Asian Journal of Management Sciences & Education Vol. 11(1) January-April 2022

INFLUENCING FACTORS ON ADOPTION OF TELKOMSEL MAXSTREAM VIDEO STREAMING APPLICATION USING MODIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY 2 (UTAUT 2)

Rustama Lumbantoruan[1], Maya Ariyanti[2]

[1,2]School of Economics & Business, Telkom University,
INDONESIA.

[1]rustama.lumbantoruan@gmail.com, [2]ariyanti@telkomuniversity.ac.id

ABSTRACT

PT Telkomsel as the leading Mobile Operator in Indonesia with the mission of "delivering mobile digital services and solutions, Maxstream is one of the digital video as Video Market Place (VMP) launched in June 2018. With the support of telecommunication service coverage that has reached 99% of the regions and customer based reaching 178 million must be able to become market leader for digital services which align with its mission. In this research will be measured perception of Maxstream users by using modified Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2) which consists of Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Content (CO), Habit (HT), Price Value (PV), Behavior Intention (BI) and Usage Behavior Intention (UB) and moderation of age and gender variables. In addition, this study evaluates whether the variables are positively significant to Behavior Intention (BI) and Usage Behavior Intention (UB) with moderate variable age and gender variables in Maxstream application users.

Data collection methodology is done through spreading of questionnaires by using Google docs to 405 Maxstream users with Purposive Sampling technique. Based on the results of data processing, it can be seen that the user perceptions of these variables Performance Expectancy (PE), Effort Expectancy (EE), Content (CO), Habit (HT), Price Value (PV) showed high value, means showing a good perception on variable while the Social Influence (SI) showed a low value that shows a less good perception because this application is still relatively new to the market launched. The analytical technique used to interpret and analyze data in research is by Partial Least Square (PLS) technique - Structural Equation Model (SEM). The result of the data analysis will explain the causality relationship between the variables in the modified UTAUT2 model modified by the Content (CO) variable. The model used can be accepted after assumptions have been fulfilled that is endogenous construct variant (R^2) with NFI value = 0.70 (high category). Exogenous and endogenous measurement models have been tested using outer model (outer model) and structural (inner model) models. Furthermore, the model is analyzed for model of causality relationship between variables that influence and influenced by the variables in UTAUT2 model that meet the criteria of original sample (O)> 0.7, Composite Reliability (CR)> 0.7, Average Variance Extracted (AVE)> 0.7, R^2 = 0.91 (solid category) and Goodness of Fit (GoF) consisting of Normed Fit Index NFI = 0.71 (large category) and chi-square = 0 <0.05. Based on the results of data analysis can be concluded that the model is acceptable.

Based on the results of the research, to increase the adoption of video streaming users Maxstream Telkomsel must consider the dominant component of Performance Expectancy (PE), Effort Expectancy (EE), Content (CO), Habit (HT), Price Value (PV), Facilitating Condition (FC)

Keywords*: Performance Expectancy (PE), Effort Expectancy (EE), Content (CO), Social Influence (SI), Habit (HT), Facilitating Condition (PV), Price Value (PV), Behavior Intention (BI) Behavior (UB), UTAUT2, Video Market Place (VMP)*

Copyright © 2022

INTRODUCTION

Recently, as the information era, humans place great emphasis on information. Humans always feel thirsty for information because it has become a necessity. This need indirectly triggered the development of communication technology. With the internet, and the penetration of smart phones (smartphones) makes people easily and freely choose the desired information, one of them is to enjoy entertainment content wherever and whenever with the device they have.

According to Marshall Mc. Luhan (1964), with the internet, the world like Global Village (a global village) with a characteristic where what happens in a country, then in a short time can be known by other countries. According to the results of research conducted by Ericsson in 2017 predicted global television viewers in 2020, 50% watch via their mobile devices. Apart from what was found from their research, it shows that currently consumers have more access to TV and video services than ever before and 1 in 8 consumers believe they will get lost in the large amount of video content available in the future. From the increasingly fragmented user experience, 6 out of 10 consumers now rate content discovery as "very important" when subscribing to a new video on demand service (https://www.ericsson.com/en/press-releases/2017/10/ tv-in-2020-50-percent-of-viewing-will-be-mobile) and through a global survey in the previous year by Nielsen Company as a market leader engaged in global information and media and focusing on research and conducting research in providing information about marketing and consumers, television, and conducting research on other media, it was found that video-on-demand audiences would be dominated by the younger generation.

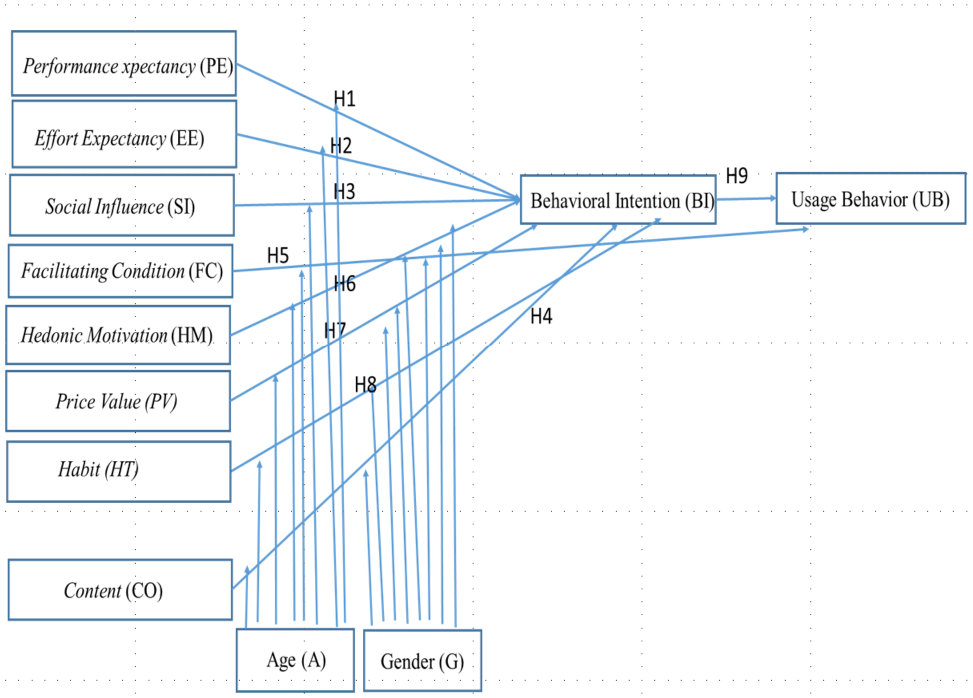
PT Telkomsel as the leading Cellular Operator in Indonesia with the mission of "providing mobile digital services and solutions" which has 181 million subscribers in the month of June 2018 consisting of 98 million internet users with 60 million video streaming users. Telkomsel has released a one stop video portal application that allows customers to access all premium content from various local and international video on demand and TV channels, through their mobile phones anywhere and anytime that can be downloaded by users from Google Play or the App Store. (Source: https://www.telkomsel.com/maxstream). This research aims to explore important values that are expected by Telkomsel data service customers, especially users of Video Streaming Services (VideoMax) to adopt and use Maxstream services as the latest service from Telkomsel. In addition, it also aims to find out how to maintain the growth of this application user by gaining a better understanding so that it can provide practical implications for service providers in this business sector in the future because based on previous experience of some existing applications such as MyTelkomsel Apps (release 2015) and Super Soccer TV (collaboration since 2017 and ending in 2018) shows a decrease in user growth when compared to the initial period the application was released to the market. The method that will be used in analyzing the behavior of customers in adopting a new service or technology is to use the modified Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2).

The further variable to be considered in this study is the influence of gender (gender), age (age) and experience in using smartphone applications (experience) so that this research is expected to provide more comprehensive results.

Based on the above phenomenon it can be concluded that some research problems are as follows:

1. How much is the respondent's assessment of the modified UTAUT2 model variables in this research Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Content (CO), Habit (HT), Price Value (PV), Behavior Intention (BI), Usage Behavior Intention (UB), age and gender moderation?
2. What are the significancies of the following variables Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Content (CO), Habit (HT), Hedonic Motivation (HM), and Price Value (PV) have a significant positive effect on Behavior Intention (BI) and Usage Behavior Intention (UB)?
3. Are variables of Age (A) and Gender (G) moderating in the relationship of Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Content (CO), Habit (HT), Price Value (PV) towards Behavior Intention (BI) and Usage Behavior Intention (UB)?

Research Framework & Hypotheses


Performance xpectancy (PE)
Effort Expectancy (EE)
Social Influence (SI)
Facilitating Condition (FC)
Hedonic Motivation (HM)
Price Value (PV)
Habit (HT)
Content (CO)
Age (A)
Gender (G)
Behavioral Intention (BI)
Usage Behavior (UB)
H1
H2
H3
H4
H5
H6
H7
H8
H9

- **H1**: *Performance expectancy* (PE) positive effect on *behavioral intention* (BI).
- **H2**: *Effort expectancy (EE)* has a positive effect on *behavioral intention* (BI).
- **H3**: *Social Influence* (SI) positive effect on *behavioral intention* (BI)
- **H4**: *Content* (CO) positive effect on *behavioral Intention* (BI)
- **H5**: *Facilitating condition* (FC) has positive effect on *Usage Behavior* (UB)
- **H6**: *Hedonic Motivation* (HM) has positive effect on *Behavioral Intention* (BI)
- **H7**: *Price Value* (PV) positive *( )*
- **H8**: *Habit* (HT) has positive effect on *behavioral intention* (BI)
- **H9**: *Behavioral Intention* BI) has positive effect on *Usage Behavior* (UB)

Experience variable is eliminated because data retrieval conducted only once (cross sectional) so that if a new Telkomsel customer uses the Maxstream Telkomsel application for the first time, then they do not have yet the experiences.

RESEARCH METHODOLOGY

1. Literature methodology consists of reading journals and theses to get additional variable insight into the content of this research
2. Descriptive and causal through surveys because it will explain customer perceptions and behavior of the variables.
3. In this research conducted on Maxstream application users to fill in the table variables and the matrix in this study
4. The test uses the SEM - PLS (Partial Least Square) method with Smart PLS 3 programming with a total of 33 indicators
5. The results of smart PSL are analyzed, conclusions, and suggestions for companies and future researchers

MATERIALS AND METHODS

Participants

This research respondent targeted to 405 customers of PT. Telkomsel whose preference to use the Telkomsel Maxstream video marketplace application, the data collection technique used to obtain data is through questionnaires distributed to 705 customers with 405 respondents watching video on demand through the Telkomsel Maxstream application and 300 respondents who do not watch video on demand through the Maxstream application.

Instruments

Data collection methodology was to distribute questionnaire with 33 questions divided into 8 variables: 3 Performance Expectancy (PE), 4 Effort Expectancy (EE), 4 Social Influence (SI), 5 Content (CO), 3 Habit (HT), 3 Hedonic Motivation (HM), 3 Facilitating Conditions (FC), 3 Price Value (PV), 4 Behavioral Intention (BI), 4 Usage Behavior - UB

Data Analytics

The chosen data analytics method of the data should be in accordance with the research pattern and the variables to be studied. The analytical method is used in this research using PLS-SEM with two evaluation steps: 1) evaluation of measurement (outer model) to assess the validity and reliability of the model through the validity of convergent and discriminant, and 2) evaluation of structural (inner model) that aims to predict the relationship between latent variables 3) descriptive statistical analysis to describe the respondent's response index and various constructs developed and differential statistics for testing hypotheses.

RESULTS

More comprehensive picture of the description of the respondents consisted of gender and age. The subjects consisted of 228 men (56,29%) and 177 women (43,71%). In term of age, 693 respondens (63,57%) were 26 – 40 years old, 224 respondens (20.55%) were 17 – 25 years old, 132 respondens (12.11%) were 41 – 55 years old, and 15 respondens (1.37%) above 55 years old.

The descriptive analysis shows that all UTAUT-2 variables are at a high level of perception with the Social Influence variable having the highest score with an average value of 80.77%, followed by Price Value (78.39%), Habit (77.2%), Content (77.12%), Effort Expectancy (76.94%), Behavior Intention (76.4), Performance Expectacy (76.46%), Facilitating Condition (75.47%) and Usage Behavior (74.48%).

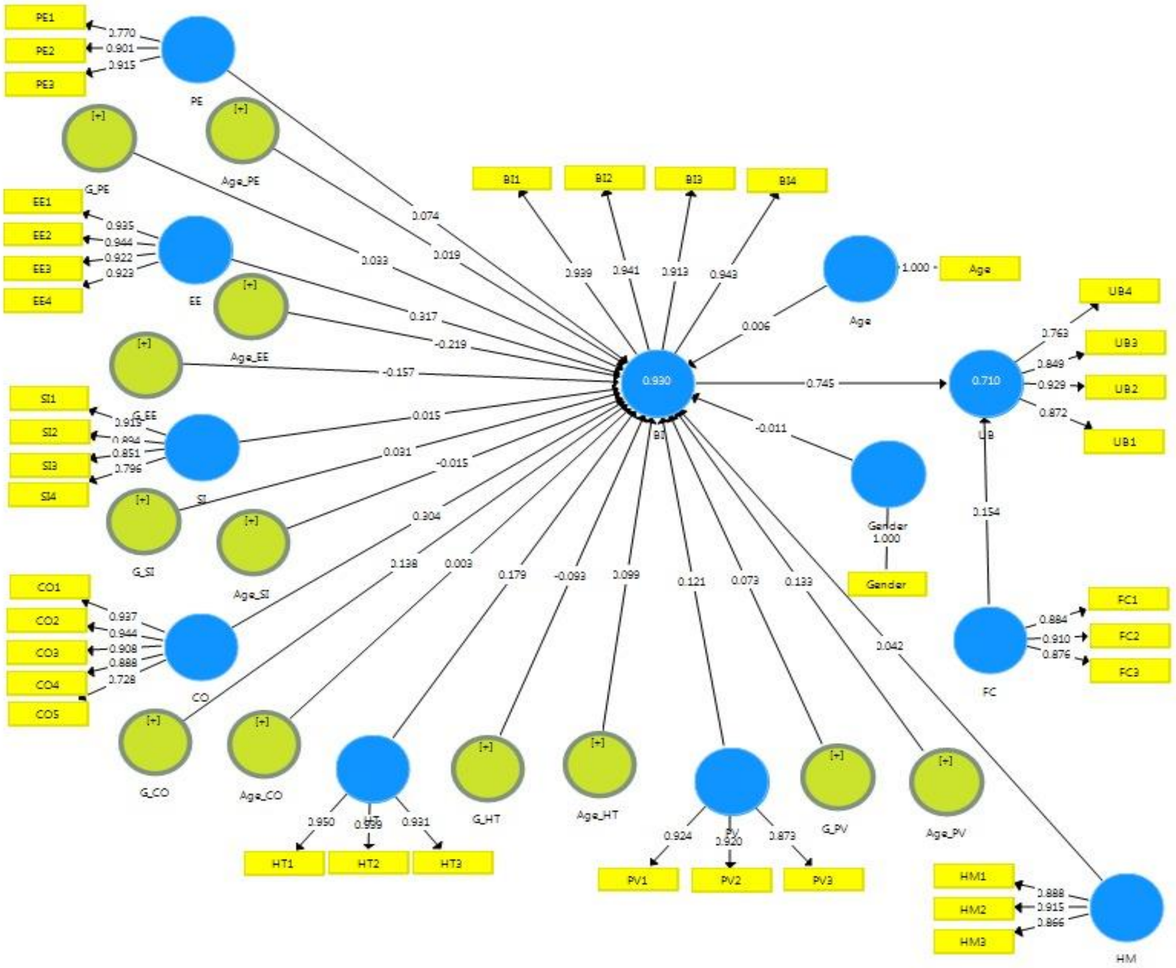
The measurement model (Outer Model) involves the relationship of each criterion representing a latent variable with each indicator. The focus of the measurement model assessment is on the validity of the component used to represent each construct as suggested by some researchers (eg, Chin, 2010; Hair et al., 2011; Henseler et al., 2009). The evaluation of measurement model (Outer Model) consists of construct validity, convergent validity, and discriminant validity.

The constract validity refers to the extent to which measuring devices can measure theoretical aspects. Loading factor and cross loading value which are higher than 0.70 are considered significant (Hair et al., 2011), based on the results, all indicators of each construct variable have a loading factor above 0.7 so that it can be concluded that all indicators of the construct variable are valid.

The next step of convergent validity is the evaluation of the value of Average Variance Extracted (AVE). The construct is said to have good convergent validity if the AVE value is above 0.5, based on AVE testing results, all construct variables are ≥ 0.5 so that it can be concluded that all construct variables have good convergent validity.

To find out Discriminant Validity is done by testing with the Cross Loading method using the SmartPLS 3.0 application. The test resulted that all indicators used in the research questionnaire have valid and reliable characteristics.

Analysis of SEM-PLS – OUTER MODEL


PE1
PE2
PE3
0.770
0.901
0.915
PE
[+]
G_PE
[+]
Age_PE
EE1
EE2
EE3
EE4
0.935
0.944
0.922
0.923
EE
[+]
Age_EE
[+]
G_EE
SI1
SI2
SI3
SI4
0.915
0.894
0.851
0.796
SI
[+]
G_SI
[+]
Age_SI
CO1
CO2
CO3
CO4
CO5
0.937
0.944
0.908
0.888
0.728
CO
[+]
G_CO
[+]
Age_CO
0.074
0.033
0.019
0.317
-0.219
-0.157
0.015
0.031
-0.015
0.304
0.138
0.003
0.179
-0.093
0.099
0.121
0.073
0.133
0.042
BI1
BI2
BI3
BI4
0.939
0.941
0.913
0.943
0.930
BI
Age
1.000
Age
0.006
-0.011
Gender
1.000
Gender
0.745
0.710
UB
UB4
UB3
UB2
UB1
0.763
0.849
0.929
0.872
0.154
FC
0.884
0.910
0.876
FC1
FC2
FC3
HT
0.950
0.939
0.931
HT1
HT2
HT3
[+]
G_HT
[+]
Age_HT
PV
0.924
0.920
0.873
PV1
PV2
PV3
[+]
G_PV
[+]
Age_PV
HM
HM1
HM2
HM3
0.888
0.915
0.866

Copyright © 2022

Leena and Luna International, Chikusei, Japan.
（株）リナアンドルナインターナショナル, 筑西市,日本

ISSN: 2186-845X ISSN: 2186-8441 Print
www.ajmse. leena-luna.co.jp

RESULTS

1. *Construct Validity*

   All loading factor indicators and constructs > 0,50

2. *Composite Reliability (CR)*

   All CR of variables > 0,70

3. *AVE*

   All AVE of variables > 0,50

4. *Discriminant Validity*

   Correlation (loading) indicators in the construct > to other construct

Based on the results of the outer model testing which has fulfilled all the parameters (*construct validity*, CR, AVE, and discriminant validity, thus, it can be said that the model has met the validity requirements so that no indicators of each latent variable are removed/discarded.

Changes in R2 values can be used to explain the effect of certain exogenous latent variables on endogenous latent variables whether they have substantive influence or not. The R-Square value will measure the level of variation in changes in independent variables to dependent so that the higher the value of R-Square, the better the predictive results of the model under study.

R-Square testing is used to measure the level of change in the dependent variable on the independent variable. The higher the R-Square value the better the model can predict from the research object, based on the results the value of R-Square on the construct variable Behavior Intention is 0.9127 meaning that the percentage of Intention Behavior can be explained by Performance Expectancy, Effort Expectancy, Social Influence, Content, Habit, Price Value, and Facilitating Conditions by 91.27% while for Usage Behavior can be explained by Intention Behavior by 70.99%.

Assessment using the Goodness of Fit (GoF) parameter is one way to verify SEM-PLS (Tenenhaus et al., 2004).

T-value testing is intended to test whether the independent variable partially has a significant effect on the dependent variable. If the probability (prob value)> 0.05 or -t table <t count <t table then H0 is accepted. Whereas if the probability (prob value) <0.05 or t count ≤ -t Table or t count> t table then H0 is rejected. From the statistical table data known t Table for alpha = 0.05 is 1.96 and t table for alpha = 0.10 is 1.65

CONCLUSIONS

Based on the results of research on Telkomsel customers who use Maxstream video streaming applications can be summarized as follows:

1. The level of user assessment of the modification factors of the UTAUT2 model in this research are at a high level of above 77%, thus all the following varibles are high user rating: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Facilitating Conditions (FC), Hedonic Motivation (HM), Price Value (PV), Habit (HT), Hedonic Motivation, Content (CO), Behavior Intention (BI), and Behavior to Use (BU).

2. Based on the research result, there are 6 independent variables in this study that have a significant positive effect on Behavior Intention (BI) and one variable that has no significant effect, while the details are as follows:
   a) Performance Expectancy (PE) has a significant positive effect on Behavior Intention (BI) with 0.076 and t count 2.4707 path coefficients.
   b) Effort Expectancy (EE) has positive but insignificant effect on Behavior Intention (BI) with path coefficients 0.0268 and t count 2.0023
   c) Social Influence (SI) did not have a significant positive effect on Behavior Intention (BI) with path coefficients 0.026 and t count 1.0028.
   d) Price Value (PV) has a significant positive effect on Behavior Intention (BI) with path coefficients 0.171 and t count 3.2589
   e) Content Factor (CO) has a significant positive effect on Behavior Intention (BI) with path coefficients 0.294 and t count 1.9916
   f) Hedonic Motivation (HM) has a significant positive effect on Behavior Intention (BI) with path coefficients 0.290 and t count 1.9907
   g) Habit factor (HT) has a significant positive effect on Behavior Intention (BI) with path coefficients 0.201 and t count 2.3779
3. Based on the research results on the dependent variable Behavior Intention (BI) has a significant positive effect on Behavior to Use (BU) with the path coefficients 0.745 and t count 27.5300
4. From the test results on the dependent variable Facilitating Conditions (FC) have a significant positive effect on Behavior to Use (BU) with 0.154 and t count path coefficients 4.9372
5. Based on the research results of the moderator varibale of sex and age, there were no significant effect on Behavior Intention (BI) with a value of 0.844 t count (below 1.96)

RECOMMENDATIONS

Based on the result of data processing, analyzing the results of the research, and draws conclusions, there are several things that can be taken into consideration and suggestions for the company or Maxstream application services and also for further research as follows:

Suggestions for the company or recommendations from the results of this study are:

a. Aspects of Price Value are the factors that have the most influence on users in adopting Maxstream video streaming applications and the results of descriptive analysis note that the weakest assessment is the factor of subscribing to video-on-demand packages Maxstream Telkomsel applications are cheaper than other similar applications because of that Telkomsel must pay attention in implementing the price scheme.

b. Content aspect is a factor that has the smallest significant effect on influencing customers to adopt the Maxstream video streaming application and from the analysis it is known that the weakest assessment is the weakest of respondents' assessment of video-on-demand content is always updated regularly. Therefore, it is recommended that Telkomsel update content regularly, enriching national and international content such as soccer services other than the international league needs to be enriched with national football content according to customer preferences because it is not yet dominant in this study so that the level of customer acceptance can be improved.

c. Facilitating Conditions aspect is a factor that has a customer influence to increase the use of Maxstream from the results of valuation analysis The most important item that must be considered by Telkomsel is the quality of streaming services on the application (unbroken) and information available in the FAQ or through Telkomsel Custumer Care (Call Center, Email, FB and Twitter) because it has the lowest score.

d. Aspects of Social Influence being a variable did not have a significant effect on this study, consumers claimed that they would use Maxstream if their family and friends had already used a lot, therefore Telkomsel had to be more aggressive in promoting the benefits of using this application so that many consumers were interested. Become a leader, word of mouth in various groups through social media or in the community as its endorser

SUGGESTIONS FOR FURTHER RESEARCH

In this research, there are seven main variables that have a significant positive impact on the adoption of Maxstream applications by Telkomsel customers, namely Performance Expectancy, Expentacy Effort, Facilitating Condition, Hedonic Motivation, Content, Habit, and Price Value. It is necessary to do further research on factors that are not significant, namely Social Influence on the Intention Behavior variables that throughout the results of the study literature conducted by the authors have only found one research result so that not many have discussed it.

REFERENCES

[1]. Ali Hasan, S. (2014). *Marketing Selected Cases.* Yogyakarta: Center for Academic Publishing Service.

[2]. Ahmed, Z. (2014). Effect of brand trust and customer satisfaction on brand loyalty in Bahawalpur. *Journal of Sociological Research* ISSN 1948-5468, 306-326. Retrieved from www.macrothink.org/journal/index.php/jsr/article/download/6568/5407

[3]. Ali Hasan, S.(2014). *Marketing dan Kasus-Kasus Pilihan.* Yogyakarta: Center for Academic Publishing Service.

[4]. Ambler, T., Bhattacharya, C. B., Edell, J., Keller, K. L., Lemon, K. N., & Mittal, V. (2002). Relating Brand and Customer Perspectives on Marketing Management. *Journal of Service Research*, 13-25.

[5]. Anderson, J. C., & Gerbing, D. W. (1988, May 1). Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin, 103*(3), 411-423. Retrieved April 28, 2018, from https://www.scholars.northwestern.edu/en/publications/structural-equation-modeling-in-practice-a-review-and-recommended

[6]. Armstrong, G., & Kotler, P. (2015). *Marketing An Introduction* Twelfth Edition Global Edition. Pearson.

[7]. Cantone, L. (2011). *The role of experience in the branding strategies. The role of experience in the branding strategies*.

[8]. Garson, G. D. (2016). *Partial Least Squares: Regression & Structural Equation Models.* United States of America: Statistical Associates Publishing.

[9]. Hair, J. F., Hult, G. M., Ringle, C. M., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM).* United States of America: SAGE Publications, Inc.

[10]. Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 414-433.

[11]. Indrawati, P. (2015). *Metode Penelitian Manajemen dan Bisnis.* Bandung: PT Refika Aditama, Bandung.

[12]. Indrawati, Raman, M., Wai, C. K., Ariyanti, M., Mansur, D. M., Marhaeni, G. M., Yuliansyah, S. (2017). *Perilaku Konsumen Individu dalam Mengadopsi Layanan Berbasis Teknologi Informasi & Komunikasi.* Bandung: Refika Aditama.

[13]. Keller, K. L. (nd). *Strategic Brand Management.* USA: Pearson.

[14]. Kotler, P., & Keller, K. L. (2012). *Marketing Management 14*. Prentice Hall.

[15]. Kotler, P., & Keller, K. L. (2016). *Marketing Management* 15th Global Edition. England: Pearson Education Limited.

[16]. Meenaghan, T., & Shipley, D. (1999). *Media effect in commercial sponsorship*. Euro

[17]. PT. Telekomunikasi Selular. (2015). *Connecting your Digital Life - PT Telekomunikasi Selular 2015 Annual Report.* Jakarta: PT. Telekomunikasi Selular.

[18]. PT. Telekomunikasi Selular. (2017). *About us: Telkomsel.* Retrieved from Tentang Telkomsel | Telkomsel: www.telkomsel.com

[19]. PT. Telekomunikasi Selular. (2017). *About: Telkomsel Cash*. Retrieved from Telkomsel TCASH | #pakeTCASH SEMUA Gampang!: https://digitalpayment.telkomsel.com

[20]. Ratri, L. E. (2007). Hubungan antara Citra Merek (Brand Image) Operator Selular dengan Loyalitas Merek (Brand Loyalty) pada Mahasiswa Pengguna Telepon Selular di Fakultas Ekonomi Regular Universitas Diponegoro Semarang. Hubungan antara Citra Merek (Brand Image) Operator Selular dengan Loyalitas Merek (Brand Loyalty) pada Mahasiswa Pengguna Telepon Selular di Fakultas Ekonomi Regular Universitas Diponegoro Semarang, 1-188.