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What Drive Auditor to Switch from Manual to Audit Software

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Abstract: **Industry 4.0 changed every aspect of work environment, no exception is also a job in the auditing field. Audit work that previously used the manual method inevitably has to change to computerized using software. The rapid and dynamic development of technology requires auditor to keep up to date with the latest technological developments. The purpose of this research is to analyse how information technology intervene competence and effort to auditor performance. This research uses quantitative research methods. Sources of data are obtained from primary data and secondary data. The primary data is obtaining from questionnaire. The secondary data is obtaining from previous studies and become the reference in making this research. The results of this research indicates that performance expectancy, effort expectancy, social influence each has significant effect on behavioural intention, facilitating condition indeed has significant effect to use behaviour, but behavioural intention has no significant effect on use behaviour.**

Keywords: industry, revolution, manual, technology, audit, software

1. INTRODUCTION:

The profession as an auditor is considered as one of the most challenging and tough jobs, this is because in auditing, auditors are often faced with various things such as deadlines, the need for careful planning, time pressure, social pressure and various other reasons. Auditors are required in an effort to always produce good and credible audit reports. Not only is the pressure to create a credible audit report, but excessive workload, especially during peak season, increases work intensity with a limited amount of time, thus triggering an increase in the level of stress faced by auditors. According to [1], responsibility for the quantity of activities and concentration in the work is a workload.

Indonesia which one of the ASEAN countries is included those who experiencing this phenomenon [2]. In Indonesia, the fear of losing a job is mostly experienced by senior auditors, especially the elderly, who have been working long hours in the audit field. This is due to their lack of absorption of information technology to assist their work. Understandably that when this senior auditor studied in college decades ago, there has been no information technology learning as it is now. Besides that, they have been working the same way for years, that is manually, even if using computer, but not using database system. In order to

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adapt to the development of information technology, they must be willing to learn and change the mindset about the pattern of work that has been formed over the years [3].

Most of the existing studies until today focus more on research on the adoption of generalized audit software in large accounting firms in the developed countries. The result said that generalized audit software has been widely applied in developed countries, and in the big four public accounting firm [4]. Contrary to that, researchs on the adoption of generalized audit software in developing countries and small and medium accounting firms is still rare.

At the end of 2019 a new virus was discovered which was later named COVID-19. This virus is spread throughout the world and in 2020 it is declared a pandemic. This pandemic has caused various economic losses and several countries have entered into the brink of recession. Many companies large and small have gone out of business. The existence of this pandemic and the need to carry out social distancing, hindered the work of auditors in auditing client companies, given the importance of implementing social distancing. According to [5], it is not certain when auditors can optimally carry out traditional auditing by visiting the client directly.

Although there are limitations in conducting audits during this pandemic, technological advances such as Generalized Audit Software (GAS) have made it easier to carry out auditors' work. According to [6], changes in business processes in general are caused by an increase in technological advances that affect the process and performance of work performed by auditors. The use and application of GAS in the audit process is expected to encourage and improve the quality of auditors' work performance. Not only Generalized Audit Software, software is also increasingly popular in the economic world.

Software technology makes a computerization that can disintegrate numerous occupation and conditions all over the world. There is a probability of increasing in popularity for the software system for organizations since this technology innovation make the transaction process becoming more quicker, efficient and secure [7]. The existence of software helps the work of auditors because it does not require auditors to directly visit the field in the auditing process. Through the explanation above, Authors would like to research and see whether the use of technology and software can help and improve the performance of auditors' work during this pandemic.

2. LITERATURE REVIEW AND HYPOTHESIS

A. *Performance Expectancy*

Performance expectancy is a UTAUT construct aimed at measuring a person's confidence level that using a system can help a person achieve his or her job performance. Performance expectancy is a v[8]ariable that can be referred to as the ability to gain significant benefits after using a system [9] Performance expectancy is a representation of five constructs including perceived usefulness (technology acceptance model), external motivation (motivational model), work correlation (model of personal computer utilization), relative advantage (innovation diffusion theory) and expectancy to the achievement (social cognitive theory) [10]

H1: Performance Expectancy has significant effect on Behavioral Intention

B. *Effort Expectancy*

Effort expectancy is the level of effort of each individual in the use of a system to support doing his work. According to [10], effort expectancy refers to how easily one thinks in using a system. Effort expectancy is a representation of three constructs including consciousness of easy to use (Technology Acceptance Model), systematic complexity (Model of Personal Computer Utilization) and operating simplicity (Innovation Diffusion Theory). In the success

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of receiving a technology, [10] mentioned that the design of a system such as a virtual platform can allow users to navigate easily or not. [11]found that an app is acceptable to its users when an app is easy to use.
H2: Effort Expectancy has significant effect on Behavioural Intention

C. *Social Influence*

Social influence is the degree to which one considers it important to others convincing themselves in using the new system. Social influence refers to a person's feelings for feeling that the person who is important to him thinks that he or she should use an app. In Social influence according to [12] the representation of three constructs are subjective norm (theory of reasoned action, technology acceptance model and theory of planned behaviour), public image (innovation diffusion theory) and social factor (model of personal computer utilization). Social influence depends on the influence of the environment including the volunteerism, and other contexts between the individual and the influence on the organization [12]. [13] said that the use of a new technology is able to elevate the status of an individual's person in a social environment. Others, the behaviour of individuals are also affected by the way in which they believe that others will see them as a result of using a technology.
H3: Social Influence has significant effect on Behavioural Intention

D. *Facilitating Condition*

Interest in the utilization of a system is the intention of the user using the system Facilitating conditions is the level of one's belief that the company's and technical infrastructure is available to support the use of the system [8]. In addition, facilitating conditions are also included in a person's beliefs about the facility's environment including coverage, network and device availability to make a person's beliefs accept a technology. Facilitating conditions are able to describe an individual's level in accepting a technology based on the support of facilities provided by organizations and technical devices that support the use of a system. The device can be a system used, training, manuals or other. Variable facilitating conditions are representations of three constructs, among others, control of conscious behaviour (technology acceptance model and theory of planned behaviour), promoting condition (model of personal computer utilization) and compatibility [8].
H4: Facilitating Condition has significant effect on Behavioural Intention

E. *Behavioural Intention*

Interest in the utilization of a system is the intention of the user using the system continuously with the assumption that they have access to the system. Behavioural intention is defined as a measure of the strength of one's intentions to perform certain behaviour [8]. In the basic concept of user acceptance models that have been developed, behavioural intention becomes the intermediate construct of perceptions of the use of information technology and actual use (use behaviour). The role of behavioural intention as a predictor of use behaviour has been widely accepted in various user acceptance models [14], [15].

H5: Behavioural Intention has significant effect on Use Behaviour

3. RESEARCH METHODOLOGY

This study aims to measure the acceptance of financial auditors on the adoption of computer assisted audit techniques in their work. Researchers use primary data obtained by distributing questionnaires to respondents. The questionnaire in this study was prepared based on preliminary research conducted by [8], [16].

Independent variables in this research are Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC). While the intervening variable in this study is Behaviour Intention (BI) and the dependent variable is Use Behaviour (USE).

A. *Population and Sample*

Respondents in this study are auditors who work at public accounting firm in Special Capital Region of Jakarta. The selection of Jakarta as population criteria is based on the number of most accounting firms in Indonesia. The sampling method used in our research is take an approach. It is because the population is unknown, the number of auditors in public accounting firm is increasing and decreasing every day (join and resign). [17] provides guidance for determining sample size, he stated that the sample for the unknown population is at least over 30, sample sizes greater than 30 and less than 500 are appropriate for most studies. In our research, we determined that our sample is 50 respondents.

B. *Data Collection*

Data collection methods in this study using questionnaires distributed to respondents directly face to face and via email (e-questionnaire). Each question in all variable except use behaviour are measured with a quantitative answer option using interval scale, the Likert scale between 1 (strongly disagree) to 5 (strongly agree) [8]. While the data used to measure the use behaviour comes from weighting the frequency of use CAATs within one-month work. Frequency of CAATs usage is obtained by retrieving existing data in the database.
This study uses analysis of structural model and path analysis to test the effect (direct and indirect) of each independent variable to intervening variable and dependent variable. Data analysis was conducted using statistical software.

C. *Data Analysis*

In doing this research, the researcher has been using the quantitative methods. According to [18], quantitative research focuses on objectivity and is especially appropriate when there is the possibility of collecting quantifiable measures of variables and inferences from samples of a population, and also adopts structured procedures and formal instruments for data collection. There are two types of source of data in this observation and those are primary and secondary data.

1. Primary data collection is cost consuming and may be affected by different kinds of bias. Selection bias, recall bias or social desirability bias are examples. This observation has been utilized the primer data and the researcher gained the data by doing questioner with the respondent who works in Accountancy firm.
2. Secondary data constitute an alternative data source, being data which already exist, using them bears the potential to be very resource-efficient, and by using questionnaires it is possible to collect information specially tailored to the research question. In this research, the secondary data has been collected from the online journal or literature.

Structural Equation Modelling which more known as SEM is a technique statistical analysis used for build and test statistical models in the form of causal models. Structural Equation Modelling (SEM) known as a second-generation multivariate data analysis method that is often used in marketing research because it can test theoretically supported linear and additive causal models

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4. RESEARCH RESULT

Prior to performing the hypothesis test, the researcher conducts a preliminary test to determine whether the model and the variable are feasible to do regression test. Researchers tested the validity and reliability of each question in each variable

A. Validity and Reliability Test

Based on the results of data analysis presented in Table 1, it can be concluded that all variables, either variable independent, intervening, or dependent have qualified reliability. Reliability is achieved when the Cronbach's Alpha value is above 0.7

Table 1 Reliability Test

Variable	Cronbach's Alpha
X1 – Performance Expectancy	0.986
X2 – Effort Expectancy	0.933
X3 – Social Influence	0.904
X4 – Facilitating Conditions	0.922
Z – Behavioral Intention	0.929
Y – Use Behavior	0.950

The validity test is used to test whether each question is a valid question. Validity is measured by outer loading value. If outer loading value is exceeding 0.5 then it can be concluded that the indicator is valid. In table 2, it can be referred that the overall outer loading value are greater than 0.5, so it can be concluded that every question representing the indicators in this research is valid.

Table 2 Validity Test

Variable	Outer Loading	Variable	Outer Loading
X1 = PE		X2 = EE	
PE_1	0.979	EE_1	0.924
PE_2	0.989	EE_2	0.955
PE_3	0.989	EE_3	0.914
PE_4	0.961	EE_4	0.844
X3 = SI		X4 = FC	
SI_1	0.753	FC_1	0.876
SI_2	0.892	FC_2	0.971
SI_3	0.948	FC_3	0.939
SI_4	0.897		
Z = BI		Y = USE	
BI_1	0.926	USE_1	0.933
BI_2	0.969	USE_2	0.964
BI_3	0.910	USE_3	0.948
		USE_4	0.880

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B. *Hypothesis Testing*

Hypothesis 1, 2, and 3 are accepted; Performance Expectancy, effort Expectancy and Social Influence each has a significant influence towards Behavioural Intention adoption of CAATs. It is indicated on Table 3, the p-value lower than 0.05 and t count value of each variable are higher than t table of 1.96. The magnitude of the direct influence and indirect influence of each variable can be seen in figure 1. Hypothesis 4 is accepted, Facilitating Conditions has a significant effect on Use Behavior, but hypothesis 5 is rejected, Behavioral Intention has no significant effect on Use Behavior.

Table 3 Hypothesis Test

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
BI -> USE	0.059	0.061	0.057	1.039	0.299
EE -> BI	0.592	0.590	0.063	9.342	0.000
FC -> USE	0.807	0.806	0.035	22.976	0.000
PE -> BI	-0.400	-0.392	0.064	6.267	0.000
SI -> BI	0.713	0.711	0.080	8.896	0.000

The path analysis and structural equation model result can be seen in figure 1

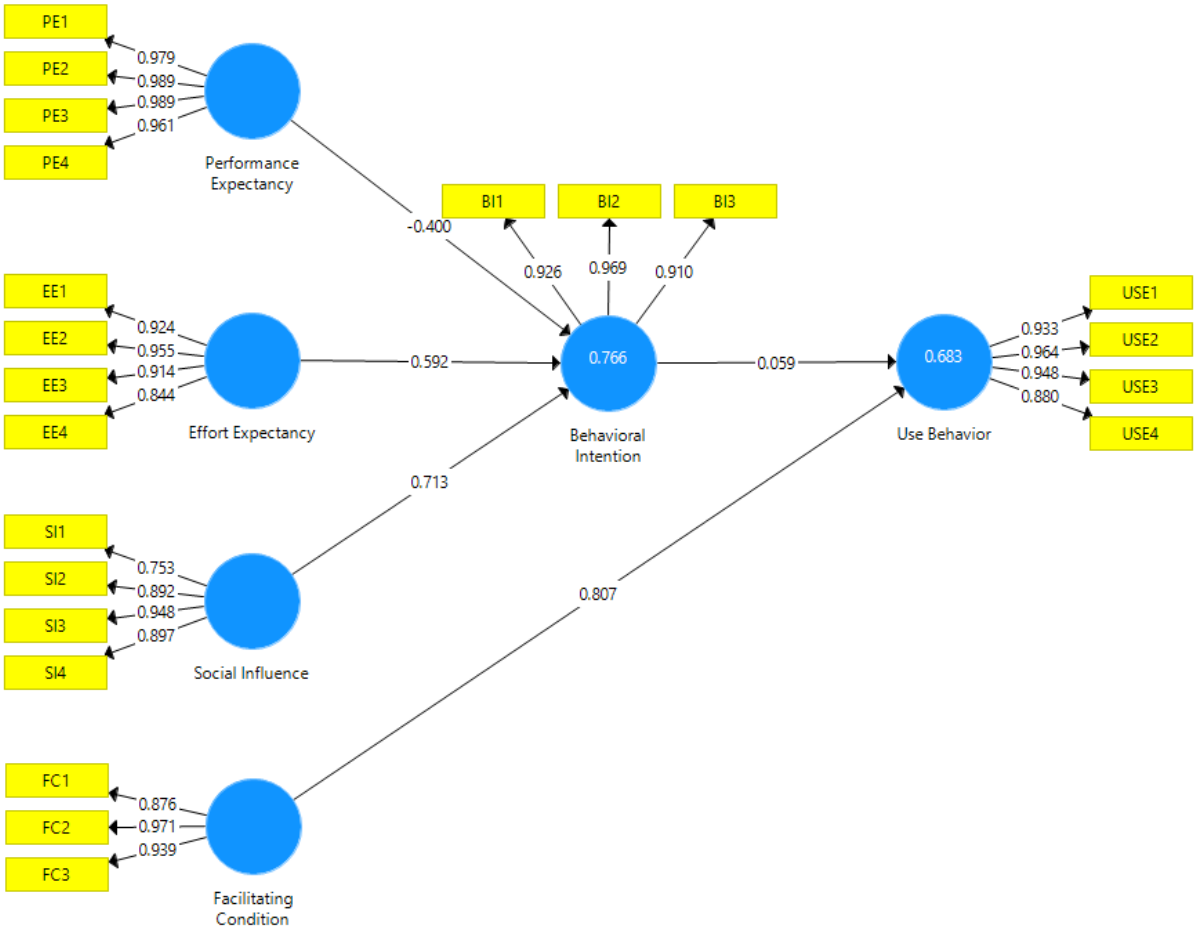

Fig. 1. Analysis of Structural Model

C. *Determination of Coefficient Test*

The coefficient of determination (R2) is used to measure the ability of independent variables and intervening variables used in this study in explaining the dependent variable. In this study, the ability of variable Performance Expectancy, Effort Expectancy and Social Influence in explaining Behavioral Intention is 76.6% as seen in R Square adjusted value in Table 4, while the rest is 23.4% influenced by other variables that not used in this study.

The ability of variable Facilitating Condiditons and Behavioral Intention in explaining Use Behavior is 67.6%, as seen in Table 4. While the rest of 33.4% influenced by other variables that not used in this study.

Table 4 Determination of Coefficient

Endogenous Variable	R Square	R Square Adjusted
Behavioural Intention	0.766	0.758
Use Behaviour	0.683	0.676

D. *Result Discussion*

Financial auditors must adapt to current condition. Nowadays, the audit work can not solely rely on the process manually. Computer assisted audit techniques help the audit work become more effective and efficient. Auditors should be willing to learn to use computer assisted audit techniques to improve their skills and knowledge. Auditors are willing to study computer assisted audit techniques if they assume that their performance can improve with CAATs. In addition, facility issues are also important. The auditor unable to learn and use CAATs if it is not supported by the latest IT infrastructure. Based on this, the need for the role of public accounting firm to provide adequate facilities for the auditor to learn and can adopt the development of information systems.

In order to enhance auditor’s skill and knowledge in information system, training can be done about CAATs. Prior to the training, the trainer must be able to demonstrate and convince the auditor that CAATs can improve the auditor's performance. The purpose of this demostrate is to build auditor perception, so they willing to learn CAATs seriously. In addition, the public accounting firm must also upgrade the computer used by the auditor to work, both hardware and software to fully support the use of CAATs.

This study was conducted to examine the auditor's assumption to use CAATs. Researchers tested a research framework developed based on UTAUT theory [8]. This study used a sample of 156 financial auditors. The result is that if the financial auditor has confidence in the increased of work performance, and supported by the appropriate facilitating conditions, then it will increase the auditor's intention to use CAATs.

There is opportunity of future research in exploring the antecedent factors of auditors' performance expectancy. Other than that, subsequent research can accommodate other sample auditors, such as internal or management auditors.

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