

The Uses of Cloud Storage: A Study on Accounting Student of Economic and Business Faculty at Brawijaya University

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ABSTRACT

The aim of this study is to examine the effect of Perceived Usefulness, and Perceived Ease of Use from Technology Acceptance Model (TAM), Social Influence and Facilitating Condition moderated by gender and age from Unified Theory of Acceptance and Use of Technology (UTAUT) and Personal Innovativeness towards the Behaviour Intention to use and ultimately the actual use of Cloud Storage among the Undergraduate Accounting student at the Faculty of Economic and Business, Brawijaya University. The sample of this research is selected using convenience-sampling method. The total amounts of the usable data are 181. The research data and hypothesis are analyzed using structural equation modelling (SEM) based on partial least squares (PLS). The result shows that. Perceived Usefulness has the most significant influence towards the intention to use among the other variables.

Keywords: Cloud Storage, Theory of Acceptance Model, Unified Theory of Acceptance and Use of Technology, Personal Innovativeness.

ABSTRAK

Tujuan diadakannya penelitian ini secara umum adalah untuk mengetahui pengaruh perspektif kegunaan dan perspektif kegunaan penggunaan dari *Technology Acceptance Model* (TAM), Faktor Sosial dan Kondisi yang Memfasilitasi yang dimoderator oleh umur dan usia dari teori *Unified Theory of Acceptance and Use of Technology* (UTAUT) dan Inovasi Pribadi terhadap niat perilaku dan Perilaku penggunaan penyimpanan awan (*Cloud Storage*) pada mahasiswa S1 Akuntansi di Fakultas Ekonomi dan Bisnis, Universitas Brawijaya. Sampel penelitian ini dipilih dengan menggunakan metode *convenience sampling*. Data yang terpilih bisa terpakai berjumlah 181. Data penelitian dan hipotesis dianalisis dengan menggunakan pemodelan persamaan struktural (*Structural Equation Method*) berdasarkan *partial least squares* (PLS). Hasil penelitian menunjukkan bahwa Persepsi Kegunaan (*Perceived Usefulness*) memiliki hasil yang paling signifikan terhadap niat perilaku menggunakan penyimpanan awan dibandingkan dengan variable lainnya.

Kata Kunci: Cloud Storage, Theory of Acceptance Model, Unified Theory of Acceptance and Use of Technology, Personal Innovativeness.

Background

Information Technology nowadays has developed very rapidly and it can be used in many sectors, such as Health, Banking, Education, Information and many more (Rema and Setyohadi, 2016). One of the products of Information Technology is Internet whose function has dramatically increased over this decade. The emergence of Internet has unexpectedly created the opportunities in various fields, for example, if in the early 2000 people use Internet to just send an email, now a days the users of Internet can use Internet to watch television programs, watch videos, listen to some music, buy and sell products and save some data as well. In this particular minor thesis, the researcher emphasizes on the effort in writing the topic concerning Cloud Storage, which is one of the benefits of Internet.

Cloud storage technology enables users to store, access, edit, backup, synchronize and share digital files in the cloud via various internet-accessible terminals, such as smartphones, tablets, personal computers and laptops (Xu, *et al.*, (2017). One of the key functionalities of cloud computing is providing users data storage services on the cloud where they can backup, revise, access, or share files over their mobile devices (Arpaci, 2015). Some popular examples of cloud storage are iCloud from Apple Inc., Skydrive, Google drive from Google, and Dropbox. Cloud services can operate across different platforms including Android, iOS, and Blackberry and enable users to synchronize their application data such as photos, videos, music, calendars, documents, and files.

In term of education, cloud storage services provide students a free space to store, access, and share files and documents (Arpaci, 2015). So with these benefit, the student does not have to buy an extra physical storage such as; flash disk or hard disk that could cost the student a lot, because the students can manage their files and documents on their mobile gadget, laptop, or computers, they can use these services for educational purposes, especially for team projects in which members are working simultaneously on the same document. Moreover, in term of accounting, a research report conducted by CCH (2013) showed that 53% of (Small Medium Enterprises) SME owners would consider looking for a new accountant if their current accountant reluctant to investigate and embrace a cloud based accounting software. This particularly disturbing news to accountants, given that 63% of accountants' work consists of transactional services (Ma, 2015). Transactional services include financial reporting, tax returns and simple financial analysis, which can be easily automated by cloud-based software due to the highly structured and low skill level requirement nature of the work. Moreover, Mathur and Dhulla (2014) stated that Chartered Accountants (CA), use cloud services not only for tax filling, but also providing information and solution to their clients. Cloud computing adoption provides CAs' a cost benefit proposition, system audit, assistance and consultancy to clients.

This research was based on the previous study by Thakur and Srivastava (2014) who test perceived risk and adoption readiness, that ultimately impact the behavioral intention to use mobile payment services in India. Adoption readiness on their research was impact by Perceived Usefulness, Perceived Ease of Use, Social Influence, Facilitating Condition, and Personal Innovativeness, while perceived risk consist of security risk and privacy risk. This research however is slightly different from the previous research. In the prior research, Thakur and Srivastava (2013) did not use The Actual Usage as the final dependent variables,

and also did not use age and gender as the moderating variables. In this research age and gender are used to be a moderator variable to social influence and facilitating condition. In addition the author also put actual usage as the final depended variables that determined by Behavioral intention. In conclusion in this research the researcher use Perceived usefulness and Perceived ease of use from Theory of Acceptance Model (TAM), Facilitating Condition and Social Influence from Unified Theory of Acceptance and Use of Technology (UTAUT) and Personal Innovativeness towards the Behaviour Intention to use and ultimately the actual use of Cloud Storage among the Undergraduate Accounting student at the Faculty of Economic and Business, Brawijaya University

THEORITICAL FRAMEWORK

Actual Usage of Cloud Storage

Actual Usage of Cloud Storage is the final outcome in this particular research that determined by behavioral intention that consist of perceived usefulness, perceived ease of use, social influence, facilitating condition, and personal innovativeness. From the previous research conducted by Rinancy (2008), she found that facilitating condition has a positive impact towards actual usage. This result is in line with Baptista and Oliveira (2015), where they found that the actual use behavior affected by facilitating condition and behavioral intention.

Perceived Usefulness towards the Usage of Cloud Storage

Perceived Usefulness is one of the main factors of TAM by Davis (1989). He defined that the perceived usefulness is the degree of a person's belief that using a particular system would enhance his performance. In other words, by using the technology, a consumer can confirm that the product or service is useful in helping them perform a set task. In term of technology acceptance by teacher students in Malaysia, Wong *et al.*, (2013) by spreading 302 respondents in Malaysia, found that perceived usefulness significantly affects the teacher's behavior intention and also attitude to use new technology in their learning process, which is also, supported the previous research (Ma *et al.*, 2005; Lin, 2011; Moran *et al.*, 2010). Based on the information above, the author proposed the following hypotheses

H1: Perceived Usefulness has Positive influence toward the Intention to Use Cloud Storage.

Perceived Ease of Use Towards The Usage of Cloud Storage

Another crucial variable found by Davis *et al.*, (1989) in TAM is perceived ease of use (PEOU). Perceived ease of use can be defined as, the degree to which an individual believes that using a system is free from effort (Davis, 1989). In other word, It is also the degree to which a person believes that using a particular system would be free of physical and mental efforts (Thakur and Srivastava, 2014). According to TAM, perceived ease of use is a major determinant that affects acceptance of a particular technology (Davis, *et al.*, 1989). Changchit (2014) investigated how cloud computing is perceived by college students and which

factors have a tendency to encourage or discourage them to accept the cloud computing based on TAM theory. The surveys were administered to students at a Southern United States University and 585 subjects participated in this study. The results in this study reveal perceived ease of use is one of the factors that play an important role in encouraging students to accept cloud computing. Therefore, the author proposed the following hypotheses:

H2: Perceived Ease of Use has a positive impact towards Behavior Intention to use Cloud Storage.

Social Influence Towards The Usage of Cloud Storage

Social influence is an individual's perception that others think she or he should use an information technology artifact (Venkatesh *et al.*, 2003). It comprises of subjective norms, social factors and image an individual persuasion of approval about technology use from his or her social group and motivation to comply with the shared social meaning of it among the group members (Venkatesh *et al.*, 2012). The use of social influence is arguably interesting in here, due to some researcher found that it has a significant impact towards behavior intention (Irmayanti, 2010; Baptista and Oliveira, 2017; Putra and Ariyanti, 2013).

In this research, the researcher uses Age and Gender as the moderating variables that attach to social influence that impact behavior intention. Theory from Venkatesh (2003) suggests that women tend to be more sensitive to others opinion. In addition, age according to Morris and Venkatesh (2000) has stated that older workers are more likely to place increased salience on social influence.

The impact of age and gender in social influence are varied in different types of research. Baptista and Oliveira (2017) that used 326 samples of Brazilian customers found that social influence that has age and gender as a moderator has a significant influence towards the intention to use mobile banking services in Brazil. However, Abu Shanab and Pearson (2007) by using 523-bank customer in Jordan found that only gender that has an influence toward social influence whilst age did not. Therefore, this moderating variables and its implication towards social influence need to be more investigated. The researcher in term of social influence, proposed 2 hypotheses which are:

H3a: Social Influence has a positive impact towards Behavior Intention to use Cloud Storage

H3b: Social Influence that is moderated by age has a significant influence towards behavior intention to use Cloud Storage

H3c: Social Influence that is moderated by gender has a significant influence towards behavior intention to Use Cloud Storage

Facilitating Condition towards the usage of Cloud Storage

The last part of UTAUT theory that researcher uses in this research is Facilitating Conditions. Facilitating Condition construct is the degree to which an

individual believes that the external support from both organizational and technical infrastructures is available when using an information technology artifact (Venkatesh *et al.*, 2003). It encompasses three similar concepts from perceived behavioral control (Theory of planned behavior), facilitating condition (The Model of PC Utilization), and compability (Innovation of Diffusion Theory) (Venkatesh *et al.*, 2012)

In the previous study, An *et al.*, (2015) found that facilitating condition has a positive direct impact towards behavior intention to use online shopping intention in China. This result is also supported by Yang (2010), who involves 400 mobile shopping users in United State and found that facilitating condition indeed has a positive impact towards the behavior intention to use mobile shopping. However, Kurniawan (2010) found that facilitating condition does not impact positively significant towards the intention to use *GO-JEK* application (online transportation in Indonesia). In this research, the researcher used age as the moderator variables on facilitating condition. Hall and Masfield (1975) in Venkatesh (2003) stated that older workers attach more importance to received help and assistance on the job. For facilitating condition, the researcher proposed the following hypotheses.

H4a: Facilitating Condition has a positive influence towards the actual usage of Cloud Storage

H4b: Facilitating Condition that moderated by age has a significant influence towards the actual usage of Cloud Storage

Personal Innovativeness towards the usage of Cloud Storage

Another variable that predict respondents' intentions to use cloud storage is personal innovativeness, a variable that potentially influences how people respond to innovations. Agarwal and Prasad (1998) conceptualized a construct termed personal innovativeness in the domain of IT (PIIT), defined as "the willingness of an individual to try out any new information technology". Agarwal and Prasad (1998) also stated that the personal innovativeness it-self construct is associated with a specific domain of information technology and proposed that it is defined as the willingness to try out new IT. So the role of personal innovativeness in this research has a key role that needs to be investigated.

In terms of the result of personal innovativeness, Aharony (2014) who did the research in Israel has found that behavioral intention to use cloud computing was impacted by perceived ease of use and personal innovativeness, this finding also supported by the previous research that was conducted by Serenko (2008). Based on the studies that have been described, the researcher proposed the following hypothesis.

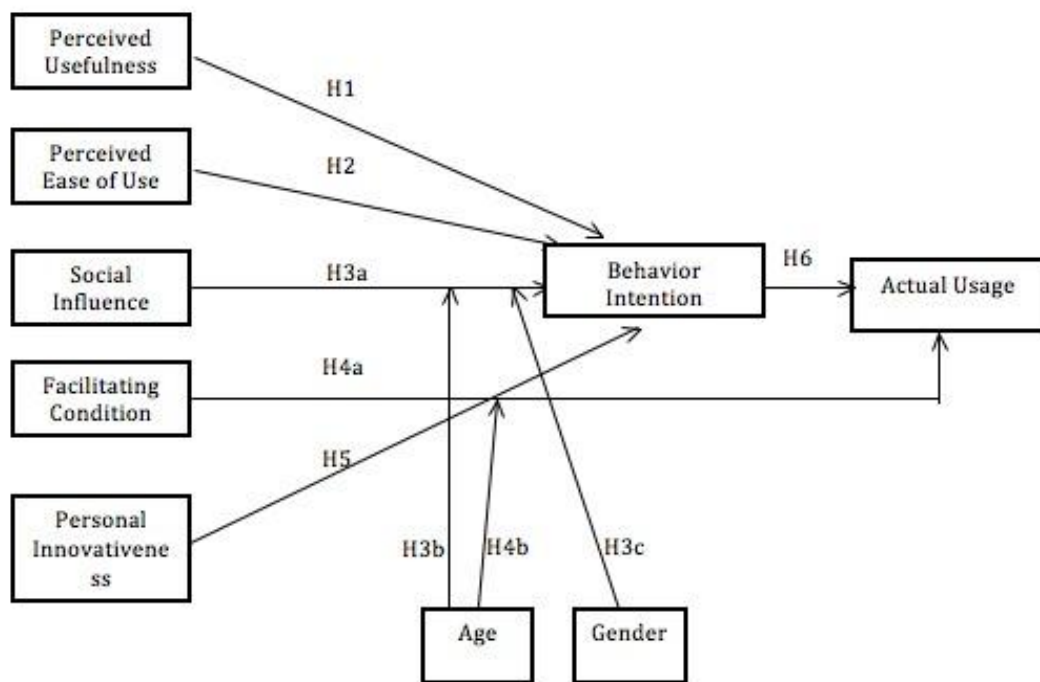
H5: Personal Innovativeness has positive influence towards Behavior Intention to use Cloud Storage.

Intention to Use Cloud Storage

Behavioral intention is defined as a person's perceived likelihood or subjective probability that he or she will engage in a given behavior (Agrebi and Jallais, 2015). In this research, the author use 5 factors that would affect the intention to use cloud storage, there are perceived usefulness, perceived ease of use, social influence, facilitating condition, and personal innovativeness. Aoun *et al.*, (2010) found that Behavior intention to use AIS positively impact the actual use in Australia. In the other field, Weerakkody *et al.*, (2017) found that the behavior intention to use E-government system in Qatar also impact significantly positive towards the actual use of E-government services. This finding makes the author believes that behavior intention has a positive impact towards the actual use of the system, therefore the researcher proposed the following hypothesis.

H6: Behavioral Intention to Use Cloud Storage has Positive influence to use Cloud Storage.

This research framework will be shown below:



RESEARCH METHOD

Populations and Sample Selection

In this research, the researcher chose the undergraduate accounting students from the Economic and Business Faculty, Brawijaya University in Malang as the target population. The total amount of the accounting student in this particular faculty is 1.233 in neither regular program nor international program. After choosing the population, the researcher must choose the sample. Moreover in term of the size of the sample, the researcher uses Slovin formula to choose the representative sampling by using the error rate of 5% of the list is considered representative sampling. Researchers are inclined to use this formula because of its simplicity (Tejada and Punzalan, 2012). Sample size may reflect the population that is very important in this research, so that the results of this research can be generalized (Ramadania, 2017). The formula of Slovin is shown below:

$$n = \frac{N}{1+N(e)^2} \text{ or } N/[1 + N(e)^2]$$

description:

n= Sample size

N= Population

e= error sampling

The total population of the accounting students in Faculty of Economics and Business, Brawijaya University either on the regular program or international programs in 2017 is 1.233. The following is the computation of the sample size based on Slovin's formula.

$$1.233 / [1 + 1.233 (0.05)^2] = 1.233 / [1 + 1.233 (0.0025)] = 1.233 / [1 + 3.0825] = 1.233 / 4.0825 = \mathbf{302 \text{ students}}$$

After the researcher knows the sample size of this research, then the researcher chooses the respondent of it. Generally there are two ways of determining the research samples or the respondent, which are probability and non-probability sampling (Sekaran and Bougie, 2013). Sekaran and Bougie (2013) furthermore stated that, a probability sample is a sample in which each element within the population has an equal, or at least a known, probability of being selected within the sample. Meanwhile, Non-probability sampling is a sample in which the elements in the population do not have any probabilities attached to their being chosen as sample subjects.

In this study, the researcher used convenience-sampling method, which is one of the non-probability sampling designs. Convenience sampling refers to the collection of information from members of the population who are conveniently available (Sekaran and Bougie, 2013). Convenience sampling is one type of non-probability sampling that prioritizes aspects of ease of sampling, so researchers can examine any accounting student at the Faculty of Economics and Business, Brawijaya University.

Data collection methods used in this study is survey method. Conducting survey method is conducted by performing data collection using the questionnaire as a data collection tool. Items questions listed in the questionnaire in this study are those items based on the research questions of Davis (1989), Agarwal and Prasad (1998), Venkatesh *et al.* (2003). The research questions in this research originally are in English. The researcher conducted several steps in the adoption of the questions. First, researcher is looking for questions according with the desired construct. Second, researchers translate the questionnaires from English into Indonesian.

The researcher asked several expertises to translate the questionnaire, such as the English teacher, Lecturer who gave a lecture in University of New South Wales, and their friends from English literature. Moreover, the researcher also brings the questionnaire to the language laboratory in Islamic University of Malang. Third, the researcher also consulted the questionnaire's translation to his supervisor. Fourth, the researcher conducted a pre-test, which is an important step in developing the questionnaire before the researcher spread the real questionnaires. The purpose of it is basically to answer 2 basic questions, "Is this instrument valid? Or can this instrument be used".

The pilot test or pretest is an important step in developing the questionnaire. In this phase, the researcher distributed the questionnaires to non-respondents students majoring in management and economic development and collected valid data by 31 respondents. The results of the pre-test questionnaires can be seen on table 3.1 below and 3.2 on the next page.

Table 3.1
Algorithm (Pre-Test)

Variables	AVE	Composite Reliability	R Square	Cronbachs Alpha	Communality	Redundancy
ACTLUSG	0.847	0.917	0.24	0.819	0.847	-0.092
AGE	1	1	-	1	1	-
FAC	0.709	0.907	-	0.867	0.709	-
FAC*AGE	0.841	0.955	-	0.942	0.841	-
Gender	1	1	-	1	1	-
INN	0.651	0.881	-	0.832	0.651	-
INT	0.807	0.926	0.749	0.88	0.807	-0.49
PEOU	0.782	0.915	-	0.86	0.782	-
PU	0.668	0.889	-	0.839	0.668	-
SOC	0.895	0.962	-	0.942	0.895	-
SOC*AGE	0.923	0.973	-	0.958	0.923	-
SOC*Gender	0.939	0.979	-	0.969	0.939	-

(PU: Perceived Usefulness, PEOU: Perceived Ease of Use, SOC: Social Influence, FAC: Facilitating Condition, INN: Personal Innovativeness, INT: Behaviour Intention, ACTLUSG: Actual Usage.)

Table 3.2
Outer Loading (Pre-Test)

Variables	ACTLUSG	AGE	FAC	FAC*AGE	GNR	INN	INT	PEOU	PU	SOC	SOC*AGE	SOC*GNR
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ACTLUSG1	0.922												
ACTLUSG2	0.918												
Age		1											
FAC1			0.826										
FAC2			0.929										
FAC3			0.863										
FAC4			0.775										
FAC1*Age				0.914									
FAC2*Age				0.957									
FAC3*Age				0.917									
FAC4*Age				0.88									
GNR					1								
INN1						0.754							
INN2						0.743							
INN3						0.865							
INN4						0.857							
INT1							0.916						
INT2							0.913						
INT3							0.879						
PEOU1								0.918					
PEOU2								0.795					
PEOU3								0.933					
PU1									0.719				
PU2									0.868				
PU3									0.9				
PU4									0.77				
SOC1										0.955			
SOC2										0.947			
SOC3										0.941			
SOC1*Age											0.958		
SOC2*Age											0.967		
SOC3*Age											0.956		
SOC1*GNR												0.983	
SOC2*GNR												0.97	
SOC3*GNR												0.955	

(PU: Perceived Usefulness, PEOU: Perceived Ease of Use, SOC: Social Influence, FAC: Facilitating Condition, INN: Personal Innovativeness, INT: Behaviour Intention, ACTLUSG: Actual Usage, GNR: Gender)

After performing the previous steps, the researcher conducted the real questionnaires. The researcher chooses 2 ways to spread the questionnaires. Firstly, the researcher distributes the questionnaire to the students and wait for the respondents while they are filling the questionnaire in order to increase the number of questionnaires return. If the condition is not possible to wait for the questionnaire return from the respondents, the researcher will take it on the next day.

For the online questionnaires, the researcher distributes the online survey to the respondent and wait around one week to get the responses. The researcher needs to contact the respondents via message and ask them to click the link address and fill the questionnaire. If after one week later there is no response from the respondent, the researcher will send the questionnaire for the second time and wait for another week.

After the second questionnaire, if there is still no response from the respondent, the researcher will give them the third questionnaire and wait until one week to get the questionnaire return. After the researcher gets the return questionnaire, it will automatically send to the researcher's email. After getting all the questionnaires, the researcher performs data processing by classifying data according to the demographics of the respondents. Furthermore, the data was tested

using Partial Least Square (PLS) and conclusions were drawn from the analysed data.

Evaluation of Outer Model

Evaluation of outer model is used as a test of validity and reliability of the instrument to obtain valid and reliable data.

1. Validity Test

Validity test conducted to determine the ability of the instrument to measure what it is supposed to be measured (Hartono and Abdillah, 2009). The validity test consists of:

A. Convergent Validity

Convergent Validity is the validity that occurs when the scores obtained from two different instruments that measure the same variables have a strong correlation.

B. Discriminant Validity

Discriminant Validity is validity that occurs when two different instruments that measure two variables predicted are not correlated generate scores that are not correlated

As for the validity test parameters in the PLS measurement model can be explained in Table 3.3 below.

Table 3.3
The Validity Test Parameters in PLS Measurement Model

Validity Test	Parameters	Rule of Thumbs
Convergent	Loading Factors	More than 0,7
	Average Variance Extracted (AVE)	More than 0,5
	Communality	More than 0,5
Discriminant	AVE square and Correlation latent construct	AVE square > Correlation latent construct
	Cross Loading	More than 0,7 in the individual variable

Source: (Hartono & Abdillah, 2009)

2. Reliability Test

Reliability test shows the accuracy, consistency, and the accuracy of an instrument in doing the measurement (Hartono and Abdillah, 2009). In Partial Least Square (PLS), this test can be done by using two methods, there are:

A. Cronbach's Alpha

Cronbach's alpha is used to measure the lower limit value of reliability of a construct that can be declared the reliability if the value should be > 0.6

B. Composite Reliability

Composite reliability measure the true value of a construct and reliability of this method is believed to be better at estimating the internal consistency of a construct. PLS output uses composite reliability with the rule of thumbs values, if it is > 0.7 , it can be called as reliable.

Evaluation of Inner Model

Structural model in PLS is evaluated using R^2 to construct the dependent, the coefficient of the path or t-values for the significance test each path between the constructs in the structural model (Hartono and Abdillah, 2009).

A. Using R^2

R^2 value is used to measure the rate of variation changes of the independent variable to the dependent variable. The higher the R-value means the better the prediction model from proposed research models. However, this model is not an absolute parameter in measuring the accuracy of production models (Hartono and Abdillah, 2009).

B. Using T-Value

Using the value of the coefficient path or t-values of each path for the test of significant between variables in the structural model. This model is used to indicate the level of significance in testing hypothesis. For testing hypothesis at alpha 5% and power 80% if the value of the coefficient of the path indicated by the T-Statistic ≥ 1.64 , the alternative hypothesis can be stated supported (Hartono and Abdillah, 2009).

FINDING AND DISCUSSION

Result of Data Collection

The respondents in this study are the active undergraduate accounting students at the faculty of Economics and Business, Brawijaya University. As the researcher has already mentioned in the previous chapter, this particular study used survey method by distributing hardcopy and online questionnaires to students from accounting major. The total usable respondent in this research are 181 respondents. Although it is only 181, it is still acceptable, consider the sample size in this research has reached 10% of the total population (1,233).

Hypotheses Testing

After a test of convergent validity, discriminant validity, and reliability testing, the next is hypothesis testing. Based on the data processing, the form of Total Effects is show in Table 4.9 on the next page. In hypothesis testing, if the coefficient path shown by the T-statistic is more than 1.64, then the alternative hypothesis can be stated as supported. Conversely, if the statistical value of T-

statistic is less than 1.64, then the alternative hypothesis is not.

Table 4.9
Total Effects

Variables	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STERR)	Explanation
AGE ->INT	0.328	0.282	1.163	Not Significant
Gender ->INT	0.156	0.195	0.802	Not Significant
INN ->INT	0.214	0.065	3.29	Significant
PEOU ->INT	0.243	0.087	2.786	Significant
PU ->INT	0.369	0.084	4.421	Significant
SOC ->INT	0.645	0.38	1.697	Significant
SOC*AGE->INT	-0.676	0.467	1.448	Not Significant
SOC*Gender->INT	-0.165	0.255	0.646	Not Significant
AGE -> ACTLUSG	1.001	0.305	3.279	Significant
FAC->ACTLUSG	0.824	0.214	3.846	Significant
FAC*AGE->ACTLUSG	-1.252	0.359	3.485	Significant
INT->ACTLUSG	0.38	0.115	3.321	Significant

PU: Perceived Usefulness, PEOU: Perceived Ease of Use, SOC: Social Influence, FAC: Facilitating Condition, INN: Personal Innovativeness, INT: Behavioural Intention, ACTLUSG: Actual Usage.

Discussions of the Research Results

Based on the hypothesis testing results above, it indicates that the entire construct of perceived usefulness, perceived ease of use, social influence, facilitating condition, personal innovativeness positively influence behavioural intention to use cloud storage. Also, the behavioral intention significantly influences actual usage. Based on these results, the researcher conducted finding of validity by seeking explanation for the results of hypotheses tested. The validity of the discoveries is analyzed using journals and research models to support the statement disclosed previously.

A. Perceived Usefulness has Positive Influence towards Behavioral Intention to Use Cloud Storage (H1)

. The analysis showed that the perceived of the usefulness influences behavioural intention to use on cloud storage. Moreover, this variables is the strongest variable among the other variables. The result is consistent with the research conducted by Cho and Sagynov (2015), Juniwati (2014), and Jin *et al.* (2014). Davis (1989) defined perceived usefulness as the belief that using the application would increase one's performance. Therefore, it can be imply that cloud storage can increase the student performance to face their daily campuses activities.

B. Perceived Ease of Use has Positive Influence towards Behavioral Intention to Use Cloud Storage (H2)

Perceived ease of use is the degree to which an individual believes that by using a particular technology would be free of effort (Davis, 1989). The analysis show that perceived ease of use has a positive effect towards consumer's behavioral intention on cloud storage. These result is consistent with research conducted by Ramayah and Ignatius (2005), Ching (2005), and Tai and Liu (2015). This result indicates that the student perceive that the usage of cloud storage will be effortless.

C. Social Influence has Positive Influence towards Behavioral Intention to Use Cloud Storage (H3a)

Social influence refers to how opinions of others affect the perceptions of a focal individual. For example, the opinions of lecturers, peers or other significant figures can influence how a person feels about a given technology information (Sun *et al.*, 2014). The analysis showed that social influence affect the behavioural intention to use. The result is consistent with the research conducted by Sedana and Wijaya (2009), AbuShanab and Pearson (2007), and Mathur and Dhulla (2014). This result imply that the others opinion such as friends, parents, or lectures, affect the student perceptions about cloud storage.

D. Facilitating Condition has Positive Influence towards the Actual Usage of Cloud Storage (H4a)

Facilitating conditions refers to which extent people believe that an organizational and technical infrastructure exists to support the system (Venkatesh *et al.*, 2003). The analysis shows that facilitating condition has a positive effect towards the actual usage to use cloud storage. Some scholars such as Weerakkody *et al.*, (2009), Howard, Restrepo, and Chang (2017), and Rema and Setyohadi (2016) also shows that facilitating condition have an effect towards the actual use of information technology. This suggests that our respondents (student) are concerned about the surrounding environment (necessary infrastructures, knowledge, capabilities, etc.) to influence their usage of cloud storage.

E. Personal Innovativeness of Use has Positive Influence towards Behavioral Intention to Use Cloud Storage (H5)

Personal innovativeness is person's beliefs and attitudes toward innovation and the Internet. An individual's level of innovative behavior has been shown to be a key element in his/her acceptance of new technologies (Brancheau & Wetherbe, 1990). The analysis showed that Personal innovativeness influences behavioural intention to use Cloud Storage. This result is consistent with the research conducted by Wang (2016), Boyle and Ruppel (2006), and Thakur and Srivastava (2013). This result suggest that individuals who are more innovative also have a higher intention to use cloud storage. In addition, the researcher believes that the student who has a huge innovativeness are ready to experience technological challenge.

F. Behavioral Intention has Positive Influence towards Cloud Storage Usage (H6)

Behavioural intention is also defined as a person's perceived likelihood or subjective probability that he or she will engage in a given behaviour (Agrebi and Jallais, 2015). The finding showed that behavioural intention has influenced the actual cloud storage usage. This result is consistent with the research conducted by Harsono and Suryana (2014), which imply that all the respondent will engage in a given behavior.

G. AGE MODERATION EFFECT: Hypotheses 3b and 4b

Age in this research model plays a moderator variable on the hypothesis of the social influence and facilitating condition towards intention to use cloud storage and the actual usage of it. The result of this research shows that, firstly, age that is moderated by social influence towards the intention to use cloud storage does not has a significant result. Conversely, facilitating condition that is moderated by age has a significant result towards the actual use of cloud storage. This finding implies that facilitating condition effect will be stronger for older student to use cloud storage. This finding is also in line with the previous researchers, such as Celik, (2015), Baptista and Oliveira (2017), and Venkatesh *et al.*, (2003). In addition, according to table 4.9, the value of Age towards intention does not significant. The t-value of age towards intention is 1.163, which is smaller than the T-table (1,64). On the other hand, the t-value of age towards actual usage is 3.279, which is greater than the T-table (1,64). This result proves that behaviour intention does not mediates age to the actual usage.

The finding of age that does not positively moderate social influence towards behavior intention is inconsistent to the prior research undertaken by Ventakatesh *et al.*, (2003), which stated that age succesfully works as a moderator variable in testing the variables of social influence towards the intention to use information technology system. Empirical evidence by Venkatesh *et al.*, (2003) resume that the impact social influence to intention is stronger for older people. This research finding has the same result as the previous researchers, such as Baridwan (2012) and Venkatesh and Zhang (2010)

However, Venkatesh and Zhang (2010) found that there are a different empirical result of research as what they did in China and USA. In USA, they found the empirical result are consistent with the previous research by Venkatesh *et al.*, (2003), but the result of research in China found that age as a moderator to test the influence of social influence on interest is not significant, although, Venkatesh and Zhang (2010) used the same research model and measurement, they found a different empirical results between USA and China.

The inconsistency of empirical evidence obtained in research that conducted in various countries according to some researchers such as Venkatsh and Zhang (2010) and Baridwan (2012) is an indicator to be more concern about the different national culture in information system research. As what Venkatesh and Zhang (2010) stated that the cause of the difference results in USA and China is because the culture differences, especially about individualism or collectivism.

In conclusion, the author has the same argument with the previous research, which are Baridwan (2012) and Venkatesh and Zhang (2010) that assume the rejection of social influence that moderated by age towards intention to use cloud storage occurred due to culture differences between each counties.

H. GENDER MODERATION EFFECT: Hypotheses 3c

Gender in this research model play as a moderator variable on social influence that impact the intention to use cloud storage, which assume that woman has a greater result of social influence effect towards behavioral intention than a man. This research however, does not support it. The previous research that conducted by Venkatesh *et al.*, (2003), Baridwan (2012), and Irmayanti (2010) also has the same results as this research. This situation happened due to the culture differences between one and another country.

When Venkatesh and Zhang (2010) did they research in USA, they found a positive empirical results that gender serves as the moderator to test the effect of performance expectancy, effort expectancy, and social influence towards behavioral intention to use information system based on technology. However, Venkatesh and Zhang (2010) stated that by using the same measurement and research model found that gender does not affect the social influence variable towards behavior intention. According to Venkatesh and Zhang (2010), the differences are due to the important role of national culture in the context of this theory.

Moreover, when Watson *et al.*, (2012), did the research about the influence of organization policy, managerial characteristic, and managerial process with cross culture between USA and Mexico, Watson *et al.*, (2010) found that there are differences in interpersonal and gender processes in two countries (USA and Mexico) due to cultural differences. USA is more individual, while Mexico considers the group more (Collective). Therefore, the researcher is in line with the previous research such as Baridwan (2012) and Venkatesh and Zhang (2010), assuming that this rejected hypotheses occurred due to the culture differences between each countries.

CONCLUSION, LIMITATION, AND IMPLICATION

Conclusion

This study aims is to investigate the influence of perceived usefulness, perceived ease of use, social influence, personal innovativeness towards the behavioural intention to use cloud storage, and the effect of behavioral intention and facilitating condition to the actual usage of cloud storage. This study tested the construct of the Technology Acceptance Model (TAM), Unified Theory of Acceptance and Usage of Technology (UTAUT), and Personal Innovativeness.

The result of this research shows that Perceived usefulness and Perceived ease of use from TAM has a positive impact toward behavioral intention to use cloud storage. Facilitating condition from UTAUT, with or without age as the moderator variable also has a significant result towards actual usage. Conversely, age and gender does not impact social influence towards the behavioral intention. However the impact of social influence alone (without age and gender as the moderator variables) was proven to be significantly impact behavioral intention. Personal innovativeness has the most significant impact towards behavioral intention. Lastly, behavioral intention significantly affect the actual usage to use cloud storage.

Limitation of The Research

There are some obstacles in this study, mainly due to time reason. As the researcher has mentioned on Chapter 3, to spread the questionnaires, the researcher uses Random sampling method to get the data. However, not all the respondent in this research was randomly selected. Some of them were chosen while some of them were not. Therefore, this research does not use a perfect random sampling method ideally.

Generally, the chosen respondent in this study came from the researcher's friends who were asked by the researcher to spread the the questionnaires to their particular friends nor classmates at campus. This condition also implies on the online questionnaires, where the researcher asked his friend to spread the questionnaires other people at campus.

This condition happened to save the time as well as to ease the data collection for researcher. However, the impact of it may reduce the generalization from the output of the result. For example, there is unequal respondent from a particular major because the researcher is from accounting major, the majority of the respondent in this research came from accounting major.

Implication For Future Research

The author suggests not to forget about the importance of culture, whereas other researchers such Venkatesh and Zhang (2010), and Baridwan (2012), also suggest the importance of culture dimension in term of information system research. As what the researcher has mentioned on the fourth chapter, when Venkatesh and Zhang (2010) did the research about UTAUT by Venkatesh *et al.*, (2003), they found that social influence has an inconsistent result between USA and China, whereas in USA social influence towards behavior intention that is moderated by age and gender is significant, while in China social influence that is moderated by age and gender is not significant.

This argument is also supported by Watson *et al.*, (2012), who found that there are differences in interpersonal and gender processes in two countries (USA and Mexico) due to cultural differences. USA is more individual, while Mexico consider group more (Collective). Therefore, the consideration of national culture differences is an important role to the acceptance on information system (Baridwan, 2012).

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