ANALYSIS OF E-COMMERCE ADOPTION BY MSME IN FASHION SECTOR IN BANDUNG USING THE UTAUT MODEL

Oldsie Meizilya Mizal[1]; Chandra Wijayangka[2]
Universitas Telkom Bandung[1,2]
Email : oldsiemeizilya@gmail.com[1]; wijayangka@telkomuniversity.ac.id[2]

ABSTRACT

This research is leading by the low level of adoption of E-commerce by MSMEs in the city of Bandung. Based on the pre-survey, there are difficulties faced by SMEs in starting e-commerce, one of which is the lack of available facilities. The Fashion sector, as the sector that has shown the most significant growth in Bandung, is considered appropriate to be the object of this research. This study aims to determine the factors of technology adoption that are obstacles to SMEs in adopting E-commerce. Quantitative methods use in this research. The sampling technique uses nonprobability sampling technique with 200 respondents. Data analysis techniques using descriptive analysis and SEM-PLS path analysis. The independent variable is Performance Expectancy, Effort Expectancy, Social Expectancy and Facilitating Condition. The dependent variable is Use Behavior and the intervening variable is Behavioral Intention. Based on descriptive analysis, E-commerce adoption using UTAUT shows high results, but there are low results on the Effort Expectancy and Social Influence variables which indicate that MSME actors still find difficulties in using E-commerce. The results obtained in this reserach are the Performance Expectancy, Effort Expectancy, and Social Expectancy show significant positive influence on Behavioral Intention. Meanwhile Behavioral Intention and Facilitating Conditions also show significant positive influence on Use Behavior

Keyword: E-commerce Adopstiont, MSMEs, UTAUT, SEM-PLS

INTRODUCTION

Since its first appearance, MSMEs have contributed greatly to the development and economic growth in the Indonesian State. In the past five years, MSMEs have contributed 60.34% to the Gross Domestic Product (GDP) and increased employment from 96.99% to 97.22% (www.liputan6.com). Bandung City is the substantial in West Java Province. As the provincial capital, it has a strategic principel to the surrounding areas. (Stastistik Daerah Kota Bandung 2018,2018:1). Strategic location and supported by a large population, making the city of Bandung a strategic place to build a business and start a business. Business fields in the city of Bandung are leading by Micro, Small and Medium Enterprises (MSMEs). This is evident from the number of MSME units in Bandung reaching 4,077 in 2017 and is believed to continue to grow until now the number has reached more than 6,000. One of the creative industries in Bandung that

shows the most significant growth is the fashion industry. According to Badan Pusat Statistik Bandung (2017), fashion sector industry provided the highest contribution at around 43.71%.

The growth of MSMEs that increases every year has not been matched by the application of digitalization and the use of the latest technology. This is indicated by the decline in the contribution of exports at the beginning of 2018 at 15.8% to 14.7% in 2019. The cause of this problem is one of the small number of MSMEs who utilize Internet using in each line of their business processes (www.pikiran-rakyat.com) . The MSMEs Cooperatives revealed that up to now 3.97 million MSMEs have penetrated the online business. That number is around 8% of the total MSME actors in Indonesia, amounting to 59.2 million. This number is still very small, the cause is the lack of knowledge of MSME entrepreneurs about selling procedures to use in online marketplaces, so MSMEs doubt whether their products can be sold in e-commerce (www.ekonomikompas.com) . This also happened to Bandung MSMEs.

The application of digitalization within the business line can MSMEs started by embracing e-commerce. In recent years, Indonesian e-commerce has shown very sunstantial rise. In 2018, users in Indonesia reached 154.1 million, an increase of 10.8% from 2017 which was 139 million users. This year e-commerce users are predicted to reach 163 million users and will continue to increase to 212.3 million users in 2023 (Statista, 2019).

In the initial observations made by the author (interview with 30 respondent), MSME actors revealed that the reason they still had not started using e-commerce was the lack of supporting facilities for the application in their businesses, both from the MSME community itself and the government. According to Venkatesh (2003), external support in the form of facilities in an organization is one reason for users to be interested in using a technology. In the UTAUT construct, external support is known as Facilitating Conditions. In addition to the lack of supporting facilities, MSMEs also revealed there are obstacles in the utilize of e-commerce. MSMEs need in-depth training to operating e-commerce itself. From UTAUT construct as stated in Venkatesh (2003), there is an Effort Expectancy variable explained as the level of ease felt by the user of technology.

From description above, the authors state that it is necessary to establish research compatible to the adoption of e-commerce for MSMEs in the fashion sector of Bandung using the UTAUT model. For this reason, the uthor will conduct a research entitled "Analysis of E-Commerce Adoption by MSMEs in the Fashion Sector in Bandung Using the UTAUT Model".

LITERATUR REVIEW

The Unified Theory of Acceptance and Use of Technology (UTAUT) Model was first present by Vankatesh et al (2003). This theory explains how someone adopts new information technology by measuring intention to use. UTAUT model has four independent variables which is Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions, one intervening variable which is Behavioral Intention, and one dependent variable which is Use Behavior. The Intervening variable will Performance Expectancy, Effort Expectancy, and Social Influence, while the dependent variable affected by Facilitating Conditions and Behavioral Intention.

Definition of each variable in this model as follows:

• Performance Expectancy: the extent for a person believes in using new system brings convenience to their work. (Venkatesh et al 2003).

• Effort Expectancy: the level of ease related to using a system that can facilitate an individual in completing their work (Venkatesh et al, 2003).

• Social Influence: the extent for a person considers their society is in charge and believes they must use a system (Venkatesh et al 2003).

• Facilitating Conditions: the level a person believes that to fully support the use of the system, they need an organizational and technical infrastructure existence (Venkatesh et al, 2003).

• Behavioral Intention: possibility of someone who will do certain behavior (Venkatesh et al, 2003).

• Use Behavior: a variable that measures the frequency of actual use of technology by users. Use behavior can be seen from the extent of someone's satisfaction in using technology, that easy to use, and it gonna increase their productivity (Venkatesh et al, 2003).

From the following description, schematically the framework in this study described as follows: (Figure 1).

The hypotheses of this research are described as follows:

1. Performance Expectancy show positive and significant influence on Behavioral Intention in adopting E-Commerce
2. Effort Expectancy show positive and significant influence on Behavioral Intention in adopting E-Commerce.
3. Social Influence show positive and significant influence on Behavioral Intention in adopting E-Commerce
4. Facilitating Conditions show positive and significant influence on Use Behavior in adopting E-Commerce
5. Behavioral Intention show positive and significant influence on Use Behavior in adopting E-Commerce

METHOD

The methods of this research use quantitative method and the type of research is descriptive research. Descriptive is a method that serves to describe or provide an overview of the object under study through sample or population data as it is, without analyzing and making general conclusions (Zulkarnaen, W., et al. 2018:55). The sampling technique uses nonprobability sampling technique. With the total of 1.054unit MSEM fashion sector in Bandung (Dinas Koperasi Usaha Mikro Kecil Menengah dan Perindustrian Perdagangan Kota Bandung,2019), we choose 200 participants as respondent.

The data analysis techniques use Structural Equation Modeling (SEM) PLS by Smart PLS 3.0 software and descriptive analysis. In this study, there are three types of variables used, namely the independent variable consist of Performance Expectancy (X1), Effort Expectancy (X2), Social Influence (X3), and Facilitating Condition (X4), Behavioral Intention (Y) as intervening variable and Use Behavior (Z) as the dependent variable . For the scale we used on the variable that is the ordinal scale while for each instrument using a Likert scale.

Primary data in the study using questionnaires and data sources obtained from respondents, namely people who respond or answer the statements of the author.

Supporting data combined from literature, reference books, national and international journals, along with previous research related to application of UTAUT model in E-commerce Adoption.

RESULT AND DISCUSSION

In this study, the characteristics of respondents contained 92.5% female and 7.5% male. Based on age, respondent with age range 17-22 years is 3%, age range 23-28 years is 12%, age range 29-34 years is 26.5%, age range 35-40 years is 31.5%, and age over 40 years by 27%. The result for MSMEs type are Micro MSMEs at 96.9%, Small MSMEs at 3.1%, while there are no Medium MSMEs (0%). Furthermore, characteristics based on experience using E-commerce show respondents with 1 year experience of 4.5%, 2 years experience of 15%, 3 years experience of 33.5%, 4 years experience of 35%, and experience of more than 4 years of 12%. Finally, the characteristics based on the type of E-Commerce used are social media users by 55%, Zalora by 18.5%, BerryBenka by 5%, Tokopedia and Shopeeid by 28.5%, Bukalapak by 3.5%, Lazada by 8% , Website at 7%, Hijup at 2%, Zilingo at 1%, and finally 8wood at 0.5%).

Respondents' responses regarding Performance Expectancy on the use of E-Commerce are in Very High categoty (85.4%), Effort Expectancy are in High category (80.3%), Social Influence also in High category (80.35%). Facilitating Condition are in Very High category, Behavioral Intention also in Very High category (87.2%). Last, respondents regarding Use Behavior are in Very High category (86.1%).

Hair et al (2014) stated there are convergent validity and discriminant validity to prove the validity. Rule of Thumb for convergent validity is an Average Variance Extracted (AVE) > 0.50. (Table 1)

Table 1 show variables fulfill the criteria of convergent validity, namely the score for each variable > 0.50, so all variable proven valid. Hair et al (2017) also stated the discriminant validity has Rule of Thumb with cross loading > 0.70. (Table 2).

In table 2, all variables are stated as meeting the discriminant validity criteria, namely the score of cross loading for each variable > 0.70, so all variable proven valid. Furthermore, the reliability test in PLS done by two methods, namely Cronbach's alpha

and Composite reliability. A construct is stated reliable if the Cronbach's alpha value> 0.60 and composite reliability > 0.70 (Hair et al., 2017). (Table 3)

Table 4 show Cronbach's Alpha of each variable > 0.6 and Composite Reliability score > 0.7. This shows that each variable meets the reliability test criteria, so all variable profen reliable.

Furthermore, in the sem-pls method there is also an inner model that uses R Square to get the impact score or t-values to test the significance of the variables (Abdillah and Hartono, 2015: 197). (Figure 2)

Figure 2 shows the results of structural model measurements (Bootstrapping). From the picture, it shows the corelation of t-statistics and path coefficient. By paying attention to the t-statistic value on the Path Coefficient which is > 1.64 for the one tailed hypothesis (Abdillah and Hartono, 2015: 197), where the hypothesis is declared received when the score of the t-statistic > 1.64 with P-Value 5% (0.05). (Table 4)

From table 4, all hypotheses show positive and significant impact. Then the conclusion of testing the hypothesis is as follows:

1. Performance Expectancy show positive and significant impact on Behavioral Intention in adopting E-commerce
2. Effort Expectancy show positive and significant impact on Behavioral Intention in adopting E-commerce.
3. Social Influence show positive and significant impact on Behavioral Intention in adopting E-commerce.
4. Facilitating Condition show positive and significant impact on Use Behavior in adopting E-commerce.
5. Behavioral Intention show positive and significant impact on Use Behavior in adopting E-commerce.

The Inner Model test also uses R Square measurement to calculate the impact of the independent variable gave to the dependent variable. R-Square results of 0.67 mean good model, 0.33 show its moderate, and last 0.19 means its weak. Following are the results of R-Square: (Table 5)

From the table, it shows the two variables are included in the moderate category. In the Behavioral Intention the R-Square is 0.614 means 61.4% Behavioral Intention is affected by the variables Performance Expectancy, Effort Expectanty, and Social

Influence. Whereas Use Behavior variable of 55.8% is affected by Facilitating Conditions and Behavioral Intention. The remaining persentage is not explained in this research.

CONCLUSION

The conclusions of this study are explained below:

The Impact of Performance Expectancy to Behavioral Intention

In this study Performance Expectancy show positive and significant impact on Behavioral Intention. Means that confidence in using e-commerce will improve the performance and productivity of MSMEs. MSMEs continue to use E-commerce so that their performance and business activities will be increased so that they will automatically increase profits in the future. Conversely, if the SMEs do not adopt E-Commerce in their business activities, then it is believed that there will be a decrease in the performance and activities of MSMEs so that it will also influence the profits to be received.

The Impact of Effort Expectancy to Behavioral Intention

Effort Expectancy show positive and significant impact on Behavioral Intention. Positively, ease of use of e-commerce motivates the intention to use them in the future so that will automatically be an increase in profits to be received by MSMEs.

The Impact of Social Influence on Behavioral Intention

In this study Social Influence has a positive and significant influence on Behavioral Intention. This means that closest people and related parties to the MSME actors have a positive influence that motivates MSMEs to keep using E-commerce, so that the application of E-commerce can continuously increase the profits that will be gained by MSMEs. MSMEs keep using e-commerce in the future as people around them (both MSMEs and customers) utilize technology in their business and personal needs.

The Impact of Facilitating Condition on Use Behavior

Facilitating Condition show positive and significant impact on Use Behavior. Indicate that the existence of facilities to support the E-commerce bring positive impact on the behavior of the use of E-commerce itself by MSMEs. The more complete the facilities used will also increase the frequency of use of Ecommerce. Adequate and supportive facilities are no longer a reason for MSMEs to be lazy in using E-commerce.

The use of Ecommerce is believed to increase the benefits obtained, so that if the frequency of using E-commerce is high, it will also increase the benefits obtained.

The Impact of Behavioral Intention on Use Behavior

Behavioral Intention show positive and significant impact on Use Behavior. Indicate the larger the intention to use Ecommerce in fashion sector MSMEs in Bandung, the higher the frequency of e-commerce usage. To be able to increase the income MSMEs received, it has support by the high frequency in using e-commerce. So, to increase revenue at MSMEs in the future, the perpetrators are expected to continue to utilize E-commerce. Motivation to use e-commerce is high supported by trust, convenience, facility and social conditions that support it too. So, if all these factors are met, it is proven that using e-commerce will continue to increase.

REFERENCES

Badan Pusat Statistik Kota Bandung. (2018). *Statistik Daerah Kota Bandung.* Badan Pusat Statistik Kota Bandung.

Databoks. 2019. *Tren Pengguna E-Commerce Terus Tumbuh* https://databoks.katadata.co.id/datapublish/2019/10/10/tren-pengguna-e-commerce-2017-2023. Accessed November 22, 2019

Hair, J., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). *Partial Least Squares Structural Equation Modelling (PLSSEM). An Emerging Tool in Business Research.* 106-121. California: Sage Publication.

Hair, J. F., Hult, G. T., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Square Structural Equation Modeling (PLS-SEM).* California: Sage Publication.

Jogiyanto, & Abdillah. (2015). Partial Least Square (PLS) Alternatif Structural Equation Modelling (SEM) dalam penelitian Bisnis. Yogyakarta: ANDI

Liputan6.com. 2018. *UMKM Sumbang 60 Persen ke Pertumbuhan Ekonomi Nasional.* https://www.liputan6.com/bisnis/read/3581067/umkm-sumbang-60-persen-ke-pertumbuhan-ekonomi-nasional. Accessed September 18, 2019

Rahmawati, Ai Rika. 2019. *Ekspor Anjlok, Kementerian KUKM Dorong UMKM Maksimalkan E-commerce.* https://www.pikiran-rakyat.com/ekonomi/pr-01319812/ekspor- anjlok- kementerian-kukm-dorong-umkm-maksimalkan-e-commerce. Accessed Oktober 12, 2019

Venkatesh, Viswanath, Michael G. Morris, Gordon B. Davis, dan Fred D. Davis. 2003. "USER ACCEPTANCE OF INFORMATION TECHNOLOGY: TOWARD A UNIFIED VIEW." *User Acceptance of IT*, September: 425-478

Widiarini, Anissa Dea. 2018. *Kemkominfo Ajak UMKM Maksimalkan "E-commerce".* https://ekonomi.kompas.com/read/2018/09/28/151900826/kemkominfo-ajak-umkm-maksimalkan-e-commerce?page=all. Accessed November 22, 2019

Zulkarnaen, W., Fitriani, I. D., & Widia, R. (2018). The Influence of Work Motivation to Work Achievement of Employees in PT. Alva Karya Perkasa Bandung. *Jurnal Manajemen, Ekonomi dan Akuntansi*, *1*(1), 42-62.

FIGURE AND TABLE

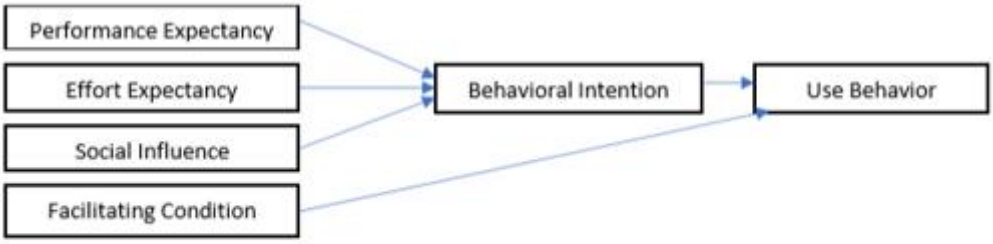

Figure 1. Framework
Source: processed data (2020)

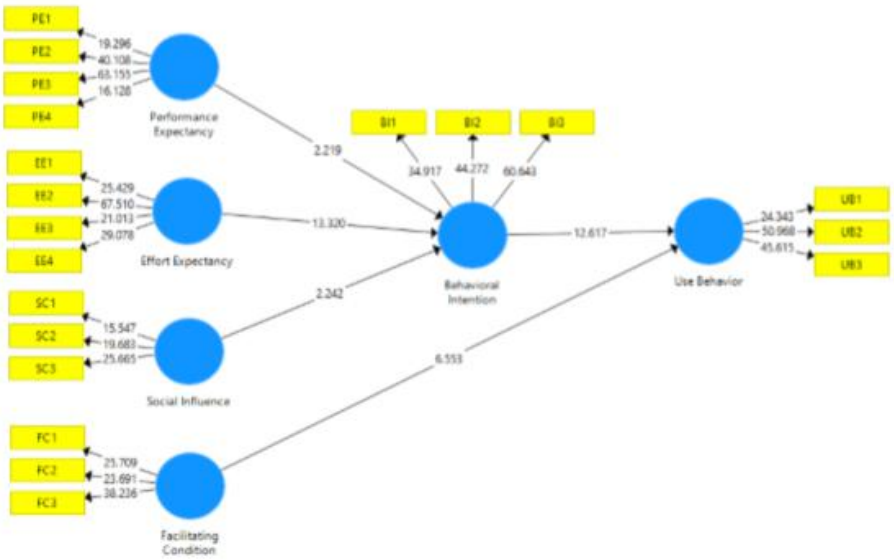

Figure 2. Bootstrapping
Source: processed data (2020)

Table 1. AVE Score

Variables	AVE (>0.50)
Behavioral Intention	0.742
Effort Expectancy	0.637
Facilitating Condition	0.684
Performance Expectancy	0.628
Social Influence	0.614
Use Behavior	0.650

Source: processed data (2020)

Table 2. Cross Loading Score

Variable	BI	EE	FC	PE	SI	UB
BI1	0.836	0.537	0.148	0.475	0.398	0.352
BI2	0.852	0.694	0.326	0.438	0.345	0.639
BI3	0.895	0.707	0.321	0.627	0.451	0.694
EE1	0.472	0.789	0.514	0.442	0.288	0.574
EE2	0.658	0.888	0.527	0.585	0.350	0.670
EE3	0.598	0.739	0.119	0.429	0.338	0.494
EE4	0.666	0.769	0.395	0.532	0.407	0.505
FC1	0.210	0.387	0.830	0.225	0.212	0.400
FC2	0.343	0.407	0.779	0.329	0.115	0.432
FC3	0.242	0.403	0.870	0.228	0.271	0.439
PE1	0.381	0.349	0.160	0.762	0.418	0.159
PE2	0.528	0.574	0.378	0.839	0.482	0.426
PE3	0.605	0.686	0.231	0.852	0.421	0.451
PE4	0.300	0.232	0.207	0.708	0.312	0.221
SI1	0.304	0.290	0.139	0.434	0.765	0.211
SI2	0.353	0.426	0.267	0.528	0.802	0.241
SI3	0.413	0.315	0.160	0.290	0.784	0.341
UB1	0.301	0.445	0.521	0.188	-0.087	0.732
UB2	0.662	0.645	0.412	0.403	0.420	0.836
UB3	0.617	0.583	0.346	0.404	0.400	0.847

Source: processed data (2020)

Table 3. Cronbach's alpha and Composite Reliability score

Variable	Cronbach's alpha (>0,60)	Composite Reliability (>0,70)
Behavioral Intention	0.829	0.896
Effort Expectancy	0.809	0.875
Facilitating Condition	0.768	0.866
Performance Expectancy	0.807	0.870
Social Influence	0.690	0.827
Use Behavior	0.734	0.848

Source: processed data (2020)

Table 4. Path Coefficient and T-Statistic

No	Paths	Path Coefficient	T-Statistic
1	BI -> UB	0.000	12.617
2	EE -> BI	0.000	13.320
3	FC -> UB	0.000	6.553
4	PE -> BI	0.013	2.219

Source: processed data (2020)

Table 5. R-Square

Variable	R-Square
Behavioral Intention	0,614
Use Behavior	0,558

Source: processed data (2020)