Exploring Online Shoppers’ Acceptance of Electronic Marketplace Using UTAUT and The Flow Theory

Asif Faroqi¹, Apol Pribadi S.², Tri Lathif M.S.¹

¹University of Pembangunan National Veteran Jawa Timur
²Department of Information Systems, Institut Teknologi Sepuluh Nopember

Email: asifaroqi.si@upnjatim.ac.id

Abstract. Today, e-marketplace is the fastest growing business model. This phenomenon causes competition among e-marketplace providers to become very tight. Some e-marketplace providers become more successful than others with many active users both from buyers and sellers. Identifying what made people using e-marketplace is needed. Existing research has analyzed the user’s motivation for the extrinsic factor. This study discusses online user acceptance of e-marketplace from both intrinsic and extrinsic factors especially online shoppers in Indonesia. Shopping enjoyment as component of flow theory was added to the model to describe the intrinsic factor. This investigation takes the sample from the employees, housewives, and educated. The result shows that both intrinsic and extrinsic factors are influencing the adoption of e-marketplace in Indonesia. E-marketplace service providers can use the result from this investigation to improve their services.

Keywords: E-Marketplace, Shopping Enjoyment, Technology Acceptance Theory, UTAUT

1. Introduction

APJII's survey shows that the number of internet users in Indonesia reaches 143,26 million people by the end of 2017 [1] and increased to 171,17 million people in 2018 [2]. Almost in every aspect, the internet is exploited, for example in the field of government with e-government that provides many benefits, such as improving communication, interaction, and public trust government [13]. In the health sector with the presence of Health Information System [7] as well as in other fields including
economics and commerce with e-commerce. In the organization with employee management information system [21]

Lately, there are many e-marketplaces in Indonesia, and some of these e-marketplaces are more successful than others. E-marketplace success is closely linked to the participation of sellers and buyers. without a huge number of buyers and sellers, an e-marketplace will not survive [11]. In China, competition between e-marketplace also occurs. Eachnet, which in 2003 led the e-marketplace market in China (72.4%), in 2005 Eachnet that has been acquired by eBay only dominated the market by 36.4%, lost by Taobao who controls e-marketplace market by 58.6% [3].

Shopping activities are not just about meeting the needs, but also a recreational activity so that there are two motives for shopping, recreational and utilitarian [14]. Recreational motivation is defined as the general attitude of consumers to shopping. It means that consumers perceived or feel shopping activities as a fun activity caused by the activity itself [12]. Other studies also corroborate with the same results that shopping motivation not only to meet the needs but also to seek pleasure or enjoyment. Each of these motivations carries different consequences of behavior [16]. Commonly, people shop traditionally, for example going to the mall, not always to fulfill their needs, often they just go out and have fun, there is hedonistic value and this also happens with online shopping [15]. Thus, the factors behind a person going shopping not only from extrinsic factors that come from the outside environment of the shoppers but also the intrinsic factors that come from within the shoppers themselves. Several e-marketplace acceptance studies have been conducted. Faroqi [6] in his research succeeded in summarizing some research result about the factors of acceptance of e-marketplace. The result showed that research on e-marketplace that has been done more emphasis on external factors, while internal factors are still rarely done.

This study explores the factors, including intrinsic and extrinsic factors, that influence online shoppers’ acceptance of e-marketplace in Indonesia. The results of this study can be used by e-marketplace vendors to identify important factors that influence their product adoption and direction for improvement. For example, we encounter that in addition to the three component of UTAUT (performance expectancy, effort expectancy, and social influence), shopping enjoyment as a flow experience is also essential factor for e-marketplace users.

2. Research Model and Hypotheses

We develop our research model and hypotheses based on the unified theory of acceptance and use of technology (UTAUT) which is modified by adding shopping enjoyment variable to represent intrinsic factors.

2.1. UTAUT Model

Venkatesh [18] has compared the similarities and differences from several technology acceptance theories and form a new theory called the unified theory of acceptance and use of technology (UTAUT). This new theory consists of four main constructs as a result of summarizing fourteen basic constructs from eight technology acceptance theories. The main constructs are performance expectancy, effort expectancy, social influence, and facilitating condition.

Performance expectations are defined as the extent to which an individual's belief that using a system will help him improve performance. While effort expectancy is defined as the degree to which the ease of use of the system.
[H1]: Performance expectancy is related positively to the intention to use e-marketplace

[H2]: Effort Expectancy is related positively to the intention to use e-marketplace

Social Influence is defined as the extent to which an individual feels that another important person believes that they should use the new system. Many internet users choose to use one kind of services or technology because their friends or their families are the users of those services or technology and are recommending them to use it. Then, we propose:

[H3]: Social Influence is related positively to the intention to use e-marketplace.

And then facilitating condition refers to the extent to which an individual believes that organizational and technical infrastructure exists to support the use of the system. Although the Internet has grown rapidly, some people still assume a special person or group exists to help users difficulties when using the system. Thus we posit that:

[H4]: Facilitating Condition is related positively to the actual usage of e-marketplace

Based on the results of the analysis conducted by Venkatesh against some theory of technology acceptance, we expect that behavioral intention will have a significant positive influence on e-marketplace usage

[H5]: Intention to use e-marketplace is related positively to the actual usage of the e-marketplace.

2.2. Shopping Enjoyment

Enjoyment is one dimension in flow theory. Flow is defined as a holistic sensation that a person feels when they do something with total involvement [4]. In subsequent developments, flow theory built on the foundations of psychological disciplines also used to analyze the behavior of technology users [8]. More specifically, flow is widely used to analyze the behavior of hedonistic technology users [5].

In general, the measure for flow is the intrinsic enjoyment of an activity. In the context of online shopping, intrinsic enjoyment we operate as shopping enjoyment.

[H6]: Shopping enjoyment is related positively to the intention to use e-marketplace

3. Research Methods

The object of this research is the e-marketplace in Indonesia and the subject is the user. The main data source in this study comes from surveys conducted online and offline. Online surveys are conducted through online forums, social media, and messaging applications, while offline surveys are conducted by distributing questionnaires at the city center of Surabaya.
The e-marketplace that becomes the object of this research is a third party or public e-marketplace. The questionnaire includes three sections. The first section asked our respondents what kind of e-marketplace they had used and also their actual usage of e-marketplace. The second section had questions measuring the variables in the proposed model. The third section had demographic questions about the respondents. Each item were related to a variable was measured using a 5-point Likert scale. Research data is processed and tested using Structural Equation Model method (SEM-PLS). The model analysis in SEM-PLS includes two stages of testing, the outer model or measurement model and then an inner model or structural model. The preparation of the research instrument and measurement scale was taken from previous studies. The UTAUT variables are from Venkatesh [18]. shopping enjoyment sources from Ghani [9] and Huang [10]. Whereas intention to use and actual use are from Moon and Kim's research [20].

4. Result

From the results of questionnaires, there were 228 valid questionnaires from a total of 252 questionnaires. The information can be collected among others is by sex, the majority of women respondents with a percentage of 57% of the total respondents, the rest of men. While based on work, the majority of respondents are students (64%), workers/entrepreneurs (26%) and housewives (10%). The city of Surabaya is the origin of the majority city of respondents, that is equal to 86%.

In the measurement, the model has evaluated the relationship between indicators and latent variables (constructs) by assessing the reliability and validity. Discriminant validity has been fulfilled with AVE value> 0.5. Reliability has also been met with the value of composite reliability and cronbach's alpha above 0.6. These results show that the measurement model has been met. The test results also showed that the fit index was eligible with APC, ARS, and AARS significant with p values <0.001 and AVIF <5. The structural model evaluates the relationship and value of the relationship between independent latent variables to latent dependent variables.

The results of the test show that the majority of the proposed hypotheses are accepted, except for H4 which states that facilitating conditions have a positive effect on shopping behavior. This result differs from previous research, both Venkatesh's [18] and Shan Wang [19] studies. This difference can be analyzed from the voluntary business environment of e-marketplace and the age of respondents who are mostly students and young workers. They are young and familiar with information technology so barriers to using e-marketplace are virtually nonexistent. Besides the device to access web e-
marketplace is getting cheaper and internet network is available everywhere. While respondents housewives tend to be more often shop offline.

Another thing we should observe from the results of testing the structural model that shopping enjoyment positively affect the intention of online shopping in e-marketplace. These results provide information that intrinsic motivation also affects online shopper's acceptance of e-marketplace. This supports previous research that mentions that one's shopping motivation is recreational, and that happens also in online shopping. In the fierce competition between emerging e-marketplaces, these findings are highly relevant, as Chen [3] studies on e-marketplace in China, where if they want to win the competition, they are not enough to provide only functional services.

5. Conclusion

The e-marketplace is a rapidly growing business electronic commerce model. However, not all e-marketplaces are well received by internet users and they only have a small market share. E-marketplace can survive and provide benefits if it has a large number of active users, both from buyers and sellers.

The results of this study indicate that the acceptance of e-marketplace by the online shopper is not only influenced by extrinsic factors, but also intrinsic factors. This is evidenced by the results of testing a structural model that shows that shopping enjoyment positively affects the intention of using e-marketplace. While other factors that also affect the acceptance of e-marketplace, among others, are performance expectations, effort expectations, and social influences.

This study shows that online shoppers pay attention to extrinsic factors as well as intrinsic factors. They want to use e-marketplace not only because of the ease of use and benefits they get but also want to have a nice experience when shopping. Shopping enjoyment or shopping pleasure as a comprehensive concept worthy of further research in the context of information systems and electronic commerce. Besides, further research may explore other relevant variables to be added to enrich the understanding of e-marketplace acceptance.

6. References

[1] APJII. (2017). Infografis Penetrasi dan Perilaku Pengguna Internet Indonesia. Jakarta: APJII.
[2] APJII. (2018). Penetrasi dan Profil Perilaku Pengguna Internet Indonesia. Jakarta: APJII.
[3] Chen, J., Zhang, C., Yuan, Y., & Huang, L. (2007). Understanding the Emerging C2C Electronic Market : An Experience Seeking Social Marketplace. Electronic Market, 86-100.
[4] Csikszentmihalyi, M. (1975). Beyond Boredome and Anxiety. Jossey Bash Publisher.
[5] Fan, L., Gu, J. C., Suh, Y. H., & Lee, S. C. (2012). How to Attract Chinese Online Game Users : An Empirical Study on the Determinants Affecting Intention to Use Chinese Online Games. Asian Journal on Quality, 7-21.
[6] Faroqi, A., Subriadi, A. P., Ridwandrodo, D., & Wibowo, N. C. (2016). Review of User Acceptance of E-Marketplace. International Joint Conference on Science and Technology. Bali: Universitas Pembangunan Nasional Veteran Jawa Timur.
[7] Puente, S.T., Ubeda, A., Torres, F. (2017). e-Health: Biomedical instrumentation with Arduino. IFAC Papers Online 50-1, 9156-9161.
[8] Finneran, C. M., & Zhang, P. (2005). Flow in Computer-mediated environments : Promises and Challenges. Communications of the Association for Information Systems, 82-101.
[9] Ghani, J. A., Supnick, R., & Rooney, P. (1991). The Experience of Flow In Computer Mediated and in Face to Face Group. *AIS Electronic Library*, 229-237.

[10] Huang, M. H. (2003). Designing Website Attribute to Induce Experiential Encounters. *Computer in Human Behavior*, 425-442.

[11] Kangning, W., Yong, Z., & Heshan, S. (2014). A Comparative Study of Buyers and Sellers Transaction Intention in Consumer to Consumer E-Marketplace.

[12] Koufaris, M. (2002). Applying The Technology Acceptance Model and Flow Theory to Online Consumer Behavior. *Information System Research*, 205-223.

[13] Mahmoodi, R.K., Nojedeh, S.H. (2016). Investigating the Effectiveness of E-Government Establishment in Government Organizations. Procedia 230, 136-141.

[14] Pu-Lai To. (2007). Shopping Motivation on Internet : A Study Based on Utilitarian and Hedonic Value. *Technovation*, 774-787.

[15] Pu-Lai, T., & E-Ping, S. (2015). Internet Shopping : A Study based on hedonic value and flow theory. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 2221-2224.

[16] Scarpi, D., Pizzi, G., & Visentin, M. (2014). Shopping for fun or shopping to buy : is it different online and offline? *Journal of retailing and consumer service*, 258-267.

[17] Turban, E. (2008). *Electronic Commerce : A Managerial Perspective*. Prentice Hall.

[18] Venkatesh, V., Morris, M., Davis, G., & Davis, F. (2003). User Acceptance of Information Technology : Toward a Unify View. *MIS Quarterly Vol 27 No 3*, 425-478.

[19] Wang, S., Archer, N. P. & Zheng, W., (2006). An Exploratory Study of Electronic Marketplace Adoption : A Multiple Perspective View. Electronic Markets, p. 337-348

[20] Moon J W & Kim Y G., (2001). Extending the TAM for a World-Wide-Web Context. *Information & Management* 38, 217-230

[21] Suryanto, T.L.M., Setyohadi, D.B., Faroqi, A. (2016). Analysis of the effect of Information System Quality to intention to reuse of Employee Management Information System based on Information system success model. *MATEC Web of Conference* 58, 03001.