

THE EFFECT OF BEHAVIORAL INTENTION IN THE UTILIZATION OF BIG DATA ANALYSIS IN PUBLIC ACCOUNTING FIRMS: BASED ON UTAUT MODEL

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Abstract

In recent years, Big Data Analytics has been widely discussed because it not only helps in understanding the information contained in the data but also helps identify the data that is most important for current and future business decisions. This makes it easy for people to obtain the data and information they want. Many organizations are reacting quickly to the increased capacity of their information reporting and data analysis systems. The development of big data has an impact on various fields in obtaining information. Information generated by big data analytics can be used as audit evidence that is useful for auditors in determining audit opinions. Big Data Analytics will demand more innovative information processing. By using the UTAUT (Unified Theory of Acceptance and Use of Technology) model, it can be explained that behavioral intention and behavior to use a technology (use behavior) are influenced by performance expectancy and effort expectancy), social influence, and facilitating conditions moderated by leadership. From the results of the study, it was found that leadership affects the relationship between Performance expectancy, Effort expectancy, Facilitating conditions with behavioral intention in the use of Big Data Analysis, but leadership does not affect Social influence. In addition, the use of information technology will affect behavioral intention.

Keywords: *Big Data Analysis, UTAUT Model, Leadership, Use on Information Technology, Behavioral Intention.*

1. Introduction

Technological sophistication has a major influence on the progress of providing information in various fields. Currently, manual data processing is almost completely replaced by a computerized system. Computerized systems make data processing faster, creating large data sets. The huge amount of data, even infinity, shows that the 21st century is entering the era of Big Data. The audit environment is rapidly changing into an environment that has the characteristics of abundant data availability and the latest audit tools. Currently in the era of Big Data, technology-based information systems are very important for an organization.

The development of technology and software in the era of the industrial revolution 4.0 also made auditors change the method of auditing financial

statements. Although financial statement audits are still a balance between traditional audit methods and technology, with the development of technology and software in the era of the industrial revolution 4.0, auditors now have new tools and techniques available. This makes audits more semi-automated, where hardware and software input increases and the use of information technology in computerized documentation, audit plans and working papers has become a standard practice in the auditing profession. With the entry of technology in the era of the industrial revolution 4.0, the expectations of stakeholders for auditing have also grown. This requires auditors as the spearhead of the company to be able to adapt to technology in the Big Data era in order to be able to provide maximum performance. Auditors will continue to deal with modern technological developments, so auditors are also required to be able to apply information technology to their work according to predetermined targets. Rapid technological developments make auditors required to be able to adapt and even be able to use technology in their respective performance processes. There are several factors that have an influence on interest in the utilization and use of computer- based information systems.

According to the researcher, there are other factors that can influence the performance of an organization in encouraging the use of technology, namely the leadership factor. Leadership is one of the important factors in achieving organizational goals. A person who occupies a managerial position in an organization has an important role, both internally and in dealing with parties outside the organization. Leadership is the overall activity in order to influence people to want to work together to achieve a common goal. Good leadership needs to be developed and maintained as well as possible, because successful management originates or depends on the existence of good leadership.

When leaders are not able to use advances in the big data era, their business development will not develop and even threaten to disappear, as well as auditors who are not able to take advantage of technological developments it will be difficult to develop. On the other hand, auditors who are able to keep pace with technological advances will be able to take advantage of big data to develop potential and produce better performance. For this reason, competent leadership is needed to create behavior intention to use technology in the work environment to increase competence.

Behavioral intention is an intention. Intention is the intention (intention) is the desire to perform the behavior. Intention has not been in the form of behavior. Behavior (behavior) is a real activity or action taken⁵. Behavioral intention is a real behavior that is visible and can be measured objectively. Behavioral intention is the result of observing a behavior, which of these behaviors will connect with future actions. The UTAUT model can be used to determine the intention to use Big Data Analytics. UTAUT was chosen because it is comprehensive and integrates performance expectancy, effort expectancy, social influence, and facilitating conditions; as well as moderating variables of age, gender, experience, and vountariness of use to measure behavioral intention and use behavior.

Based on the research conducted, there are not many studies that discuss behavioral intention. From the results of research on the use of big data analysis, it is found that performance expectancy, social influence, facilitating conditions, and opportunity costs have a positive effect on behavioral intention; resistance use has a negative effect on behavioral intention; Performance expectancy, Social Influence, and Business Value Expectancy have a positive effect on behavioral intention. This study uses the UTAUT model to understand behavioral intentions in using Big Data Analytics by including additional leadership variables. The purpose of this study is to find out what factors influence behavioral intention in terms of performance

expectancy, effort expectancy, social influence, facilitating conditions, utilization of information technology and leadership.

2. Literature Review

Unified Theory of Acceptance and use of Technology (UTAUT)

UTAUT (Unified Theory of Acceptance and Use of Technology) is a model develops to explain user behavior towards information technology. The success of the use or application of technology depends on the acceptance and use of each individual user. The UTAUT model has four main constructs that play an important role as a direct determinant of behavioral intention and use behavior. These four constructs are performance expectancy, effort expectancy, social influence, and facilitating conditions which are described in the conceptual framework. In addition, there are four moderators namely gender, age, experience and volunteerism of use, which are positioned to moderate the impact of constructs on behavioral intention and use behavior. UTAUT aims to explain user interest in using information systems and subsequent usage behavior.

Behavioral Intention

Behavioral intention is a person's desire to use information technology for the purposes he wants. Behavioral intention as a measure of the strength of a person's intention to perform a certain behavior.

Intention is a desire that is a tendency that a person has to perform certain behaviors. Intention will remain a behavioral tendency until there is an attempt to change the intention into a behavior (Ajzen & Fishbein, 2005).

Performance Expectancy

Performance expectancy is the level of individual confidence to use technology because it can help individual work performance better. When an information system provides convenience in improving work, it is a sign that the information system has a positive impact on its.

Leadership

Leadership is the overall activity in order to influence people to want to work together to achieve a common goal. Good leadership needs to be developed and maintained as well as possible, because successful management originates or depends on the existence of good leadership. The ability of a leader to influence others by provoking the growth of positive feelings in the people he leads to achieve the desired goals.

Big Data Analytics

In principle, BDA works by translating information into knowledge. Therefore, the term Big Data Analytics (BDA) emerged, which was derived from the combination of the terms big data and business analytics. Business analytics is the process of processing data, in order to obtain useful information in decision making. BDA refers to a new generation of technology designed to perform analysis at high speed, to extract value from the vast amounts of data that companies receive every day.

Utilization of Information Technology

Information technology is a tool that can simplify work. The use of information technology helps work to be more effective and efficient because it can obtain information quickly. Information technology is a general form of the ability of computer systems and a collection of technologies within a company or organization to store, communicate and convey information. Various kinds of convenience with the existence of information technology that can be felt by humans in general include (1) Automating work and processes provided by

humans; (2) Restructuring the changes to the work and processes that are being carried out; and (3) Integrating divisions that have differences within the company and are able to provide information to those in need.

The existence of information technology has a positive impact on companies that are able to provide information quickly so that companies can experience increasing profits. The work of an auditor cannot be separated from information technology; the existence of information technology makes it easier for auditors to carry out the audit process. Therefore, the auditor must be able to apply information technology in his work.

3. Hypotheses Development

Interaction of Leadership and Performance Expectancy on Behavioral Intention

Leaders have behavioral intentions (behavioral intention) the use of technology is influenced by the belief to use technology-based information systems because it can help better work performance. Performance Expectations are defined as the degree to which a person believes that the use of computer-based information systems will help in improving his performance. Leaders who have a good leadership style are able to inspire followers to be involved, committed, have a vision and purpose for their organization, encourage followers to be innovative and support followers to have competence through coaching and supervision. So that in achieving the vision and mission, the leader encourages followers to be able to use technology and be able to improve the competence of each follower. This is in line with the results of research suggested that leadership style increases auditor's behavioral intention. Leadership style affects the behavioral intention of auditors. Based on this description, the hypothesis is:

H1: Leadership affects the relationship between performance expectancy and behavioral intention

Interaction of Leadership and Effort Expectancy on Behavioral Intention

Effort expectancy is defined as the level of ease in using computer-based information systems that will reduce the effort (energy and time) of individuals in doing their work. This model describes the ease of use of computer-based information systems for users. Leaders must be able to provide the best performance so that goals can be achieved in one way, namely optimizing the use of technology because it is considered capable of supporting optimal performance in achieving goals. Leadership style is a leadership style that inspires followers to be involved, committed, has a vision and goals for their organization, encourages followers to be innovative in solving problems in the organization and supports followers to have competence in leadership through coaching and supervision, including in using technology in performance that will reduce the burden of energy and time in doing their work.

Based on this description, the hypothesis is:

H2: Leadership Affects the Relationship between Effort expectancy and behavioral intention

Interaction of Leadership and Social Influence on Behavioral Intention

A leader is able to inspire and motivate followers to go beyond their personal interests and is able to have a profound and extraordinary impact on followers so that followers feel the urge to perform better, resulting in behavioral intentions to use technology to maximize performance results. This opinion is in accordance with the results of research which states that social factors have a significant influence on the use of computer-based information systems. There is a significant relationship between social factors of computer-based information system users, where social factors are shown from the amount of support from coworkers, senior

managers, leaders, and organizations as well as experience in implementing technology-based performance that is able to make leaders easily and concretely give examples or convince their followers. to participate in using technology in their performance so that the behavioral intention of using technology arises from their followers.

Based on this description, the hypothesis is:

H3: Leadership Affects Relationships Social Influence and Behavioral Intention

Interaction of Leadership and Facilitating Conditions on Behavioral Intention

The achievement of goals for a leader is an absolute thing so that the leader will try to provide technology-based infrastructure that is able to support the performance of his followers. This condition is able to cause behavioral intentions of followers to take advantage of technology-based infrastructure. The research explain that facilitating conditions have a positive influence on intention to use technology. Behavioral intentions of leaders who are able to implement technology-based performance and are able to provide facilities that support long-term implementation so that followers can use technology more comfortably and easily will lead to behavioral intentions (behavioral intentions) from followers to participate in implementing the use of technology because the completeness of existing infrastructure makes implementation easier.

Based on this description, the hypothesis is:

H4: Leadership Affects Relationship Facilitating Conditions and Behavioral Intention

The Effect of Information Technology Utilization on Behavioral Intention

To produce a good performance appraisal, an auditor is required to be able to complete any given work correctly, with quality and on time. The application of information technology in the auditor's work can facilitate the auditor in completing his duties so that the auditor can provide the best. In carrying out their duties, the auditor will be faced with a control system, currently many auditees use different information technology systems.

The development of technology that is getting faster and faster and the auditor's ability to adjust it will result in a time gap. Auditors are required to be able to use information technology in carrying out their duties so that they can complete tasks on time and the results of the reports presented are of high quality, this has an impact on improving the performance of the auditors. The results of previous studies explain that the use of information technology has an effect on behavioral intention. Based on the explanation above, this hypothesis is stated:

H5: The use of information technology has an effect on behavioral intention

Research Methods

Population and Sample

The object of this research is the Public Accounting Firm (KAP) in Central Java. The numbers of respondents in this study are auditors who work in Public Accounting Firms. The type of data used in this study is primary data with a questionnaire method containing structured questions that are given directly to the external auditor.

Research Instruments and Variable Measurement

Table 1. Operational Definition

Variable	Operational Definition
Leadership	is the ability to influence a group to achieve a vision or goal.
Behavioral intention	It is a person's desire to use information technology with the goals he wants.

Performance expectancy	It is the degree to which a person believes that using the system will be able to help him to gain an advantage in job performance.
Effort Expectancy Competence	Is the level of convenience in using computer-based information systems that will reduce the effort (energy and time) of individuals in doing their work
Social influence	It is the degree to which an individual perceives others to be able to convince him that he should use a new computer-based information
Facilitating condition	It is the degree to which an individual believes that the organization's infrastructure facilitates the use of technology so that individuals can use the technology comfortably and easily
Use of information technology	It is the ability of the auditor when applying information technology to his work

Data Analysis Method

The data analysis technique used in this study is to test whether the data obtained are valid by using the validity test, and the reliability test is used to see whether the answers given by the respondents are consistent from time to time. Then the classical assumption test was carried out which consisted of normality test, multicollinearity test, and heteroscedasticity test. This test aims to ensure that all data used can present good measurements/benchmarks and produce reliable evidence. After testing the classical assumptions, hypothesis testing is then carried out.

Adapun formulasi dari regresi berganda dapat ditulis sebagai berikut :

$$Y = a + b_1PE * L + b_2EE * L + b_3SI * L + b_4FC * L + e_1 \dots \dots (1)$$

$$Y = a + b_1UIT + e_2 \dots \dots \dots \dots \dots \dots \dots (2)$$

Keterangan:

- Y : behavior intention
- a : nilaiintersepkonstan b1...b5 : koefisienarahregresi
- PE : performance expectancy
- EE : effort expectancy
- SI : social influence
- FC : facilitating condition
- L : leadership
- UIT : Use of information technology
- e1...2 : error

4. Result and Discussion

Based on the results of the validity and reliability testing, it was found that all the questionnaires in this study were valid and the reliability test results were reliable because they had a Cronbach value greater than 0.6.

Descriptive Statistics Test

Table 2. Descriptive Statistics

Variable	Theoretical Range	Actual Range	Mean	Scale Range			Description
				Low	Moderate	High	
Performance expectancy	4-20	6-15	18.11	4-9.33	9.34-14.66	14.67-20	High
Effort expectancy	4-20	8-20	14.39	4-9.33	9.34-14.66	14.67-20	Moderate
Social Influence	4-20	8-18	13.04	4-9.33	9.34-14.66	14.67-20	Moderate
Facilitating Conditions	4-20	6-16	17.15	4-9.33	9.34-14.66	14.67-20	High
Leadership	4-20	5-14	14.51	4-9.33	9.34-14.66	14.67-20	Moderate
Utilization of information technology	4-20	6-18	13.92	4-9.33	9.34-14.66	14.67-20	Moderate
Behavioral intention	4-20	9-20	16.37	4-9.33	9.34-14.66	14.67-20	High

Source: Processed Primary Data (2021)

From the table above, it can be seen that the Expectancy performance variable is in the high category, meaning that a person's level of confidence in the ability of the system to help do a job is very large. The Effort expectancy variable is in the medium category, meaning that there are still respondents who find it difficult to use technology. The Social influence variable is in the moderate category, meaning that there are still some respondents who feel that there are still people around them who do not believe that the respondent is using the new system. The facilitating conditions variable is in the high category, which means that the respondent's confidence in the readiness of the resources needed to support the use of a system is very good. For the leadership variable is in the medium category, meaning that the respondent in influencing and directing his staff in doing work has not run smoothly. For the variable of the use of information technology, it is in the medium category, meaning that respondents using technology have not been fully based on voluntary or of their own volition. As for the behavioral intention variable, it is in the high category, meaning that the use of a new generation of technology that is designed to perform analysis and draw value from various data is in a very large amount.

Likewise for classical assumption testing, it was found that by using the Kolmogorov - Smirnov test, the data is said to be normally distributed because it has a test probability value greater than 0.05. The multicollinearity test aims to test whether in the regression model there is a correlation between the independent variables (independent). The variables in this study are free from multicollinearity, which means that there is no correlation between the independent variables in this study. The significance value on all variables is also > 0.05, which means the data in this study are free from heteroscedasticity or in this study have the same variance between one another.

Table3. Hypotesis Test

Model	Unstandardized Coefficients		t	Sig	Result
	B	Std.Error			
PE*L	0.027	0.034	2.763	0.036	Accepted
EE*L	0.040	0.045	2.425	0.029	Accepted
SI*L	0.112	0.044	1.861	0.066	Rejected
FC*L	0.149	0.033	3.939	0.000	Accepted
UIT	0.721	0.093	9.650	0.000	Accepted

Source: Processed Primary Data (2021)

The Influence of Leadership with Performance Expectancy on Behavioral

Intention

Based on the results of statistical tests that have been carried out, it can be explained that the interaction of leadership with performance expectancy on behavioral intention in the use of Big Data Analysis shows that the sig is smaller than 0.05, so hypothesis 1 is accepted. The results of this study indicate that leaders who have a good leadership style are able to inspire followers to be involved, committed, have a vision and goals for their organization, encourage followers to be innovative and support followers to have competence through coaching and supervision. So that in achieving the vision and mission, the leader encourages followers to be able to use technology and be able to improve the competence of each follower. This is in line with the results of research suggested that leadership style increases auditor's behavioral intention.

Effect of Leadership with Effort Expectancy on Behavioral Intention

Based on the results of statistical tests that have been carried out, it can be explained that the interaction of leadership with Effort expectancy on behavioral intention in the use of Big Data Analysis shows that the sig is smaller than 0.05, so hypothesis 2 is accepted. The results of this study indicate that the leader's support and leadership style that inspires staff to be involved, committed can encourage staff to be innovative in solving problems in the organization and support followers to have competence so that they are able to use computer-based information systems.

The Influence of Leadership with Social Influence on Behavioral Intention

Based on the results of statistical tests that have been carried out, it shows that the interaction of leadership with social expectancy on behavioral intention in the use of Big Data Analysis shows that the sig is greater than 0.05, so hypothesis 3 is rejected. To be able to master the use of Big Data Analysis, respondents need a lot of time and effort, meaning that respondents process every day to practice and practice so that they can use big data analysis well new from someone else. With confidence and trust that the system that will be used is capable of assisting in their work, the respondent can filter all the data needed, determine which data is relevant, and use the information in decision making, so that it does not affect the leadership.

The Effect of Leadership with Facilitating Conditions on Behavioral Intention

Based on the results of statistical tests that have been carried out, it shows that the interaction of leadership on behavioral intention shows that the sig is smaller than 0.05, so hypothesis 4 is accepted. With a good leadership spirit, this makes respondents not easily discouraged when facing difficulties, so this can make it easier to learn the use of big data analysis. The greater one's belief in the readiness of the facilities needed to run a technology, the stronger the intention to use the technology will be.

The Effect of Information Technology Application on Behavioral Intention

Based on the results of statistical tests that have been carried out, it can be explained that the application of information technology has an effect on behavioral intention in using Big Data Analysis, which shows that the sig is smaller than 0.05, so hypothesis 5 is accepted. The results of this study indicate that the success of an auditor's performance cannot be separated from the existence of information technology used in the audit process. The development of technology that is getting faster and faster and the auditor's ability to adjust it will result in a time gap. Auditors are required to be able to use information technology in carrying out their duties so that they can complete tasks on time and the results of the reports

presented are of high quality, this has an impact on improving the performance of the auditors.

On the other hand, the addition of various technological devices and information technology training are expected to assist auditors in carrying out their audit duties so as to improve their performance. This encourages auditors to be eager to apply the use of information technology to speed up the inspection process so that work is completed more quickly and on time which can later improve its performance.

5. Conclusions

From the results of hypothesis testing, it is found that:

Leadership is proven to influence the relationship between Performance expectancy, Effort expectancy, and Facilitating conditions on behavioral intention.

Leadership is proven not to affect the relationship between social influence and behavioral intention.

The application of information technology has an effect on behavioral intention..

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