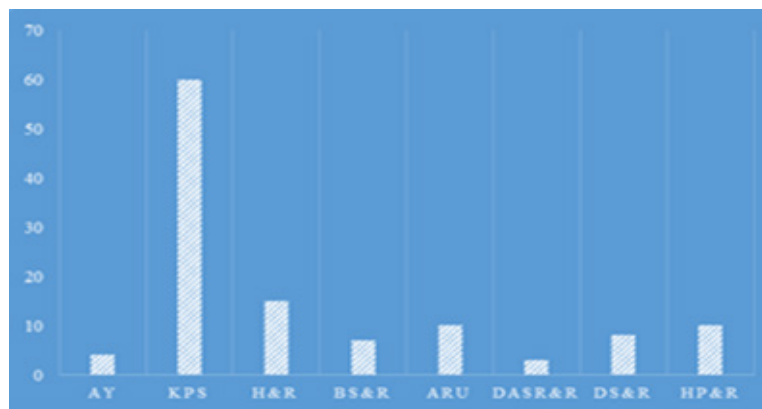


Figure 2
Names of Public Accountant Firms and Number of Auditors

Source: Processed data (2019)

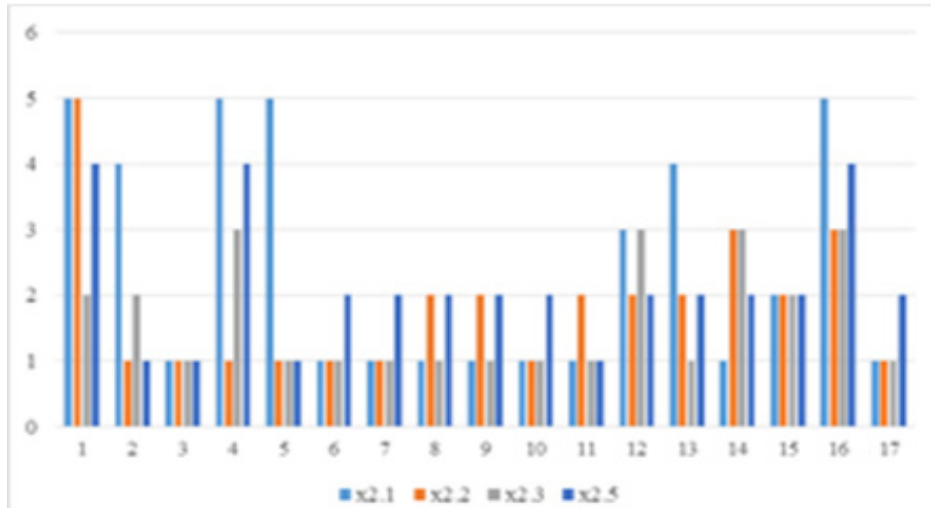


Figure 3
Respondents' Responses related to the Variable of Organization
Indicators X2.1, X2.2, X2.3, X2.5
 Source: Processed data (2019)

resource commitment and good organizational climate development play an important role in the successful use of CAATs. One form of support provided by Public Accounting Firm can be in the form of facilities that include auditors in CAAT training and budget allocation for the procurement of supporting audit technology or software.

Auditor training on CAATs is one determinant of success in the use of CAATs. From the responses of respondents presented through the graph above, it shows that the level of Public Accounting Firm support in terms of allocating budget for training and procurement of technology or software audits is still low. This will be an obstacle for the auditor in using CAAT, and this indirectly will have an impact on the auditor's own skills, especially if most of the Public Accounting Firm's staff is junior auditors.

Auditors who use technology as a tool in the audit process must have at least two skills in the field of science: skill in auditing and skill in technology (CAATs). The auditors must understand how to operate the type of CAATs they use so that they are able to produce reliable decisions or opinions. In addition, the lack of experience in using CAATs causes the auditors to have difficulty in using CAATs, so they will likely return to the manual system or only use a simple type of CAATs. Despite the sophisticated technological advancements, as long as support from HR and company policies is still low, the use of CAATs by auditors will be less optimal.

The Effect of Environment on the Use of CAATs

The environment is an arena where public accounting firms conduct their business, including competitors, access to resources, and relation with government. In this study, the variable of environment is proxied by six indicators such as client's needs and expectations, vendor or license, audit standard, client size, availability of auditors who have IT skills in the labor market, and the support and policies of regulators or Indonesian Institute of Certified Public Accountants (IAPI). However, in this study, there are only three indicators that passed the evaluation stage of the measurement model (outer model), namely indicators of vendor or license, audit standard, and support and policy of regulators or IAPI.

Based on Table 1, the variable of environment has t-statistic value of 0.622, which is smaller than the t-table value of 2.026. Therefore, it can be concluded that H0 is accepted and H1 is rejected. These results indicate that the variable of environment has no significant effect on the use of CAATs.

The variable of environment has no significant effect on the use of CAATs because the client does not matter what type of CAATs which is used by the auditor in the audit process. From the demographic data of the respondents, Figure 4 shows the types of CAATs / GAS used by the auditors.

From the data in Figure 4, it can be interpreted that most auditors use Microsoft Excel / Word in the audit process and the lack

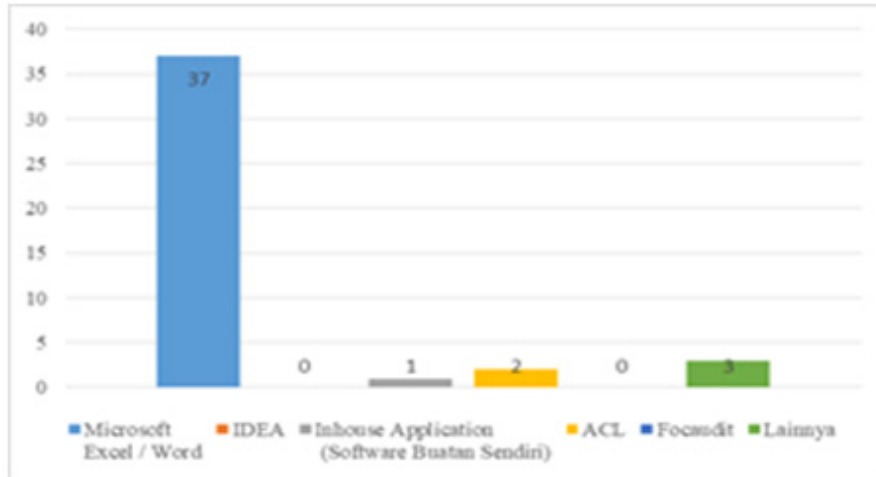


Figure 4
Types of CAATs / GAS used by the Auditor
 Source: Processed data

of auditors using audit software. Small or large-sized clients do not matter what type of CAATs the auditor uses. The result of this study is also supported by the result of research conducted by Kristian & Imelda (2015) that business complexity (client size) does not significantly affect the use of information technology-based audits, because the business sector of the client company being audited does not determine whether it is necessary to use information technology-based audits or not. Therefore, the auditor still uses Microsoft Excel/ Word.

The result of this study is not in accordance with that of previous studies such as by Thistle et al. (2016) that environmental factor is identified as more influential factor than technological and organizational factors, because the use of CAATs tends to be very determined by indicators of client needs. As Public Accounting Firm in a developing country, the need to use CAATs / GAS innovations is very important to better serve the needs of each client.

The next is the variable of environment in which it has no significant effect on the use of CAATs because there are no specific standards that require auditors to use CAATs. In the studies conducted by Ahmi & Kent (2012) and Debreceeny et al. (2005), this factor is one of the factors that drive Public Accounting Firm to use CAATs. The use of CAATs in Indonesia is regulated in the Public Accountant Professional Standards (SPAP) issued by Indonesian Institute of Certified Public Accountants (IAPI). The Public Accountant Professional Standards contain several regulations concerning CAATs,

including Accounting Standard (SA) 327 and (SA) 335. From these two standards, there are no rules that require auditors to use CAATs, it is only recommended.

According to Widuri et al. (2016), so far, there has been no audit standard that requires the auditors to use of CAATs. The reason auditors use CAATs is only to meet the needs of the audit process, not because of mandatory audit standards. Even some auditors, especially in small-sized Public Accounting Firms, are not familiar with the standards governing the use of CAATs in Indonesia. So, small-sized Public Accounting Firms feel that the use of CAATs is not encouraged by the Public Accountant Professional Standards.

5. CONCLUSION, IMPLICATION, SUGGESTION AND LIMITATION

This study aims to analyze the factors that influence the use of Computer-Assisted Audit Techniques (CAATs) by auditors who audit sharia entities. The variable of technology has no significant effect on the use of CAATs because the easy and fast access to technology system is not supported by good resources, such as inadequate ability and skills of users and no auditors who have certification relating to the use of computer-assisted audit techniques (CAATs). In addition, the variable of organization has no significant effect on the use of CAATs because the objects in this study come from middle to lower-sized Public Accounting Firms. Therefore, the support from the Public Accounting Firm is low. Besides that, the budget for software procurement and training related to CAATs is small.

The variable of environment has no significant effect on the use of CAATs because the line of business of the audited client's company does not determine whether it is necessary to use an information technology-based audit or not, and there is no standard that requires the use of CAATs.

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