Analyzing Subscribers Intention on Nethost Services using Unified Theory of Acceptance and Use of Technology 2 (Study on: Telkom University Area)

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Abstract

The Internet is one of the Twentieth Century’s most important innovations. Amount of internet users then create business opportunities in internet service providers (ISP). There are so many ISP but there is still a lack of promotion, the difficulty of paying and the exclusivity of the service providers make other service providers difficult to compete in the Indonesian market even more so with the emergence of newcomers from internet service providers who directly steal the student’s attention, it is Nethost. This study aims to examine the influence of analyse factors inside UTAUT 2 model to analysed variable Behavioral Intention and Use Behavior. The objective of this research is to analyse factors inside UTAUT 2 model that influence the subscriber on using ISP of Nethost service in Telkom University Area and to analysed age and gender affecting the influence inside UTAUT 2 model in the context of Nethost service in Telkom University Area, by using data from 360 respondents who lived in Telkom University Area and have been using ISP of Nethost by using nonprobability sampling. The result revealed that there are six factors in the UTAUT2 Model which significantly influence the behavioral intention of ISP of Nethost service adoption, namely Habit, Hedonic Motivation, Facilitating Condition, Performance Expectancy, and Social Influence. In terms of moderating factors, both Age and Gender are not moderating any influences of factors towards Behavioral Intention. The model can predict moderate the behavioral intention of subscribers towards ISP of Nethost services in Telkom University Area since the R² is 55.5%.

Keywords: Nethost, Behavior Intention, Use Behavior, UTAUT 2

1. Introduction

According by Asosiasi Penyelenggara Jasa Internet Indonesia the internet users in Indonesia on 2016, there are 132.7 million internet users out of the total population, increase from 88.1 million users in 2014. From the total internet users in 2016, APJII found the most of the internet users in Indonesia either as workers or Self-employed amounted to 82.2 million or 62%. Order in the next internet user profession as a Housewife of 22 million or 17%. With the amount of internet users then create business opportunities in internet service providers (ISP).

According to Nethost Marketing (2017) Nethost currently have customers with total 3428 customers in Telkom University area. However, from the records of the year 2016 its customers who use the service Nethost only around 1188 customers. In the year 2014 Nethost have total users of 3678 with the number of active customers of 1467. Can be seen in this data that the user actively Nethost down from 1467 until 1188, in which many things have created a state, such as students who graduated or moved from Nethost.

The use of internet has a positive impact on education. The internet can facilitate students on meeting their educational needs. Nethost is an internet service provider whose focus on providing internet facilities in the educational environment particularly Telkom University. Nethost has number of subscriber growth every year but those number are not compatible with the number of active subscribers.

The factor that affecting subscriber on using Nethost in Telkom University area still not clearly observe and UTAUT 2 is found as the most suitable model for technology acceptance issues. From the search of some previous studies related to customer’s behaviour intention, the author want to know which factor that have a significant influence.

2. Theoretical Background

2.1 Performance Expectancy

According to Venkantesh et al. (2003)[1] is defined as “the degree to which an individual believes that using the system will help him or her to attain in job performance”. On this research, performance expectancy describes a user’s belief that use of Nethost services provides many benefit on their daily life. Performance expectancy impacts on a user’s intention to use Nethost services.
expectancy is the strongest predictor of behavioral intention (Venkatesh et al., 2003). This result also found in a research done by Pahnila (2011) that performance expectancy, a combination of usefulness, compatibility and relative advantage variables from TAM and IDT is the most significant factor influences behavioral intention. The influence of performance expectancy to behavioral intention varied on gender and age where the result showed more significant effect on younger men (Venkatesh et al., 2003).

2.2 Effort Expectancy

Venkatesh et al. (2003:450) describe that effort expectancy is “the degree of ease associated with technology use”. Research of Venkatesh et al. (2003) showed that the Effort Expectancy has a positive influence on Behavioral Intention. The same results were shown in some studies, such as the adoption of Mobile Learning studies at universities in Guyana showing that Effort Expectancy is one factor that directly affects the Behavioral Intention (Thomas et al., 2013). According to Venkatesh et al. (2003), the influence of Effort Expectancy on Behavioral Intention is moderated by Gender and Age, which is more significant in women with older age.

2.3 Social Influence

Venkatesh et al. (2003) describe that social influence is “the degree to which an individual perceives that important others believe he or she should use the new system”. Social influence has affected the behavioral intention with the most significant effect on older women and using technology as mandatory with a little experience.

2.4 Facilitating Condition

Venkatesh et al. (2003) described facilitating condition as “the degree to which an individual believes that an organizational and technical infrastructure exists to support use of system. In UTAUT 2 model, Venkatesh et al. (2003) research related to UTAUT 2 Model, facilitating conditions have an effect to behavioral intention which is moderated by gender and age. Wu and Indrawati (2012) indicate that facilitating conditions positively affect behavioral intention.

2.5 Hedonic Motivation

According to Brown and Venkatesh (2005), Hedonic Motivation is defined as “the fun or pleasure derived from using a technology”, and it has been shown to play an important role in determining technology acceptance and use. Venkatesh et al. (2003) stated that hedonic motivation is a critical determinant factor of behavioral intention in non-organizational context.

2.6 Price Value

According to Zeithaml (1988), price is usually conceptualized together with the quality of products or services to determine the perceived value of products or services. (Venkatesh et al., 2003) stated the price value is positive when the benefits of using a technology are perceived to be greater than the monetary cost and such price value has a positive impact on intention. Several studies using a variety of terms that leads to Price Value. Indrawati et al. (2010) proposes a new construct models on UTAUT to include variables Price as predictors of Behavioral Intention.

2.7 Habit

According to Limayem et al. (2007), Habit has been defined as “the extent to which people tend to perform behaviors automatically because of learning”, while Kim et all (2005) equate habit with automaticity. Although conceptualized rather similarly, habit has been operationalized in two distinct ways: first, habit is viewed as prior behavior and second habits measured as the extent to which an individual believes the behavior to be automatic. Venkatesh et al. (2012) revealed that the influence of Habit on Use Behavior Habit is stronger in men who were older with a lot experience. Research which involving Habit into UTAUT model previously conducted by Pahnila et al. (2011), revealed that Habit had a significant influence on the Actual Use.

2.8 Behavioral Intention

Ajzen (1991) assumed that intention was one of motivational factors that influence a behavior. More over Ajzen stated that intention are indications of how hard people are willing to try of how much effort they are planning to exert in order to perform the behavior. According to Venkatesh et al. (2003), there are three factors that determine Behavioral Intention on UTAUT model, namely Performance Expectancy, Effort Expectancy and Social Influence. In the UTAUT 2 model, factors Facilitating Conditions, Hedonic Motivation, Price Value and Habit added as a predictor of Behavioral Intention.

2.9 Use Behavior

According to Wu et al (2008), use behavior is measure by counting the frequency of actual use of technology by user. Venkatesh et al. (2003) stated that use behavior measured by frequency of using mobile internet. This study defines Use Behavior as the frequency of the users in using instant messenger application.
In UTAUT 2 model, influence on the Use Behavior is also determined by factors Habit, where Venkatesh et al. (2012) found that men who were older with more experience of the use of technology tend to be more accustomed to using technology.

2.10 Research Framework

![Research Framework Diagram](image)

Figure 2.1 Research Framework

2.11 Research Hypotheses

- H1 Performance Expectancy has a positive and significant influence on Behavioral Intention
  - H1a Performance Expectancy’s influence on Behavioral Intention is moderated by Age
  - H1b Performance Expectancy’s influence on Behavioral Intention is moderated by Gender
- H2 Effort Expectancy has a positive and significant influence on Behavioral Intention
  - H2a Effort Expectancy’s influence on Behavioral Intention is moderated by Age
  - H2b Effort Expectancy’s influence on Behavioral Intention is moderated by Gender
- H3 Social Influence has a positive and significant influence on Behavioral Intention
  - H3a Social Influence’s influence on Behavioral Intention is moderated by Age
  - H3b Social Influence’s influence on Behavioral Intention is moderated by Gender
- H4 Facilitating Conditions has a positive and significant influence on Behavioral Intention
  - H4a Facilitating Condition’s influence on Behavioral Intention is moderated by Age
  - H4b Facilitating Condition’s influence on Behavioral Intention is moderated by Gender
- H5 Hedonic Motivation has a positive and significant influence on Behavioral Intention
  - H5a Hedonic Motivation’s influence on Behavioral Intention is moderated by Age
  - H5b Hedonic Motivation’s influence on Behavioral Intention is moderated by Gender
- H6 Price Value has a positive and significant influence on Behavioral Intention
  - H6a Price Value’s influence on Behavioral Intention is moderated by Age
  - H6b Price Value’s influence on Behavioral Intention is moderated by Gender
- H7 Habit has a positive and significant influence on Behavioral Intention
  - H7a Habit’s influence on Behavioral Intention is moderated by Age
  - H7b Habit’s influence on Behavioral Intention is moderated by Gender
- H8 Facilitating Conditions has a positive and significant influence on Use Behavior
  - H8a Facilitating Condition’s influence on Use Behavior is moderated by Age
  - H8b Facilitating Condition’s influence on Use Behavior is moderated by Gender
- H9 Habits has a positive and significant influence on Use Behavior
H9a Habit’s influence on Use Behavior is moderated by Age
H9b Habit’s influence on Use Behavior is moderated by Gender
H10 Behavioral Intention has a positive and significant Influence on Use Behavior

3. Methodology

3.1 Research Characteristics
On this research, the researcher used a quantitative method as the basic foundation of doing the research. Quantitative research method is a method of research that used to perform an accurate measurement of the behavior, knowledge, opinions, or attitudes (Cooper & Schindler, 2011) [10]. The purpose of this research is a causal conclusive or causal research. According to Indrawati (2015) [11], the objective of causal research is to understand which variables are the causes and which variables are the effects. Also used to see the nature of the relationship between cause variable and effect variable (positive or negative). In term of time horizon, this research used a cross sectional method.

3.2 Measurement Scale
To calculate data gathered from the sample, this research uses systematic differential with 5 levels of measurement, ranging from “Strongly Disagree” to “Strongly Agree”.

3.3 Population and Sample
The population of this research is the Nethost service users in Telkom University area. In this research, known that Nethost service users in Telkom University area are 3678 people in 2017.

3.4 Data Testing Technique
This study uses SEM methodology that uses Smart PLS due to its structure and complexity. Partial least squares regression is a variance-based statistical method. The analytical software used in this study is smart PLS

3.4.1 Validity Test
The pilot test conducted on SPSS to test the reliability and validity due to the number of samples gathered are below 100. According to r table, the coefficient should be at least 0.361 given the sample of 30 and alpha of 5%.

3.4.2 Reliability Test
The data reliability of this research is to see the adequateness of Alpha Cronbach and Composite of the variables’ Reliabilitiness using SPSS software. According to Sekaran and Bougie (2010) [12] to determine a variable is reliable or not use the provisions if Cronbach’s Alpha ≥ 0.60 then declared acceptable and if Cronbach’s Alpha < 0.60 the variable is poor.

4. Research Result
4.1.1 Analysis of Structural Equation Model
a. Outer Model
The Data gathered from 360 respondents then processed and tested for its discriminant validity/

1.Convergent Validity
Convergent validity is conducted to test the accurate level of items inside a variable to measure the research object. The indicator used in this test is using Factor Loading (FL). According to Hair et., al (2010) [13] in Indrawati (2015), the item can be said to have a convergent validity if the FL score is ≥0.5. The result of the FL scores of this research is shown on the table 4.1

Table 4.1 Loading Factor Result

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>Indicator</th>
<th>Loading Factor</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior Intention (BI)</td>
<td>BI1&lt;- BI</td>
<td>0.69</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>BI2&lt;- BI</td>
<td>0.88</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>BI3&lt;- BI</td>
<td>0.91</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>EE1&lt;- EE</td>
<td>0.80</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>EE2&lt;- EE</td>
<td>0.88</td>
<td>Valid</td>
</tr>
<tr>
<td>Effort Expectancy (EE)</td>
<td>EE3&lt;- EE</td>
<td>0.87</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>EE4&lt;- EE</td>
<td>0.85</td>
<td>Valid</td>
</tr>
<tr>
<td>Facilitating Conditions (FC)</td>
<td>FC1&lt;- FC</td>
<td>0.80</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>FC2&lt;- FC</td>
<td>0.88</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>FC3&lt;- FC</td>
<td>0.87</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>FC4&lt;- FC</td>
<td>0.85</td>
<td>Valid</td>
</tr>
</tbody>
</table>
As shown on the table 4.2, all the indicators/items on this study are valid. Every indicator revealed that the loading factor is $\geq 0.5$.

Table 4.2 AVE Scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior Intention</td>
<td>0.673</td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td>0.730</td>
</tr>
<tr>
<td>Facilitating Conditions</td>
<td>0.609</td>
</tr>
<tr>
<td>Habit</td>
<td>0.641</td>
</tr>
<tr>
<td>Hedonic Motivation</td>
<td>0.681</td>
</tr>
<tr>
<td>Performance Expectancy</td>
<td>0.688</td>
</tr>
<tr>
<td>Price Value</td>
<td>0.712</td>
</tr>
<tr>
<td>Social Influence</td>
<td>0.735</td>
</tr>
<tr>
<td>Use Behavior</td>
<td>0.751</td>
</tr>
</tbody>
</table>

Source: SmartPLS 3 Processed Data Result by Author

From the calculation using Smart PLS 3.0, the AVE scores of each variable is more than 0.50. Therefore, the questionnaire fulfills the criteria of convergent validity.

2. Discriminant Validity

Alongside convergent validity, it is also requiring discriminant validity. Indicators of discriminant validity can be seen from the AVE Square Root Score. If the AVE square root score of each AVE variable is higher than the correlation between two variables inside the model, so then the research questionnaire already fulfills the discriminant validity. (Gepen and Straub, 2005) in Indrawati (2017). Below the Table 4.3 shows about Correlation Score among Variable:

Table 4.3 Correlation Score among Variable

<table>
<thead>
<tr>
<th>BI</th>
<th>EE</th>
<th>FC</th>
<th>H</th>
<th>HM</th>
<th>PE</th>
<th>PV</th>
<th>SI</th>
<th>UB</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI1</td>
<td>0.699</td>
<td>0.491</td>
<td>0.532</td>
<td>0.492</td>
<td>0.327</td>
<td>0.365</td>
<td>0.450</td>
<td>0.328</td>
</tr>
</tbody>
</table>
Table 4.3 shows the value of cross loading of each items that are higher than the score of other construct. The table above indicates a positive result as there is no indication of problem.

### Composite Reliability

According to the Indrawati (2015), the reliability relates with a consistency and also a stability of a measurement result. Hulland (1999) in Hair et al (2017) \[14\] Researchers frequently obtain weaker outer loadings (<0.70) in social science studies, especially when newly developed scales are used. Table 4.4 shows the Cronbach Alpha and the Composite Reliability and of each variable on this research.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s Alpha</th>
<th>Composite Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior Intention</td>
<td>0.749</td>
<td>0.859</td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td>0.876</td>
<td>0.915</td>
</tr>
<tr>
<td>Facilitating Conditions</td>
<td>0.785</td>
<td>0.877</td>
</tr>
</tbody>
</table>
b. Inner Model

According to Indrawati (2017), the second test of PLS is Assessment of the structural model or Inner model Test. This test is conducted to know the influence of the latent variables towards another latent variable. The test is conducted by looking at the path value to see whether the influence is significant or not. This test required bootstrapping procedure to get the t-value. Besides the t-value, the variance percentage need to be concerned, which is \( R^2 \) for dependent latent variable. The \( R^2 \) result 0.67; 0.33; and 0.19 indicate that the model is “Good”, “Moderate”, and “Weak”. (Indrawati, 2017:71)

1. T-Statistical result

In this research, the significance level that author used is 5%. By using significance level of 5%, if the t-value result is greater than 1.65 means that there is a significant influence between independent variable and dependent variable, then, \( H_0 \) rejected.

<table>
<thead>
<tr>
<th>No</th>
<th>Path Diagram</th>
<th>Path Coefficient</th>
<th>t-Value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BI -&gt; UB</td>
<td>0.044</td>
<td>0.465</td>
<td>( H_1 ) rejected</td>
</tr>
<tr>
<td>2</td>
<td>EE -&gt; BI</td>
<td>-0.008</td>
<td>0.129</td>
<td>( H_1 ) rejected</td>
</tr>
<tr>
<td>3</td>
<td>FC -&gt; BI</td>
<td>0.183</td>
<td>2.656</td>
<td>( H_1 ) accepted</td>
</tr>
<tr>
<td>4</td>
<td>FC -&gt; UB</td>
<td>0.044</td>
<td>0.582</td>
<td>( H_1 ) rejected</td>
</tr>
<tr>
<td>5</td>
<td>H -&gt; BI</td>
<td>0.345</td>
<td>5.375</td>
<td>( H_1 ) accepted</td>
</tr>
<tr>
<td>6</td>
<td>H -&gt; UB</td>
<td>0.300</td>
<td>3.006</td>
<td>( H_1 ) accepted</td>
</tr>
<tr>
<td>7</td>
<td>HM-&gt;BI</td>
<td>0.202</td>
<td>3.604</td>
<td>( H_1 ) accepted</td>
</tr>
<tr>
<td>8</td>
<td>PE -&gt; BI</td>
<td>0.111</td>
<td>2.107</td>
<td>( H_1 ) accepted</td>
</tr>
<tr>
<td>9</td>
<td>PV -&gt; BI</td>
<td>0.035</td>
<td>0.716</td>
<td>( H_1 ) rejected</td>
</tr>
<tr>
<td>10</td>
<td>SI -&gt; BI</td>
<td>0.076</td>
<td>1.677</td>
<td>( H_1 ) accepted</td>
</tr>
</tbody>
</table>

Source: SmartPLS 3.0 Result Processed by the Author

As shown in the table 4.5, four hypotheses are rejected and six hypotheses are accepted.

2. \( R^2 \) and \( Q^2 \)-square Test (\( R^2 \) and \( Q^2 \))

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>R Square</th>
<th>Q Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral Intention</td>
<td>0.550</td>
<td>0.343</td>
</tr>
<tr>
<td>Use Behavior</td>
<td>0.129</td>
<td>0.081</td>
</tr>
</tbody>
</table>

Source: SmartPLS 3.0 Result Processed by the Author
The $R^2$ on BI construct is 0.550, means Behavior Intention is 55.0% influenced by Performance Expectancy, Social Influence, Hedonic Motivation, Price Value and Habit. Meanwhile, the rest is influenced by the other factors that is not studied in this research. It also indicates that the model is “Moderate”. On UB construct, the $R^2$ is 0.129, means the Use Behavior is 12.9% influenced by Behavioral Intention and Habit, while the rest is influenced by the other factors outside this research.

5. Conclusion and Suggestions

5.1 Conclusion

There are 6 variables in this study that were proven to have a positive and significant influence on the subscriber’s behavioral intention of Nethost service adoption. The variables were ordered from the highest to lowest affect respectively as follows: Habit, Hedonic Motivation, Facilitating Condition, Performance Expectancy, and Social Influence. There is no difference perception of respondents in terms of age and gender.

The proposed model of this research had an R-Square value of 55.5% which means this model has a moderate predicting power to predict subscriber’s behavioral intention towards ISP of Nethost adoption. Therefore, this proposed model can be used to be implemented in deciding Nethost management marketing program to increase subscriber behavioral intention on ISP of Nethost adoption.

5.2 Suggestion

5.2.1 Suggestion for the Company

This research has found that the most significant factor from UTAUT 2 model that influence the Behavioral Intention to use Nethost services is Habit. It means that Nethost need to make their subscribers habitual to use ISP on their daily life. Socialization about the importance of ISP can be one of the solution to make people habitual to use the services. For example, Nethost perform a periodical demonstration about the ISP, so people can really experiencing the performance of the Nethost services.

The second factor that Influence the behavioral intention on using Nethost services is Social Influence. Therefore, it will be better if the Nethost make some program or promotion which required a subscribers to bring another party to join the program, for example the subscribers should bring their 4 friends or family join to use nethost services, and if they able to bring 4 friends, they will get free 5GB of Nethost services package. Things that might attract more subscribers like that is really crucial in order to increase the willingness of people to use Nethost services.

The third factor that significantly influence the behavioral intention to use Nethost services is Hedonic Motivation. It means the willingness of people on using Nethost services are depends on the satisfaction and happiness that achieved from using the services. In order to satisfy the subscribers, Nethost need to consider about the features that they deliver. They need to make sure that all the ISP features can meet all segment, because different segment may have different demands. By performing a segmentation of subscriber demands, will help Nethost to find out the best features that needed by each customer segment.

The fourth factor that significantly influence the Behavioral Intention to use Nethost services is Performance Expectancy. It means Nethost need to provide a services that can ensure their customers to communicate and experiencing a good connection by using ISP. As we know, people nowadays are really depends on the internet connection. Start from use internet for playing game, watch a movie, performs a live streaming, even people now use it for trading. Those activities are required a high speed and stable connection. So, the Nethost need convince their subscribers that ISP is better than previous technology. The researcher suggest that Nethost need to socialize peoples that by using ISP might increase their productivity, reduce wasted time, etc.

The last factor that Influence the behavioral intention on using Nethost services is Facilitating Condition. Even Facilitating Condition is not influence the Use Behavior on the adoption Nethost services, this factor has a significant influence on Behavior Intention. The researcher found that in order to keep the subscribers loyal on using Nethost services, Nethost need to be consider facilitates that support people on using ISP. One of the aspect is Information. By having a good customer service that able to help subscribers when they experiencing some problems on using the services, will build a trustworthiness from the subscribers on the Nethost services.

5.2.2. Suggestion for the future research

Since this UTAUT2 Model can be used for predicting the Behavioral Intention of ISP of Nethost services adoption in Telkom University area since it has a moderate explanatory power which is 55.5% and categorized as a moderate model. Use Behavior of ISP of Nethost services adoption in Telkom University area since it has a moderate explanatory power which is 12.9% and categorized as a low model, further research is expected to add the moderating variable that might affect the factors. In UTAUT 2 model, there is Experience moderating variable.
which is not included on this research. Further research about the adoption of Nethost services are expected to be able to including Experience moderating variable. To support the involvement of Experience variable, the researcher require a periodical data sampling method. So the experience of subscribers on using Nethost services in certain period time can be collected and predicted.

REFERENCES