The Evaluation of Acceptance Samsung Smart Switch Application as Data Sharing Media Using UTAUT

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Abstract

Samsung Smart Switch is a multi-platform application that will make it easier for users to share and transfer data via wired or wireless from various platforms to all Samsung Galaxy devices. This study was conducted to analyze the adoption factors for the acceptance of data sharing applications using the Samsung Smart Switch with the Unified Theory of Acceptance and Use of Technology (UTAUT) model. UTAUT consists of four independent variables and one bound, namely performance expectancy, effort expectancy, social influence, facilitating conditions and behavioral intention. This research was conducted on 100 respondents of Samsung Smart Switch users who had moved data from old devices to Samsung Galaxy devices. Data was collected through interviews and questionnaires, and multiple linear regression was used for data processing. The results of the study obtained the results of the analysis that the variables of performance expectancy, effort expectancy, social influence, facilitating condition have a correlation value of 0.902 to behavioral intention, meaning that the independent and dependent variables in this study have a strong relationship, the calculated F value is 103.360, the value of R Square (R2) of 81.3% while the rest is influenced by other variables. It can also be concluded that simultaneously, the variables of performance expectancy, effort expectancy, social influence, facilitating condition have a significant effect on behavioral intention. Effort expectancy and facilitating condition variables have a significant effect on behavioral intention partially, while performance expectancy and social influence do not have a significant effect on behavioral intention.

Keywords
Acceptance, Behavioral Intentions, UTAUT, Smart Switch

1. Introduction

Mobile device technology or known in English as a mobile device is a technology that is developing very rapidly (Tolle, Pinandito, Kharisma, & Dewi, 2017). Digital In 2019 Report data in October 2019 from the We Are Social website shows that no less than 7,730 billion mobile device users around the world or around 55% of the world's population use mobile devices (Simon, 2019). Sharing and moving data using applications will be needed, especially if the data to be shared is large or large besar (Kurniawan & Creativity, 2017). One example of such a media sharing application is the Samsung Smart Switch. This Smart Switch application was developed by Samsung and is also a mainstay feature on Samsung devices. Samsung Smart Switch users until this research was made have been downloaded more than 100 million times.

A large number of downloads and good reviews on Google Playstore underlies this research. The need for the application to be carefully evaluated for user acceptance of the application. Several models can be used to evaluate user

acceptance of an application, including UTAUT (Prasetio, Analisa Manfaat dan Kemudahan Penggunaan Google Task di Lingkungan Akademik Menggunakan Metode TAM, 2020).

Unified Theory of Acceptance and Use of Technology (UTAUT) is a model that describes various factors that influence individual acceptance of an information technology (Susafa'ati, 2015). There are 4 (four) independent variables in UTAUT, including Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI) and Facilitating Condition (FC) (Muttaqin & Prihandoko, 2018). This acceptance evaluation is expected to be able to find out what variables affect the level of acceptance of application use and explain factors that influence behavioral intentions to use technology and predict the possibility of using applications (Prasetio, Ramdhani, Anshori, Hidayatulloh, & Mubarok, 2018).

UTAUT was chosen because in addition to having the performance factor criteria of the application itself, UTAUT also considers the existence of factors from social influence. This social influence factor is closely related to the Smart Switch application where Samsung itself already has its own community and enthusiasts, which is often a social factor for its users (Hidayati & Ramdhani, 2020).

The independent variables used in this study include performance expectancy, effort expectancy, social influence and facilitating conditions with one dependent variable, namely behavioral intentions. With this research, it is expected to find out user acceptance of the Samsung Smart Switch application

2. Literature Review

The Unified Theory of Acceptance and Use Of Technology (UTAUT) is one of the technology acceptance models that synthesizes the elements of the eight existing technology acceptance models, namely the theory of reasoned action (TRA), technology acceptance model (TAM), motivation model (MM), theory of planned behavior (TPB), combined TAM & TPB, model of PC utilization (MPTU), innovation diffusion theory (IDT) and social cognitive theory (SCT) to obtain a unified view of the acceptance of the latest technology (Venkatesh, Morris, Davis, & Davis, 2003)

In the UTAUT research model, behavioral intention and use behavior are influenced by people's perceptions of performance expectancy, effort expectancy, social influence, and supporting conditions (facilitating conditions) moderated by gender, age, experience, and volunteerism.

2.1. Performance Expectancy

Performance expectancy is a UTAUT construct that is intended to measure a person's level of belief that using a system can help a person in achieving his or her job performance (Venkatesh, Morris, Davis, & Davis, 2003). Performance expectancy is a variable that can be referred to as the ability to obtain significant benefits after using a system (Prasetio, Ramdhani, Anshori, Hidayatulloh, & Mubarok, 2018).

2.2. Effort Expectancy

Effort expectancy is the level of effort of each individual in using a system to support doing his job (Venkatesh et al., 2003). Effort expectancy refers to how easy a person thinks in using a system (Prasetio, Ramdhani, Anshori, Hidayatulloh, & Mubarok, 2018). 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).

2.3. Social Influence

Social influence is the degree to which a person considers it important for others to convince him or herself to use the new system. Social influence refers to a person's feeling to feel that people who are important to him think that he should use an application (Venkatesh, Morris, Davis, & Davis, 2003). Social influence is a representation of three constructs, namely subjective norm (theory of reasoned action, technology acceptance model and theory of planned behavior), public image (innovation diffusion theory) and social factor (model of personal computer utilization).

2.4. Facilitating Conditions

Facilitating conditions are a person's level of confidence that the company and technical infrastructure is available to support the use of the system (Venkatesh, Morris, Davis, & Davis, 2003). In addition, Facilitating conditions also include a person's belief in the facilities in his environment including coverage, network and availability of devices to make someone believe in accepting a technology.

2.5. Behavior Intention

Interest in using a system is the user's intention to use the system continuously with the assumption that they have access to the system. Behavioral intention is defined as a measure of the strength of a person's intention to perform a certain behavior. In the basic concept of user acceptance models that have been developed, behavioral intention becomes an intermediary construct from perceptions of the use of information technology and actual use (use behavior). The role of behavioral intention as a predictor of use behavior has been widely accepted in various user acceptance models (Venkatesh, Morris, Davis, & Davis, 2003)

3. Methods

3.1 Research Instruments

The instruments used in this research are research variables and indicators

1. Research Variables.

   The variables used are independent variables, namely performance expectancy, effort expectancy, social influence, facilitating conditions and dependent variables, namely behavioral intentions.

TABLE I. MEASUREMENTS

Variables	**Indicators**	
Performance Expectancy (PE)	PE_1	The Samsung Smart Switch app can increase my productivity.
	PE_2	The Samsung Smart Switch app makes it easy for me to share data.
	PE_3	The Samsung Smart Switch app can increase my effectiveness and speed up my work.
Effort Expectancy (EE)	EE_1	The Samsung Smart Switch app is easy to learn and understand.
	EE_2	The Samsung Smart Switch app is easy to use.
	EE_3	The display of the Samsung Smart Switch is interactive and makes getting my work done easier.
Social Influence (SI)	SI_1	I use Samsung Smart Switch because of the influence of a friend.
	SI_2	I use Samsung Smart Switch because of my environment.
	SI_3	I use Samsung Smart Switch because my friend considers using Smart Switch important.
Facilitating Conditions (FC)	FC_1	I can use Samsung Smart Switch skillfully.
	FC_2	Samsung Smart Switch is widely used in data sharing in my environment.
	FC_3	The Samsung Smart Switch app is compatible with the phone I'm using.
Behavioral Intention (BI)	BI_1	I intend to use Samsung Smart Switch for data sharing.
	BI_2	I will always use Samsung Smart Switch for data sharing.

Variables	Indicators	
	BI_3	I will use Samsung Smart Switch as a data sharing application in the future.

2. Scale

The scale used in this study is the Likert Scale. The variables to be measured are translated into variable indicators which can be seen in Table II (Sugiyono, 2017):

TABLE II. SCALE

Criteria	Score
Strongly Disagree	1
Disagree	2
Rarely	3
Agree	4
Strongly Agree	5

3.2 Data Collections

Data collection used through interviews and questionnaires. The target or target population in this study are all Samsung Smart Switch users who have used the Smart Switch application to transfer data from other devices to Samsung devices. The sampling technique used in this study is to use the Slovin formula with a confidence level of 10%.

4. Results and Discussion

4.1 Respondent Profile

The results of the research data were obtained from distributing a questionnaire in the form of a google form to 100 respondents who had used the Samsung Smart Switch. Characteristics of respondents based on gender can be seen in TABLE III and Characteristics of respondents by gender can be seen in TABLE IV.

TABLE III. RESPONDENT PROFILES

Sex	Frequency (F)	Percent (%)
Man	36	36%
Woman	64	64%
Total	**100**	**100%**

TABLE IV. AGE OF RESPONDENTS

Age	Frequence (F)	Percent (%)
< 20 Yo	44	44%
20-30 Yo	39	39%
> 30 Yo	17	17%
Total	**100**	**100%**

4.2 Result of Research

TABLE V. PERFORMANCE EXPECTANCY

No	Indicators	Score					Total Score	Ideal Score	%
		(1)	(2)	(3)	(4)	(5)			
1	The Samsung Smart Switch app can increase my productivity.	5	8	30	35	22	361	500	72.2%
2	The Samsung Smart Switch app makes it easy for me to share data.	1	6	16	41	36	405	500	81%
3	The Samsung Smart Switch app can increase my effectiveness and speed up my work.	1	9	25	45	20	374	500	74.8%
							1140	1500	76%

The overall score on respondents' responses to Performance Expectancy (Performance Expectancy) can be known based on the scoring data in TABLE V. The continuum area that shows the ideal area of the information quality variable can be obtained using the formula:

$$Interval \frac{SIT - SIR}{Sum\ of\ Category} = 240$$

SIT = Max Ideal Score x Respondent x Indicators = 5 x 100 x 3 = 1500
SIR = Min Ideal Score x Respondent x Indicators = 1 x 100 x 3 = 300

1. 300 + 240 = 540
2. 540 + 240 = 780
3. 780 + 240 = 1020
4. 1020 + 240 = 1260
5. 1260 + 240 = 1500

Tingkat interval :

1. 300 – 540 = Sangat Tidak Baik
2. 541 – 780 = Tidak Baik
3. 781 – 1020 = Cukup
4. 1021 – 1260 = Baik
5. 1261 – 1500 = Sangat Baik

TABLE V explains the score of the Performance Expectancy variable of 1140 is in the interval 1020-1260, which means that the Performance Expectancy variable is categorized as "Good". This shows that the Smart Switch application has been responded positively by the community.

TABLE VI. SOCIAL INFLUENCE

No	Indicators	Score					Total Score	Ideal Score	%
		(1)	(2)	(3)	(4)	(1)			
1	The Samsung Smart Switch app is easy to learn and understand.	3	12	24	32	29	372	500	74.4%
2	The Samsung Smart Switch app is easy to use.	3	10	23	33	31	379	500	75.8%
3	The display of the Samsung Smart Switch is interactive and makes getting my work done easier.	2	14	28	31	25	363	500	72.6%
							1114	1500	74.3%

The overall score on respondents' responses to Social Influence can be known based on the scoring data in TABLE VI. The continuum area that shows the ideal area of social factor variables. TABLE VI explains that the Social Influence variable score of 1114 is in the interval 1020–1260, which means that the Social Influence variable is categorized as “Good”. This shows that the Smart Switch application has been responded positively by the community.

TABLE VII. FACILITATING CONDITION

No	Indicators	Score					Total Score	Ideal Score	%
		(1)	(2)	(3)	(4)	(1)			
1	I use Samsung Smart Switch because of the influence of a friend.	2	7	19	43	29	390	500	78%
2	I use Samsung Smart Switch because of my environment.	1	6	21	45	27	391	500	78.2%
3	I use Samsung Smart Switch because my friend considers using Smart Switch important.	1	8	33	28	30	378	500	75.6%
							1159	1500	77.3%

The overall score on the respondent's response to the influence of the facilitating condition can be seen based on the scoring data in TABLE VII. The continuum area that shows the ideal region of the facilitating condition variable. TABLE VII explains that the Facilitating Condition variable score of 1159 is in the interval 1020-1260, which means that the Facilitating Condition variable is categorized as "Good". This shows that the Smart Switch application has been responded positively by the community.

TABLE VIII. BEHAVIORAL INTENTION

No	Indicators	Score					Total Score	Ideal Score	%
		(1)	(2)	(3)	(4)	(1)			
1	I can use Samsung Smart Switch skillfully.	1	7	20	42	30	393	500	78.6%
2	Samsung Smart Switch is widely used in data sharing in my environment.	2	5	14	43	37	409	500	81.8%
3	The Samsung Smart Switch app is compatible with the phone I'm using.	1	11	27	36	25	373	500	74.6%
							1175	1500	78.3%

The overall score on respondents' responses to Effort Expectancy can be known based on the scoring data in TABLE VIII. The continuum area that shows the ideal area of the business expectation variable. TABLE VIII explains that the Effort Expectancy variable score of 1175 is in the interval 1020–1260, which means that the Effort Expectancy variable is categorized as “Good”. This shows that the Smart Switch application has been responded positively by the community.

TABLE IX. BEHAVIORAL INTENTION

No	Indicators	Score					Total Score	Ideal Score	%
		(1)	(2)	(3)	(4)	(1)			
1	I intend to use Samsung Smart Switch for data sharing.	1	8	24	38	29	386	500	77.2%
2	I will always use Samsung Smart Switch for data sharing.	3	9	28	34	26	371	500	74.2%
3	I will use Samsung Smart Switch as a data sharing application in the future.	1	8	35	33	23	369	500	73.8%
							1126	1500	75.1%

The overall score on the respondent's response to behavioral intentions can be known based on the scoring data in TABLE IX. The continuum area that shows the ideal region of the behavioral intention variable. Behavioral Intention variable score of 1126 is in the interval 1020-1260, which means that the Behavioral Intention variable is categorized as "Good". This shows that the Smart Switch application has been responded positively by the community.

4.3 Validity and Reliability Test

The validity test used in this study used the Pearson bivariate correlation formula with the SPSS 25 application tool. The criteria used in this study referred to the formula df = (N – 2) many samples with a sig of 5% (www.spssindonesia.com). Provisions for the final result if r count > r table then the question item is said to be valid. The value of r table from research with 100 respondents with a significance of 5% has a value of 0.195 (www.spssindonesia.com). The calculated r value from the study can be seen in TABLE X to TABLE XIV

TABLE X. R SCORE OF PERFORMANCE EXPECTANCY

Items	r count	r table 5% (100)	Results
PE_1	0,905	0,195	Valid
PE_2	0,864	0,195	Valid
PE_3	0,875	0,195	Valid

TABLE XI. R SCORE OF EFFORT EXPECTANCY

Items	r count	r table 5% (100)	Results
EE_1	0,776	0,195	Valid
EE_2	0,822	0,195	Valid
EE_3	0,839	0,195	Valid

TABLE XII. R SCORE OF SOCIAL INFLUENCE

Items	r count	r table 5% (100)	Results
SI_1	0,899	0,195	Valid
SI_2	0,878	0,195	Valid
SI_3	0,881	0,195	Valid

TABLE XIII. R SCORE OF FACILITATING CONDITION

Items	r count	r table 5% (100)	Results
FC_1	0,821	0,195	Valid
FC_2	0,631	0,195	Valid
FC_3	0,839	0,195	Valid

TABLE XIV. R SCORE OF BEHAVIOUR INTENTION

Items	r count	r table 5% (100)	Results
BI_1	0,899	0,195	Valid
BI_2	0,908	0,195	Valid
BI_3	0,897	0,195	Valid

The conclusion of the data processing on the validity test of the question indicators used is that all the questions given to the respondents in this study were declared valid and feasible (Ghozali, 2016). were used as research sample data because the results of the r count were greater than the r table. The reliability test of this study used the alpha formula (Nasution, 2017). The significance test was carried out with a level of = 0.05. The instrument is said to be reliable if the alpha value is greater than the r table value of 0.195. The results of the reliability test can be seen in TABLE XV.

TABLE XV. RELIABILITY TEST

Items	Correlation Scores	Results
PE	0,856	Reliabel
EE	0,774	Reliabel
SI	0,866	Reliabel
FC	0,690	Reliabel
BI	0,887	Reliabel

The results of Cronbach's alpha per-item data have the following values PE = 0.856; EE = 0.774; SI = 0.866; FC = 0.690 and BI = 0.887. The results of the reliability test show that all variables have Cronbach's alpha which is greater than the value of 0.6 so that all variables from the questionnaire are reliable, which means that the questionnaire used in this study is a consistent questionnaire so that it can be used many times (Satori & Komariah, 2014).

4.4 Hypothesis Test

Provisions in taking the t test as follows; if the value of sig < 0.05 or t count > t table then there is an effect of variable X on variable Y. If the value of sig > 0.05 or t count < t table, then there is no effect of variable X on variable Y. The value of the t table contained in the distribution of the r value of the product moment table with a significance of 5% is 1.984 (www.spssindonesia.com).

TABLE XVI. RESULT OF T VALUE

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-1.252	.635		-1.972	.051		
Total PE	-.047	.087	-.044	-.537	.592	.291	3.433
Total EE	.263	.084	.237	3.145	.002	.347	2.882
Total SI	.122	.063	.132	1.933	.056	.425	2.353
Total FC	.740	.109	.638	6.805	.000	.224	4.469

TABLE XVI explains that each variable used in this study has a sig value such as performance expectations (PE) = 0.592, business expectations (EE) = 0.002 social factors (SI) = 0.056, facilitation conditions (FC) = 0.000 and t values respectively. variables, namely performance expectations (PE) = -0.537, business expectations (EE) = 3.145, social factors (SI) = 1.933, facilitation conditions (FC) = 6.805. Conclusions from data processing on the t-test that have been carried out in research such as:

1. Performance Expectancy partially has no significant effect on Behavioral Intention because the t value is -0.537 < 1.984.
2. Effort Expectancy partially has a significant influence on Behavioral Intention because the t value is 3.145 > 1.984.
3. Social factors (Social Influence) partially have no significant effect on Behavioral Intention because the t-count value is 1.933 < 1.984.
4. Facilitating Conditions partially have a significant influence on Behavioral Intention because the t-count value is 6.805 > 1.984.

Provisions in making decisions on the f test, namely if the value of sig < 0.05 or f count > f table then there is an effect of the X variable on the Y variable. variable Y. The value of the f table contained in the distribution of the f value of the product moment table with a significance of 5% is 2.46 (www.spssindonesia.com). The results of the F test can be seen in TABLE XVII.

TABLE XVII. RESULT OF F VALUE

Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	590.544	4	147.636	103.360	.000[b]
Residual	135.696	95	1.428		
Total	726.240	99			

The F value of 103.360 with a sig value of 0.000 was obtained based on the results of the f test, namely the variable performance expectations (PE), business expectations (EE), social factors (SI), facilitation conditions (FC) which together or simultaneously affect behavioral intentions (BI).

TABLE XVIII. RESULT OF R SQUARE

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.902[a]	.813	.805	1.195

a. Predictors: (Constant), Total FC, Total SI, Total EE, Total PE
b. Dependent Variable: Total BI

The results of TABLE XVIII explain the coefficient of determination R2 is 0.813 or 81.3%. The effect of the 4 independent variables on the related variables is 0.813 or 81.3%. The remaining value of 18.7% is influenced by other factors not examined in this study.

5. Conclusions

The results of research that have been carried out on the acceptance of the Samsung Smart Switch application as a data sharing medium for users of Samsung Galaxy devices, namely the t test shows that the Performance Expectancy Variable and Social Influence Variable partially have no significant effect on the Intention variable. Behavior (Behavioral Intention) while the Variable Effort Expectancy (Effort Expectancy) and Variable Facilitating Conditions (Facilitating Condition) partially have a significant influence on the variable Behavioral Intention (Behavioral Intention) and on the f test Variable Performance Expectancy (Performance Expectancy), Business Expectations (Effort Expectancy), Social Factors (Social Influence), Facilitating Conditions together or simultaneously have a significant influence on Behavioral Intention with a coefficient of determination R square of 0.813 or 81.3% .

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