International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2015): 78.96 | Impact Factor (2015): 6.391

Predicting Acceptance and Use Behavior of Consumers toward IndiHome Services by Using Extended UTAUT Model (A Case Study in Bandung)

Indrawati[1], Rafa Najiya[2]

[1]Telkom University, School of Economics and Business, Telekomunikasi Terusan Buah Batu Road, Bandung 40257, Indonesia

[2] Telkom University, School of Economics and Business, Telekomunikasi Terusan Buah Batu Road, Bandung 40257, Indonesia

Abstract: ***Telkom as the only state-owned telecommunications enterprise also a leading telecommunication company in Indonesia which provides fixed line or cable line try to seek an opportunity from another potential market to generate their profit. While the mobile migration result in unfavorable situation for traditional market, however industry statistics show an upward trend from other key ICT indicator subscriptions, which in this case is Triple Play services named IndiHome. Unfortunately, the factors that affecting consumers on using IndiHome Services are still not clearly observed. Analyzing factors that affect the behavior intention and usage behavior of consumers toward the adoption of IndiHome Services is needed. This research intends to analyze factors that affect the behavioral intention and use behavior of consumers toward the adoption of IndiHome Services in Bandung, based on Unified Theory of Acceptance and Use of Technology 2. The results reveals, factors that influencing the Behavioral Intention on the adoption of IndiHome services in Bandung sequentially starting from the greatest influence are Habit, Hedonic Motivation, Social Influence, Performance Expectancy, Price Value and Facilitating Condition as 82.3%. While the influence of Habit and Behavioral Intention on Use Behavior as 7%.***

Keywords: behavioral intention, use behavior, UTAUT2, IndiHome services

1. Introduction

The telecommunications industry has encountered more change in the last decade than in its entire history. In 1999, only 15 percent of the world's population had access to a telephone; by 2009, roughly 70 percent had mobile phones. Additionally to this phenomenal growth in mobile communications, it also brought sharp declines for the past decade in public switched telephone network (PSTN) voice revenues, an explosion of over-the-top (OTT) communication services and global industry consolidation. Moreover, there were ground-breaking decisions by some Telcos to outsource functions as core to their business as their physical networks. Fueled by rapid growth in developing countries, mobile communications have shored up the industry's top line. However at the moment with these markets saturating, communications revenue growth is stalling. Expected content and connectivity-related revenues have not risen fast enough to compensate [1].

Thus, despite of these situation, Telkom as a leading telecommunication company in Indonesia which provides fixed line or cable line try to seek an opportunity from another potential market to generate their profit. While the mobile migration result in unfavorable situation for traditional market, however industry statistics show an upward trend from others key ICT indicator subscriptions. Moreover, previously, research conducted by IBM in the publication entitled "Telco 2015: five telling years, four future scenarios" revealed an interesting phenomenon, the top three answer when asked if the economic crisis continues, after their homes, consumers are least likely to give up mobile phones and broadband Internet access. As in Indonesia, those findings are consistent with the data from Association of Indonesian Internet Service Providers (Asosiasi Penyelenggara Jasa Internet Indonesia – APJII) that claimed there are 132.7 million Internet users in Indonesia in 2016 from the total population of 256.2 million people, increase from 88.1 million users in 2014 [2].

In February 2015, after three weeks of its launch, Director of Telkom Consumer Service (Dian Rachmawan) said for the first year of it sales the target subscriber of IndiHome are three million users. Those come from one million users of Speedy old migration and two million results of the net sales. In his calculation, if the number of targeted subscriber are achieved, there would be an additional IDR 1.25 trillion beside the IDR 8.25 trillion targeted for the revenue of consumer directorate that he leads. "If in 2016, there are an additional equal numbers of subscribers achieved, there would be an income of IDR 18 trillion, and in 2017 it can go beyond approximately IDR 21 trillion," he asserted [3]. Nevertheless, despite of its initial numbers targeted, at the period ended of it first year of sales there was only the addition of 930,000 subscribers throughout Indonesia for IndiHome [4]. In fact, this number are still far below expectation.

However, Bandung has biggest amount of additional subscriber targeted by IndiHome compared to compare to other big cities in Indonesia [5]. Bandung is capital city of west Java and listed as the city with the largest population in West Java with 2,470,802 inhabitant as in 2014 [6]. Talk

about their performance in 2016, started on February, IndiHome applied Fair Usage Policy (FUP) toward its broadband services followed by many changes unilaterally imposed which results in massive condemnations from their subscribers throughout Indonesia. Until today, complaints addressed to Telkom IndiHome through petition disillusionment toward their services on the site Change.org continue to increase. The petition now has exceeded 23,600 signatures [7].

In response to the phenomenal numbers of customer complaints reported less than a year, commencing on Tuesday (11/10/2016) Indonesia's Business Competition Supervisory Commission (Komisi Pengawas Persaingan Usaha – KPPU) has officially set out to upgrade the handling of Telkom IndiHome case, from the investigation phase to examination phase. This attitude was taken by the KPPU after the investigation of the cases indicates that there are at least two issues were explored by the Commission [8].

While one of Telkom's strategic initiatives is to focus on high growth or high value portfolio, roughly within this year there is a remarkable complaints from customer addressed to them. The slow response and its inability to resolve the problems reported is indicating that Telkom was incapable anticipating this issue. Consequently, KPPU alleged there is an unhealthy practice conducted by IndiHome. Meaning to say, there is probability Telkom will lose a massive number of their subscriber due to unfavorable situation arise nowadays. To that end, in attempt to minimize the losses, Telkom should focus on a specific context and identify relevant predictors and mechanisms which are considered to be vital in providing a rich understanding of the massive condemnations phenomenon they are facing.

This study intends to analyze factors that affect the behavioral intention and use behavior of customers toward the adoption of IndiHome Services in Bandung, based on Unified Theory of Acceptance and Use of Technology 2.

2. Literature Review

Unified Theory of Acceptance and Use of Technology (UTAUT) 2

The Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh et al. in 2003 integrates eight models and theories of user acceptance, these consist of TRA, TPB, TAM, MM, CTAM-and-TPB, MPCU, IDT, and SCT. The UTAUT was developed to investigate the acceptance of a technology in an organizational context use [9]. Moreover the UTAUT model was empirically validated determinants of the acceptance of technology [10]. This is supported by the opinion which stated that UTAUT and proven to outperform each these eight individual models, which make it useful for researchers investigating the model is the most appropriate model to describe behavior to use technology due to it can predict consumer intention to adopt technology-based service until 70% while other eight models can only predict between 17 – 53% [11] [12].

Nonetheless, since the UTAUT addresses employee technology acceptance, UTAUT 2 was specially introduced for the need to investigate consumer technologies, which are technologies that are targeted at consumers. Therefore the UTAUT was extended to UTAUT 2 to suit a consumer context. Three constructs that were added to the theory are hedonic motivation (HM), price value (PV), and habit (HT) [9].

UTAUT 2 kept the constructs and definitions of PE, EE, SI and FC from the UTAUT adapting them to a consumer use context. In the UTAUT 2, HM, PV, HT, PE, EE, SI, and FC affect the behavioral intention to use a technology, while the behavioral intention to use a technology determines the use behavior, which is the individual actual usage of technology. In other words this theory states that the individual intention to use the technology depends on if the technology is perceived as useful; easy to use; suggested by important others; the needed resources to use the technology are present; the technology is fun to use; the price value of the technology, and if the users have a habit to use the technology. Individual differences of age, gender, and experience, moderate the effects of these constructs on behavioral intention and technology use [13]. The conceptual model used in this research shown in Figure 1 below:

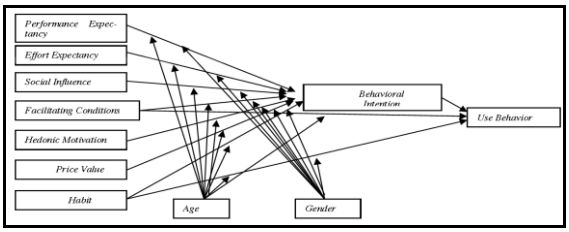

Figure 1: Conceptual Model adopted from UTAUT2 (Venkatesh et al., 2012)

After reviewing the UTAUT2 model, as this study wants to predict behavioral and use behavior in consumer context, thus the model is most suitable to be used as conceptual model in this research. UTAUT 2 developed by uses Age, Gender, and Experience as moderating variable[13], however this research only use Age and Gender because the type of this research is cross-sectional, not a longitudinal study [14]. The hypotheses in this research are summarized in Table 1 below:

Table 1: Hypotheses

Hypotheses	
1.	Performance Expectancy has a positive and significant influence on Behavioral Intention
1.a	The influence of Performance Expectancy on Behavioral Intention is moderated by age.
1.b	The influence of Performance Expectancy on Behavioral Intention is moderated by gender.
2.	Effort Expectancy has a positive and significant influence on Behavioral Intention
2.a	The influence of Effort Expectancy on Behavioral Intention is moderated by age.
2.b	The influence of Effort Expectancy on Behavioral Intention is moderated by age.
3.	Social Influence has a positive and significant influence on Behavioral Intention
3.a	The influence of Social Influence on Behavioral Intention

	is moderated by age.
3.b	The influence of Social Influence on Behavioral Intention is moderated by gender.
4.	Facilitating Condition has a positive and significant influence on Behavioral Intention
4.a	The influence of Facilitating Condition on Behavioral Intention is moderated by age.
4.b	The influence of Facilitating Condition on Behavioral Intention is moderated by gender.
5.	Hedonic Motivation has a positive and significant influence on Behavioral Intention
5.a	The influence of Hedonic Motivation on Behavioral Intention is moderated by age.
5.b	The influence of Hedonic Motivation on Behavioral Intention is moderated by gender.
6.	Price Value has a positive and significant influence on Behavioral Intention
6.a	The influence of Price Value on Behavioral Intention is moderated by age.
6.b	The influence of Price Value on Behavioral Intention is moderated by gender.
7.	Habit has a positive and significant influence on Behavioral Intention
7.a	The influence of Habit on Behavioral Intention is moderated by age.
7.b	The influence of Habit on Behavioral Intention is moderated by gender.
8.	Facilitating Conditions has a positive and significant influence on Use Behavior
8.a	The influence of Facilitating Conditions on Behavioral Intention is moderated by age.
8.b	The influence of Facilitating Conditions on Behavioral Intention is moderated by gender.
9.	Habit has a positive and significant influence on Use Behavior
9.a	The influence of Habit on Behavioral Intention is moderated by age.
9.b	The influence of Habit on Behavioral Intention is moderated by gender.
10.	Behavioral Intention has a positive and significant Influence on Use Behavior

3. Methods

In order to test the hypotheses, this study collects data from 400 respondents, through survey by using questionnaire distributed to respondents by using purposive sampling technique. To analyze the data that collected, the researcher used a Smart PLS 3.0 software. In PLS, there are two different testing model that is conducted, which is outer and inner model. Outer model is used to test the indicators with their own latent variable or in other words to measure how far the indicators able to describe the latent variable. Indicators are tested with convergent validity, discriminant validity and also Average Variance Extracted (AVE), and composite reliability. The other test that is conducted is inner model. Inner model is used to test the influence of one latent variable to the other latent variable. The test itself conducted by looking at the percentage of variance that explained, which is R^2 for dependent latent variable modeled is influences by independent latent variable. This stability estimations is tested by using t-statistics test, through bootstrapping procedure [15].

In PLS, the correctness of the proposed model can be measured by using path coefficient (PC) and R-square (R^2). The hypotesis test conducted in this step of path analysis uses 4 kind of significance value which are 1%, 5%, 10%, and 15%. So that, the critical values that has to be fulfilled in order to be significant using the mentioned significant level in a particular order are at least 2.34, 1.65, 1.32, and 1.04 [16]-[18].

In order to measure the influence of age and gender as moderating variables, this study use a group comparison approach. This study performed the following steps to test the differences between sub-group: 1) Split the sample according the group (e.g., men and women; young and adult, low and high income). 2) Calculate each group in a separate model in SmartPLS. 3) Compare the differences of the paths using the method proposed by Chin [19].

$$t = \frac{Path_{sample1} - Path_{sample2}}{\sqrt{s.e._{sample1}^2 + s.e._{sample2}^2}}$$

The comparison result is shown on the Table 3.

4. Discussion

Table 2 shows the path coefficients and t-values of the model as a result of bootstrapping:

Table 2: T-Value for Each Variable

Variable Relationship	Path	t-Value	Status
PE → BI	0.142	3.621****	Accepted
EE → BI	-0.126	2.6	Rejected
SI → BI	0.176	3.707****	Accepted
FC → BI	0.071	2.173***	Accepted
HM → BI	0.226	5.322****	Accepted
PV → BI	0.14	3.139****	Accepted
HT → BI	0.4	8.173****	Accepted
BI → UB	0.104	1.206*	Accepted
FC → UB	-0.026	0.42	Rejected
HT → UB	0.185	2.216***	Accepted

****0.99 Significant Level ***0.95 Significant Level *0.90 Significant Level *0.85 Significant Level

In Table 2, it can be seen that five out of 10 hypotheses are significant at 1% level, two relationships are significant at 5% level, one relationship is significant at 15% level and two relationships is not significant at any of signifinace level which are the combination between Effort Expectancy – Behavior Intention and Facilitating Condition – Usage Behavior. Thus, between endogenous latent variables and exogenous latent variables, concluded that there are two hypotheses (*EE – BI* and *FC – UB)* that are not fulfilled the condition of this research as explained in Table 1.

The level of variance which explained by a model between exogenous variables and endogenous variable is shown by its R^2 (Determination Coefficient) value. There are two models that are formed in this research with two different endogenous variables (BI and UB). The result shows that the percentage of variance that explained by the exogenous variables (Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition, Hedonic Motivation, Price Value, and Habit) toward Behavioral Intention as the

endogenous variable is 82.35%, meaning the other 17.65% is explained by other variables that is not included in this research. Whereas, the percentage of variance that is explained by Facilitating Condition, Habit, and Behavioral Intention toward Usage Behavior is only 7%, which means that other 93% is explained by other variables that is not included in this research.

Table 3: Results for Moderating Variables

Variable Relationship	t-Values for Moderating Variables	
	Age	Gender
PE → BI	-0.157	-1.269
SI → BI	0.674	0.226
FC → BI	0.651	-1.637*
HM → BI	-0.933	0.419
PV → BI	-1.365	-0.855
HT → BI	0.372	0.740
HT → UB	-0.858	-0.269

****0.99 Significant Level ***0.95 Significant Level *0.90 Significant Level *0.85 Significant Level

Refer to the t-values of the two moderating variables as shown in Table 3, it can be seen that none of the paths has significant differences between young and adult groups, meanwhile significant differences exist between the paths of Facilitating Condition to Behavioral Intention between male and female groups.

5. Conclusion

Referring to the result of the path analysis using UTAUT 2 model, factors that influencing the Behavioral Intention on the adoption of IndiHome services in Bandung sequentially starting from the greatest influence to the lowest are Habit, Hedonic Motivation, Social Influence, Performance Expectancy, Price Value and Facilitating Condition. The factors that influence Use Behavior are Habit and Behavioral Intention. The R^2 of the Behavioral Intention is 82.3%, while the R^2 of Use Behavior is 7%. Gender had moderated the influence of Facilitating Condition on Behavioral Intention. The result of the test indicates that the female group (β=0.152) are expects more about the quality of facilities from the service than the male group (β=0.043), but the two groups have no different opinion on other variables.

Since Habit is the most influential variable in IndiHome services adoption, the service provider should make an effort to understand the habit of the prospective users and try to put the application in or near their habit, thus the prospective users will have intention to use and later use and reuse the application [14]. This requires more marketing communication efforts to strengthen both the potential intention and its influence to behavior [13]. For instance, when IndiHome service was introduced, the service providers rolled out advertisements to emphasize a variety of scenarios where the service provide useful functions to the users, for instance, pause and rewind feature that can allow users to have full experience in watching TV, excellent and reliable internet speed connection, etc. These advertisements helped to enhance the potential intention and its influence to behavior in distinct usage contexts. Retrospectively, emphasizing the feature of IndiHome services in varied contexts may be a useful strategy to potentially increase the habitual use of the services. Additionally, service provider should try to constantly reinforce users' habit with value added services and upgrades. Furthermore, they can alter users' habit that was cultivated elsewhere by providing greater benefits in their services than their competitors [20].

Based on the finding that the second biggest variable influences Behavioral Intention is Hedonic Motivation, thus the service provider should make the service features more enjoyable and pleasant which will make the user of IndiHome feel fun or pleasure during using the services [14]. Meanwhile, in order to gain and maintain the consumer from female group, the service provider should ensure that the users have enough resources, knowledge and capabilities to control the services also it is necessary for service provider to provide and oversee the availability and capability of support infrastructure. This is based on the findings that the female group considers more on the facility of the IndiHome than male group when they want to use and reuse it services.

6. Future Scope

This study provides a theoretical implications for prior related literatures. For this research is among the first to empirically investigate consumer's acceptance of IndiHome services (bundled/Triple Play services) in Indonesia, notably in Bandung. By conducing reliability analysis, testing the proposed research model empirically, it has been proved that the model is valid and reliable for this kind of bundled services. Therefore the research model of this study could be applied to investigate the factors that affect the behavioral intention to use similar services and for future studies on IndiHome services.

One of the limitations of this study is related to the low levels of the R^2 of use in the models. Accordingly, the explanatory power is considerably lower in this research.

Perhaps the explanation is that IndiHome service users simply use more traditional services instead of bundled one which is Triple Play services in this study on their daily life than other cultures where this technology is more usual and established [21]. Low levels of the R^2 of use may be due to the fact that with other technologies, factors such as Facilitating Condition has a direct influence on use, while the tested models do not estimate direct influences on use.

The next limitation concerns generalizability of the findings. As this study was conducted in Bandung, which has a very high penetration rate for internet users compared to other areas in Indonesia, the findings may not apply to areas that are less technologically advanced. Also since data were collected from consumers using a convenience sampling technique and thus should not necessarily be considered representative of the population.

A cross-sectional study was used to measure respondents' perceptions and intentions at a point in time. Given that perceptions and intentions change over time, information obtained may only be applicable to the present situation in

Bandung. Thus, the findings may not be suitable in the future as the data would be outdated.

In order to gain further validation and generalization; it is recommended that the future study should replicate current research setting in other countries' areas. Furthermore, it is also interesting to compare the results yielded in different areas; thus, comparison study should also be considered. Lastly, future researchers should use the longitudinal approach to predict adoption intention over time. As such, the model should be validated at different points in time. For example, future studies should study adoption intention in stages, such as pre-adoption and post-adoption of IndiHome Services.

References

[1] Nelson, E., & Dam, R. V. (2010, April). Telco 2015 Five telling years, four future scenarios. Telco 2015 Five Telling Years, Four Future Scenarios.
[2] Penetrasi & Perilaku Pengguna Internet Indonesia. (2016). Retrieved Nov. & dec., 2016, from apjii.or.id Internet Users in Indonesia
[3] Pasca Flexi Ditutup, Telkom Andalkan IndiHome di Pasar Ritel. (2015). Retrieved October 5, 2016, from http://www.indotelko.com/kanal?c=&it=pasca-flexi-ditutup-telkom-andalkan-indihome-di-pasar-ritel
[4] Telkom IndiHome sudah Miliki Sejuta Pelanggan. (2015). Retrieved October 5, 2016, from http://www.indihome.co.id/article/detail/telkom-indi-home-sudah-miliki-sejuta-pelanggan
[5] Performansi Witel Jabar Tengah (Bandung). (2015). Retrieved Nov. & dec, 2016, from PT Telekomunikasi Indonesia Tbk Witel Jabar Tengah (Bandung)
[6] Jumlah Pendududuk Menurut Jenis Kelamin Dan Kecamatan Di Kota Bandung 2011-2014. (2014). Retrieved Nov. & dec, 2016, from https://bandungkota.bps.go.id/linkTableDinamis/view/id/
[7] Ono, K. (2016). @TelkomIndonesia, ini alasan ribuan orang petisi IndiHome. @rudiantara_id. Retrieved October 23, 2016, from https://www.change.org/p/telkomindonesia-ini-alasan-ribuan-orang-petisi-indihome-rudiantara-id
[8] Dalami Pelanggaran, KPPU Tingkatkan Status Kasus Telkom IndiHome. (2016). Retrieved November 1, 2016, from http://techno.okezone.com/read/2016/10/12/207/1512464/dalami-pelanggaran-kppu-tingkatkan-status-kasus-telkom-indihome
[9] Miladinovic & Xiang. (2016). A Study on Factors Affecting the Behavioral Intention to use Mobile Shopping Fashion Apps in Sweden.
[10] Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F.D. (2003). User Acceptance of Information Technology: Toward A Unified View. MIS Quarterly, 27(3), 425 – 478.
[11] Indrawati (2012). Behavioral Intention to Use 3G Mobile Multimedia Services in Indonesia. Doctoral Dissertation, Multimedia University Malaysia
[12] Indrawati (2015). Metode Penelitian Manajemen dan Bisnis Konvergensi Teknologi Komunikasi dan Informasi. Bandung: Refika
[13] Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. MIS Quarterly, 36(1), 157 – 178.
[14] Indrawati & Marhaeni. (2015). Predicting Instant Messenger Application Adoption Using a Unified Theory of Acceptance and Use of Technology 2, 030, 772-778.
[15] Wiyono, G. (2011). Merancang Penelitian Bisnis dengan Alat Analisis SPSS 17.0 & SmartPLS 2.0. Yogyakarta: UPP STIM YKPN.
[16] Chin, W.W., & Dibbern, J. (2010). An Introduction to a Permutation Based Procedure for Multi-Group PLS Analysis. In V.E. Vinzi, W.W. Chin, J. Henseler, H. Wang (Eds.), Handbook of Partial Least Squares Concepts, Methods, and Application. (pp. 171 – 193). Berlin: Springer
[17] Urbach, U., & Ahlemann, F. (2010) Structural Equation Modeling in Information Systems Research Using Partial Least Squares. Journal of Information Technology Theory and Application. 11(2), p. 5-40 (2010).
[18] J. Henseler, C.M. Ringle and R.R. Sinkovics: The Use of Partial Least Squares Path Modeling in International Marketing. In R.R. Sinkovics, P.N. Ghauri (Ed.) New Challenges to International Marketing (Advances in International Marketing, Volume 20) pp. 277-319 (2009).
[19] Chin, W. W. (2000). Frequently Asked Questions – Partial Least Squares & PLS-Graph. http://disc-nt.cba.uh.edu/chin/plsfac/plsfac.htm
[20] Kit, A., Ni, A., Badri, A., & Yee, T. (2014). UTAUT2 Influencing the Behavioral Intention to Adopt Mobile Application
[21] Cataluña, F., Jorge, Arenas., & Correa, P. (2015),"A comparison of the different versions of popular technology acceptance models", Kybernetes, Vol. 44 Iss 5 pp. 788 - 805

Author Profile

Indrawati was born in Indonesia and received her master degrees from Padjadjaran University (UNPAD), Indonesia, majoring in Management. She received her Ph.D. in Faculty of Management, Multimedia University (MMU) Malaysia. Indrawati's research interests include Adoption of Services based on Technology, Competitive Intelligent, Innovation, New Product Development, New Product Acceptance, Creative Industry, E-commerce, and Smart City. She has published more than 300 articles in newspaper, tabloid, magazines, national (in Indonesia) and international proceedings and journals, as well as books. Several of her articles have got awards in several events, such as: the eight best articles on the 4th International Conference on E-Commerce with Focus on Developing Countries (ECDC), Kuala Lumpur Malaysia on 3-4 November 2009, the best paper on Smart Collaborations for Business in Technology and Information Industries (SCBTII) Conference, Bandung Indonesia August 15th -16th 2016, and the best paper on International Seminar and Conference on Learning

Organization (ISCLO) 2016, Bandung Indonesia, October 26th 2016.

Rafa Najiya was born in Indonesia, started pursuing and received the Bachelor's degree in Economics and Business from Telkom University in 2013 and 2017, respectively. During 2013-2017, she stayed in International ICT Business Management class and simultaneously in 2015 registered as exchange student in Management / Graduate School of Business (GSB) of Universiti Sains Malaysia.